
STORMWATER MANAGEMENT PLAN (SWMP)

COLORADO SPRINGS UTILITIES

CLEAR SPRINGS RANCH – FIRE BREAK ACCESS ROAD

Southern Area of Clear Springs Ranch, Exit 125 off of I-25

El Paso, Colorado Springs, CO 80817

Latitude: 38° 36' 19.2" N, Longitude: 104° 41' 53.2" W

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Nearest Navigable Waterway: Fountain Creek is located 5 miles Southeast of this facility

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Environmental Services Department

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Forward

The Stormwater Management Plan (SWMP) shall identify potential sources of pollution (including sediment) which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the facility. In addition, the plan shall describe and ensure the implementation of Best Management Practices (BMPs) which will be used to reduce the pollutants in stormwater discharges associated with construction activity. The BMPs must be implemented before construction/grading begins. Construction operations must implement the provisions of the SWMP required under this part as a condition of this permit. The Colorado Department of Public Health and Environment General Permit for Stormwater Discharges Associated with Construction Activities may be found in Attachment 1.

Prohibition of non-stormwater discharges. All discharges covered by this permit shall be composed entirely of stormwater associated with construction activity, except as provided below:

- a) Emergency fire fighting activities
- b) Landscape irrigation return flow
- c) Uncontaminated springs

Discharges of material other than stormwater must be addressed in a separate CDPS permit issued for that discharge.

Discharges to the ground of concrete washout water from washing of tools and concrete mixer chutes may be authorized by the stormwater permit, provided that:

- a) The source is identified in the SWMP
- b) BMPs are included in the SWMP and to prevent pollution of groundwater
- c) These discharges do not leave the site as surface runoff to surface waters

Releases in excess of reportable quantities. The stormwater permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117 or 40 CFR 302. Any discharge of hazardous material must be handled in accordance with the Division's Noncompliance Notification Requirements (see Part II.A.3 of the stormwater permit).

SWMP Requirements. The plan shall be updated as appropriate. SWMP provisions shall be implemented until expiration or inactivation of permit coverage. A copy of the SWMP must be retained on site unless another location, specified by the permittee, is approved by the Division. The permittee shall amend the SWMP:

- a) 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
- b) If the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity; or
- c) When BMPs are no longer necessary and are removed.

SWMP changes shall be made prior to changes in the site conditions. SWMP revisions may include, but are not limited to: potential pollutant source identification; selection of appropriate BMPs for site conditions; BMP maintenance procedures; and interim and final stabilization practices. The SWMP changes may include a schedule for further BMP design and implementation, provided that, if any interim BMPs are needed to comply with the permit, they are also included in the SWMP and implemented during the interim period.

SWMP changes addressing BMP installation and/or implementation are often required to be made in response to changing conditions, or when current BMPs are determined ineffective. The majority of SWMP revisions to address

these changes can be made immediately with quick in-the-field revisions to the SWMP. In the less common scenario where more complex development of materials to modify the SWMP is necessary, SWMP revisions shall be made in accordance with the following requirements:

- a) The SWMP shall be revised as soon as practicable, but in no case more than 72 hours after the change(s) in BMP installation and/or implementation occur at the site, and
- b) A notation must be included in the SWMP prior to the site change(s) that includes the time and date of the change(s) in the field, an identification of the BMP(s) removed or added, and the location(s) of those BMP(s).

1. Site Description

1.1. THE NATURE OF CONSTRUCTION ACTIVITY AT THE SITE

The purpose of this project is to widen approximately 11,500 linear feet of an existing two-track dirt road within the southern area of CSU's Clear Springs Ranch (CSR) property into a 17 foot wide fire break dirt road. The road widening will consist of grubbing and grading existing soil along the current two track path. Additionally, two gates will be added into the CSR perimeter chain link fence where the road exits the Clear Springs Ranch property.

