Westwood

STORMWATER POLLUTION PREVENTION PLAN

Grazing Yak Solar Project

El Paso County, Colorado

April 2019

Prepared For:

NextEra Energy Resources, LLC
700 Universe Boulevard
Juno Beach, FL 33408

Mortenson Construction
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Denver, CO 80202

Stormwater Management Plan (SWMP) Narrative

Grazing Yak Solar Project

Calhan, El Paso County, Colorado

Colorado Discharge Permit System (CDPS)
Permit Identification #: COR

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April 2019

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ATTACHMENTS

Attachment A: CDPS General Permit
Attachment B: Permitting Documentation (NOI, Permit Card, Permit Letters, Pre-construction Photo Log)
Attachment C: Soil Maps
Attachment D: Vicinity Map, Pre and Post Drainage Maps, Impaired Water Maps
Attachment E: Site Plans, Grading and Erosion Control Plans, Details
Attachment F: Training Documentation
Attachment G: Inspection and Maintenance Forms and Spill Response and reporting Information

1.0 INTRODUCTION AND PURPOSE

This Stormwater Management Plan (SWMP) is prepared in accordance with the regulations as established by the Clean Water Act and guided by the State of Colorado. The Colorado Discharge Permit System's General Permit COR-400000 ("General Permit"; expiration: midnight March 31, 2024) provides the framework of requirements for compliance to discharge stormwater from a construction site.

This SWMP is for implementation by the Owner and Operator, as listed in Section 6.1 of this SWMP, at the Grazing Yak Solar Project, with the project location as defined in Section 4.0 of this SWMP. This report shall be on the site at all times during construction.

The following are outlined in this site specific SWMP:

- Identify all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the facility;
- Describe the practices to be used to reduce the pollutants in stormwater discharges associated with construction activity at the facility; and ensure the practices are selected and described in accordance with good engineering practices, including the installation, implementation and maintenance requirements; and
- Be properly prepared, and updated in accordance with Part I.C.3, to ensure compliance with the terms and conditions of the General Permit.

2.0 OWNER AND OPERATOR SWMP CERTIFICATION STATEMENT AND SIGNATURE

"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."

Owner:

_____	Vice President	_____
Signature	Title	Date
John Didonato	(561) 814-7287	Grazing Yak Solar, LLC
Printed Name	Contact Number	Company

Operator:

_____	Vice President, General Manager	_____
Signature	Title	Date
Trent Mostaert	(763) 287-3439	Mortenson Construction
Printed Name	Contact Number	Company

3.0 SWMP AMENDMENTS

This plan and the attachments must be amended as soon as practicable, but in no case more than 72 hours after field changes. **NOTE**: the permittee must ensure the site changes are reflected in the SWMP. The permittee is noncompliance with the General Permit until the SWMP revisions have been made. Notation must be made before the field fix to include additional requirements or modified requirements which take place during construction if one or more of the following occur:

- There is a change in design, construction, operation, maintenance, weather or seasonal conditions that significantly impacts the discharge of pollutants from the site to surface or groundwater;
- Inspections or investigations by the site owner, operator, Environmental Protection Agency, or Colorado Department of Public Health and Environment officials indicate this plan is not effective in eliminating or significantly minimizing the discharge of pollutants;
- This SWMP is not achieving the general objectives of minimizing pollutants in stormwater discharges or if this plan is not consistent with the General Permit;
- If the Colorado Department of Public Health and Environment (CDPHE) notifies the permittee that additional requirements are needed, requirements are not being met for Total Maximum Daily Load (TMDL) or other water quality standards, or that the SWMP did not incorporate the necessary requirements; and
- When Control Measures (CMs) are removed either because of ineffectiveness or are no longer useful the following items shall be documented; date, location, and time of the maintenance, removal, or design change which took place.

The following table should be completed as necessary during construction to document changes and amendments to this document. Place the Modification or Amendment (Amend) Number next to all application changes, redlines and information in the document to reference back to the changes summarized below. If an additional sheet is necessary attach the additional sheet to the SWMP.

Table 1: Amendment Log

Modification or Amend #	Date	Reason, location and brief description of change or amendment (including the control measure removed or modified)

4.0 SITE DESCRIPTION

4.1 Site Location and Vicinity Map

The Grazing Yak Solar Project site is located in the El Paso County, Colorado. The nearest town, Calhan, is located 4 miles to the northwest. The nearest intersection is SEC Washington Road and McQueen Road. The site occupies the northwest and southwest quarters of Section 29, Township 12S, Range 61W. Refer to Appendix D of this SWMP for the full vicinity map.

Table 2: Project Location

Section	Township	Range
29	12S	61W
Latitude and Longitude Points (Decimal)		
Latitude	38.9810	
Longitude	-104.2529	

4.2 Nature of Construction Activity

Permanent access roads will be constructed around the perimeter of the site and through the arrays. Solar panels will be installed on driven piles directly into the ground. Inverter skids will be mounted on similar posts or spread footings with underground trenching to install conduit. A fence will be installed around the perimeter and a seed mix used to restore any exposed soils to vegetative cover. Grading of the site will include maintaining and stabilizing existing eroded swales and conveyances. Concurrently stabilization and installation of velocity dissipater devices shall be phased during grading to minimize exposed soils and sedimentation potential. The SWMP shall be amended to show locations and disturbance areas as necessary should locations change during construction.

NOTE to Operator: Mark all sensitive areas prior to start of earth disturbance activities. If any subsurface and/or surface drainage features are altered during construction restore to pre-construction conditions and drainage patterns. Coordinate the work with the Land Owner.

4.3 Project Activity Schedule

Table 3: Project Schedule

Activity	Start Date	End Date
Overall Project	05/01/2019	12/31/2019
Mass Grading	05/01/2019	05/31/2019
Access Roads	05/01/2019	05/31/2019
PV Array	06/01/2019	09/30/2019
Laydown Area	05/01/2019	12/31/2019

4.4 Project Phasing

The project will be phased as follows:

1. Identification of clearing and grading limits, sensitive areas, and wetlands prior to construction;

2. Installation of sediment and erosion controls as identified by project plans/approvals, including any necessary site-specific modifications as identified;
3. Performance of earthwork, drain tile adjustment, access road work, and initial stabilization of exposed soils;
4. Concurrently with earthwork activities the installation and construction of terraces and velocity dissipater BMPs shall be done to minimize exposed soils and erosion potential. Multiple applications of erosion control blanket may be necessary to maintain stabilized swales and conveyances.
5. Construction/installation of permanent stormwater treatment facilities and temporary stabilization of exposed soils;
6. Installation of the solar array and electrical components (concurrent with above);
7. Application of seed and temporary stabilization; and
8. Cleanup and permanent stabilization of the site.

4.5 Pre and Post Project Estimates

Table 4: Project Area Estimates

Project Area	Disturbed Area	Disturbance Location	Existing Impervious Area	Post Construction Impervious Area
317 Acres	203.3 Acres*	See civil plans.	0.0 Acres	1.67 Acres

*The above-listed disturbed area includes approximately 58 acres of disturbance consisting of grading, proposed access roads and haul routes, and staging areas that will require fully stabilized with permanent seeding (approximately 56.33 acres) or impervious surfaces (approximately 1.67 acres). This area includes approximately 1 mile of trenching and restoration only for the interconnection line.

As a conservative measure, an additional 145 acres of the proposed array area have also been included in the total area to account for minor trenching activities and potential vehicle/equipment tracking. Generally, disturbance in the array area will be minor, and existing vegetation will be maintained to the greatest degree possible. An estimated 20% of this area (approximately 29 acres) will require reseeding following completion of construction activities, though this value is subject to change based on actual disturbances. If more than 20% is disturbed, the contractor shall update this SWMP accordingly. Due to the temporary nature of disturbance in this area, soils will be stabilized as soon as possible, but not to exceed 14 days after worked is ceased. Total reseeding required is therefore estimated as 87 acres (58 acres + 29 acres).

4.6 Environmental Review Document

At the time of SWMP completion, there are no known environmental review documents that apply to this project.

4.7 Contaminated Soils

A Phase 1 Environmental Site Assessment (ESA) was conducted by Tetra Tech, Inc. with a report dated 11/26/2018. Based on the results of the Phase I ESA, no recognized environmental conditions (RECs) were identified in association with the site. As a result, there are no known contaminated soils at the site.

4.8 Site Soils and Erosion Potential

The soils present on-site include clay loam, loam, and complexes. These soils belong to Hydrologic Soil Groups (HSGs) A and B. Soils belonging to HSGs A and B have low and moderately low runoff potential when wet, respectively. Comprehensive soil maps can be found in Attachment C of this SWMP. Soils information summarized above and in the table below are from the USDA Natural Resources Conservation Service Web Soil Survey (accessed: 03/29/2019).

Soil Erosivity

Table 5: Soil K Factors and Erosivity Hazards

Soil Name / Type	K Factor	Erosivity Hazard				Reason(s) for Erosivity Rating
		Slight	Moderate	Severe	Very Severe	
Ascalon sandy loam, 1-3%	0.24	X				Lack of Slope
Bresser sandy loam, 3-5%	0.15	X				Lack of Slope
Truckton sandy loam, 3-9%	0.28	X				Lack of Slope
Truckton-Bresser complex, eroded	0.24	X				Lack of Slope

Soil Particle Size

Table 6: Soil Particle Sizes

Soil Type	% Sand	% Silt	% Clay	% Site Area
Ascalon sandy loam, 1-3%	66.6	23.4	10.0	7.9
Bresser sandy loam, 3-5%	66.8	19.2	14.0	29.7
Truckton sandy loam, 3-9%	68.0	24.0	8.0	56.2
Truckton-Bresser complex, eroded	66.8	19.2	14.0	6.2

4.9 Existing and Proposed Conditions

The slope and terrain of the site is generally flat, gently sloping to the east. The site currently has stormwater runoff flowing via overland flow to the east. The site area discharges to tributaries of Horse Creek, which is located approximately 0.5 miles to the northeast of the site.

Non-Vegetative Cover

Prior to construction, there is no non-vegetative cover at the site.

Vegetative Cover

Based on information obtained from the United States Department of Agriculture CropScape Database (https://nassgeodata.gmu.edu/CropScape/, accessed 04/01/2019), vegetative cover at the site primarily consists of grassy pasture land, with a small portion used for alfalfa production.

Table 7: Vegetative Cover Estimates

Site Area	Vegetative Cover	Estimated Vegetative Coverage (%)	Method Used to Determine Cover %
Full site	Grass	99.75	USDA CropScape
Minor areas	Alfalfa	0.25	USDA CropScape

Land Use

Prior to construction, the site area was primarily used as terraced pastureland. The Phase I ESA prepared by Tetra Tech, Inc. and dated 11/26/2018 also noted the presence of overhead power lines near the northeastern corner of the site. Average annual rainfall at the site is 18 inches.

Proposed Non-Vegetative Cover

Following construction of the solar facility, non-vegetative cover will consists of gravel access roads and inverter pads.

Proposed Vegetative Cover

Following construction, vegetative cover in disturbed areas and beneath the solar array will be restored to its original conditions. Please refer to Section 7.3 for a description of temporary and permanent seeding options.

Proposed Land Use

Following construction, the site will be used as a solar power generation facility. Components of the facility will include the photovoltaic (PV) panel array, access roads,

4.10 Potential Prevention Management

Potential pollutant sources including construction and waste materials that are used or stored at the site are described below. Upon proper implementation of the CMs potential pollutant sources are not reasonably expected to affect the stormwater discharges from the site. Construction materials and chemicals used or stored on site should be kept in small quantities whenever possible. Materials shall only be stored in non-sensitive areas and not in close proximity to watercourses, wetlands or floodplains.

A spill prevention, control and countermeasure (SPCC) Plan will be needed if materials or tanks present on site contain more than, or have the ability to contain more than, 1,320 gallons of petroleum products. When not in use, petroleum products should be stored in sealed containers and out of contact with the elements to prevent direct contact with stormwater. Inadvertent spills should be cleaned up immediately upon discovery and the materials should be disposed of in accordance with local, state and federal requirements. Contractors should have spill kits available on site for rapid deployment to contain and cleanup spills.

Table 8: Potential Pollutants List

Potential Pollutant	Location	Control Measure*
Antifreeze	Vehicle/Equipment	S.C./Drip pan
Diesel Fuel	Vehicle/Equipment/Fuel Tank	S.C./Drip pan
Gasoline	Vehicle/Equipment/Fuel Tank	S.C./Drip pan
Hydraulic Oils/Fluids	Vehicle/Equipment	S.C./Drip pan
Grease	Vehicle/Equipment	S.C./Drip pan
Sanitary Waste Restrooms	Portable	Service Provider To Secure Units From Tipping
Trash And Construction Debris	Various	Dumpster
Paints	Contractor	S.C. and secure/covered storage.
Glue/Adhesives/Curing Compounds	Contractor	S.C. and secure/covered storage.
Soil Amendments	Various	S.C. and secure/covered storage.
Landscaping Materials Fertilizer	Various	S.C. and secure/covered storage.
Concrete Mortar	Mobile Mixer	S.C./Washout Area and secure/covered storage

Concrete	Trucks/Washout	Washout Area/S.C.
Bentonite	Directional Boring/Utility Contractor	S.C./Sump area
Sediment/ Dirt	Exposed soils/Disturbed Areas; tracking of soils, dust/wind erosion	Sediment, Erosion, Tracking, and Runoff Controls

*S.C. refers to secure secondary containment unit or area.

4.11 Potential Non-Stormwater Pollutant Sources and CMs

Non-stormwater discharges shall be eliminated or reduced to the extent feasible, with the exception of those necessary for the completion of certain construction activities. A list of allowable non-stormwater discharges include the items below.

Table 9: Non-Stormwater Discharges and Potential CMs

Type of Allowable Non-Stormwater Discharge	Likely to be Present at Site?
Discharges from emergency fire-fighting activities	☐ YES ☒ NO
Uncontaminated spring water (of which do not originate from an area of land disturbance)	☐ YES ☒ NO
Landscape irrigation return flow	☐ YES ☒ NO
Concrete Washout Water (washing of tools, mixer chutes)	☒ YES ☐ NO

These authorized non-stormwater discharges should be conducted in accordance with the requirements of the General Permit, and every effort should be made to minimize non-stormwater runoff from these site activities. The operators are responsible to implement CMs and management for non-stormwater discharges.

4.12 Receiving Waters

The table below summarizes the immediate receiving waters from the site. Where necessary the receiving waters has been designated immediate (for the first surface water receiving drainage from the site) and ultimate (for the surface water receiving runoff from site after the immediate receiving waters). The receiving waters listed are located within a mile, and receive water from the site discharge location(s).

The entire site drains to the north towards the Headwaters of Horse Creek, which is located approximately 0.35 miles north of the site. Refer to Attachment D for drainage maps.

Table 10: Receiving Waters

Name of Waterbody	Immediate (I) or Ultimate (U)	Type (wetland, lake, stream, ditch)	Outstanding Waterbody Designation?	Impaired?	MS4?
Headwaters Horse Creek	U	Stream	N	Y	N

Impaired Waters

According to the Stream Impairment Map and 303(d) list, Colorado Department of Public Health & Environment website: https://www.colorado.gov/pacific/cdphe/impaired-waters (accessed 04/01/2018), Horse Creek is impaired for sulfate, uranium, selenium, arsenic, iron, and manganese. However, the site discharge location is 1.87 miles from the impaired waterbody. There is / is not an approved Total Maximum Daily Load (TMDL) and / or Waste Load Allocation (WLA) plan for this waterbody and impairment.

5.0 SITE MAP

The SWMP site maps showing the entire site can be found in Attachment D and E. The site maps will list or be updated via redlines to show these features as they are installed:

- Construction site boundaries;
- All areas of ground surface disturbance;
- Areas of cut and fill;
- Areas used for storage of building materials, equipment, soil or waste;
- Location of dedicated concrete batch plants;
- Areas of pre-existing vegetation which must be maintained within 50 feet of a receiving water
- Location of all structural CMs;
- Location of non-structural CMs; and
- Locations of springs, streams, wetlands and other surface waters.

6.0 STORMWATER MANAGEMENT CONTROLS

6.1 Owner and Operator Information

Owner Information	Operator Information
NextEra Energy Resources, LLC	Mortenson Construction
P. Duane McCloud, P.E., Lead Engineer	Matthew Berry, Project Executive
700 Universe Boulevard, Juno Beach, FL 33408	1621 18th Street, Suite 400, Denver, CO 80202
561-694-3577, duane.mccloud@nexteraenergy.com	763-287-5843, matthew.berry@mortenson.com

6.2 Permittee Responsibilities

- Development of a SWMP prior to commencement of any construction activity.
- Submittal of a complete and accurate NOI.
- Compliance with all terms and conditions of the General Permit.
- Keeping the SWMP up to date (partial, whole, contractor, builders, etc.)
- Submittal of the Notice of Termination (NOT) within thirty days of meeting requirement of final stabilization.
- Identify who has long term operation and maintenance responsibility of the permanent stormwater controls.
- Develop a chain of responsibility with the operators to ensure CDPS and SWMP compliance
- Identification of personnel to oversee the SWMP and conduct inspections as a Qualified Stormwater Manager. This qualified person shall sign inspection reports. .
- Identification of personnel to develop a SWMP.
- Identification of personnel to install and maintain Control Measures.
- Compliance with CGP sections and parts relating to applicable construction activity requirements. See the CGP in Attachment A of this document.
- Keeping the SWMP up to date with the Owner and Operator (partial, whole, contractor, builders, etc.)

6.3 Project Contacts and Chain of Responsibility

Table 11: Project Contacts

Company	Name or Position	Responsibility	Contact Number
		Qualified Stormwater Manager	
		Site Development	
		Dirt Work / Grading	
		Access Roads	
		PV Array	

		Interconnect	
		Laydown Area	
		Routine SWMP Inspections	
Westwood Professional Services	Aaron Mlynek, CPESC	SWMP Development	952-697-5710
		Restoration	
		CM installation	

7.0 CONTROL MEASURES FOR STORMWATER POLLUTION PREVENTION

7.1 Soil Management

After clearing and grubbing, the grading contractor will strip and stockpile topsoil material for reapplication on all future permanent pervious surface areas During development, grading and utility construction the subsoils will be compacted as necessary for construction using typical excavation techniques. During final grade, reapplication of topsoil will be done by a wide-pad dozer and other equipment to minimize compaction of the topsoil material.

7.2 Natural Buffers and No-disturbance Areas

Natural Buffers

An undisturbed fifty foot buffer zone will be preserved from the centerline of the drainageway running through the center of the site and the detention pond. The use of linear sediment controls will be installed upgradient to provide sediment control and delineate the fifty foot buffer. Refer to the site erosion and sediment control plans within the civil construction plans for the location of the buffer. The following activities are prohibited from taking place within the buffer area:

- Placement of stockpiles;
- Vegetation disturbance;
- Placement of construction material; and
- Storage of gas, oils, other potential pollutant material.

In areas where construction activity will encroach into the fifty foot buffer area (such as underground cable collection system and / or access roads) the use of sediment and erosion control CMs will be used to minimize impacts to surface waters. Phasing of the activity in the fifty foot buffer area should include work during forecast dry periods and application of temporary stabilization within time frames of the General Permit.

7.3 Erosion Prevention Practices

The following controls are anticipated to minimize soil loss from the construction site area. The controls should help to minimize soil from being transported from water and wind as well as aide in establishment of temporary and permanent vegetation. Prior to grading and during clearing and grubbing, the areas of vegetation preservation, buffers and other areas of no-disturbance should be flagged, staked or otherwise delineated.

