HUNT FARMS
WCR 40 SOIL/DIRT MINE
DRMS 112 PERMIT SUBMITTAL
M-XXXX-021-

PREPARED FOR:

HUNT FARMS
14460 CO RD 40
Platteville, CO 80651
(970) 737-2437

PREPARED BY:

Civil Resources, LLC
323 5th Street
P.O. Box 680
Frederick, CO 80530
303.833.1416

DATE SUBMITTED TO DRMS: MAY 3, 2020

CIVIL RESOURCES, LLC
ENGINEERS & PLANNERS

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)**: Hunt
   - 1.1 Type of organization (corporation, partnership, etc.): LLC

2. **Operation name (pit, mine or site name)**: WCR 40 Dirt Mine

3. **Permitted acreage (new or existing site)**: 150 permitted acres
   - 3.1 Change in acreage (+) _____ acres
   - 3.2 Total acreage in Permit area 150 acres

4. **Fees**:
   - 4.1 New Application $2,696.00 application fee
   - 4.2 New Quarry Application $3,342.00 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**: top soil | overburnden | reclamation soil | _____ | _____
   - 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: reclamation soil
   - 5.3 Anticipated end use of incidental commoditie(s) to be mined: construction material

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

7. **Name of owner of surface of affected land**: David Hunt

8. **Type of mining operation**: ☑ Surface ☐ Underground

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

   COUNTY: Weld

   PRINCIPAL MERIDIAN (check one): ☑ 6th (Colorado) ☐ 10th (New Mexico) ☐ Ute

   SECTION (write number): S 33

   TOWNSHIP (write number and check direction): T 4 ☑ North ☐ South

   RANGE (write number and check direction): R 66 ☐ 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):
   ~1/2 a mile south of Gilcrest. Elevation: 4778

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 _____ min _____ sec ____._____ (2 decimal places)

   Longitude (W): deg _____ min _____ sec ____._____ (2 decimal places)

   OR

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

   Latitude (N) 40.27337 (5 decimal places)

   Longitude(W) 104.77807 (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) Nad 83 Zone 13

   Easting _____

   Northing _____

11. **Correspondence Information**:

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

Contact's Name: **David Hunt** Title: _____

Company Name: Hunt

Street/P.O. Box: 14460 WCR 40 P.O. Box: _____

City: Platteville

State: Colorado Zip Code: 80651

Telephone Number: (970) - 534 0917

Fax Number: ( ) - _____

PERMITTING CONTACT (if different from applicant/operator above)

Contact's Name: Andy Rodriguez Title: _____

Company Name: Civil Resources, LLC

Street/P.O. Box: 8308 Colorado Boulevard, STE. 200 P.O. Box: _____

City: Firestone

State: Colorado Zip Code: 80504

Telephone Number: (303) - 833-1416

Fax Number: ( ) - _____

INSPECTION CONTACT

Contact's Name: _____ Title: _____

Company Name: _____

Street/P.O. Box: _____ P.O. Box: _____

City: _____

State: _____ Zip Code: _____

Telephone Number: ( ) - _____

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): Excavators and loaders.

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

13.1 Briefly explain mining method (e.g. truck/shovel): Stockpiled.

List any designated chemicals or acid-producing materials to be used or stored within permit area:

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.

JH 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;

DH 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;

DH 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;

DH 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;

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

DH 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.

DH 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.

DH 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.

DH 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.

DH 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.

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 3 day of May, 2021.

David E. Hunt Hunt Farms
Applicant/Operator or Company Name

If Corporation Attest (Seal)

Signed: David Hunt

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

Title: Owner.

State of Colorado)
) ss.
County of Weld)

The foregoing instrument was acknowledged before me this 3 day of May,
____, by David Hunt as Owner of Hunt Farms

ANDREW RODRIGUEZ
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20114053878
My Commission Expires September 12, 2023

Notary Public

My Commission expires: 9/12/2023

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

EXHIBIT A – LEGAL DESCRIPTION

This information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.1 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

PROPERTY DESCRIPTION-PARCEL 1 (Per Title Commitment No. 21613UTG Amendment No. 1)

Lots A and B of Recorded Exemption No. 1057-33-1 RECX14-0042, recorded October 23, 2014 at Reception No. 4056435, being a part of the North 1/2 of the Northeast 1/4 of Section 33, Township 4 North, Range 66 West of the 6th P.M., County of Weld, State of Colorado. 75.19 ACRES (GROSS).

PROPERTY DESCRIPTION-PARCEL 2 (Per Title Commitment No. 21616UTG Amendment No. 1)

Lot B of Amended Recorded Exemption No. 1057-33-1-RE-993, recorded July 1, 1996 at Reception No. 2499201, located in the NE 1/4 of Section 33, Township 4 North, Range 66 West of the 6th P.M., County of Weld, State of Colorado. 74.32 ACRES (GROSS).

TOTAL PERMIT BOUNDARY AREA

149.51 ACRES (+/-)

EXHIBIT B – INDEX MAP

Please refer to the attached index map.

FIGURE 1
PROJECT LOCATION MAP

EXHIBIT C – PRE-MINING AND MINING PLAN MAPS OF AFFECTED LANDS

Please refer to the attached Existing Conditions Map and Mining Plan Map.

DIVISION OF RECLAMATION MINING AND SAFETY PERMIT M2021-XXX

HUNT FARMS

WCR 40 SOIL MINE

WELD COUNTY, COLORADO

PERMIT BOUNDARY DESCRIPTION:

PROPERTY DESCRIPTION–PARCEL 1 (Per Title Commitment No. 21613UTG Amendment No. 1)

Lots A and B of Recorded Exemption No. 1057–33–1 RECX14–0042, recorded October 23, 2014 at Reception No. 4056435, being a part of the North 1/2 of the Northeast 1/4 of Section 33, Township 4 North, Range 66 West of the 6th P.M., County of Weld, State of Colorado. 75.19 ACRES (GROSS)

PROPERTY DESCRIPTION–PARCEL 2 (Per Title Commitment No. 21616UTG Amendment No. 1)

Lot B of Amended Recorded Exemption No. 1057–33–1–RE–993, recorded July 1, 1996 at Reception No. 2499201, located in the NE 1/4 of Section 33, Township 4 North, Range 66 West of the 6th P.M., County of Weld, State of Colorado. 74.32 ACRES (GROSS)

TOTAL PERMIT BOUNDARY AREA

149.51 ACRES (+/–)

FIGURE 1
PROJECT LOCATION MAP

NORTH

SCALE: 1" = 500 UNITS

CERTIFICATION:

I HEREBY CERTIFY THAT THESE PLANS FOR THE DRMS PERMIT FOR THE WCR 40 GRAVEL MINE WERE PREPARED UNDER MY DIRECT SUPERVISION FOR THE OWNERS THEREOF.

BY: _____ DATE: 05/03/2021

ANDREW R. RODRIGUEZ, P.E.

HUNT FARMS DOES HEREBY ACCEPT AND APPROVE THESE PLANS FOR THE DRMS PERMIT.

BY: _____ DATE: 05/03/2021

AUTHORIZED REPRESENTATIVE
HUNT FARMS

PREPARED FOR:

HUNT FARMS
14460 CO RD 40
PLATTEVILLE, CO 80651
(970) 737-2437

PREPARED BY:

CIVIL RESOURCES, LLC
323 5th STREET
P.O. BOX 680
FREDERICK, CO 80530
303 833 1416

811 Know what's below. Call before you dig.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

DATE: 03/ 30 / 2021

DWG: COVER-EXISTING CONDITIONS-WCR40.DWG

SHEET: 1

SURVEY INFO:

LAT 40°
PROFESSIONAL LAND SURVEYORS
6250 W. 10TH STREET, UNIT 2
GREELEY, CO 80643
O: 970-515-5294

LEGEND

- BOUNDARY LINE
- LOT LINE
- SECTION LINE
- QUARTER SECTION LINE
- FRACTIONAL SECTION LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- FENCE
- OHU — OVERHEAD UTILITY
- E — ELECTRIC LINE
- G — GAS LINE
- FO — FIBER OPTIC/TELEPHONE LINE
- W — WATER LINE
- TOP OF BANK
- IRRIGATION TRACK
- GUARD RAIL
- EDGE OF WATER
- GRAVEL
- ASPHALT ROADWAY
- DIRT ROAD
- CONCRETE
- BUILDING
- FOUND ALIQUOT CORNER AS DESCRIBED
- FOUND MONUMENT AS DESCRIBED
- CALCULATED POSITION
- POWER POLE
- ELECTRIC METER
- ELECTRIC SERVICE
- GUY WIRE
- GAS MARKER
- GAS VALVE
- OIL MARKER
- GAS METER
- TELEPHONE/FIBER OPTIC PEDESTAL
- WATER MARKER
- WATER METER
- WATER WELL
- WATER VALVE
- GATE VALVE
- AIR VENT
- MINE PERMIT BOUNDARY
- MONITOR
- MAIL BOX
- STREET SIGN
- GATE
- OIL & GAS WELL
- PLUGGED & ABANDONED OIL & GAS WELL
- SURVEY CONTROL POINT
- UAV SURVEY CONTROL POINT
- WOOD POST
- 0.8% — EXISTING GRADE SLOPE

STRUCTURE INFO:

HUNT KAYLEEN & DAVID, IRRIGATION INFRASTRUCTURE
CENTRAL WELD COUNTY WATER LINE WCR 40 ROW (CWCWD)
WCR 40 & 31 ROW (WELD COUNTY PUBLIC WORKS)
XCEL OVERHEAD POWER LINE (NORTHERN, WESTERN & EASTERN BOUNDARY)
VARIOUS GAS LINES (DCP, AKA, NGL & NOBLE)
URPRC 33-7F WELL HEAD (NOBLE)
UPRC 33-8F WELL HEAD (NOBLE)
SWEET VALLEY FARMS UPRR 31-33-2 (NOBLE)
SWEET VALLEY FARMS-UPRR 41-33 (NOBLE)
FIBER OPTIC IN WCR 40 & 31 ROW (CENTURY LINK)
CWCWD (WATER LINE, NORTH BOUNDARY)

NEIGHBORS WITHIN 200-FEET

HUNT KAYLEEN & DAVID
WEBBER EILEEN & WEBBER PAUL T
SANDAU DORIS E & SANDAU ROBERT V
HEITMAN ELLA K (HEIRS OF)
NELSON RALPH CARL & CLAUDIA JEAN
MARTINEZ FRANCISCO
FAMILY LIVING TRUST
PEARSON JOSH

SOILS

11	BRESSER SANDY LOAM, 0 TO 3 PERCENT SLOPES
29	JULESBURG SANDY LOAM, 0 TO 3 PERCENT SLOPES
30	JULESBURG SANDY LOAM, 1 TO 3 PERCENT SLOPES
75	VONA SANDY LOAM, 0 TO 1 PERCENT SLOPES

EXISTING VEGETATION:

AGRICULTURAL FARM LAND

APPLICANT:

HUNT FARMS
14460 CO RD 40
PLATTEVILLE, CO 80651

AFFECTED LANDS:

HUNT KAYLEEN & DAVID

TOTAL PERMIT AREA:
149.5 ACRES +/-

NOTE:

CIVIL RESOURCES, LLC. IS NOT RESPONSIBLE FOR SAFETY, IN, ON, OR ABOUT THE PROJECT SITE, NOR FOR COMPLIANCE BY THE APPROPRIATE PARTY OF ANY REGULATIONS THERETO.

THESE MAPS WERE PREPARED BY CIVIL RESOURCES, LLC. IN COOPERATION WITH HUNT FARMS. HUNT FARMS WILL KEEP THE DIVISION OF RECLAMATION MINING AND SAFETY INFORMED OF ANY CHANGES TO THE MINING OR RECLAMATION PLANS THROUGH ANNUAL REPORTS AND FILE TECHNICAL REVISIONS AND AMENDMENT APPLICATIONS AS NECESSARY THROUGHOUT THE LIFE OF THE MINE.

