Ellicott Sand & Gravel LLC

SCHUBERT RANCH SAND RESOURCE

EL PASO COUNTY, COLORADO
December 2018

Application for a Regular 112 Construction Materials Mined Land Reclamation Permit

PREPARED BY
ENVIRONMENT, INC.
7985 VANCE DR., SUITE 205A
ARVADA, CO 80003
(303) 423-7297

STATE OF COLORADO

DIVISION OF RECLAMATION, MINING AND SAFETY
Department of Natural Resources

1313 Sherman St., Room 215
Denver, Colorado 80203
Phone: (303) 866-3567
FAX: (303) 832-8106

CONSTRUCTION MATERIALS
REGULAR (112) OPERATION
RECLAMATION PERMIT APPLICATION FORM

CHECK ONE: _____ **There is a File Number Already Assigned to this Operation**

Permit # M -____-____-___ (Please reference the file number currently assigned to this operation)

☑ **New** Application (Rule 1.4.5) ☐ **Amendment** Application (Rule 1.10)

☐ **Conversion** Application (Rule 1.11)

Permit # M -_____-_____-_____ (provide for **Amendments** and **Conversions** of existing permits)

The application for a Construction Materials Regular 112 Operation Reclamation Permit contains three major parts: (1) the application form; (2) Exhibits A-S, Addendum 1, any sections of Exhibit 6.5 (Geotechnical Stability Exhibit; and (3) the application fee. When you submit your application, be sure to include one (1) complete signed and notarized **ORIGINAL** and one (1) copy of the completed application form, two (2) copies of Exhibits A-S, Addendum 1, appropriate sections of 6.5 (Geotechnical Stability Exhibit, and a check for the application fee described under Section (4) below. Exhibits should **NOT** be bound or in a 3-ring binder; maps should be folded to 8 1/2" X 11" or 8 1/2" X 14" size. To expedite processing, please provide the information in the format and order described in this form.

GENERAL OPERATION INFORMATION

Type or print clearly, in the space provided, ALL information requested below.

1. **Applicant/operator or company name (name to be used on permit)**: Ellicott Sand and Gravel, LLC

   1.1 Type of organization (corporation, partnership, etc.): Corporation

2. **Operation name (pit, mine or site name)**: Schubert Ranch Sand Resource

3. **Permitted acreage (new or existing site)**: 733.7 permitted acres

   3.1 Change in acreage (+) _____ acres

   3.2 Total acreage in Permit area 733.7 acres

4. **Fees**:

   4.1 New Application $2,696.00 application fee
   4.2 New Quarry Application ~~$3,442.00~~ quarry application
   4.4 Amendment Fee ~~$2,229.00~~ amendment fee
   4.5 Conversion to 112 operation (set by statute) ~~$2,696.00~~ conversion fee

5. **Primary commoditie(s) to be mined**: Gravel Sand Borrow _____ _____

   5.1 Incidental commoditie(s) to be mined: 1. _____ - _____ lbs/Tons/yr 2. _____ / _____ lbs/Tons/yr

   3. _____ / _____ lbs/Tons/yr 4. _____ / _____ lbs/Tons/yr 5. _____ / _____ lbs/Tons/yr

   5.2 Anticipated end use of primary commoditie(s) to be mined: Specification aggregates, fill material

   5.3 Anticipated end use of incidental commoditie(s) to be mined: _____

6. **Name of owner of subsurface rights of affected land**: Schubert Ranches, LLC
If 2 or more owners, "refer to Exhibit O".

7. **Name of owner of surface of affected land**: Schubert Ranches, LLC

8. **Type of mining operation**: ✔ Surface _____ Underground

9. **Location Information**: The center of the area where the majority of mining will occur:

COUNTY: El Paso

PRINCIPAL MERIDIAN (check one): ✔ 6th (Colorado) _____ 10th (New Mexico) _____ Ute

SECTION (write number): S 29

TOWNSHIP (write number and check direction): T 14 ____ North ✔ South

RANGE (write number and check direction): R 62 ____ East ✔ West

QUARTER SECTION (check one): ____ NE ____ NW ✔ SE ____ SW

QUARTER/QUARTER SECTION (check one): ✔ NE ____ NW ____ SE ____ SW

GENERAL DESCRIPTION: (the number of miles and direction from the nearest town and the approximate elevation):

3.1 miles southeast of Ellicott Colorado, west side of South Baggett Road. Site elevation 5910'

10. **Primary Mine Entrance Location** (report in either Latitude/Longitude **OR** UTM):

Latitude/Longitude:

Example: (N) 39° 44′ 12.98″
(W) 104° 59′ 3.87″

Latitude (N): deg 38 min 47 sec 43 .58 (2 decimal places)

Longitude (W): deg 104 min 21 sec 15 .94 (2 decimal places)

OR

Example: (N) 39.73691°
(W) -104.98449°

Latitude (N) _____._____ (5 decimal places)

Longitude(W) _____._____ (5 decimal places)

OR

Universal Tranverse Mercator (UTM)

Example: 201336.3 E NAD27 Zone 13
4398351.2 N

UTM Datum (specify NAD27, NAD83 or WGS 84) WGS 84 Zone 13

Easting _____

Northing _____

11. **Correspondence Information**:

APPLICANT/OPERATOR (name, address, and phone of name to be used on permit)

Contact's Name: Perry Hastings Title: Agent

Company Name: Ellicott Sand and Gravel, LLC

Street/P.O. Box: 235 Franceville Coal Mine Road P.O. Box:

City: Colorado Springs

State: CO Zip Code: 80929

Telephone Number: (602) - 558-0846

Fax Number: ( ) -

PERMITTING CONTACT (if different from applicant/operator above)

Contact's Name: Steve O'Brian Title: President

Company Name: Environment, Inc

Street/P.O. Box: 7985 Vance Dr. #205A P.O. Box:

City: Arvada

State: CO Zip Code: 80003

Telephone Number: (303) - 423-7297

Fax Number: (303) - 423-7599

INSPECTION CONTACT

Contact's Name: Perry Hastings Title: Agent

Company Name: Ellicott Sand and Gravel, LLC

Street/P.O. Box: 235 Franceville Coal Mine Road P.O. Box:

City: Colorado Springs

State: CO Zip Code: 80929

Telephone Number: (602) - 558-0846

Fax Number: ( ) -

CC: STATE OR FEDERAL LANDOWNER (if any)

Agency:

Street:

City:

State: Zip Code:

Telephone Number: ( ) -

CC: STATE OR FEDERAL LANDOWNER (if any)

Agency:

Street:

City:

State: Zip Code:

Telephone Number: ( ) -

12. **Primary future (Post-mining) land use (check one)**:

☐ Cropland(CR)	☐ Pastureland(PL)	☐ General Agriculture(GA)
☑ Rangeland(RL)	☐ Forestry(FR)	☐ Wildlife Habitat(WL)
☐ Residential(RS)	☐ Recreation(RC)	☐ Industrial/Commercial(IC)
☐ Developed Water Resources(WR)		☐ Solid Waste Disposal(WD)

13. **Primary present land use (check one)**:

☐ Cropland(CR)	☐ Pastureland(PL)	☑ General Agriculture(GA)
☐ Rangeland(RL)	☐ Forestry(FR)	☐ Wildlife Habitat(WL)
☐ Residential(RS)	☐ Recreation(RC)	☐ Industrial/Commercial(IC)
☐ Developed Water Resources(WR)		

14. **Method of Mining**: Briefly explain mining method (e.g. truck/shovel): This is a dry mining operation where front end loaders, dozers, track hoes & scrapers will remove material from a dry deposit.

15. **On Site Processing**: ☑ Crushing/Screening

13.1 Briefly explain mining method (e.g. truck/shovel): Loaders, dozers trackhoes, scrapers and trucks will be used to remove material and feed a processing plant that crushes washes and screens it into stockpiles.

List any designated chemicals or acid-producing materials to be used or stored within permit area:
None

16. **Description of Amendment or Conversion**:

If you are amending or converting an existing operation, provide a brief narrative describing the proposed change(s).

Maps and Exhibits:

Two (2) complete, unbound application packages must be submitted. One complete application package consists of a signed application form and the set of maps and exhibits referenced below as Exhibits A-S, Addendum 1, and the Geotechnical Stability Exhibit. Each exhibit within the application must be presented as a separate section. Begin each exhibit on a new page. Pages should be numbered consecutively for ease of reference. If separate documents are used as appendices, please reference these by name in the exhibit.

With each of the two (2) signed application forms, you must submit a corresponding set of the maps and exhibits as described in the following references to Rule 6.4, 6.5, and 1.6.2(1)(b):

EXHIBIT A	Legal Description
EXHIBIT B	Index Map
EXHIBIT C	Pre-Mining and Mining Plan Map(s) of Affected Lands
EXHIBIT D	Mining Plan
EXHIBIT E	Reclamation Plan
EXHIBIT F	Reclamation Plan Map
EXHIBIT G	Water Information
EXHIBIT H	Wildlife Information
EXHIBIT I	Soils Information
EXHIBIT J	Vegetation Information
EXHIBIT K	Climate Information
EXHIBIT L	Reclamation Costs
EXHIBIT M	Other Permits and Licenses
EXHIBIT N	Source of Legal Right-To-Enter
EXHIBIT O	Owners of Record of Affected Land (Surface Area) and Owners of Substance to be Mined
EXHIBIT P	Municipalities Within Two Miles
EXHIBIT Q	Proof of Mailing of Notices to County Commissioners and Conservation District
EXHIBIT R	Proof of Filing with County Clerk or Recorder
EXHIBIT S	Permanent Man-Made Structures
Rule 1.6.2(1)(b)	ADDENDUM 1 - Notice Requirements (sample enclosed)
Rule 6.5	Geotechnical Stability Exhibit (any required sections)

The instructions for preparing Exhibits A-S, Addendum 1, and Geotechnical Stability Exhibit are specified under Rule 6.4 and 6.5 and Rule 1.6.2(1)(b) of the Rules and Regulations. If you have any questions on preparing the Exhibits or content of the information required, or would like to schedule a pre-application meeting you may contact the Office at 303-866-3567.

Responsibilities as a Permittee:

Upon application approval and permit issuance, this application becomes a legally binding document. Therefore, there are a number of important requirements which you, as a permittee, should fully understand. These requirements are listed below. Please read and initial each requirement, in the space provided, to acknowledge that you understand your obligations. If you do not understand these obligations then please contact this Office for a full explanation.

_____ 1. Your obligation to reclaim the site is not limited to the amount of the financial warranty. You assume legal liability for all reasonable expenses which the Board or the Office may incur to reclaim the affected lands associated with your mining operation in the event your permit is revoked and financial warranty is forfeited;

2. The Board may suspend or revoke this permit, or assess a civil penalty, upon a finding that the permittee violated the terms or conditions of this permit, the Act, the Mineral Rules and Regulations, or that information contained in the application or your permit misrepresent important material facts;

3. If your mining and reclamation operations affect areas beyond the boundaries of an approved permit boundary, substantial civil penalties, to you as permittee can result;

4. Any modification to the approved mining and reclamation plan from those described in your approved application requires you to submit a permit modification and obtain approval from the Board or Office;

5. It is your responsibility to notify the Office of any changes in your address or phone number;

6. Upon permit issuance and prior to beginning on-site mining activity, you must post a sign at the entrance of the mine site, which shall be clearly visible from the access road, with the following information (Rule 3.1.12):

   a. the name of the operator;

   b. a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board; and,

   c. the permit number.

7. The boundaries of the permit boundary area must be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries prior to site disturbance.

8. It is a provision of this permit that the operations will be conducted in accordance with the terms and conditions listed in your application, as well as with the provisions of the Act and the Construction Material Rules and Regulations in effect at the time the permit is issued.

9. Annually, on the anniversary date of permit issuance, you must submit an annual fee as specified by Statute, and an annual report which includes a map describing the acreage affected and the acreage reclaimed to date (if there are changes from the previous year), any monitoring required by the Reclamation Plan to be submitted annually on the anniversary date of the permit approval. Annual fees are for the previous year a permit is held. For example, a permit with the anniversary date of July 1, 1995, the annual fee is for the period of July 1, 1994 through June 30, 1995. Failure to submit your annual fee and report by the permit anniversary date may result in a civil penalty, revocation of your permit, and forfeiture of your financial warranty. It is your responsibility, as the permittee, to continue to pay your annual fee to the Office until the Board releases you from your total reclamation responsibility.

NA 10. For joint venture/partnership operators: the signing representative is authorized to sign this document and a power of attorney (provided by the partner(s)) authorizing the signature of the representative is attached to this application.

NOTE TO COMMENTORS/OBJECTORS:

It is likely there will be additions, changes, and deletions to this document prior to final decision by the Office. Therefore, if you have any comments or concerns you must contact the applicant or the Office prior to the decision date so that you will know what changes may have been made to the application document.

The Office is not allowed to consider comments, unless they are written, and received prior to the end of the public comment period. You should contact the applicant for the final date of the public comment period.

If you have questions about the Mined Land Reclamation Board and Office's review and decision or appeals process, you may contact the Office at (303) 866-3567.

Certification:

As an authorized representative of the applicant, I hereby certify that the operation described has met the minimum requirements of the following terms and conditions:

1. To the best of my knowledge, all significant, valuable and permanent man-made structure(s) in existence at the time this application is filed, and located within 200 feet of the proposed affected area have been identified in this application (Section 34-32.5-115(4)(e), C.R.S.).

2. No mining operation will be located on lands where such operations are prohibited by law (Section 34-32.5-115(4)(f), C.R.S.;

3. As the applicant/operator, I do not have any extraction/exploration operations in the State of Colorado currently in violation of the provisions of the Colorado Land Reclamation Act for the Extraction of Construction Materials (Section 34-32.5-120, C.R.S.) as determined through a Board finding.

4. I understand that statements in the application are being made under penalty of perjury and that false statements made herein are punishable as a Class 1 misdemeanor pursuant to Section 18-8-503, C.R.S.

This form has been approved by the Mined Land Reclamation Board pursuant to section 34-32.5-112,C.R.S., of the Colorado Land Reclamation Act for the Extraction of Construction Materials. Any alteration or modification of this form shall result in voiding any permit issued on the altered or modified form and subject the operator to cease and desist orders and civil penalties for operating without a permit pursuant to section 34-32.5-123, C.R.S.

Signed and dated this 8 day of October, 2018.

Ellicott Sand and Gravel, LLC
Applicant/Operator or Company Name

If Corporation Attest (Seal) No seal

Signed: Perry Hastings

Signed: NA
Corporate Secretary or Equivalent
Town/City/County Clerk

Title: Agent

State of Colorado)
) ss.
County of El Paso)

The foregoing instrument was acknowledged before me this 8 day of October 2018, by Perry Hastings as Agent of Ellicott Sand and Gravel, LLC

CHRISTINE WILSON
Notary Public
State of Colorado
Notary ID # 20094028750
My Commission Expires 11-10-2021

Christine Wilson
Notary Public

My Commission expires: 11-10-2021

SIGNATURES MUST BE IN BLUE INK

You must post sufficient Notices at the location of the proposed mine site to clearly identify the site as the location of a

Affidavit of Authority to Execute Financial Warranty Documents

Before me this day, the undersigned Perry Hastings [name of authorized person], in his/her capacity as Agent [title of authorized person] ("Affiant"), personally appeared and, being first duly sworn upon oath said:

1. This affidavit is being executed and submitted on behalf of Ellicott Sand and Gravel, LLC [name of business organization], a(n) Limited Liability Corporation [legal form of business organization, *e.g.*, corporation, partnership, limited liability company, etc.], in good standing in the State of Colorado (the "Company").

2. It is in the interest of the Company to execute certain financial warranty documents associated with file number _____ (DRMS file number), which are required by the Colorado Mined Land Reclamation Board and Division of Reclamation Mining and Safety pursuant to Colorado law ("Financial Warranty Documents").

3. Affiant is duly authorized to sign such Financial Warranty Documents on behalf of the Company and to bind the Company to the same.

4. Affiant is not prohibited or limited by the Company's governing documents or by any applicable law from executing the Financial Warranty Documents.

5. Affiant will inform the Division of Reclamation Mining and Safety within thirty (30) days in the event that his/her authorization to execute Financial Warranty Documents on the Company's behalf is terminated.

Further, Affiant sayeth not.

what is the permit number?

Perry Hastings
Affiant's Name

Perry Hastings
Signature

CHRISTINE WILSON
Notary Public
State of Colorado
Notary ID # 20094028750
My Commission Expires 11-10-2021

STATE OF Colorado)
) ss.:
COUNTY OF El Paso)

The foregoing instrument was acknowledged before me this 8 day of October, 2018,
by Perry Hastings as Agent of Ellicott Sand and Gravel, LLC.

Notary Public Christine Wilson

My Commission Expires 11-10-2021

TABLE OF CONTENTS

EXHIBIT A

LEGAL DESCRIPTION

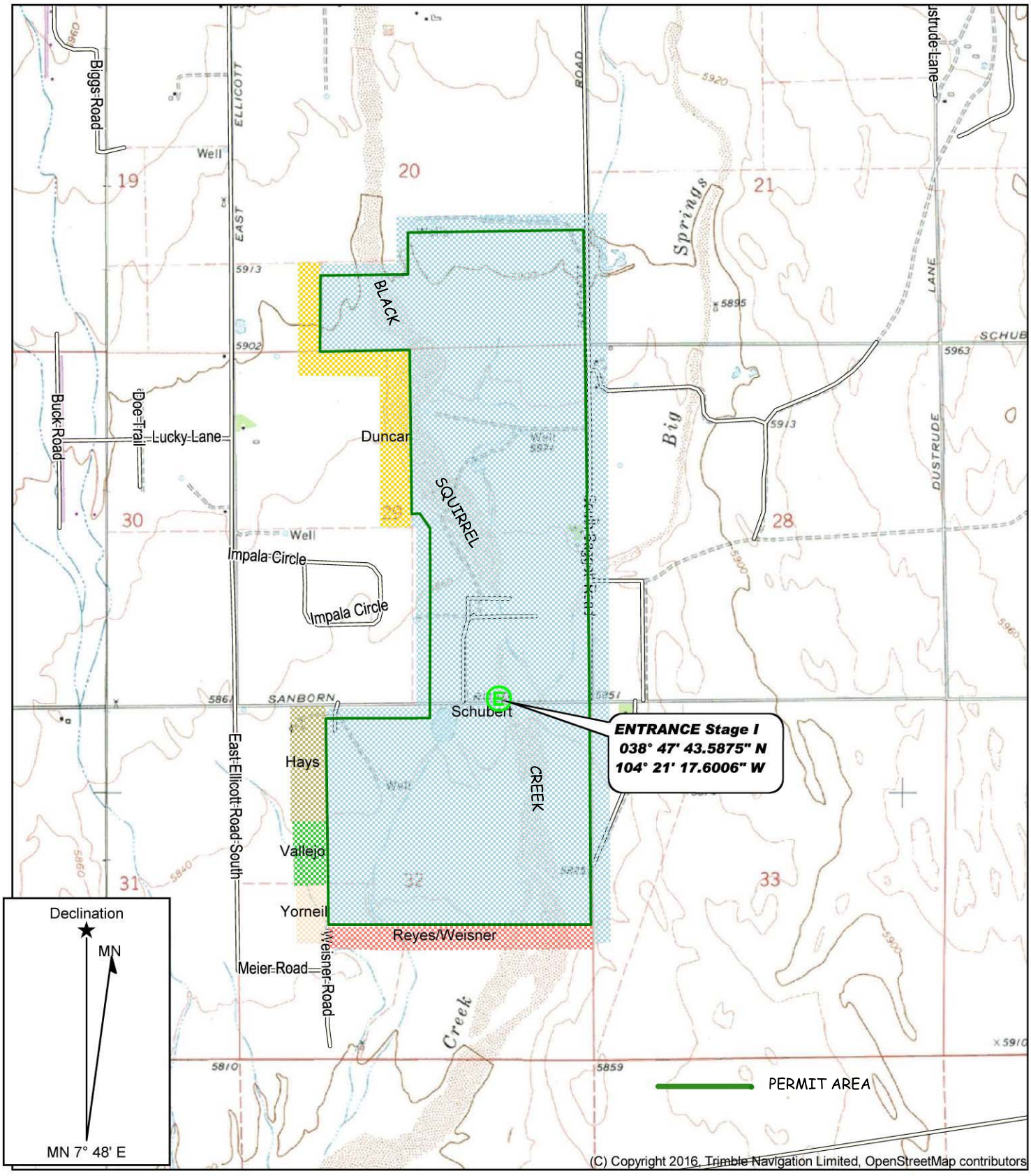
Part fo the S½N½SE¼, S½SE¼,and SE¼SW¼of Section 20, and

The E½E½ and NW¼NE¼ and parts of the SW¼NE¼, SW¼SE¼, and NW¼SE¼ of Section 29 and

The E½NE¼, SW¼NE¼, & SE¼NW¼, and parts of the NW¼NE¼ & NE¼NW¼, Section 32, Township 14 South, Range 62 West, 6th P.M. El Paso County, Colorado

Containing 733.7 acres more or less.