Timing for disturbed areas and slopes

Temporary erosion prevention practices should be initiated immediately after construction activity disturbing soil in an area is temporarily or permanently ceased. The application of temporary erosion control management practices should be completed a fourteen day time frame.

Table 12: Potential Nonstructural Erosion Controls and Phased CM Implementation

Potential CMs	Construction Phase or Activity						Application Notes	
	Clearing / Grubbing	Grading and Excavation	Temporary Laydown / Batch Plant	Access Roads	PV Array	Restoration		
Construction Phasing	X	X	X	X	X	X	Minimize soil disturbance, as feasible, per phase. Stake/flag areas that are to be left undisturbed.	
Buffer Strips	X	X			X		See Section 7.2 for more info.	
Slope Roughing	X	X			X		Use tracked equipment perpendicular to contour on steep slopes for temp/short term erosion control.	
Mulch	X	X			X		Apply at two tons / acre. Disc anchor to soil. Material must be certified Weed Free.	
Erosion Control Blanket	X	X			X		Biodegradable netting. Install per manufacturer's recommendations. Wood fiber blankets must be used, or other fiber blankets may be used if they are certified Weed Free.	
*Temporary Seed Mix	X	X	X		X		Application Rate = See below	Prepare soil prior to seeding. Drill Seed soil prior to mulch or blanket.
*Permanent Seed Mix					X	X	Application Rate = See below	

Based on the disturbance estimates, approximately 100 acres will need to be stabilized with a permanent seed mixture. Please see below for sample seed mixes.

Example Seed Mixes

Temporary			
Growth Season	Species (Common Name)	Pounds of Pure Live Seed (PLS)/acre	Planting Depth (in)
March 16 - May 15	Oats	35 - 50	1 - 2
	Spring Wheat	25 - 35	1 - 2
	Spring Barley	25 - 35	1 - 2
	Annual Ryegrass	10 - 15	½
May 16 - July 15	Millet	3 - 15	½ - ¾
	Sudangrass	5 - 10	½ - ¾
	Sorghum	5 - 10	½ - ¾
September 1 - September 30	Winter Wheat	20 - 35	1 - 2
	Winter Barley	20 - 35	1 - 2
	Winter Rye	20 - 35	1 - 2
	Triticale	25 - 40	1 - 2
Permanent			
Growth Season	Species (Common Name)	Pounds of Pure Live Seed (PLS)/acre	
October 1 - May 15	Blue grama	0.5	

	Camper little bluestem	1.0
	Prairie sandreed	1.0
	Arriba western wheatgrass	5.5
October 1 – April 30	Sand dropseed	0.25
	Vaughn sideoats grama	2.0

*Seed mixes should be approved by the owner and land owners as necessary. Contractor shall update this document with seed mixes for temporary and permanent restoration.

7.4 Structural Sediment Control Practices

The following controls are anticipated to minimize sediment discharge, capture sediment in suspension and minimize sedimentation off site. Existing earthen berms present throughout the site will be maintained during construction as a sediment control practice.

Table 13: Potential Sediment Controls and Phased CM Implementation

Potential CMs	Construction Phase or Activity						Application Notes
	Clearing / Grubbing	Grading and Excavation	Temporary Laydown / Batch Plant	Access Roads	PV Array	Restoration	
Silt fence	X	X	X	X	X	X	Machine sliced install w/ wood posts at six foot spacing. Install perimeter silt fence prior to grading.
Fiber rolls	X	X	X	X	X	X	Install on contour, minimum of six inch roll, wood or straw fiber. Secure with two inch posts every two feet on center.
Topsoil Berms	X	X			X		Side slopes of 3:1 with at least one foot height. Use temporary erosion control to stabilize berm.
Sediment Traps	X	X			X		

7.5 Run-on and Runoff Controls

The following controls are anticipated to minimize scour, transport water across or down steep slopes or critical areas, divert clean water, and / or provide temporary conveyances to maintain drainage.

Table 14: Run-on and Runoff Controls

Potential CMs	Construction Phase or Activity						Application Notes
	Clearing / Grubbing	Grading and Excavation	Temporary Laydown / Batch Plant	Access Roads	PV Array	Restoration	
Riprap Apron / Energy Dissipation		X					See detail in plans. Install within twenty-four hours of connection to surface waters.
Culvert Protection				X			See details in plan set. Install within twenty-four hours of installation of culverts.
Rock Check Dam				X			See detail in plans.

7.6 Temporary Sediment Basin Practices

Due to the estimated 200 acres of contiguous disturbance for PV construction, temporary sediment basins will be required to treat runoff prior to discharge from the site. Six sediment basins will be constructed at the site to meet the capacity requirements shown in Table 15. Please refer to the plan set in Attachment E for the location of each basin.

Calculations

Table 15: Temporary Sediment Basin Calculations

Basin #	Storm Frequency	Rainfall Amount	Runoff Area	Capacity Needed
C1-1	2 yr. / 24 hr.	1.8”	14.6 Acres	1.2 ac-ft.
C1-2	2 yr. / 24 hr.	1.8”	7.0 Acres	0.6 ac-ft.
C1-3	2 yr. / 24 hr.	1.8”	17.3 Acres	1.4 ac-ft.
A3	2 yr. / 24 hr.	1.8”	137.2 Acres	11.3 ac-ft.
A4	2 yr. / 24 hr.	1.8”	79.9 Acres	6.6 ac-ft.
B2	2 yr. / 24 hr.	1.8”	5.6 Acres	0.5 ac-ft.

Due to the nature of short duration disturbance and the best management practice of leaving as much existing vegetation in place as possible, single basins are proposed for each drainage area regardless of acreage. This is typical for this type of construction to minimize land disturbance by concentrating sediment basins, whenever possible, into already disturbed areas. Adding multiple small basins will result in significantly greater land disturbance area and does not effectively contribute to the goal of minimizing discharge of sediment offsite. The goal of this approach is to limit disturbance to only those areas necessary for installation of electrical equipment and roads.

7.7 Tracking Controls

The following controls are anticipated to minimize or prevent sediment track - out from construction site exits to paved surfaces or to retrieve material tracked onto paved surfaces to minimize or prevent the material from being washed into surface waters or stormwater inlets.

Table 16: Potential Tracking Controls and Phased CM Implementation

Potential CMs	Construction Phase or Activity						Application Notes
	Clearing / Grubbing	Grading and Excavation	Temporary Laydown / Batch Plant	Access Roads	PV Array	Restoration	
Rock Pad			X	X			See detail in plans. Install at all site exits prior to grading. Maintain for duration of project.
Gravel or Aggregate Road Base			X	X			See detail and notes in plans.
Street Scraping				X			Scrape large clumps/amounts of material with soft tracked or wheeled equipment prior to sweeping.
Street Sweeping				X			Sweep paved surfaces within twenty-four hours of discovery.

7.8 Storage, Handling, and Disposal of Construction Materials

Storage and Handling

- All products shall be kept in their original container, with original labels still attached, unless the container is not re-sealable.
- Hazardous materials shall be returned to the hazardous material storage area at the end of each day.
- An effort should be made to store only enough products to do the required job.
- The contractor shall provide tanks or barrels to collect liquid byproducts that pose a pollution hazard.
- The pollutants shall be removed from the site on a weekly basis and disposed of in accordance with federal, state and local regulations.
- All spills shall be cleaned up immediately after discovery, in accordance with the manufacture's recommended methods.
- Hazardous materials shall be properly stored to prevent vandalism or unauthorized access.
- Containment units shall be installed in accordance with federal, state, and local regulations.
- No hazardous material shall be stored within 200 feet of an identified critical area.
- If building materials, chemicals, or general refuse is being used, stored, disposed of, or otherwise managed inappropriately, the contractor shall correct such defects within twenty-four hours of detection or notification.

Disposal (Dumpsters)

- Locate dumpsters away from watercourses, streams, creeks and other surface waters or conveyances.
- Site inspector shall regularly observe for and report excess litter and solid waste and request pickup and retrieval of wastes.
- Wastes, litter, debris shall be deposited into dumpsters in a central location and / or in various satellite locations where work is active.

- Dumpsters should be supplied by and regularly maintained, emptied and removed by a waste management company.

7.9 Fueling and Maintenance of Equipment and Vehicles; Spill Response

- Routine maintenance of vehicles, if necessary, shall occur in staging areas only;
- Maintenance of equipment and vehicles should be avoided and done off site where feasible;
- If fueling is done by mobile tank and dispenser, the transfer of fuel should be done under close supervision and there should be drip pans and spill containment and cleanup materials readily available;
- If fueling is done via temporary tank, the tank should be stored away from surface waters and within secondary containment;
- Spill Kits with absorbent materials shall be available on site for use in cleaning up small spills;
- In the event of a spill or discharge of any hazardous materials be sure to reference the Spill Pollution Prevention Plan and if applicable contact the following agencies within twenty-four hours;
- Colorado Environmental Release and Incident Reporting Line (877) 518-5608;
- EPA Region 8 Emergency Response Spill Report Line (303) 293-1788;
- National Response Center at (800) 424-8802; and
- If the hazardous condition involves the release of an EPA regulated material or an oil as defined by the EPA, the release may also need to be reported to the National Response Center. Federal Reporting is required within 15 minutes of event occurrence or discovery. Contact the National Response Center at (800) 424-8802. The NRC is staffed twenty-four hours a day. For more information reference the following website: https://www.epa.gov/emergency-response/when-are-you-required-report-oil-spill-and-hazardous-substance-release.

7.10 Vehicle and Equipment Washing

If necessary, the contractor shall develop a designated wash area with basin containment to prevent the untreated water from discharging from the site to surface waters. CMs include: temporary basins; inspecting the vehicles and equipment for leaks prior to washing; and prohibiting washing activity until discovered leaks are repaired and maintenance is completed of the equipment or vehicle. The area shall be shown on the site plan. The water shall be contained and pumped from the site into a truck for proper disposal at a waste water facility. No engine degreasing shall be done on site.

7.11 Portable Sanitary Facilities

- Locate facilities away from watercourses, streams, creeks and other surface waters or conveyances;
- Facilities should be placed upgradient from perimeter sediment controls and not on paved or other impervious surfaces;
- Secure facilities to the soil with stakes or tether to other non-movable structure to prevent tipping from wind or other factors; and
- Schedule routine and regular cleanout and maintenance of facility from a reliable company.

7.12 Concrete Washout and Other Washout

Mobile Concrete or Mortar Mixers

The following CMs should be considered with the use of mortar or concrete mixers:

- Store bags of concrete and mortar in dry storage;
- Position mixers 100 feet from the nearest watercourse or conveyance;
- If mixers must be positioned closer than 100 feet from a conveyance a temporary berm shall be installed to prevent runoff from the mixer from flowing into the conveyance;
- Use tarpaulins or plastic sheeting as a liner to prevent concrete or mortar from contacting the soil;

- Use buckets to contain washout / rinse water when cleaning the mobile mixer; and
- Dump buckets of washout water in a designated concrete washout area.

Concrete Washout

The following CMs and considerations should be implemented for concrete washout areas:

- Washout water from the tools, equipment and the chutes of concrete trucks, mobile mixers or other containers with concrete material must be contained and not allowed to be discharged into waters of the state or drain onto adjacent properties;
- The washout area should be a defined area with signage notifying the contactors of the location and use;
- The washout area should be a sufficient size to contain the expected washout material. 10'x10'x3' area should suffice for most activities;
- Multiple washout areas may be needed. Locations of the washouts should be shown on the construction plans by the contractor;
- When noting the location of the concrete washout areas, include the date of install, date of last maintenance and date of removal;
- Washout areas should have a silt fence or other perimeter control; and
- No liner is required where the ground water is deeper than three feet from the bottom of the washout area AND the soil has sufficient buffering capacity to protect the groundwater. Otherwise, the use of thick poly sheeting should be used to prevent contamination of the soil and prevent infiltration of the washout material.

Once the material is hardened it can be disposed of in a dumpster. If the material is water or not hardened, the material should be vacuumed and hauled off site to be properly disposed of or recycled at a facility. Some sites will not need the separate washout area if a truck chute washout is available from the concrete supplier.

Truck Chute Washout

Truck washout facility: where available, all trucks with self-contained washout and water recycle systems must be used for every truck chute, tool and equipment rinse and washout. Two unlined pits will be used at all locations that are not within the minimum distance of waterways and will be dug at each foundation. They are to be approximately 5'x4'x3' and compacted.

7.13 Construction Dewatering

Construction Dewatering includes discharging accumulated water within construction excavations from snow melt or precipitation via pump, trench, temporary ditch or grade cuts. No ground water dewatering is allowed without additional permits.

Clean water should be discharged to a vegetated area, ditches or other conveyance via hose. Energy dissipation should be applied to the discharge location to minimize scour. Alternatively, uncontaminated water could be discharged to receiving waters as allowed by local permits and regulations or as long as positive drainage is provided, the water could be discharged into the surrounding areas and allowed to infiltrate or drain along existing drainage patterns provided that the water does not cause flooding, prolonged or damaging inundation, or vegetation damage.

<u>Dewatering Accumulated Water (via pump, trench, temporary ditch or grade cuts)</u>

Dewatering of turbid water (water that is visibly cloudy or brown in color) should be discharged via pump and hose or overland flow to a temporary sediment basin for pretreatment. The use of riprap apron (energy dissipation) should be used for the discharge location. If riprap is not used, an alternative form of energy dissipation should be used to prevent scour and re-suspension of soil at the discharge point of the hose. If discharge to a temporary sediment basin is not feasible, the use of dewatering dumpsters, dewatering bags or other prefabricated product should be used. The use of rock checks, erosion control blanket and sumps or traps may be considered for overland flow. After the use of CMs, the water could be discharged through

a vegetated buffer and energy dissipation. The discharge of water from the site should be visibly clear in appearance.

The discharge of accumulated water should not:

- Contain oil, grease, a sheen, odor, or concrete washout;
- Adversely impact adjacent properties with water or sediment;
- Adversely impact waters of the state;
- Cause erosion of slopes and channels;
- Cause nuisance conditions; and
- Contribute to inundation of wetlands which negatively impact the wetlands.

8.0 FINAL STABILIZATION AND LONG-TERM STORMWATER MANAGEMENT

8.1 Final Stabilization and Notice of Termination

Final stabilization practices for obtaining a vegetative cover should include, as appropriate: seed mix selection and application methods; soil preparation and amendments; soil stabilization practices (e.g., mulch, hydro mulch or rolled erosion control products); and appropriate sediment control CMs as needed until final stabilization is achieved. The permanent erosion control CMs may be a combination of vegetative and non-vegetative cover types. Additional requirements to achieving final stabilization include:

- All soil disturbing activity is completed;
- Permanent stormwater treatment system (if required) is constructed and accumulated sediment has been removed from construction activity;
- All temporary, synthetic CMs have been removed from the site;
- Work in agriculture fields will be restored to pre-construction conditions and in conformance with land owner as much as feasible; and
- The vegetative cover for the site is at a density, with a uniform perennial cover of 70% of pre-disturbance levels or equivalent permanent, physical erosion reduction methods have been employed.

When the final stabilization conditions above are met, the permittee may fill out the Notice of Termination in Attachment B or located on the CDPHE website: https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits. A hard copy of the NOT must be mailed to the CDPHE Water Quality Control Division, 4300 Cherry Creek Drive South, Denver CO 80246.

8.2 Record Retention

During Construction

This report, amendments and attachments, inspections, and maintenance records should be kept on site during normal business hours. The records should be kept by the permittee listed on the permit application. The records should be in a mailbox, in a vehicle or in an on-site office trailer or model home unless another location, specified by the permittee, is approved by the Division.

Post Construction / Notice of Termination (NOT)

The site owner must retain all the following records for a period of at least three years after the submittal of the NOT.

- The final SWMP with all field notes/amendments;
- Other stormwater related permits in addition to the NPDES permit from PCA;
- Inspection and maintenance records;
- All permanent operation and maintenance agreements; and
- All required calculations for design of the temporary and permanent stormwater management systems

8.3 Long-Term Stormwater Management Practices

Based on the "Preliminary Hydrology Report for Grazing Yak Solar" prepared by Westwood Professional Services and dated 02/06/2019, during a 100-year 24-hour storm event, flood depths across the majority of the site will be less than 0.5 feet with velocities less than 1 foot/second.

A 1.54 acre-foot extended detention basin (EDB) has been designed near the primary outlet on the east side of the site (see plans in Attachment E). This has been designed per the hydrology design provided to extend the release of initial flows that are increased due to increased imperviousness created by the project. Once this volume is exceeded, additional culverts allow historic flows to be discharged at their pre-development rate. Access has been provided to this basin for maintenance. Maintenance shall be performed as specified in this stormwater plan.

9.0 INSPECTION AND MAINTENANCE

Construction activity and all support activities must be inspected (using the inspection form found in Attachment G or an alternative form) within the parameters of the schedule below. The inspector shall be a qualified stormwater manager who is trained and familiar with the requirements of this SWMP and the General Permit. Refer to contact table 6.3 for the qualified stormwater manager contact information.

Scope of inspections should include: include the site perimeter, all disturbed areas, material and/or storage areas that are exposed to precipitation, discharge locations, and locations where vehicles access the site. All installed CMs shall be evaluated to ensure that they are maintained and operating correctly. The minimum inspection report requirements are listed below:

- The inspection date;
- Name(s) and title(s) of personnel making the inspection;
- Weather conditions at the time of inspection;
- Phase of construction
- Estimated acres disturbed at time of inspection;
- Notation of the inspection frequency being implemented;
- Location(s) of discharges of sediment or other pollutants from the site;
- Location(s) of CMs that need to be maintained;
- Location(s) of CMs that failed to operate as designed or proved inadequate for a particular location;
- Location(s) where additional CMs are needed that were not in place at the time of inspection;
- Deviations from the minimum inspection schedule as provided in Part I.D.6.a; and
- Description of corrective action for items and measures taken to prevent future violations, including requisite changes to the SWMP, as necessary.
- Compliance statement and signature by the site Qualified Stormwater Manager

After adequate corrective action(s) has been taken, or where a report does not identify any incidents requiring corrective action, the report shall contain a signed statement indicating the site is in compliance with the General Permit to the best of the signer's knowledge and belief.

*All inspections should be documented within twenty-four hours after completing the field inspection and available in paper or electronic form on site.

**Rainfall amounts should be taken from an onsite rain gauge. If a rain gauge is not feasible, the rain fall data should be observed from the following website:

https://forecast.weather.gov/MapClick.php?textField1=39.04&textField2=-104.3#.XKN3hJhKhaQ

9.1 Inspection Schedule

Table 17: Inspection Schedule

Site Status/Activity	Necessary Inspection Schedule	Notes and Information
Minimum Inspection Schedule	☒ Once every fourteen calendar days and within twenty-four hours of a rainfall or snow melt event that causes surface erosion. ☐ Once every seven calendar days.	The first inspection shall be completed within 7 days of starting construction activity. A rain gauge should be used or rain data should be taken from the link listed above.

Post-Storm Event Inspections at Temporarily Idle Sites	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 fourteen calendar days. Post storm events for temporarily idle sites are not required for sites who have chosen to inspect every seven calendar days.
Inspections at Completed Sites/Areas	Once every month; post-storm event inspections are not required.	Only once all construction activities resulting in ground disturbance are completed and all activities required for final stabilization have been completed (with the exception of seed that has not occurred due to seasonal conditions) and the SWMP has been amended to indicate areas that will be inspected in accordance with the reduced schedule.
Winter Conditions Inspections Exclusion	Inspections are not required where construction activities are temporarily halted, snow cover exists over the entire site for an extended period, and melting conditions pose a risk of surface erosion do not exist.	This exception is only applicable during the period where melting conditions do not exist, and applies to the routine fourteen-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.*

*When site conditions make the schedule required in this section impractical, the permittee may petition the Division to grant an alternate inspection schedule.