CIVIL RESOURCES, LLC
323 5th STREET
P.O. Box 680
FREDERICK, CO 80530
303.833.1416
WWW.CIVILRESOURCES.COM

HUNT WCR 40
14460 CO RD 40
PLATTEVILLE, CO 80651

CONTACT: DAVID HUNT

WCR 40
GRAVEL MINE
PLATTEVILE, COLORADO

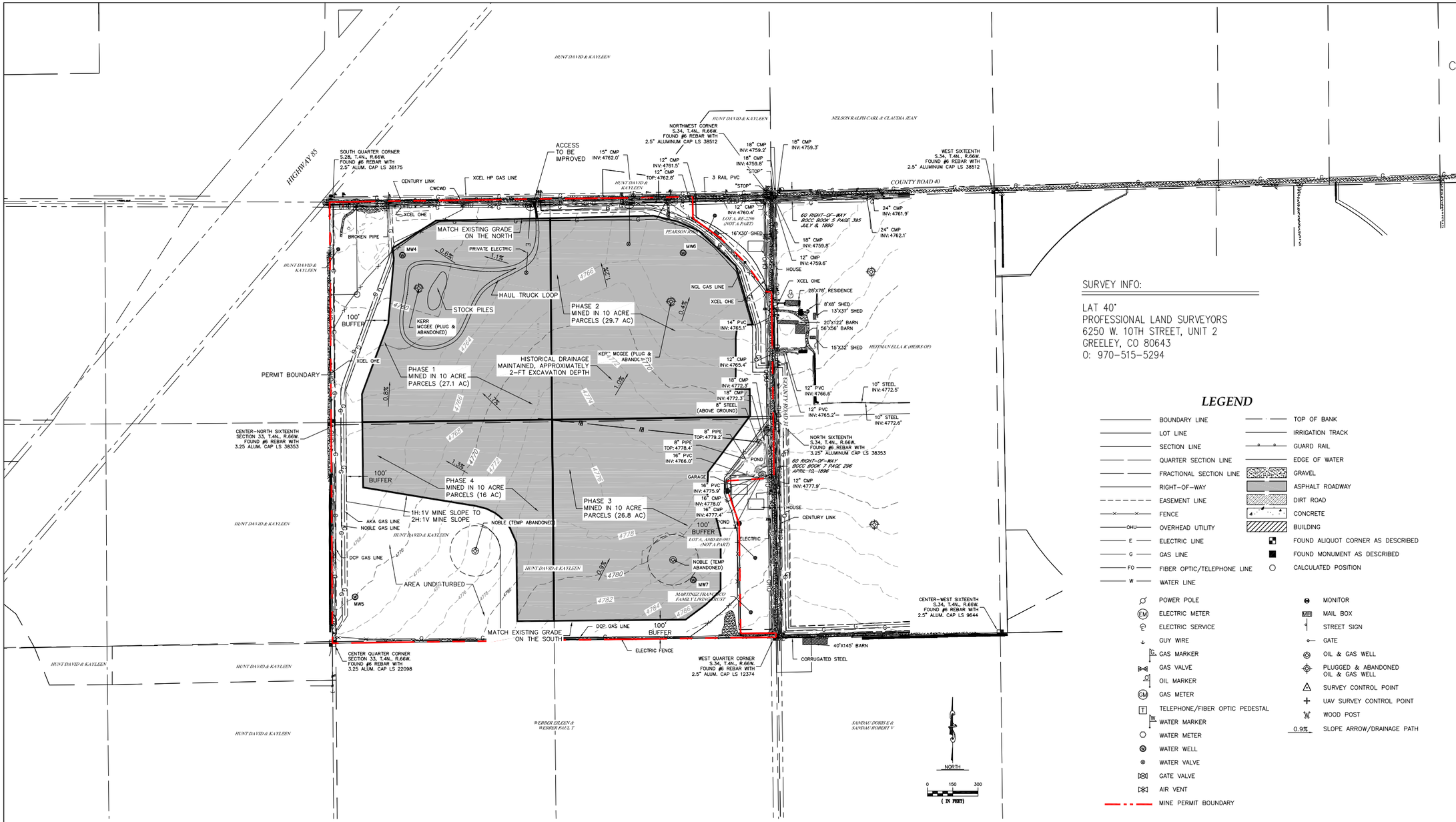
REVISIONS

NO.	DESCRIPTION	DATE

DESIGNED BY: ARR
DRAWN BY: ARR
CHECKED BY: ARR
DATE: APRIL 2021
SCALE: AS NOTED
AS NOTED
JOB NO.: 307.001.04
DWG NAME: COVER-EXISTING CONDITIONS-WCR40.DWG

EXISTING

SHEET:
2



STRUCTURE INFO:

HUNT KAYLEEN & DAVID, IRRIGATION INFRASTRUCTURE
CENTRAL WELD COUNTY WATER LINE WCR 40 ROW (CWCWD)
WCR 40 & 31 ROW (WELD COUNTY PUBLIC WORKS)
XCEL OVERHEAD POWER LINE (NORTHERN, WESTERN & EASTERN BOUNDARY)
VARIOUS GAS LINES (DCP, AKA, NGL & NOBLE)
URPRC 33-7F WELL HEAD (NOBLE)
UPRC 33-8F WELL HEAD (NOBLE)
SWEET VALLEY FARMS UPRR 31-33-2 (NOBLE)
SWEET VALLEY FARMS-UPRR 41-33 (NOBLE)
FIBER OPTIC IN WCR 40 & 31 ROW (CENTURY LINK)
CWCWD (WATER LINE, NORTH BOUNDARY)

EXISTING VEGETATION:

AGRICULTURAL FARM LAND

APPLICANT:

HUNT FARMS
14460 CO RD 40
PLATTEVILLE, CO 80651

AFFECTED LANDS:

HUNT KAYLEEN & DAVID

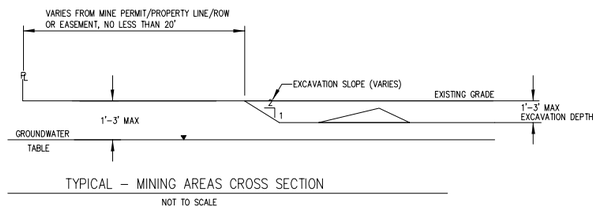
TOTAL PERMIT AREA:
149.5 ACRES +/-

NOTE:

CIVIL RESOURCES, LLC. IS NOT RESPONSIBLE FOR SAFETY, IN, ON, OR ABOUT THE PROJECT SITE, NOR FOR COMPLIANCE BY THE APPROPRIATE PARTY OF ANY REGULATIONS THERETO.

THESE MAPS WERE PREPARED BY CIVIL RESOURCES, LLC. IN COOPERATION WITH HUNT FARMS. HUNT FARMS WILL KEEP THE DIVISION OF RECLAMATION MINING AND SAFETY INFORMED OF ANY CHANGES TO THE MINING OR RECLAMATION PLANS THROUGH ANNUAL REPORTS AND FILE TECHNICAL REVISIONS AND AMENDMENT APPLICATIONS AS NECESSARY THROUGHOUT THE LIFE OF THE MINE.

Know what's below. Call before you dig. 811



TYPICAL - MINING AREAS CROSS SECTION
NOT TO SCALE

SURVEY INFO:

LAT 40°
PROFESSIONAL LAND SURVEYORS
6250 W. 10TH STREET, UNIT 2
GREELEY, CO 80643
O: 970-515-5294

LEGEND

- BOUNDARY LINE
- LOT LINE
- SECTION LINE
- QUARTER SECTION LINE
- FRACTIONAL SECTION LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- FENCE
- OHU — OVERHEAD UTILITY
- E — ELECTRIC LINE
- G — GAS LINE
- FO — FIBER OPTIC/TELEPHONE LINE
- W — WATER LINE
- TOP OF BANK
- IRRIGATION TRACK
- GUARD RAIL
- EDGE OF WATER
- GRAVEL
- ASPHALT ROADWAY
- DIRT ROAD
- CONCRETE
- BUILDING
- FOUND ALIQUOT CORNER AS DESCRIBED
- FOUND MONUMENT AS DESCRIBED
- CALCULATED POSITION
- POWER POLE
- ELECTRIC METER
- ELECTRIC SERVICE
- GUY WIRE
- GAS MARKER
- GAS VALVE
- OIL MARKER
- GAS METER
- TELEPHONE/FIBER OPTIC PEDESTAL
- WATER MARKER
- WATER METER
- WATER WELL
- WATER VALVE
- GATE VALVE
- AIR VENT
- MINE PERMIT BOUNDARY
- MONITOR
- MAIL BOX
- STREET SIGN
- GATE
- OIL & GAS WELL
- PLUGGED & ABANDONED OIL & GAS WELL
- SURVEY CONTROL POINT
- UAV SURVEY CONTROL POINT
- WOOD POST
- 0.9% — SLOPE ARROW/DRAINAGE PATH

CIVIL RESOURCES, LLC
323 5th STREET
P.O. Box 680
FREDERICK, CO 80530
303.833.1416
WWW.CIVILRESOURCES.COM

HUNT WCR 40
14460 CO RD 40
PLATTEVILLE, CO 80651

CONTACT: DAVID HUNT

WCR 40
GRAVEL MINE
PLATTEVILE, COLORADO

REVISIONS

NO.	DESCRIPTION	DATE

DESIGNED BY: ARR
DRAWN BY: ARR
CHECKED BY: ARR
DATE: APRIL 2021
SCALE: AS NOTED
AS NOTED
JOB NO.: 307.001.04
DWG NAME: COVER-EXISTING CONDITIONS-WCR40.DWG

MINE

SHEET:
3

EXHIBIT D – MINING PLAN

This information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.4 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

(a) Description of the method(s) of mining to be employed in each stage of the operation as related to any surface disturbance on affected lands;

The proposed amendment area includes a significant deposit of harvestable overburden used for reclamation soil in oil and gas operations located on the east side of Highway 85 in Weld County. The site is located east of Highway 85, south of Weld County Road 40 and west of Weld County Road 31. The permit boundary will include 149.51 acres +/-.

Existing Conditions and Site Preparation:

Existing Conditions
The proposed mining area is actively being farmed as irrigated pasture grass, including alfalfa and other various crops for cattle as the site is used to supply a feed lot operation directly to the west.

Site Preparation
Very little site preparation is required, stripping the topsoil and stockpiling on the perimeter of the site.

Mining:

Phase 1 – to be stripped 2-feet, stockpiled and sold.
Phase 2 – to be stripped 2-feet, stockpiled and sold.
Phase 3 – to be stripped 2-feet, stockpiled and sold.
Phase 4 – to be stripped 2-feet, stockpiled and sold.

The operator will develop and comply with a Stormwater Management Plan and Spill, Prevention, Control and Countermeasures Plan. The operator will notify the Division of Mine Safety and Reclamation in the event of a reportable spill.

Processing:
All material mined under this proposed application will be transported by excavator, loader or haul truck to the stock pile area.

Import Material:
Hunt Farms may import material from and export material to other sites. The applicant is aware that in accordance with Rule 3.1.5(9) of the Construction Material Rules and Regulations, if any offsite material is used as backfill, a notarized letter will be submitted to the Division indicating the materials are inert. The applicant will supply

such a letter to the Division if, at the time of Reclamation, the applicant intends to use off-site material as backfill.

(b) Earthmoving;

Topsoil and overburden will be stripped with bulldozers, loaders or excavators and stockpiled in the active mine phase.

The mined area will be reclaimed to 2-feet below existing grade and tie into existing grade on the perimeter of the mine. The reclamation detail will include maintaining a 100-foot buffer around the perimeter and reclaiming the excavation. The mine was excavated down at a 2 to1 horizontal to vertical slope on the east, west and south side, along with feathering grades back into existing on the north by Weld Cunty Road 40. This excavation will be amended and planted with crops or dryland native grasses. Historic drainage patterns will be maintained.

(c) All water diversions and impoundments; and

There will no dewatering or water impoundments onsite.

(d) The size of area(s) to be worked at any one time.

Typically up to 10 acres will be disturbed during mining.

(e) An approximate timetable to describe the mining operation. The timetable is for the purpose of establishing the relationship between mining and reclamation during the different phases of a mining operation.

The Operator anticipates that mining will commence as soon as all permits are in place. The Operator anticipates extracting approximately 100,000 tons of reclamation soil per year, however, production rates may vary based on market demands.

Timetable for Mining and Reclamation

There is approximately 500,000 tons of soil material which will provide 5 years of reserves. Phase 1 will be mined first, then Phase 2, 3, etc..

Reclamation will begin immediately after mining is complete. When possible, concurrent reclamation practices will be used to minimize site disturbance and to limit material handling to the greatest extent possible. Please refer to the Mining Plan Map in Exhibit C for phase areas to be mined, locations and areas.

(f) Use Mining Plan Map in conjunction with narrative to present:

(i.) Nature, depth and thickness of the deposit and thickness and type of overburden to be removed

Exploratory borings were performed by Hunt Farms. The bedrock depths in the proposed mine areas ranged from approximately 20 feet to 30 feet below the ground surface. Groundwater ranges from 4 feet to 18 feet in the four wells that were drilled onsite. **The groundwater in the southwest corner of the site is 4 feet deep and this area will be undisturbed**. The remainder of the area has an average depth to groundwater of 13.3 feet.

(ii.) Nature of the stratum immediately beneath the material to be mined in sedimentary deposits

The site is located approximately 15 miles east of the foothills of the Colorado Front Range on the western flank of the Denver Structural Basin. The basin is a downwarp of sedimentary strata that tends north-northwest, parallel to the mountain front. In the project area, the sedimentary bed dips gently eastward toward the axis of the basin east of the site. Based on regional geologic mapping (Colton, 1978), the near surface bedrock in the project area is the Paleocene and Upper Cretaceous Denver and Arapahoe Formations. The bedrock is overlain by upper Pleistocene and Holocene (Quarternary age) gravel deposits and eolian (wind blown) overburden soils. The gravel deposits exist primarily within the Broadway Alluvium deposit. The bedrock unit consists mainly of claystone and may contain lenses of siltstone and sandstone.