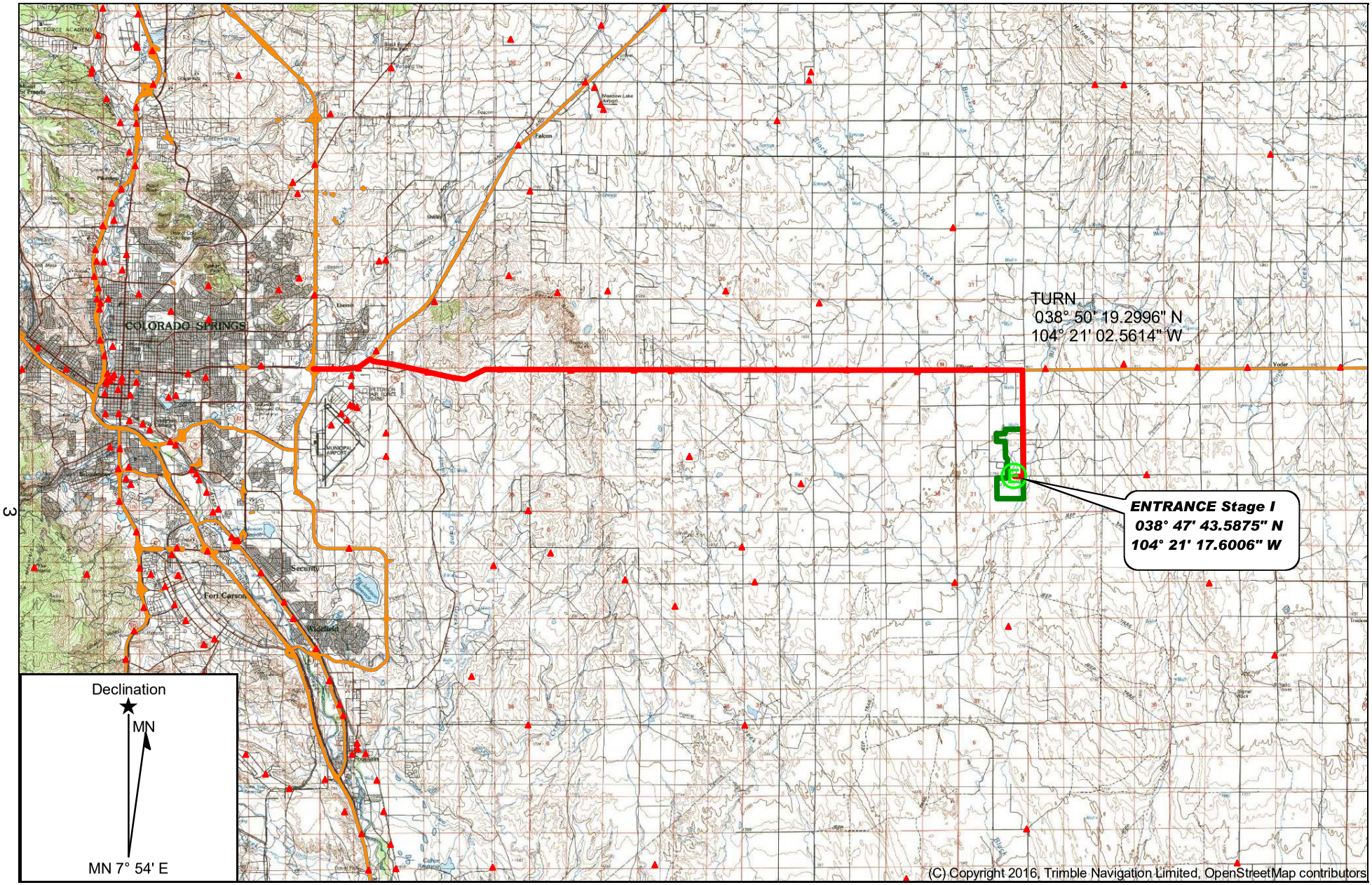
Entrance location Stage I: 38°47'43.59"N, 104°21'17.601"



Quad. Name: BIG SPRINGS RANCH
Date: 10/29/18
Scale: 1 inch = 2,000 ft.

Part of the S1/2N1/2SE1/4, S1/2SE1/4,and SE1/4SW1/4 of Section 20, and The E1/2E1/2 and NW1/4NE1/4 and parts of the SW1/4NE1/4, SW1/4SE1/4, and NW1/4SE1/4 of Section 29 and The E1/2NE1/4, SW1/NE1/4, & SE1/4NW1/4, and parts of the NW1/4NE1/4 & NE1/4NW1/4, Section 32, Township 14 South, Range 62 West, 6th P.M. El Paso County, Colorado
Containing 733.7 acres more or less.

ELLICOTT SAND AND GRAVEL LLC
SCHUBERT RANCH SAND RESOURCE
MAP EXHIBIT B - VICINITY MAP



Quad. Name: PUEBLO (CO)
Date: 10/29/18
Scale: 1 inch = 20,000 ft.

Part of the S1/2N1/2SE1/4, S1/2SE1/4,and SE1/4SW1/4 of Section 20, and The E1/2E1/2 and NW1/4NE1/4 and parts of the SW1/4NE1/4, SW1/4SE1/4, and NW1/4SE1/4 of Section 29 and The E1/2NE1/4, SW1/NE1/4, & SE1/4NW1/4, and parts of the NW1/4NE1/4 & NE1/4NW1/4, Section 32, Township 14 South, Range 62 West, 6th P.M. El Paso County, Colorado
Containing 733.7 acres more or less.

ELLICOTT SAND AND GRAVEL LLC
SCHUBERT RANCH SAND RESOURCE
MAP EXHIBIT B1 - AREA MAP

EXHIBIT D

MINING PLAN AND TIMETABLE

LOCATION

This is an open pit mine located approximately 2.5 miles southeast of Ellicott, Colorado. From Ellicott Colorado, follow SHW 94 east two (2) miles to South Baggett Road, then south (right) 1.7 miles to the northeast corner of the mine. The Entrance to Stage I is west of the intersection of South Baggett Road and Sanborn Road (coordinates 38°47'43.58"N, 104°21'17.60"W). The entrance will change as each new mining Stage is opened. The exact entrance locations for each stage are unknown at this time. The private roads on the mine site will be used also. Periodic grading will be necessary to keep the roads in their present condition. Each Stage entrance will remain after mining is complete for landowner access to that area. Please refer to **EXHIBIT B - VICINITY MAP** for the property configuration and the relationships to surrounding geological features.

CURRENT CONDITIONS

Map Exhibit C shows the outline of the Affected Lands; the touching landowners; the 200 foot ownership; structures; current topography, and hydrologic features of the property. Also, all permanent manmade structures are shown on this map exhibit. Surrounding property uses include rangeland or irrigate agriculture and rural residential. Portions of the mine area used as irrigated sod grass area or irrigated agriculture fields. These area are generally associated with the irrigation pivots on the north and south side of the permit area. The Schubert Ranch (owners) office and main yard is located on South Baggett Road approximately midway along the east permit line. All of the buildings shown on the permit area are owned by Schubert Ranch or the ranches owners. At this time the building in the mined area will remain so we plan to establish a mining setback from the main structures as shown on the Reclamation Plan Map.

Bisecting the permit area from north to south is an ephemeral drainage labeled Black Squirrel Creek and a secondary area that is where Big Springs Creek merges with the Black Squirrel. Mining will not take place in the primary erosion channels where water has run down the dry creek bed. The landowners have built flow direction berms along the dry creek

beds and done some armoring to protect the fields and building from past flooding. The Floodplain line is shown on the map. This line is located from the Pikes Peak Regional Floodplain Map. Run off down these dry creek beds will not be impaired by mining or reclamation.

The site is currently used as irrigated agriculture and rangeland and consists of a deep sand deposit that parallels both side of Black Squirrel Creek. The usable material on this site is greater then 70 feet deep as evidenced by the well drilling logs reviewed. The salvageable soil depths vary from 4 to 15 inches but many of the 8 soils types have 8 inches or less so the average works out to be 5.5 inches. However, Most of Stage VI is area covered by irrigation sprinklers is used for sod farming so little or no actual soil remains on those. The mine floor will be sand since the deposit averages 100 plus feet deep.

MINING PLAN

Of the 733.7 acres ± in the permit area a maximum of 561.7 acres ± will be disturbed by the mining operation over the life of the mine. The area is broken into 6 mining stages for sake of discussion. When a stage is opened the 25 foot mining setbacks will be delineated along the permit/affected lands line and 50 feet from the top of the bank along Black Squirrel Creek.

Mining will begin in Stage I west of Black Squirrel Creek and north of Sanborn Road. A 30 acre area will be stripped within the setbacks explained above that will be used as the active mining area, plant site and stockpile area. Mining will move south to north in this stage once a working face that trends east-west across the stage. We expect to mine approximately 35 feet deep in the stripped area creating the first level. Once enough area is open a second 35 foot deep cut will be made to reach the final floor of the mine. This will create two 35 foot benches that extend from east to west across the stage as shown on the **MINING PLAN MAP - EXHIBIT C-1**. The typical layout of the bench is show on **Figure D-1** following the Mining Timetable. Eventually, an additional 10 acres of partially reclaimed area will be present since reclamation will run concurrent with mining, so the total bonded disturbance allowed will be 40 acres.

There will be a 25-foot or wider digline setback maintained from the permit boundary so there is adequate space on the level above the slope for property line access, setback maintenance, grading and shaping. In Stage VI the setback from the northern house will be between 210 and 215 feet and on the southern ranch complex it will vary from 50 to 130 feet.

As mining progresses across a stage the exterior slope will be mined ½ to 1 until it is within 55 feet of a stage perimeter then shaped to the final 3:1 rate from the surface to the top of the first bench. Once that slope toe of that slope is established another 55 foot wide vertical mining setback will be established to leave enough material to create the bottom of the 3:1 cut/fill slope along the outer limits of a Stage.

The Plant Site/stockpile area will start on the surface, but once the initial level is reached it will be moved below grade so it is screened below the surrounding areas. **MAP EXHIBIT C-1** shows how the site would look when the mine reaches full production.

On the **Mining Plan Map** the processing/stockpile and partially reclaimed areas covers approximately 22.0 acres, there is 15.0 ac. of bench and working face area and 3.0 acres stripped. The highwall is 500 feet long with approximately 4100 feet being temporary graded to 2h to 1v. As the mining face extends across the property, we will maintain a 500 foot long, near vertical, working face. The remaining highwall will be kept at an interim grade of 2h to 1v. The working face will move from the top bench to the mine floor as it progresses across a given Stage. The plan is to continue to mine into the sand deposit at the mining face until the permit limits are reached. .

Typically mining will be done in cycles. These cycles involve moving a crushing plant into a mine and beginning to process material until there is a six month to 1 year supply of material stockpiled. Once an adequate supply is processed, the processing plant and equipment is moved to another mine. The stockpiles will be used throughout the year by the company. As mining ends on a section of the working face it is temporally graded to 2:1 so it is stable when there are no activities in the mine. Any resoiling and revegetation needed will be completed when the area where material is removed will not be redisturbed. This cycle continues until the mine is played out.

Each time the mine is re-entered, mining begins by setting up the plant and if needed an area is stripped. The salvaged topsoil will be stockpiled along the mine perimeter setbacks or on the mine floor, i.e., in places where it will not be disturbed until needed. Much of the permit area will continue to be used by the owners for their ranching purposes throughout the life of the mine. The approximate location of the soil piles are shown on the **MINING PLAN MAP.**

Mining will begin on a section of the slopes created at the end of the last mining cycle until a near vertical face is open. This face will be worked to the east and west until it extends across the property and at that time mining will progress to the south or north depending on the Stage mining is taking place. As mining progresses thru the site the processing plant will be set near the open face to reduce the haul distance from the mine face.

This pit will be operated year-around by Ellicott Sand & Gravel LLC, weather permitting. There may be periods when the demands for material are slow and no mining will take place at which time the mine will become an ***Intermediate Operation.*** Stockpiles of material will be maintained on the site and as the need arises, it will be hauled to our project sites or sold to the public.

This will be a six stage operation, starting in Stage I and working counter clock wise around the permit area so mining ends in the northeast corner. Generally, mining will be to the north and south depending on what stage is being mined with the mining face extended across each stage from east to west.

Review of **MAP EXHIBIT C-1** shows how we expect the site to look when mining is approximately 20% done. Note, the floor of the excavation is flat and the exterior slopes into the mined area are graded 3:1 where reclaimed, 2:1 when temporary grading is done and near vertical where mining is taking place. Material will be left along the mine perimeter to do a cut/fill sloping operations for the final slopes.

Mining equipment may include but is not limited to, front-end loaders, scrapers, bulldozers, dump trucks and a water truck. Processing equipment may include but is not limited to conveyors, crushers and screen plants. A scale and scale house as well as a

This should be included in proposed structures in the LOI

Does Well Permit support?

shop and maintenance building may also be built at the mine during its life. No blasting will take place at this mine.

As much as possible, the surface drainage will be maintained in the same direction as it now exists. The proposed sloping plan for the excavated area should eliminate any concerns of erosion occurring on the site. The ephemeral drainages will not be disturbed by mining.

On a typical operation of this type we may use up to 3 ac-ft of water per year. Most of the water used for dust control will be used on haul roads. Please refer to **EXHIBIT G - WATER** for the discussion of how water will be used at the site and the source of said water.

There are no ditches crossing the site and no surface or subsurface water will be impacted by the mining operation. All interior pit slopes will be maintained with a pit-ward attitude so that historic drainage patterns can be maintained. This same slope management plan will prevent any offsite slides or other disruptions. Isolation berms or ditches will be constructed around the active mining area to prevent off site stormwater from contacting the disturbed area. All stormwater contacting the disturbed area will be retained on site and allowed to evaporate or soak into the underlying sand. No stormwater will be retained in the mine area for more then 72 hours. No dewatering will take place as this is a dry mine. A CDPS and stormwater permit will be obtained if needed. No U.S. Army Corps of Engineers 404 permit is necessary, as there are no water bodies on the site nor are there any wetland areas that will be disturbed by mining or reclamation. No mining will take place within the ephemeral drains of Black Squirrel Creek or Big Springs Creek.

MINING TIMETABLE

This estimated mining timetable is based on an average year and Ellicott Sand & Gravel LLC expects a specific year to vary widely from the average. If there are changes in the mining timetable we will discuss the reasons for the changes in the annual report that follows the change and modify it at that time.

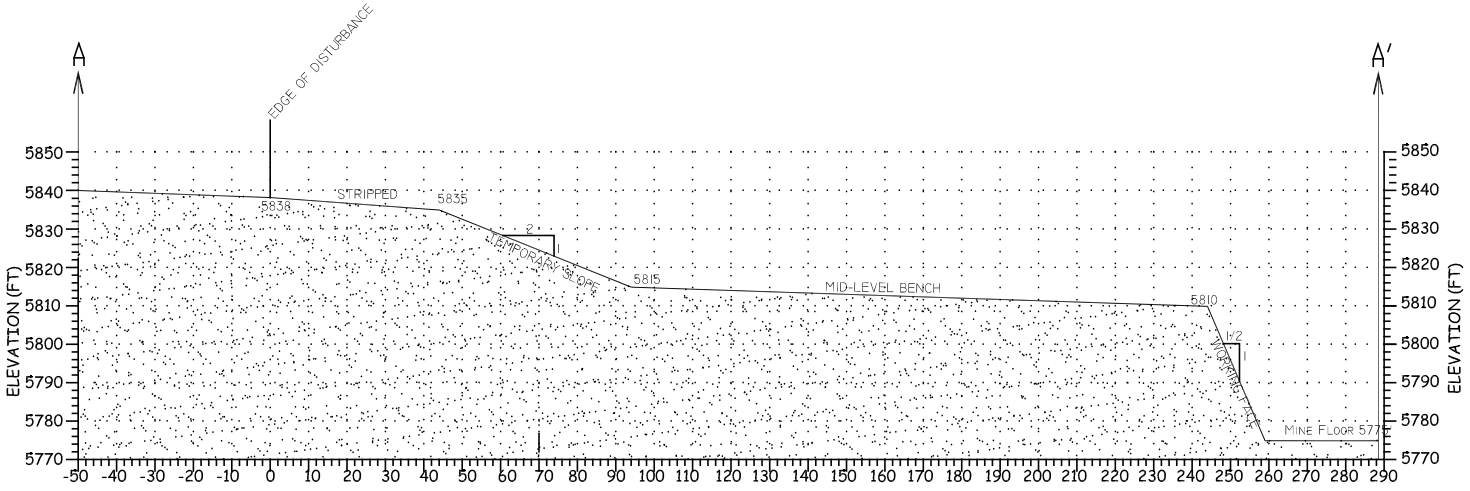
ESTIMATED MINING TIMETABLE

		ACRES ±			
Stage	ESTIMATED YEARS	TOTAL AREA	TOTAL MINED	MINED 100%	MINED SLOPES
I	10-15	68.94	60.05	28.22	31.83
II	15-20	214.00	181.14	129.68	51.46
III	4-6	54.39	47.30	14.26	33.04
IV	2-5	24.32	19.00	4.20	14.80
V	2-4	20.81	17.46	3.32	14.15
VI	20-30	268.60	236.70	159.64	77.07
Drainage	LOM	82.81	0.00	0.00	0.00
Totals	52-80	733.87	561.65	339.32	222.35

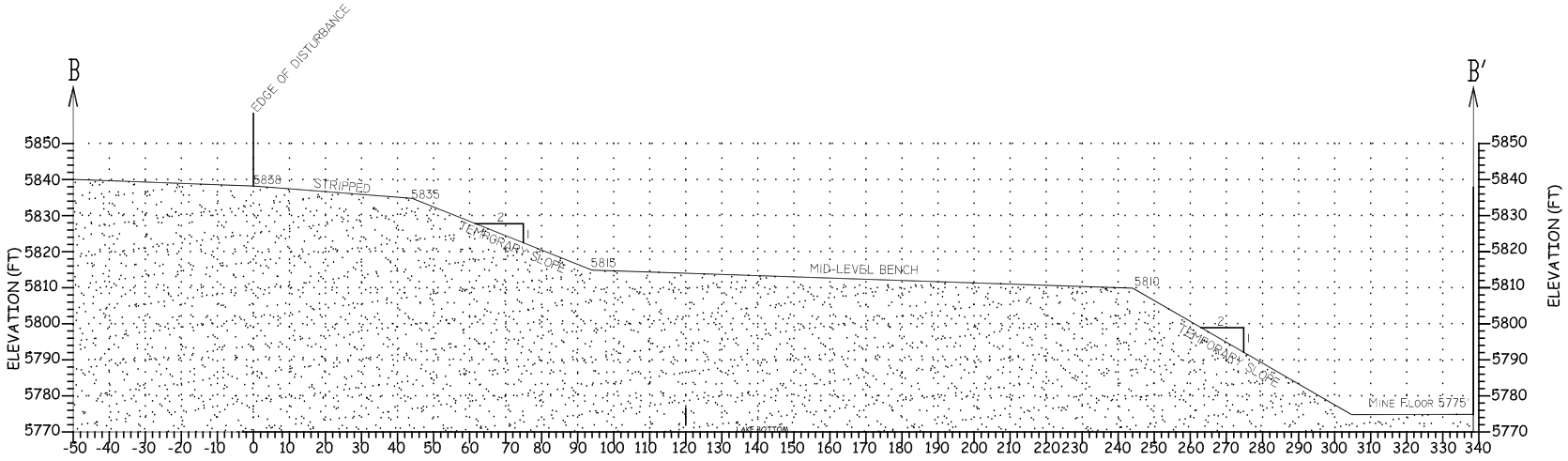
ELLICOTT SAND AND GRAVEL, LLC.

