

Item Numbers refer to SWMP Checklist

# STORMWATER MANAGEMENT PLAN (SWMP)

Cimmaron Hill Southeast Filing No. 1  
El Paso County, Colorado  
Colorado Springs, CO 80915

**Applicant (Owner):**

Jovenchi-II LLC  
4779 N. Academy Blvd.  
Colorado Springs, CO 80918

**Owner Representative:**

**SWMP Prepared By:**

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**Qualified Stormwater Manager:**

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**Contractor Information:**



**Matrix**

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Colorado Springs, CO 80920  
(719) 575-0100

**July 2024**

Item 1. Add line space for contact information to be filled in prior to construction.

Item 1. Will Matrix be the QSM during construction (i.e. updating the SWMP, living site map, and conducting self-inspections)? If not, please remove and allow space for QSM contact information prior to construction.

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**Attachments**

- SWMP Drawings
- SWMP Inspection and Maintenance Log
- Soil Survey of El Paso County Area Soils Map
- FEMA FIRM Floodplain Maps
- CDPHE General Permit

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## **1. GENERAL INFORMATION**

This Stormwater Management Plan (SWMP) is being submitted on behalf of Jovenchi-I LLC for Cimarron Hills Southeast Filing No. 1 in El Paso County, Colorado. The purpose of this SWMP is to identify potential source areas that may contribute pollutants to stormwater and to identify Best Management Practices (BMP)s that will reduce or eliminate adverse water quality impacts. Development, implementation, and maintenance of this SWMP will provide the general contractor with the framework for reducing soil erosion and minimizing pollutants in stormwater during construction of the project site.

This SWMP has been prepared in accordance with engineering, hydrologic and pollution control practices and will cover this facility only (the extents of the Project construction site) using BMPs to reduce the pollutants in stormwater discharges as described in Section 2 of this SWMP. The SWMP will be administrated by the Qualified Stormwater Manager identified in Section 1.3. The Qualified Stormwater Manager's duties include the following:

- Implement the SWMP
- Oversee installation and maintenance of BMPs as identified in the SWMP
- Implement and oversee employee training
- Conduct or provide for inspection and monitoring activities
- Identify potential pollutant sources and make sure they are included in the SWMP
- Identify any deficiencies in the SWMP and make sure they are corrected
- Ensure that any changes in construction plans, phasing, or use of BMP's are addressed in the SWMP

The provisions of this SWMP must be implemented as they are written and updated, from the initiation of construction until final stabilization is complete. The Water Quality Control Division reserves the right to review the SWMP, and to require the permittee to develop and implement additional measures to prevent and control pollution as is needed.

### **1.1 Site Description**

Cimarron Hills Southeast Filing No. 1, located in El Paso County, Colorado, is a 30-acre site which will consist of townhomes and church on site. The site is located at Latitude: 38.84292 and Longitude: -104.69863. The Site is bounded to the west by existing Peterson Road, to the south by Highway 24 and Super 8, to the north by open space, and apartments and housing development are east of the site.

**1.2 Site Location**



**1.3 Project Contact Information**

Item 1. Update per comment on cover sheet if applicable.

<b>Contact Information/Responsible Parties</b>			
<b>Owner</b>	Jovenchi-II LLC 4779 N. Academy Blvd. Colorado Springs, CO 80918	719-491-2158	Click or tap here to enter text.
<b>Project Manager/Site Supervisor</b>	Construction management & Consulting, Inc. P.O. Box 7207 Colorado Springs, CO 80933	719-528-5999	Click or tap here to enter text.
<b>Qualified Stormwater Manager</b>	Mark Ferrarese Matrix Design Group 2435 Research Pkwy, Suite 300 Colorado Springs, CO 80920	585-694-9975	mark.ferrarese@matrixdesigngroup.com
<b>SWMP Preparer</b>	Jeff Odor, PE Matrix Design Group 2435 Research Pkwy Suite 300 Colorado Springs, CO 80920	719-575-0100	Jeff.Odor@matrixdesigngroup.com

The QSM will be sufficiently qualified for the required duties per the **ECM Appendix 1.5**

**ECM Appendix I.5.2.A**

**1.4 Disturbance Area and Import/Export Volume**

The following is the total site area and the expected area of disturbance. Any changes to the area of disturbance (current disturbance) must be updated as changes occur.

Total Site Area	<b>32.68 acres</b>	Date: 07/08/2024
Initial Estimate of Disturbance Area	<b>9.62 acres</b>	Date: 07/08/2024
Import/Export Volume Estimate	<b>20,253 CY</b>	<input checked="" type="checkbox"/> Import <input type="checkbox"/> Export
Updated Disturbance Area		
Updated Disturbance Area		
Updated Disturbance Area		



Item 4. Include installation of temporary sediment basins and permanent control measures (i.e. Extended Detention Basin Pond 1) in Construction Activities discussion.

Item 4. Note that final stabilization is not complete until areas receiving seed have reached 70% of pre-existing vegetation density and that temporary control measures can not be removed until this time. Please clarify.

**1.5 Construction Activities**

Begin construction with clearing and grubbing, temporary stabilization, overlot grading, and utility/storm installation. Follow with final grading, final stabilization, and the removal of temporary control measures performed under the Cimmaron Hills Southeast Filing No. 1 Grading and Erosion Control Plans. Initial stabilization methods (BMPs) will be installed prior to construction. Following initial BMPs, construction will consist initially of site clearing and grubbing if necessary, temporary stabilization BMPs, final grading, utility installation, and road paving, followed by subdivision construction. Open spaces will be maintained with the vegetation placed prior to commencement of construction. There will be no concrete or asphalt batched onsite. All concrete and asphalt will be imported from offsite batch plants. Final stabilization and removal of temporary control measure will be completed following placement of permanent landscaping and hardscaping.

**1.6 Construction Sequencing and Phasing**

Item 6. Temporary stabilization control measures would not be applicable prior to site grading.

Construction Schedule	Estimated Start Date	Estimated Completion Date
Anticipated Project Start Date	May 2025	
<ol style="list-style-type: none"> <li>1. Install Initial BMPs</li> <li>2. Temporary Stabilization BMPs</li> <li>3. Site Grading</li> <li>4. Utility Installation</li> <li>5. Final Stabilization</li> <li>6. Removal of Temporary Control Measures</li> </ol>	June 2025 June 2025 June 2025 June 2025 Jan 2026 May 2026	June 2025 June 2025 Sept 2025 Sept 2025 Mar 2026 May 2026
Anticipated Project End Date		May 2026

Item 6. Include installation of the Temporary Sediment Basins, paving, and installation of permanent Extended Detention Basin, in this section.

Construction Phase	Description and Conservation Measures
Install Initial BMPs	Silt Fencing (perimeter BMP) and perimeter control will be installed at designated locations (see Grading and Erosion Control Plan details) as outlined in Section 2. Vehicle tracking control will be installed at the entrance/exit to any disturbed areas as work progresses as outlined in Section 2. All construction traffic must enter/exit the site at approved construction access points.
Temporary Stabilization BMPs	Temporary stabilization measures to control erosion and sediment runoff will be implemented as outlined in Section 2.



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Site Grading	Erosion and sediment runoff during site grading will be controlled by BMPs outlined in Section 2.
Utility Installation	Sewer, water, and storm water utilities will be constructed. BMPs outlined in Section 2 will be used to control erosion and sediment runoff.
Final Stabilization and Removal of Temporary BMPs	Once construction ceases, the area shall be stabilized with permanent landscaping and/or seed and mulch as outlined in Section 2. Final stabilization is complete when all ground disturbing activities are complete and all disturbed areas have either a uniform vegetative cover with an individual plant density of 70% of pre-disturbance levels, permanent hardscaping or paving is in place, or an equivalent permanent alternative stabilization method is implemented. Once stabilization is complete, all temporary sediment and erosion control measures shall be removed.

**1.7 Soils**

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS); Web Soil Survey of El Paso County Area, Colorado, published by the United States Department of Agriculture, dated June 2024, was utilized to investigate the existing general soil types within and surrounding the Project area. A soil map for this area is provided in the Attachments. Per the information given within the Soil Conservation Survey, hydrologic soil groups “A and B” characteristics are dominant across the study area as described in the following table.

