

SWMP TEMPLATE TEXT FOR PROJECTS WITH LESS THAN 1 ACRE OF DISTURBANCE

1. SITE DESCRIPTION

- A. **PROJECT SITE LOCATION:** The project is located on State Highway 67 in two discontinuous project sites, Site A between mileposts 52.304-69.651 from Cripple Creek to Divide in Teller County, and Site B between mileposts 77.59-92.7 from Woodland Park in Teller County to north of Westcreek in Douglas County.
- B. **PROJECT SITE DESCRIPTION:** Site A activities include a full length and width 4" CIPR, and 1.5" overlay. Site B activities include a full length and width 1.5" overlay. Project activities also include shouldering, guardrail adjustment and hardware replacement, bridge rail replacement, additional approach and departure guardrail for bridges, temporary erosion control, centerline rumble strips, and delineator replacement and installation.
- C. **ACRES OF DISTURBANCE:**
 - 1. Total area of construction site (LOC): 100 acres
 - 2. Total area of disturbance (LDA): 0.82 acres
 - 3. Acreage of seeding: 0.8 acres

D. **RECEIVING WATER:**

1. Outfall locations:

MP 57.61	Oil Creek
MP 60.50	Unknown
MP 63.54	Putney Gulch
MP 63.95	Unknown
MP 64.45	Fourmile Creek
MP 67.48	Rule Creek
MP 78.38	Loy Gulch
MP 78.65	Lovell Gulch
MP 82.16	Long Gulch
MP 83.93	Trout Creek
MP 88.46	Uknown (Trout Creek)
MP 89.69	Uknown (Trout Creek)

2. Ultimate receiving water: South Platte River, Arkansas River

- E. **EXISTING SOIL DATA:** Gravelly Loam
- F. **EXISTING VEGETATION, INCLUDING PERCENT COVER:**
Vegetative transects are *not required*, by permit, on projects with under an acre of disturbance. However, it is advised that transects be completed prior to construction, as a quality control for post construction revegetation assessment. If transects are not completed on a project, at a minimum describe the quality of the existing vegetation.

2. STORMWATER MANAGEMENT CONTROLS FIRST CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL PERFORM THE FOLLOWING:

- A. **POTENTIAL POLLUTANT SOURCES**
 - 1. Evaluate, identify and describe all potential sources of pollutants at the site in accordance with subsection 107.25 and place any BMPs/Control Measures required to contain potential pollutants.
- B. **OFFSITE DRAINAGE (RUN ON WATER)**

1. Place BMPs/Control Measures to address run-on water in accordance with subsection 208.03.

E. **PERIMETER CONTROL**

- 1. Perimeter control shall be established as the first item on the SWMP to prevent the potential for pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters.
- 2. Perimeter control may consist of vegetation buffers, berms, silt fence, erosion logs, existing landforms, or other BMPs/Control Measures as approved.
- 3. Perimeter control shall be in accordance with subsection 208.04.

3. SWMP ADMINISTRATOR:

A. **SWMP ADMINISTRATOR FOR DESIGN:**

Name/Title	Contact Information
Austin Gilbert	719.227.3256 austin.gilbert@state.co.us

B. **SWMP ADMINISTRATOR FOR CONSTRUCTION:** (See Subsection 208 Under an Acre Specification) The Contractor shall designate a SWMP Administrator for Construction upon ownership of the SWMP. The SWMP Administrator shall become the owner/operator and assume responsibility for all design changes to the SWMP implementation and maintenance in accordance to 208.03. The SWMP Administrator shall be responsible for implementing, maintaining and revising SWMP, including the title and contact information. The activities and responsibilities of the SWMP administrator shall address all aspects of the projects SWMP. (Update the information below for each new SWMP Administrator) (Copy of TECS Certification must also be included in the SWMP Notebook.) **The SWMP Administration for construction is not a separate pay item but is included in the cost of the work.**

Name/Title	Contact Information	Certification #	Start Date	Engineer Approval

4. DURING CONSTRUCTION

The SWMP should be considered a "living document" that is continuously reviewed and modified. During construction, the following items shall be added, updated, or amended as needed by the Contractor in accordance with Section 208

- A. **MATERIALS HANDLING AND SPILL PREVENTION:** prior to construction commencing the Contractor shall submit a Spill Prevention, Control and Countermeasure Plan, see subsection 208.06. Materials handling shall be in accordance with subsection 208.06.
- B. **STOCKPILE MANAGEMENT:** shall be done in accordance with subsection 107.25 and 208.07
- C. **CONCRETE WASHOUT:** Concrete wash out water or waste from field laboratories and paving equipment shall be contained in accordance with subsection 208.05.
- D. **SAW CUTTING:** shall be done in accordance with subsection 107.25, 208.04, 208.05
- E. **STREET SWEEPING:** shall be done in accordance with subsection 208.04

5. BMP/CONTROL MEASURE MAINTENANCE

- A. Maintenance shall be in accordance with subsection 208.04 (f).