SCHUBERT RANCH SAND RESOURCE

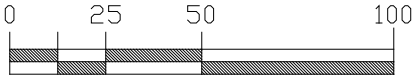
CROSS SECTION FIGURE D-1



SECTION A - WORKING FACE SLOPING



SECTION B - TEMPORARY MINING FACE SLOPING



SCALE 1"=50'

PREPARED BY: *ENVIRONMENT, INC.*
7985 VANCE DR., # 205A
ARVADA, CO 80003
(303) 423-7297

DATE: MAR 17, 2009 – 15:09:13

EXHIBIT E

RECLAMATION PLAN AND TIMETABLE

RECLAMATION PLAN

The proposed future use of this site is to return it to it's existing use of rangeland and agriculture. Mining will create a series of dry depressions along Black Squirrel Creek that have flat floors which are approximately 70 feet below the surface. This makes the reclamation plan very simple in that the mined area will have 3h to 1v slopes from the surface to the mined floor that will be shaped, resoiled and then revegetated with grass seed once mining is complete. Review of the **RECLAMATION PLAN MAPS** in this application packet depicts how we believe the site will look once mining is complete.

As mining progresses the slopes along the working face of the mining area will be temporally graded 2:1 to stabilize them until it is time for resumption of mining or they are final graded for final reclamation. By creating the temporary slopes as mining progresses, we are reducing the amount of work necessary to reclaim the site if mining stopped prematurely. The exterior slope will be graded 3h to 1v, resoiled and seeded as soon as practical after they are mined.

Since the working face slopes around in the mined area will be steeper than their final slopes, only minor amounts of cut/fill slope work will be necessary as mining ends. Five Hundred feet of the working face will be left nearly vertical and will need to be cut/fill sloped if mining ended early. This sloping plan will also insure, that if mining ceases before the resource is exhausted, only a minor amount of work would have to be done to finish reclamation on the disturbed area. The placement of the soil stockpiles around the perimeter of the mined area or direct placement on the final slopes as stripping takes place helps reduce the cost to reclaim the site if mining ended midway thru the site. It also means that the topsoil, only has to be handled once and reclamation will run concurrent with mining.

There are sufficient amounts of soil on the site so the mined area can be resoiled to an average depth of 4 to 6 inches

except on the sod farm areas. Additional growth medium (processing fines) will be salvaged during processing to supplement the topsoil if needed. All topsoil encountered will be saved from the stripping process and the operator will not haul additional soils onto the site for revegetation. Existing soils in place have been capable of producing a sparse cover of grasses suitable for grazing purposes when not abused. The vegetation information was obtained from site visits and data provided in the vegetation information obtained from the El Paso County NRCS soil report found in **EXHIBIT I - SOILS**. The report describes the current cover in the terms of yearly production for a typical range site and is not site specific. It will serve as background information as reclamation progresses. Our site specific investigations suggest the range quality is on the average side.

As outlined in the **MINING PLAN**, up to six stages will be mined creating 561.7 acres ± of mined area in the permitted area. This will be reclaimed concurrently with mining. The plan calls for having no more than 40.0 acres ± disturbed at any-one-time. As mining progresses across the property some parts of the property will remain undisturbed while other areas will be either stripped, mined, partially reclaimed or totally reclaimed. The **MINING PLAN MAP - EXHIBIT C-1** shows how the pit will look when approximately 38% is stripped, mined and partially reclaimed. The **RECLAMATION PLAN MAP - EXHIBIT F** shows how the area will look when reclamation is complete. The mined areas will be returned to at least their present vegetative condition when reclamation is complete.

Careful analysis of the growth medium and salvaged soil will permit the operator to carry out a soil additive program and to monitor the prescribed seeding plan. We will be able to determine if the plan requires revision. In some case ages manure will be used to add organic matter to the soil at a rate of 4000 lbs per acres. Under normal weather conditions, an adequate moisture reserve will be present for the establishment of the proposed seed mixture. No irrigation is planned for this site because we will be attempting to create a diverse dryland site that is non-water dependent. If the owners wish to use some of the mined area for irrigated agriculture, it is their responsibility to develop those areas after mining ends. No

revegetation will take place on access roads as they will be used by the owners to access their property.

REVEGETATION PROGRAM

The revegetation program to be implemented by the Ellicott Sand & Gravel LLC is detailed below. The topsoiling plan presented above and this revegetation program is devised after careful review of the existing soil conditions and present vegetation, both on the site and in the NRCS report prepared by Mr. Greg Langer. *"Revegetation will be carried out in such a way so as to establish a diverse, effective and long-lasting vegetative cover that is capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizers."* The plan is designed to create a vegetative cover that is at least equal in extent to the cover of the natural vegetation before mining. The use of species native to the area is included. The seed mix below was prepared by Greg Langer of the El Paso County NRCS office in Colorado Springs. Since the intended use of the reclaimed land as rangeland and agriculture any slopes created will be commensurate with this final land use.

Seed will be drilled wherever possible, when drilling is not possible, the seed will be broadcast. The revegetation plan provides for the greatest probability of success in plant establishment and vegetative development by considering environmental factors such as seasonal patterns of precipitation, temperatures and wind.

The roads will remain on the site to provide access for planting crews and for the supervision and inspection of the reclamation plan. The roads will provide the owner's with access to the surrounding property when reclamation is complete.

SEEDBED PREPARATION

When mining on an area is complete, reclamation will begin. The stockpiled soils will be spread, smoothed of large clods, worked until moderately fine. On the areas where seed is broadcast the surface will be left fairly rough to trap the seed and keep it from being affected by wind.

SEEDING TIME

The grass seed mixture will be planted from early fall thru mid-spring (November 1 to April 30). The time of planting will be controlled by when the resoiled areas are ready for planting. If fall planting is convenient, the seeding will be done before the first freeze (about the time Winterwheat is planted). If spring planting is called for, it will be done in March or April weather permitting after the last frost. Both periods assure there will be adequate residual ground moisture available for the newly planted seeds.

GRASSES

The following seed mix was developed by the El Paso County NRCS office to be used by Ellicott Sand & Gravel LLC.

Non-Irrigated grass seed recommendation

Seed	Rate PLS/acre
Sideoats grama (Vaughn)	0.91
Sand dropseed (common)	0.01
Little Bluestem (camper)	0.67
Western Wheatgrass (Arriba)	1.60
Sand Bluestem (Chet)	0.79
Prairie Sandreed(goshen)	0.32
Yellow indiangrass (Cheyenne)	1.02
Switchgrass (blackwell)	1.12
Green needlegrass (lodorm)	0.48
Indian ricegrass (Nexpar)	1.11
Purple prairie clover	0.03
Four-wing saltbush	1.00
Winterfat	0.02
	9.08

Using this mixture, when drilled, will provide approximately 40 seeds per square foot. If the seed is broadcast, the amount will be doubled and spread on a rough surface. The seeded areas will then be dragged or raked thoroughly to set the seed.

Experience shows that on other operations the seeded area will have a heavy cover of weeds after the first year. The inclusion of winter wheat will reduce this probability. It will tend to shade the seedbed, retain snow in the winter and act as a

wind break for the newly emerging grasses. The second year there are fewer weeds as the grasses start to take hold. By the third year the weeds are mostly gone and the grass has established itself so it will grow in future years.

WEED CONTROL

The revegetated areas will be monitored closely each spring for the first two years to determine if noxious weeds are invading the area. Ellicott Sand & Gravel, will implement a weed monitoring and control plan for the mine and have included a copy in the Appendix for your review. The operator will be responsible for weed control on the areas around and in the active mine area. The landowner will be responsible for weed control on the undisturbed area.

Weed control will be initiated if the problem becomes serious or if an excessive weed cover is still present at the end of the second year. In no way should this be taken to mean that we will try to eradicate all the weeds from the site. Total eradication of weeds from the site is not necessarily desirable, so we will be using controls on the noxious weeds and letting the rest grow in select areas for limited times as long as they do not hamper the grass growth. It may be necessary to control weeds by mowing after the first year, the feasibility of chemical weed control methods will be studied should other forms not work. Control of noxious weeds is important to the state so USDA Extension Service recommendations will be followed to control them.

IRRIGATION

No irrigation is planned for the revegetated area in the pit. It makes the vegetation dependent on water and does not promote a vegetation cover that is diverse and capable of self regeneration. The landowners may wish to use irrigation on areas they redevelop for agricultural purposes.

RECLAMATION PERFORMANCE STANDARDS

The operator intends to mine the property in compliance with the Reclamation Performance Standards of Rule 3. Grading will be done to create a final topography that is compatible with the

intended final land use. Most slope areas will be created by backfilling to the final slope rate. These slopes will be 3:1 and we will attempt to retain the present drainage pattern across the property for those areas not mined. A sign that conforms to the requirements in Rule 3.1.12 (1996) will be in place at the entrance to this facility before mining begins.

The material used to create the slopes will be native material found on the site at this time. All surface runoff from reclaimed areas will be directed into the mine area.

All grading will be done in a manner to control erosion and to protect areas outside the affected lands from slides or other damage. All backfilling and grading will be completed as soon as feasible after mining is completed in any given area. All refuse will be hauled away or disposed of in a manner that will control unsightliness and protect the drainage system from pollution. There are no acid-forming or toxic materials involved in this operation. If petroleum products are stored at the site, it will be done as prescribed by applicable laws. Any storage tanks will be surrounded by a berm or be in self contained facilities adequate to retain any fluid spilled should a tank rupture. In addition, there is adequate absorbent materials on site to contain any spills that would occur outside the containment structure. There are no drill or auger holes on the land. Maximum slopes will be within the limits set forth in the Rules and Regulations of the Board and will be capable of being traversed by machinery.

The operator does not expect prevailing hydrologic conditions to be disturbed. Ellicott Sand & Gravel LLC will comply with applicable Colorado water laws and regulations (as the operator understands them) governing injury to existing water rights to minimize any disturbance which might occur to the prevailing hydrologic balance of the affected land and surrounding area and to the quality and quantity of water in surface and ground-water systems both during and after the mining operation and during reclamation. No groundwater will be exposed by mining. Any water used in the operation of the processing plants and for dust control will come from water sources described in **WATER - EXHIBIT G**.

No dredging takes place at this facility, there are no temporary siltation structures involved in this operation and no mining will be done in a river or waters of the United States. A U.S. Army Corps of Engineers Permit is not required for this operation because there are no wetlands on the site that will be disturbed. Retention ponds may be constructed on the site to collect stormwater before it leaves the site. No stormwater will be retained for more then 72 hours and then only after it meets water quality standards. These ponds will be removed when an area is reclaimed. There will be no earthen dams on the mined area.

The mining and reclamation plans consider existing wildlife conditions and final reclamation will not change the area for wildlife use. The mining and reclamation plans allow for the safety and protection of wildlife remaining on the mine site, at the processing site and along all access roads to the site. In general we have found there is little long term disturbance to native wildlife species around gravel mining operations. The big game species tend to use mining sites and newly vegetated areas after operations have stopped for the day. The smaller species tend to move to undisturbed areas.

Topsoil in the areas that are used as sod farm area (average 5 inches) is of good to fair quality, so when it is removed to reach the mineral deposit, it will be segregated and stockpiled. If the topsoil and overburden piles remain undisturbed for more than a year, a vegetative cover using 40.0 #'s-PLS of Western Wheatgrass, per acre of surface area of soil stockpiles. This works out to about 80 seeds/sq-ft, or other means will be employed to prevent erosion from wind and water and keep them free of contaminants so that they remain useful for sustaining vegetation when reclamation begins. The stockpiles will be located in areas where disturbances by ongoing mining operations will be at a minimum, i.e., along setbacks on the pit perimeter or mine floor. The topsoil will be handled as little as possible until it is replaced onto disturbed areas. The operator will take measures necessary to insure the stability of the replaced topsoil on graded slopes and spreading it as evenly as possible. Fertilizer and other soil amendments will be used as discussed in this plan.

RECLAMATION TIMETABLE

Reclamation will begin once enough area has been opened so that any reclamation completed will not be disturbed as mining progresses. This may take 10 or more years depending on the economic conditions in the area and the amount of material mined. The operator anticipates approximately 95% of the total mined land will be reclaimed by the time mining is completed. A portion of the floor area will be complete, but the area under the plant site/stockpile area will still need work and grading of the final face area will be that last area to be reclaimed. Within one year after the stockpiles have been removed, all resoiling and revegetation will be complete. The area will then be monitored for success of revegetation until it is released by the Board. The operator estimates that, this will happen 3 to 5 years after mining is completed.

If revegetation problems occur before release, an analysis of the site will be made and the area will be revegetated again as necessary. The seed mixture and rates may be revised as needed to complete reclamation, if a modification is required, the Division will be notified prior to making the change. This gives us the most flexibility to complete reclamation successfully.

RECLAMATION TIMETABLE

		Acres ±			
Stage	Years	Total Area	Revegetation	Road	Undisturbed
I	3-5	68.94	58.95	1.11	8.88
II	3-5	214.04	178.18	2.97	32.89
III	3-5	54.39	46.17	1.13	7.09
IV	3-5	24.32	18.39	0.61	5.32
V	3-5	20.80	16.60	0.86	3.35
VI	3-5	268.41	234.34	2.37	31.70
Drainage	LOM	82.81	0	0	82.81
Totals		733.71	552.63	9.05	172.04

EXHIBIT G

WATER INFORMATION

There are 24 water wells located within 200 feet of the permit/affected lands line. Twenty-two of them are owned by the Schubert Family on or near the property. The remaining two are located just south of the southwest corner. Table G- Permitted Well within 200 feet of the affected lands is a condensed print out of the Well View information downloaded from the State Engineers Office web site. Of the 24 wells, 5 of them are less then 70 feet deep, 13 are greater then 90 feet and the remaining 6 are greater then 300 feet. Map Exhibit G - is a copy of the SEO Map Viewer map showing the permit area, the 200 foot line and each well is labeled with the well permit number from Table G. In addition, all wells are located and labeled on Map Exhibits C, C-1 & F.

Mining will not reach the ground water table. Our review of the drill logs for the 24 listed wells indicates the ground water table on the permit is in excess of 80 feet below the surface except in Stage VI where a single well the depth is listed as 61 feet. As mining progress in this stage precautions will be taken to stay at lease 2 feet above the ground water table.

We do not expect to encounter ground water on this site however if at anytime groundwater is encountered a 2-foot cover will be placed over the exposed water and the mine floor elevations will be adjusted to maintain that depth to groundwater. The 2 ephemeral drainages cross the permit area, Black Squirrel Creek from north to south and Big Springs Creek enters the property from the east where it intersects Black Squirrel Creek. The only time water flows down either drainage is after heavy storm events. The closest stream that has water in it year around is Fountain Creek approximately 20 miles southwest of the mine. The Black Squirrel Creek drainage will not be affected by mining, The landowners have roads that cross the creek bed for accessing their property. The plan is to maintain a 50 foot setback from the top of the bank along both drainage ways to the dig line in areas to be mined.

The operators intent is to minimize the disturbances to the prevailing hydrologic balance of the affected land and of the

surrounding area and to the quality and quantity of the surface and ground water system, both during and after mining and reclamation. We believe we will be in compliance with all state laws, federal laws, and regulations governing water and water rights as the property develops.

We estimate the current water uses at the mine, including, dust control will require 12.0 ac-ft per year. It is will be purchased from the Schubert Ranch, they have water that is permitted for industrial uses. No water will be used for reclamation, nor will the revegetated areas be irrigated.

The pit is a dry mine so will not be dewatered and will be graded such that all surface water runoff is retained on the site for less then 72 hours and all off site storm runoff will be diverted around the permit area.

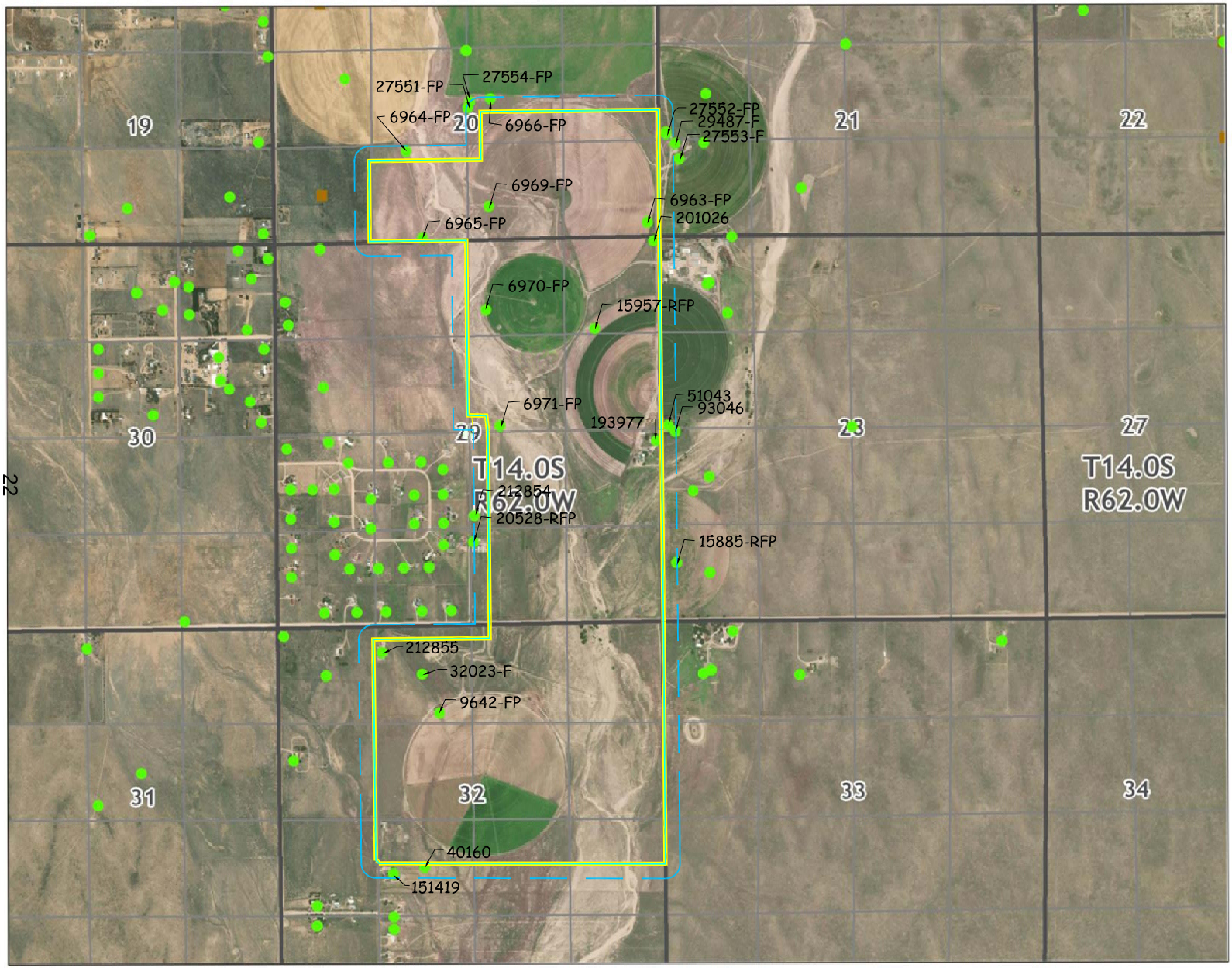
PERMITTED WELLS WITHIN 200 FEET OF AFFECTED LANDS