9.2 Maintenance Schedule

Where site inspections identify the need for CM maintenance activities, CMs must be maintained in accordance with the SWMP and Part I.B.1.b of the General Permit. Repair, replacement, or installation of new CMs determined necessary during site inspections to address ineffective or inadequate CMs must be conducted in accordance with Part I.B.1.c of the General Permit. SWMP updates required as a result of deficiencies in the SWMP identified during site inspections shall be made in accordance with Part I.C.3 of the General Permit.

Table 18: Maintenance Schedule

CM	Observed Condition for Maintenance	Maintenance Interval
All non-functional CMs	Sediment overtopping, under water, scoured ends, undermined, destroyed, non-functional as designed. etc	Maintenance or replacement should be completed immediately after discovery unless infeasible.
Perimeter Sediment Control (silt fence, fiber logs, berms, etc.)	½ full of sediment, flattened to ½ height, driven over, undermined, scoured, moved for access etc.	Maintenance or replacement should be completed immediately after discovery unless infeasible.
Inlet protection CMs, conveyances, surface waters	Sediment deposition, sediment deltas and accumulation of sediment material.	Removal/cleanout of accumulated sediment and deltas to be removed by immediately after discovery unless infeasible. Stabilize as needed if soils are exposed during removal/cleanout.
Temp. sed. basins and traps; permanent sediment basins	Sediment deposition and accumulation to ½ of the storage volume.	Cleanout, remove accumulated sediment material immediately after discovery unless infeasible.
Site exit locations, rock exit pads, other anti-tracking practices	Accumulated sediment in rock or other anti-tracking CM, tracking of sediment from the site onto paved surfaces	Top dress rock, maintain rock exit or other anti-tracking controls, scrap paved surfaces, and sweep paved surfaces immediately after discovery unless infeasible.
Paved surfaces; adjacent streets	Tracked sediment and soil material from the site hauling or access	Sweep surface same working day after discovery unless infeasible. . Additional and/or more frequent sweeping may be needed to maintain public safety or prevent washing from forecast rains.

NOTE: *If it is infeasible to install or repair control measures immediately after discovery of the deficiency the following information must be documented and kept on record: 1. Describe why it is infeasible to initiate the installation or repair immediately; and 2. Provide a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.*

Attachment A

CDPS General Permit

STATE OF COLORADO

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
Water Quality Control Division

CDPS GENERAL PERMIT

STORMWATER DISCHARGES ASSOCIATED WITH

CONSTRUCTION ACTIVITY

AUTHORIZATION TO DISCHARGE UNDER THE

COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

In compliance with the provisions of the Colorado Water Quality Control Act, (25-8-101 et seq., CRS, 1973 as amended) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.; the "Act"), this permit authorizes the discharge of stormwater associated with construction activities (and specific allowable non-stormwater discharges in accordance with Part I.A.1. of the permit) certified under this permit, from those locations specified throughout the State of Colorado to specified waters of the State.

Such discharges shall be in accordance with the conditions of this permit. This permit specifically authorizes the facility listed on the certification to discharge in accordance with permit requirements and conditions set forth in Parts I and II hereof. All discharges authorized herein shall be consistent with the terms and conditions of this permit.

This permit becomes effective on April 1, 2019, and shall expire at midnight March 31, 2024.

Issued and signed this 1st day of November 2018.

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

Ellen Howard Kutzer, Permits Section Manager
Water Quality Control Division

Permit History
Originally signed and issued October 31, 2018; effective April 1, 2019.

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Part I
Note: At the first mention of terminology that has a specific connotation for the purposes of this permit, the terminology is electronically linked to the definitions section of the permit in Part I.E.

A. COVERAGE UNDER THIS PERMIT

1. Authorized Discharges

   This general permit authorizes permittee(s) to discharge the following to state waters: stormwater associated with construction activity and specified non-stormwater associated with construction activity. The following types of stormwater and non-stormwater discharges are authorized under this permit:

   a. Allowable Stormwater Discharges

      i. Stormwater discharges associated with construction activity.

      ii. Stormwater discharges associated with producing earthen materials, such as soils, sand, and gravel dedicated to providing material to a single contiguous site, or within ¼ mile of a construction site (i.e. borrow or fill areas)

      iii. Stormwater discharges associated with dedicated asphalt, concrete batch plants and masonry mixing stations (Coverage under this permit is not required if alternative coverage has been obtained.)

   b. Allowable Non-Stormwater Discharges

      The following non-stormwater discharges are allowable under this permit if the discharges are identified in the stormwater management plan in accordance with Part I.C. and if they have appropriate control measures in accordance with Part I.B.1.

      i. Discharges from uncontaminated springs that do not originate from an area of land disturbance.

      ii. Discharges to the ground of concrete washout water associated with the washing of concrete tools and concrete mixer chutes. Discharges of concrete washout water must not leave the site as surface runoff or reach receiving waters as defined by this permit.

      iii. Discharges of landscape irrigation return flow.

   c. Emergency Fire Fighting

      Discharges resulting from emergency firefighting activities are authorized by this permit.

2. Limitations on Coverage

   Discharges not authorized by this permit include, but are not limited to, the discharges and activities listed below. Permittees may seek individual or alternate general permit coverage for the discharges, as appropriate and available.

   a. Discharges of Non-Stormwater

Discharges of non-stormwater, except the authorized non-stormwater discharges listed in Part I.A.1.b., are not eligible for coverage under this permit.

b. Discharges Currently Covered by another Individual or General Permit

c. Discharges Currently Covered by a Water Quality Control Division (division) Low Risk Guidance Document

3. Permit Certification and Submittal Procedures

a. Duty to apply
The following activities shall apply for coverage under this permit:

i. Construction sites that will disturb one acre or more; or

ii. Construction sites that are part of a common plan of development or sale; or

iii. Stormwater discharges that are designated by the division as needing a stormwater permit because the discharge:

(a) Contributes to a violation of a water quality standard; or

(b) is a significant contributor of pollutants to state waters.

b. Application Requirements
To obtain authorization to discharge under this permit, applicants applying for coverage following the effective date of the renewal permit shall meet the following requirements:

i. Owners and operators submitting an application for permit coverage will be co-permittees subject to the same benefits, duties, and obligations under this permit.

ii. Signature requirements: Both the owner and operator (permittee) of the construction site, as defined in Part I.E., must agree to the terms and conditions of the permit and submit a completed application that includes the signature of both the owner and the operator. In cases where the duties of the owner and operator are managed by the owner, both application signatures may be completed by the owner. Both the owner and operator are responsible for ensuring compliance with all terms and conditions of the permit, including implementation of the stormwater management plan.

iii. Applicants must use the paper form provided by the division or the electronic form provided on the division's web-based application platform when applying for coverage under this permit.

iv. The applicant(s) must develop a stormwater management plan (SWMP) in accordance with the requirements of Part I.C. The applicant(s) must also certify that the SWMP is complete, or will be complete, prior to commencement of any construction activity.

v. The applicant(s) must submit a complete, accurate, and signed permit application electronically, by mail or hand delivery to the division at least 10 days prior to the commencement of construction activity except that construction activities that are in response to a public emergency related site shall apply for coverage no later than 14 days after the commencement of construction activities. The provisions of this part in no way remove a violation of the Colorado Water Quality Control Act if a point source discharge occurs prior to the issuance of a CDPS permit.

vi. The application must be signed in accordance with the requirements of Part IA. Applications submitted by mail or hand delivered should be directed to:

Colorado Department of Public Health and Environment
Water Quality Control Division
Permits Section, WQCD-PS-B2
4300 Cherry Creek Drive South
Denver, CO 80246

vii. The applicant(s) must receive written notification that the division granted permit coverage prior to conducting construction activities except for construction activities that are in response to a public emergency related site

c. Division Review of Permit Application

Within 10 days of receipt of the application, and following review of the application, the division may:

i. Issue a certification of coverage;

ii. request additional information necessary to evaluate the discharge;

iii. delay the authorization to discharge pending further review;

iv. notify the applicant that additional terms and conditions are necessary; or

v. deny the authorization to discharge under this general permit.

d. Alternative Permit Coverage

i. Division Required Alternate Permit Coverage:
The Division may require an applicant or permittee to apply for an individual permit or an alternative general permit if it determines the discharge does not fall under the scope of this general permit. In this case, the Division will notify the applicant or permittee that an individual permit application is required.

ii. Permittee Request for alternate permit coverage:
A permittee authorized to discharge stormwater under this permit may request to be excluded from coverage under this general permit by applying for an individual permit. In this case, the permittee must submit an individual application, with reasons supporting the request, to the Division at least 180 days prior to any discharge. When an individual permit is issued, the permittee's authorization to discharge under this permit is terminated on the effective date of the individual permit.

e. Submittal Signature Requirements

Documents required for submittal to the division in accordance with this permit, including applications for permit coverage and other documents as requested by the division, must include signatures by both the owner and the operator, except for instances where the duties of the owner and operator are managed by the owner.

Signatures on all documents submitted to the division as required by this permit must meet the Standard Signatory Requirements in Part II.K. of this permit in accordance with 40 C.F.R. 122.41(k).

i. Signature Certification
Any person(s) signing documents required for submittal to the Division must make the following certification:

"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."

f. Compliance Document Signature Requirements
Documents which are required for compliance with the permit, but for which submittal to the division is not required unless specifically requested by the division, must be signed by the individual(s) designated as the Qualified Stormwater Manager, as defined in Part I.E.

i. Any person(s) signing inspection documents required for compliance with the permit must make the following statement:

"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."

g. Field Wide Permit Coverage for Oil and Gas Construction
At the discretion of the division, a single permit certification may be issued to a single oil and gas permittee to cover construction activity related discharges from an oil and gas field at multiple locations that are not necessarily contiguous.

h. Permit Coverage without Application
Qualifying Local Program: When a small construction site is within the jurisdiction of a qualifying local program, the owner and operator of the construction activity are authorized to discharge stormwater associated with small construction activity under this general permit without the submittal of an application to the division. Sites covered by a qualifying local program are exempt from the following sections of this general permit:

Part I.A.3.a.; Part I.A.3.b.; Part I.A.3.c.; Part I.A.3.d.; Part I.A.3.g.; Part I.A.3.i.; Part I.A.3.j.; Part I.A.3.k.

Sites covered by a qualifying local program are subject to the following requirements:

i. Local Agency Authority: This permit does not pre-empt or supersede the authority of local agencies to prohibit, restrict, or control discharges of stormwater to storm drain systems or other water courses within their jurisdiction.

ii. Permit Coverage Termination: When a site under a Qualifying Local Program is finally stabilized, coverage under this permit is automatically terminated.

iii. Compliance with Qualifying Local Program: Qualifying Local Program requirements that are equivalent to the requirements of this permit are incorporated by reference. Permittees authorized to discharge under this permit, must comply with the equivalent requirements of the Qualifying Local Program that has jurisdiction over the site as a condition of this permit.

iv. Compliance with Remaining Permit Conditions. Requirements of this permit that are in addition to or more stringent than the requirements of the Qualifying Local Program apply in addition to the requirements of the Qualifying Local Program.

v. Written Authorization of Coverage: The division or local municipality may require any permittee within the jurisdiction of a Qualifying Local Program covered under this permit to apply for, and obtain written authorization of coverage under this permit. The permittee must be notified in writing that an application for written authorization of coverage is required.

i. Permittee Initiated Permit Actions

Permittee initiated permit actions, including but not limited to modifications, contact changes, transfers, reassignments, and terminations, shall be conducted following division guidance and using appropriate division-provided forms.

j. Sale of Residence to Homeowner

Residential construction sites only: The permittee may remove residential lots from permit coverage once the lot meets the following criteria:

i. the residential lot has been sold to the homeowner(s) for private residential use;

ii. a certificate of occupancy, or equivalent, is maintained on-site and is available during division inspections;

iii. the lot is less than one acre of disturbance;

iv. all construction activity conducted on the lot by the permittee is complete;

v. the permittee is not responsible for final stabilization of the lot; and

vi. the SWMP was modified to indicate the lot is no longer part of the construction activity.

If the residential lot meets the criteria listed above then activities occurring on the lot are no longer considered to be construction activities with a duty to apply and maintain permit coverage. Therefore, the permittee is not required to meet the final stabilization requirements and may terminate permit coverage for the lot.

k. Permit Expiration and Continuation of Permit Coverage

Authorization to discharge under this general permit shall expire at midnight on March 31, 2024. While Regulation 61.4 requires a permittee to submit an application for continuing permit coverage 180 days before the permit expires, the division is requiring that permittees desiring continued coverage under this general permit must reapply at least 90 days in advance of this permit expiration. The Division will determine if the permittee may continue to discharge stormwater under the terms of the general permit. An individual permit may be required for any facility not reauthorized to discharge under the reissued general permit.

If this permit is not reissued or replaced prior to the expiration date, it will be administratively continued and remain in force and effect. For permittees that have applied for continued permit coverage, discharges authorized under this permit prior to the expiration date will automatically remain covered by this permit until the earliest of:

i. An authorization to discharge under a reissued permit, or a replacement of this permit, following the timely and appropriate submittal of a complete application requesting authorization to discharge under the new permit and compliance with the requirements of the new permit; or

ii. The issuance and effect of a termination issued by the Division; or

iii. The issuance or denial of an individual permit for the facility's discharges; or

iv. A formal permit decision by the Division not to reissue this general permit, at which time the Division will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will cease when coverage under another permit is granted/authorized; or

v. The Division has informed the permittee that discharges previously authorized under this permit are no longer covered under this permit.

B. EFFLUENT LIMITATIONS

1. Requirements for Control Measures Used to Meet Effluent Limitations

The permittee must implement control measures to minimize the discharge of pollutants from all potential pollutant sources at the site. Control measures must be installed prior to commencement of activities that may contribute pollutants to stormwater discharges. Control measures must be selected, designed, installed and maintained in accordance with good engineering, hydrologic and pollution control practices. Control measures implemented at the site must be designed to prevent pollution or degradation of state waters.

a. Stormwater Pollution Prevention

The permittee must implement structural and/or nonstructural control measures that effectively minimize erosion, sediment transport, and the release of other pollutants related to construction activity.

i. Control Measures for Erosion and Sediment Control

Control measures for erosion and sediment control may include, but are not limited to, wattles/sediment control logs, silt fences, earthen dikes, drainage swales, sediment traps, subsurface drains, pipe slope drains, inlet protection, outlet protection, gabions, sediment basins, temporary vegetation, permanent vegetation, mulching, geotextiles, sod stabilization, slope roughening, maintaining existing vegetation, protection of trees, and preservation of mature vegetation. Specific non-structural control measures must meet the requirements listed below.

Specific control measures must meet the requirements listed below.

(a) Vehicle tracking controls shall either be implemented to minimize vehicle tracking of sediment from disturbed areas, or the areas where vehicle tracking occurs shall meet subsection Part I.B.1.a.i(b);

(b) Stormwater runoff from all disturbed areas and soil storage areas for which permanent or temporary stabilization is not implemented, must flow to at least one control measure to minimize sediment in the discharge. This may be accomplished through filtering, settling, or straining. The control measure must be selected, designed, installed and adequately sized in accordance with good engineering, hydrologic and pollution control practices. The control measure(s) must contain or filter flows in order to prevent the bypass of flows without treatment and must be appropriate for stormwater runoff from disturbed areas and for the expected flow rate, duration, and flow conditions (i.e., sheet or concentrated flow);

(c) Outlets that withdraw water from or near the surface shall be installed when discharging from basins and impoundments, unless infeasible.

(d) Maintain pre-existing vegetation or equivalent control measures for areas within 50 horizontal feet of receiving waters as defined by this permit, unless infeasible.

(e) Soil compaction must be minimized for areas where infiltration control measures will occur or where final stabilization will be achieved through vegetative cover.

(f) Unless infeasible, topsoil shall be preserved for those areas of a site that will utilize vegetative final stabilization.

(g) Minimize the amount of soil exposed during construction activity, including the disturbance of steep slopes.

ii. Practices for Other Common Pollutants

(a) Bulk storage, 55 gallons or greater, for petroleum products and other liquid chemicals must have secondary containment, or equivalent protection, in order to contain spills and to prevent spilled material from entering state waters.

(b) Control measures designed for concrete washout waste must be implemented. This includes washout waste discharged to the ground as authorized under this permit and washout waste from concrete trucks and masonry operations contained on site. The permittee must ensure the washing activities do not contribute pollutants to stormwater runoff, or receiving waters in accordance Part I.A.1.b.ii. Discharges that may reach groundwater must flow through soil

that has buffering capacity prior to reaching groundwater, as necessary to meet the effluent limits in this permit, including Part I.B.3.a. The concrete washout location shall be not be located in an area where shallow groundwater may be present and would result in buffering capacity not being adequate, such as near natural drainages, springs, or wetlands. This permit authorizes discharges to the ground of concrete washout waste.

iii. Stabilization Requirements
The following requirements must be implemented for each site.

(a) Temporary stabilization must be implemented for earth disturbing activities on any portion of the site where ground disturbing construction activity has permanently ceased, or temporarily ceased for more than 14 calendar days. Temporary stabilization methods may include, but are not limited to, tarps, soil tackifier, and hydroseed. The permittee may exceed the 14-day schedule when either the function of the specific area of the site requires it to remain disturbed, or, physical characteristics of the terrain and climate prevent stabilization. The SWMP must document the constraints necessitating the alternative schedule, provide the alternate stabilization schedule, and identify all locations where the alternative schedule is applicable on the site map.

(b) Final stabilization must be implemented for all construction sites. Final stabilization is reached when all ground surface disturbing activities at the construction site are complete; and, for all areas of ground surface disturbing activities, either a uniform vegetative cover with an individual plant density of at least 70 percent of pre-disturbance levels is established, or equivalent permanent alternative stabilization methods are implemented. The division may approve alternative final stabilization criteria for specific operations.

(c) Final stabilization must be designed and installed as a permanent feature. Final stabilization measures for obtaining a vegetative cover or alternative stabilization methods include, but are not limited to, the following as appropriate:

(1) Seed mix selection and application methods;

(2) Soil preparation and amendments;

(3) Soil stabilization methods (e.g., crimped straw, hydro mulch or rolled erosion control products);

(4) Appropriate sediment control measures as needed until final stabilization is achieved;

(5) Permanent pavement, hardscape, xeriscape, stabilized driving surfaces;

(6) Other alternative stabilization practices as applicable;

(d) The permittee(s) must ensure all temporary control measures are removed from the construction site once final stabilization is achieved, except when the control measure specifications allow the control measure to be left in place (i.e., bio-degradable control measures).

b. Maintenance

The permittee must ensure that all control measures remain in effective operating condition and are protected from activities that would reduce their effectiveness. Control measures must be maintained in accordance with good engineering, hydrologic and pollution control practices. Observations leading to the required maintenance of control measures can be made during a site inspection, or during general observations of site conditions. The necessary repairs or modifications to a control measure requiring routine maintenance, as defined in Part I.E., must be conducted to maintain an effective operating condition. This section is not subject to the requirements in Part I.B.1.c. below.

c. Corrective Actions

The permittee must assess the adequacy of control measures at the site, and the need for changes to those control measures, to ensure continued effective performance. When an inadequate control measure, as defined in Part I.E., is identified (i.e., new or replacement control measures become necessary), the following corrective action requirements apply. The permittee is in noncompliance with the permit until the inadequate control measure is replaced or corrected and returned to effective operating condition in compliance with Part I.B.1. and the general requirements in Part I.B.3. If the inadequate control measure results in noncompliance that meets the conditions of Part II.L., the permittee must also meet the requirements of that section.

i. The permittee must take all necessary steps to minimize or prevent the discharge of pollutants, until a control measure is implemented and made operational and/or an inadequate control measure is replaced or corrected and returned to effective operating condition. If it is infeasible to install or repair of control measure immediately after discovering the deficiency, the following must be documented and kept on record in accordance with the recordkeeping requirements in Part II.