Soil ID Number	Soil Type	Soil Description	Estimated Coverage Area	Hydrologic Classification
8	Blakeland loamy sand, 1% to 9% slopes	Surface runoff is low, somewhat excessively draining soil, the hazard of erosion and soil blowing are slight	56.4 %	A
10	Blendon sandy loam, 0 to 3% slopes	Surface runoff is low, well drained soil	43.5 %	B
28	Ellicott loamy coarse sand, 0 to 5 % slopes	Surface runoff is very low, somewhat excessively drained soil	0.1 %	A

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Runoff coefficients outlined in the City of Colorado Springs Design Criteria Manual and are provided below:

Land Use	5-year	100-year
Historic Analysis	0.09	0.36
Residential, 1 Acre	0.20	0.44
Paved	0.90	0.96

Runoff Coefficients for Rational Method from the Urban Drainage and Flood Control District (UDFCD 2001) are listed below:

Land Use or Surface Characteristics	Percent Impervious	Runoff Coefficients											
		2-year		5-year		10-year		25-year		50-year		100-year	
		HSG A&B	HSG C&D	HSG A&B	HSG C&D	HSG A&B	HSG C&D	HSG A&B	HSG C&D	HSG A&B	HSG C&D	HSG A&B	HSG C&D
<b>Business</b>													
Commercial Areas	95	0.79	0.80	0.81	0.82	0.83	0.84	0.85	0.87	0.87	0.88	0.88	0.89
Neighborhood Areas	70	0.45	0.49	0.49	0.53	0.53	0.57	0.58	0.62	0.60	0.65	0.62	0.68
<b>Residential</b>													
1/8 Acre or less	65	0.41	0.45	0.45	0.49	0.49	0.54	0.54	0.59	0.57	0.62	0.59	0.65
1/4 Acre	40	0.23	0.28	0.30	0.35	0.36	0.42	0.42	0.50	0.46	0.54	0.50	0.58
1/3 Acre	30	0.18	0.22	0.25	0.30	0.32	0.38	0.39	0.47	0.43	0.52	0.47	0.57
1/2 Acre	25	0.15	0.20	0.22	0.28	0.30	0.36	0.37	0.46	0.41	0.51	0.46	0.56
1 Acre	20	0.12	0.17	0.20	0.26	0.27	0.34	0.35	0.44	0.40	0.50	0.44	0.55
<b>Industrial</b>													
Light Areas	80	0.57	0.60	0.59	0.63	0.63	0.66	0.66	0.70	0.68	0.72	0.70	0.74
Heavy Areas	90	0.71	0.73	0.73	0.75	0.75	0.77	0.78	0.80	0.80	0.82	0.81	0.83
<b>Parks and Cemeteries</b>													
Parks and Cemeteries	7	0.05	0.09	0.12	0.19	0.20	0.29	0.30	0.40	0.34	0.46	0.39	0.52
Playgrounds	13	0.07	0.13	0.16	0.23	0.24	0.31	0.32	0.42	0.37	0.48	0.41	0.54
Railroad Yard Areas	40	0.23	0.28	0.30	0.35	0.36	0.42	0.42	0.50	0.46	0.54	0.50	0.58
<b>Undeveloped Areas</b>													
Historic Flow Analysis-- Greenbelts, Agriculture	2	0.03	0.05	0.09	0.16	0.17	0.26	0.26	0.38	0.31	0.45	0.36	0.51
Pasture/Meadow	0	0.02	0.04	0.08	0.15	0.15	0.25	0.25	0.37	0.30	0.44	0.35	0.50
Forest	0	0.02	0.04	0.08	0.15	0.15	0.25	0.25	0.37	0.30	0.44	0.35	0.50
Exposed Rock	100	0.89	0.89	0.90	0.90	0.92	0.92	0.94	0.94	0.95	0.95	0.96	0.96
Offsite Flow Analysis (when landuse is undefined)	45	0.26	0.31	0.32	0.37	0.38	0.44	0.44	0.51	0.48	0.55	0.51	0.59
<b>Streets</b>													
Paved	100	0.89	0.89	0.90	0.90	0.92	0.92	0.94	0.94	0.95	0.95	0.96	0.96
Gravel	80	0.57	0.60	0.59	0.63	0.63	0.66	0.66	0.70	0.68	0.72	0.70	0.74
<b>Drive and Walks</b>													
Drive and Walks	100	0.89	0.89	0.90	0.90	0.92	0.92	0.94	0.94	0.95	0.95	0.96	0.96
Roofs	90	0.71	0.73	0.73	0.75	0.75	0.77	0.78	0.80	0.80	0.82	0.81	0.83
Lawns	0	0.02	0.04	0.08	0.15	0.15	0.25	0.25	0.37	0.30	0.44	0.35	0.50

All exposed soil throughout the Project site will be landscaped and/or seeded with a locally approved seed mix as described in Section 2.2.

Item 14. Discharge of concrete wash water to ground (e.g. a concrete washout area) is an allowable non-stormwater discharge per the COR400000 Permit if properly identified in the SWMP and if the appropriate control measures are implemented. CWA is anticipated on site, so allowable non-stormwater discharges *are anticipated*.

### **1.8 Vegetation**

The existing vegetation consists of native grasses and shrubs. Based on a review of aerial photography, the vegetative cover at Cimmaron Hills Southeast Filing No. 1 is approximately 95%.

### **1.9 Allowable Non-Stormwater Discharges**

Uncontaminated groundwater may be discharged onsite, but may not leave the site in the form of surface runoff. Concrete washout areas will be used as described in Section 2.3. Non-stormwater discharges are not anticipated.

Item 14. Is uncontaminated groundwater anticipated to be encounter on site? Please clarify

### **1.10 Receiving Waters**

Ultimate Receiving Water(s): Sand Creek

Stormwater Outfalls/Temporary Sediment Basin Discharge:

As part of the proposed development, the proposed detention basin will discharge to the southwest through the existing stormwater that conveys flows to Peterson Road and collected southwest of the site.

### **1.11 Stream Crossings within the Project Area**

No stream crossings in project area.

### **1.12 Pollution Sources**

Pollutants that result from clearing, grading, maintenance, operations, and excavation have the potential to be present in stormwater runoff and are potential sources for stormwater contamination. The following is a description of potential source areas for pollutant that may be released during construction, maintenance, operation, and excavation activities:

#### **Source Area:**

1. Disturbed and stored soils, erosion.
2. Vehicle tracking of sediments.
3. Management of contaminated soils.
4. Loading and unloading operations.
5. Outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.).
6. Vehicle and equipment maintenance, cleaning, and fueling operations.
7. Significant dust or particulate generation activities.
8. Routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, etc.
9. Onsite waste management practices (waste piles, liquid wastes, dumpsters, chemical containers etc.).
10. Concrete truck/equipment washing
11. Non-industrial waste sources (trash, portable toilets)

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The following pollutants may impact stormwater runoff for each of the source areas listed above.

Potential Pollutant	Chemical/Physical Description	Stormwater Impacts	Potential Source Area (listed above)
Pesticides (insecticides, fungicides, herbicides, rodenticides)	Various colored to colorless liquid, powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic	3, 4, 5, 8, 9
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous	3, 4, 5, 8, 9
Cleaning solvents	Colorless, blue, or yellow-green liquid	Perchloroethylene, methylene chloride, trichloroethylene, petroleum distillates	3, 4, 5, 6, 8, 9, 10, 11
Concrete	White solid	Limestone, sand	3, 5, 9, 10
Paints	Various colored liquid	Metal oxides, stoddard solvent, talc, calcium carbonate, arsenic	3, 5, 6, 9
Wood preservatives	Clear amber or dark brown liquid	Stoddard solvent, petroleum distillates, arsenic, copper, chromium	3, 5, 8
Hydraulic oil/fluids	Brown oily petroleum hydrocarbon	Mineral oil	3, 4, 5, 6, 8, 9
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE	2, 3, 4, 5, 6, 8, 9, 10
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillate, oil & grease, naphthalene, xylenes	2, 3, 4, 5, 6, 8, 9, 10
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates	5, 6, 8, 9
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)	2, 3, 4, 5, 6, 8, 9, 10
Particulates	Dust, airborne particulates	Sediment	1, 2, 4, 5, 6, 10
Biological	Human/animal waste	Bacterial	11

The largest possible sources of non-stormwater pollution will be from trucks during equipment maintenance and refueling operations. The contractor shall be responsible for any spill cleanup during refueling operations in accordance with applicable city, county and state regulations. The contractor will also be responsible for cleanup of any off-site vehicle tracking on paved roads. Other sources of pollution

such as vehicle washing, chemical storage or waste disposal are not anticipated. No recognized environmental conditions (REC) have been identified within Project site.

### **1.13 Spill Prevention and Response Plan**

The Spill Prevention and Response Plan (SPRP) is designed to outline requirements for the handling and management of hazardous substances (pesticides, herbicides, fuels, cleaners, etc.) stored or used at the Project area.

#### **Materials Management and Handling**

- Chemicals that have the potential to be released in stormwater are to be used only where necessary and, in a manner, consistent with industry-standard uses and handling procedures.
- Ensure all hazardous materials are properly labeled.
- Store, dispense, and/or use hazardous substances in a way that prevents releases.
- Provide secondary containment when storing hazardous substances in bulk quantities (greater than 55-gallons).
- Maintain good housekeeping practices for chemicals stored onsite.
- Complete routine checks of hazardous substance storage areas.
- Provide monthly inspections of hazardous substance storage areas, secondary containment, and above ground and/or underground storage tanks.