Receipt	Permit Number	Permit Status	Contact Name	Township	Range	Section	Q160	Q40	UTM x	UTM y	Permit Category	Aquifer(s)	Use(s)	Completed Well Depth
SECTION 20, T14S, R62W														
0210820B	25554-F	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	20	SE	NW	555616.8	4296433	General Purpose	LARAMIE FOX HILLS	Irrigation	583
480360	6965-FP-R	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	20	SW	SE	555420.2	4295862	Final Permit	QUATERNARY ALLUVIUM	Irrigation	116
9078901	6963-FP	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	20	SE	SE	556365.3	4295934	Final Permit	QUATERNARY ALLUVIUM	Irrigation	130
9078902	6964-FP	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	20	SW	SE	555349.9	4296224	Final Permit	QUATERNARY ALLUVIUM	Irrigation	109
9078905	6969-FP	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	20	SE	SW	555698.3	4295996	Final Permit	QUATERNARY ALLUVIUM	Irrigation	102
9081260	27551-FP	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	20	SE	NW	555608	4296408	Final Permit	ARAPAHOE	Irrigation	110
SECTION 21, T14S, R62W														
0258775B	29487-F	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	21	SW	SW	556479.8	4296262	General Purpose	LARAMIE FOX HILLS	Irrigation	594
9081261	27552-FP	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	21	SW	NW	556441.3	4296311	Final Permit	ARAPAHOE	Irrigation	58
9081262	27553-F	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	21	SW	SW	556497.5	4296200	General Purpose	ARAPAHOE	Irrigation	54
SECTION 28, T14S, R62W														
9079652	15885-RFP	Well Constructed	SCHUBERT BEVERLY & THEODORE	14.0 S	62.0 W	28	SW	SW	556494.6	4294510	Final Permit	ALL UNNAMED AQUIFERS	Irrigation	35
9082753	51043-	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	28	NW	SW	556456.7	4295083	Residential	ALL UNNAMED AQUIFERS	Domestic	51
9084401	93046-	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	28	SW	NW	556487.5	4295058	Residential	ALL UNNAMED AQUIFERS	Domestic, Stock	332
SECTION 29, T14S, R62W														
0265306A	20528-RFP	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	29	SE	SW	555640.1	4294594	Final Permit	QUATERNARY ALLUVIUM	Irrigation	132
396705	193977-	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	29	SE	NE	556405.8	4295019	Residential	LARAMIE FOX HILLS	Domestic, Stock	580
0409692A	201026-	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	29	NE	NE	556391.9	4295856	Residential	LARAMIE FOX HILLS	Domestic, Stock	645
0435035A	212854-	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	29	SE	NE	555643.8	4294704	Residential	ALL UNNAMED AQUIFERS	Domestic, Stock	100
9078906	6970-FP	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	29	NE	NW	555688.5	4295563	Final Permit	ALL UNNAMED AQUIFERS	Irrigation	96
9078907	6971-FP	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	29	NE	SW	555749.7	4295078	Final Permit	ALL UNNAMED AQUIFERS	Irrigation	78.5
9079683	15957-RFP	Well Constructed	SCHUBERT, W T	14.0 S	62.0 W	29	NE	NE	556146.7	4295487	Final Permit	ALL UNNAMED AQUIFERS	Irrigation	61
SECTION 32, T14S, R62W														
272328	32023-F	Well Constructed	SCHUBERT RANCHES	14.0 S	62.0 W	32	NW	NE	555427.8	4294039	General Purpose	LARAMIE FOX HILLS	Municipal	565
0283204B	151419-	Well Constructed	PERRY, WILLIAM A (Fred L Wiesner)	14.0 S	62.0 W	32	SW	NE	555310.4	4293204	Residential	ALL UNNAMED AQUIFERS	Domestic, Stock	106
0435035B	212855-	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	32	NW	NE	555257.8	4294129	Residential	ALL UNNAMED AQUIFERS	Domestic, Stock	120
9079072	9642-FP	Well Constructed	SCHUBERT RANCHES INC	14.0 S	62.0 W	32	NW	NE	555500.3	4293877	Final Permit	QUATERNARY ALLUVIUM	Municipal	96
9082118	40160-	Well Constructed	BABCOCK, BUDDY (Fred L Wiesner)	14.0 S	62.0 W	32	SW	NE	555441.2	4293232	Residential	ALL UNNAMED AQUIFERS	Stock	90

SOURCE: https://dnrweb.state.co.us/cdss/WellPermits DATE: 11/5/18

CDSS
Colorado's Decision Support Systems

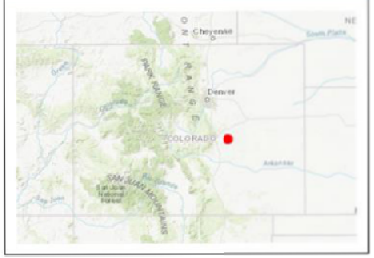
Map Viewer



Legend

- Well Constructed
- Ground Water
- Township
- Section
- Q40
- Water District
- County
- Critical Area
- PERMIT LINE
- 200 FT. LINE

Location



Notes

4,000 0 2,000 4,000 Feet

1: 24,000

This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Date Prepared: 11/5/2018 10:17:45 AM

SOURCE: https://gis.colorado.gov/dnrviewer/Index.html?viewer=dwrwellpermit

EXHIBIT H

WILDLIFE STATEMENT.

. The Colorado Springs office of the Colorado Department of Parks and Wildlife (CDPW) was contacted around July 26, 2018 about supplying a Wildlife Statement for this permit application and declined to comment at this time on the grounds that they do not provide the service as described in Rule 6.8.4(1).

Review of the Conservation Status Handbook for El Paso County indicate that the propose permit area does not lie in one of the listed Critical Habitat areas of El Paso County and we find no list of endangered or threatened species for the area around or on the permit area. No raptor nests were observed on the mine during site inspections and in discussion with the landowner they do not remember any being present in the past.

The site is mostly grassland and developed agricultural areas with some ephemeral creek bed running down the central part of the site. The only trees of any significance are located on or around the farm yards on the parcel. There are a few shrubs and scattered small trees on the southern end of the area. Wildlife resources on the affected lands are limited by the existing ground cover consisting of seasonal grasses, shrubs and weeds. Ground cover in this area averages 25% or less, with some areas having little or no cover, only exposed sand.

Not a lot of wildlife have been observed on the area. Usually it consisted of larger mammals such as deer and antelope that use travel corridors over the area. Some small game species and birds have been observed. Wildlife expected to be found on the property may include deer, antelope, small rodents and mammals, and song birds. There are no known threatened or endangered species on the property.

Existing wildlife in the area is not expected to be significantly impacted by mining at this site. Temporary and permanent losses of food and habitat is not expected to be significant as the area of disturbance will be limited to less then 10% of the permit area at any given time. Haul road speed limits will be limited to 15 MPH or less.

Prior to opening an area for mining, Ellicott Sand & Gravel will make observations of the new area to determine if there are raptors using the site as active hunting areas, over night roost sites or nesting sites. If any are observed, the Colorado Springs Office of the Colorado Parks and Wildlife (CPW) office will be contacted to confirm the observations and advise Ellicott Sand & Gravel on what actions should be taken to avoid disrupting the sites during nesting times. Ellicott Sand & Gravel, will then take the appropriate actions to prevent disturbance to the nest or roost site. If raptor use occurs or is observed after mining activities have commenced on an area then CPW will be contacted to advise actions that can be worked out to operate the mine without completely abandoning the site for long periods of time.

SOILS

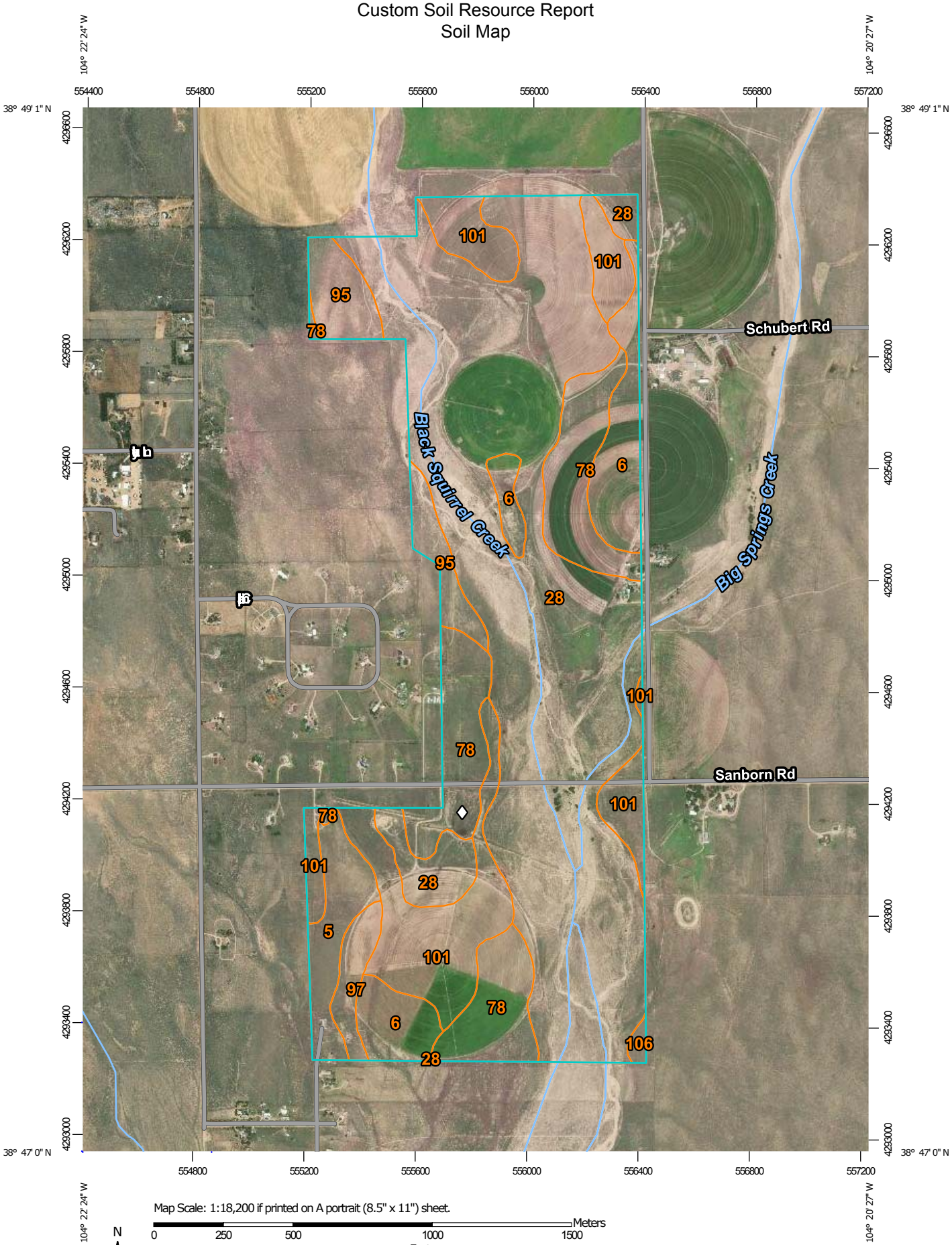
SOILS INFORMATION

INTRODUCTION

The following information was provided by Mr. Greg Langer District Conservationist from the El Paso County District or the NRCS. Soil units are shown on the USDA map, reproduced on the following pages. The photo map shows the surrounding vegetation features and soil types. This site lies along a north/south trending deposit of sand on both sides of the ephemeral drainage known as Black Squirrel Creek. There are 8 soils types found on the mine site. Underling the soils is a sand deposit with a little gravel intermixed that is 70 plus feet thick. The static ground water table in the wells on the mine site averages 70 feet deep and no mining will take place deeper then 70 ft or minimum or 2 feet above the water table.

Soils information and technical information is provided in the NRCS report attached following this section. The report indicates that the salvageable soil depths vary from 4 to 15 but many of the soils types have 8 inches or less so the average works out to be 5.5 inches. Across the site however the northern area covered by irrigation sprinklers is used for sod farming so little or no actual soil remains on those areas due to the way the grass is grown on a sand base that has organic additives added to make soil for the sod. Any soil encountered in a stage will be salvaged and placed around the outer mine limits as far from the creek as practical for use in reclamation.

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.

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: El Paso County Area, Colorado
Survey Area Data: Version 16, Sep 10, 2018

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

Date(s) aerial images were photographed: Apr 12, 2017—Nov 17, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background 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
5	Bijou loamy sand, 1 to 8 percent slopes	26.5	3.6%
6	Bijou sandy loam, 0 to 3 percent slopes	52.9	7.3%
28	Ellicott loamy coarse sand, 0 to 5 percent slopes	406.4	55.7%
78	Sampson loam, 0 to 3 percent slopes	96.2	13.2%
95	Truckton loamy sand, 1 to 9 percent slopes	31.7	4.3%
97	Truckton sandy loam, 3 to 9 percent slopes	12.4	1.7%
101	Ustic Torrifluvents, loamy	101.3	13.9%
106	Wigton loamy sand, 1 to 8 percent slopes	2.0	0.3%
Totals for Area of Interest		**729.4**	**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

Map Unit Description (Brief, Generated)

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 in this report, along with the maps, provide information on the composition of map units and properties of their components.

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.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief, Generated)

El Paso County Area, Colorado

Map Unit: 5—Bijou loamy sand, 1 to 8 percent slopes

Component: Bijou (85%)

The Bijou component makes up 85 percent of the map unit. Slopes are 1 to 8 percent. This component is on plains, stabilized sand sheets. The parent material consists of eolian sands. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R067BY024CO Sandy Plains ecological site. Nonirrigated land capability classification is 4e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Valent (10%)

Generated brief soil descriptions are created for major soil components. The Valent soil is a minor component.

Component: Olnest (5%)

Generated brief soil descriptions are created for major soil components. The Olnest soil is a minor component.

Map Unit: 6—Bijou sandy loam, 0 to 3 percent slopes

Component: Bijou (85%)

The Bijou component makes up 85 percent of the map unit. Slopes are 0 to 3 percent. This component is on stabilized sand sheets, swales, plains. The parent material consists of eolian sands. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R067BY024CO Sandy Plains ecological site. Nonirrigated land capability classification is 4c. Irrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Valent (10%)

Generated brief soil descriptions are created for major soil components. The Valent soil is a minor component.

Component: Olnest (5%)

Generated brief soil descriptions are created for major soil components. The Olnest soil is a minor component.

Map Unit: 28—Ellicott loamy coarse sand, 0 to 5 percent slopes

Component: Ellicott (85%)

The Ellicott component makes up 85 percent of the map unit. Slopes are 0 to 5 percent. This component is on stream terraces, flood plains. The parent material consists of sandy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is frequently flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R069XY031CO Sandy Bottomland ecological site. Nonirrigated land capability classification is 7w. This soil does not meet hydric criteria.

Component: Fluvaquentic haplaquoll (%)

Generated brief soil descriptions are created for major soil components. The Fluvaquentic haplaquoll soil is a minor component.

Component: Other soils (%)

Generated brief soil descriptions are created for major soil components. The Other soils soil is a minor component.

Component: Pleasant (%)

Generated brief soil descriptions are created for major soil components. The Pleasant soil is a minor component.

Map Unit: 78—Sampson loam, 0 to 3 percent slopes

Component: Sampson (90%)

The Sampson component makes up 90 percent of the map unit. Slopes are 0 to 3 percent. This component is on alluvial fans, terraces, depressions. The parent material consists of alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3c. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 8 percent.

Component: Pleasant (%)

Generated brief soil descriptions are created for major soil components. The Pleasant soil is a minor component.

Component: Other soils (%)

Generated brief soil descriptions are created for major soil components. The Other soils soil is a minor component.

Map Unit: 95—Truckton loamy sand, 1 to 9 percent slopes

Component: Truckton (85%)

The Truckton component makes up 85 percent of the map unit. Slopes are 1 to 9 percent. This component is on flats, uplands, hills. The parent material consists of arkosic alluvium derived from sedimentary rock and/or arkosic residuum weathered from sedimentary rock. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the R049BY210CO Sandy Foothill ecological site. Nonirrigated land capability classification is 6e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Other soils (%)

Generated brief soil descriptions are created for major soil components. The Other soils soil is a minor component.

Component: Pleasant (%)

Generated brief soil descriptions are created for major soil components. The Pleasant soil is a minor component.

Map Unit: 97—Truckton sandy loam, 3 to 9 percent slopes

Component: Truckton (85%)

The Truckton component makes up 85 percent of the map unit. Slopes are 3 to 9 percent. This component is on backslopes of hills on uplifted piedmonts, sideslopes of interfluves on uplifted piedmonts. The parent material consists of re-worked alluvium derived from arkose. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R049BY210CO Sandy Foothill ecological site. Nonirrigated land capability classification is 6e. Irrigated land capability classification is 6e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Blakeland (8%)

The Blakeland component makes up 8 percent of the map unit. Slopes are 3 to 9 percent. This component is on shoulders and backslopes of hills on uplifted piedmonts, sideslopes and crests of interfluves on uplifted piedmonts. The parent material consists of alluvium and/or eolian deposits derived from arkose. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R049BY210CO Sandy Foothill ecological site. Nonirrigated land capability classification is 6s. Irrigated land capability classification is 6s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Bresser (7%)

The Bresser component makes up 7 percent of the map unit. Slopes are 3 to 9 percent. This component is on baseslopes of interfluves on uplifted piedmonts, toeslopes or footslopes of low hills on uplifted piedmonts. The parent material consists of tertiary aged alluvium derived from arkose. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R049BY210CO Sandy Foothill ecological site. Nonirrigated land capability classification is 6e. Irrigated land capability classification is 6e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Map Unit: 101—Ustic Torrifluvents, loamy

Component: Ustic Torrifluvents (85%)

The Ustic Torrifluvents component makes up 85 percent of the map unit. Slopes are 0 to 3 percent. This component is on stream terraces, flood plains. The parent material consists of sandy, clayey, stratified loamy. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. This component is in the R069XY037CO Saline Overflow ecological site. Nonirrigated land capability classification is 3e. Irrigated land capability classification is 2e. This soil does not meet hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 6 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Pleasant (%)

Generated brief soil descriptions are created for major soil components. The Pleasant soil is a minor component.

Component: Other soils (%)

Generated brief soil descriptions are created for major soil components. The Other soils soil is a minor component.

Map Unit: 106—Wigton loamy sand, 1 to 8 percent slopes

Component: Wigton (85%)

The Wigton component makes up 85 percent of the map unit. Slopes are 1 to 8 percent. This component is on uplands, dunes. The parent material consists of noncalcareous, dune-like sandy eolian deposits. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 2 percent. This component is in the R069XY019CO Deep Sand ecological site. Nonirrigated land capability classification is 6e. Irrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Pleasant (%)

Generated brief soil descriptions are created for major soil components. The Pleasant soil is a minor component.

Component: Other soils (%)

Generated brief soil descriptions are created for major soil components. The Other soils soil is a minor component.