(g) Identify the primary and secondary commodities to be mined/extracted and describe the intended use.

The primary commodities are reclamation fill; intended for construction materials.

(h) Name and describe the intended use of all expected incidental products to be mined/extracted by the proposed operation.

There are no expected incidental products to be mined.

(i) Specify if explosives will be used in conjunction with the mining (or reclamation)

No explosive material will be used on-site.

EXHIBIT E – RECLAMATION PLAN

This information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.5 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations: The proposed mining and reclamation plan focuses on minimizing the ecological impacts of mining, minimizing the length of time of impact, and maximizing long-term benefits.

Phase 1 – mined in year one and reclaimed concurrently.
Phase 2 – mined in year two and reclaimed concurrently.
Phase 3 – mined in year three and four reclaimed concurrently.
Phase 4 – mined in year five and reclaimed concurrently.

(a) A description of the type(s) of reclamation the Operator proposes to achieve in the reclamation of the affected land, why each was chosen, the amount of acreage accorded to each, and a general discussion of methods of reclamation as related to the mechanics of earthmoving;

The mined area will be reclaimed to 2-feet below existing grade and tie into existing grade on the perimeter of the mine. The mine will include a 100-foot buffer around the perimeter of the excavation. The mine was excavated down at a 2 to1 horizontal to vertical slope on the east, west and south side, along with feathering grades back into existing on the north by Weld County Road 40. This excavation will be amended and planted with crops or dryland native grasses. Historic drainage patterns will be maintained. Refer to Exhibit F for the acreages and additional details.

Earthmoving

The soil amendment will be placed by a loader and generally graded with a blade. All grading will be done in a manner that controls erosion and siltation of the affected lands, to protect areas outside of the affected land from slides and other damage. In addition, all backfilling and grading will be completed as soon as feasible after the mining process. All disturbed areas will be regraded and smoothed to a finished grade that is suitable for revegetation of the final land use. See attached mining plan for historic and proposed grades.

As noted previously, the area will be reclaimed as mining commences. Finish grading, topsoil/soil amendment placement and seeding will occur once the resource is completely removed per phase. A typical cross-section of the excavation is included on the Reclamation Plan Map.

(b) A comparison of the proposed post-mining land use to other land uses in the vicinity and to adopted state and local land use plans and programs.

Once the site is reclaimed it can returned to being farmed.

(c) A description of how the Reclamation Plan will be implemented to meet each applicable requirement of Section 3.1.

The Operator will carry reclamation to completion with reasonable diligence. Reclamation will be completed within one to two years from completion of mining, but not more than five years from the date the Operator informs the Board or Office that such phase has commenced.

Section 3.1.5 Reclamation Measures Material Handling: Grading will be performed to help control erosion and siltation of the affected lands through phased mining, implementing good operation techniques to handle material as little as possible, and vegetation of stockpiles remaining in place for more than one growing season. Although the use of erosion protection devices is not anticipated, if deemed necessary by the operator at the time of excavation, silt fence and haybale dams will be installed to prevent erosion. Backfilling and grading will be completed as soon as feasible after the mining process is complete.

Maximum slopes and slope combinations will be compatible with the configuration of surrounding conditions and selected land use. Mining will occur at a slope that is stable. The site will be reclaimed to grades 2-feet below pre-mining elevations.

The operator will backfill using fill material generated on-site, or imported inert fill generated outside the permit area. If any inert off-site material is used as backfill, a notarized letter will be submitted to the Division as required by Section 3.1.5(9) of the MLRB Construction Material Rules and Regulations.

It is not anticipated that mining will uncover any refuse or acid-forming or toxic producing materials, however if any such materials are encountered the operator will take precaution to handle the materials in a manner that will control unsightliness and protect the drainage system.

Drill or auger holes that are part of the mining operation shall be plugged with non-combustible material, which shall prevent harmful or polluting drainage. Any test pits, soil boring holes, or monitoring wells not located within the mine excavation limits will be plugged as soon as it can be confirmed that they are no longer needed for the operation.

Mined material to be disposed of within the affected area will be handled in such a manner so as to prevent any unauthorized release of pollutants to the surface drainage system. No unauthorized release of pollutants to groundwater shall occur from any materials mined, handled or disposed of within the permit area.

***Section 3.1.6 Water-General Requirements*:** The Operator will comply with applicable Colorado water laws governing injury to existing water rights and with applicable state and federal water quality and dredge and fill laws and regulations.

The operator will develop and comply with a stormwater management plan and will use best management practices (BMPs) to ensure groundwater and surface water are protected to the greatest possible extent. BMPs include schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the pollution in runoff from the site.

***Section 3.1.7 Groundwater - Specific Requirements*:** The Operator will comply with the applicable standards and conditions for classified and unclassified groundwater. Groundwater will not be exposed or dewatered.

***Section 3.1.8 Wildlife*:** The mining and reclamation plans have been designed to account for the safety and protection of wildlife on the mine site. The Operator will use concurrent reclamation methods to minimize the impact on wildlife. The proposed reclamation plan may improve wildlife habitat. The proposed plantings will create improved cover, foraging, roosting, and nesting areas for wildlife. Control and/or removal of noxious and weedy species during the project and the replacement of desirable graminoid, forb, shrub and tree species during reclamation will result in enhancement of wildlife habitat on the project site.

***Section 3.1.9 Topsoiling*:** Topsoil might be removed and segregated from other spoil. The topsoil might be blended sold or used for reclamation. Topsoil stockpiles shall be stored in places and configurations to minimize erosion and located in areas where disturbance by ongoing mining operations will be minimized. Once stockpiled, topsoil shall be rehandled as little as possible. Stockpiles that will remain in place for more than one growing season will receive vegetative cover, as outlined on the Reclamation Plan Map, as soon as possible to minimize erosion.

Section 3.1.10 Revegetation: In those areas where revegetation is part of the reclamation plan, the land shall be revegetated in a manner that establishes a diverse, effective, and long-lasting vegetative cover. The proposed seed-mix or plantings for reclamation are outlined on the Reclamation Plan included in Exhibit F of this application. The quarter section of land has a sprinkler and irrigation water and this infrastructure will remain and be utilized for irrigation purposes.

Section 3.1.11 Buildings and Structures: Please refer to the enclosed Reclamation Plan included in Exhibit F.

Section 3.1.12 Signs and Markers: The Operator will post appropriate signage at the entrance to the mine site. The permit area will be marked by existing fencing, or proximity to existing County roads.

(d) Plans for topsoil segregation, preservation and replacement; for stabilization, compaction and grading of spoil; and for revegetation.

Topsoil will be removed and segregated from other spoils. Topsoil not needed for reclamation may be sold or removed from the site. For reclamation, topsoil will be replaced by a scraper and generally graded with a blade. Grading shall be done in a manner that controls erosion and siltation of the affected land and protects areas outside the affected land from damage. In addition, backfilling and grading shall be completed as soon as feasible after the mining process.

Final grading will create a final topography that is appropriate for ultimate land use. For example, grades on the site will maintain historic drainage. Topsoil will be uniformly placed and spread on areas disturbed by the mining. The minimum thickness shall be 3 to

6 inches above the surrounding finished grade, consistent with existing topsoil depths on-site. The topsoil shall be keyed to the underlying and surrounding material by the use of harrows, rollers or other equipment suitable for the purpose. The owner is as active farmer in the area and has the ability to maintain and ensure the reclaimed land will be suitable for the proposed use.

The Operator plans to plant crops for use in their feed lot operation. In the event crops are not use, areas where perennial seed revegetation is part of the reclamation plan, the Operator will revegetate the land in such a manner so as to establish a diverse, effective, and long-lasting vegetative cover that is capable of self-regeneration without continued dependence on irrigation or fertilizer and is at least equal in extent of cover to the natural vegetation of the surrounding area. Seed will be drilled and mulched. The Operator owns a sufficient amount of irrigation water to establish an effective ground cover. In the event a dryland crop is utilized the Operator will more than likely continue to irrigate the ground allowing for more production for use in feedlot operations. The Operator currently uses this method on their other Weld County farms.

The revegetation seeding and plant list on the Reclamation Plan Map contains the preferred species of grasses, shrubs and trees to be planted.

Seeding will take place once final grading and replacement of topsoil have been completed. Timing of seeding will be consistent with standard horticultural practice for dryland applications - generally between late September and the middle of April to ensure there is adequate moisture for germination.

(e) A plan or schedule indicating how and when reclamation will be implemented. Include:

i. An estimate of the periods of time which will be required for the various stages or phases of reclamation.
Please refer to the Timetable for Mining and Reclamation in Section (e) of Exhibit D.

ii. A description of the size and location of each area to be reclaimed during each phase.
Please refer to the Reclamation Plan Map (Exhibit F).

iii. Outlining the sequence in which each stage or phase of reclamation will be carried out.
Please refer to the Timetable for Mining and Reclamation in Section (e) of Exhibit D.

(f) A description of:

i. Final grading – maximum anticipated slope gradient or expected ranges thereof;
The slopes will range from 0.5% to 2% and match historic grade.

ii. Seeding – types, mixtures, quantities and time of application;

Please refer to the Reclamation Plan Map for the list of plant materials and seeds to be utilized. The operator will seed during the appropriate season to ensure adequate moisture for germination and implement weed controls to allow the grasses/crops to successfully establish.

iii. Fertilization –types, mixtures, quantities, and time of application;
The type and application rate of fertilizer shall be determined based on a soil test at the time of final reclamation.

iv. Revegetation – types of trees, shrubs, etc.; and
Please refer to the letter discussing the proposed reclamation in more depth.

v. *Topsoiling – specify anticipated minimum depth or range of depths for those areas where topsoil will be replaced.*
Topsoil will be uniformly placed and spread on all areas disturbed by the mining. The minimum thickness shall be 3 inches above the surrounding finished grade including soil amendments and manure application.

WEED MANAGEMENT PLAN

Hunt Farms has a full-time weed manager on staff as they currently irrigate hundreds of acres for their associated operations. Hunt Farms has all of the necessary equipment in house to perform weed management.

M E M O R A N D U M

TO: DRMS M2021-030 WCR 40 Soil Mine

FROM: Civil Resources, LLC

DATE: May 17, 2021

RE: Reclamation attachment and qualifications

This memorandum summarizes the proposed reclamation for the WCR 40 Dirt mine and Hunt Farms ability to reclaim the site to irrigated crop land. This memorandum is intended to supplement Exhibit E (Reclamation Plan).

Existing Use

The farm is currently irrigated crop land producing alfalfa, corn silage and pasture grass. Approximately 350 acre-feet of water is applied on the field per year. Hunt Farms has grown from operating two circles to successfully owning and operating thirteen irrigation systems on over 1,200 acres of Weld County farmland over the last thirty years. Hunt Family Farms also pastures and feeds 7,000 head of beef cattle through its operations, utilizing the crops, aftermath, and irrigated pastures from the irrigated farms to supply feed for its cattle operations. Mr. Hunt holds a degree in agronomy and has applied techniques to increase crop yield across Hunt Farms. Using creative solutions to utilize irrigation water and varying crops, Hunt Farms is a forward thinking irrigator along the historic US Highway 85 corridor in Weld County.

Proposed Use

Hunt Farms plans to excavate/harvest the upper soils and sell those as a reclamation product for use in oil and gas reclamation across Weld County. This will provide nutrient rich soils for reclaimed oil and gas sites and will improve these sites to allow for crop development.

Hunt Farms will segregate a minimum of 3-inches of topsoil and mix that with manure from a near-by (adjacent) feed lot to be applied to the fields in-turn promoting plant growth on these deep sandy loam soils. Hunt Farms owns and operates the adjacent feed lot and this material is a byproduct of raising cattle. These uses are appropriate for the development of irrigated crops and a reclaimed use of the manure. For example, sod farms continuously remove the top organic layer and continue to replant the sod. The sod could be considered a cover crop that creates organic matter each season. This will be very similar to the reclaimed use of the WCR 40 Soil Mine except that Hunt's is a one-time operation. The proposed mining area also has native water rights in conjunction with an existing sprinkler system. The sprinkler will not be removed during mining and once the soil is ready for planting it will be irrigated which will further ensure the success of a cover crop. Mr. Hunt proposes to plant alfalfa, legumes, or other cover crops to promote growth and rebuild the reclaimed area.

Discussions with Weld County have taken place and initial support for the project has been conveyed to Hunt Farms. Once the DRMS process is complete Hunt Farms will have to obtain a Use by Special Review Permit.

Background Information

Mr. Hunt has also discussed the proposed reclamation with various agronomists and attached to this memo is a background data sheet discussing manure use and proposed cover crops for reclamation.