#### **Spill Containment and Reporting**

A release of any chemical, oil, petroleum product, sewage, etc. that has the potential to enter surface water, groundwater, dry gullies, or storm sewers leading to surface water must be reported to the CDPHE immediately (25-8-601 CRS). When a spill is identified, the proper spill response should be implemented:

1. Assess the area for any immediate dangers or health and safety concerns. If any immediate dangers are present, call 911.
2. Contain any spilled materials. Assess the size of the leak and immediate threat of the spill reaching storm drains or permeable surfaces. If there is an immediate threat and no safety concerns, attempt to block the spill from reaching storm drains or other impermeable surfaces.
3. Stop the source of the spill if possible.
4. Cleanup spill in a timely manner. Use adsorbent materials (cat litter) and/or sock booms or rags to clean up the spill. Dispose of used materials appropriately.
5. Report and record spills to Qualified Stormwater Manager. Once the spill has been contained and any immediate threat to storm drains or permeable surfaces has been minimized, contact the Qualified Stormwater Manager. If necessary, a specialized cleanup contractor should be used to clean up the remaining contamination.
6. Follow applicable Colorado Discharge Permit System (CDPS) terms and conditions regarding spill reporting and response.

7. Report spills to the Colorado Department of Public Health and Environment (CDPHE). For non-permitted activities or in the case of an activity where a permit does not address reporting or response to a spill which may cause pollution of surface or subsurface waters of the State, notify the Environmental Release and Incident Reporting Line within 24 hours at **(877) 518-5608**. Reporting should include:
  - a. Name of responsible person or name of Qualified Stormwater Manager
  - b. An estimate of the date and time of the release
  - c. The location of the spill and its source (saddle tank, manhole, storage container, etc.),
  - d. The type of material spilled (untreated wastewater, petroleum products, etc.)
  - e. The estimated volume of the spill
  - f. The time and date the spill was controlled or stopped
  - g. If the spill is ongoing, the estimated rate of flow and when the spill is expected to be controlled/contained
  - h. Measures being taken to contain, reduce, and/or clean the spill
  - i. A list of potentially impacted areas and known downstream water uses that will be or have been notified
  - j. The phone number and email of the Qualified Stormwater Manager.
8. Any accidental discharge to the sanitary sewer system must be reported immediately to the local sewer authority and the affected wastewater treatment plant.
9. Written notification following a reportable spill shall be submitted to the CDPHE within five days (5 CCR 1002-31, Section 61.8(5)(d)).

## **2. BEST MANAGEMENT PRACTICES**

Best Management Practices (BMP's) encompass a wide range of erosion and sediment control practices, both structural and non-structural in nature, that are intended to reduce or eliminate any possible water quality impacts from stormwater leaving a construction site. The individual BMP's appropriate for a particular construction site are largely dependent on the types of potential pollutant sources present, the nature of the construction activity, and specific-site conditions.

Most of the BMP's referenced herein are widely used in the construction industry. They generally involve a simple and low-cost approach and can be very effective *when properly installed and maintained*. To prevent soil from washing into the public right-of way or the undisturbed areas of the site, the following is a discussion of BMPs and an indication of which BMPs are expected to be implemented as part of this Project.

BMPs for all slopes, channels, ditches, or any disturbed land area shall be completed immediately after grading or earth disturbance has occurred. All temporary soil erosion control measures and BMP's shall be maintained until site reaches final stabilization and permanent soil erosion control measures are implemented.

The Qualified Stormwater Manager may modify the planned BMPs based on construction sequencing, site conditions, and/or other factors. The SWMP should be modified by field notes including dates of modifications and the purpose of the modification. The Grading and Erosion Control Plan should reflect what has been constructed or modified onsite. The Qualified Stormwater Manager will be responsible for documenting BMP's (including phasing of BMP implementation).

## **2.1 Structural BMPs**

Structural BMPs are used to minimize erosion and sediment transport and include but are not limited to: silt fencing, erosion control blankets, turf reinforcement mat, wattles/sediment control logs, earth dikes, drainage swales, sediment traps, gravel inlet protection, inlet/outlet protection, straw bales, concrete washout areas, and temporary or permanent sediment basins. Structural BMPs shall be coordinated with construction activities so the BMP is in place before construction begins. The structural BMPs outlined below are general definitions and guidelines. Project-specific specifications for selected BMPs are detailed in the SWMP Drawings included in the Attachments.

- **Silt Fencing**: A silt fence is a structural sediment control device that typically consists of a geotextile fabric attached to wooden stakes inserted into a ground trench and rising to a vertical height of approximately 18-inches. The silt fence is generally used as perimeter sediment control and as a primary containment around storage areas, staging areas, stockpiles, etc.

Used for this project?  Yes  No

*Application notes:* Temporary perimeter controls (e.g. silt fences) will be installed *before* any clearing and grading begins. The use of rebar, steel stakes, or steel fence posts to anchor silt fencing is prohibited. Once the site is cleaned and the surrounding disturbed areas are 70% established with vegetation, the silt fences around the Project site can be removed.

- **Erosion Control Blanket**: An erosion control blanket (ECB) is a rolled-fiber product typically made up of straw, coconut, or synthetic fibers that are used to prevent scour erosion, stabilize slopes, and to aid revegetation by providing a protective layer over seeded areas. Turf reinforcement mats are similar to ECBs and are made to withstand greater stress such as traffic, extended life, or continuous and frequent water flow. ECBs are available in both biodegradable and photodegradable varieties.

Used for this project?  Yes  No

*Application Notes:* Exposed slopes greater than 3:1 will be covered by an erosion control blanket. The use of rebar, steel stakes, or steel fence posts to anchor ECB is prohibited.

- **Sediment Control Logs**: SCLs are log-shaped, rolled straw products encased in a polypropylene monofilament filter fabric. SCLs are used for sediment control usually at the perimeter of a disturbance or as a channel check in low flow areas. Wattle can also be used for slope length reduction.



Used for this project?  Yes  No

*Application Notes:* SCLs that act as perimeter control shall be installed prior to any upgradient land disturbing activities. SCLs may be used as small check dams in ditches and swales, however they should not be used in perennial streams or high velocity drainage ways.

- **Inlet Protection (gravel):** Storm sewer inlet protection is typically comprised of 1.5-inch angular rock (gravel) wrapped in a chicken wire mesh to form an approximate 6-inch diameter roll in varying lengths. The gravel roll should be firmly secured in front of the inlet opening with a spacing device to prevent the roll from entering the inlet. A sufficiently-sized overflow opening should be left to prevent flooding during high surface water flow volumes. The basic design applies to curb and drop-style inlets.

Used for this project?  Yes  No

*Application Notes:* Inlet protection measures for existing inlets shall be installed *before* clearing and grading is initiated.

- **Inlet/Outlet Protection:** Inlet/outlet protection can be composed of 4- to 6-inch rock (rip-rap) underlain with geotextile fabric placed at the outlet or inlet of a drainage pipe, culvert, or other areas where high surface water flow may be encountered. Geotextile socks filled with gravel may also be used as a temporary BMP. This BMP is used to reduce erosion sediment transport by reducing flow velocity.

Used for this project?  Yes  No

*Application Notes:* Temporary rip rap outlet protection specified in the SWMP specification drawings is for outlets intended to be utilized less than 2 years. Rough cut street control measures (geotextile socks filled with gravel or compacted earthen berms) shall be installed after a road has been cut and will not be paved for more than 14 days, or for temporary construction roads that have not received road base.

- **Straw Bale Barriers:** Bound straw bale barriers (SBB) are typically used for inlet protection or as drainage swale check dams. Installation of the bales is critical to avoid erosion at the ends of the bales.

Used for this project?  Yes  No

*Application Notes:* Straw bales shall consist of certified weed-free straw or hay and shall consist of approximately 5 cubic feet of straw or hay. Straw bales must weigh at least 35 pounds.

- **Check Dams:** Check dams are temporary grade control structures placed in drainage channels to limit the erosivity of stormwater by reducing flow velocity. Check dams are typically constructed from rock, gravel bags, sand bags, or sometimes, proprietary devices. Reinforced check dams are typically constructed from rock and wire gabion. Although the primary function of check dams is to reduce the velocity of concentrated flows, a secondary benefit is sediment trapping upstream of the structure.

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Used for this project?  Yes  No

*Application Notes:* When rock is used for the check dam, place rock mechanically or by hand. Do not dump rocks into the drainage channel. Where multiple check dams are used, the top of the lower dam should be at the same elevation as the toe of the upper dam. When reinforced check dams are used, install erosion control fabric under and around the check dam to prevent erosion on the upstream and downstream sides. Each section of the dam should be keyed in to reduce the potential for washout or undermining. A rock apron upstream and downstream of the dam may be necessary to further control erosion.