Data Source Information

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 15, Oct 10, 2017

El Paso County Area, Colorado

5—Bijou loamy sand, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tqxq
Elevation: 4,000 to 5,300 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Not prime farmland

Map Unit Composition

Bijou and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bijou

Setting

Landform: Sand sheets
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian sands

Typical profile

A - 0 to 4 inches: loamy sand
AB - 4 to 9 inches: loamy sand
Bt - 9 to 36 inches: sandy loam
BC - 36 to 50 inches: loamy sand
C - 50 to 79 inches: loamy sand

Properties and qualities

Slope: 1 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.1 to 0.2 mmhos/cm)
Available water storage in profile: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

Minor Components

Valent

Percent of map unit: 10 percent
Landform: Sand sheets
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Deep Sand (R067BY015CO)
Hydric soil rating: No

Olnest

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

6—Bijou sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tqxr
Elevation: 5,700 to 6,200 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 130 to 170 days
Farmland classification: Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

Map Unit Composition

Bijou and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bijou

Setting

Landform: Swales, sand sheets
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Concave, linear
Parent material: Eolian sands

Typical profile

A - 0 to 4 inches: sandy loam

Bt1 - 4 to 8 inches: sandy loam
Bt2 - 8 to 21 inches: sandy loam
Bw - 21 to 28 inches: sandy loam
C - 28 to 79 inches: loamy coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.1 to 0.2 mmhos/cm)
Available water storage in profile: Low (about 5.0 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4c
Hydrologic Soil Group: A
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

Minor Components

Valent

Percent of map unit: 10 percent
Landform: Sand sheets
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Deep Sand (R067BY015CO)
Hydric soil rating: No

Olnest

Percent of map unit: 5 percent
Landform: Swales
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: Sandy Plains (R067BY024CO)
Hydric soil rating: No

28—Ellicott loamy coarse sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 3680
Elevation: 5,500 to 6,500 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 47 to 50 degrees F

Frost-free period: 125 to 145 days
Farmland classification: Not prime farmland

Map Unit Composition

Ellicott and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ellicott

Setting

Landform: Flood plains, stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium

Typical profile

A - 0 to 4 inches: loamy coarse sand
C - 4 to 60 inches: stratified coarse sand to sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7w
Hydrologic Soil Group: A
Ecological site: Sandy Bottomland LRU's A & B (R069XY031CO)
Other vegetative classification: SANDY BOTTOMLAND (069AY031CO)
Hydric soil rating: No

Minor Components

Fluvaquentic haplaquoll

Percent of map unit:
Landform: Swales
Hydric soil rating: Yes

Other soils

Percent of map unit:
Hydric soil rating: No

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

78—Sampson loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 369s
Elevation: 5,500 to 6,500 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 135 to 155 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Sampson and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sampson

Setting

Landform: Depressions, alluvial fans, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

A - 0 to 15 inches: loam
Bt - 15 to 34 inches: clay loam
Bk - 34 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3c
Hydrologic Soil Group: B
Ecological site: Loamy Foothill (R049BY202CO)
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit:
Hydric soil rating: No

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

95—Truckton loamy sand, 1 to 9 percent slopes

Map Unit Setting

National map unit symbol: 36bd
Elevation: 6,000 to 7,000 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 125 to 145 days
Farmland classification: Not prime farmland

Map Unit Composition

Truckton and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Truckton

Setting

Landform: Hills, flats
Landform position (three-dimensional): Side slope, talf
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Arkosic alluvium derived from sedimentary rock and/or arkosic residuum weathered from sedimentary rock

Typical profile

A - 0 to 8 inches: loamy sand
Bt - 8 to 24 inches: sandy loam
C - 24 to 60 inches: coarse sandy loam

Properties and qualities

Slope: 1 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Available water storage in profile: Low (about 5.4 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: Sandy Foothill (R049BY210CO)
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit:
Hydric soil rating: No

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

97—Truckton sandy loam, 3 to 9 percent slopes

Map Unit Setting

National map unit symbol: 2x0j2
Elevation: 5,300 to 6,850 feet
Mean annual precipitation: 14 to 19 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 85 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Truckton and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Truckton

Setting

Landform: Interfluves, hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Re-worked alluvium derived from arkose

Typical profile

A - 0 to 4 inches: sandy loam
Bt1 - 4 to 12 inches: sandy loam
Bt2 - 12 to 19 inches: sandy loam
C - 19 to 80 inches: sandy loam

Properties and qualities

Slope: 3 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 1 percent
Salinity, maximum in profile: Nonsaline (0.1 to 1.9 mmhos/cm)
Available water storage in profile: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: Sandy Foothill (R049BY210CO)
Hydric soil rating: No

Minor Components

Blakeland

Percent of map unit: 8 percent
Landform: Interfluves, hillslopes
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Ecological site: Sandy Foothill (R049BY210CO)
Hydric soil rating: No

Bresser

Percent of map unit: 7 percent
Landform: Interfluves, low hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: Sandy Foothill (R049BY210CO)
Hydric soil rating: No

101—Ustic Torrifluvents, loamy

Map Unit Setting

National map unit symbol: 3673
Elevation: 5,500 to 7,000 feet
Mean annual precipitation: 13 to 16 inches
Mean annual air temperature: 47 to 52 degrees F

Frost-free period: 125 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Ustic torrifluvents and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ustic Torrifluvents

Setting

Landform: Stream terraces, flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy, clayey, stratified loamy

Typical profile

A - 0 to 6 inches: variable
C - 6 to 60 inches: stratified loamy sand to clay loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well 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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: Saline Overflow LRU's A & B (R069XY037CO)
Other vegetative classification: OVERFLOW (069BY036CO)
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit:
Hydric soil rating: No

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

106—Wigton loamy sand, 1 to 8 percent slopes

Map Unit Setting

National map unit symbol: 3678
Elevation: 5,300 to 6,000 feet
Mean annual precipitation: 12 to 14 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 135 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

Wigton and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wigton

Setting

Landform: Dunes
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Noncalcareous, dune-like sandy eolian deposits

Typical profile

A - 0 to 8 inches: loamy sand
AC - 8 to 19 inches: loamy sand
C - 19 to 60 inches: sand

Properties and qualities

Slope: 1 to 8 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: Deep Sand (R067BY015CO)
Other vegetative classification: DEEP SANDS (069BY019CO)
Hydric soil rating: No

Minor Components

Other soils

Percent of map unit:
Hydric soil rating: No

Pleasant

Percent of map unit:
Landform: Depressions
Hydric soil rating: Yes

VEGETATION INFORMATION

Introduction

The following information was provided by Mr. Greg Langer District Conservationist from the El Paso District or the NRCS. The photo map shows the surrounding vegetation features and soil types. This site lies along a north/south trending deposit of sand on both sides of the ephemeral drainage known as Black Squirrel Creek

The permit area consists of mostly rangeland/floodplain vegetation common to this area and river bottom having grasses commonly found along the Black Squirrel Creek drainage. The overall property appears to have had a long history of agricultural use as rangeland, irrigated sod grass areas and for feed crops for the landowners cattle. Approximately 82.81 acres is an ephemeral creek drainage that is subject to periodic flooding; 170.90 acres is cover by sod farm circles; 88.95 acres is feed crop area and the remaining area is grass rangeland. The ephemeral drain will not be disturbed except by roads to cross it as needed.

The attached tables are from the NRCS report and show the typical vegetation types on the different soils within the mine. The seed mix and rates, seeding depth, and mulching recommendations were prepared by the local NRCS office at our request for use on the reclamation areas. The seed will be drilled where possible and doubled if broadcast.

Rangeland Productivity and Plant Composition

In areas that have similar climate and topography, differences in the kind and amount of rangeland or forest understory vegetation are closely related to the kind of soil. Effective management is based on the relationship between the soils and vegetation and water.

This table shows, for each soil that supports vegetation suitable for grazing, the ecological site; the total annual production of vegetation in favorable, normal, and unfavorable years; the characteristic vegetation; and the average percentage of each species. An explanation of the column headings in the table follows.

An *ecological site* is the product of all the environmental factors responsible for its development. It has characteristic soils that have developed over time throughout the soil development process; a characteristic hydrology, particularly infiltration and runoff that has developed over time; and a characteristic plant community (kind and amount of vegetation). The hydrology of the site is influenced by development of the soil and plant community. The vegetation, soils, and hydrology are all interrelated. Each is influenced by the others and influences the development of the others. The plant community on an ecological site is typified by an association of species that differs from that of other ecological sites in the kind and/or proportion of species or in total production. Descriptions of ecological sites are provided in the Field Office Technical Guide, which is available in local offices of the Natural Resources Conservation Service (NRCS).

Total dry-weight production is the amount of vegetation that can be expected to grow annually in a well managed area that is supporting the potential natural plant community. It includes all vegetation, whether or not it is palatable to grazing animals. It includes the current year's growth of leaves, twigs, and fruits of woody plants. It does not include the increase in stem diameter of trees and shrubs. It is expressed in pounds per acre of air-dry vegetation for favorable, normal, and unfavorable years. In a favorable year, the amount and distribution of precipitation and the temperatures make growing conditions substantially better than average. In a normal year, growing conditions are about average. In an unfavorable year, growing conditions are well below average, generally because of low available soil moisture. Yields are adjusted to a common percent of air-dry moisture content.

Characteristic vegetation (the grasses, forbs, and shrubs that make up most of the potential natural plant community on each soil) is listed by common name. Under *rangeland composition*, the expected percentage of the total annual production is given for each species making up the characteristic vegetation. The amount that can be used as forage depends on the kinds of grazing animals and on the grazing season.

Range management requires knowledge of the kinds of soil and of the potential natural plant community. It also requires an evaluation of the present range similarity index and rangeland trend. Range similarity index is determined by comparing the present plant community with the potential natural plant community on a particular rangeland ecological site. The more closely the existing community resembles the potential community, the higher the range similarity index. Rangeland trend is defined as the direction of change in an existing plant community relative to the potential natural plant community. Further information about the range similarity index and rangeland trend is available in the "National Range and Pasture Handbook," which is available in local offices of NRCS or on the Internet.

The objective in range management is to control grazing so that the plants growing on a site are about the same in kind and amount as the potential natural plant community for that site. Such management generally results in the optimum production of vegetation, control of undesirable brush species, conservation of water, and control of erosion. Sometimes, however, an area with a range similarity index somewhat below the potential meets grazing needs, provides wildlife habitat, and protects soil and water resources.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service, National range and pasture handbook.

Report—Rangeland Productivity and Plant Composition

Rangeland Productivity and Plant Composition–El Paso County Area, Colorado						
Map unit symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct*
5—Bijou loamy sand, 1 to 8 percent slopes						
Bijou	Sandy Plains	2,200	1,650	800	Blue grama	25
					Prairie sandreed	25
					Little bluestem	10
					Sideoats grama	10
					Needleandthread	5
					Switchgrass	5
					Sand bluestem	5
					Sand sagebrush	3
Valent	Deep Sand	2,400	1,850	1,200	Sand bluestem	25
					Prairie sandreed	20
					Switchgrass	20
					Indiangrass	8
					Western sandcherry	5
					Little bluestem	5
					Sand sagebrush	5
					Sideoats grama	5
					Blue grama	5
Olnest	Sandy Plains	2,200	1,650	800	Blue grama	25
					Prairie sandreed	25
					Little bluestem	10

Rangeland Productivity and Plant Composition–El Paso County Area, Colorado						
Map unit symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct*
					Sideoats grama	10
					Sand bluestem	5
					Needleandthread	5
					Switchgrass	5
					Sand dropseed	3
					Sand sagebrush	3
					Western wheatgrass	—
6—Bijou sandy loam, 0 to 3 percent slopes						
Bijou	Sandy Plains	2,200	1,650	800	Blue grama	30
					Prairie sandreed	15
					Sand bluestem	10
					Sideoats grama	10
					Sand sagebrush	5
					Needleandthread	5
					Western wheatgrass	5
					Little bluestem	5
					Sand dropseed	5
Valent	Deep Sand	2,400	1,850	1,200	Sand bluestem	25
					Prairie sandreed	20
					Switchgrass	20
					Indiangrass	8
					Western sandcherry	5
					Little bluestem	5
					Sand sagebrush	5

Rangeland Productivity and Plant Composition–El Paso County Area, Colorado						
Map unit symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct*
					Sideoats grama	5
					Blue grama	5
Olnest	Sandy Plains	2,200	1,650	800	Blue grama	20
					Prairie sandreed	20
					Sand bluestem	15
					Switchgrass	5
					Needleandthread	5
					Western wheatgrass	5
					Western sandcherry	4
					Spreading buckwheat	2
28—Ellicott loamy coarse sand, 0 to 5 percent slopes						
Ellicott	Sandy Bottomland Lru's A & B	1,500	1,200	800	Switchgrass	30
					Sand dropseed	15
					Prairie sandreed	10
					Sand bluestem	10
					Sand sagebrush	5
Fluvaquentic haplaquoll	—	—	—	—	—	—
Other soils	—	—	—	—	—	—
Pleasant	—	—	—	—	—	—
78—Sampson loam, 0 to 3 percent slopes						
Sampson	Loamy Foothill	1,400	1,200	800	Western wheatgrass	40
					Green needlegrass	10
					Prairie junegrass	5

Rangeland Productivity and Plant Composition–El Paso County Area, Colorado						
Map unit symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct*
					Bluegrass	5
Other soils	—	—	—	—	—	—
Pleasant	—	—	—	—	—	—
95—Truckton loamy sand, 1 to 9 percent slopes						
Truckton	Sandy Foothill	2,000	1,600	1,200	Prairie sandreed	25
					Needleandthread	10
					Western wheatgrass	10
					Sand dropseed	10
					Sand bluestem	5
					Sideoats grama	5
Other soils	—	—	—	—	—	—
Pleasant	—	—	—	—	—	—
97—Truckton sandy loam, 3 to 9 percent slopes						
Truckton	Sandy Foothill	2,300	1,600	900	Big bluestem	20
					Prairie sandreed	20
					Switchgrass	10
					Blue grama	5
					Needleandthread	4
					Sideoats grama	4
					Western wheatgrass	4
					Purple prairie clover	3
					Fringed sagebrush	2
					Prairie junegrass	2

Rangeland Productivity and Plant Composition–El Paso County Area, Colorado						
Map unit symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct*
					Mountain muhly	1
					Buckwheat eriogonum	1
					Slimflower scurfpea	1
					Yellow indiangrass	1
					Sand dropseed	1
					Yucca	1
Blakeland	Sandy Foothill	2,300	1,600	900	Big bluestem	20
					Prairie sandreed	20
					Switchgrass	10
					Blue grama	5
					Needleandthread	4
					Western wheatgrass	4
					Sideoats grama	4
					Purple prairie clover	3
					Prairie junegrass	2
					Fringed sagebrush	2
					Slimflower scurfpea	1
					Yellow indiangrass	1
					Sand dropseed	1
					Yucca	1
					Mountain muhly	1
					Buckwheat eriogonum	1
Bresser	Sandy Foothill	2,300	1,600	900	Big bluestem	20
					Prairie sandreed	20

Rangeland Productivity and Plant Composition–El Paso County Area, Colorado						
Map unit symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct*
					Switchgrass	10
					Blue grama	5
					Needleandthread	4
					Western wheatgrass	4
					Sideoats grama	4
					Purple prairie clover	3
					Prairie junegrass	2
					Fringed sagebrush	2
					Slimflower scurfpea	1
					Yellow indiangrass	1
					Sand dropseed	1
					Yucca	1
					Mountain muhly	1
					Buckwheat eriogonum	1
101—Ustic Torrifluvents, loamy						
Ustic torrifluvents	Saline Overflow Lru's A & B	2,500	1,800	1,000	Alkali sacaton	30
					Western wheatgrass	20
					Sand bluestem	10
					Blue grama	10
					Vine mesquite	10
					Fourwing saltbush	5
					Switchgrass	5
Other soils	—	—	—	—	—	—
Pleasant	—	—	—	—	—	—

Rangeland Productivity and Plant Composition–El Paso County Area, Colorado						
Map unit symbol and soil name	Ecological site	Total dry-weight production			Characteristic vegetation	Rangeland composition
		Favorable year	Normal year	Unfavorable year		
		Lb/ac	*Lb/ac*	*Lb/ac*		*Pct*
106—Wigton loamy sand, 1 to 8 percent slopes						
Wigton	Deep Sand	1,800	1,400	1,000	Sand bluestem	30
					Prairie sandreed	20
					Switchgrass	20
					Little bluestem	5
					Sand dropseed	5
					Needleandthread	5
					Sand sagebrush	5
					Sideoats grama	5
					Soapweed yucca	1
Other soils	—	—	—	—	—	—
Pleasant	—	—	—	—	—	—

Data Source Information

Soil Survey Area: El Paso County Area, Colorado
Survey Area Data: Version 15, Oct 10, 2017

General concerns when reseeding a disturbed site.

1. Many parts of El Paso County that are disturbed have very little topsoil. When disturbing a site and when possible, any topsoil that can be removed for later use will only help in reestablishing vegetation on the site. As a general rule, removing the top 4 inches of topsoil before the heavy construction begins will be sufficient. The top 4 inches has the most organic matter and may be a store of native seed that when spread back onto the site can help in reclamation. If the site will be disturbed for a long period of time (more than 1 year) provisions should be made to stabilize the topsoil until it can be reused.

2. Seedbed preparation since most of the site to be seeded will be heavily traveled areas, compacted areas, fill or material stockpile areas should include several considerations.

A. If the area is highly compacted from machinery traffic, the area should be chiseled or tilled to a depth of 1 foot or more. This will break up most hard pan layers that were created and permit greater water infiltration and root penetration. After such renovation the site should be disked and dragged and mildly compacted to provide seedbed that is smooth and relatively flat. The seedbed should be well settled and friable enough to permit placement of seed at the recommended seeding depth. Optimum firmness is when approximately a one-half inch deep boot print is left after walking across the prepared site.

B. The seedbed should be as rock and weed-free as possible. If heavy weed invasion has already occurred on the site to be seeded, weed control will be necessary to control the weeds and prevent the existing vegetation from competing with the new seeding. Mowing would be recommended until the new grass stand is established. Herbicide application should be avoided for the first couple years as it could kill many of the new plants that are trying to establish. The county weed control specialist would be a good source of information on the best chemical to use when the time comes. Areas that have been totally denuded of topsoil should be considered for a topsoil application. If possible, a topdressing of topsoil at least 4 inches thick should be applied and worked into the existing soil material on site. This will greatly increase the chances of establishing vegetation on the site.

C. If fertilizer were specified, I would recommend that an application of 20 lbs per acre of phosphorus and 20 lbs per acre of nitrogen be applied and worked into the soil before seeding. If you are concerned that fertilizer is the limiting element in a successful seeding, I would recommend a soil test to determine need.

D. Prior to topsoil spreading, any banks or other slopes of moderate or greater degree should be worked within reason to provide as minimal a slope as possible, preferably 3:1 or flatter. If steeper slopes are to be reseeded you need to

consider an erosion control blanket to cover the slope to prevent rilling and loss of topsoil and seed that has been applied.

3. Seeding should preferably be accomplished using an appropriate grass drill. The drill should be equipped with a satisfactory seed-feeding mechanism, agitator, double disc openers with depth bands and packer wheels or drag chains. Distances between drill rows should not exceed 12 inches. The best results are from a seed drill that has an 8 inch spacing between drill rows. Seed may be broadcast if the site is not accessible to a grass drill. Broadcast rates will be double the drill rates. The broadcast seed should be covered 1/2 to 3/4 of an inch deep rake in. Care should be taken not to cover the seed over 3/4 of an inch since it will probably not be able to germinate and emerge at deeper depths. If the soil is frozen seeding should wait until the site can be drilled or broadcast and the seed covered to the required depth. Hydro mulching might be a consideration on some sites that are difficult to reseed. I would recommend that two operations be applied with hydro mulching. The seed applied first and the mulch in the second operation. If the seeding operation is done all at once I would ask the applicator for some assurances of success when applying the seed by hydro mulch.

4. The timing of the seeding should also be considered. Best results are with late fall seeding before the ground freezes. Spring application will work but it may take longer to get a stand of grass that holds the ground. Seeding should not occur from May 15th to the middle of October unless supplemental water is available to germinate the newly seeded area. Supplemental water could be applied at a rate sufficient to keep plants from stressing once they are germinated. Apply about an inch of water per application during the first growing season dependent on the amount of natural moisture received.

5. Upon completion of the seeding operation the site should be covered with weed free mulch at the rate of 4,000 lbs to the acre and be crimped into the soil to prevent the straw from being blown off the site. Mulches will provide a more humid environment for the seeding to become established, help in providing wind erosion protection and conserve existing soil moisture. I would recommend oat or wheat straw as a mulch.