Attachments

Rebuilding Topsoil – Down to Earth Consulting LLC
USDA Cover Crop Chart

REBUILDING TOPSOIL

1. Soil test the area 0-12 " run a complete analysis

2. Add gypsum or lime to adjust PH if needed (6 to 7) then deep till

3. Apply manure and or compost or other organic matter in the fall and lightly till in

4. Plant cover crop (such as rye, or beans etc.)

5. work cover crop into soil during the spring

6. repeat every fall

Mineral Conditioners

Gypsum. Gypsum has long been recognized for its benefits on high sodium-containing soils. Gypsum is a mineral with the chemical composition $CaSO_4 \cdot 2H_2O$. It occurs in nature as soft crystalline rock and varies in purity. Gypsum has been shown to displace exchangeable sodium from the cation exchange sites of soils high in sodium. With irrigation or dryland, gypsum can be used to reclaim saline areas or slick spots, soften and crumble alkali hard pans, supply calcium on low exchange capacity soils, and improve infiltration for some puddled soils. Gypsum is not recommended on soils containing native gypsum or areas irrigated with water containing abundant amounts of calcium and magnesium.

The amount of gypsum to apply depends on the purity of the gypsum and the quantity of sodium present in the soil. Actual rates should be based on a salt-alkali soil test. Application rates normally vary between 1 and 10 tons/acre. Gypsum applied at less than 500 pounds per acre will likely be of little benefit as a soil conditioner, but may work as a calcium or sulfur nutrient source.

Animal manure. Animal manures can be important contributors to soil organic matter levels as well as suppliers of various nutrients. Manure is largely composed of partially decomposed plant material plus a wide variety of organisms. Many of the organic compounds in manure are similar to those found in soil organic matter. An application of 10 tons/acre of manure would result in 0.5 to 2 tons of organic matter after decomposition by soil organisms. Manure, however, contains soluble salts which can be detrimental to soil physical properties and crop growth when added in high amounts, especially to arid soils.

Table 1. Approximate C:N ratios of organic material and soil microbes (3).

Material	C:N Ratio
Crop Residues	
Alfalfa (young)	13:1
Clovers (mature)	20:1
Bluegrass	30:1
Corn Stalks	40:1
Straw (small grain)	80:1
Sewage Sludge	10-12:1
Cattle Manure	30:1
Peat Moss	58:1
Sawdust	
Hardwood	295: 1
Pine	729:1
Soil Microbes	
Bacteria	5:1
Actinomycetes	6:1
Fungi	10:1

Other organic conditioners. Other materials that can serve as soil conditioners include crop residues, compost, sewage sludges, green manure crops, and sawdust. The effectiveness of the material varies with the amount of material added and the C:N ratio. Sewage sludges may contain potentially harmful levels of heavy metals and other toxic materials and should be analyzed for these materials before using.

Building New TopSoil

No Bare Soil:	Soil must always be covered with plants or plant litter
Produce Organic Matter :	Rest groundcover from grazing, or grow green manure crops with minimum tillage
Graze :	Or slash the groundcover oeriodically. Use high stock densities for short periods to place organic matter bothinand on the soil (root pruning and litter trampling). On pasture cropping land, this may include one or two in-crop graze periods. Green manure crops should be lightly incorporated, although animal impact is the prefeerred option.
Higher Biomass :	The higher the biomass and turnover of plants roots, the faster new topsoil will form
Monitor Progress :	A composty smell indicates high levels of biological activity, particuly fungi. The activites of benefical soil microbes are important for the formation of soil aggregates which give soil its structure, improve porosity and water- holding capacity.
Soil Testing soil health :	
Can we Measure It ? :	

Cover Crop :

USDA United States Department of Agriculture
Agricultural Research Service

Cover Crop Chart

GROWTH CYCLE	PLANT ARCHITECTURE	RELATIVE WATER USE
A = Annual	♈ = Upright	💧 = Low
B = Biennial	✱ = Upright-Spreading	💧💧 = Medium
P = Perennial	≈ = Prostrate	💧💧💧 = High

COOL ---------- WARM

--GRASS-- ---------- BROADLEAF ----------

---------- LEGUME ----------

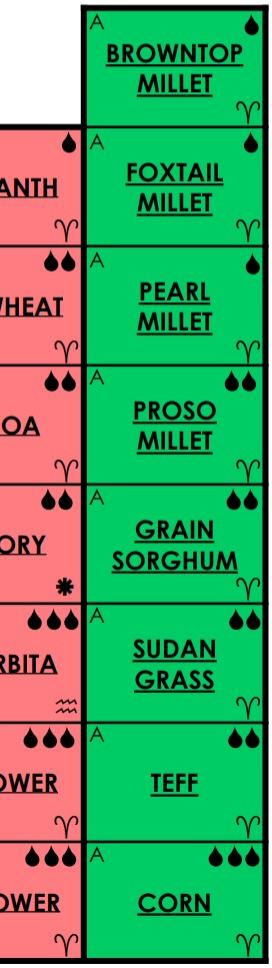
A 💧 ANNUAL FESCUE ♈								A AMARA
A 💧 BARLEY ♈								
A 💧💧 OAT ♈	A/B 💧 CAMELINA ♈	A/P 💧 MUSTARD ✱	A BALANSA CLOVER ≈ ✱	A 💧 CHICKPEA ✱	A/P 💧 MEDIC ♈	A 💧 COWPEA ✱	A 💧 CLUSTER BEAN ✱	A BUCKW
A 💧 SPELT ♈	A 💧 PHACELIA ♈	A/B 💧💧 CANOLA ✱	A 💧💧 BERSEEM CLOVER ♈	A 💧 PEA ♈	A 💧 LUPIN ♈	A/P 💧 LABLAB ≈ ✱	A/P 💧 JACK BEAN ✱	A QUIN
A 💧💧 WHEAT ♈	A 💧💧 FLAX ♈	A 💧💧💧 RADISH ✱	A 💧💧 CRIMSON CLOVER ✱	A 💧 LENTIL ✱	A 💧💧 FABA BEAN ♈	A/P 💧 FENUGREEK ♈	A 💧 VELVET BEAN ✱	P CHIC
A 💧💧💧 CEREAL RYE ♈	A 💧💧 KALE ✱	B 💧💧💧 TURNIP ✱	B/P 💧💧 RED CLOVER ♈	A/P 💧💧 LESPEDEZA ≈ ✱ ♈	A/B 💧💧 SWEET CLOVER ♈	A/P 💧 PIGEONPEA ✱	A 💧💧 MUNG BEAN ✱	A CUCUR
A 💧💧💧 TRITICALE ♈	A 💧💧 SPINACH ✱	B 💧💧💧 BEET ✱	P 💧💧 WHITE CLOVER ≈ ✱	P 💧💧 BIRDSFOOT TREFOIL ≈	P 💧💧💧 ALFALFA ♈	A 💧💧 PARTRIDGE PEA ♈	A 💧💧 SOYBEAN ✱	A SAFFLO
P SALINE TOLERANT ♈	A/B 💧💧💧 CHARD ✱	A/B 💧💧💧 CARROT ✱	P 💧💧 KURA CLOVER ≈	A/B 💧💧 VETCH ≈	P 💧💧💧 SAINFOIN ♈	A 💧💧 SUNNHEMP ♈	A/P 💧💧💧 PEANUT ≈ ✱	A SUNFLO

V 3.0 February 2018

◈ Add

AREA 4 SCD Cooperative Research Farm

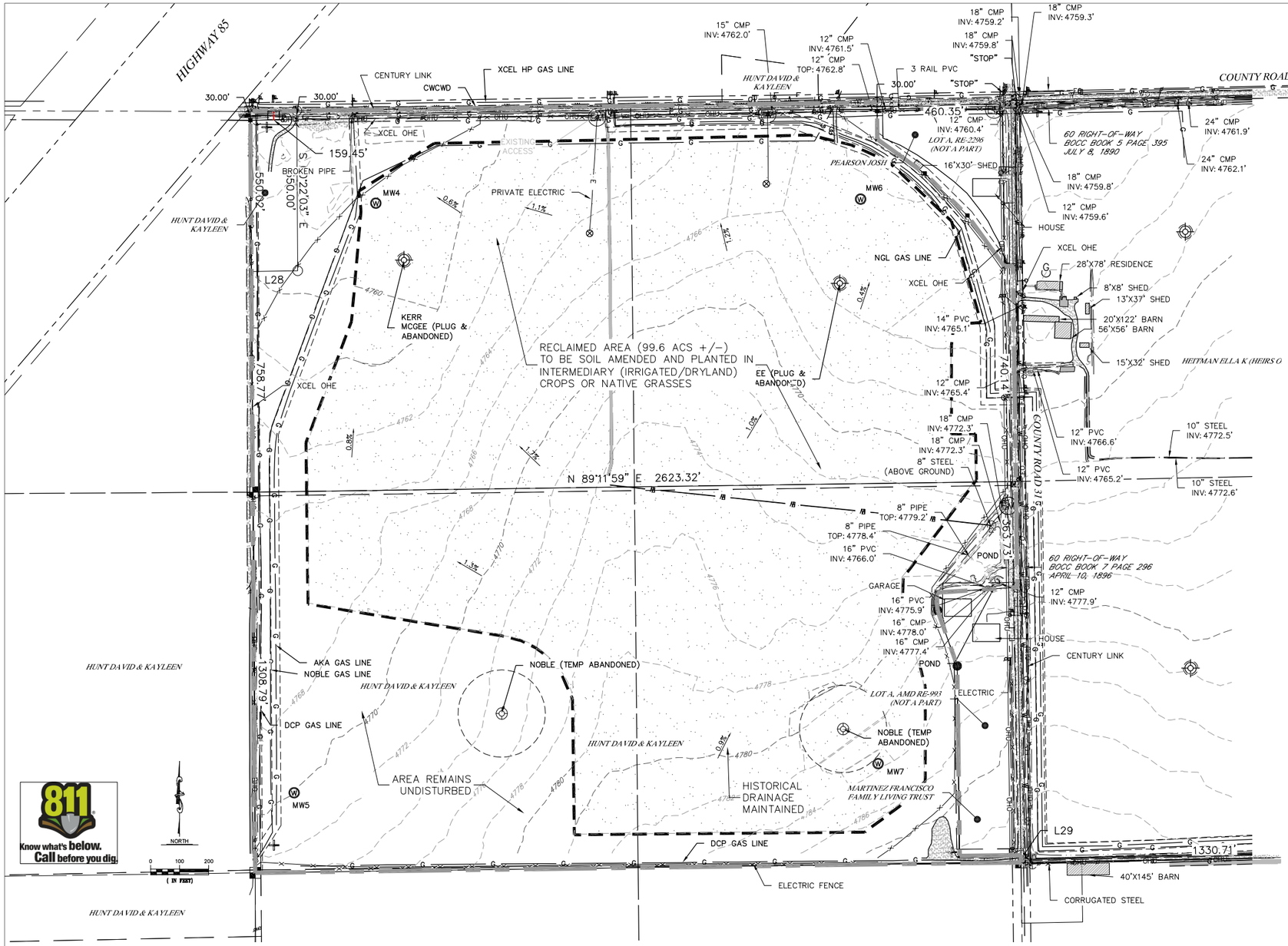
--GRASS--



ditional Information

EXHIBIT F– RECLAMATION PLAN MAP

Please refer to the attached Reclamation Plan Map.



811 Know what's below. Call before you dig.

EXISTING VEGETATION:

AGRICULTURAL FARM LAND

APPLICANT:

HUNT FARMS
14460 CO RD 40
PLATTEVILLE, CO 80651

AFFECTED LANDS:

HUNT KAYLEEN & DAVID

TOTAL PERMIT AREA:
149.5 ACRES +/-

NOTE:

CIVIL RESOURCES, LLC. IS NOT RESPONSIBLE FOR SAFETY, IN, ON, OR ABOUT THE PROJECT SITE, NOR FOR COMPLIANCE BY THE APPROPRIATE PARTY OF ANY REGULATIONS THERETO.

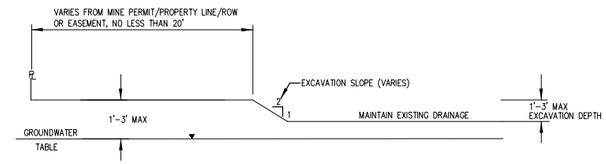
THESE MAPS WERE PREPARED BY CIVIL RESOURCES, LLC. IN COOPERATION WITH HUNT FARMS. HUNT FARMS WILL KEEP THE DIVISION OF RECLAMATION MINING AND SAFETY INFORMED OF ANY CHANGES TO THE MINING OR RECLAMATION PLANS THROUGH ANINUAL REPORTS AND FILE TECHNICAL REVISIONS AND AMENDMENT APPLICATIONS AS NECESSARY THROUGHOUT THE LIFE OF THE MINE.