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6. INTERIM AND FINAL STABILIZATION

A. SEEDING PLAN

Soil preparation, soil conditioning or topsoil, seeding (native), mulching (weed free) and mulch tackifier will be required for an estimated 0.8 acres of disturbed area within the right-of-way limits which are not surfaced. The following types and rates shall be used:

Common Name	Scientific/Botanical Name	Pounds of Pure Live Seed (PLS) per Acre
Arizona Fescue	<i>Festuca arizonica</i>	6
mountain muhly	<i>Muhlenbergia montana</i>	3
Little bluestem	<i>Schizachyrium scoparium</i>	5
Sandberg bluegrass	<i>Poa secunda v. sandbergii</i>	4
Mountain brome #	<i>Bromus marginatus</i>	4
Western wheatgrass #	<i>Pascopyrum smithii v. Arriba</i>	4
Blue flax	<i>Linum perenne v. Appar</i>	2
Side-cats grama #	<i>Boutelous curtipendula</i>	2
Scarlet gilia	<i>Ipomopsis aggregata</i>	2
Cover/Nurse Crop Oats or	<i>Avena sativa (Spring)</i>	2
	TOTAL	34

B. **SEEDING APPLICATION:** Drill seed 0.25 inch to 0.5 inch into the soil. In small areas not accessible to a drill, hand broadcast at double the rate and rake 0.25 inch to 0.5 inch into the soil.

C. **MULCHING APPLICATION:** Apply a minimum of 2 tons of certified weed free straw or 2 tons of certified weed free straw per acre and in accordance with Section 213, and mechanically crimp it into the soil in combination with an organic mulch tackifier.

D. SPECIAL REQUIREMENTS:

A. Due to steep slopes (>2:1), hydroseeding will be allowed on this project for permanent stabilization. Hydroseeding rate shall be at double the seeding rate. Hydroseed shall be applied in two applications. The first application is a slurry which contains seed, organic amendment and fertilizer. The second application is a slurry of mulch and tackifier. Both slurry applications shall be applied from top of slope downward, in 50' vertical lifts, unless otherwise approved by the Engineer. [Elevation: (10,000) feet]

B. **SOIL CONDITIONING AND FERTILIZER REQUIREMENTS:** Minimum requirements for all disturbances to receive seeding (native).

Soil conditioner paid for as Item 212- Soil Conditioning (Acre)		
Biological nutrient organic based fertilizer (lbs/acre)*	Humate (lbs/acre)	Spray on Amendment (lbs/acre) >2:1 slopes only
300	200	3500

*Biological nutrient shall not exceed 8-8-8 (N-P-K).

Humate based material shall be in accordance to Standard Special Provision 212 and compost shall be in accordance to Standard Special Provision 212.

F. **BLANKET APPLICATION:** On slopes and ditches requiring a blanket, the blanket shall be placed in lieu of mulch and mulch tackifier.

7. PRIOR TO FINAL ACCEPTANCE

A. Partial Acceptance shall be in accordance with subsection 107.25 (d) and 208.10 At the Partial Acceptance of the project, it shall be determined by the SWMP Administrator and the Engineer which temporary BMPs/Control Measures shall remain until 70% reestablishment or which shall be removed.

B. At the end of the project, all ditch checks shall either consist of temporary erosion logs (or equivalent) or permanent rip-rap.

8. NARRATIVES:

A. ADDITIONAL BMPS/CONTROL MEASURES AND NARRATIVES:

BMP/Control Measure details and narratives not covered by the SWMP or Standard Plan M-208, M-216 shall be added to the SWMP notebook by the SWMP Administrator. **BMP Matrix:**

- M-Standards have been included along with standard BMP narratives. If a Non-Standard BMP will be used or the standard narrative does not apply, the SWMP Administrator shall write a Non-Standard BMP narrative, place an "X" in the column and complete a Non-Standard BMP Specification and Narrative for the SWMP notebook.
- The SWMP Administrator shall place an "X" in the column In Use on Site when the BMP/Control Measure has been installed.
- Place an "X" in the column BMP/Control Measure to be located by SWMP Administrator if the SWMP Administrator shall locate the BMP/Control Measure during construction. These BMP/Control Measures are not currently located on SWMP Plans but are anticipated to be used during construction (i.e. Vehicle Tracking Pad, Batch Plants, etc.). The SWMP Administrator shall locate these prior to or during construction and reflect on SWMP Map.
- Place an "X" in the column Installation BMP/Control Measure Pre-Construction if the BMP/Control Measure is to be installed prior to construction activity.