6. Weed control for the first two seasons should be considered as part of the seeding operation. Mowing during the first growing season when the weeds are approximately 6 inches high will help in establishing the newly seeded area. Native grass seeding takes from 2 to 4 years to get firmly established depending on the species selected.

USDA NRCS
United States Department of Agriculture
Natural Resources Conservation Service

Grass Seeding Planned and Applied Worksheet

Grass Seeding PART I - Planned

Cooperator	Ellicott Sand and Gravel	Date	3/28/18
Tract/Field No	Schubert Gravel Pit	Acres	750
Soil Survey Area	El Paso	Map Unit (s)	Ellicott Loamy course sand 0 to 5 percen
Contract No.	NA	CIN	NA

Seeding dates	dormant suggested	Purpose	Other
Seedbed preparation	Intensive: more than 3 tillage operations	Seed rate	Critical Area Planting drilled (40 seeds/sq ft)
Drill type	grass	Acres to be seeded	750.00
Planting depth-Drill spacing (in)	1/4-1/2 in, 6-8 in spacing		

	N	P_2O_5	K_2O
Planned fertilizer application (lb/ac)	0	0	0

A Nutrient Management Plan is not required for the establishment of vegetative conservation practices.

Planned weed control activities	Description	Tillage
	Date(s)	mowing as needed

Attach WIN-PST Soil-Pesticide Interaction Risk Report for all chemical suppression activities

Planned residue cover or mulch	Type	Cereal grain straw
	Amount (lb/ac)	4000
	Application method	straw spreader

Seed Mix Recommendation, † ‡

(PLS = Pure Live Seed)

Common name N=native, I=introduced		Genus, species	Recommended Cultivar	% of seed mix	Total Pounds PLS	Pounds PLS per acre
Grasses, forbs						
Grama, Sideoats	N	*Bouteloua curtipendula*	Vaughn	10.0	682.50	0.91
Sand dropseed	N	*Sporobolus cryptandrus*	Common	1.5	5.63	0.01
Bluestem, Little	N	*Schizachyrium scoparium*	Camper	10.0	502.50	0.67
Wheatgrass, Western	N	*Pascopyrum smithii*	Arriba	10.0	1200.00	1.60
Bluestem, Sand	N	*Andropogon hallii*	Chet	5.0	592.50	0.79
Prairie sandreed	N	*Calimovilfa longifolia*	Goshen	5.0	240.00	0.32
Yellow indiangrass	N	*Sorghastrum nutans*	Cheyenne	10.0	765.00	1.02
Switchgrass	N	*Panicum virgatum*	Blackwell	28.0	840.00	1.12
Green needlegrass	N	*Ephedra viridis*	Lodorm	5.0	360.00	0.48
Indian ricegrass - Nezpar, Rimrock	N	*Achnatherum hymenoides*	Nezpar	15.0	832.50	1.11
Prairie clover, purple	N	*Dalea purpurea*		0.5	23.63	0.03
				100.0		
Shrubs (add shrub seed to grass - forb seed mix)						
Four-wing saltbush	N	*Atriplex canescens*			750.00	1.00
Winterfat	N	*Krascheninnikovia lanata*			15.00	0.02
				Shrubs	765.00	
				Grasses, Forbs	6044.25	
				Total lbs PLS	6809.25	
				Seed Rate (Pounds PLS per acre)		9.08

† Certified Seed is required for all NRCS cost share programs

‡ Complete a Tree and Shrub Establishment 612 Job Sheet for bare-root shrub plantings

Additional Recommendations

use dealer recommended cultivars for area.. Certified seed REQUIRED. Rip seed bed to a depth of 24 inches if prior use has compacted soil. Seedbed should be firm, not fluffy. Exclude livestock grazing from seeded area for a minimum of 3 years or until grass is solidly established.

Certified Planner	Greg Langer	**Date**	3/28/2018

CLIMATE

EXHIBIT K

Information was downloaded from the Climatology Data-base at Colorado State University. The average Daily temperature is 49.44 degrees and the average precipitations amount is 16.67 inches per year. The Colorado Springs Air Port Station is the closest data collection station to this property (8.9 miles). The data in the table is for the years 1985-2017, most recent published.

Station data Latitude - 38d49' Longitude -104d42' Elevation - 6190

Temperature (F)

YEAR(S)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
Average	30.7	32.5	39.8	46.8	55.9	66.2	71.5	69.1	61.7	50.0	38.8	30.3	49.4
Max	38.2	39.8	48.0	53.8	59.8	73.3	75.8	74.1	67.3	58.0	45.5	39.7	52.9
Year	1986	39.84	2012	1981	2012	2012	2012	2011	2015	2016	2017	1980	2012
Min	24.3	21.8	35.2	39.5	49.4	60.0	67.3	64.5	56.2	42.7	30.3	18.4	47.1
Year	1988	1989	1984	1997	1995	1991	2004	2004	2006	2009	2000	1983	1982
Years	38	38	38	38	38	38	38	38	38	38	38	38	38

Tempurture Average - Maximum (F)

Average	43.6	45.1	53.4	60.0	69.3	80.2	85.4	82.3	75.4	63.8	51.9	42.6	62.8
Max	53.0	54.2	63.7	66.9	75.0	89.2	91.7	88.3	83.2	73.6	60.0	48.4	67.2
Year	1986	1999	2012	2006	2000	2012	2003	2011	2010	2016	1999	2017	2012
Min	36.2	31.7	45.9	51.5	59.8	72.3	79.6	76.4	69.2	52.8	42.2	28.9	59.8
Year	1988	1989	1983	1983	1995	1982	2004	2004	2006	1984	1985	1983	1982
Years	36	36	36	36	36	36	36	36	36	36	36	36	36

Tempurture Average - Minumum (F)

Average	17.8	19.4	26.4	33.4	42.7	51.9	57.3	55.9	47.9	36.3	25.3	17.4	36.0
Max	23.3	25.1	32.3	39.1	45.5	57.3	61.7	59.9	53.1	43.0	30.3	21.4	38.7
Year	1986	1992	2012	1981	1996	2012	2012	2011	2013	2015	2016	2010	2012
Min	11.6	11.8	19.3	27.4	38.3	47.5	53.4	52.5	43.2	30.2	18.4	7.9	34.2
Year	1996	1989	2002	1997	1983	1983	1995	2004	2006	2009	2000	1983	1985
Years	36	36	36	36	36	36	36	36	36	36	36	36	36

Monthly Precipitation (in.)

Average	0.33	0.39	0.91	1.43	2.22	2.28	3.07	3.19	1.38	0.80	0.36	0.32	16.67
Max	1.17	2.45	2.42	7.5	8.13	7.79	6.23	7.04	5.91	5.01	2.05	1.05	27.58
Year	1987	1987	1998	1999	2015	1995	2017	1999	2010	1984	1991	1988	1999
Min	0.00	0.00	0.06	0.02	0.33	0.13	0.28	0.12	0.09	0.00	0.00	0.00	7.85
Year	1995	1991	2012	2002	2008	1990	2008	2012		2016	1995	1995	2002
Years	38	38	38	38	38	38	38	38	38	38	38	38	38

Monthly Snow (in)

Arverage	5.68	5.19	7.31	4.96	0.62	0.00	0.00	0.00	0.21	2.65	4.37	5.75	36.44
Max	28.70	23.20	23.20	19.80	6.50	0.00	0.00	0.00	2.30	25.90	26.30	18.20	83.20
Year	1986-87	1986-87	1983-84	1994-95	2000-01				2001-02	1984-85	1991-92	1983-84	1986-87
Min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.70
Year	1994-95	1990-91	1988-89	1991-92								1995-96	2010-11
Years	37	37	37	37	36	36	36	36	36	37	36	36	37

PREPARED FROM DATA PROVIDED BY: COLORADO CLIMATE CENTER, DEPT. OF ATMOSPHERIC SCIENCE, COLORADO STATE FT. COLLINS, CO 80523, (303)491-8545. DOWN LOADED FROM DATABASE - March 27, 2018

EXHIBIT L

RECLAMATION COSTS

The following Reclamation Cost estimate is based on the assumption that there will be restricted no more than 40.0 acres ± of disturbance at any-one time, as shown on the Mining Plan Map. The mine working face will be 500 feet long by an average of 35 feet high and would need cut/fill sloped at 14.16 yd/lft. Finish sloping on the 1,675 feet of partially backfilled 2:1 slopes that averages 35 feet high at 5.68 yd/lft to complete the 3:1 slopes. The 30 acres will then be resoiled with an average of 5.5 inches of soil using a scraper to spread it and a blade to shape the seed bed. At that time we will have to respread 22,185 cubic yards of topsoil and move 16,600 cy of cut\fill sloping along the working face. The remaining 10 acres are partially reclaimed and are awating grass to grow so may only need reseeding. The table below outlines the various areas of disturbance at the time explained above. A D8N dozer is used to do the cut/fill sloping, a 631G scraper will resoil and couplet bank sloping and a 140G Blade is used to shape the reclamation area. The mobilization haul distance is 25.0 miles at a average speed of 45 mph. The revegetation cost figure used includes fertilizer, grass seed, labor and drilling costs.

STAGE	TOTAL	SOIL DEPTH
NEEDING RESOILING	30.00	5.5"
REVEGETATION AREA	30.00	
RESOIL @ 5.5"	22,185	CUBIC YARDS
CUT/FILL SLOPING ½:1	7,090	CUBIC YARDS
BACKFILL SLOPING	9,510	CUBIC YARDS
SECONDARY REVEGETATION	33%	

ESTIMATED UNIT COSTS FOR RECLAMATION ITEMS:

	Unit Cost
1. Revegetation areas includes grass seed, fertilizer and labor to drill	$ 1,500.00/AC.
2. Re-spreading soil and/or growth media with **631G Scraper, haul distance 800 ft or less**	$ 0.583/YD^3 1/
3. Cut/fill working face 500 feet long by 35 feet high **D-8 Dozer, push distance 100 ft or less**	$ 0.533/YD^3 1/
4. Backfill and shape 1675 feet long part reclaimed slope **D-8 Dozer, push distance 100 ft or less**	$ 0.533/YD^3
5. Shape seedbed **140G Blade at 1.75 acres per hour** . .	$ 83.99/AC 1/

RECLAMATION COSTS

1.	Revegetation, 30.00 ac @ $1500.00/ac	$45,000.00
1a.	Secondary revegetation 40.00 ac @ 33% * $1500.00/ac	14,850.00
2.	Resoiling, 22,185 yd^3 @ 58.8/yd^3	14,476.49
3.	Cut/fill highwall 7,090 yd^3 @ 53.3¢/yd^3	4,348.94
4.	Backfill slope 9,510 yd^3 @ 53.3¢ /yd^3	5,074.61
5.	Shape seed bed 30.00 acres @ $59.54/ac	2,519.84
	Direct cost Total	$86,269.87
6.	Indirect costs	11,663.69
	Mobilization	7,015.00
7.	Administration costs	4,896.68
	TOTAL ESTIMATE	$109,844.08

Recommend bond be set at $109,900.00

EXHIBIT M

OTHER PERMITS AND LICENSES REQUIRED

1. If an Air Pollution permit is needed it will be obtained if needed.

2. We are applying for a Special Use Permit in El Paso County to cover the entire 733.7 acres.

3. This is an open pit operation and ground water will not be exposed so a well permit and temporary supply plan is unnecessary.

4. A dredge fill permit (404) is <u>not required</u> because there are no waters of the U.S. on this site that will be disturbed by mining.

5. A Storm Water Management Plan (SWMP) will be prepared for this pit if there is a potential for surface water leaving the site.

6. A CDPS permit to cover stormwater runoff is not required, all stormwater will be retained on site and allowed to soak into the sand substrata. If needed a CPDS discharge permit will be obtained prior discharging water.

SOURCE OF LEGAL RIGHT TO ENTER

STATE OF COLORADO)
) ss. AFFIDAVIT
COUNTY OF EL PASO)

George Schubert, being first duly sworn upon oath, deposes and says:

1. That Schubert Ranches, LLC, is the surface and mineral rights owner of the property known as the Schubert Ranch Sand Resource. A copy of the deed is available for inspection at their offices in Calhan, Colorado.

2. That Ellicott Sand & Gravel LLC. is legally empowered to enter upon the subject lands and to conduct mining operations for sand and gravel and other construction materials and auxiliary uses associated with mining.

3. That Ellicott Sand & Gravel LLC is empowered to acquire any permits for mining on this property with or before the Colorado Mined Land Reclamation Board under the provisions of the Colorado Mined Land Reclamation Act.

4. If mining occurs within 200 feet of any structure owned by Ellicott Sand & Gravel LLC has agreed to repair, replace or compensate Schubert Ranches, LLC for any damage to the structure caused by mining.

George H. Schubert

George H.Schubert, Agent

SUBSCRIBED and sworn to before me this 8, day of October, 2018, by George Schubert as the Agent for Schubert Ranches, LLC.

CHRISTINE WILSON
Notary Public
State of Colorado
Notary ID # 20094028750
My Commission Expires 11-10-2021

Christine Wilson

Notary Public

My commission expires:
11-10-2021

(notarial seal)

EXHIBIT O

OWNERS OF RECORD OF AFFECTED LAND - SURFACE AREA

SURFACE AREA, SUBSTANCE TO BE MINED
El Paso records as of 11/28/18

Schubert Ranches LLC
1555 S. Baggett Road
Calhan, CO 80808-7808

ADJOINING OWNERS AND OWNERS WITHIN 200 FEET

Schubert Ranches LLC
1555 S. Baggett RD
Calhan CO 80808

Daniel Fontes Reyes & Fred L Wiesner
3255 Wiesner RD
Calhan CO 80808-9536

Ariel Loriga De Andres Yorniel
Arieshy Rodriguez
24820 Meier RD
Calhan, CO 80808

Benjamin & Makinsey Vallejo
2755 S East Ellicott RD
Calhan, CO 80808

Doris J. Hays
24975 Sanborn RD
Calhan, CO 80808

Mildred J Duncan
PO Box 1057
Fort Benton, MT, 59442

RIGHT-OF WAYS OR EASEMENTS WITHIN 200 FEET OF THE PERMIT AREA

County Roads
El Paso Board of County Commissioners
200 South Cascade Avenue, Suite 100
Colorado Springs, CO 80903-2202

Electric
Mountain View Electric Association, Inc.
Falcon Operations Center
11140 E. Woodmen Rd.
Falcon, CO

Telephone/communications
Centurylink
8400 East Crescent Parkway, Suite 600
Greenwood Village, CO 80111

EXHIBIT P

MUNICIPALITIES WITHIN TWO MILES

None

EXHIBIT Q

NOTICE TO COUNTY COMMISSIONERS

NOTICE OF FILING APPLICATION
FOR COLORADO MINED LAND RECLAMATION PERMIT
FOR A REGULAR 112 APPLICATION
NOTICE TO COUNTY COMMISSIONERS
EL PASO COUNTY

Ellicott Sand & Gravel LLC (Operator) has applied for a Construction Materials Regular 112 Reclamation Permit from the Colorado Mined Land Reclamation Board ("the Board") known as the Schubert Ranch Sand Resource, to conduct mining operation in El Paso 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 & Safety ("the Division") and the El Paso County Clerk and Recorder, Citizens Service Center, 1675 West Garden of the Gods Rd., Suite 2201,Colorado Springs, CO 80907

The applicant proposes to reclaim the land as rangeland. Pursuant to C.R.S. 34-32.5-116(7)(j) the Board is required to confer with the local Board of County Commissioners before approving 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 twenty (20) days after the applicant's last newspaper publication.

If you would like to discuss the proposed post-mining land use, or any other issue regarding this application, please contact Perry Hastings , Ellicott Sand and Gravel LLC,235 Franceville Coal Mine Road, Colorado Springs, CO 80929, (602) 558-0846 or the Division of Reclamation, Mining & Safety, 1313 Sherman St., Room 215, Denver, CO 80203, (303) 866-3567.

Ellicott Sand & Gravel LLC
December 3, 2018

NOTICE TO SOIL CONSERVATION DISTRICT

NOTICE OF FILING APPLICATION
FOR COLORADO MINED LAND RECLAMATION PERMIT
FOR A REGULAR 112 APPLICATION
NOTICE TO THE BOARD OF SUPERVISORS
OF THE LOCAL SOIL CONSERVATION DISTRICT
EL PASO COUNTY DISTRICT

Colorado Crushing, Inc. (Operator) has applied for a Construction Materials Regular 112 Reclamation Permit from the Colorado Mined Land Reclamation Board ("the Board") known as the Perrino Pit, to conduct mining operation in El Paso 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 & Safety ("the Division") and the El Paso County Clerk and Recorder, Citizens Service Center,1675 West Garden of the Gods Rd., Suite 2201, Colorado Springs, CO 80907

.

The applicant proposes to reclaim the land as rangeland. Pursuant to C.R.S. 34-32.5-116(7)(j) the Board is required to confer with the Board of Supervisors of the local Soil Conservation District before approving 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 twenty (20) days after the applicant's last newspaper publication.

If you would like to discuss the proposed post-mining land use, or any other issue regarding this application, please contact Perry Hastings, Ellicott Sand and Gravel LLC, 235 Franceville Coal Mine Road, Colorado Springs, CO 80929, (602) 558-0846 or the Division of Reclamation, Mining & Safety, 1313 Sherman St., Room 215, Denver, CO 80203, (303) 866-3567.

Ellicott Sand & Gravel LLC
December 3, 2018

EXHIBIT R

PROOF OF FILING WITH COUNTY CLERK AND RECORDER

December 3 2018

Mr. Chuck Broerman
El Paso County Clerk & Recorder
Citizens Service Center
1675 West Garden of the Gods Rd., Suite 2201
Colorado Springs, CO 80907

Re: Application for a Mined
Land Reclamation Permit
Ellicott Sand & Gravel LLC

Dear Mr. Broerman:

We are delivering to you here with a copy of a conversion application for the Schubert Ranch Sand Resource, a Regular (112) Construction Materials permit, to be operated by the Ellicott Sand & Gravel LLC. Two copies of the application are on file with the Division of Reclamation, Mining & Safety (DIVISION OF RECLAMATION MINING AND SAFETY).

This copy of the application packet is delivered to you pursuant to 34-32.5-112(9)(a), Colorado Revised Statutes 1995, as amended, which states in part:

> *....the applicant shall file a copy of such application for public inspection at the office of the County Clerk and Recorder of the County in which the affected land is located.*

Please acknowledge receipt of this copy of the permit application by signing in the appropriate space provided below and returning one copy of this letter to the person delivering the book. Please hold the book for pick-up after the application has been heard by the MINED LAND RECLAMATION BOARD (approx. 180 days).

Yours truly,
Environment, Inc.

Stevan L. O'Brian

enclosure

RECEIVED THIS ___ DAY OF _____ _____
MINED LAND RECLAMATION BOARD application for the referenced mine.

By _____
El Paso County Clerk and Recorders Office

EXHIBIT S

PERMANENT MAN MADE STRUCTURES

Permanent man-made structures within 200 feet of affected areas are located on all Map Exhibits and their owners are listed below. Colorado Crushing, Inc. has sent structure agreements to all of the structure owners listed below. Copies of the proof of mailing receipts for the structures are attached. No mining in the new permit area will take place within 200 feet of the listed structures until this is completed or a Geotechnical analysis has been provided and approved.