- **Drainage Swales:** Swales can be permanent or temporary and are typically designed to control storm water runoff in a non-erosive manner to a destination such as a detention pond or other stormwater collection facility. Swales can also be designed with velocity control devices and can be made of concrete or lined with materials such as rock or grass.

Used for this project?  Yes  No

- **Sediment/Detention Basins:** Sediment/Detention basins are designed according to project size and runoff volume and are used for flood control and to aid in temporary retention of runoff to aid in sediment deposition. A release point for runoff water is typically present and consists of an emergency overflow or regulating structure.

Used for this project?  Yes  No

*Application Notes:* Sediment basins will be installed prior to any other land disturbing activities that rely on basins for stormwater control. Embankment materials shall consist of soil free of debris. Organic material, and rocks or concrete greater than 3-inches diameter and shall have a minimum of 15% by weight passing a No. 200 sieve. Embankment materials must be compacted to at least 95% of maximum density.

*Ponds:* Note that the contractor will be responsible for any re-excavation of sediment and debris that collects in the basin depressions required to ensure that the basin meets the design grades following construction. The storm lines shall also be cleaned and free of sediment once the site becomes stabilized.

- **Vehicle Tracking Control:** VTC is used to limit off-site tracking of sediment from disturbed or unpaved areas to paved areas. VTC can include: TRM or mud mats installed at the point of access from unpaved areas (used when traffic is limited or light), a 1.5-inch diameter rock gravel access pad combined with pavement sweeping (used when traffic is limited or light), or a 3+-inch rock with geotextile underlayment combined with street sweeping (used for heavy construction traffic or at the main access point to a development site).

Used for this project?  Yes  No

*Application Notes:* VTC Entrances to disturbed areas will be constructed *before* clearing and grading begins.

- ***Stabilized Staging Area:*** A staging area for equipment and material storage, parking, and loading/unloading operations should be sized appropriately for the needs of the site and should be constructed prior to the onset of construction activities. Site stabilization may include structural BMPs (e.g. perimeter fencing, gravel laydown, VTC) and housekeeping BMPs and should be maintained appropriately.

Used for this project?  Yes  No

*Application Notes:* A stabilized staging area will be constructed prior to other operations for parking, construction trailers, portable toilet facilities, storage, and construction equipment.

Item 19. Per COR400000 Permit, temporary stabilization must be implemented for earth disturbing activities on any portion of the site where ground disturbing activities have permanently ceased, or temporarily ceased for more than 14 calendar days.

## **2.2 Non-Structural BMPs**

Non-structural BMPs are implemented at the site to minimize erosion and sediment transport and may include temporary or permanent vegetation, mulching, landscaping, geotextiles, sod stabilization, surface roughening, vegetative buffer strips (VBS), and protection/preservation of trees and other mature vegetation. The non-structural BMPs outlined below are general definitions and guidelines. Project-specific specifications for selected BMPs are detailed in the SWMP Drawings included in the Attachments.

- ***Temporary and permanent seeding:*** Seeding of disturbed areas provides soil stabilization and helps prevent erosion and sediment transport. Seeding is usually performed by ripping the area, spreading the appropriate seed mix, and applying straw mulch at a rate of two tons per acre over the seeded area. In some cases, a tackifier may be used to anchor the straw mulch. Managing and applying the proper seed mix and following the specified maintenance procedures are very important in promoting timely growth of grasses while minimizing weed growth. This BMP is effective on slopes up to 3:1 and where soil conditions are adequate.

Used for this project?  Yes  No

*Application Notes:* A mixture developed for elevations 3,000 feet to 8,000 feet will provide natural cover under dryland conditions. Seed for this project will be broadcast spread at a rate of 20 to 25 pounds per acre or drilled at a rate of 15 to 20 pounds per acre. Overseeding will be broadcast spread at a rate of 10 to 15 pounds per acre or drilled at a rate of 5 to 10 pounds per acre. Seed mixture specifications are included in the attached SWMP Drawings. Seed will be mulched with weed-free straw mulch. **Temporary seeding may be used on disturbed areas not planned for activity within 30 days.** Top soil stock piles will be stabilized with temporary seed and mulch no later than fourteen days from the last construction activities in that area. Once construction activity ceases permanently in an area, the area will be stabilized with permanent seed and mulch. Permanent seeding will be used in designated Open Space areas. Soils that are stockpiled for more

than 30 days shall be mulched and seeded with a temporary or permanent grass cover within 21 days of stockpile construction.

- **Mulching:** A layer of suitable mulch is typically applied at a rate of two tons per acre and can be tacked or fastened by an approved method suitable for the type of mulch used. Rough cut streets can be mulched in lieu of a layer of aggregate road base or asphalt paving. Seeding shall be placed in areas designated as being in an interim state.

Used for this project?  Yes  No

*Application Notes:* A layer of suitable mulch shall be applied at a rate of two tons per acre to all disturbed portions of the site within 21 days of the completion of grading. If the area is to remain in an interim state for more than 60 days, seeding BMPs shall be used. Mulch can be used in areas of rough cut streets unless a layer of road base or asphalt paving is planned within 21 days.

- **Landscaping:** Landscaping includes rock, mulch, sod, trees, bushes, geofabrics, hardscaping, etc. as identified in the final stabilization specifications. Landscaping may be done by the developer or by the property owner.

Used for this project?  Yes  No

*Application Notes:* Landscaping is planned for all disturbed areas that are not paved, hardscaped, or covered with permanent seeding.

- **Surface Roughening:** Surface roughening is the mechanical breaking up of soils as a short-term method of temporary stabilization in areas where temporary seeding is not practical or in areas where active construction is ongoing. Surface roughening is achieved through ripping or tilling the surface to increase surface area and infiltration.

Used for this project?  Yes  No

*Application Notes:* Surface roughening using scarifying methods such as disking or dragging bucket teeth over areas of disturbed soils parallel to slope contours will be completed in areas of active construction.

- **Vegetative Buffer Strips:** VBS are areas of original vegetation kept in place during construction that are preserved and maintained to filter sediment deposited from sheet flow. Maintenance includes cleanup of sediment and re-vegetation of VBS as necessary. Maintaining vegetative buffers is important around sensitive areas such as wetlands, waterways, etc.

Used for this project?  Yes  No

*Application Notes:* Pre-existing vegetation shall be protected and maintained within 50 horizontal feet of waters of the State unless unfeasible.

### **2.3 Housekeeping BMPs**

Housekeeping BMPs are maintenance practices implemented to keep the site clean, reduce potential chemical or biological exposures, and to minimize the tracking of soils to hard surfaces and airborne particles. Maintenance BMPs include street sweeping, dust suppression techniques, spill prevention and response (Section 1.13), waste management and disposal, and materials handling and management (Section 1.14). Project-specific specifications for selected BMPs are detailed in the SWMP Drawings included in the Attachments.

- **Street Sweeping:** Street sweeping is the practice of removing soil clumps, scraping packed dirt/mud, and sweeping loose soils tracked onto paved surfaces to prevent sediment transport in runoff water. Materials removed as part of this BMP should be deposited in an area contained by perimeter BMPs or disposed offsite.

Used for this project?  Yes  No

*Application Notes:* Street sweeping methods will be employed in areas of ingress/egress from paved areas to the construction site. Vehicle tracking of soils and construction debris off-site shall be minimized. Materials tracked offsite shall be cleaned up and properly disposed immediately. The owner, site developer, contractor, and their agents shall be responsible for the removal of dirt, rock, construction debris, trash, sediment, and sand that accumulates in public right of ways, storm sewers, or other drainage conveyance system and stormwater appurtenances.

- **Stockpile Protection Plan:** Management of onsite soil stockpiles will be in accordance with a Stockpile Protection Plan. Structural BMPs (e.g. silt fencing, ECBs, SCLs) and non-structural BMPs (e.g. surface roughening, temporary seeding and mulching, soil binders) may be used for stockpile stabilization and to prevent erosion and sediment transport at the piles. Consideration for determining the appropriate type of perimeter control includes stockpile location, the relative heights of the perimeter control and stockpile, the ability of the perimeter control to contain the stockpile without failing in the event the stockpile shifts or slumps against the perimeter, and other factors. Perimeter controls must remain in place and routine maintenance must be performed including routine inspections to maintain effective operating condition of each BMP.

Used for this project?  Yes  No

*Application Notes:* At this time, soil stockpiles are not expected to be onsite for more than 14 days. If long-term storage of soils is necessary, perimeter controls (e.g. silt fencing, sediment control logs) and surface stabilization (e.g. surface roughening, erosion control blankets) shall be in place for soil stockpiles. Stockpiles that will remain onsite for longer than 60 days should be seeded and mulched within 14 days of placing the stockpile.

- **Dust Suppression:** Dust suppression BMPs are typically used to minimize the transport of fine particles through the air. Dust suppression techniques may include keeping the site wet using water trucks or other wetting methods or covering of loose soils in disturbance areas. During

Item 19. Add text stating that water used for dust suppression may not be discharged off-site.

periods of high wind, the following activities should be monitored: limited street sweeping, restriction of major grading activities, restriction of soil stockpiling, controlling vehicular speed.