(a) Describe why it is infeasible to initiate the installation or repair immediately; and

(b) Provide a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.

ii. If applicable, the permittee must remove and properly dispose of any unauthorized release or discharge (e.g., discharge of non-stormwater, spill, or leak not authorized by this permit.) The permittee must also clean up any contaminated surfaces to minimize discharges of the material in subsequent storm events.

2. Discharges to an Impaired Waterbody

a. Total Maximum Daily Load (TMDL)

If the permittee's discharge flows to or could reasonably be expected to flow to any water body for which a TMDL has been approved, and stormwater discharges

associated with construction activity were assigned a pollutant-specific Wasteload Allocation (WLA) under the TMDL, the division may:

i. ensure the WLA is implemented properly through alternative local requirements, such as by a municipal stormwater permit; or

ii. notify the permittee of the WLA and amend the permittee's certification to add specific effluent limits and other requirements, as appropriate. The permittee may be required to do the following:

(a) under the permittee's SWMP, implement specific control measures based on requirements of the WLA, and evaluate whether the requirements are met through implementation of existing stormwater control measures or if additional control measures are necessary. Document the calculations or other evidence demonstrating that the requirements are expected to be met; and

(b) if the evaluation shows that additional or modified control measures are necessary, describe the type and schedule for the control measure additions or modifications.

iii. Discharge monitoring may also be required. The permittee may maintain coverage under the general permit provided they comply with the applicable requirements outlined above. The division reserves the right to require individual or alternate general permit coverage.

3. General Requirements

a. Discharges authorized by this permit shall not cause, have the reasonable potential to cause, or measurably contribute to an exceedance of any applicable water quality standard, including narrative standards for water quality.

b. The division may require sampling and testing, on a case-by-case basis, in the event that there is reason to suspect that the SWMP is not adequately minimizing pollutants in stormwater or in order to measure the effectiveness of the control measures in removing pollutants in the effluent. Such monitoring may include Whole Effluent Toxicity testing.

c. The permittee must comply with the lawful requirements of federal agencies, municipalities, counties, drainage districts and other local agencies including applicable requirements in Municipal Stormwater Management Programs developed to comply with CDPS permits. The permittee must comply with local stormwater management requirements, policies and guidelines including those for erosion and sediment control.

d. All construction site wastes must be properly managed to prevent potential pollution of state waters. This permit does not authorize on-site waste disposal.

e. This permit does not relieve the permittee of the reporting requirements in 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.L. of the permit).

C. STORMWATER MANAGEMENT PLAN (SWMP) REQUIREMENTS

1. SWMP General Requirements

   a. A SWMP shall be developed for each construction site covered by this permit. The SWMP must be prepared in accordance with good engineering, hydrologic and pollution control practices.

      i. For public emergency related sites a SWMP shall be created no later than 14 days after the commencement of construction activities.

   b. The permittee must implement the provisions of the SWMP as written and updated, from commencement of construction activity until final stabilization is complete. The division may review the SWMP.

   c. A copy of the SWMP must be retained onsite or be onsite when construction activities are occurring at the site unless the permittee specifies another location and obtains approval from the division.

2. SWMP Content

   a. The SWMP, at a minimum, must include the following elements.

      i. Qualified Stormwater Manager. The SWMP must list individual(s) by title and name who are designated as the site's qualified stormwater manager(s) responsible for implementing the SWMP in its entirety. This role may be filled by more than one individual.

      ii. Spill Prevention and Response Plan. The SWMP must have a spill prevention and response plan. The plan may incorporate by reference any part of a Spill Prevention Control and Countermeasure (SPCC) plan under section 311 of the Clean Water Act (CWA) or a Spill Prevention Plan required by a separate CDPS permit. The relevant sections of any referenced plans must be available as part of the SWMP consistent with Part I.C.4.

      iii. Materials Handling. The SWMP must describe and locate all control measures implemented at the site to minimize impacts from handling significant materials that could contribute pollutants to runoff. These handling procedures can include control measures for pollutants and activities such as, exposed storage of building materials, paints and solvents, landscape materials, fertilizers or chemicals, sanitary waste material, trash and equipment maintenance or fueling procedures.

      iv. Potential Sources of Pollution. The SWMP must list all potential sources of pollution which may reasonably be expected to affect the quality of stormwater discharges associated with construction activity from the site. This shall include, but is not limited to, the following pollutant sources:

         (a) disturbed and stored soils;

         (b) vehicle tracking of sediments;

         (c) management of contaminated soils;

         (d) loading and unloading operations;

(e) outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.);

(f) vehicle and equipment maintenance and fueling;

(g) significant dust or particulate generating processes (e.g., saw cutting material, including dust);

(h) routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.;

(i) on-site waste management practices (waste piles, liquid wastes, dumpsters);

(j) concrete truck/equipment washing, including washing of the concrete truck chute and associated fixtures and equipment;

(k) dedicated asphalt, concrete batch plants and masonry mixing stations;

(l) non-industrial waste sources such as worker trash and portable toilets.

v. Implementation of Control Measures. The SWMP must include design specifications that contain information on the implementation of the control measure in accordance with good engineering hydrologic and pollution control practices; including as applicable drawings, dimensions, installation information, materials, implementation processes, control measure-specific inspection expectations, and maintenance requirements.

The SWMP must include a documented use agreement between the permittee and the owner or operator of any control measures located outside of the permitted area, that are utilized by the permittee's construction site for compliance with this permit, but not under the direct control of the permittee. The permittee is responsible for ensuring that all control measures located outside of their permitted area, that are being utilized by the permittee's construction site, are properly maintained and in compliance with all terms and conditions of the permit. The SWMP must include all information required of and relevant to any such control measures located outside the permitted area, including location, installation specifications, design specifications and maintenance requirements.

vi. Site Description. The SWMP must include a site description which includes, at a minimum, the following:

(a) the nature of the construction activity at the site;

(b) the proposed schedule for the sequence for major construction activities and the planned implementation of control measures for each phase. (e.g.: clearing, grading, utilities, vertical, etc.);

(c) estimates of the total acreage of the site, and the acreage expected to be disturbed by clearing, excavation, grading, or any other construction activities;

(d) a summary of any existing data used in the development of the construction site plans or SWMP that describe the soil or existing potential for soil erosion;

(e) a description of the percent of existing vegetative ground cover relative to the entire site and the method for determining the percentage;

(f) a description of any allowable non-stormwater discharges at the site, including those being discharged under a division low risk discharge guidance policy;

(g) a description of areas receiving discharge from the site. Including a description of the immediate source receiving the discharge. If the stormwater discharge is to a municipal separate storm sewer system, the name of the entity owning that system, the location of the storm sewer discharge, and the ultimate receiving water(s); and

(h) a description of all stream crossings located within the construction site boundary.

vii. Site Map. The SWMP must include a site map which includes, at a minimum, the following:

(a) construction site boundaries;

(b) flow arrows that depict stormwater flow directions on-site and runoff direction;

(c) all areas of ground disturbance including areas of borrow and fill;

(d) areas used for storage of soil;

(e) locations of all waste accumulation areas, including areas for liquid, concrete, masonry, and asphalt;

(f) locations of dedicated asphalt, concrete batch plants and masonry mixing stations;

(g) locations of all structural control measures;

(h) locations of all non-structural control measures;

(i) locations of springs, streams, wetlands and other state waters, including areas that require pre-existing vegetation be maintained within 50 feet of a receiving water, where determined feasible in accordance with Part I.B.1.a.i.(d).; and

(j) locations of all stream crossings located within the construction site boundary.

viii. Final Stabilization and Long Term Stormwater Management. The SWMP must describe the practices used to achieve final stabilization of all disturbed areas at the site and any planned practices to control pollutants in stormwater discharges that will occur after construction operations are completed. Including but not limited to, detention/retention ponds, rain gardens, stormwater vaults, etc.

ix. Inspection Reports. The SWMP must include documented inspection reports in accordance with Part ID.

3. SWMP Review and Revisions

Permittees must keep a record of SWMP changes made that includes the date and identification of the changes. The SWMP must be amended when the following occurs:

a. a change in design, construction, operation, or maintenance of the site requiring implementation of new or revised control measures;

b. the SWMP proves ineffective in controlling pollutants in stormwater runoff in compliance with the permit conditions;

c. control measures identified in the SWMP are no longer necessary and are removed; and

d. corrective actions are taken onsite that result in a change to the SWMP.

For SWMP revisions made prior to or following a change(s) onsite, including revisions to sections addressing site conditions and control measures, a notation must be included in the SWMP that identifies the date of the site change, the control measure removed, or modified, the location(s) of those control measures, and any changes to the control measure(s). The permittee must ensure the site changes are reflected in the SWMP. The permittee is noncompliant with the permit until the SWMP revisions have been made.

4. SWMP Availability

A copy of the SWMP must be provided upon request to the division, EPA, and any local agency with authority for approving sediment and erosion plans, grading plans or stormwater management plans within the time frame specified in the request. If the SWMP is required to be submitted to any of these entities, the submission must include a signed certification in accordance with Part I.A.3.e., certifying that the SWMP is complete and compliant with all terms and conditions of the permit.

All SWMPs required under this permit are considered reports that must be available to the public under Section 308(b) of the CWA and Section 61.5(4) of the CDPS regulations. The permittee must make plans available to members of the public upon request. However, the permittee may claim any portion of a SWMP as confidential in accordance with 40 CFR Part 2.

D. SITE INSPECTIONS

Site inspections must be conducted in accordance with the following requirements. The required inspection schedules are a minimum frequency and do not affect the permittee's responsibility to implement control measures in effective operating condition as prescribed in the SWMP. Proper maintenance of control measures may require more frequent inspections. Site inspections shall start within 7 calendar days of the commencement of construction activities on site.

1. Person Responsible for Conducting Inspections

The person(s) inspecting the site may be on the permittee's staff or a third party hired to conduct stormwater inspections under the direction of the permittee(s). The permittee is responsible for ensuring that the inspector is a qualified stormwater manager.

2. Inspection Frequency

Permittees must conduct site inspections in accordance with one of the following minimum frequencies, unless the site meets the requirements of Part ID.3

a. At least one inspection every 7 calendar days. Or

b. At least one inspection every 14 calendar days, if post-storm event inspections are conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Post-storm inspections may be used to fulfill the 14-day routine inspection requirement.

c. When site conditions make the schedule required in this section impractical, the permittee may petition the Division to grant an alternate inspection schedule. The alternative inspection schedule may not be implemented prior to written approval by the division and incorporation into the SWMP.

3. Inspection Frequency for Discharges to Outstanding Waters

Permittees must conduct site inspections at least once every 7 calendar days for sites that discharge to a water body designated as an Outstanding Water by the Water Quality Control Commission.

4. Reduced Inspection Frequency

The permittee may perform site inspections at the following reduced frequencies when one of the following conditions exists:

a. Post-Storm Inspections at Temporarily Idle Sites
For permittees choosing to combine 14-day inspections and post-storm-event-inspections, if no construction activities will occur following a storm event, post-storm event inspections must be conducted prior to re-commencing construction activities, but no later than 72 hours following the storm event. The delay of any post-storm event inspection must be documented in the inspection record. Routine inspections must still be conducted at least every 14 calendar days.

b. Inspections at Completed Sites/Areas
When the site, or portions of a site are awaiting establishment of a vegetative ground cover and final stabilization, the permittee must conduct a thorough inspection of the stormwater management system at least once every 30 days. Post-storm event inspections are not required under this schedule. This reduced inspection schedule is allowed if all of the following criteria are met:

i. all construction activities resulting in ground disturbance are complete;

ii. 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

iii. the SWMP has been amended to locate those areas to be inspected in accordance with the reduced schedule allowed for in this paragraph.

c. Winter Conditions Inspections Exclusion

Inspections are not required for sites that meet all of the following conditions: 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 inspection exception is applicable only during the period where melting conditions do not exist, and applies to the routine 7-day, 14-day and monthly inspections, as well as the post-storm-event inspections. When this inspection exclusion is implemented, the following information must be documented in accordance with the requirements in Part II:

i. dates when snow cover existed;

ii. date when construction activities ceased; and

iii. date melting conditions began.

5. Inspection Scope

a. Areas to be Inspected
When conducting a site inspection the following areas, if applicable, must be inspected for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters:

i. construction site perimeter;

ii. all disturbed areas;

iii. designated haul routes;

iv. material and waste storage areas exposed to precipitation;

v. locations where stormwater has the potential to discharge offsite; and

vi. locations where vehicles exit the site.

b. Inspection Requirements

i. Visually verify whether all implemented control measures are in effective operational condition and are working as designed in their specifications to minimize pollutant discharges.

ii. Determine if there are new potential sources of pollutants.

iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges.

iv. Identify all areas of non–compliance with the permit requirements and, if necessary, implement corrective action in accordance with Part IB.1.c.

c. Inspection Reports
The permittee must keep a record of all inspections conducted for each permitted site. Inspection reports must identify any incidents of noncompliance with the terms and conditions of this permit. Inspection records must be retained in accordance with Part II.O. and signed in accordance with Part I.A.3.f. At a minimum, the inspection report must include:

i. the inspection date;

ii. name(s) and title(s) of personnel conducting the inspection;

iii. weather conditions at the time of inspection;

iv. phase of construction at the time of inspection;

v. estimated acreage of disturbance at the time of inspection

vi. location(s) of discharges of sediment or other pollutants from the site;

vii. location(s) of control measures needing maintenance;

viii. location(s) and identification of inadequate control measures;

ix. location(s) and identification of additional control measures are needed that were not in place at the time of inspection;

x. description of the minimum inspection frequency (either in accordance with Part I.D.2., I.D.3. or I.D.4.) utilized when conducting each inspection.

xi. deviations from the minimum inspection schedule as required in Part I.D.2.;

xii. after adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the report shall contain a statement as required in Part I.A.3.f.

E. DEFINITIONS

For the purposes of this permit:

(1) Bypass - the intentional diversion of waste streams from any portion of a treatment facility in accordance with 40 CFR 122.41(m)(1)(i) and Regulation 61.2(12).

(2) Common Plan of Development or Sale - A contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules, but remain related. The Division has determined that "contiguous" means construction activities located in close proximity to each other (within ¼ mile). Construction activities are considered to be "related" if they share the same development plan, builder or contractor, equipment, storage areas, etc. "Common plan of development or sale" includes construction activities that are associated with the construction of field wide oil and gas permits for facilities that are related.

(3) Construction Activity - Ground surface disturbing and associated activities (land disturbance), which include, but are not limited to, clearing, grading, excavation, demolition, installation of new or improved haul roads and access roads, staging areas, stockpiling of fill materials, and borrow areas. Construction does not include routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. Activities to conduct repairs that are not part of routine maintenance or for replacement are construction activities and are not routine maintenance. Repaving activities where underlying and/or surrounding soil is exposed as part of the repaving operation are considered construction activities. Construction activity is from initial ground breaking to final stabilization regardless of ownership of the construction activities.

(4) Control Measure - Any best management practice or other method used to prevent or reduce the discharge of pollutants to state waters. Control measures include, but are not limited to, best management practices. Control measures can include other methods such as the installation, operation, and maintenance of structural controls and treatment devices.

(5) Control Measure Requiring Routine Maintenance - Any control measure that is still operating in accordance with its design and the requirements of this permit, but requires maintenance to prevent a breach of the control measure. See also inadequate control measure.

(6) Dedicated Asphalt, Concrete Batch Plants and Masonry Mixing Stations – are batch plants or mixing stations located on, or within ¼ mile of, a construction site and that provide materials only to that specific construction site.

(7) Final Stabilization - The condition reached when all ground surface disturbing activities at the site have been completed, and for all areas of ground surface disturbing activities where a 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.

(8) Good Engineering, Hydrologic and Pollution Control Practices: are methods, procedures, and practices that:
   a. Are based on basic scientific fact(s).
   b. Reflect best industry practices and standards.
   c. Are appropriate for the conditions and pollutant sources.
   d. Provide appropriate solutions to meet the associated permit requirements, including practice based effluent limits.

(9) Inadequate Control Measure - Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. See also Control Measure Requiring Routine Maintenance.

(10) Infeasible – Not technologically possible, or not economically practicable and achievable in light of best industry practices.

(11) Minimize - reduce or eliminate to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice.

(12) Municipality - A city, town, county, district, association, or other public body created by, or under, State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or a designated and approved management agency under section 208 of CWA (1987).

(13) Municipal Separate Storm Sewer System (MS4) - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

   a) owned or operated by a State, city, town, county, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or a designated and approved management agency under section 208 of the CWA that discharges to state waters;

      i. designed or used for collecting or conveying stormwater;
      ii. are not a combined sewer; and
      iii. are not part of a Publicly Owned Treatment Works (POTW). See 5 CCR 1002-61.2(62).

(14) Municipal Stormwater Management Program - A stormwater program operated by a municipality, typically to meet the requirements of the municipalities MS4 discharge certification.

(15) Operator - The party that has operational control over day-to-day activities at a project site which are necessary to ensure compliance with the permit. This party is authorized to direct individuals at a site to carry out activities required by the permit.(e.g. the general contractor)

(16) Owner - The party that has overall control of the activities and that has funded the implementation of the construction plans and specifications. This is the party with ownership of, a long term lease of, or easements on the property on which the construction activity is occurring (e.g., the developer).

(17) Permittee(s) - The owner and operator named in the discharge certification issued under this permit for the construction site specified in the certification.

(18) Point Source - Any discernible, confined, and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. Point source does not include irrigation return flow. See 5 CCR 102-61.2(75).

(19) Pollutant - Dredged spoil, dirt, slurry, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, chemical waste, biological nutrient, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, or any industrial, municipal or agricultural waste. See 5 CCR 1002-61.2(76).

(20) Presentation of credentials – a government issued form of identification, if in person; or (ii) providing name, position and purpose of inspection if request to enter is made via telephone, email or other form of electronic communication. A Permittee's non-response to a request to enter upon presentation of credentials constitutes a denial to such request, and may result in violation of the Permit.

(21) Process Water - Any water which, during manufacturing or processing, comes into contact with or results from the production of any raw material, intermediate product, finished product, by product or waste product.

(22) Public Emergency Related Site - a project initiated in response to an unanticipated emergency (e.g., mud slides, earthquake, extreme flooding conditions, disruption in essential public services), for which the related work requires immediate authorization to avoid imminent endangerment to human health or the environment, or to reestablish essential public services.

(23) Qualified Stormwater Manager - An individual knowledgeable in the principles and practices of erosion and sediment control and pollution prevention, and with the skills to assess conditions at construction sites that could impact stormwater quality and to assess the effectiveness of stormwater controls implemented to meet the requirements of this permit.

(24) Qualifying Local Program - A municipal program for stormwater discharges associated with small construction activity that was formally approved by the division as a qualifying local program.

(25) Receiving Water - Any classified or unclassified surface water segment (including tributaries) in the State of Colorado into which stormwater associated with construction activities discharges. This definition includes all water courses, even if they are usually dry, such as borrow ditches, arroyos, and other unnamed waterways.

(26) Severe Property Damage - substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. See 40 CFR 122.41(m)(1)(ii).

(27) Significant Materials - Include, but not limited to, raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical the permittee is required to report under section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag and sludge that have the potential to be released with stormwater discharges.