OWNER	STRUCTURES	Agreement (date sent)
Mountain View Electric Association, Inc.	**power transmission line and poles along portions of the east & south side of permit area**	11/30/18
Schubert Ranch, LLC.	**Section 20 - 6 water wells, fences, sprinkler pivot Section 21 - fences, 3 water well Section 28 - 3 houses, 3 buildings, 3 water wells Section 29 - 3 houses, 7 water wells, fences, 3 sprinkler pivots, 13 building, 4 trailer houses, 4 sheds Section 32 - 2 houses, 2garages, 3 buildings, 3 water wells, sprinkler pivot, fences**	11/30/18
Daniel Fontes Reyes & Fred L Wiesner	**wire fences, house, garage, shed, water well, stock well**	11/30/18
Mildred J Duncan	**3-strand wire fences**	11/30/18
Ariel Loriga De Andres Yorniel Arieshy Rodriguez	**3- strand wire fence in SW corner**	11/30/18
El Paso Board of County Commissioners	**Baggett Road & Sanborn Road**	11/30/18
Century link	**Telephone/communications along Baggett & Sanborn Roads**	11/30/18

Notes:

1. **Structure agreements will be provided to the Division of Reclamation, Mining & Safety when received.**

There are no bridges, pipelines, water storage impoundments, railroad tracks, cemeteries or communication antennas within 200 feet of the affected lands.

Receipts 1 page

Weed Control Plan

1. INTRODUCTION

Ellicott Sand & Gravel LLC (hereinafter referred to as the Operator) of the Schubert Ranch Sand Resource, encompassing a parcel of land shown on the vicinity map and located in Parts or the S½N½SE¼, S½SE¼,and SE¼SW¼of Section 20, and The E½E½ and NW¼NE¼ and parts of the SW¼NE¼, SW¼SE¼, and NW¼SE¼ of Section 29 and The E½NE¼, SW¼NE¼, & SE¼NW¼, and parts of the NW¼NE¼ & NE¼NW¼, Section 32, Township 14 South, Range 62 West, 6th P.M. El Paso County, Colorado, Containing 733.7 acres more or less. Construction materials mining operations will occur across all, or part, of the rangeland area on this 733.7 acre mine. The site currently has areas that have been used as a ranch yard complex, an creek bottom and undisturbed areas used as rangeland or irrigated sod grass and hay production.

Recognizing the presence of state-listed and county-listed noxious weeds in the general vicinity of this project area; and understanding the destructive nature of these noxious weeds, the Colorado Division of Reclamation, Mining & Safety has required the operator to develop and implement a weed management plan that encompasses the total project area.

The CSU Cooperative Extension office operates under cooperative agreement with the El Paso County government, and provides technical assistance regarding noxious weed management on public and private lands within the county. Ellicott Sand & Gravel LLC will do biennial checks on the active mine for any noxious weeds on site. On the area outside the active mine area the landowners will be responsible for weed control. Implementation of this plan will begin in the spring after mining starts and will continue until the state determines that reclamation is complete.

It is not possible to totally eradicate the noxious weeds from the mine since much of the surrounding property is not owned by Ellicott Sand & Gravel LLC, nor managed for noxious weed control. These uncontrolled areas are the seed sources for the infestation occurring on the mine. For this reason the Operator will be continually working to control noxious weeds throughout the life of the mine and until reclamation is done.

2. OVERVIEW OF APPROACH TO WEED MANAGEMENT

Weed control is part of the over all property management activities done by Schubert Ranch as part of their good farming/ranching practices. This plan is based on controlling the undesirable plant species and communities, rather than on simply eliminating weeds. Preventive programs are implemented to

keep the management area free of species that are not yet established there, but which are known to be pests elsewhere in the area. Priorities are set to reduce or eradicate weeds that have already established on the property, according to their actual and potential impacts on the land management goals for the property, and according to the ability to control them now versus later. Actions will be taken only when careful consideration indicates leaving the weed unchecked, would result in more damage than controlling it with best available methods.

The plan follows the adaptive management approach:

- First, weed species are identified through inventory of the property and by gathering information from other sources.
- Second, land management goals and weed management objectives are established for the property.
- Third, priorities are assigned to the weed species and weed patches based on the severity of their impacts, while considering the ability to control them.
- Fourth, methods are considered for controlling them or otherwise diminishing their impacts and, if necessary, re-order priorities based on likely impacts on target and non-target species.
- Fifth, An Integrated Weed Management (IWM) plan is developed based on this information.
- Sixth, the IWM plan is implemented in the spring or fall as recommended by the CSU Cooperative Extension local office.
- Seventh, the results of management actions are monitored and evaluated in light of weed management objectives for the management area.
- Finally, this information is used to modify and improve weed management objectives, control priorities, and IWM plans, thereby starting the cycle again.

The premise behind a weed management plan is that a structured, logical approach to weed management, based on the best available information, is cheaper and more effective than an ad-hoc approach where one deals with weed problems as they arise.

3. NOXIOUS WEEDS TO BE WATCHED FOR AT THE Perrino PIT.

1. Leafy spurge (Euphorbia eslua)
2. Canada thistle (Cirsium arvense)
3. Russian knapweed (Acroptilon repens)
4. Yellow toadflas (Linaria vulgaris)
5. Saltcedar (Tamarix sp.)
6. Hoary cress (Cardaria draba)
7. Perennial pepperweed (Lepedium tatifolium)

a. Spotted knapweed (Acroptilon repens)
b. Musk thistle (Carduus nutans)
c. Purple loosestrife (Lythrum salicaria)
d. Showy milkweed (Aisclepias speciosa)
e. Russian Olive (Elaeagunus angustifolia)
f. Bursage, skeltonleaf (Ambrosia tomentosa)
g. Bursage, wollyleaf (Ambrosia greyi)
h. Field bindweed (Convolvulus arvensis)
I. Jointed goatgrass (Aegilopa cylindrica)
j. Diffuse knapweed (Centaurea diffusa)

The first 7 species are listed as Priority 1 or 2 for control in El Paso County and the remaining 10 are on the State noxious weed list and should be looked for on the mine and controlled if needed.

4. NUISANCE WEEDS THAT SHOULD BE ADDRESSED

a. Russian thistle, common name tumbleweed
b. Kosha

5. CONTROLLING ABOVE LISTED WEEDS

All of the above weeds can be controlled or eradicated by using mechanical, biological, or chemical control depending on species. The Operator will have a qualified weed control agent observe the mine for possible noxious weeds and advise the Operator on how noxious species should be treated. Initially it may require semi-annual spraying or mowing to control the problem weeds and digging the woody species, but eventually we expect to revert to an annual control program to maintain the site. Records of weed control activities, including dates work was done; methods used; area sprayed and types/quantities of chemical used if any, will be kept at the Corporate office in Colorado Springs, Colorado for review.

PUBLIC NOTICE

PUBLISHED NOTICE OF APPLICATION FILING FOR A REGULAR (112) CONSTRUCTION MATERIALS RECLAMATION PERMIT

The Ellicott Sand and Gravel, LLC, 235 Franceville Coal Mine Road Colorado Springs, CO 80929, has filed an application for a Construction Materials Regular 112 Reclamation Permit with the Colorado Mined Land Reclamation Board under provisions with the Colorado Mined Land Reclamation Act for extraction of Construction materials. The proposed mine is known as the Schubert Ranch Sand Resource, (Permit # M-2018- ???) and is located in or near the SW¼ of Section 20, E½ of Section 29 and parts of the S½ of Section 32, T-14-S, R-62-W of the 6th P.M., El Paso County, Colorado.

The date of commencement will be in 2019 the proposed date of completion is December 2100. The proposed future use of the land is rangeland and agriculture. Additional information and a tentative decision date may be obtained at the Division of Reclamation, Mining & Safety, 1313 Sherman Street, Rm 215, Denver, Colorado 80203, (303) 866-3567, or at the office of the El Paso County Clerk and Recorder, 1675 West Garden of the Gods Rd., Suite 2201, Colorado Springs, CO 80907.

Written comments to the application must be received at the office of the Mined Land Reclamation Division no later than 4:00 p.m. on the __th day of _____, 2019

Please note that comments related to noise, truck traffic, hours of operation, visual impacts, effects on property values and other social or economic concerns are issues not subject to this Office's jurisdiction. These subjects and similar ones, are typically addressed by your local governments, rather that the Division of Reclamation, Mining & Safety or the Mined Land Reclamation Board.

Ellicott Sand & Gravel LLC
Colorado Springs, Colorado

First Publication:
Second Publication:
Third Publication:
Last Publication:
Published in:

NOTICE

This site is the location of a proposed construction materials operation. Ellicott Sand and Gravel LLC, whose address and phone number is 235 Franceville Coal Mine Road, Colorado Springs, CO 80929 (602) 558-0846, has applied for a Regular 112 Reclamation Permit with the Colorado Mined Land Reclamation Board known as the Schubert Ranch Sand Resource. Anyone wishing to comment on the application may view the application at the El Paso County Clerk and Recorders office, Citizens Service Center, 1675 West Garden of the Gods Rd., Suite 2201, Colorado Springs, CO 80907, and should send comments prior to the end of the public comment period to the Division of Reclamation, Mining & Safety, 1313 Sherman St, Room 215, Denver, CO, 80203

Certification

I, Steve O'Brien, hereby certify that I posted a sign containing the above notice for the proposed permit area known as the Schubert Ranch Sand Resource on December 3, 2018.

Signature

12/3/18
Date

Notice Packet Delivery Receipts

El Paso Board of County Commissioners - proof of packet delivery

El Paso County Clerk - proof of packet delivery

El Paso Soil Conservation District - proof of packet delivery

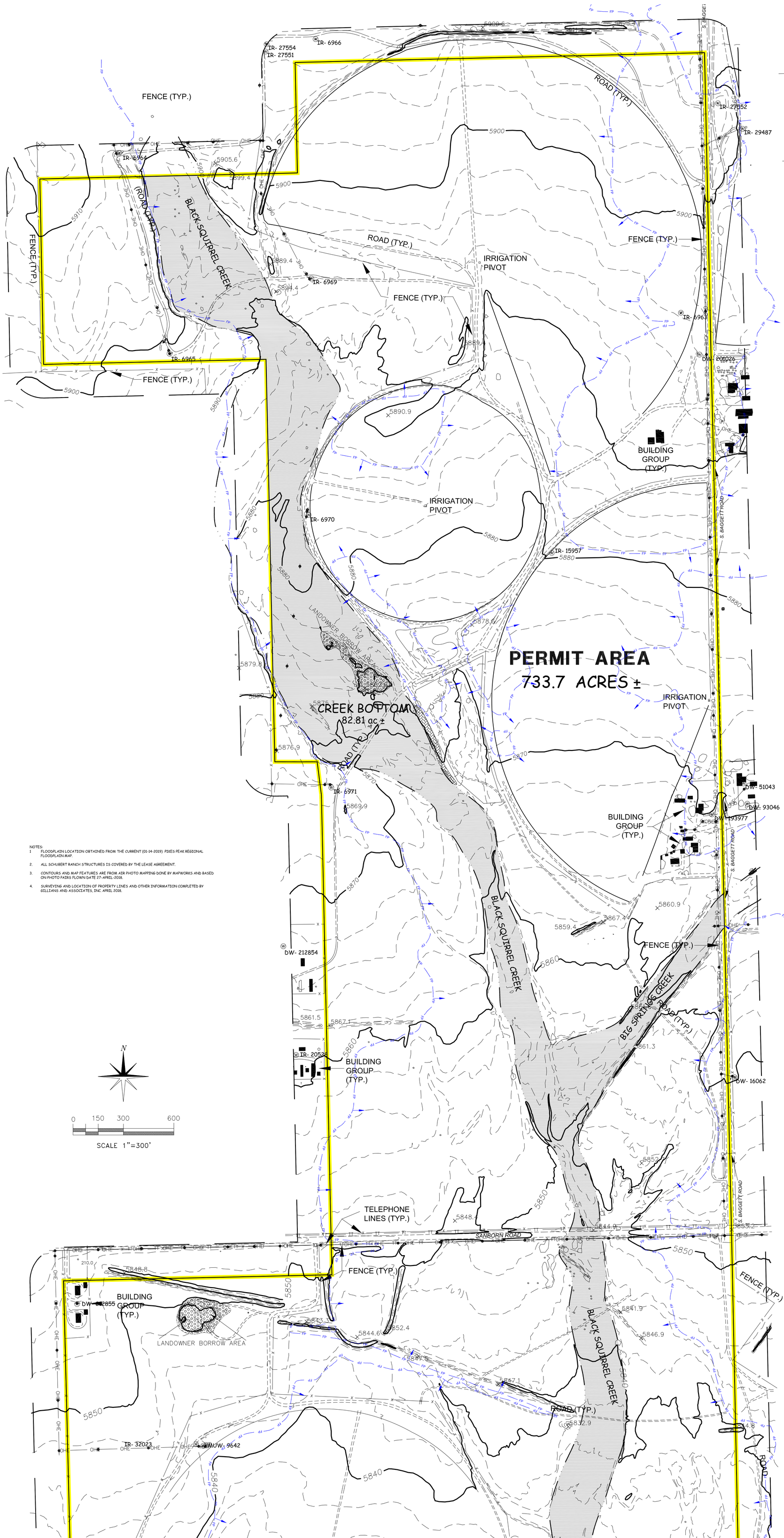
Division of Reclamation, Mining & Safety - transmittal letter

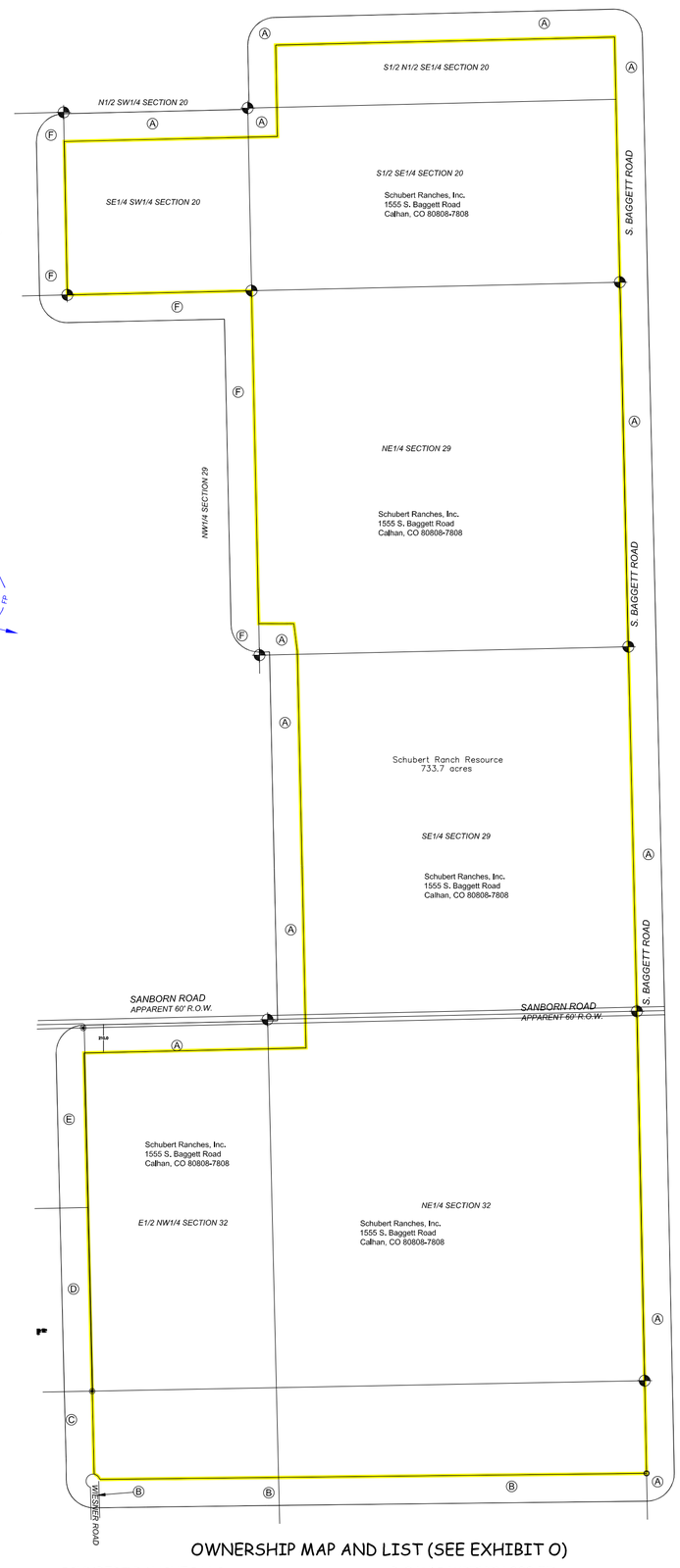
NOTES:
1. FLOODPLAIN LOCATION OBTAINED FROM THE CURRENT (01-14-2019) PIKES PEAK REGIONAL FLOODPLAIN MAP.
2. ALL SCHUBERT RANCH STRUCTURES IS COVERED BY THE LEASE AGREEMENT.
3. CONTOURS AND MAP FEATURES ARE FROM AIR PHOTO MAPPING DONE BY MAPWORKS AND BASED ON PHOTO PAIRS FLOWN DATE 27-APRIL-2018.
4. SURVEYING AND LOCATION OF PROPERTY LINES AND OTHER INFORMATION COMPLETED BY GILLIANS AND ASSOCIATES, INC. APRIL 2018.

N

0 150 300 600

SCALE 1"=300'





OWNERSHIP MAP AND LIST (SEE EXHIBIT O)

(A) SCHUBERT RANCHES LLC
1555 S. BAGGETT RD
CALHAN CO 80808

(B) DANIEL FONTES REYES & FRED L WIESNER
3255 WIESNER RD
CALHAN CO 80808-9536

(C) *ARIEL LORIGA DE ANDRES YORNIEL*
ARIESKY RODRIGUEZ
24820 MEIER RD
CALHAN, CO 80808

(D) *B ENJAMINE & MAKENSEY VALLEJO*
2755 S EAST ELLICOTT RD
CALHAN, CO 80808

(E) *DORIS J. HAYS*
24975 SANBORN RD
CALHAN, CO 80808

(F) *MILDRED J DUNCAN*
1798 S EAST ELLICOTT RD
CALHAN, CO 80808

R.O.W'S WITHIN 200 FT.

EL PASO BOARD OF COUNTY COMMISSIONERS
200 SOUTH CASCADE AVENUE, SUITE 100
COLORADO SPRINGS, CO 80903-2202

MOUNTAIN VIEW ELECTRIC ASSOCIATION, INC.
FALCON OPERATIONS CENTER
11140 E. WOODMEN RD.
FALCON, CO 80831

CENTURYLINK
8400 EAST CRESCENT PARKWAY, SUITE 600
GREENWOOD VILLAGE, CO 80111

STRUCTURES ON OR WITHIN 200 FT

Schubert Ranches, LLC. 1555 S. Baggett Road Calhan, CO 80808-7808	Section 20 - 6 water wells, fences, sprinkler pivot Section 21 - fences, 3 water wells Section 28 - 3 houses, 3 buildings, 3 water wells, fences Section 29 - 3 houses, 7 water wells, 3 sprinkler pivots, 13 buldings, 4 trailer houses, 4 sheds, fences Section 32 - 2-houses, 2-garages, 3 buildings, 3 water well sprinkler pivot, fences
Ariel Loriga De Andres Yorniel 24820 Meier RD Calhan, CO 80808	wire fence
Daniel Fontes Reyes & Fred L Wiesner 3255 Wiesner Rd Calhan CO 80808-9536	wire fences, house, garage, shed, water well DW-151419 , stock well SW-140160
Mildred J Duncan PO Box 1057 Fort Benton, MT 59442-1057 (1798 S East Ellicott Rd Calhan, CO 80808)	wire fences
Mountain View Electric Association, Inc. Falcon Operations Center 11140 E. Woodmen Rd. Falcon, CO	Powerlines
Century Link Communications 8400 East Crescent Parkway, Suite 600 Greenwood Village, CO 80111	underground communication lines
El Paso County 200 South Cascade Avenue, Suite 100 Colorado Springs, CO 80903-2202	Baggett Road & Sanborn Road

LEGEND

- PERMIT BOUNDARY/ AFFECTED LANDS
- 200 FOOT LIMIT
- ROADS (HAUL, ACCESS) (TYP.)
- FENCE
- BURIED TELEPHONE/COMMUNICATION LINES
- OVERHEAD ELECTRIC LINES
- BUILDING
- WW-239897 WATER WELL
- 2 FOOT CONTOURS
- 5840 TOPO CONTOUR
- EPHEMERAL DRAINAGE
- FP FP FLOOD PLAIN (100 YR)
- LANDOWNER BANK ARMORING

Map Exhibit C - Current Conditions Map

ELLICOTT SAND AND GRAVEL, LLC.