1.2. THE PROPOSED SEQUENCE FOR MAJOR ACTIVITIES

The entire sequence of events will take place during the week of October 29, 2018. Vehicles will be brought on site the Friday before, materials will be locally sourced from CSU gravel pits further north on the CSR property. Grading is not expected to disturb any areas outside of the road base save for the very end of the road length where vehicles will have to turn around. Given that the road acts as its own final stabilization method, that no storage piles of materials have to be set up, and as the CSR property has vehicle tracking control methods already in place, no project specific pre-construction BMPs are expected to be used. The road area will be grubbed and then graded and any section grubbed will be graded the same day to restabilize the soil making up the road base. Clay from CSU's on-site gravel pits will be used as a binder for the road top. Construction crews will remove any trash daily, and all vehicles and materials will be removed from the site either immediately after or the day after the road is complete.

1.3. DISTURBED AREA

The estimate of the total area of this site and the area of the site that is expected to undergo clearing, excavation, grading, or other construction activities that will disturb the surface is 5.0 acres and will grade no more than 11,000 cubic yards of soil.

1.4. SOIL OR EXISTING POTENTIAL FOR SOIL EROSION

Over three quarters of the soil to be graded is Limon clay with sandy-gravelly soils in some areas. Soil will be loosened and exposed during grading and then restabilized by the regrading and binding. This presents the brief opportunity for erosion when the soil has been loosened. The construction is taking place during a time of low rainfall and therefore the actual risk of erosion is low.

1.5. EXISTING VEGETATION

The site is mostly covered by low grasses and occasional small bushes, cacti, and wildflowers. The percent ground cover averages about 50% with some areas as high as 70%.

1.6. POTENTIAL POLLUTION SOURCES

The location and description of all potential pollution sources, including ground surface disturbing activities, vehicle fueling, storage of fertilizers or chemicals, etc. are located in Table 1 on page 6. Each activity has been evaluated for its potential to contribute pollutants to stormwater discharges.

TABLE 1: POTENTIAL POLLUTION SOURCES

POTENTIAL POLLUTION SOURCES	POSSIBLE SITE CONTRIBUTIONS OF POLLUTANTS TO STORMWATER DISCHARGES
All disturbed and stored soils	Topsoil grubbing
Vehicle tracking of sediments	See Figures 3 and 4 for vehicle entrance and exits
Management of contaminated soils	No contaminated soils expected to be encountered
Loading and unloading operations	Clay binder brought from gravel pits on CSR property
Outdoor storage activities (building material, fertilizers, chemicals, etc.)	No onsite storage
Vehicle and equipment maintenance and fueling	Fueling will occur onsite
Significant dust or particulate generating processes	Vehicle tracking, grading, and vegetation removal
Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc	All equipment maintenance will occur offsite, no fertilizers, pesticides, detergents, and/or solvents will be used or stored onsite
On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.)	All waste will be removed from site ASAP
Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment	No concrete truck/equipment washing onsite
Dedicated asphalt and concrete batch plants	No dedicated asphalt and concrete batch plants onsite
Non-industrial waste sources such as worker trash and portable toilets	Worker trash will be removed from the site as soon as possible, portable toilets onsite is serviced regularly
Other areas or procedures where potential spills can occur	Petroleum releases possible from equipment

1.7. NON-STORMWATER DISCHARGE

No discharges of non-stormwater are expected from this site. Should a discharge occur site crews should call dispatch at 719-448-4800.

1.8. RECEIVING WATER(S) AND OUTFALL(S)

Several unnamed drainage ditches exist on site that ultimately discharge into Fountain Creek about five miles south east of the site.

2. SITE MAP(S)

The SWMP shall include a legible site map(s), showing the entire site, identifying:

- a) construction site boundaries;
- b) all areas of ground surface disturbance;
- c) areas of cut and fill;
- d) areas used for storage of building materials, equipment, soil or waste;
- e) locations of dedicated asphalt or concrete batch plants;
- f) locations of all structural BMPs;
- g) locations of non-structural BMPs as applicable; and
- h) locations of springs, streams, wetlands and other surface waters.

Figures are located in Attachment 5.