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STRUCTURAL BMPs/Control Measures that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to:

APPLICATION, BMP	NARRATIVE	BMP AS DESIGNED	IN USE ON SITE	BMP PHASING		
				FIRST/INITIAL CONSTRUCTION ACTIVITIES	INTERIM CONSTRUCTION ACTIVITIES	FINAL STABILIZATION
<u>CULVERT INLET/OUTLET PROTECTION</u> Erosion logs, aggregate bags	Placed at mouth of culvert inlets and over top of culvert at inlet and outlet where disturbance may be occurring adjacent to pipe to prevent sediment laden water from entering pipe or drainage. Place prior to start of construction disturbances.	X		X	X	X
<u>STOCKPILE PROTECTION</u> Earth berm, erosion logs, aggregate bags*	Placed within specified distance from toe to contain sediment around stockpile. *Aggregate bags are easily moved and replaced for access during the work day. Place prior to start of stock pile, increase control as stock pile increases size.	X			X	
<u>PERIMETER CONTROL</u> Erosion logs, silt fence, earth berm, topsoil window*	Placed prior to construction commencing to address potential run-on water from off site, and to divert around disturbed area			X	X	
<u>CONCRETE WASHOUT</u> In-ground or fabricated	Construction control, used for waste management of concrete and concrete equipment cleaning. Place prior to start of concrete activities.	X		X	X	

NON-STRUCTURAL BMPs/Control Measures that may be potentially used on the project for erosion and sediment control; practices may include, but are not limited to:
Erosion control devices are used to limit the amount of soil loss on site
Sediment control devices are designed to capture sediment on the project site.
Construction controls are BMPs/Control Measures related to construction access and staging.
BMP/Control Measure locations are indicated on the SWMP site map.

APPLICATION, BMP	NARRATIVE	BMP AS DESIGNED	IN USE ON SITE	BMP PHASING		
				FIRST/INITIAL CONSTRUCTION ACTIVITIES	INTERIM CONSTRUCTION ACTIVITIES	FINAL STABILIZATION
SWEEPING	Source control, used to remove sediment tracked onto paved surfaces and to prevent from entering drainage system. Sweep daily and at the end of the construction shift as needed.	X		X	X	

9. TABULATION OF STORMWATER QUANTITIES

A. BMP/Control Measure sediment removal and disposal shall be paid for as: 208 Removal and Disposal of Sediment (Equipment) and 208 Removal and Disposal of Sediment (Labor). All other BMP/Control Measure maintenance shall be included in the cost of the BMP/Control Measure.

B. Establishment of seeded areas shall be paid for as: This shall include mowing, weed control, reseeding/mulch/tackifier.

Pay Item	Description	Pay Unit	Initial Const.	Interim Const.	Permanen Stabilizatio
208-00002	Erosion Log Type 1 (12 inch)	LF		2000	
208-00035	Aggregate Bag	LF	30		
208-00045	Concrete Washout Structure	Each		1	
208-00103	Removal and Disposal of Sediment (Labor)	Hour		20	
208-00105	Removal and Disposal of Sediment (Equipment)	Hour		20	
208-00106	Sweeping (Sediment Removal)	Hour		100	
240-00000	Wildlife Biologist	Hour	5		
240-00010	Removal of Nests	Hour	10		
700-70380	F/A Erosion Control	LS			

*It is anticipated that additional BMPs/Control Measures and BMP/Control Measure quantities not shown on the SWMP Site Maps shall be required on the project for unforeseen conditions and replacement of items that are beyond their useful service life, see subsection 208.03 and 208.04. **Quantities for all BMPs/Control Measures shown above are estimated, and have been increased for unforeseen conditions and normal BMP/Control Measure life expectancy.** Quantities shall be adjusted according to the conditions encountered in the field as directed and approved by the Engineer. Payment shall be for the actual work completed and material used.


10. BIOLOGIC IMPACTS

A. ENVIRONMENTAL IMPACTS:

1. Wetland Impacts: YES NO
2. Stream Impacts: YES NO
3. Threatened and Endangered Species: NO

11. Notes

ECM (or SWMP Administrator For Construction or Erosion Control Inspector) is included in the cost of the work.

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