(28) Small Construction Activity - The discharge of stormwater from construction activities that result in land disturbance of equal to, or greater than, one acre and less than five acres. Small construction activity also includes the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale, if the larger common plan ultimately disturbs equal to, or greater than, one acre and less than five acres.

(29) Spill - An unintentional release of solid or liquid material which may pollute state waters.

(30) State Waters - means any and all surface and subsurface waters which are contained in or flow in or through this state, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed.

(31) Steep Slopes: where a local government, or industry technical manual (e.g., stormwater BMP manual) has defined what is to be considered a “steep slope”, this permit’s definition automatically adopts that definition. Where no such definition exists, steep slopes are automatically defined as those that are 3:1 or greater.

(32) Stormwater - Precipitation runoff, snow melt runoff, and surface runoff and drainage. See 5 CCR 1002-61.2(103).

(33) Total Maximum Daily Loads (TMDLs) -The sum of the individual wasteload allocations (WLA) for point sources and load allocations (LA) for nonpoint sources and natural background. For the purposes of this permit, a TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL includes WLAs, LAs, and must include a margin of safety (MOS), and account for seasonal variations. See section 303(d) of the CWA and 40 C.F.R. 130.2 and 130.7.

(34) Upset - an exceptional incident in which there is unintentional and temporary noncompliance with permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation in accordance with 40 CFR 122.41(n) and Regulation 61.2(114).

F. MONITORING

The division may require sampling and testing, on a case-by-case basis. If the division requires sampling and testing, the division will send a notification to the permittee. Reporting procedures for any monitoring data collected will be included in the notification.

If monitoring is required, the following applies:

1. the thirty (30) day average must be determined by the arithmetic mean of all samples collected during a thirty (30) consecutive-day period; and

2. a grab sample, for monitoring requirements, is a single “dip and take” sample.

G. Oil and Gas Construction

Stormwater discharges associated with construction activities directly related to oil and gas exploration, production, processing, and treatment operations or transmission facilities are regulated under the Colorado Discharge Permit System Regulations (5 CCR 1002-61), and require coverage under this permit in accordance with that regulation. However, references in this permit to specific authority under the CWA do not apply to stormwater discharges associated with these oil and gas related construction activities, to the extent that the references are limited by the federal Energy Policy Act of 2005.

Part II: Standard Permit Conditions

A. DUTY TO COMPLY

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Water Quality Control Act and is grounds for:

a. enforcement action;

b. permit termination, revocation and reissuance, or modification; or

c. denial of a permit renewal application.

B. DUTY TO REAPPLY

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain authorization as required by Part I.A.3.k. of the permit.

C. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

D. DUTY TO MITIGATE

A permittee must take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

E. PROPER OPERATION AND MAINTENANCE

A permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by the permittee only when the operation is necessary to achieve compliance with the conditions of this permit. This requirement can be met by meeting the requirements for Part I.B., I.C., and I.D. above. See also 40 C.F.R. § 122.41(e).

F. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for cause. The permittee request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. Any request for modification, revocation, reissuance, or termination under this permit must comply with all terms and conditions of Regulation 61.8(8).

G. PROPERTY RIGHTS

In accordance with 40 CFR 122.41(g) and 5 CCR 1002-61, 61.8(9):

1. The issuance of a permit does not convey any property or water rights in either real or personal property, or stream flows or any exclusive privilege.

2. The issuance of a permit does not authorize any injury to person or property or any invasion of personal rights, nor does it authorize the infringement of federal, state, or local laws or regulations.
3. Except for any toxic effluent standard or prohibition imposed under Section 307 of the Federal act or any standard for sewage sludge use or disposal under Section 405(d) of the Federal act, compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 318, 403, and 405(a) and (b) of the Federal act. However, a permit may be modified, revoked and reissued, or terminated during its term for cause as set forth in Section 61.8(8) of the Colorado Discharge Permit System Regulations.

H. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the division, within a reasonable time, any information which the division may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the division, upon request, copies of records required to be kept by this permit in accordance with 40 CFR 122.41(h) and/or Regulation 61.8(3)(q).

I. INSPECTION AND ENTRY

The permittee shall allow the division and the authorized representative, upon the presentation of credentials as required by law, to allow for inspections to be conducted in accordance with 40 CFR 122.41(i), Regulation 61.8(3), and Regulation 61.8(4):

1. to enter upon the permittee's premises where a regulated facility or activity is located or in which any records are required to be kept under the terms and conditions of this permit;
2. at reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit;
3. at reasonable times, inspect any monitoring equipment or monitoring method required in the permit; and
4. to enter upon the permittee's premises in a reasonable manner and at a reasonable time to inspect or investigate, any actual, suspected, or potential source of water pollution, or any violation of the Colorado Water Quality Control Act. The investigation may include: sampling of any discharges, stormwater or process water, taking of photographs, interviewing site staff on alleged violations and other matters related to the permit, and assessing any and all facilities or areas within the site that may affect discharges, the permit, or an alleged violation.

The permittee shall provide access to the division or other authorized representatives upon presentation of proper credentials. A permittee's non-response to a request to enter upon presentation of credentials constitutes a denial of such request, and may result in a violation of the permit.

J. MONITORING AND RECORDS

1. Samples and measurements taken for the purpose of monitoring must be representative of the volume and nature of the monitored activity.

2. The permittee must retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date the permit expires or the date the permittee's authorization is terminated. This period may be extended by request of the division at any time.

3. Records of monitoring information must include:
   a. The date, exact place, and time of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

4. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit.

K. SIGNATORY REQUIREMENTS

1. Authorization to Sign:

   All documents required to be submitted to the division by the permit must be signed in accordance with the following criteria:

   a. For a corporation: By a responsible corporate officer. For the purpose of this subsection, a responsible corporate officer means:

      i. a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or

      ii. the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

   b. For a partnership or sole proprietorship: By a general partner or the proprietor, respectively; or

   c. For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this subsection, a principal executive officer of a federal agency includes

      i. (i) the chief executive officer of the agency, or

ii. (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency. (e.g., Regional Administrator of EPA)

2. Electronic Signatures

For persons signing applications for coverage under this permit electronically, in addition to meeting other applicable requirements stated above, such signatures must meet the same signature, authentication, and identity-proofing standards set forth at 40 CFR § 3.2000(b) for electronic reports (including robust second-factor authentication). Compliance with this requirement can be achieved by submitting the application using the Colorado Environmental Online Service (CEOS) system.

3. Change in Authorization to Sign

If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the division, prior to the re-authorization, or together with any reports, information, or applications to be signed by an authorized representative.

L. REPORTING REQUIREMENTS

1. Planned Changes

The permittee shall give advance notice to the division, in writing, of any planned physical alterations or additions to the permitted facility in accordance with 40 CFR 122.41(l) and Regulation 61.8(5)(a). Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.41(a)(1).

2. Anticipated Non-Compliance

The permittee shall give advance notice to the division, in writing, of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements. The timing of notification requirements differs based on the type of non-compliance as described in subparagraphs 5, 6, 7, and 8 below.

3. Transfer of Ownership or Control

The permittee shall notify the division, in writing, ten (10) calendar days in advance of a proposed transfer of the permit. This permit is not transferable to any person except after notice is given to the division.

a. Where a facility wants to change the name of the permittee, the original permittee (the first owner or operators) must submit a Notice of Termination.

b. The new owner or operator must submit an application. See also signature requirements in Part II.K, above.

c. A permit may be automatically transferred to a new permittee if:

   i. The current permittee notifies the Division in writing 30 calendar days in advance of the proposed transfer date; and

   ii. The notice includes a written agreement between the existing and new permittee(s) containing a specific date for transfer of permit responsibility, coverage and liability between them; and

   iii. The division does not notify the existing permittee and the proposed new permittee of its intent to modify, or revoke and reissue the permit.

   iv. Fee requirements of the Colorado Discharge Permit System Regulations, Section 61.15, have been met.

4. Monitoring reports

   Monitoring results must be reported at the intervals specified in this permit per the requirements of 40 CFR 122.41(l)(4).

5. Compliance Schedules

   Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule in the permit, shall be submitted on the date listed in the compliance schedule section. The fourteen (14) calendar day provision in Regulation 61.8(4)(n)(i) has been incorporated into the due date.

6. Twenty-four hour reporting

   In addition to the reports required elsewhere in this permit, the permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances:

   a. Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident;

   b. Circumstances leading to any unanticipated bypass which exceeds any effluent limitations in the permit;

   c. Circumstances leading to any upset which causes an exceedance of any effluent limitation in the permit;

d. Daily maximum violations for any of the pollutants limited by Part I of this permit. This includes any toxic pollutant or hazardous substance or any pollutant specifically identified as the method to control any toxic pollutant or hazardous substance.

e. The division may waive the written report required under subparagraph 6 of this section if the oral report has been received within 24 hours.

7. Other non-compliance

A permittee must report all instances of noncompliance at the time monitoring reports are due. If no monitoring reports are required, these reports are due at least annually in accordance with Regulation 61.8(4)(p). The annual report must contain all instances of non-compliance required under either subparagraph 5 or subparagraph 6 of this subsection.

8. Other information

Where a permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Permitting Authority, it has a duty to promptly submit such facts or information.

M. BYPASS

1. Bypass not exceeding limitations

The permittees may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Part II.M.2 of this permit. See 40 CFR 122.41(m)(2).

2. Notice of bypass

a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, the permittee must submit prior notice, if possible at least ten days before the date of the bypass. ee 40 CFR §122.41(m)(3)(i) and/or Regulation 61.9(5)(c).

b. Unanticipated bypass. The permittee must submit notice of an unanticipated bypass in accordance with Part II.L.6. See 40 CFR §122.41(m)(3)(ii) .

3. Prohibition of Bypass

Bypasses are prohibited and the division may take enforcement action against the permittee for bypass, unless:

i. the bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

iii. proper notices were submitted to the division.

N. UPSET

1. Effect of an upset

An upset constitutes an affirmative defense to an action brought for noncompliance with permit effluent limitations if the requirements of Part II.N.2. of this permit are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review in accordance with Regulation 61.8(3)(j).

2. Conditions necessary for demonstration of an Upset

A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed contemporaneous operating logs, or other relevant evidence that

a. an upset occurred and the permittee can identify the specific cause(s) of the upset;

b. the permitted facility was at the time being properly operated and maintained; and

c. the permittee submitted proper notice of the upset as required in Part II.L.6.(24-hour notice); and

d. the permittee complied with any remedial measure necessary to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. In addition to the demonstration required above, a permittee who wishes to establish the affirmative defense of upset for a violation of effluent limitations based upon water quality standards shall also demonstrate through monitoring, modeling or other methods that the relevant standards were achieved in the receiving water.

3. Burden of Proof

In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

O. RETENTION OF RECORDS

1. Post-Expiration or Termination Retention

Copies of documentation required by this permit, including records of all data used to complete the application for permit coverage to be covered by this permit, must be

retained for at least three years from the date that permit coverage expires or is terminated. This period may be extended by request of EPA at any time.

2. On-site Retention

   The permittee must retain an electronic version or hardcopy of the SWMP at the construction site from the date of the initiation of construction activities to the date of expiration or inactivation of permit coverage; unless another location, specified by the permittee, is approved by the division.

P. REOPENER CLAUSE

1. Procedures for modification or revocation

   Permit modification or revocation of this permit or coverage under this permit will be conducted according to Regulation 61.8(8).

2. Water quality protection

   If there is evidence indicating that the stormwater discharges authorized by this permit cause, have the reasonable potential to cause or contribute to an excursion above any applicable water quality standard, the permittee may be required to obtain an individual permit, or the permit may be modified to include different limitations and/or requirements.

Q. SEVERABILITY

The provisions of this permit are severable. If any provisions or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances and the application of the remainder of this permit shall not be affected.

R. NOTIFICATION REQUIREMENTS

1. Notification to Parties

   All notification requirements, excluding information submitted using the CEOS portal, shall be directed as follows:

   a. Oral Notifications, during normal business hours shall be to:
      Clean Water Compliance Section
      Water Quality Control Division
      Telephone: (303) 692-3500

   b. Written notification shall be to:
      Clean Water Compliance Section
      Water Quality Control Division
      Colorado Department of Public Health and Environment
      WQCD-WQP-B2
      4300 Cherry Creek Drive South
      Denver, CO 80246-1530

S. RESPONSIBILITIES

1. Reduction, Loss, or Failure of Treatment Facility

   The permittee has the duty to halt or reduce any activity if necessary to maintain compliance with the effluent limitations of the permit. It shall not be a defense for a permittee in an enforcement action that it would be necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

T. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 (Oil and Hazardous Substance Liability) of the CWA.

U. Emergency Powers

Nothing in this permit shall be construed to prevent or limit application of any emergency power of the division.

V. Confidentiality

Any information relating to any secret process, method of manufacture or production, or sales or marketing data which has been declared confidential by the permittee, and which may be acquired, ascertained, or discovered, whether in any sampling investigation, emergency investigation, or otherwise, shall not be publicly disclosed by any member, officer, or employee of the Water Quality Control Commission or the division, but shall be kept confidential. Any person seeking to invoke the protection of of this section shall bear the burden of proving its applicability. This section shall never be interpreted as preventing full disclosure of effluent data.

W. Fees

The permittee is required to submit payment of an annual fee as set forth in the 2016 amendments to the Water Quality Control Act. Section 25-8-502 (1.1) (b), and the Colorado Discharge Permit System Regulations 5 CCR 1002-61, Section 61.15 as amended. Failure to submit the required fee when due and payable is a violation of the permit and will result in enforcement action pursuant to Section 25-8-601 et. seq., C.R.S.1973 as amended.

X. Duration of Permit

The duration of a permit shall be for a fixed term and shall not exceed five (5) years. If the permittee desires to continue to discharge, a permit renewal application shall be submitted at least ninety (90) calendar days before this permit expires. Filing of a timely and complete application shall cause the expired permit to continue in force to the effective date of the new permit. The permit's duration may be extended only through administrative extensions and not through interim modifications. If the permittee anticipates there will be no discharge after the expiration date of this permit, the division should be promptly notified so that it can terminate the permit in accordance with Part I.A.3.i.

Y. Section 307 Toxics

If a toxic effluent standard or prohibition, including any applicable schedule of compliance specified, is established by regulation pursuant to Section 307 of the Federal Act for a toxic pollutant which is present in the permittee's discharge and such standard or prohibition is more stringent than any limitation upon such pollutant in the discharge permit, the division

shall institute proceedings to modify or revoke and reissue the permit to conform to the toxic effluent standard or prohibition

Attachment B

Permitting Documentation (NOI, Permit Card, Permit Letters, Pre-construction Photo Log)

Attachment C

Soil Maps

Soil Map—El Paso County Area, Colorado
(Grazing Yak Solar Project)

Map Scale: 1:9,290 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 450 900 1800 2700

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 16, Sep 10, 2018

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

Date(s) aerial images were photographed: Jun 7, 2016—Aug 17, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ascalon sandy loam, 1 to 3 percent slopes	21.4	7.9%
12	Bresser sandy loam, cool, 3 to 5 percent slopes	80.7	29.7%
97	Truckton sandy loam, 3 to 9 percent slopes	152.9	56.2%
100	Truckton-Bresser complex, eroded	16.9	6.2%
Totals for Area of Interest		**271.9**	**100.0%**

Erosion Hazard (Off-Road, Off-Trail)—El Paso County Area, Colorado
(Grazing Yak Solar Project)

Map Scale: 1:9,290 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 450 900 1800 2700

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 Rating Polygons

Very severe

Severe

Moderate

Slight

Not rated or not available

Soil Rating Lines

Very severe

Severe

Moderate

Slight

Not rated or not available

Soil Rating Points

Very severe

Severe

Moderate

Slight

Not rated or not available

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.

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Erosion Hazard (Off-Road, Off-Trail)

Map unit symbol	Map unit name	Rating	Component name (percent)	Rating reasons (numeric values)	Acres in AOI	Percent of AOI
2	Ascalon sandy loam, 1 to 3 percent slopes	Slight	Ascalon (85%)		21.4	7.9%
12	Bresser sandy loam, cool, 3 to 5 percent slopes	Slight	Bresser, cool (85%)		80.7	29.7%
			Truckton (10%)			
			Yoder (5%)			
97	Truckton sandy loam, 3 to 9 percent slopes	Slight	Truckton (85%)		152.9	56.2%
			Blakeland (8%)			
			Bresser (7%)			
100	Truckton-Bresser complex, eroded	Slight	Truckton, eroded (55%)		16.9	6.2%
			Bresser, eroded (30%)			
Totals for Area of Interest					**271.9**	**100.0%**

Rating	Acres in AOI	Percent of AOI
Slight	271.9	100.0%
Totals for Area of Interest	**271.9**	**100.0%**

Description

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope and soil erosion factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

RUSLE2 Related Attributes

This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. Soil property data for each map unit component include the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic surface layer. .

Report—RUSLE2 Related Attributes

Soil properties and interpretations for erosion runoff calculations. The surface mineral horizon properties are displayed. Organic surface horizons are not displayed.

RUSLE2 Related Attributes–El Paso County Area, Colorado								
Map symbol and soil name	Pct. of map unit	Slope length (ft)	Hydrologic group	Kf	T factor	Representative value		
						% Sand	% Silt	% Clay
2—Ascalon sandy loam, 1 to 3 percent slopes								
Ascalon	85	—	B	.24	5	66.6	23.4	10.0
12—Bresser sandy loam, cool, 3 to 5 percent slopes								
Bresser, cool	85	180	B	.15	3	66.8	19.2	14.0
97—Truckton sandy loam, 3 to 9 percent slopes								
Truckton	85	161	A	.28	5	68.0	24.0	8.0
100—Truckton-Bresser complex, eroded								
Truckton, eroded	55	—	A	.24	5	66.8	19.2	14.0
Bresser, eroded	30	—	C	.20	3	66.8	19.2	14.0

Data Source Information

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

Attachment D

Vicinity Map, Pre and Post Drainage Maps, Impaired Water Maps

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Data Source(s): Westwood (2019); ESRI WMS World Streets Basemap Imagery (Accessed 2019).

Legend

Project Boundary

County Boundary

Westwood

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Westwood Professional Services, Inc.

N

0 1 Miles

Grazing Yak

El Paso County, Colorado

Vicinity Map

April 01, 2019

Map Document: N:\0021201.00\GIS\SWPPP Exhibits\2019-04-01_GrazingYak_Ex1_SWPPP_VicinityMap.mxd MJHildreth 4/1/2019 7:23:50 AM

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Data Source(s): Westwood (2019); ESRI WMS World Streets Basemap Imagery (Accessed 2019).

Legend

Project Boundary

County Boundary

Westwood

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Westwood Professional Services, Inc.

N

0 1,000 Feet

Grazing Yak

El Paso County, Colorado

USGS Topographic Map

April 01, 2019

Map Document: N:\0021201.00\GIS\SWPPP Exhibits\2019-04-01_GrazingYak_Ex2_SWPPP_USGSTopoMap.mxd MJHildreth 4/1/2019 7:30:42 AM

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Discharge ID	Latitude	Longitude
1	38.971019	-104.256458
2	38.974296	-104.253839
3	38.977746	-104.248440

Data Source(s): Westwood (2019); ESRI WMS World Streets Basemap Imagery (Accessed 2019).

