

**STORM WATER MANAGEMENT PLAN
FOR
VOLLMER SUBSTATION
EL PASO COUNTY, COLORADO**

MARCH 2020

Prepared For:

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SWMP is to be maintained on site in the construction trailer whenever work is occurring. If construction trailer is not available, another alternative must be provided.

COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

TO: Site Inspector Responsible For All CDPS Requirements

The following storm water pollution management plan (SWMP) is a detailed account of the requirements for the CDPS permit. The main objective of this plan is to prevent any contamination of the storm water while construction activity is taking place.

This document must be kept at the construction site at all times and be made available to the public and any representative of the Colorado Department of Health – Water Quality Control Division, if requested.

Enclosed are temporary erosion control details for the construction site and storm sewer outfall points (Detail A). The operation and maintenance inspection record should be used as a guideline for the inspection of permanent and temporary control devices. Items to be inspected are not limited to those listed. The inspections should be made at regular intervals and before and after storm events. The inspection records must be signed and kept in this binder for no less than three (3) years.

STORM WATER MANAGEMENT PLAN FOR Vollmer Substation – El Paso County, Colorado

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SELECT UDFCD BMP DESCRIPTION SHEETS
GENERAL PERMIT APPLICATION
OPERATION AND MAINTENANCE INSPECTION FORM
OPERATION AND MAINTENANCE INSPECTION RECORD**

STORM WATER MANAGEMENT PLAN FOR Vollmer Substation – El Paso County, Colorado

SITE DESCRIPTION & EXISTING CONDITIONS

This site is approximately 4.96 acres of undeveloped land located in the northwest part of El Paso County, approximately 3,600 feet east of the north end of Mohawk Road. This site is being developed as an electrical substation. The development will also include constructing a gravel access road, a series of power poles to the substation, and a temporary construction road. The site is located in the southeast quarter of Section 34, Township 12 South, Range 65 West of the 6th Principal Meridian currently within El Paso County, Colorado. The site is bounded on all sides by undeveloped open space (rural residential). The site is contained within the Sand Creek Basin. Existing vegetation onsite consists of grasses with approximately 80% ground cover per aerial photos.

Soils for this project are delineated by the map in the appendix as Columbine gravelly sandy loam (19), 0 to 3 percent slopes. Soils in the study area are shown as mapped by S.C.S. in the “Soils Survey of El Paso County Area” and contains soils of Hydrologic Group A. Item 8 - discuss soil erosion potential (ex: high, low, etc)

The site lies within the Sand Creek Drainage Basin, with storm runoff draining to the south onsite primarily as sheet flow, before entering the proposed sand filter, and then flowing off the site to the south in a swale. The ultimate receiving waters for the Site is Fountain Creek.

No known toxic materials have been treated, stored, disposed, spilled or leaked onto the site.

No stream crossings are located on the site.

No sources of non-stormwater discharge have been identified onsite.

CONSTRUCTION ACTIVITY

The proposed development is an electrical substation, with a water quality sand filter, access road, and a series of power poles to the substation. Proposed construction activities include regrading the site and access road, construction of the electrical substation structures, installation of culverts at three access road

crossings, construction of two drainage channels on the north side of the site, construction of a water quality sand filter, construction of a temporary construction road for the power poles, and construction of the power poles. Potential pollutants at the site include suspended solids, fuels, and lubricants.

Discuss street sweeping of sediment tracked offsite somewhere in SWMP text.

Practices to minimize contact of construction materials, equipment, and vehicles within the storm water include installation of silt fencing and sedimentation control logs, installation of vehicle tracking control, and sub-contractor cleaning and hauling of excess debris and material upon completion of work. Construction material loading and unloading, and access to such areas occur from staging areas shown on the map. See Erosion Control plan for Vehicle Tracking access point during construction. The concrete washout area will be removed and disposed of as required by this permit as well as the SWMP permit.

There will be no on-site mobile fueling. Contractor shall have the Hazardous Material emergency response number posted on the site. No concrete or asphalt batch plants are planned for the construction site. The site will be considered stabilized when site vegetation is 70% established and grading and building construction has been completed. There will be 21.6 acres of disturbed soil area. The estimate for cut on this site is 4,522 cy and for fill it is 6,027 cy for a net fill of 1,505 cy.

This data appears to be for a different project. Revise.

This is correct. The disconnect is likely from an old version of the GEC being reviewed.

No non-stormwater discharges are anticipated at the site.

revise to future date

CONSTRUCTION SCHEDULE AND SEQUENCE

Grading will begin in Fall 2020 with completion of construction activities anticipated to be in the Winter of 2020. The construction sequence will be: clear and grub, access road construction and final grading, sand filter construction, electrical structure construction, landscaping/stabilization, and cleanup.

Before clearing and grubbing may begin the first level of BMP's are to be installed. These will include silt fencing and/or sediment control logs and vehicle tracking control at the exit point from the access road. The staging area is also to be setup with appropriate measures to protect the surrounding areas.