ALTERNATE SEEDING SPEC FOR UPLAND AREAS:

COMMON NAME (VARIETY)	SCIENTIFIC NAME	LBS PLS/ACRE
SAND BLUESTEM	(CHAMP, CHET)	1
SAND LOVEGRASS	(BEND, NATIVE, NE27)	2.5
INDIAN RICEGRASS	(NEZPAR, RIMROCK)	3
PRAIRIE SANDREED	(GOSHEN)	0.75
GREEN NEEDLEGRASS	(LODORM)	1.5
LITTLE BLUESTEM	(BLAZE, CIMARRON, CAMPER)	0.75
YELLOW INDIANGRASS	(CHEYENNE, HOLT, SCOUT)	0.5
SWITCHGRASS	(BLACKWELL, NEBRASKA 28)	1.5
SAND DROPSEED		0.5
	TOTAL LBS PER ACRE:	12.0

PREFERRED SEEDING FOR CROPLAND AREAS:

ALFALFA
LEGUMES
SEE RECLAMATION PLAN AND COVER CROP LIST



TYPICAL – RECLAMATION CROSS SECTION

NOT TO SCALE

SURVEY INFO:

LAT 40°
PROFESSIONAL LAND SURVEYORS
6250 W. 10TH STREET, UNIT 2
GREELEY, CO 80643
O: 970-515-5294

LEGEND

- BOUNDARY LINE
- LOT LINE
- SECTION LINE
- QUARTER SECTION LINE
- FRACTIONAL SECTION LINE
- RIGHT-OF-WAY
- EASEMENT LINE
- FENCE
- OHU — OVERHEAD UTILITY
- E — ELECTRIC LINE
- G — GAS LINE
- FO — FIBER OPTIC/TELEPHONE LINE
- W — WATER LINE
- TOP OF BANK
- IRRIGATION TRACK
- GUARD RAIL
- EDGE OF WATER
- GRAVEL
- ASPHALT ROADWAY
- DIRT ROAD
- CONCRETE
- BUILDING
- FOUND ALIQUOT CORNER AS DESCRIBED
- FOUND MONUMENT AS DESCRIBED
- CALCULATED POSITION
- POWER POLE
- EM — ELECTRIC METER
- ELECTRIC SERVICE
- GUY WIRE
- GAS MARKER
- GAS VALVE
- OIL MARKER
- GM — GAS METER
- T — TELEPHONE/FIBER OPTIC PEDESTAL
- W — WATER MARKER
- WATER METER
- W — WATER WELL
- WATER VALVE
- GATE VALVE
- AIR VENT
- MONITOR
- MB — MAIL BOX
- STREET SIGN
- GATE
- OIL & GAS WELL
- PLUGGED & ABANDONED OIL & GAS WELL
- SURVEY CONTROL POINT
- UAV SURVEY CONTROL POINT
- WOOD POST
- 0.9% — SLOPE ARROW/DRAINAGE PATH
- RECLAMATION AREA

CIVIL RESOURCES, LLC
323 5th STREET
P.O. Box 680
FREDERICK, CO 80530
303.833.1416
WWW.CIVILRESOURCES.COM

HUNT WCR 40
14460 CO RD 40
PLATTEVILLE, CO 80651

CONTACT: DAVID HUNT

WCR 40
GRAVEL MINE
PLATTEVILE, COLORADO

REVISIONS

NO.	DESCRIPTION	DATE

DESIGNED BY: GL | DATE: JUNE 2018
DRAWN BY: ARR | SCALE: AS NOTED
CHECKED BY: GL | AS NOTED
JOB NO.: 307.001.04
DWG NAME: COVER-EXISTING CONDITIONS-WCR40.DWG

RECLAIM

SHEET: 4

EXHIBIT G – WATER INFORMATION

This information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.7 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

(a) Locate on the map (Exhibit C) tributary water courses, wells, springs, stock water ponds, reservoirs and ditches

Please refer to Exhibit C for locations of water courses, ditches and well permit in close proximity to the site, including wells, springs, stock water ponds, reservoirs and ditches.

(b) Identify all known aquifers

The Site is underlain by the South Platte River alluvial aquifer.

(c) Show how water from dewatering operations or runoff from disturbed areas, piled material and operating surfaces will be managed to protect against pollution of either surface or groundwater both during and after the operation.

Please refer to the Mining Plan Map in Exhibit C of this application. Mine areas will drain internally. Uncontrolled releases of surface water in disturbed areas will not occur. Stormwater collected in the active mine area will be managed through the dewatering system.

(d) Estimate project water requirements including flow rates and annual volumes for the development, mining and reclamation phases of the project.

Projected Use And Consumption: There will be no exposed groundwater.

(e) Indicate the projected amounts of the water sources to supply project water requirements. There will be no exposed groundwater.

(f) Affirmatively state that the Applicant has acquired or applied for a National Pollutant Discharge Elimination System permit from the Water Quality Control Division

The Operator will apply for a National Pollutant Discharge Elimination System (NPDES) permit from the Water Quality Control Division of the Colorado Department of Public Health and Environment prior to discharging water from the site.

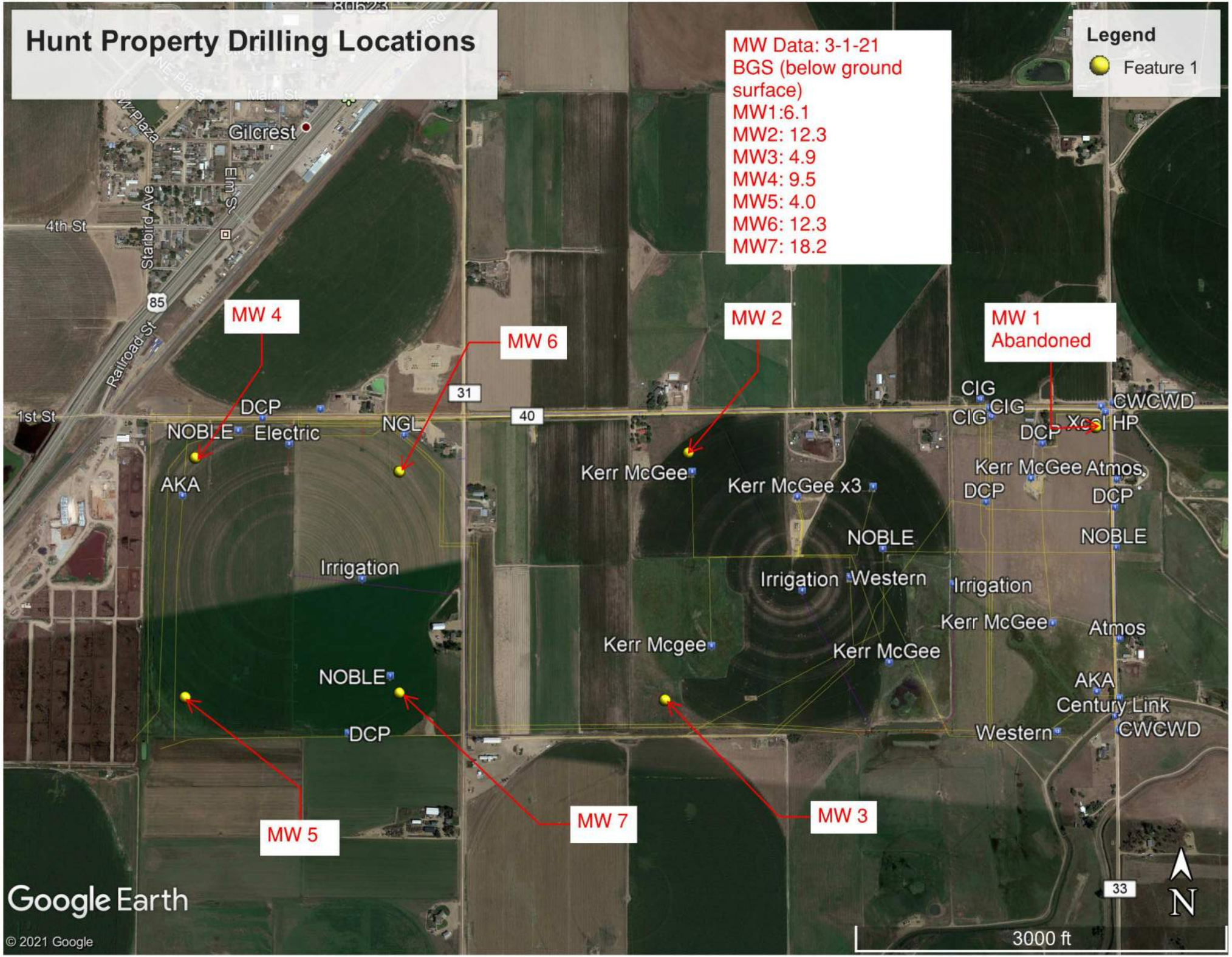

Hunt Property Drilling Locations
MW Data: 3-1-21
BGS (below ground surface)
MW1:6.1
MW2: 12.3
MW3: 4.9
MW4: 9.5
MW5: 4.0
MW6: 12.3
MW7: 18.2
Legend
Feature 1
MW 4
MW 6
MW 2
MW 1
Abandoned
MW 5
MW 7
MW 3
Gilcrest
Main St
Elm St
Starbird Ave
4th St
Railroad St
1st St
85
31
40
33
DCP
NOBLE
Electric
NGL
AKA
Kerr McGee
Kerr McGee x3
CIG
CWCWD
XCEL HP
Kerr McGee Atmos.
Irrigation
Western
Atmos
Century Link
Google Earth
© 2021 Google
3000 ft
N

EXHIBIT H – WILDLIFE INFORMATION

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.8 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

(1) The Operator/Applicant shall include in this Exhibit, a description of the game and non-game resources on and in the vicinity of the application area, including;

a) A description of the significant wildlife resources on the affected land;

This information is provided in the attached Exhibit H Wildlife Information, prepared by Savage and Savage environmental firm, located at 4610 Haystack Drive, Windsor, Colorado 80550, based on a site investigation conducted in April of 2021.

b) Seasonal use of the area;

This information is provided in the attached Exhibit H Wildlife Information, prepared by Savage and Savage environmental firm, located at 4610 Haystack Drive, Windsor, Colorado 80550, based on a site investigation conducted in April of 2021.

c) Threatened or endangered species;

The attached Savage and Savage Exhibit H Wildlife Information included an evaluation for threatened and endangered species. Their conclusions are documented in the attached report.

d) General effect during and after the proposed operation on the existing wildlife of the area;

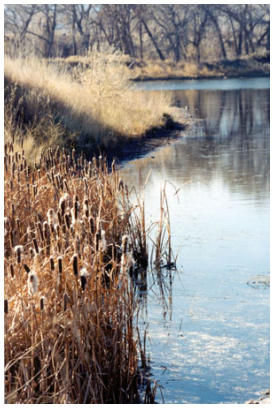
This information is provided in the attached Exhibit H Wildlife Information, prepared by Savage and Savage environmental firm, located at 4610 Haystack Drive, Windsor, Colorado 80550, based on a site investigation conducted in April of 2021.

Savage and Savage *Environmental*

practical solutions for environmental issues

4610 Haystack Drive
Windsor, Colorado 80550

970 674 8080 telephone
970 674 8088 facsimile
savageandsavage@earthlink.net



April 13, 2021

Andy Rodriguez
Civil Resources, LLC
8308 Colorado Boulevard, Suite 200
Firestone, Colorado 80504

Re: Preliminary Environmental Assessment, WCR 40 Soil Mine, Weld County, Colorado

Andy:

On April 8, 2021, Savage and Savage staff conducted a preliminary on-site investigation of the proposed WCR 40 Soil Mine located south of Gilcrest in Weld County, Colorado. The purpose of the site investigation was to assess the likelihood of encountering jurisdictional wetlands and waters of the United States, potential habitat for the Preble's meadow jumping mouse (*Zapus hudsonius preblei*), Ute ladies-tresses orchid (*Spiranthes diluvialis*), bald eagle nests or roosts, and any other protected species.

The on-site investigation of the proposed WCR 40 Soil Mine site consisted of a pedestrian and vehicle inspection of approximately 150 acres contained in the NE¼ of Section 33 and the N1/2 of Section 34 within T4N, R66W of the 6th prime meridian in Weld County, Colorado. The site is bounded on the north by the Weld County Road 40, the east by Weld County Road 31, the south by adjacent agricultural fields, and the west by a feed lot. Currently, the property is used for irrigated agriculture. Adjacent land uses include residential, agriculture, a feed lot, oil and gas development, and grazing. Findings of the preliminary site investigation are detailed below.

Waters of the United States

Waters of the United States, regulated by the U.S. Army Corps of Engineers, are all waters which were, are, or could be used in interstate commerce; and include (but are not limited to) rivers, streams, sloughs, and adjacent wetlands. No waters of the United States were identified on the property, based on a review of Google Earth© aerial imagery and verified by pedestrian and vehicular on-site inspection.

The nearest waters of the United States navigable waterway is the South Platte River located three miles to the northwest.