Legend

- Project Boundary
- County Boundary
- HUC 12 Boundary
- NWI Wetlands
- Array Outline
- Inverter Pad
- NHD Flowline
- Access Road
- Discharge Location

N

0 1,000 Feet

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Grazing Yak

El Paso County, Colorado

Drainage Map

April 01, 2019

Map Document: N:\0021201.00\GIS\SWPPP Exhibits\2019-04-01_GrazingYak_Ex3_SWPPP_DrainageMap.mxd MJHildreth 4/1/2019 8:36:54 AM

WATERS GeoViewer Map Image Layer

COARLA09a	9a. Mainstems of Adobe, Buffalo, Cheyenne, Clay, Gageby, Horse, Two Butte, Wildhorse and Wolf Creeks from their sources to their confluences with the Arkansas River. Mainstems of Chacuacho Creek, San Francisco Creek, Trinchera Creek and Van Bremer Arroyo from their sources to their confluences with the Purgatoire River. Mainstem of Willow Creek from Highway 287 to the confluence with the Arkansas River. Mainstem of Big Sandy Creek from the source to the El Paso/Elbert county line. Mainstem of South Rush Creek from the source to the confluence with Rush Creek. Mainstem of Middle Rush Creek from the source to the confluence with North Rush Creek. North Rush Creek from the source to the confluence with South Rush Creek. Mainstem of Rush Creek to the Lincoln County Line. Mainstem of Antelope Creek from the source to the confluence with Rush Creek; the West May Valley drain from the Fort Lyon Canal to the confluence with the Arkansas River.	
Listed portion: [1]	**COARLA09a_A**	Mainstem (MS) of Buffalo, Cheyenne, Clay, Gageby, Two Butte, Wildhorse and Wolf Cks from sources to the Ark. R. MS of Chacuacho, San Francisco, Trinchera and Van Bremer Cks from sources to the Purgatoire R. MS of Willow Ck from HWY 287 to the confl. with the Ark. R. MS of Big Sandy Creek from source to the El Paso/Elbert cty line. MS of South Rush Ck from source to the confl. with Rush Ck. MS of Middle Rush Ck from source to the confl. with North Rush Ck. North Rush Ck from source to the confl. with South Rush Ck. MS of Rush Ck to the Lincoln cty Line. MS of Antelope Ck from source to the confluence with Rush Ck; the West May Valley drain from Fort Lyon Canal to the confl. with the Ark. R.

Affected Use	Analyte	Category / List [2]	Priority
Aquatic Life Use	Selenium (Dissolved)	5. - 303(d)	L
Water Supply Use	Arsenic (Total)	5. - 303(d)	H
Water Supply Use	Manganese (Dissolved)	5. - 303(d)	L

Listed portion: [1] **COARLA09a_B** Mainstem of Horse Creek

Affected Use	Analyte	Category / List [2]	Priority
Water Supply Use	Sulfate	3b. - M&E list	NA
Water Supply Use	Uranium (Total)	3b. - M&E list	NA
Aquatic Life Use	Selenium (Dissolved)	5. - 303(d)	L
Water Supply Use	Arsenic (Total)	5. - 303(d)	H
Aquatic Life Use	Iron (Total)	5. - 303(d)	H
Water Supply Use	Manganese (Dissolved)	5. - 303(d)	NA

April 2, 2019

1:36,112

GrazingYak0021201EQUIP_Project_bdy

- Override 1
- 303(d) Point
- 303(d) Line
- 303(d) Area
- 305(b) Point
- 305(b) Line
- 305(b) Area
- Streams
- Subwatersheds

0 0.45 0.9 1.8 mi

0 0.5 1 2 km

US EPA
Sources: Esri, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Brad Cooper

Esri, NASA, NGA, USGS, FEMA | Esri, HERE, Garmin, INCREMENT P, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA | US EPA

Attachment E

Site Plans, Grading and Erosion Control Plans, Details, and Spill Response Information

Grazing Yak

El Paso County, Colorado

Grading & Erosion Control Plan - Issued For Permit

PROJECT CONTACT INFORMATION				
CONSULTANT	COMPANY	ADDRESS	NAME	PHONE NO.
APPLICANT (CONTRACTOR)	MORTENSON CONSTRUCTION	1621 18TH ST SUITE 400 DENVER, CO 80202	TRENT MOSTAERT	763-287-3439
CIVIL ENGINEER	WESTWOOD	10170 CHURCH RANCH WAY SUITE 100 WESTMINSTER, CO 80021	BRENDAN MILLER	720-531-8355
LAND OWNER	GRAZING YAK SOLAR, LLC	700 UNIVERSE BLVD JUNO BEACH, FL 33408	JOHN DIDONATO	561-814-7287

DATA SET INFORMATION			
BASE FILE	FILE NAME	PROVIDER	DATE
PV ARRAY	0021201E-EQUIP.dwg	WESTWOOD	3/21/2019
TOPO	0021201ECON.dwg	WESTWOOD	3/18/2019

Plan Sheet Index		
Sheet Number	Sheet Title	Sheet Number
CVP01	Cover Sheet	1
SPPOA	Overall Site Grading & Erosion Control Plan	2
SPP01	Grading & Erosion Control - Sheet 1	3
SPP02	Grading & Erosion Control - Sheet 2	4
SPP03	Grading & Erosion Control - Sheet 3	5
SPP04	Grading & Erosion Control - Sheet 4	6
SPP05	Grading & Erosion Control - Sheet 5	7
SPP06	Grading & Erosion Control - Sheet 6	8
SPP07	Grading & Erosion Control - Sheet 7	9
ND01	Notes and Details - Sheet 1	10
ND02	Notes and Details - Sheet 2	11
ND03	Notes and Details - Sheet 3	12
ND04	Notes and Details - Sheet 4	13
ND05	Notes and Details - Sheet 5	14
ND06	Notes and Details - Sheet 6	15

PROJECT DESCRIPTION

35 MW-AC SINGLE-AXIS TRACKER SOLAR PROJECT

PROJECT AREA: ±280 ACRES INCLUDING "LIMITS OF CONSTRUCTION"

GENERAL NOTES:

1. ALL PHOTOVOLTAIC (PV), ELECTRICAL OR STRUCTURAL EQUIPMENT LOCATIONS SHOWN ON THESE PLANS ARE APPROXIMATE AND SOLELY CONCEPTUAL AT THIS TIME AND MAY BE SUBJECT TO CHANGE PENDING FINAL FACILITY DESIGN AND/OR UTILITY INTERCONNECTION REQUIREMENTS.
2. TREES ARE NOT OBSERVED WITHIN THE PV ARRAY AREAS. IF NECESSARY, TREES AND SHRUBS ARE TO BE REMOVED AS NECESSARY TO ALLOW FOR THE INSTALLATION OF THE ARRAYS AND TO ELIMINATE SHADING.
3. SHADED AREAS OUTSIDE THE LIMITS OF CONSTRUCTION SHALL NOT BE DISTURBED. CONSTRUCTION FENCE OR CONSTRUCTION MARKERS TO DELINEATE LIMITS OF CONSTRUCTION SHALL BE INSTALLED PRIOR TO ANY WORK ON SITE.
4. ANY AREAS DISTURBED WILL BE SEEDED WITH A MEADOW GRASS SEED MIX THAT WILL IMPROVE RUNOFF FROM THE EXISTING CONDITIONS, SLOWING DOWN THE RUNOFF AND ALLOWING FOR ADDITIONAL ONSITE INFILTRATION. SEE URBAN DRAINAGE VOLUME 3 FOR APPLICABLE SEED MIX AT TIME OF PLANTING.
5. PRIOR TO DEMOBILIZATION FROM THE SITE, THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE INSTALLED BMP'S, INCLUDING BUT NOT LIMITED TO STRAW WATTLES.
6. SITE BENCHMARK TO BE ESTABLISHED PRIOR TO CONSTRUCTION.

LANDOWNERS ACKNOWLEDGEMENT:

I HEREBY CERTIFY THAT THE GRADING, EROSION, AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED ACCORDING TO THE DESIGN PRESENTED IN THIS DOCUMENT. I UNDERSTAND THAT ADDITIONAL EROSION CONTROL, SEDIMENT CONTROL AND WATER QUALITY ENHANCING MEASURES MAY BE REQUIRED OF THE OWNER AND HIS OR HER AGENTS DUE TO UNFORESEEN POLLUTANT DISCHARGES OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THE PLAN SHALL BE THE OBLIGATION OF THE LAND OWNER AND/OR HIS SUCCESSORS OR HEIRS; UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

OWNER OR AUTHORIZED AGENT _____

AUTHORIZED SIGNATURE DATE _____

ENGINEER'S SIGNATURE:

I HEREBY ATTEST THAT THIS GRADING, EROSION, AND SEDIMENT CONTROL (GESC) DOCUMENT FOR GRAZING YAK SOLAR HAS BEEN PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, AND TO THE BEST OF MY KNOWLEDGE AND ABILITY HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST VERSION OF THE EL PASO COUNTY GESC MANUAL. THE SIGNATURE AND STAMP AFFIXED HEREON CERTIFIES THAT THIS GESC DOCUMENT WAS PREPARED IN ACCORDANCE WITH THE REQUIRED REGULATIONS AND CRITERIA; HOWEVER, THE STAMP AND SIGNATURE DOES NOT CERTIFY OR GUARANTEE FUTURE PERFORMANCE OF THE EXECUTION OF THE PLAN BY THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR EXECUTING THE CONSTRUCTION WORK ACCORDING TO THE INFORMATION SET FORTH IN THE PLAN AND IN ACCORDANCE WITH ALL APPLICABLE REQUIREMENTS.

REGISTERED PROFESSIONAL ENGINEER BRENDAN D. MILLER, P.E.

STATE OF COLORADO NO. 44186
AFFIX SEAL W/DATE

COLORADO LICENSED
BRENDAN DEAN MILLER
44186
PROFESSIONAL ENGINEER
04/22/2019

EL PASO COUNTY GRADING AND EROSION CONTROL PLAN NOTES

1. STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFFSITE WATERS, INCLUDING WETLANDS.
2. NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS TO REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
3. A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. DURING CONSTRUCTION THE SWMP IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR AND SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
4. ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
5. CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT MAY CONTRIBUTE POLLUTANTS TO STORMWATER. TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
6. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES IS NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN PRIOR TO IMPLEMENTATION.
7. TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE STABILIZED.
8. 8. FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLAN DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
9. ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DEFINED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE HYDROLOGY OR HYDRAULICS OF A PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
10. ANY EARTH DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE, UNLESS INFEASIBLE.
11. COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED.
12. ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
13. CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUT SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY.
14. DEWATERING OPERATIONS: UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT MAY NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF.
15. EROSION CONTROL BLANKETING IS TO BE USED ON SLOPES STEEPER THAN 3:1.
16. 6. BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. BMP'S MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
17. VEHICLE TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFFSITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
19. THE OWNER, SITE DEVELOPER, CONTRACTOR, AND/OR THEIR AUTHORIZED AGENTS SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
20. THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
21. NO CHEMICALS ARE TO BE USED BY THE CONTRACTOR, WHICH HAVE THE POTENTIAL TO BE RELEASED IN STORMWATER UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
22. BULK STORAGE OF PETROLEUM PRODUCTS OR OTHER LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL HAVE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
23. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE FLOW LINE OF THE CURB AND GUTTER OR IN THE DITCH FLOW LINE.
24. INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, OR COUNTY AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
25. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
26. PRIOR TO ACTUAL CONSTRUCTION THE PERMITEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
27. A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
28. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY TERRACON CONSULTANTS DATED SEPTEMBER 2018 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
29. AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS

REGIONAL MAP

VICINITY MAP

Westwood

Phone (720) 531-8350 10170 Church Ranch Way, Suite #100
Westminster, CO 80021
westwoodps.com

Westwood Professional Services, Inc.

PREPARED FOR:

Mortenson construction

NEXTera ENERGY

REVISIONS:

#	DATE	COMMENT
A	03/27/19	Issued for 30% Design Review
B	04/22/19	Issued for Permit

Grazing Yak Solar

El Paso County, Colorado

Cover Sheet

Not For Construction

DATE: 04/22/2019

SHEET: **CVP01**

N:\0021201-00\dwg\Civil\0021201GEC_GV01.dwg, 4/23/2019 4:18 PM, Paul Cicler

LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- X — PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- GL — PROPOSED GRADING LIMITS
- 340 — PROPOSED INDEX CONTOUR LINE
- PROPOSED INTERVAL CONTOUR LINE
- 6775 — EX. INDEX CONTOUR LINE
- EX. INTERVAL CONTOUR LINE
- EX. EASEMENT LINE
- SECTION BOUNDARY LINE
- X — EX. FENCE LINE
- POH — EX. OVERHEAD POWERLINE
- PUG — EX. UNDERGROUND ELEC. LINE
- FO — EX. FIBER OPTIC LINE
- EX. GRAVEL ROAD
- EDGE OF ASPHALT
- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- FLOW DIRECTION

Existing Topo Flood Depths		
0.500'	1.000'	
1.000'	1.500'	
1.500'	2.000'	
2.000'	2.500'	
2.500'	3.000'	
3.000'	5.000'	

VICINITY MAP
Scale: 1" = 5000'

Westwood
Phone (720) 531-8350
10170 Church Ranch Way, Suite #100
Westminster, CO 80021
westwoodps.com
Westwood Professional Services, Inc.

COLORADO LICENSED
BRENDAN RYAN MILLER
44186
PROFESSIONAL ENGINEER
04/22/2019

PREPARED FOR:
Mortenson construction
NEXTera ENERGY

REVISIONS:

#	DATE	COMMENT
A	03/27/19	Issued for 30% Design Review
B	04/22/19	Issued for Permit

N

0' 300' 600' 900'

Grazing Yak Solar

El Paso County, Colorado

Overall Site Grading & Erosion Control Plan

Not For Construction

DATE: 04/22/2019

SHEET: SPPOA

See Plan View 2 (This Sheet)

1 Plan View 1
1" = 300'

See Plan View 1 (This Sheet)

See Plan View 3 (This Sheet)

2 Plan View 2
1" = 300'

See Plan View 2 (This Sheet)

3 Plan View 3
1" = 300'

LEGEND & ABBREVIATIONS

- EX. PROJECT BOUNDARY LINE
- INVERTER BLOCK BOUNDARY
- P-PUG-1 — PROPOSED UNDERGROUND CIRCUIT 1
- P-PUG-2 — PROPOSED UNDERGROUND CIRCUIT 2
- X — EX. FENCE LINE
- PROPOSED SOLAR TRACKER
- BOUNDARY SET BACK LINE 10M
- BOUNDARY SET BACK LINE 15M
- PROPOSED GRAVEL ACCESS RD. (2500 FT.)
- PROPOSED DIRT ACCESS RD. (13,425 FT.)
- PROPOSED CAB
- PROPOSED SECONDARY CAB
- PROPOSED LAYDOWN AREA
- SF — PROPOSED SILT FENCE LINE
- PROPOSED PROTECTED CROSSING
- PROPOSED VELOCITY DISSIPATER
- 6775 — EX. INDEX CONTOUR LINE
- EX. INTERVAL CONTOUR LINE
- EX. SECTION LINE
- EX. EASEMENT LINE
- X — EX. FENCE LINE
- POH — EX. OVERHEAD POWERLINE
- FO — EX. FIBER OPTIC LINE
- EX. GRAVEL ROAD
- EX. ASPHALT PAVEMENT ROAD

VICINITY MAP
Scale: 1" = 5000'

Existing Topo Flood Depths		
0.500'	1.000'	
1.000'	1.500'	
1.500'	2.000'	
2.000'	2.500'	
2.500'	3.000'	
3.000'	5.000'	

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04/22/2019

PREPARED FOR:

Mortenson construction

NEXTera ENERGY

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#	DATE	COMMENT
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Grazing Yak Solar

El Paso County, Colorado

Sheet Index

Not For Construction

DATE: 04/22/2019

SHEET: SPINDX

SEE SHEET C.301

SEE SHEET C.302

LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
- PROPOSED DIRT ACCESS RD.
- PROPOSED FENCE LINE
- PROPOSED PROTECTED CROSSING
- GL — PROPOSED GRADING LIMITS
- 340 — PROPOSED INDEX CONTOUR LINE
- PROPOSED INTERVAL CONTOUR LINE
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- EX. ASPHALT PAVEMENT ROAD
- EX. BERM
- EX. WATERWAY
- FEMA FLOODPLAIN

EROSION CONTROL LEGEND

- FLOW DIRECTION ARROW
- TEMPORARY CONSTRUCTION FENCE — CF
- SF — SILT FENCE — SF
- PROPOSED EARTHEN BERM — EB
- STABILIZED STAGING AREA — SSA
- VEHICLE TRACKING CONTROL — VTC
- SEEDING AND MULCHING (INCLUDE AS REQUIRED) — SM
- EROSION CONTROL BLANKET — ECB
- SEDIMENT TRAP — ST
- PROPOSED VELOCITY DISSIPATER
- XX / X.XX ac-ft. — TEMPORARY SEDIMENT BASINS (Contractor to determine grading limits to provide volume requirement stated in SWMP).

KEYMAP
Scale: 1"=1500'

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0' 80' 160' 240'

Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 1

Not For Construction

DATE: 04/22/2019

SHEET: SPP01

LEGEND & ABBREVIATIONS

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KEYMAP
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Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 2

Not For Construction

DATE: 04/22/2019

SHEET: SPP02

LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
- PROPOSED GRAVEL ACCESS RD.
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EROSION CONTROL LEGEND

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KEYMAP
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Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 3

Not For Construction

DATE: 04/22/2019

SHEET: SPP03

LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
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Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 4

Not For Construction

DATE: 04/22/2019

SHEET: SPP04

LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
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EROSION CONTROL LEGEND

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KEYMAP
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Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 5

Not For Construction

DATE: 04/22/2019

SHEET: SPP05

LEGEND & ABBREVIATIONS

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EROSION CONTROL LEGEND

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Scale: 1"=1500'

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Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 6

Not For Construction

DATE: 04/22/2019

SHEET: SPP06

LEGEND & ABBREVIATIONS

- PROJECT BOUNDARY LINE
- PROPOSED SOLAR TRACKER
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EROSION CONTROL LEGEND

	FLOW DIRECTION ARROW	
	TEMPORARY CONSTRUCTION FENCE	CF
SF	SILT FENCE	SF
	PROPOSED EARTHEN BERM	EB
	STABILIZED STAGING AREA	SSA
	VEHICLE TRACKING CONTROL	VTC
	SEEDING AND MULCHING (INCLUDE AS REQUIRED)	SM
	EROSION CONTROL BLANKET	ECB
	SEDIMENT TRAP	ST
	PROPOSED VELOCITY DISSIPATER	
XX / X.XX ac-ft.	TEMPORARY SEDIMENT BASINS (Contractor to determine grading limits to provide volume requirement stated in SWMP).	

KEYMAP
Scale: 1"=1500'

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Grazing Yak Solar

El Paso County, Colorado

Grading & Erosion Control - Sheet 7

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DATE: 04/22/2019

SHEET: SPP07

LEGEND & ABBREVIATIONS

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Grazing Yak Solar

El Paso County, Colorado

Route to Interconnect
Erosion Control Plan-
Sheet 8

Not For Construction

DATE: 04/22/2019

SHEET: SPP08

Vehicle Tracking Control (VTC) SM-4

VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

Stabilized Staging Area (SSA) SM-6

SSA-1. STABILIZED STAGING AREA

STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF STAGING AREA(S).
   -CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

Surface Roughening (SR) EC-1

SR-1. SURFACE ROUGHENING
FOR STEEP SLOPES (3:1 OR STEEPER)

SR-2. SURFACE ROUGHENING
FOR LOW SLOPES (LESS THAN 3:1)

SM-4 Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   -LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
   -TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).

2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.

3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.

4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.

6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.