Used for this project?  Yes  No

**Application Notes: A water source shall be available onsite during earthwork operations and utilized as required to minimize dust from earth working operations and wind.**

- **Load Covering:** Trucks or other vehicles carrying cut or fill materials to or from the site should be covered to prevent accidental loss of material during transport onto public right of ways

Used for this project?  Yes  No

**Application Notes:** Loads of cut and fill must be properly covered.

- **Site Waste Management and Disposal:** Construction waste disposal and trash generated by onsite personnel should be collected in dumpsters or similar trash containers and emptied on a regular basis. Construction waste and trash should be kept in a secure area and lidded if required to avoid accidental spreading of waste. Trash containers should be kept on permeable surfaces within perimeter BMPs. Loose trash should be collected daily and disposal services should be on a regular schedule to avoid overfilling of containers. Hazardous materials may not be disposed in trash containers and no waste materials should be buried onsite.

Used for this project?  Yes  No

**Application Notes:** Trash at the site will be cleared daily and kept in secured and/or covered receptacles. Waste disposal will be managed through a licensed contractor.

- **Portable Toilet Facilities:** A proper amount of portable toilets should be located at the Project Site and should be kept within the perimeter BMPs on permeable surfaces. Portable toilets should be anchored to prevent tipping and should be at least five feet behind curbs and at least 50 feet from any storm sewer inlets. Toilets should also be kept away from preferential flow pathways and from all water bodies. Regularly scheduled maintenance should be in place to empty and clean the receptacles to prevent overflow and waste collecting.

Used for this project?  Yes  No

**Application Notes:** Portable toilets will be provided and maintained through a private contractor.

- **Concrete Washout:** Concrete washout areas typically consist of an unlined pit in the ground with a vehicle tracking control (VTC) entrance and are designed to capture and contain concrete washout water. In areas with a high groundwater table, poly-lined pits or a portable waste bin may be used. Pits should be placed to minimize the potential for pollutant discharge. Washout basin deposits (hardened concrete waste) should be removed and properly disposed offsite as solid waste on a regular basis after liquids have evaporated.

Item 14. Discharge of concrete wash water to ground (e.g. a concrete washout area) is an allowable non-stormwater discharge per the COR400000 Permit if properly identified in the SWMP and if the appropriate control measures are implemented. CWA is anticipated on site, so allowable non-stormwater discharges are anticipated.

Used for this project?  Yes  No

*Application Notes:* Concrete wash water shall be contained and disposed in accordance with the SWMP. No concrete wash water shall be discharged to or allowed to runoff to State waters. Concrete washout areas shall not be located in an area where shallow groundwater may be present or within 50 feet of a surface water body. Unless confined to a predefined, bermed containment area, the cleaning of concrete truck delivery chutes is prohibited at the Project area.

Dewatering is not proposed and is not anticipated throughout the lifecycle of the project.

**2.4 Stormwater Management Plan Non-Applicable Items**

SWMP Checklist Number	Description	Comments
12	Spill prevention and pollution controls for dedicated batch plants	Asphalt/concrete batch plants not proposed
14	Location and description of any anticipated allowable non-stormwater discharge (ground water, springs, irrigation, discharge covered by CDPHE Low Risk Guidance, etc.)	Non-stormwater discharge not anticipated
16	Description of all stream crossings located within the project area or statement that no streams cross the project area	No streams cross the project site area
17f	Location of any dedicated asphalt / concrete batch plants	Asphalt/concrete batch plants not proposed
26	If this project relies on control measures owned or operated by another entity, a documented agreement must be included in the SWMP that identifies location, installation and design specifications, and maintenance requirements and responsibility of the control measure(s).	Project does not rely on BMP's owned by someone else

**3. FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT**

Once construction activity ceases permanently in an area, the area shall be stabilized with permanent landscaping and/or seed and mulch as designated below. Final stabilization is complete when all ground



**\*\*Note: EPC does not currently have specific criteria regarding the scope of self-inspections, however this does not meet the COR400000 Permit Part I.D.5.a requirements for inspection scope regarding areas to be inspected. No change is required for purposes of satisfying the EPC SWMP Checklist.**

disturbing activities are complete and all disturbed areas have either a uniform vegetative cover with an individual plant density of 70% of pre-disturbance levels, permanent hardscaping or paving is in place, or an equivalent permanent alternative stabilization method is implemented. Once stabilization is complete, all temporary sediment and erosion control measures shall be removed.

Final Stabilization for this site will consist of a combination of temporary controls and permanent seeding:

- *Landscaping.* Disturbed areas around finished units that are not paved or otherwise hardscaped should be landscaped on completion of the vertical structure. Weather may delay landscaping which may be offset by temporary measures such as erosion control blankets, wattles, inlet protection, or other BMPs outlined in Section 2.
- *Paving/Hardscaping.* Areas not planned for landscaping should be paved or hardscaped including roadways, sidewalks, driveways, parking areas, etc.
- *Temporary controls.* Temporary erosion and sediment control measures should be maintained on un-stabilized areas. Disturbed areas should be surface-roughened and slopes steeper than 3:1 and graded swales should be covered with erosion control blankets. Temporary controls may be removed once stabilization is complete and the plant density reaches 70% pre-disturbance levels.
- *Permanent BMPs.* Permanent post-construction BMPs should remain onsite after construction activities have been completed and the site is stabilized. These BMPs may include detention facilities, swales, and natural depressions.
- This project will not require the use of control measures owned or operated by another entity.
- *Permanent BMPs.* Permanent post-construction BMPs should remain onsite after construction activities have been completed and the site is stabilized. These BMPs may include detention facilities, storm drain systems, swales, and natural depressions.

**Item 22. Revise long-term stormwater management discussion to include info specific to this project.**

**Duplicate bullet.**

### **3.1 Inspection and Maintenance**

Visual inspections of all cleared and graded areas of the construction site will be performed on a minimum occurrence of once per week and/or within 24 hours of the end of any precipitation or snowmelt event that causes surface erosion. The inspection will be the responsibility of the Qualified Stormwater Manager. An inspection report form has been provided in the Attachments. The inspection will verify that the structural BMPs described in Section 2.1 of this SWMP are functioning properly, in good condition, up to date and continue to minimize erosion. The inspection will also verify that the procedures used to prevent stormwater contamination from construction materials and petroleum products are effective. The following inspection and maintenance practices will be used to maintain erosion and sediment controls:

**Item 24. Post-storm inspections not required for 7-day inspection frequency. Inspections are to be conducted either (1) Once every 7 days or (2) Once every 14 days and within 24 hours following the end of a precipitation/snowmelt event that causes surface erosion. Please clarify.**

- Accumulated sediment and debris shall be removed from a BMP when the sediment/debris level reaches one half the height of the BMP or at any time that sediment or debris adversely impacts the functioning BMP.

Item 25. Add statement regarding the required QSM signature on completed reports.

**Cimmaron Hills Southeast Filing No. 1**  
**Stormwater Management Plan**

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- Built up sediment will be removed from silt fencing when it has reached one-third the height of the fence.
- Silt fences will be inspected for depth of sediment, for tears, to see if the fabric is securely attached to the fence posts, and to see that the fence posts are firmly in the ground.
- Temporary and permanent seeding will be inspected AND noted for bare spots, washouts, and healthy growth.
- The stabilized construction entrances will be inspected for sediment tracked on the road, for clean gravel, and to make sure that all traffic uses the stabilized entrance when leaving the site.
- The maintenance inspection report will be made after each inspection. A copy of the report form to be completed and signed by the Qualified Stormwater Manager is provided in the Attachments. Completed forms will be maintained on-site during the entire construction project. Following construction and the expiration or inactivation of the permit, the completed forms will be retained at the general contractor's office, for a minimum of 3 years.
- If construction activities or design modifications are made to the site plan which could impact stormwater, this SWMP will be amended appropriately. The amended SWMP will have a description of the new activities that contribute to the increased pollutant loading and the planned source control activities.

### **3.2 BMP Replacement and Failed BMPs**

At a minimum, the contractor shall inspect and keep a log of all BMPs on a weekly basis and after a significant precipitation event. BMPs should be assessed by a qualified inspector to determine if new or replacement BMPs are necessary. Where BMPs have failed, the failure must be addressed as soon as possible to minimize discharge of additional pollutants. As new BMPs are installed and/or replaced, this SWMP should be updated to reflect the change(s).

### **3.3 Qualified Inspectors**

Qualified inspectors should be knowledgeable in the principles and practices of erosion and sediment control and should have a good working knowledge of the regulation and BMPs included in this SWMP. Inspectors should also be able to anticipate site conditions and assess BMP functionality that could impact stormwater runoff.