SCHUBERT RANCH SAND RESOURCE

112 MLRB PERMIT

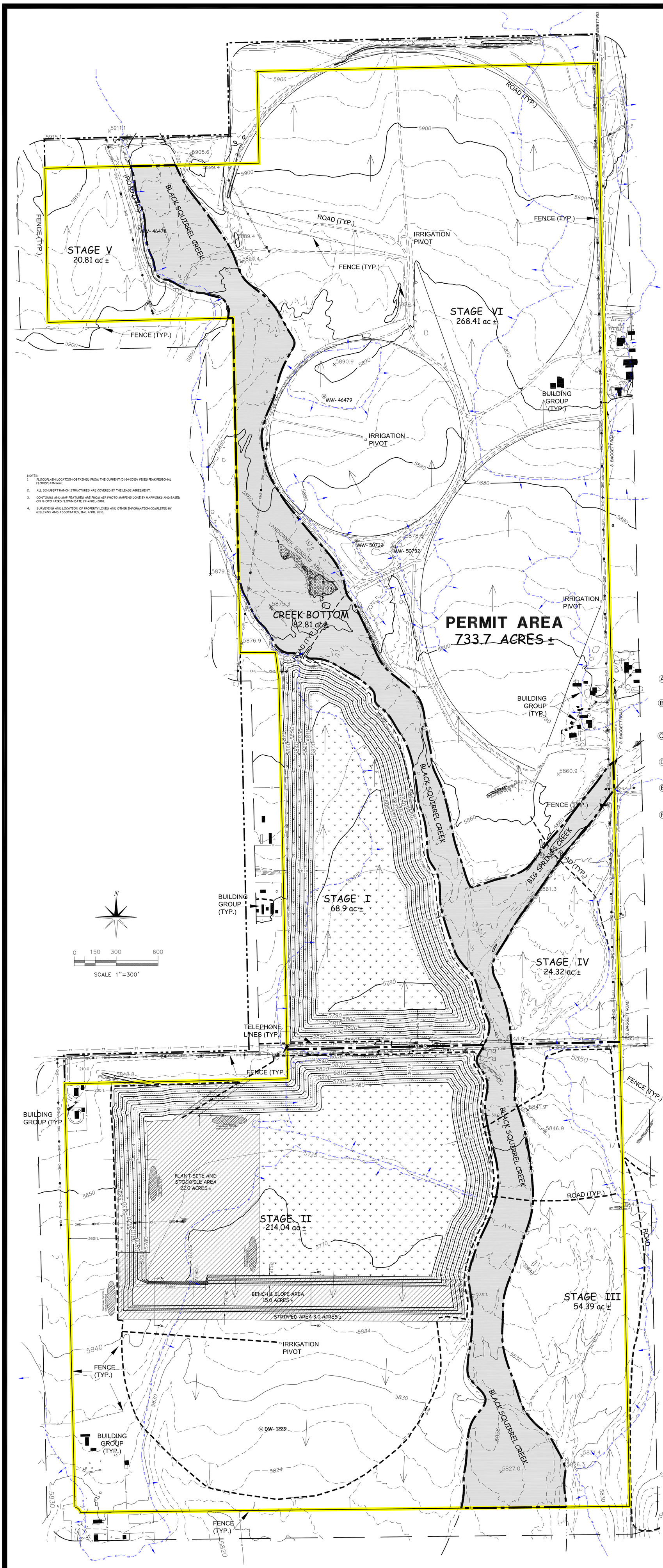
Parts of the S½NW¼SE¼, S½SE¼ & SE¼SW¼, Section 20. The E½E½, & NW¼NE¼ and Parts of the SW¼NE¼ , SW¼SE¼ & NW¼SE¼, Section 29 and The E½NE¼, SW¼NE¼, SE¼NW¼ and parts of the NW¼NE¼ & NE¼NW¼, Section 32, T-14-S, R-62-W, 6th P.M., El Paso County, Colorado.
Containing 733.7 acres more or less.

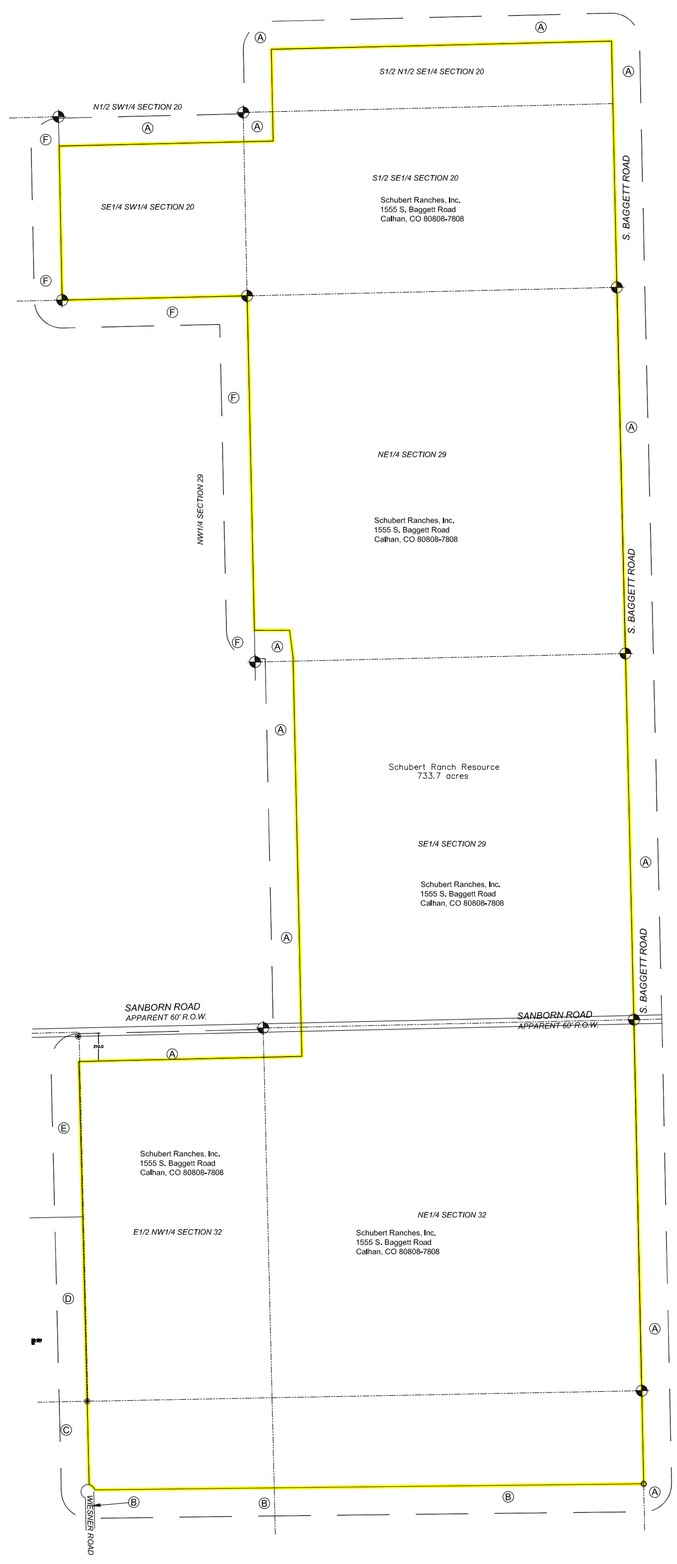
REVISIONS:	DATE:
Flood plain corrections to Dec 2018 maps	1/14/2018

PREPARED BY: ENVIRONMENT, INC.
7985 VANCE DR., # 205A
ARVADA, CO 80003
(303) 423-7297
Environment-inc@outdrs.net

SCALE 1" = 300'
DATE 11/29/2018

REVISED: JAN 14, 2019 - 12:42:27





NOTES:
1. FLOODPLAIN LOCATION OBTAINED FROM THE CURRENT (01-14-2019) PIKES PEAK REGIONAL FLOODPLAIN MAP.
2. ALL SCHUBERT RANCH STRUCTURES ARE COVERED BY THE LEASE AGREEMENT.
3. CONTOURS AND MAP FEATURES ARE FROM AIR PHOTO MAPPING DONE BY MAPWORKS AND BASED ON PHOTO PAIRS FLOWN DATE 27-APRIL-2018.
4. SURVEYING AND LOCATION OF PROPERTY LINES AND OTHER INFORMATION COMPLETED BY GILLIANS AND ASSOCIATES, INC. APRIL 2018.

N

0 150 300 600

SCALE 1"=300'

OWNERSHIP MAP AND LIST (SEE EXHIBIT O)

(A) SCHUBERT RANCHES LLC
1555 S. BAGGETT RD
CALHAN CO 80808

(B) DANIEL FONTES REYES & FRED L WIESNER
3255 WIESNER RD
CALHAN CO 80808-9536

(C) *ARIEL LORIGA DE ANDRES YORNIEL*
ARIESKY RODRIGUEZ
24820 MEIER RD
CALHAN, CO 80808

(D) *BENJAMINE & MAKENSEY VALLEJO*
2755 S EAST ELLICOTT RD
CALHAN, CO 80808

(E) *DORIS J. HAYS*
24975 SANBORN RD
CALHAN, CO 80808

(F) *MILDRED J DUNCAN*
1798 S EAST ELLICOTT RD
CALHAN, CO 80808

R.O.W'S WITHIN 200 FT.

EL PASO BOARD OF COUNTY COMMISSIONERS
200 SOUTH CASCADE AVENUE, SUITE 100
COLORADO SPRINGS, CO 80903-2202

MOUNTAIN VIEW ELECTRIC ASSOCIATION, INC.
FALCON OPERATIONS CENTER
11140 E. WOODMEN RD.
FALCON, CO 80831

CENTURYLINK
8400 EAST CRESCENT PARKWAY, SUITE 600
GREENWOOD VILLAGE, CO 80111

STRUCTURES ON OR WITHIN 200 FT

Schubert Ranches, LLC. 1555 S. Baggett Road Calhan, CO 80808-7808	Section 20 - 6 water wells, fences, sprinkler pivot Section 21 - fences, 3 water wells Section 28 - 3 houses, 3 buildings, 3 water wells, fences Section 29 - 3 houses, 7 water wells, 3 sprinkler pivots, 13 buldings, 4 trailer houses, 4 sheds, fences Section 32 - 2-houses, 2-garages, 3 buildings, 3 water wells, sprinkler pivot, fences
Ariel Loriga De Andres Yorniel 24820 Meier RD Calhan, CO 80808	wire fence
Daniel Fontes Reyes & Fred L Wiesner 3255 Wiesner Rd Calhan CO 80808-9536	wire fences, house, garage, shed, water well DW-151419 , stock well SW-140160
Mildred J Duncan PO Box 1057 Fort Benton, MT 59442-1057 (1798 S East Ellicott Rd Calhan, CO 80808)	wire fences
Mountain View Electric Association, Inc. Falcon Operations Center 11140 E. Woodmen Rd. Falcon, CO	Powerlines
Century Link Communications 8400 East Crescent Parkway, Suite 600 Greenwood Village, CO 80111	underground communication lines
El Paso County 200 South Cascade Avenue, Suite 100 Colorado Springs, CO 80903-2202	Baggett Road & Sanborn Road

LEGEND

- PERMIT BOUNDARY/ AFFECTED LANDS
- 200 FOOT LIMIT
- STAGE LINE
- ROADS (HAUL, ACCESS) (TYP.)
- FENCE
- BURIED TELEPHONE/COMMUNICATION LINES
- OVERHEAD ELECTRIC LINES
- BUILDING
- WW-239897 WATER WELL
- 2 FOOT CONTOURS
- 5840 TOPO CONTOUR
- EPHEMERAL DRAINAGE
- FLOOD PLAIN (100 YR)
- MINING DIRECTION
- REVEGETATED AREA
- PLANT & STOCKPILE AREA - 40 AC.±
- STRIPPED
- LANDOWNER BANK ARMORING

Map Exhibit C-1 - Mining Plan Map

ELLICOTT SAND AND GRAVEL, LLC.

SCHUBERT RANCH SAND RESOURCE

112 MLRB PERMIT

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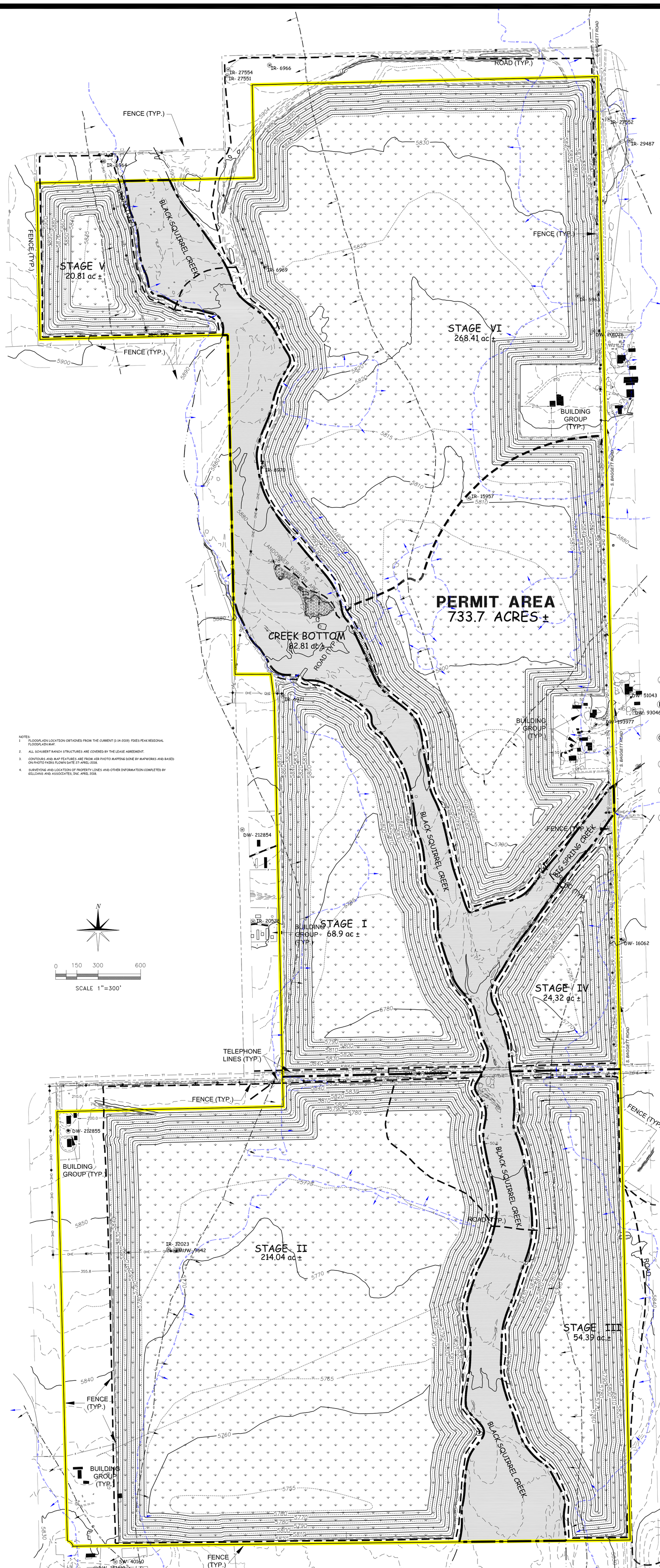
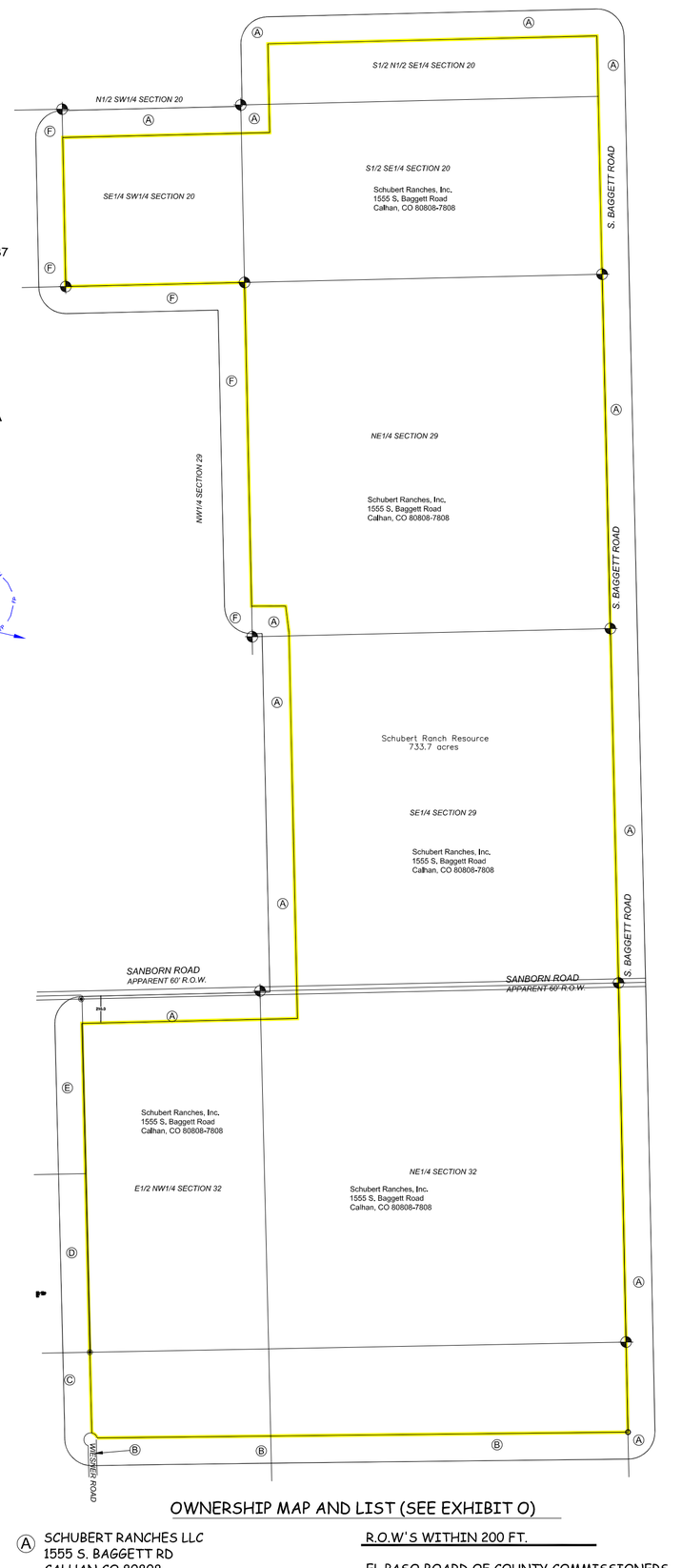
REVISED: JAN 14, 2019 - 12:37:00





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- 5840 TOPO CONTOUR
- EPHEMERAL DRAINAGE
- FLOOD PLAIN (100 YR)
- REVEGETATED AREA
- LANDOWNER BANK ARMORING

Map Exhibit F - Reclamation Plan Map

ELLICOTT SAND AND GRAVEL, LLC.

SCHUBERT RANCH SAND RESOURCE

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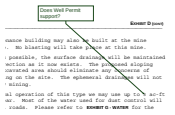
REVISED: JAN 14, 2019 - 12:33:45

DRMS Mine Permit_V1.pdf Markup Summary

Does Well Permit support? (1)



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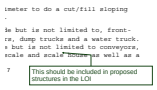
Does Well Permit support?

This should be included in proposed structures in the LOI (1)



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This should be included in proposed structures in the LOI

what is the permit number? (1)

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what is the permit number?