List of Maps:

Figure 1 – Site Vicinity Map

Figure 2 – Site Detail Map

Figure 3 – Construction Contours

Figure 4 – BMP Placement

3. STORMWATER MANAGEMENT CONTROLS

3.1. SWMP ADMINISTRATOR

The SWMP shall identify a specific individual(s), position or title who is responsible for developing, implementing, maintaining, and revising the SWMP. The activities and responsibilities of the administrator shall address all aspects of the facility's SWMP:

SWMP Administrator – Brad Pritekel, Operations Supervisor

SWMP Inspector – Richard Sebastian-Coleman, Environmental Project Engineer

3.2. IDENTIFICATION OF POTENTIAL POLLUTANT SOURCES

See Section 1.6, Table 1.

3.3. BMPs FOR STORMWATER POLLUTION PREVENTION

Attachment 3 contains the installation, maintenance, and BMP specification guidelines for this project. This attachment should be referenced when installing BMPs.

3.3.1. STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL

Structural BMPs are expected to consist of check dams along the steep slopes in the south east portion of the road. The lack of project specific structural BMPs is due to a wide variety of institutional BMPs on the CRS Property, described in Section 3.3.2 through 3.3.6. If conditions at the site change, additional BMPs, such as sediment control logs and silt fence may be used and their purposes are described below. The structural BMPs that will be implemented at this site include, but are not limited to, the following:

- a) Sediment Control Logs: Should any materials have to be stored on site, which is not expected, then SCL's will be used to prevent movement of sediments off of them.
- b) Silt Fence: If disturbance is deemed a threat to drainage channels, then a Silt Fence may be installed at the base of slopes to stop stormwater from entering these channels after moving through the disturbed area.

Locations for all structural BMPs can be found in Figure 4.

3.3.2. NON-STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL

The non-structural BMPs that will be implemented at this site include, but are not limited to, the following:

- a) Sod Stabilization: The primary method for protection of stormwater is to stabilize the road surface as it is being graded and bound with local clay.
- b) Protection of Mature Vegetation: As much as possible, vegetation outside the grading area will not be disturbed. Vehicles will travel only on existing roads or on the grade itself. Exceptions include turn around points at the ends of road lengths.
- c) Permanent Seeding: Any devegetated areas beyond the area of the road will be reseeded with native species as soon as grading is complete.
- d) An erosion control mat will be used on impacted areas (not covered with road base) as follows: all cut and fill slopes steeper than 5:1 and on all ditch bottoms except where covered with riprap.

Locations for all non-structural BMPs can be found in Figure 4.

3.3.3. PHASED BMP IMPLEMENTATION

See Section 1.2 for all phases and associated BMP implementation.

3.3.4. MATERIALS HANDLING AND SPILL PREVENTION

This project may require low risk material to be brought onsite, including sand, gravel, and other road covering material. If native soil proves sufficient then these materials will not be brought onsite. Other procedures designed to reduce the risk of a spill on site include but are not limited to:

- a) Equipment maintenance is done off-site.
- b) Off-site fuel trucks will fill individual equipment on-site. Attachment 3 includes the fueling procedures that will be followed to prevent stormwater contamination during fueling.
- c) Areas or procedures where potential spills can occur must have spill prevention and response procedures identified in the SWMP.
- d) Onsite bulk fuel tank(s) will have secondary containment.

SPILL RESPONSE – IN THE EVENT OF A SPILL OR DISCOVERY OF ON-SITE CONTAMINATION, IMMEDIATELY NOTIFY ENVIRONMENTAL SERVICES AT 448-4800.

3.3.5. DEDICATED CONCRETE OR ASPHALT BATCH PLANTS

No concrete or asphalt plants will be used on site.

3.3.6. VEHICLE TRACKING CONTROL

Vehicle tracking will be controlled by the layout of the CSR Property. The roads outside the disturbance area are dirt road themselves, so installing a vehicle tracking pad on the immediate edge of the disturbance area would do little good. The dirt roads lead to paved roads which continue for roughly a mile before exiting CSR. These roads provide enough time for sediment to fall off of vehicles before they return to public roads. Internal CSU crews sweep CSR roads as part of regular preventative maintenance.

- a) Minimization of site access – all vehicle and equipment drivers are instructed to stay within construction boundaries, and to keep the footprint of disturbance to an absolute minimum.
- b) Street sweeping – the services of a street sweeper will be employed as soon as possible if it is determined that vehicles and equipment are tracking sediment onto the neighboring paved roads.