### **3.4 Additional SWMP and BMP Practices**

An employee training program should be developed and implemented to educate employees about the requirements of the SWMP. This education program will include background on the components and goals of the SWMP and hands-on training in erosion controls, spill prevention and response, good housekeeping, proper material handling, disposal and control of waste, equipment fueling, and proper storage, washing, and inspection procedures.

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**Cimmaron Hills Southeast Filing No. 1**  
**Stormwater Management Plan**

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This plan was prepared in accordance with the CDPS General Permit. A copy of this permit is provided in the Attachments.

This SWMP should be viewed as a “living document” that is continuously being reviewed and modified as a part of the overall process of evaluating and managing stormwater quality issues at the site. The Qualified Stormwater Manager shall amend the SWMP when there is a change in design, construction, operation or maintenance of the site which would require the implementation of new or revised BMPs or if the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity or when BMPs are no longer necessary and are removed.

Item 21. Add text stating that the QSM shall maintain a record of amendments made to the SWMP that includes the date and identification of the changes.

## **Attachments**

## **SWMP Drawings**

## **SWMP Inspection & Maintenance Log**





# **Soil Survey of El Paso County Area Soils Map**

# Custom Soil Resource Report for El Paso County Area, Colorado



# Preface

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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](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.

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# How Soil Surveys Are Made

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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

## Custom Soil Resource Report

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



## Custom Soil Resource Report

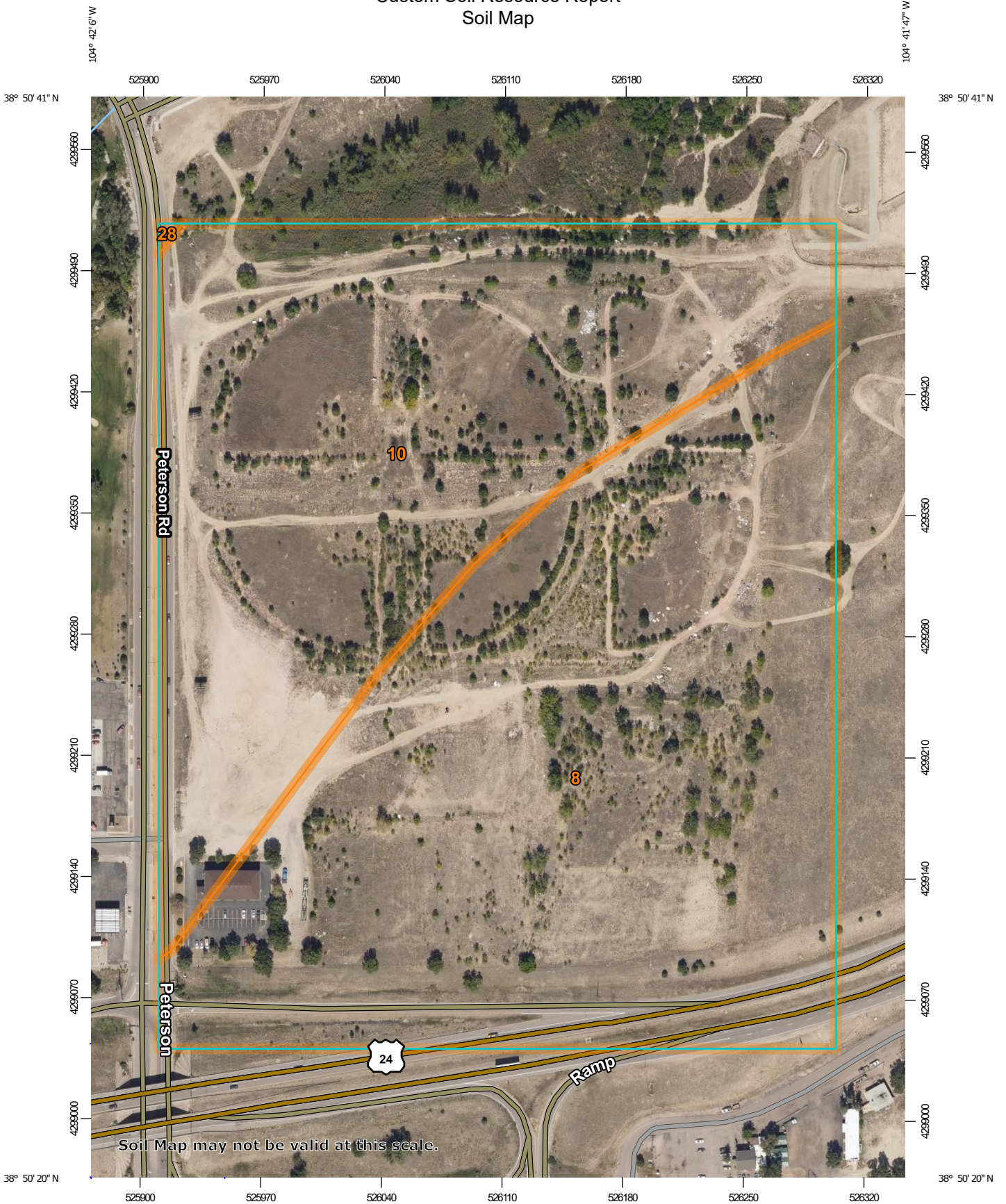
identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

# Soil Map

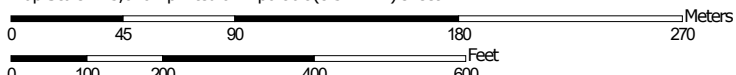
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The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce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

# Custom Soil Resource Report Soil Map




Map Scale: 1:3,040 if printed on A portrait (8.5" x 11") sheet.



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: El Paso County Area, Colorado  
 Survey Area Data: Version 21, Aug 24, 2023

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

Date(s) aerial images were photographed: Aug 19, 2018—Sep 23, 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
8	Blakeland loamy sand, 1 to 9 percent slopes	26.2	56.4%
10	Blendon sandy loam, 0 to 3 percent slopes	20.2	43.5%
28	Ellicott loamy coarse sand, 0 to 5 percent slopes	0.0	0.1%
<b>Totals for Area of Interest</b>		<b>46.5</b>	<b>100.0%</b>

## 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

## Custom Soil Resource Report

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.

## El Paso County Area, Colorado

### 8—Blakeland loamy sand, 1 to 9 percent slopes

#### Map Unit Setting

*National map unit symbol:* 369v  
*Elevation:* 4,600 to 5,800 feet  
*Mean annual precipitation:* 14 to 16 inches  
*Mean annual air temperature:* 46 to 48 degrees F  
*Frost-free period:* 125 to 145 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Blakeland and similar soils:* 98 percent  
*Minor components:* 2 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Blakeland

##### Setting

*Landform:* Hills, flats  
*Landform position (three-dimensional):* Side slope, talf  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Alluvium derived from sedimentary rock and/or eolian deposits derived from sedimentary rock

##### Typical profile

*A - 0 to 11 inches:* loamy sand  
*AC - 11 to 27 inches:* loamy sand  
*C - 27 to 60 inches:* sand

##### Properties and qualities

*Slope:* 1 to 9 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Runoff class:* Low  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)  
*Depth to water table:* More than 80 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* None  
*Calcium carbonate, maximum content:* 5 percent  
*Available water supply, 0 to 60 inches:* Low (about 4.5 inches)

##### Interpretive groups

*Land capability classification (irrigated):* 3e  
*Land capability classification (nonirrigated):* 6e  
*Hydrologic Soil Group:* A  
*Ecological site:* R049XB210CO - Sandy Foothill  
*Hydric soil rating:* No

#### Minor Components

##### Other soils

*Percent of map unit:* 1 percent



*Hydric soil rating:* No

**Pleasant**

*Percent of map unit:* 1 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

**10—Blendon sandy loam, 0 to 3 percent slopes**

**Map Unit Setting**

*National map unit symbol:* 3671

*Elevation:* 6,000 to 6,800 feet

*Mean annual precipitation:* 14 to 16 inches

*Mean annual air temperature:* 46 to 48 degrees F

*Frost-free period:* 125 to 145 days

*Farmland classification:* Not prime farmland

**Map Unit Composition**

*Blendon and similar soils:* 98 percent

*Minor components:* 2 percent

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

**Description of Blendon**

**Setting**

*Landform:* Terraces, alluvial fans

*Down-slope shape:* Linear

*Across-slope shape:* Linear

*Parent material:* Sandy alluvium derived from arkose

**Typical profile**

*A - 0 to 10 inches:* sandy loam

*Bw - 10 to 36 inches:* sandy loam

*C - 36 to 60 inches:* gravelly sandy loam

**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:* 2 percent

*Available water supply, 0 to 60 inches:* Moderate (about 6.2 inches)

**Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 3e



## Custom Soil Resource Report

*Hydrologic Soil Group:* B  
*Ecological site:* R049XB210CO - Sandy Foothill  
*Hydric soil rating:* No