5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

SM-6 Stabilized Staging Area (SSA)

STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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NEXTera ENERGY

REVISIONS:

#	DATE	COMMENT
A	03/27/19	Issued for 30% Design Review
B	04/22/19	Issued for Permit

Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 1

Not For Construction

DATE: 04/22/2019

SHEET: ND01

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SM-3 Construction Fence (CF)

CF–1. PLASTIC MESH CONSTRUCTION FENCE

CONSTRUCTION FENCE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF CONSTRUCTION FENCE.

2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR–GRADE MATERIAL THAT IS AT LEAST 4' HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.

4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.

5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

Silt Fence (SF) SC-1

SILT FENCE

SECTION A

SF–1. SILT FENCE

Stockpile Management (SP) MM-2

SP–2. MATERIALS STAGING IN ROADWAY

MATERIALS STAGING IN ROADWAYS INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   –LOCATION OF MATERIAL STAGING AREA(S).
   –CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. FEATURE MUST BE INSTALLED PRIOR TO EXCAVATION, EARTHWORK OR DELIVERY OF MATERIALS.

3. MATERIALS MUST BE STATIONED ON THE POLY LINER. ANY INCIDENTAL MATERIALS DEPOSITED ON PAVED SECTION OR ALONG CURB LINE MUST BE CLEANED UP PROMPTLY.

4. POLY LINER AND TARP COVER SHOULD BE OF SIGNIFICANT THICKNESS TO PREVENT DAMAGE OR LOSS OF INTEGRITY.

5. SAND BAGS MAY BE SUBSTITUTED TO ANCHOR THE COVER TARP OR PROVIDE BERMING UNDER THE BASE LINER.

6. FEATURE IS NOT INTENDED FOR USE WITH WET MATERIAL THAT WILL BE DRAINING AND/OR SPREADING OUT ON THE POLY LINER OR FOR DEMOLITION MATERIALS.

7. THIS FEATURE CAN BE USED FOR:
   –UTILITY REPAIRS.
   –WHEN OTHER STAGING LOCATIONS AND OPTIONS ARE LIMITED.
   –OTHER LIMITED APPLICATION AND SHORT DURATION STAGING.

Construction Fence (CF) SM-3

CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

SC-1 Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2–5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.

2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.

3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.

4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.

5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.

6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J–HOOK." THE "J–HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' – 20').

7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".

5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.

6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.

7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

MM-2 Stockpile Management (SM)

MATERIALS STAGING IN ROADWAY MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. INSPECT PVC PIPE ALONG CURB LINE FOR CLOGGING AND DEBRIS. REMOVE OBSTRUCTIONS PROMPTLY.

5. CLEAN MATERIAL FROM PAVED SURFACES BY SWEEPING OR VACUUMING.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCO STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM AURORA, COLORADO)

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04/22/2019

PREPARED FOR:

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Notes and Details - Sheet 2

Not For Construction

DATE: 04/22/2019

SHEET: ND02

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SEDIMENT TRAP PLAN

SECTION A

SECTION B

ST–1. SEDIMENT TRAP

SEDIMENT BASIN PLAN

*EXCEPT WHERE THE HOLES EXCEED 1" DIAMETER, THEN UP TO TWO COLUMNS OF SAME SIZED HOLES MAY BE USED

SECTION A

SEDIMENT BASIN MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).

5. SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.

6. WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SEDIMENT TRAP INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION, LENGTH AND WIDTH OF SEDIMENT TRAP.

2. ONLY USE FOR DRAINAGE AREAS LESS THAN 1 ACRE.

3. SEDIMENT TRAPS SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND–DISTURBING ACTIVITIES.

4. SEDIMENT TRAP BERM SHALL BE CONSTRUCTED FROM MATERIAL FROM EXCAVATION. THE BERM SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.

5. SEDIMENT TRAP OUTLET TO BE CONSTRUCTED OF RIPRAP, TYPE M (D50=12") TYP.SMALLER ROCK SIZE MAY BE ALLOWABLE FOR SMALLER TRAPS IF APPROVED BY LOCAL JURISDICTION.

6. THE TOP OF THE EARTHEN BERM SHALL BE A MINIMUM OF 6" HIGHER THAN THE TOP OF THE RIPRAP OUTLET STRUCTURE.

7. THE ENDS OF THE RIPRAP OUTLET STRUCTURE SHALL BE A MINIMUM OF 6" HIGHER THAN THE CENTER OF THE OUTLET STRUCTURE.

SEDIMENT TRAP MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. REMOVE SEDIMENT ACCUMULATED IN TRAP AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN THE SEDIMENT DEPTH REACHES ½ THE HEIGHT OF THE RIPRAP OUTLET.

5. SEDIMENT TRAPS SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

6. WHEN SEDIMENT TRAPS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

TABLE SB–1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN

Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)
1	12 ½	2	9/32
2	21	3	15/16
3	28	5	½
4	33 ½	6	5/16
5	38 ½	8	23/32
6	43	9	21/32
7	47 ¼	11	25/32
8	51	12	27/32
9	55	13	⅞
10	58 ¼	15	15/16
11	61	16	31/32
12	64	18	1
13	67 ½	19	1 1/16
14	70 ½	21	1 ⅛
15	73 ¼	22	1 3/16

SEDIMENT BASIN INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF SEDIMENT BASIN.
   –TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
   –FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
   –FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.

2. FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.

3. SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND–DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS AS A STORMWATER CONTROL.

4. EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.

5. EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.

6. PIPE SCH 40 OR GREATER SHALL BE USED.

7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

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04/22/2019

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El Paso County, Colorado

Notes and Details - Sheet 3

Not For Construction

DATE: 04/22/2019

SHEET: ND03

ED–1. COMPACTED UNLINED EARTH DIKE FORMED BY BERM

DS–1. COMPACTED UNLINED EXCAVATED SWALE

DS–2. COMPACTED UNLINED SWALE FORMED BY CUT AND FILL

DS–3. ECB LINED SWALE (CUT AND FILL OR BERM)

DS–4. SYNTHETIC LINED SWALE

DS–5. RIPRAP LINED SWALE

EARTH DIKE AND DRAINAGE SWALE INSTALLATION NOTES

1. SEE SITE PLAN FOR:
   - LOCATION OF DIVERSION SWALE
   - TYPE OF SWALE (UNLINED, COMPACTED AND/OR LINED).
   - LENGTH OF EACH SWALE.
   - DEPTH, D, AND WIDTH, W DIMENSIONS.
   - FOR ECB/TRM LINED DITCH, SEE ECB DETAIL.
   - FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, D50.

2. SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES AND/OR DIVERSION SWALES EXCEEDING 2–YEAR FLOW RATE OR 10 CFS.

3. EARTH DIKES AND SWALES INDICATED ON SWMP PLAN SHALL BE INSTALLED PRIOR TO LAND–DISTURBING ACTIVITIES IN PROXIMITY.

4. EMBANKMENT IS TO BE COMPACTED TO 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698.

5. SWALES ARE TO DRAIN TO A SEDIMENT CONTROL BMP.

6. FOR LINED DITCHES, INSTALLATION OF ECB/TRM SHALL CONFORM TO THE REQUIREMENTS OF THE ECB DETAIL.

7. WHEN CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION SWALE, INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12 INCHES.

ECB–3. OUTSIDE OF DRAINAGEWAY

STAKING PATTERNS BY ECB TYPE

STAKING PATTERNS BY SLOPE OR CHANNEL TYPE

EARTH DIKE AND DRAINAGE SWALE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SWALES SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION; IF APPROVED BY LOCAL JURISDICTION, SWALES MAY BE LEFT IN PLACE.

5. WHEN A SWALE IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF COLORADO SPRINGS, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

EROSION CONTROL BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION OF ECB.
   –TYPE OF ECB (STRAW, STRAW–COCONUT, COCONUT, OR EXCELSIOR).
   –AREA, A, IN SQUARE YARDS OF EACH TYPE OF ECB.

2. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE PREFERRED FOR RECPs, ALTHOUGH SOME JURISDICTIONS MAY ALLOW OTHER MATERIALS IN SOME APPLICATIONS.

3. IN AREAS WHERE ECBs ARE SHOWN ON THE PLANS, THE PERMITTEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION, AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO ECB INSTALLATION AND THE ECB SHALL BE IN FULL CONTACT WITH SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.

4. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.

5. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL ECBs EXCEPT STRAW WHICH MAY USE AN OVERLAPPING JOINT.

6. INTERMEDIATE ANCHOR TRENCH SHALL BE USED AT SPACING OF ONE–HALF ROLL LENGTH FOR COCONUT AND EXCELSIOR ECBs.

7. OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF ECBs TOGETHER FOR ECBs ON SLOPES.

8. MATERIAL SPECIFICATIONS OF ECBs SHALL CONFORM TO TABLE ECB–1.

9. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING ECBS SHALL BE RESEEDED AND MULCHED.

10. DETAILS ON DESIGN PLANS FOR MAJOR DRAINAGEWAY STABILIZATION WILL GOVERN IF DIFFERENT FROM THOSE SHOWN HERE.

TABLE ECB–1. ECB MATERIAL SPECIFICATIONS

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING**
STRAW*	–	100%	–	DOUBLE/ NATURAL
STRAW–COCONUT	30% MIN	70% MAX	–	DOUBLE/ NATURAL
COCONUT	100%	–	–	DOUBLE/ NATURAL
EXCELSIOR	–	–	100%	DOUBLE/ NATURAL

*STRAW ECBs MAY ONLY BE USED OUTSIDE OF STREAMS AND DRAINAGE CHANNEL.
**ALTERNATE NETTING MAY BE ACCEPTABLE IN SOME JURISDICTIONS

EROSION CONTROL BLANKET MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ECBs SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE, UNLESS REQUESTED TO BE REMOVED BY THE LOCAL JURISDICTION.

5. ANY ECB PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW THE GEOTEXTILE THAT HAVE ERODED TO CREATED A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE ECB REINSTALLED.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND TOWN OF PARKER COLORADO, NOT AVAILABLE IN AUTOCAD)

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Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 4

Not For Construction

DATE: 04/22/2019

SHEET: ND04

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SC-3 Straw Bale Barrier (SBB)

STRAW BALE

TRENCH FOR STRAW BALE

SECTION A

SBB–1. STRAW BALE

Sediment Control Log (SCL) SC-2

TRENCHED SEDIMENT CONTROL LOG

SECTION A
TRENCHED SEDIMENT CONTROL LOG

LOG JOINTS

SCL–1. TRENCHED SEDIMENT CONTROL LOG

Sediment Control Log (SCL) SC-2

SCL–3. SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

Straw Bale Barrier (SBB) SC-3

STRAW BALE INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   –LOCATION(S) OF STRAW BALES.

2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.

3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.

4. WHEN STRAW BALES ARE USED IN SERIES AS A BARRIER, THE END OF EACH BALE SHALL BE TIGHTLY ABUTTING ONE ANOTHER.

5. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"X18"X18".

6. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PLACED SO THAT BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S). ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALE(S) AND COMPACTED.

7. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKES SHALL BE 2"X2"X24". WOODEN STAKES SHALL BE DRIVEN 6" INTO THE GROUND.

STRAW BALE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN, OR DAMAGED BEYOND REPAIR.

5. SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE STRAW BALE BARRIER.

6. STRAW BALES ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

7. WHEN STRAW BALES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

SC-2 Sediment Control Log (SCL)

COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

SECTION A
COMPOST SEDIMENT CONTROL LOG

LOG JOINTS

SCL–2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

SC-2 Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.

2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND–DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.

5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ⅓ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.

6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY ½ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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BRENDAN RYAN MILLER
44186
PROFESSIONAL ENGINEER
04/22/2019

PREPARED FOR:
Mortenson construction
NEXTera ENERGY

REVISIONS:

#	DATE	COMMENT
A	03/27/19	Issued for 30% Design Review
B	04/22/19	Issued for Permit

Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 5

Not For Construction

DATE: 04/22/2019

SHEET: ND05

TABLE CB-1. CLASS 1 COMPOST

PARAMETERS	CHARACTERISTIC
MINIMUM STABILITY INDICATOR	STABLE TO VERY STABLE
SOLUBLE SALTS	MAXIMUM 5 mmhos/cm
PH	6.0 – 8.0
AG INDEX	> 10
MATURITY INDICATOR EXPRESSED AS PERCENTAGE OF GERMINATION/VIGOR	80+/80+
MATURITY INDICATOR EXPRESSED AS AMMONIA N/ NITRATE N RATIO	< 4
MATURITY INDEX AS CARBON TO NITROGEN RATIO	20:1
TESTED FOR CLOPYRALID	YES/NEGATIVE RESULT
MOISTURE CONTENT	30–60%
ORGANIC MATTER CONTENT	25–45% OF DRY WEIGHT
PARTICLE SIZE DISTRIBUTION	3" (75mm) 100% PASSING
PRIMARY, SECONDARY NUTRIENTS; TRACE ELEMENTS	MUST BE REPORTED
TESTING AND TEST REPORT SUBMITTAL REQUIREMENTS	STA + CLOPYRALID
ORGANIC MATTER PER CUBIC YARD	MUST REPORT
CHEMICAL CONTAMINANTS	COMPLY WITH US EPA CLASS A STANDARD, 40 CFR 503.1 TABLES 1 & 3 LEVELS
MINIMUM MANUFACTURING/PRODUCTION REQUIREMENT	FULLY PERMITTED UNDER COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
RISK FACTOR RELATING TO PLANT GERMINATION AND HEALTH	LOW

CB–1. COMPOST BLANKET AND COMPOST FILTER BERM

COMPOST FILTER BERM AND COMPOST BLANKET INSTALLATION NOTES

1. SEE PLAN VIEW FOR
   –LOCATION OF COMPOST FILTER BERM(S).
   –LENGTH OF COMPOST FILTER BERM(S).

2. COMPOST BERMS AND BLANKETS MAY BE USED IN PLACE OF STRAW MULCH OR GEOTEXTILE FABRIC IN AREAS WHERE ACCESS TO LANDSCAPING IS DIFFICULT DUE TO LANDSCAPING OR OTHER OBJECTS OR IN AREAS WHERE A SMOOTH TURF GRASS FINISH IS DESIRED.

3. FILTER BERMS SHALL RUN PARALLEL TO THE CONTOUR.

4. FILTER BERMS SHALL BE A MINIMUM OF 1 FEET HIGH AND 2 FEET WIDE.

5. FILTER BERMS SHALL BE APPLIED BY PNEUMATIC BLOWER OR BY HAND.

6. FILTER BERMS SHALL ONLY BE UTILIZED IN AREAS WHERE SHEET FLOW CONDITIONS PREVAIL AND NOT IN AREAS OF CONCENTRATED FLOW.

7. COMPOST BLANKETS SHALL BE APPLIED AT A DEPTH OF 1 –3 INCHES (TYPICALLY 2 INCHES). FOR AREAS WITH EXISTING VEGETATION THAT ARE TO BE SUPPLEMENTED BY COMPOST, A THIN 0.5–INCH LAYER MAY BE USED.

8. SEEDING SHALL BE PERFORMED PRIOR TO THE APPLICATION OF COMPOST. ALTERNATIVELY, SEED MAY BE COMBINED WITH COMPOST AND BLOWN WITH THE PNEUMATIC BLOWER.

9. WHEN TURF GRASS FINISH IS NOT DESIRED, SURFACE ROUGHENING ON SLOPES SHALL TAKE PLACE PRIOR TO COMPOST APPLICATION.

10. COMPOST SHALL BE A CLASS 1 COMPOST AS DEFINED BY TABLE CB–1.

COMPOST FILTER BERM MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. COMPOST BERMS AND BLANKETS SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RILLING IN THE COMPOST SURFACE OCCURS.

(DETAILS ADAPTED FROM ARAPAHOE COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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04/22/2019

PREPARED FOR:

Mortenson construction

NEXTera ENERGY

REVISIONS:

#	DATE	COMMENT
A	03/27/19	Issued for 30% Design Review
B	04/22/19	Issued for Permit

Grazing Yak Solar

El Paso County, Colorado

Notes and Details - Sheet 6

Not For Construction

DATE: 04/22/2019

SHEET: ND06

N:\0021203.00\dwg\Cad\0021203100ND01.dwg, 4/23/2019 4:41:19 PM pat.Cider

Attachment F

Training Documentation

Stormwater Pollution Prevention Training Log

Project Name:

Project Location:

Instructor's Name(s):

Instructor's Title(s):

Course Location:

Date of Course:

Course Length(hours):

Stormwater Training Topic: ***(check as appropriate)***

- ❑ **Sediment and Erosion Controls**
- ❑ **Emergency Procedures**
- ❑ **Stabilization Controls**
- ❑ **Inspections/Corrective Actions**
- ❑ **Pollution Prevention Measures**
- ❑ **Stormwater Runoff Sampling**

Specific Training Objective(s):

_____

_____

_____

_____

Attendee Roster: *(attach additional pages as necessary)*

No.	Name of Attendee	Company
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Attachment G

Inspection and Maintenance Forms and Spill Response and Reporting Information

CONSTRUCTION STORMWATER SITE INSPECTION REPORT

Facility Name		Permittee	
Date of Inspection		Weather Conditions	
Permit Certification #		Disturbed Acreage	
Phase of Construction		Inspector Title	
Inspector Name			

	YES	NO
Is the above inspector a qualified stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)	☐	☐

INSPECTION FREQUENCY	
Check the box that describes the minimum inspection frequency utilized when conducting each inspection	
At least one inspection every 7 calendar days	☐
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	☐
• This is this a post-storm event inspection. Event Date: _____	☐
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	☐
• Post-storm inspections at temporarily idle sites	☐
• Inspections at completed sites/area	☐
• Winter conditions exclusion	☐
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	YES ☐ NO ☐

INSPECTION REQUIREMENTS*
i. Visually verify all implemented control measures are in effective operational condition and are working as designed in the specifications
ii. Determine if there are new potential sources of pollutants
iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges
iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action
*Use the attached **Control Measures Requiring Routine Maintenance** and **Inadequate Control Measures Requiring Corrective Action** forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED			
Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?			
	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions **Inadequate Control Measures Requiring Corrective Action** form
Construction site perimeter	☐	☐	
All disturbed areas	☐	☐	
Designated haul routes	☐	☐	
Material and waste storage areas exposed to precipitation	☐	☐	
Locations where stormwater has the potential to discharge offsite	☐	☐	
Locations where vehicles exit the site	☐	☐	
Other: _____	☐	☐	

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring maintenance?	NO	YES	
	☐	☐	If "YES" document below

Date Observed	Location	Control Measure	Maintenance Required	Date Completed

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

Are there inadequate control measures requiring corrective action?	NO	YES	
	☐	☐	If "YES" document below

Are there additional control measures needed that were not in place at the time of inspection?	NO	YES	
	☐	☐	If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

REPORTING REQUIREMENTS

The permittee shall report the following circumstances orally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances. The division may waive the written report required if the oral report has been received within 24 hours.

All Noncompliance Requiring 24-Hour Notification per Part II.L.6 of the Permit

a. Endangerment to Health or the Environment

Circumstances leading to any noncompliance which may endanger health or the environment regardless of the cause of the incident (See Part II.L.6.a of the Permit)

This category would primarily result from the discharge of pollutants in violation of the permit

b. Numeric Effluent Limit Violations

- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit)
- Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit)
- Daily maximum violations (See Part II.L.6.d of the Permit)

Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.

Has there been an incident of noncompliance requiring 24-hour notification?	NO	YES	
	☐	☐	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Oral Notification	Date of 5 Day Written Notification *

*Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement:

"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."

Name of Qualified Stormwater Manager	Title of Qualified Stormwater Manager
Signature of Qualified Stormwater Manager	Date

Notes/Comments

COLORADO
Water Quality Control Division
Department of Public Health & Environment

Five day reporting form

Incident / spill / sanitary sewer overflow release

Use this form to report incidents impacting waters of the state

The Water Quality Control Division distinguishes between reporting requirements for incidents that occur at entities operating under a Colorado Discharge Permit System (CDPS) permit and those resulting from non-permitted activities.