3.3.7. WASTE MANAGEMENT AND DISPOSAL, INCLUDING CONCRETE WASHOUT

- a) All waste will be collected and taken off-site for proper disposal at the end of each day.
- b) No concrete washout area will be needed.

3.3.8. GROUNDWATER AND STORMWATER DEWATERING

Groundwater is not expected to be encountered due to the fact that the grading cut is not expected to ever be more than a few feet into the surface and no excavation will be occurring on site. Should groundwater be encountered crews should contact Environmental Services (EVS) for dewatering guidance. EVS will then work with the crews to regrade such that groundwater does not discharge.

4. FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT

4.1. FINAL STABILIZATION AND POLLUTION CONTROL PRACTICES POST CONSTRUCTION

Final stabilization will be achieved by the completion of the road and revegetation of any disturbed areas outside of the road. The road will be subjected to annual preventative maintenance and immediate maintenance whenever necessary. Any temporary BMPs will be removed from the site. The following methods may also be employed:

- a) The roadway will be covered with ~4 inches of road base.
- b) Disturbed areas other than above will be seeded and erosion mat will be employed, as needed.
- c) All temporary BMPs will be removed from the site once final stabilization is achieved.

4.2. VEGETATIVE COVER

Attachment 3 presents specifications for achieving final stabilization by means of seed mix selection and application methods, soil preparation and amendments, soil stabilization practices (e.g., crimped straw, hydro mulch or rolled erosion control products), and appropriate sediment control BMPs as needed.

Any reseeded, mulching, etc. will be completed by Trax Construction, Inc. Details of seeding procedures will be added to this SWMP at a later date.

4.3. FINAL STABILIZATION

Final stabilization is reached when all ground surface disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.

5. INSPECTIONS AND MAINTENANCE

5.1. MINIMUM INSPECTION SCHEDULE

The permittee shall, at a minimum, make a thorough inspection at least once every 14 calendar days. Also, post-storm event inspections must be conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Provided the timing is appropriate, the post-storm inspections may be used to fulfill the 14-day routine inspection requirement. A more frequent inspection schedule than the minimum inspections described may be necessary, to ensure that BMPs continue to operate as needed to comply with the permit.

5.1.1. POST-STORM EVENT INSPECTIONS AT TEMPORARILY IDLE SITES

If no construction activities will occur following a storm event, post-storm event inspections shall be conducted prior to re-commencing construction activities, but no later than 72 hours following the storm event. The occurrence of any such delayed inspection must be documented in the inspection record. Routine inspections still must be conducted at least every 14 calendar days.

5.1.2. INSPECTIONS AT COMPLETED SITES/AREAS

For sites or portions of sites that meet the following criteria, but final stabilization has not been achieved due to a vegetative cover that has not become established, the permittee shall make a thorough inspection of their stormwater management system at least once every month, and post-storm event inspections are not required. This reduced inspection schedule is only allowed if:

- a) all construction activities that will result in surface ground disturbance are completed;
- b) all activities required for final stabilization, in accordance with the SWMP, have been completed, with the exception of the application of seed that has not occurred due to seasonal conditions or the necessity for additional seed application to augment previous efforts; and
- c) the SWMP has been amended to indicate those areas that will be inspected in accordance with the reduced schedule allowed for in this paragraph.

5.1.3. WINTER CONDITIONS INSPECTIONS EXCLUSION

Inspections are not required at sites where construction activities are temporarily halted, snow cover exists over the entire site for an extended period, and melting conditions posing a risk of surface erosion do not exist. This exception is applicable only during the period where melting conditions do not exist, and applies to the routine 14-day and monthly inspections, as well as the post-storm event inspections. The following information must be documented in the inspection record for use of this exclusion: dates when snow cover occurred, date when construction activities ceased, and date melting conditions began. Inspections, as described above, are required at all other times.

CERTIFICATION STATEMENT

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 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.

Signature:



Brad Pritekel, Operations Supervisor

Date:

9-4-18