Jurisdictional Wetlands

Regulated jurisdictional wetlands encountered in Colorado include submergent, emergent, wet meadows, sloughs, surface water drainage ditches, bogs, and potholes. No areas concluded to be jurisdictional wetlands were identified within the proposed project area. The southwest boundary of the project site (located within the fallow area on the aerial) contained hydrophytic vegetation species (including *Scirpus americanus*, *Rumex crispus*, and *Phalaris arundinacea*) within small inclusions. The inclusions did not contain evidence of hydric soils or a prevailing hydrology indicative of significant saturation or inundation during the growing season. Further investigation revealed that the southwest boundary has the lowest elevation of the project site and is downgradient from an irrigation tailwater pond and row irrigation within the farm immediately to the south. The location of the small inclusions is also isolated from any adjacent waters of the United States, further rendering the areas non-jurisdictional.

Preble's Meadow Jumping Mouse Habitat

The Preble's meadow jumping mouse (*Zapus hudsonius preblei*) is a federally listed threatened species which generally occurs near wetlands and water bodies. The property was evaluated for potential Preble's habitat, based on the current U.S. Fish and Wildlife Service guidelines.

No potential habitat for the Preble's meadow jumping mouse exists within the proposed project area. The proposed project site does not contain requisite habitat (riparian corridors with significant overstory and shrub understory, or wet meadows).

Ute Ladies-tresses Orchid Habitat

The Ute ladies-tresses orchid (*Spiranthes diluvialis*) is a federally listed threatened plant species characteristically found in wet meadows and alluvial flood plains below 6500 feet in northern Colorado, southwestern Wyoming, and the Uintah Basin of Utah. Habitat assessments and/or pedestrian surveys during the blooming period are required for sites within the South Platte River 100-year floodplain and in characteristic habitat which includes areas with a seasonally high water table, wet meadows, stream channels, floodplains, areas with vegetation in the facultative wet or obligate classification, and jurisdictional wetlands.

Based on the preliminary investigation, there is no potential orchid habitat within the proposed project area, as the characteristic orchid habitat elements are not present.

Bald Eagle Habitat

A review of the Colorado Oil and Gas Conservation Commission (COGCC) website (https://cogccmap.state.co.us/cogcc_gis_online/) for identified bald eagle nests and roosts did not identify any nests or roosts within three miles of the project site. The nearest bald eagle nests and roosts are located along the South Platte River corridor to the northwest. During our on-stie investigation no evidence of bald eagle roosts, nests, or bald eagles were

observed. No prairie dogs or prairie dog colonies that would provide a food source for eagles or other raptors were found within the property.

Other Potential Species of Concern

In addition to bald eagle nests and roosts, the COGCC website was searched for locations of burrowing owl, ferruginous hawk, golden eagle, northern goshawk, peregrine falcon, and prairie falcon active nest sites. None were within the project area or within two miles of the project site. Least tern and piping plover production areas were searched, and none were located within the project site or within five miles of the project site.

No mule deer migration corridors, winter concentration areas, or severe winter range are located within three miles of the project area.

Discussion and Recommendations

No jurisdictional wetlands or waters of the United States are present within the proposed project area.

No potential Preble's meadow jumping mouse habitat was observed within the proposed project area.

Characteristic potential habitat for the Ute ladies-tresses orchid is not present within the project area.

No evidence of bald eagles was observed on the project site, nor have any bald eagle nests or roosts been identified within three miles of the project site.

No evidence of other species of concern was found within the project area. No identified locations for the above species of concern were located within the vicinity of the project area.

If I can provide additional information, assistance, or clarification, please contact me.

Sincerely,

Michael S. Savage
Principal

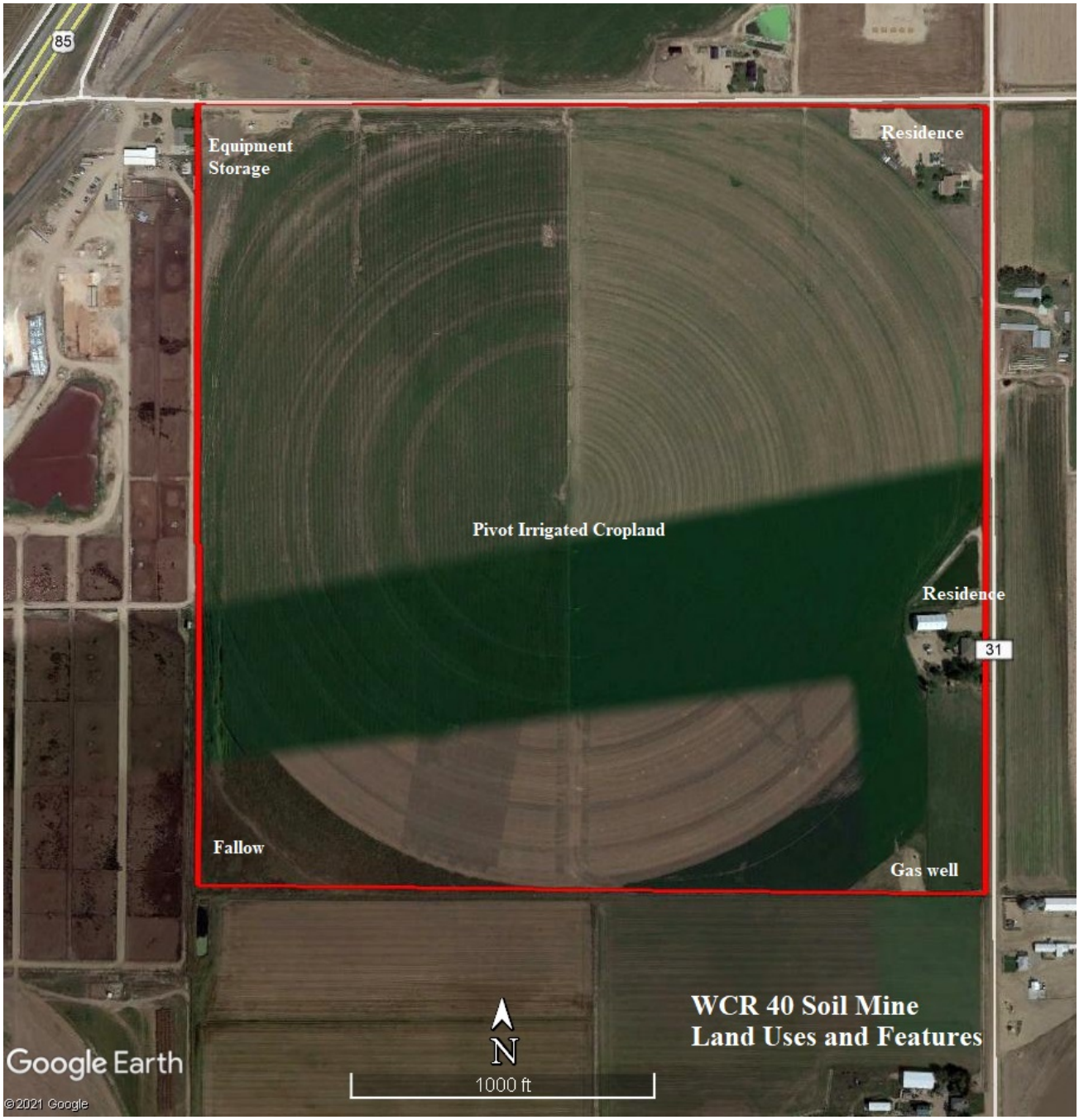

85
Equipment
Storage
Residence
Pivot Irrigated Cropland
Residence
31
Fallow
Gas well
N
1000 ft
WCR 40 Soil Mine
Land Uses and Features
Google Earth
© 2021 Google

EXHIBIT I – SOILS INFORMATION

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.9 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

(1) In consultation with the Soil Conservation Service or other qualified person, indicate on a map (in Exhibit C) or by a statement the general type, thickness and distribution of soil over affected land.

The soil types on the site are shown on the attached Soil Map.

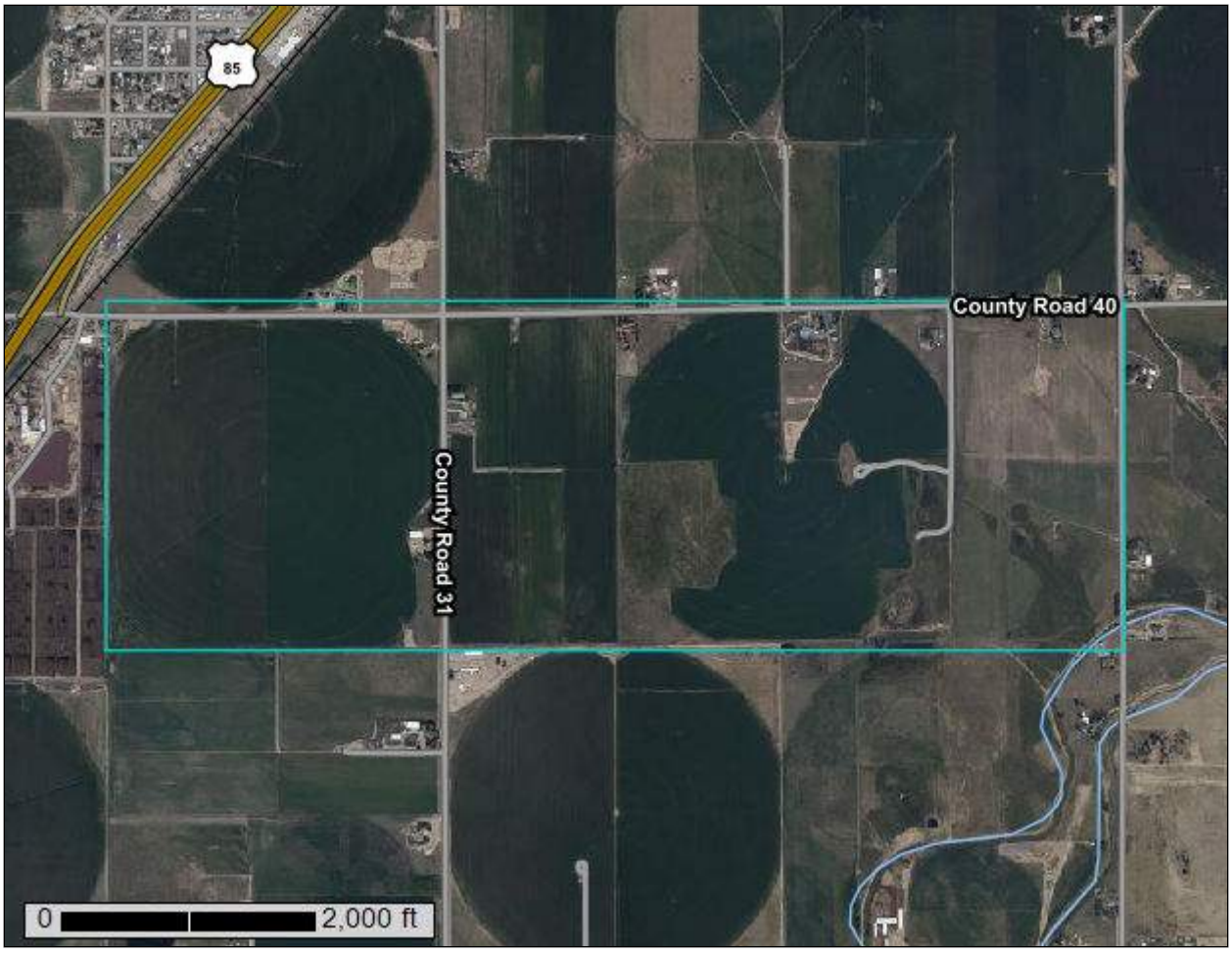
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Weld County, Colorado, Southern Part