The second level of BMP's shall be installed once the previous BMP's and construction are completed. This level includes any disturbed areas and stockpiles which are not at final grade, but will remain dormant for

longer than 30 days to be mulched within 21 days after interim grading. Any area that is going to remain in an interim state for more than 60 days shall also be seeded. All temporary soil erosion control measures and BMP's shall be maintained until permanent soil erosion control measures are implemented and vegetation has been established to 70% on areas not to be covered with pavement or other finished products.

Erosion control measures shall be implemented in a manner that will protect properties and public facilities from the adverse effects of erosion and sedimentation as a result of construction and earthwork activities.

POTENTIAL SOURCES OF POLLUTION

The potential sources of pollution associated with this development are:

- Disturbed and stored soils
- Vehicle tracking of sediments
- Management of contaminated soils (if exist)
- Loading and unloading operations
- Outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.)
- Vehicle and equipment maintenance and fueling
- Significant dust or particulate generating processes
- Routine maintenance activities involving fertilizers, pesticides, herbicides, fuels, solvents, etc.)
- Onsite waste management practices (waste piles, liquid wastes, dumpsters)
- Concrete truck / equipment washing
- Non-industrial waste sources such as worker trash and portable toilets

IMPLEMENTATION OF CONTROL MEASURES

BMP design specifications and implementation information can be found in the UDFCD BMP Description Sheets included in the Appendix.

MATERIALS HANDLING

All construction materials shall be handled in a manner to minimize the chance of stormwater contamination. Stockpile and material staging areas are shown on the Erosion Control Plan. Additional

materials handling info is included in the Spill prevention and Control Plan section.

Item 13. Discuss inspection procedure for checking waste disposal bins for leaks and overflowing capacity. And discuss frequency that they will be emptied (or at what level of capacity would trigger the need to be emptied)

WASTE MANAGEMENT AND DISPOSAL

All waste and debris created by construction activities at the site shall be disposed of in compliance with all laws, regulations, and ordinances of the federal, state and local agencies.

SPILL PREVENTION AND CONTROL PLAN

The Site Superintendent will act as the point of contact for any spill that occurs at this jobsite. The Construction Manager will be responsible for implementation of prevention practices, spill containment / cleanup, worker training, reporting and complete documentation in the event of a spill. The Site Superintendent shall immediately notify the Owner, /Construction Manager, State and the Local Fire Department in addition to the legally required Federal, State, and Local reporting channels (including the National Response Center, 800.424.8802) if a reportable quantity is released to the environment.

SPILL PREVENTION BEST MANAGEMENT PRACTICES

This section describes spill prevention methods Best Management Practices (BMP) that will be practiced to eliminate spills before they happen.

Equipment Staging and Maintenance

- Store and maintain equipment in a designated area.
- Reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous materials.
- Use secondary containment (drain pan) to catch spills when removing or changing fluids.
- Use proper equipment (pumps, funnels) to transfer fluids.
- Keep spill kits readily accessible.
- Check incoming vehicles for leaking oil and fluids.
- Transfer used fluids and oil filters to waste or recycling drums immediately following generation.

- Inspect equipment routinely for leaks and spills.
- Repair equipment immediately, if necessary implement a preventative maintenance schedule for equipment and vehicles.

Fueling Area

- Perform fueling in designated fueling area minimum 50' away from federal waters.
- Use secondary containment (drain pan) to catch spills.
- Use proper equipment (pumps, funnels) to transfer fluids.
- Keep spill kits readily accessible.
- Inspect fueling areas routinely for leaks and spills.
- Hazardous Material Storage Areas: Reduce the amount of hazardous materials by substituting non-hazardous or less hazardous materials.

Hazardous Material Storage Areas

- Minimize the quantity of hazardous materials brought onsite.
- Store hazardous materials in a designated area away from drainage points.

Unexpected Contaminated Soil and Water

- Investigate historical site use.
- Perform all excavation activities carefully and only after the Owner/Construction.
- Manager directs any activities.

SPILL CONTAINMENT METHODS

The following discussion identifies the types of secondary containment that will be used in the event of a spill. Table 1 summarizes the containment methods for each potential source.

- Equipment Staging and Maintenance Area: An equipment leak from a fuel tank, equipment seal, or

hydraulic line will be contained within a spill containment cell placed beneath all stationary potential leak sources. An undetected leak from parked equipment will be cleaned up using hand shovels and containerized in a 55-gallon steel drum for offsite disposal.