Permitted activities - Reporting and management of non-compliance incidents and spills that occur as a result of permitted activities should be performed in accordance with the specific requirements in the notifications section of your permit. You may use this form to submit the information requested in the permit.

Non-permitted activities - In the case of an activity where a permit does not address reporting of, or response to, a given spill please submit a written summary of the event, your response, and clean up efforts to the division within five working days of the date of the event. This form is provided for your convenience. If you have any questions please contact the division's field services staff person assigned to your spill case.

Prior to the five working day deadline you may request an extension to submit the report if needed for sampling analysis or other reasons. To request an extension please send an email to the division's field services staff person assigned to your spill case or to the spill administrator. The field services contact list is available at: www.colorado.gov/cdphe/wq-inspection-services-contact-us.

Please send the completed form or report with signature to the division's field services spill administrator:

Michelle Thiebaud
222 S. Sixth Street, 232
Grand Junction, CO 81501

Telephone: 970-248-7150
Fax: 970-248-7198
Email: michelle.thiebaud@state.co.us

1. Incident background information					
Incident/spill number (division provided)		Date of event		County	
Type of incident / spill / SSO (check one)					
☐ Sanitary sewer overflow		☐ Potable water/reuse water/ reclaimed water		☐ Biosolids	
☐ Wastewater treatment plant bypass or upset (authorized outfall point)		☐ Petroleum product		☐ Oil or gas field production spill	
☐ Wastewater treatment plant spill or overflow (other than outfall)		☐ Chemical		☐ Other	
Estimated volume released					
Size and depth of area affected					
Contact information					
Potentially responsible party contact name					
Potentially responsible party company/agency name					
CDPHE Permit number and facility name (if applicable)					
Email address				Phone	
2. Incident information: Please provide the following information.					
A. Describe incident including source, cause, and location (e.g. address, latitude/longitude).					
B. Material released, e.g. untreated wastewater, specific chemical or product, biosolids. Please attach the OSHA Material Safety Data Sheets for any and all chemicals or products in spill or release.					

C.	Actual or estimated duration of the event and time spill was fully controlled/stopped. If release is still occurring, the date and time the release is expected to be stopped.
D.	Describe measures taken or planned to contain, reduce, and clean up spill or release.
E.	Describe steps taken or planned to prevent reoccurrence.

3. Incident impact to state waters (As defined in § 25-8-103(19), C.R.S.).
Examples of state waters include: stormwater conveyances (when they discharge to surface water), perennial streams, intermittent or ephemeral gulches, ditches, ponds, lakes, reservoirs, irrigation canals, wetlands and groundwater.

A.	Did flow or materials reach surface water of the state? If so, identify the water body or bodies and describe the path of flow. What quantity of material reached the surface waters and what was the resulting impact?
B.	Did flow or materials reach groundwater of the state? If so, identify the water body or bodies and describe the path of flow. If yes, what quantity of material reached the ground or groundwater and what was the resulting impact?
C.	Did the incident include any of the following? If so, please include additional details below.

☐ Chemical release	☐ Fish kill	☐ Sheen on water

D.	Were any water quality samples or other samples taken? If so, please describe sampling process, sampling location(s) in relationship to the incident, i.e. up/down stream and attach results.

4. Incident impact to areas or water users

A.	Describe the potential impact of the incident/spill/SSO to public use areas or downstream water users. This includes parks and swim beaches or public water system sources and irrigation diversions.
B.	Were the impacted area users and downstream water users notified and describe the method of notification, e.g. signs posted, via phone.
C.	List any downstream users who were notified.

I hereby certify that the information presented above is accurate and complete.

Signature	Name and title	Company, organization	Date

Colorado Water Quality Control Division

Policy No:	WQE-10
Initiated By:	Dave Akers
Approved By:	
Effective Date:	3/1/08
Revision No.:	
Revision Date:	

WATER QUALITY CONTROL DIVISION

Guidance for Reporting Spills under the Colorado Water Quality Control Act and Colorado Discharge Permits

I. Purpose

To provide guidance on applicable Colorado reporting requirements pursuant to § 25-8-601(2), C.R.S., that pertains to spills or discharges that may cause pollution of State waters. This guidance does not relieve an entity of any other statutory or regulatory requirements applicable to a spill. Facilities possessing a Colorado Discharge Permit System (CDPS) permit should follow applicable permit terms and conditions regarding spill reporting and response. This guidance is not intended to supersede or modify such permit terms and conditions or the applicable statute and regulations. This guidance does not limit the existing rights or responsibilities of persons with respect to spill reporting. For example, persons retain the right and responsibility to determine in the first instance whether a particular spill is covered by an existing permit or may cause pollution to State waters (i.e., surface or ground waters).

II. Statutory Requirement Addressed

Colorado Water Quality Control Act - Spill Reporting Requirements - § 25-8-601(2), C.R.S.

> "Any person engaged in any operation or activity which results in a spill or discharge of oil or other substance which may cause pollution of the waters of the state contrary to the provisions of this article as soon as he has knowledge thereof, shall notify the division of such discharge."

State waters means any and all surface and subsurface waters which are contained in or flow in or through this state, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed (§ 25-8-103 (19), C.R.S.).

Examples of State waters include, but are not limited to, perennial streams, intermittent or ephemeral gulches and arroyos, ponds, lakes, reservoirs, irrigation canals or ditches, wetlands, stormwater conveyances (when they discharge to a surface water), and groundwater.

III. Policy/Applicability

The Division distinguishes between reporting requirements for spills that occur with respect to activities that result in a discharge that is authorized under a CDPS permit and those that are not. For non-permitted activities, or in the case of an activity where a permit does not address reporting of or response to a given spill, the Division recommends that the responsible person(s) take the following actions:

1. Immediately report spills that may result in a non-permitted discharge of pollutants to State waters to the Environmental Release and Incident Reporting Line at 1-877-518-5608;
2. Include the following information, if available, when notifying the Division of a spill:
   a. The name of the responsible person and, if not reported by that person, the name of the person reporting the spill and the name of the responsible person if known;
   b. An estimate of the date and time that the spill began or the actual date and time, if known;

c. The location of the spill, its source (e.g., manhole, tanker truck), and identification of the type of material spilled (e.g., untreated wastewater, biosolids, specific chemical);

d. The estimated volume of the spill and, if known, the actual date and time the spill was fully controlled/stopped.

e. Whether the spill is ongoing and, if it is, the rate of flow and an estimate of the time that the spill will be fully controlled, if known;

f. Measures that are being or have been taken to contain, reduce, and/or clean up the spill;

g. A list of any potentially affected area and any known downstream water uses (e.g., public water supplies, irrigation diversions, public use areas such as parks or swim beaches) that will be or have been notified; and

h. A phone number and e-mail to contact a representative of the responsible person that is in charge of the response. Where a non-responsible person is reporting the spill, they are encouraged, but not required, to provide contact information.

Reporting and management of spills that occur with respect to activities resulting in a discharge authorized under a permit should be performed in accordance with the specific requirements of that permit. If the permit does not provide specific reporting or management response requirements for a given spill that may pollute State waters, the Division recommends that the responsible person report the spill in accordance with the procedures listed above.

This guidance only addresses reporting requirements under the Division's authority. The person or entity engaged in any operation or activity that results in a spill is responsible for any other applicable reporting requirements associated with the spill to other regulatory agencies.

Section 25-8-601(2), C.R.S. only addresses spill reporting to the Division. Section 25-8-202(7), C.R.S. provides certain water quality responsibilities to other state "implementing agencies." The Division's position is that, where a spill to the ground that may impact ground water only is fully and timely reported to an implementing agency having jurisdiction over that spill, the intent of section 601(2) has been fulfilled, and the spill need not also be reported to the Division. The Division suggests that the responsible person confirm with the implementing agency that a spill falls under the jurisdiction of the implementing agency at the time it is reported in order to avoid possible legal liability should it fall under the Division's jurisdiction.

IV. Division Examples of Non-Reportable Spills

The Division has identified the following examples of types of spills that are considered "non-reportable" under § 25-8-601(2), C.R.S. Documentation of such spills, including the information listed in section III.2.a – III.2.f above, should be maintained by the responsible person for Division review for a period of three years.

1. A spill to a generally impervious surface or structure (e.g., paved street/parking lot, storm sewer, warehouse floor, manhole, vault, concrete basement), or onto soils, that is fully contained in/on the impervious surface/structure or soils, or that is managed in a manner so that it will not reach State waters at the time of the spill or in the future. Such spills that are cleaned up within 24 hours will be considered by the Division to have no potential to reach State waters. However, even if such spills are not cleaned up within 24 hours, the responsible person may be able to "fully contain" or otherwise manage a spill such that it will not reach State waters. Where there is a sump pump present in a basement to which a spill occurred, the responsible person must establish that the pump did not discharge to State waters during the time between the start of the spill and the completion of clean-up in accordance with best management practices.

2. A spill or discharge that is managed consistent with best management practices that are established in accordance with a CDPS discharge permit or any Water Quality Control Commission-adopted control regulation related to spill management or reporting.

3. A spill of potable water from a public water system that does not reach surface waters.

Environmental Spill Reporting

24—Hour Emergency and Incident Reporting Line
Office of Emergency Preparedness & Response

1-877-518-5608

Updated: June, 2018

Reporting chemical spills and releases in Colorado

General

For all hazardous substance incidents, local emergency response agencies must be notified.

Releases from fixed facilities

The Superfund Amendments and Reauthorization Act (SARA) Title III, requires reporting releases from fixed facilities

Refer to the SARA Title III List of Lists, available from the Environmental Protection Agency (EPA), for the reportable quantity.

The party that owns the spilled material must immediately notify the following agencies or organizations:

- National Response Center (NRC) 1-800-424-8802;
- Colorado Emergency Planning Committee (CEPC), represented by the Colorado Department of Public Health and Environment (CDPHE) 1-877-518-5608; and
- Local Emergency Planning Committee (LEPC) 1-720-852-6600.

In addition to telephone notification, the responsible party must also send written notification describing the release and associated emergency response to both the CEPC (in this case, CDPHE) and the LEPC.

Releases from RCRA facilities

Emergency releases from facilities permitted under the Resource Conservation and Recovery Act (RCRA) are reportable according to the permit requirements.

The permit often requires reporting to CDPHE, even if the amount of the release is less than a reportable quantity under SARA Title III (6 CCR 1007-3 Part 264).

Permitted facilities and generators and transporters of hazardous waste are required to have and implement a contingency plan that describes the actions facility personnel must take in response to fires, explosions or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface or ground water at the facility (6 CCR 1007-3 Sections 261, 262, 263, 264 and 265).

Whenever there is an imminent or actual emergency situation, appropriate state or local agencies, with designated response roles as described in the contingency plan, must be notified immediately.

The National Response Center or government official designated as the regional on-scene coordinator must be notified immediately if it is determined that the facility has had a release, fire or explosion that could threaten human health or the environment outside the facility.

CDPHE and local authorities must be notified when the facility is back in compliance and ready to resume operations. In addition, the facility must send a written report to CDPHE within 15 days of any incident that requires implementation of the contingency plan. The contingency plan should include current contact information for notification and submittal of written reports.

Permitted facilities, generators and transporters that store hazardous waste must notify CDPHE within 24 hours of any release to the environment that is greater than one (1) pound and must submit a written report to CDPHE within 30 days of the release (6 CCR 1007-3).

Transportation accidents

Transportation accidents that require reporting:

- Result in a spill or release of a hazardous substance in excess of the reportable quantity (40 CFR Part 302.6)
- Cause injury or death or cause estimated property damage exceeding $50,000.
- Cause an evacuation of the general public lasting one or more hours.

Those that close or shut down one or more major transportation arteries or facilities or result in fire, breakage, spillage, or suspected contamination from radioactive or infectious substances must immediately be reported to the National Response Center.

Refer to the EPA SARA Title III List of Lists for those substances that have reportable quantities.

In addition to the NRC being notified, the local emergency number (9-1-1) must be called and CDPHE should be notified.

Written notification of any transportation accident involving a release of hazardous materials must be provided to the U.S. Department of Transportation within 30 days (49 CFR Part 171.16)

Since hazardous waste is a subset of hazardous materials, transporters who have discharged hazardous waste must notify the NRC and provide a written report to the US Department of Transportation as noted in the above reporting requirements.

The transporter must give immediate notice to the nearest Colorado State Patrol office (8 CCR 1507-8 HMP 5) and the nearest law enforcement agency if the accident or spill involved a vehicle (42-20-113(3) CRS).

Notification and a written report detailing the ultimate disposition of the discharge of hazardous waste must also be provided to CDPHE (6 CCR 1007-2 Section 263.30). This may be a duplicate copy of the US Department of Transportation report

In the event of a spill or discharge of hazardous waste at a transfer facility, the transporter must notify CDPHE within 24 hours if the spill exceeds 55 gallons or if there is a fire or explosion.

Within 15 days of a reportable incident, the transporter must submit a written report of the incident to CDPHE, including the final disposition of the material (6 CCR 1007-2 Section 263.40).

Releases of hazardous waste at a transfer facility may also require notification to the National Response Center and a written report to the U.S. Department of Transportation.

Releases to water

A release of any chemical, oil, petroleum product, sewage, etc., which may enter waters of the State of Colorado (which include surface water, ground water and dry gullies or storm sewers leading to surface water) must be reported to CDPHE immediately (25-8-601 CRS).

Written notification to CDPHE must follow within five (5) days (5 CCR 1002-61, Section 61.8(5)(d)).

Any accidental discharge to the sanitary sewer system must be reported immediately to the local sewer authority and the affected wastewater treatment plant.

Releases of petroleum products and certain hazardous substances listed under the Federal Clean Water Act (40 CFR Part 116) must be reported to the National Response Center as well as to CDPHE (1-877-518-5608) as required under the Clean Water Act and the Oil Pollution Act.

Releases to air

Any unpredictable failure of air pollution control or process equipment that results in the violation of emission

control regulations should be reported CDPHE by 10 a.m. of the following working day, followed by a written notice explaining the cause of the occurrence and describing action that has been or is being taken to correct the condition causing the violation and to prevent such excess emissions in the future (5 CCR 1001-2 Common Provisions Regulations Section II.E).

If emergency conditions cause excess emissions at a permitted facility, the owner/operator must provide notice to CDPHE no later than noon of the next working day following the emergency, and follow by written notice within one month of the time when emission limitations were exceeded due to the emergency (5 CCR 1001-5, Regulation 3 Part C, Section VII.C.4).

Releases from oil and gas wells

All spills or releases of exploration and production wastes or produced fluids which meet the reporting thresholds of the Colorado Oil and Gas Conservation Commission (COGCC) Rule 906 shall be reported verbally to the COGCC within 24 hours of discovery and on the COGCC Spill/Release Report Form 19 within 72 hours of discovery.

Spills or releases are reportable to the COGCC in the following circumstances:

1) the spill or release impacts or threatens to impact any waters of the state, (which include surface water, ground water and dry gullies or storm sewers leading to surface water), a residence or occupied structure, livestock or a public byway;
2) a spill or release in which 1 barrel or more is released outside of berms or other secondary containment; or
3) any spill or release of 5 barrels or more.

COGCC also requires reportable spills or releases be reported to the surface owner and local government. Whether or not they are reportable, spills or releases of any size must be stopped, cleaned up, and investigated as soon as practicable.

If the spill or release impacts or threatens to impact waters of the state, it must also be reported immediately to CDPHE (25-8-601 CRS).

Releases from storage tanks

Petroleum releases of 25 gallons or more (or any size that causes a sheen on nearby surface waters) from regulated aboveground and underground fuel storage tanks must be reported to the Division of Oil and Public Safety (303-318-8547) within 24 hours. If the report is made after business hours, please leave a message on the technical assistance line for the Division of Oil and Public Safety, and contact the 24 hour CDPHE Emergency and Incident Reporting Line. This includes spills from fuel dispensers.

Spills or releases of hazardous substances from regulated storage tanks in excess of the reportable quantity (40 CFR Part 302.6) must be reported to the National Response Center and the local fire authority immediately, and to the Division of Oil and Public Safety within 24 hours. (8-20.5-208 CRS and 7 CCR 1101-14 Article 4).

Owners/operators of regulated storage tanks must contain and immediately clean up a spill or overfill of less than 25 gallons of petroleum and a spill or overfill of a hazardous substance that is less than the reportable quantity.

If cleanup cannot be accomplished within 24 hours, the Division of Oil and Public Safety must be notified immediately (7 CCR 1101-14 Article 4-4).

CDPHE should also be notified in the case of hazardous substance releases as cleanup activities may be covered by state solid or hazardous waste requirements (6 CCR 1007-2, 6 CCR 1007-3).

Any release that has or may impact waters of the state (which include surface water, ground water and dry

gullies or storm sewers leading to surface water), no matter how small, must be reported immediately to CDPHE (25-8-601 CRS).

Releases from pipelines

Releases of five or more gallons of hazardous liquids or carbon dioxide from a pipeline that result in explosion or fire, cause injury or death or cause estimated property damage (including cost of clean-up and recovery, value of lost product and property damage) exceeding $50,000 must be reported immediately to the US Department of Transportation Office of Pipeline Safety (49 CFR Part 195 Subpart B) and the National Response Center.

Releases of five or more gallons of hazardous liquids or carbon dioxide from interstate pipelines that do not involve explosion or fire, injury or death or property damage exceeding $50,000 should be reported to the US Department of Transportation Office of Pipeline Safety within 30 days after the incident.

Releases of natural gas from intrastate pipelines that cause injury or death, property damage in excess of $50,000 (including the cost of lost product), closure of a public road, or evacuation of 50 or more people must be reported immediately to the Colorado Public Utilities Commission, Pipeline Safety Group (4 CCR 723-11-2).

Releases of natural gas or liquefied natural gas (LNG) from interstate pipelines that cause injury or death, property damage in excess of $50,000 (including the cost of lost product), or results in an emergency shutdown of the facility must be reported immediately to the National Response Center and the US Dept of Transportation Office of Pipeline Safety.

Releases of oil, petroleum products or other hazardous liquids from interstate and intrastate pipelines that have or may enter waters of the State of Colorado (which include surface water, ground water and dry gullies or storm sewers leading to surface water) must be reported to CDPHE immediately (25-8-601 CRS). CDPHE should also be notified of releases to soil, as cleanup activities may be covered by state solid or hazardous waste requirements (6 CCR 1007-2, 6 CCR 1007-3).

Radiological accidents, incidents, and events

CDPHE must be notified of any condition that has caused or threatens to cause an event, which meets or exceeds the criteria specified in (6 CCR 1007-1) RH 4.51 and RH 4.52 of the State of Colorado *Rules and Regulations Pertaining to Radiation Control*. Reportable events include lost radioactive materials, lost radiation producing machines, over-exposures to persons, contamination events and fires or explosions involving radioactive materials.

Depending upon the severity of the event, notification may be required immediately, within 24 hours, or within 30 days. In most cases, a written follow-up report is also required.

If you are unsure of the proper notification requirement, please contact CDPHE immediately. Telephone event notifications can be made to the CDPHE Radiation Program at any time by calling 1-303-877-9757.

Notification Numbers

Colorado Department of Public Health and Environment toll-free 24-hour environmental emergency and incident reporting line: (877) 518-5608 (24-hour)

National Response Center
(800) 424-8802 (24-hour)

State Oil Inspector (Colorado Division of Oil & Public Safety-Above & Underground Storage Tank Regulators)
(303) 318-8547