### Minor Components

#### Other soils

*Percent of map unit:* 1 percent  
*Hydric soil rating:* No

#### Pleasant

*Percent of map unit:* 1 percent  
*Landform:* Depressions  
*Hydric soil rating:* Yes

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

### Map Unit Setting

*National map unit symbol:* 3680  
*Elevation:* 5,500 to 6,500 feet  
*Mean annual precipitation:* 13 to 15 inches  
*Mean annual air temperature:* 47 to 50 degrees F  
*Frost-free period:* 125 to 145 days  
*Farmland classification:* Not prime farmland

### Map Unit Composition

*Ellicott and similar soils:* 97 percent  
*Minor components:* 3 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Ellicott

#### Setting

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

#### Typical profile

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

#### Properties and qualities

*Slope:* 0 to 5 percent  
*Depth to restrictive feature:* More than 80 inches  
*Drainage class:* Somewhat excessively drained  
*Runoff class:* Very low  
*Capacity of the most limiting layer to transmit water (Ksat):* High to very high (5.95 to 19.98 in/hr)  
*Depth to water table:* More than 80 inches

## Custom Soil Resource Report

*Frequency of flooding:* Frequent

*Frequency of ponding:* None

*Available water supply, 0 to 60 inches:* Low (about 4.1 inches)

### **Interpretive groups**

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 7w

*Hydrologic Soil Group:* A

*Ecological site:* R069XY031CO - Sandy Bottomland

*Other vegetative classification:* SANDY BOTTOMLAND (069AY031CO)

*Hydric soil rating:* No

### **Minor Components**

#### **Fluvaquentic haplaquoll**

*Percent of map unit:* 1 percent

*Landform:* Swales

*Hydric soil rating:* Yes

#### **Other soils**

*Percent of map unit:* 1 percent

*Hydric soil rating:* No

#### **Pleasant**

*Percent of map unit:* 1 percent

*Landform:* Depressions

*Hydric soil rating:* Yes

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- 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>

## Custom Soil Resource Report

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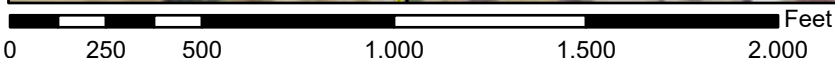
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## **FEMA FIRM Floodplain Maps**

# National Flood Hazard Layer FIRMette



104°42'15"W 38°50'47"N



1:6,000

104°41'38"W 38°50'19"N

Basemap Imagery Source: USGS National Map 2023

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- |                                    |  |
|------------------------------------|--|
| <b>SPECIAL FLOOD HAZARD AREAS</b>  | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #e0ffff; border: 1px solid black;"></span> Without Base Flood Elevation (BFE)<br/><i>Zone A, V, A99</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #e0ffff; background-image: linear-gradient(to right, transparent 48%, #e0ffff 48%, #e0ffff 52%, transparent 52%); background-size: 4px 4px;"></span> With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background-image: linear-gradient(to right, #ffcccc 48%, #ffcccc 52%, #ffcccc 56%, #ffcccc 60%, #ffcccc 64%, #ffcccc 68%, #ffcccc 72%, #ffcccc 76%, #ffcccc 80%, #ffcccc 84%, #ffcccc 88%, #ffcccc 92%, #ffcccc 96%, #ffcccc 100%); background-size: 4px 4px;"></span> Regulatory Floodway</li> </ul>  |
| <b>OTHER AREAS OF FLOOD HAZARD</b> | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #ffcc99;"></span> 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background-image: linear-gradient(to right, #cccccc 48%, #cccccc 52%, #cccccc 56%, #cccccc 60%, #cccccc 64%, #cccccc 68%, #cccccc 72%, #cccccc 76%, #cccccc 80%, #cccccc 84%, #cccccc 88%, #cccccc 92%, #cccccc 96%, #cccccc 100%); background-size: 4px 4px;"></span> Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background-image: linear-gradient(to right, #ffcc99 48%, #ffcc99 52%, #ffcc99 56%, #ffcc99 60%, #ffcc99 64%, #ffcc99 68%, #ffcc99 72%, #ffcc99 76%, #ffcc99 80%, #ffcc99 84%, #ffcc99 88%, #ffcc99 92%, #ffcc99 96%, #ffcc99 100%); background-size: 4px 4px;"></span> Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; background-image: linear-gradient(to right, #ffcc99 48%, #ffcc99 52%, #ffcc99 56%, #ffcc99 60%, #ffcc99 64%, #ffcc99 68%, #ffcc99 72%, #ffcc99 76%, #ffcc99 80%, #ffcc99 84%, #ffcc99 88%, #ffcc99 92%, #ffcc99 96%, #ffcc99 100%); background-size: 4px 4px;"></span> Area with Flood Risk due to Levee <i>Zone D</i></li> </ul> |
| <b>OTHER AREAS</b>                 | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #ffffff;"></span> NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i></li> <li><span style="display: inline-block; width: 20px; height: 10px; border: 2px solid #0000ff;"></span> Effective LOMRs</li> <li><span style="display: inline-block; width: 20px; height: 10px; background-color: #ffcc99;"></span> Area of Undetermined Flood Hazard <i>Zone D</i></li> </ul>  |
| <b>GENERAL STRUCTURES</b>          | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dashed black;"></span> Channel, Culvert, or Storm Sewer</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dashed gray;"></span> Levee, Dike, or Floodwall</li> </ul>   |
| <b>OTHER FEATURES</b>              | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid #0000ff;"></span> Cross Sections with 1% Annual Chance Water Surface Elevation</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dashed gray;"></span> Coastal Transect</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dotted gray;"></span> Base Flood Elevation Line (BFE)</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid #ff0000;"></span> Limit of Study</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid #0000ff;"></span> Jurisdiction Boundary</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px dashed gray;"></span> Coastal Transect Baseline</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid #0000ff;"></span> Profile Baseline</li> <li><span style="display: inline-block; width: 20px; border-bottom: 2px solid #0000ff;"></span> Hydrographic Feature</li> </ul>  |
| <b>MAP PANELS</b>                  | <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; background-color: #ffffff;"></span> Digital Data Available</li> <li><span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; background-color: #cccccc;"></span> No Digital Data Available</li> <li><span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; background-color: #ffffff;"></span> Unmapped</li> </ul>  |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/30/2024 at 10:55 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

## **CDPHE General Permit**



# STATE OF COLORADO

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.  
Denver, Colorado 80246-1530  
Phone (303) 692-2000  
TDD Line (303) 691-7700  
Located in Glendale, Colorado  
<http://www.cdph.state.co.us>



Colorado Department  
of Public Health  
and Environment

For Agency Use Only

Permit Number Assigned

COR03- \_\_\_\_\_

Date Received \_\_\_\_/\_\_\_\_/\_\_\_\_  
Month Day Year

## COLORADO DISCHARGE PERMIT SYSTEM (CDPS) STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES APPLICATION **PHOTO COPIES, FAXED COPIES, PDF COPIES OR EMAILS WILL NOT BE ACCEPTED.**

**Please print or type. Original signatures are required.** All items must be completed accurately and in their entirety for the application to be deemed complete. Incomplete applications will not be processed until all information is received which will ultimately delay the issuance of a permit. If more space is required to answer any question, please attach additional sheets to the application form. Applications must be submitted by mail or hand delivered to:

**Colorado Department of Public Health and Environment  
Water Quality Control Division  
4300 Cherry Creek Drive South  
WQCD-P-B2  
Denver, Colorado 80246-1530**

Any additional information that you would like the Division to consider in developing the permit should be provided with the application. Examples include effluent data and/or modeling and planned pollutant removal strategies.

### PERMIT INFORMATION

Reason for Application:  NEW CERT  
 RENEW CERT      EXISTING CERT # \_\_\_\_\_

Applicant is:  Property Owner  Contractor/Operator

### A. CONTACT INFORMATION - NOT ALL CONTACT TYPES MAY APPLY \* indicates required

**\*PERMITTEE (If more than one please add additional pages)**

**\*ORGANIZATION FORMAL NAME:** \_\_\_\_\_

1) **\*PERMITTEE** the person **authorized to sign and certify** the permit application. This person receives all permit correspondences and is **legally responsible** for compliance with the permit.