- **Fueling Area:** A small spill during fueling operations will be contained using fuel absorbent pads at the nozzle. The transfer of fuel into portable equipment will be performed using a funnel and/or hand pump and a spill pad used to absorb any incidental spills/drips. Any leaking tanks or drums will have fluids removed and transferred to another tank, drum, or container for the fluids. A spill response kit will be located near the fueling area or on the fuel truck for easy access. The spill response kit will include plastic sheeting, tarps, over pack drums, absorbent litter, and shovels.
- **Hazardous Material Storage Area:** A spill from containers or cans in a hazardous material storage area will be contained within the storage cabinet these materials are kept in.
- **Unexpected Contaminated Soil:** If contaminated soil is encountered during the project, the Owner/Construction Manager will be notified immediately. Small quantities of suspected contaminated soil will be placed on a 6-mil plastic liner and covered with 6-mil plastic. A soil berm or silt fence will be used to contain the stockpile and prevent migration of contaminated liquids in the soil.

Table 1: Spill Prevention and Containment Methods

Potential Spill Source	Containment Method(s)
Equipment staging and maintenance area	Spill containment pad, spill kit, pumps, funnels
Fueling area (site equipment only)	Spill containment pad, spill kit, pumps, funnels
Hazardous material staging area	Spill containment pad, spill kit, pumps, funnels
Unexpected contaminated soil	Plastic liner, plastic cover, soil berm, hay bales, lined super sacks

SPILL COUNTERMEASURES

Every preventative measure shall be taken to keep contaminated or hazardous materials contained. If a release occurs, the following actions shall be taken:

1. **Stop the Spill:** The severity of a spill at the site is anticipated to be minimal as large containers/quantities of Hazardous Materials are not anticipated. The type of spill would occur while dispensing material at the hazardous materials storage facility and would likely be contained in secondary containment. Thus, the use spill kits or other available absorbent materials should stop the spill.

2. **Warn Others:** Notify co-workers and supervisory personnel of the release. Notify emergency responders if appropriate. For site personnel, an alarm system will consist of three one second blasts on an air horn sounded by the person discovering a spill or fire. In the event of any spill, the Superintendent and Project Manager shall be notified if the spill is 5 gallons or more the STATE will be contacted along with the Fire Department.

3. **Isolate the Area:** Prevent public access to the area and continue to minimize the spread of the material. Minimize personal exposure throughout emergency response actions.

4. **Containment:** A spill shall only be contained by trained personnel and if it is safe to do so. DO NOT

PLACE YOURSELF IN DANGER. Attempt to extinguish a fire only if it is in the incipient stage; trash can size or smaller. For larger spills, wait for the arrival of emergency response personnel and provide directions to the location of the emergency.

5. Complete a Spill and Incident Report: For each spill of a Hazardous Material a spill and incident report shall be completed and submitted to the Owner/Construction Manager and if applicable to the Engineer and the State of Colorado Department of Public Health and Environment.

MAINTENANCE, INSPECTION, AND REPAIR

Discuss the repair process in the text below

The owner or his representative shall inspect and maintain all erosion control measures and other protective devices and sediment control measures and other protective devices

There are close to 100 pages of standard details in the appendix that include maintenance/repair of all of the BMPs. The last sentence in this paragraph references those details. 90 something pages of discussion is more than enough.

maintained in good and effective condition, an Operation and Maintenance Inspection Monitoring Program will be implemented by the permit holder during the construction phase. A systematic inspection of all the above mentioned protective devices will be performed by trained personnel using the operation and maintenance inspection record form in the appendix at least once every 14 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 plan. All monitoring records are to be kept with the SWMP for a period of no less than three (3) years. All maintenance of temporary and permanent erosion and sediment control facilities shall be per the details included in this report.

This lot will be considered stabilized when all construction activities have been completed and vegetation has been re-established. Erosion control measures, including silt fence, must be removed after final stabilization.

Any major revisions or modification to this Storm Water Management Plan will require a report addendum and erosion control map revision. Minor revisions may be signed off by the City Storm Water Field Inspector.

The onsite SWMP will be located at: _____

FINAL STABILIZATION AND LONG TERM STORMWATER MANAGEMENT

Permanent stabilization measures include landscaping per the approved landscaping plan. These temporary BMPS's are to be removed once the 70% vegetation or permanent landscaping has been established. At this point in the construction process, all landscaping should be in place and maintained for a period of time that allows for its establishment on the site.

Long term stormwater management is provided by the sand filter onsite.

REQUIREMENTS THAT ARE NOT APPLICABLE

The requirement for a phasing plan is not applicable as only one phase is proposed.

The requirement for spill prevention and pollution controls for dedicated batch plants is not applicable as no batch plants are proposed.

The requirement to show the location of any dedicated asphalt / concrete batch plants is no applicable as no batch plants are proposed.

Item 21. Add text stating that the 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 SW quality issues at the site. The QSM shall amend the SWMP when there is a change in design, construction, O&M 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 SW discharges associated with construction activity or when BMPs are no longer necessary and are removed.

Added to the IMPLEMENTATION OF CONTROL MEASURES section.

Already there, page 3, last paragraph

Item 25. Discuss record keeping procedures - including signature on inspection logs

Item 26. Add a note stating that this project does not rely on control measures owned or operated by another entity.

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