March 22, 2021

Preface

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

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

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

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

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

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

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

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

Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

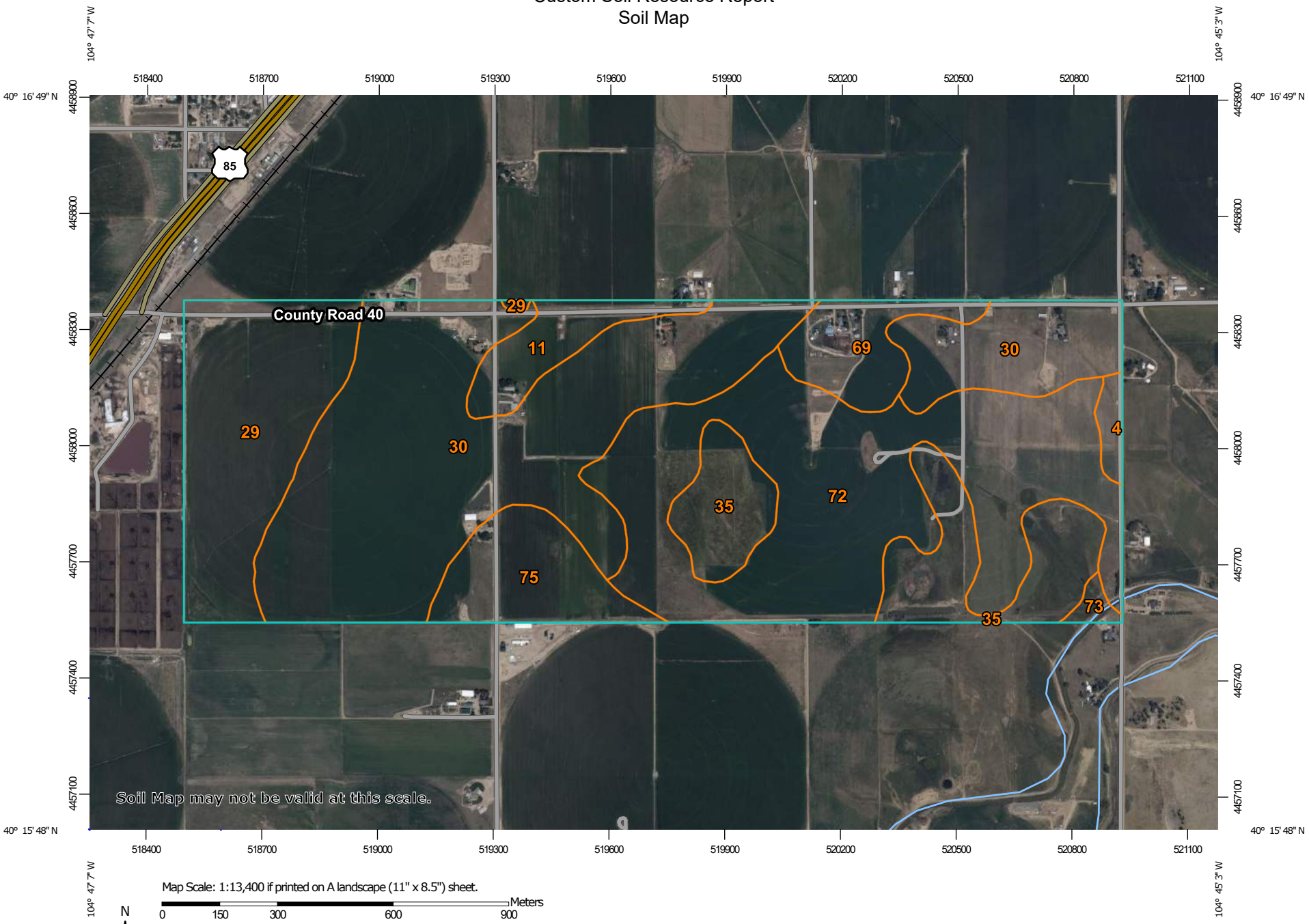
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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

Soil Map

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

Custom Soil Resource Report
Soil Map



Map Scale: 1:13,400 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 150 300 600 900

Feet
0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Weld County, Colorado, Southern Part
Survey Area Data: Version 19, Jun 5, 2020

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

Date(s) aerial images were photographed: Jul 19, 2018—Aug 10, 2018

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
4	Aquolls and Aquepts, flooded	3.9	0.8%
11	Bresser sandy loam, 0 to 3 percent slopes	16.8	3.3%
29	Julesburg sandy loam, 0 to 1 percent slopes	64.7	12.9%
30	Julesburg sandy loam, 1 to 3 percent slopes	180.1	35.8%
35	Loup-Boel loamy sands, 0 to 3 percent slopes	50.8	10.1%
69	Valent sand, 0 to 3 percent slopes	20.1	4.0%
72	Vona loamy sand, 0 to 3 percent slopes	135.9	27.1%
73	Vona loamy sand, 3 to 5 percent slopes	2.4	0.5%
75	Vona sandy loam, 0 to 1 percent slopes	27.7	5.5%
Totals for Area of Interest		**502.4**	**100.0%**

Map Unit Descriptions

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

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

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the

scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

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

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

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

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

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

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

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

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

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

Weld County, Colorado, Southern Part

4—Aquolls and Aquepts, flooded

Map Unit Setting

National map unit symbol: 362l
Elevation: 3,600 to 4,700 feet
Mean annual precipitation: 12 to 16 inches
Mean annual air temperature: 50 to 55 degrees F
Frost-free period: 100 to 165 days
Farmland classification: Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Map Unit Composition

Aquolls and similar soils: 55 percent
Aquepts, flooded, and similar soils: 25 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aquolls

Setting

Landform: Drainageways, plains, depressions
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Recent alluvium

Typical profile

H1 - 0 to 8 inches: variable
H2 - 8 to 60 inches: stratified sandy loam to clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 6.00 in/hr)
Depth to water table: About 6 to 36 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): 6w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: D
Ecological site: R067BY035CO - Salt Meadow
Hydric soil rating: Yes

Description of Aquepts, Flooded

Setting

Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Recent alluvium

Typical profile

H1 - 0 to 8 inches: variable
H2 - 8 to 60 inches: stratified sandy loam to clay

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 6.00 in/hr)
Depth to water table: About 6 to 36 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Moderately saline to strongly saline (8.0 to 16.0 mmhos/cm)
Sodium adsorption ratio, maximum: 5.0
Available water capacity: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): 6w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: D
Ecological site: R067BY038CO - Wet Meadow
Hydric soil rating: Yes

Minor Components

Haverson

Percent of map unit: 10 percent
Hydric soil rating: No

Thedalund

Percent of map unit: 10 percent
Hydric soil rating: No

11—Bresser sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2swl0
Elevation: 4,050 to 6,800 feet
Mean annual precipitation: 12 to 18 inches

Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 135 to 190 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

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

Description of Bresser

Setting

Landform: Drainageways
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse sandy alluvium derived from igneous, metamorphic and sedimentary rock

Typical profile

Ap - 0 to 9 inches: sandy loam
Bt - 9 to 25 inches: sandy clay loam
BC - 25 to 30 inches: sandy loam
C - 30 to 79 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
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 content: 10 percent
Maximum salinity: Nonsaline (0.0 to 0.1 mmhos/cm)
Available water capacity: Low (about 5.8 inches)

Interpretive groups

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

Minor Components

Truckton

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

Vona

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

29—Julesburg sandy loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 3626
Elevation: 4,700 to 4,800 feet
Mean annual precipitation: 15 to 19 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 145 to 155 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

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

Description of Julesburg

Setting

Landform: Terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: South platte river alluvium

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 27 inches: sandy loam
H3 - 27 to 60 inches: sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very 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
Available water capacity: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): 2s
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: A
Ecological site: R067BY024CO - Sandy Plains
Hydric soil rating: No

Minor Components

Valent

Percent of map unit: 4 percent
Hydric soil rating: No

Remmit

Percent of map unit: 4 percent
Hydric soil rating: No

Edgar

Percent of map unit: 4 percent
Hydric soil rating: No

Vona

Percent of map unit: 3 percent
Hydric soil rating: No

30—Julesburg sandy loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tlpz
Elevation: 4,200 to 4,320 feet
Mean annual precipitation: 15 to 20 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 144 to 163 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

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

Description of Julesburg

Setting

Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Eolian sands

Typical profile

A - 0 to 5 inches: sandy loam
BA - 5 to 12 inches: sandy loam
Bt1 - 12 to 30 inches: sandy loam
Bt2 - 30 to 39 inches: sandy loam
C - 39 to 80 inches: loamy sand

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very 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
Maximum salinity: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
Available water capacity: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: R072XY111KS - Sandy Plains
Hydric soil rating: No

Minor Components

Haxtun

Percent of map unit: 5 percent
Landform: Interfluves, drainageways
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R072XY111KS - Sandy Plains
Hydric soil rating: No

Valent

Percent of map unit: 5 percent
Landform: Interfluves
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R072XY109KS - Rolling Sands
Hydric soil rating: No

Manter

Percent of map unit: 5 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R072XY111KS - Sandy Plains

Hydric soil rating: No

35—Loup-Boel loamy sands, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 362f
Elevation: 4,550 to 4,750 feet
Mean annual precipitation: 11 to 15 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 130 to 180 days
Farmland classification: Not prime farmland

Map Unit Composition

Loup and similar soils: 55 percent
Boel and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Loup

Setting

Landform: Swales, drainageways, streams
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy alluvium

Typical profile

H1 - 0 to 16 inches: loamy sand
H2 - 16 to 40 inches: loamy sand
H3 - 40 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Low (about 5.2 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: A/D
Ecological site: R067BY029CO - Sandy Meadow
Hydric soil rating: Yes

Description of Boel

Setting

Landform: Swales, drainageways, streams
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Stratified sandy alluvium

Typical profile

H1 - 0 to 14 inches: loamy sand
H2 - 14 to 60 inches: loamy sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly 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: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water capacity: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): 4w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: A
Ecological site: R067BY029CO - Sandy Meadow
Hydric soil rating: No

Minor Components

Osgood

Percent of map unit: 5 percent
Hydric soil rating: No

Valent

Percent of map unit: 5 percent
Hydric soil rating: No

69—Valent sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tczd
Elevation: 3,000 to 5,210 feet
Mean annual precipitation: 13 to 20 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 130 to 166 days

Farmland classification: Farmland of local importance

Map Unit Composition

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

Description of Valent

Setting

Landform: Interdunes
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Noncalcareous eolian sands

Typical profile

A - 0 to 5 inches: sand
AC - 5 to 12 inches: sand
C1 - 12 to 30 inches: sand
C2 - 30 to 80 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 39.96 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 1 percent
Maximum salinity: Nonsaline (0.1 to 1.9 mmhos/cm)
Available water capacity: Very low (about 2.4 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: R067BY015CO - Deep Sand, R072XA021KS - Sands (North) (PE 16-20)
Hydric soil rating: No

Minor Components

Julesburg

Percent of map unit: 5 percent
Landform: Interdunes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067BY024CO - Sandy Plains, R072XA022KS - Sandy (North) Draft (April 2010) (PE 16-20)
Hydric soil rating: No

Dailey

Percent of map unit: 5 percent
Landform: Interdunes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: R067BY015CO - Deep Sand, R072XA022KS - Sandy (North) Draft (April 2010) (PE 16-20)
Hydric soil rating: No

Vona

Percent of map unit: 5 percent
Landform: Interdunes
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R067BY024CO - Sandy Plains, R072XA022KS - Sandy (North) Draft (April 2010) (PE 16-20)
Hydric soil rating: No

72—Vona loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 363r
Elevation: 4,600 to 5,200 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 130 to 160 days
Farmland classification: Farmland of local importance

Map Unit Composition

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

Description of Vona

Setting

Landform: Plains, terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium and/or eolian deposits

Typical profile

H1 - 0 to 6 inches: loamy sand
H2 - 6 to 28 inches: fine sandy loam
H3 - 28 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very 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
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water capacity: Moderate (about 6.5 inches)

Interpretive groups

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

Minor Components

Remmit

Percent of map unit: 10 percent
Hydric soil rating: No

Valent

Percent of map unit: 5 percent
Hydric soil rating: No

73—Vona loamy sand, 3 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2x0j8
Elevation: 4,100 to 5,200 feet
Mean annual precipitation: 12 to 17 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 130 to 155 days
Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Vona

Setting

Landform: Hills, hillslopes

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

Typical profile

A - 0 to 7 inches: loamy sand
Bt1 - 7 to 14 inches: sandy loam
Bt2 - 14 to 20 inches: sandy loam
Bk - 20 to 45 inches: sandy loam
C - 45 to 80 inches: loamy sand

Properties and qualities

Slope: 3 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very 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 content: 10 percent
Maximum salinity: Nonsaline (0.1 to 1.0 mmhos/cm)
Available water capacity: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: R067BY015CO - Deep Sand
Hydric soil rating: No

Minor Components

Ascalon

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

Manter

Percent of map unit: 5 percent
Landform: Hills, interfluves
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Ecological site: R067BY024CO - Sandy Plains
Hydric soil rating: No

Olnest

Percent of map unit: 3 percent

Landform: Interfluves, hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Ecological site: R067BY024CO - Sandy Plains
Hydric soil rating: No

Valent

Percent of map unit: 2 percent
Landform: Dunes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Ecological site: R067BY015CO - Deep Sand
Hydric soil rating: No

75—Vona sandy loam, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 363v
Elevation: 4,650 to 4,950 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 55 degrees F
Frost-free period: 130 to 160 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

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

Description of Vona

Setting

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

Typical profile

H1 - 0 to 6 inches: sandy loam
H2 - 6 to 28 inches: fine sandy loam
H3 - 28 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very 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
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water capacity: Moderate (about 6.8 inches)

Interpretive groups

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

Minor Components

Remmit

Percent of map unit: 11 percent
Hydric soil rating: No

Olney

Percent of map unit: 4 percent
Hydric soil rating: No

References

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

EXHIBIT J – VEGETATION INFORMATION

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.10 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

(a) Description of present vegetation types including estimates of cover and height of principal species in each life-form represented;

The current site is covered by irrigated pasture..