Responsible Position (Title): \_\_\_\_\_

Currently Held By (Person): \_\_\_\_\_

Telephone No: \_\_\_\_\_

email address \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**This form must be signed by the Permittee (listed in item 1) to be considered complete.**

**Per Regulation 61 In all cases,** it shall be signed as follows:

- In the case of corporations, by a responsible corporate officer. For the purposes of this section, the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the application originates.
- In the case of a partnership, by a general partner.
- In the case of a sole proprietorship, by the proprietor.
- In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official



- 2) **DMR COGNIZANT OFFICIAL (i.e. authorized agent)** the person or position authorized to **sign and certify reports required by the Division** including Discharge Monitoring Reports \*DMR's, Annual Reports, Compliance Schedule submittals, and other information requested by the Division. The Division will transmit pre-printed reports (ie. DMR's) to this person. If more than one, please add additional pages. Same As 1) Permittee

Responsible Position (Title): \_\_\_\_\_

Currently Held By (Person): \_\_\_\_\_

Telephone No: \_\_\_\_\_

email address \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

**Per Regulation 61** : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(i) The authorization is made in writing by the permittee

(ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a **named individual** or any individual occupying a **named position**); and

(iii) The written authorization is submitted to the Division

- 3) **\*SITE CONTACT** local contact for questions relating to the facility & discharge authorized by this permit for the facility.

Same As 1) Permittee

Responsible Position (Title): \_\_\_\_\_

Currently Held By (Person): \_\_\_\_\_

Telephone No: \_\_\_\_\_

email address \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

- 4) **\* BILLING CONTACT** if different than the permittee

Responsible Position (Title): \_\_\_\_\_

Currently Held By (Person): \_\_\_\_\_

Telephone No: \_\_\_\_\_

email address \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

5) OTHER CONTACT TYPES (check below) Add pages if necessary:

Responsible Position (Title): \_\_\_\_\_

Currently Held By (Person): \_\_\_\_\_

Telephone No: \_\_\_\_\_

email address \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

- Pretreatment Coordinator
- Environmental Contact
- Biosolids Responsible Party
- Property Owner
- Inspection Facility Contact
- Consultant
- Compliance Contact
- Stormwater MS4 Responsible Person
- Stormwater Authorized Representative
- Other \_\_\_\_\_

B. Permitted Project/Facility Information

Project/Facility Name \_\_\_\_\_

Street Address or cross streets \_\_\_\_\_

(e.g., "S. of Park St. between 5<sup>th</sup> Ave. and 10<sup>th</sup> Ave.", or "W. side of C.R. 21, 3.25 miles N. of Hwy 10"; A street name without an address, intersection, mile marker, or other identifying information describing the location of the project is not adequate. For **linear projects**, the route of the project should be described as best as possible with the location more accurately indicated by a map.)

City, \_\_\_\_\_ Zip Code \_\_\_\_\_ County \_\_\_\_\_

Facility Latitude/Longitude— (approximate center of site to nearest 15 seconds using one of following formats

001A Latitude \_\_\_\_\_ . \_\_\_\_\_ Longitude \_\_\_\_\_ . \_\_\_\_\_ (e.g., 39.703°, 104.933°)  
degrees (to 3 decimal places) degrees (to 3 decimal places)

or

001A Latitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " Longitude \_\_\_\_\_ ° \_\_\_\_\_ ' \_\_\_\_\_ " (e.g., 39°46'11"N, 104°53'11"W)  
degrees minutes seconds degrees minutes seconds

For the approximate center point of the property, to the nearest 15 seconds. The latitude and longitude must be provided as either degrees, minutes, and seconds, or in decimal degrees with three decimal places. This information may be obtained from a variety of sources, including:

- Surveyors or engineers for the project should have, or be able to calculate, this information.
- EPA maintains a **web-based siting tool** as part of their Toxic Release Inventory program that uses interactive maps and aerial photography to help users get latitude and longitude. The siting tool can be accessed at [www.epa.gov/tri/report/siting\\_tool/index.htm](http://www.epa.gov/tri/report/siting_tool/index.htm)
- U.S. Geological Survey **topographical map(s)**, available at area map stores.
- Using a **Global Positioning System (GPS) unit** to obtain a direct reading.

**Note:** the latitude/longitude required above is not the directional degrees, minutes, and seconds provided on a site legal description to define property boundaries.

C. MAP (Attachment) If no map is submitted, the permit will not be issued.

**Map:** Attach a map that indicates the site location and that CLEARLY shows the boundaries of the area that will be disturbed. Maps must be **no larger** than 11x17 inches.

D. LEGAL DESCRIPTION

**Legal description:** If subdivided, provide the legal description below, or indicate that it is not applicable (**do not** supply Township/Range/Section or metes and bounds description of site)

Subdivision(s): \_\_\_\_\_ Lot(s): \_\_\_\_\_ Block(s): \_\_\_\_\_

OR

- Not applicable (site has not been subdivided)

**E. AREA OF CONSTRUCTION SITE**

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Total area of project site (acres): \_\_\_\_\_ Area of project site to undergo disturbance (acres): \_\_\_\_\_

**Note:** aside from clearing, grading and excavation activities, disturbed areas also include areas receiving overburden (e.g., stockpiles), demolition areas, and areas with heavy equipment/vehicle traffic and storage that disturb existing vegetative cover

Total disturbed area of Larger Common Plan of Development or Sale, if applicable: \_\_\_\_\_  
(i.e., total, including all phases, filings, lots, and infrastructure not covered by this application)

Provide both the total area of the construction site, and the area that will undergo disturbance, in acres. **Note:** aside from clearing, grading and excavation activities, disturbed areas also include areas receiving overburden (e.g., stockpiles), demolition areas, and areas with heavy equipment/vehicle traffic and storage that disturb existing vegetative cover (see construction activity description under the APPLICABILITY section on page 1).

If the project is part of a **larger common plan of development or sale** (see the definition under the APPLICABILITY section on page 1), the disturbed area of the total plan must also be included.

**F. NATURE OF CONSTRUCTION ACTIVITY**

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Check the appropriate box(s) or provide a brief description that indicates the general nature of the construction activities. (The full description of activities must be included in the Stormwater Management Plan.)

- Single Family Residential Development
- Multi-Family Residential Development
- Commercial Development
- Oil and Gas Production and/or Exploration (including pad sites and associated infrastructure)
- Highway/Road Development (not including roadways associated with commercial or residential development)
- Other – Description:

\_\_\_\_\_

**G. ANTICIPATED CONSTRUCTION SCHEDULE**

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Construction Start Date: \_\_\_\_\_ Final Stabilization Date: \_\_\_\_\_

- *Construction Start Date* - This is the day you expect to begin ground disturbing activities, including grubbing, stockpiling, excavating, demolition, and grading activities.
- *Final Stabilization Date* - in terms of permit coverage, this is when the site is finally stabilized. This means that all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, paved, or a uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels. **Permit coverage must be maintained until the site is finally stabilized. Even if you are only doing one part of the project, the estimated final stabilization date must be for the overall project.** If permit coverage is still required once your part is completed, the permit certification may be transferred or reassigned to a new responsible entity(s).

**H. RECEIVING WATERS (If discharge is to a ditch or storm sewer, include the name of the ultimate receiving waters)**

Immediate Receiving Water(s): \_\_\_\_\_

Ultimate Receiving Water(s): \_\_\_\_\_

Identify the receiving water of the stormwater from your site. Receiving waters are any waters of the State of Colorado. This includes all water courses, even if they are usually dry. If stormwater from the construction site enters a ditch or storm sewer system, identify that system and indicate the ultimate receiving water for the ditch or storm sewer. **Note:** a stormwater discharge permit does not allow a discharge into a ditch or storm sewer system without the approval of the owner/operator of that system.

**I. REQUIRED SIGNATURES (Both parts i. and ii. must be signed)**

**Signature of Applicant:** The applicant must be either the owner and/or operator of the construction site. Refer to Part B of the instructions for additional information.

The application must be signed by the applicant to be considered complete. In all cases, it shall be signed as follows: (Regulation 61.4 (1e))

- a) In the case of corporations, by the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the form originates
- b) In the case of a partnership, by a general partner.
- c) In the case of a sole proprietorship, by the proprietor.
- d) In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official, (a principal executive officer has responsibility for the overall operation of the facility from which the discharge originates).

**STOP!: A Stormwater Management Plan must be completed prior to signing the following certifications!**

**i. STORMWATER MANAGEMENT PLAN CERTIFICATION**

"I certify under penalty of law that a complete Stormwater Management Plan, has been prepared for my activity. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the Stormwater Management Plan is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for falsely certifying the completion of said SWMP, including the possibility of fine and imprisonment for knowing violations."

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Signature of Legally Responsible Person or Authorized Agent (submission must include original signature)	Date Signed
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Name (printed)	Title
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**ii. SIGNATURE OF PERMIT LEGAL CONTACT**

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

"I understand that submittal of this application is for coverage under the State of Colorado General Permit for Stormwater Discharges Associated with Construction Activity **for the entirety of the construction site/project described and applied for, until such time as the application is amended or the certification is transferred, inactivated, or expired.**"

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Signature of Legally Responsible Person (submission must include original signature)	Date Signed
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Name (printed)	Title
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**DO NOT INCLUDE A COPY OF THE STORMWATER MANAGEMENT PLAN  
DO NOT INCLUDE PAYMENT – AN INVOICE WILL BE SENT AFTER THE CERTIFICATION IS ISSUED.**