(b) Relationship of present vegetation to soil types;

The pasture grasses are compatible with the current soil type.

(c) Estimates of annual production and carrying capacity if the choice for reclamation is for range or agriculture.

The area is proposed to be reclaimed as fallow ground or irrigated crops.

EXHIBIT K – CLIMATE INFORMATION

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.11 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

Provide a description of the significant climatological factors for the locality.

This property is in a semi-arid continental climate strongly influenced by the Rocky Mountains. The area is usually warm in the summer with frequent hot days. In winter, periods of very cold weather are caused by arctic air moving in from the north or northwest. Milder periods occur when westerly winds are warmed as they move down slope off of the mountains to the west.

Weather monitoring data is not available from the site. The nearest weather monitoring station is at Ft. Lupton and Brighton, Colorado. Data is collected from the Western Regional Climate Center. The table below lists the mean monthly temperature, and average total precipitation on a monthly and annual basis for the period of record from January 1, 1950 to December 31, 2000. Most of the precipitation occurs as rainfall during the warmer part of the year with the heaviest rainfalls in the late spring and early summer. Winter snowfall is frequent but the snow cover usually melts quickly during the milder periods.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Monthly Temperature (F)	28.0	32.9	39.1	48.1	57.7	67.3	72.8	70.7	61.9	50.8	37.1	29.5	49.7
Average Total Precipitation (in.)	0.44	0.39	1.04	1.44	2.12	1.63	1.44	1.39	1.16	0.83	0.69	0.42	12.99

EXHIBIT L – RECLAMATION COSTS

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.12 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

The mined area will be reclaimed to 2-feet below existing grade and tie into existing grade on the perimeter of the mine. The mine will include a 100-foot buffer around the perimeter of the excavation. The mine was excavated down at a 2 to1 horizontal to vertical slope on the east, west and south side, along with feathering grades back into existing on the north by Weld Cunty Road 40. This excavation will be amended and planted with crops or dryland native grasses. Historic drainage patterns will be maintained.

Please refer to the attached table for estimates of quantities and associated costs.

EXHIBIT L - RECLAMATION COST - WCR 40 MINE

Activity	Quantity	Units	Unit Costs	Cost
A. Processing area. Processing equipment is portable and would be removed by the operator				
1 Clean up processing area, minor grading	1	LS	$ 25,000.00	$ 25,000.00
			Subtotal	$ 25,000.00
D. Reclamation				
1 Import soil amendment (3" of manure or amendment for 100 acres)	60,500	CY	$ 3.00	$ 181,500.00
2 Spread & place soil amendment (inlcudes scarify/rip)	60,500	CY	$ 3.00	$ 181,500.00
3 Seeding/Planting ($900/ac to seed & mulch)	100	AC	$ 900.00	$ 90,000.00
			Subtotal	$ 453,000.00
Total Disturbance Costs				**$ 478,000.00**
Indirect Costs				
Overhead & Profit				
Performance Bond (2.02%) - Based on DRMS estimate				$ 9,655.60
Performance Bond (3.07%) - Based on DRMS estimate				$ 5,019.00
Job Superintendent (240 hours @ $75/hr) - Based on DRMS estimate				$ 18,000.00
Contractor Mob and DeMob (3%) - Based on DRMS estimate				$ 14,340.00
Contractor Overhead and Profit (10%) - Based on DRMS estimate				$ 47,800.00
			Subtotal	$ 94,814.60
Contract Amount (direct + O & P)				**$ 572,814.60**
Legal, Engineering & Project Management				
Financial warranty processing (legal/related costs) ($500)				$ 500.00
Engineering Work and/or contract/bid preparation (4.25%)				$ 24,344.62
Reclamation management and/or administration (5%) - Based on DRMS estimate				$ 28,640.73
Contingency (3%)				$ 14,340.00
			Subtotal	$ 67,825.35
Total Indirect Costs				$ 162,639.95
Total Bond Amount				$ 640,639.95

EXHIBIT M – OTHER PERMITS AND LICENSES

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.13 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

Prior to excavation the Operator will acquire all appropriate permits. Including but not limited to:

- CDPHE Discharge Permit

- CDPHE APEN Permit

- Weld County Use by Special Review (USR), the permits below are typically required under the USR process.
    - Access permits, if required CDOT will be notified under this permit process.
    - ROW permits.
    - Noise and Traffic studies.

EXHIBIT N – SOURCE OF LEGAL RIGHT TO ENTER

This information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.7 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations. Please refer to the attached legal right-to-enter documents.

May 3, 2021

David Hunt
Property Owner

RE: Legal Right to Enter

Dear Mr. Hunt:

In exchange for good and valuable consideration, in hand paid, David Hunt hereby grants to Hunt Farms the right to enter into the real property situated between the towns of Platteville (to the south) and Gilcrest (to the northeast). The site is located within the northeast ¼ of Section 33, Township 4 North, Range 66 West of the 6th Principal Meridian. The site is generally bounded on the north by the Weld County Road 40, on the south by farmland, the east and west by Weld County Road 31 and a feedlot, respectively.

You and your officers, employees, contractors, and agents have permission to enter upon the Property for all purposes, including the exploration for gravel, sand and aggregate. We hereby confirm that you have authority and right to execute all documents required to apply for and obtain permits and the like to mine gravel, sand and aggregate on the Property. .

David Hunt

By: _____
David Hunt - Hunt Farms

STATE OF COLORADO)
) ss.
COUNTY OF WELD)

The foregoing instrument was acknowledged before me on May 3, 2021, by David Hunt, as Owner of the property. Witness my hand and seal.
My commission expires: 9/12/2023.

_____
Notary Public

ANDREW RODRIGUEZ
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20114053878
My Commission Expires September 12, 2023

EXHIBIT O – OWNERS OF RECORD OF AFFECTED LAND (SURFACE AREA) AND OWNERS OF SUBSTANCE TO BE MINED

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.15 of the Colorado Mined Land Reclamation Board Construction Material Rules and regulations:

Owners of Surface Area and Owners of Substance to be mined

The property and the substance to be mined are owned by:

HUNT DAVID & KAYLEEN
14460 CO RD 40
PLATTEVILLE, CO 80651
(970) 737-243

The following are Mineral Owners:

HUNT DAVID & KAYLEEN
14460 CO RD 40
PLATTEVILLE, CO 80651
(970) 737-243

EXHIBIT P – MUNICIPALITIES WITHIN TWO MILES

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.16 of the Colorado Mined Land Reclamation Board Construction Material Rules and regulations:

List any municipalities within two miles of the proposed mining operation and address of the general office:

Town of Gilcrest
304 8th Street, Gilcrest, CO 80623
(970) 737-2426

Town of Platteville
400 Grand Avenue
Platteville, CO 80651
970-785-2245

EXHIBIT Q – PROOF OF MAILING OF NOTICES TO COUNTY COMMISSIONERS AND CONSERVATION DISTRICT

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.17 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations:

May 3, 2021

Board of County Commissioners
915 Tenth Street
P. O. Box 758
Greeley CO 80632

RE: Division of Reclamation Mining and Safety, Mine Land Reclamation Board (112) Operation Reclamation Permit Application, Weld County, Colorado; Weld County Road 40 Soil Mine

Dear Board:

Hunt Farms is applying for a MLRB permit to mine soil at the project site within the northeast ¼ of Section 33, Township 4 North, Range 66 West of the 6th Principal Meridian. The site is generally bounded on the north by the Weld County Road 40, on the south by farmland, the east and west by Weld County Road 31 and a feedlot, respectively. The project is located in Weld County, Colorado. As required by the DRMS regulations, we have enclosed the following information for your review:

- Notice of Filing Application form
- Construction Material Regular (112) Operation Reclamation Permit application form
- Exhibit B Index Map
- Exhibit C Mining Plan Map
- Exhibit F Reclamation Plan Map

If you have any questions, please feel free to contact me at 303-833-1416, ext. 202.

Sincerely,

CIVIL RESOURCES, LLC

Andy Rodriguez, P.E.
Civil Engineer

J:\Bestway-213\vogl\Notices\NOTICE Cltr Cnty Cmmsrs.doc

May 3, 2021

VIA: Certified Mail/Hand Delivered

Platte Valley Soil Conservation District
57 West Bromley Lane
Brighton, CO 80601

RE: MLRB (112) Operation Reclamation Permit Application, Weld County, Colorado; Hunt Farms, Weld County Road 40 Soil Mine.

To Whom it May Concern:

Hunt Farms, Weld County Road 40 Soil Mine is applying for an MLRB permit to mine sand at the project site. The site is located within the northeast ¼ of Section 33, Township 4 North, Range 66 West of the 6th Principal Meridian. The site is generally bounded on the north by the Weld County Road 40, on the south by farmland, the east and west by Weld County Road 31 and a feedlot, respectively.

As required by the DRMS regulations, we have enclosed the following information for your review:

- Construction Material Regular (112) Operation Reclamation Permit application form
- Exhibit B Index Map
- Exhibit C Pre-Mining Plan Map
- Exhibit D Mining Plan
- Exhibit E Reclamation Plan
- Exhibit F Reclamation Plan Map
- Exhibit I Soils Information
- Exhibit J Vegetation Information

If you have any questions, please feel free to contact me at 303-833-1416, ext. 202.

Sincerely,

CIVIL RESOURCES, LLC

Andy Rodriguez, P.E.
Civil Engineer

J:\HallIrwin-105\DHF-Gravel Mine\DRMS\NOTICE Cltr W Greeley PVSCD - Hunt .doc

Recieved May 3, 2021
By Cynthia Einspahn
USDA/NRCS
Resource Conservation

EXHIBIT R – PROOF OF FILING WITH COUNTY CLERK OR RECORDER

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.18 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations.

May 3, 2021

Clerk to the Board of Weld County Commissioners
1150 O Street
P.O. Box 758
Greeley, CO 80631

RE: Weld County Road 40 Soil Mine

Dear Clerk to the Board:

As a requirement of the Division of Reclamation Mining and Safety (DRMS), the complete Weld County Road 40 Soil Mine application must be on file at the County Clerk's Office and be available for public viewing. A copy of the complete application on behalf of Hunt Farms is attached. Please sign below to indicate that you have received the above-mentioned information and return this page to us by email at andy@civilresources.com.

As always, thank you for your assistance.

Sincerely,

Civil Resources, LLC

Andy Rodriguez, P.E.
Project Engineer

Confirmation of Receipt:
I have received the above reference documents, and will put it on file for public viewing.

County Clerk to the Board Date

J:\Hunt Farms-306\WCR 40\DRMS\exhibits\notices\letter to clerk_signature reqted.doc

EXHIBIT S – PERMANENT MAN-MADE STRUCTURES

The information provided in this Exhibit is intended to satisfy the requirements outlined in Section 6.4.19 of the Colorado Mined Land Reclamation Board Construction Material Rules and Regulations.

Where mining will adversely affect the stability of any significant, valuable or permanent man-made structure located within 200 feet of affected land, the applicant may either:

a) Provide a notarized agreement between the applicant and the person(s) having an interest in the structure, that the applicant is to provide compensation for any damage to the structure; or

b) The applicant shall provide an appropriate engineering evaluation that demonstrates that such structure shall not be damaged by activities occurring at the mining operation: or

c) Where the structure is a utility, the Applicant may supply a notarized letter stating that the mining and reclamation as proposed will have no negative effect on their utility.

The site poses no risk to surrounding structures as the excavation will be 2 feet or less. The known, permanent, man-made structures within 200 feet of the proposed mine areas are listed as follows:

UTILITIES: HUNT KAYLEEN & DAVID, IRRIGATION INFRASTRUCTURE
CENTRAL WELD COUNTY WATER LINE WCR 40 ROW (CWCWD)
WCR 40 & 31 ROW (WELD COUNTY PUBLIC WORKS)
XCEL OVERHEAD POWER LINE (NORTHERN, WESTERN & EASTERN BOUNDARY)
VARIOUS GAS LINES (DCP, AKA, NGL & NOBLE)
URPRC 33-7F WELL HEAD (NOBLE)
UPRC 33-8F WELL HEAD (NOBLE)
SWEET VALLEY FARMS UPRR 31-33-2 (NOBLE)
SWEET VALLEY FARMS-UPRR 41-33 (NOBLE)
FIBER OPTIC IN WCR 40 & 31 ROW (CENTURY LINK)
CWCWD (WATER LINE, NORTH BOUNDARY)

HOME OWNERS WITH HOUSES WITHIN 200':
HUNT KAYLEEN & DAVID
WEBBER EILEEN & WEBBER PAUL T
SANDAU DORIS E & SANDAU ROBERT V
HEITMAN ELLA K (HEIRS OF)
NELSON RALPH CARL & CLAUDIA JEAN
MARTINEZ FRANCISCO
FAMILY LIVING TRUST
PEARSON JOSH