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Spring 5-15-2023

## **Draft Final BPSOU Unreclaimed Sites UR-06 Temporary Best Management Practice Work Plan**

Pioneer Technical Services, Inc.

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May 15, 2023

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**RE: Butte Priority Soils Operable Unit (BPSOU) Unreclaimed (UR) Site (UR-06) Temporary Best Management Practice (BMP) Work Plan**

Agency Representatives:

I am writing to you on behalf of Atlantic Richfield Company (Atlantic Richfield) to convey the Unreclaimed (UR) Site Temporary Best Management Practice (BMP) Work Plan to be implemented at the UR-06 site named Capri Motel Parking Lot in the Butte Priority Soils Operable Unit (BPSOU). Preliminary soil sampling data and site investigation indicate human health and storm water exceedances are present at the Site. Although storm water from the site is conveyed through the Belmont Diversion to the Berkely Pit, Atlantic Richfield proposes temporary BMPs to mitigate erosion of sediments onto roadways and into storm water infrastructure. The site is third-party owned, and access agreements will need to be secured prior to implementation of the proposed measures.

The report may be downloaded at the following link:

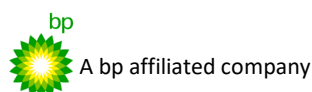
[https://pioneertechnicalservices.sharepoint.com/:f:/s/submitted/EnspC3q5wMVkt05uEDA8U5sBYHzCeT\\_D2lsN6585fkZm1w](https://pioneertechnicalservices.sharepoint.com/:f:/s/submitted/EnspC3q5wMVkt05uEDA8U5sBYHzCeT_D2lsN6585fkZm1w)

If you have any questions or comments, please call me at (907) 355-3914.

Sincerely,



Mike McAnulty  
Liability Manager  
Remediation Management Services Company  
An affiliate of **Atlantic Richfield Company**



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BPSOU SharePoint - upload

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**SILVER BOW CREEK/BUTTE AREA NPL SITE  
BUTTE PRIORITY SOILS OPERABLE UNIT**

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*Draft Final*

*BPSOU Unreclaimed Sites*

*UR-06*

*Temporary Best Management Practice Work Plan*

*Atlantic Richfield Company*

May 2023

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**SILVER BOW CREEK/BUTTE AREA NPL SITE  
BUTTE PRIORITY SOILS OPERABLE UNIT**

---

***Draft Final***

***BPSOU Unreclaimed Sites***

***UR-06***

***Temporary Best Management Practice Work Plan***

Prepared for:

***Atlantic Richfield Company***  
317 Anaconda Road  
Butte, Montana 59701

Prepared by:

***Pioneer Technical Services, Inc.***  
1101 S. Montana Street  
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**May 2023**

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- Appendix A Location of Site BMPs
- Appendix B Technical Specifications for BMP Installation

## **1.0 INTRODUCTION AND PURPOSE**

The purpose of this Butte Priority Soils Operable Unit (BPSOU) Unreclaimed (UR) Site Temporary Best Management Practice (BMP) Work Plan is to describe the work to take place at the UR source area UR-06 named Capri Motel Parking Lot within the BPSOU. The work includes installing temporary source area BMPs to mitigate sediment loading on the existing Butte-Silver Bow (BSB) storm water infrastructure. The Site is within the Anaconda Road/Butte Brewery Drainage. Appendix A of this work plan contains the Site map and location of temporary BMPs, Appendix B contains the Technical Specifications for BMP Installation, and Appendix C contains the preliminary data collected from X-ray fluorescence (XRF) and laboratory samples.

## **2.0 BACKGROUND**

Reclamation was performed by ARCO in 1995 at the Arctic Dump (BRES No. 100) west of UR-06. The Capri Site, UR-06, was a ramp/parking area composed of waste rock on the southeast side of the Capri Motel. Approximately 630 cubic yards of waste rock was removed and hauled to the BSB repository, and the final grade (approximately 12 horizontal to 1 vertical) was sloped south toward Granite Street. A total of 60 tons of lime rock was applied at a rate of 350 tons per acre. The existing land owner plans to eventually apply asphalt to this parking area as a final cover to this Site.

A third party owns the Site, and it will require coordination and approval from the landowner prior to the start of work.

### **2.1 Site Location and Work Plan**

The UR-06 Project Site is located on the northwest corner of the East Granite Street and Arizona Street intersection. Most of the Site is exposed mine waste with active erosion rills and sediment ponding on East Granite Street. UR-06 is surrounded by additional source areas and BPSOU Sites including the Washoe Dump (BRES No. 96), Lexington Gardens or the Baltic Dump (BRES No. 102), and UR-22.

The preliminary results from field XRF analysis and laboratory confirmation indicate human health and storm water exceedances are present at the Site due to historical mine waste. Storm water flows currently carry sediments downgradient south directly to the Arizona Street storm water inlet AB-I-5961, which discharges to the Berkely Pit through the Belmont Diversion. The temporary BMPs installed at the Site will be focused on mitigating erosion of sediments onto roadways and into storm water infrastructure while additional Site and data evaluations are completed. Temporary Site BMPs to be completed use a gravel pad, silt fence, and rock wattles.

### **2.2 Project Considerations**

The following list is intended to provide a brief explanation of the potential issues related to this Work Plan and the anticipated effects of the work, if any.



- Design – The UR-06 temporary BMPs were designed to mitigate sediment loading into existing BSB infrastructure. Storm water flows and sediment movement will be controlled by a gravel pad, silt fence, and rock wattles.
- Health – Adverse effects to human health due to completing the project are not expected. Individuals performing the work will be required to use appropriate Personal Protective Equipment (PPE) and conduct work in accordance with Section 4.0.
- Safety – Risks associated with work activities will be mitigated through implementing Task Risk Assessments (TRAs), and Control of Work (CoW) practices. Due to the safety precautions being taken, hazards such as weather, working surfaces, working around traffic, heavy equipment operation, disturbed ground, and overhead power lines will be minimized. All necessary CoW items and work permits will be completed prior to initiating any of the tasks discussed above.
- Security – On-site personnel will monitor security during working hours. Security issues are not expected.
- Environment – Adverse effects to the environment are not expected to occur because of this work.
- Regulatory – Regulatory effects are not anticipated as a result of performing the work.
- Reputation – No impact is expected regarding the reputation of Atlantic Richfield Company (Atlantic Richfield).

### **3.0 DESCRIPTION OF RESPONSIBILITIES**

Pioneer Technical Services, Inc. (Pioneer) will notify the interested Agencies and organizations and provide oversight to complete the work. The contractor will provide a foreman/supervisor, safety professional, and all other labor, equipment, and materials necessary to complete the work. Pioneer will notify Atlantic Richfield before completing the BMP work.

#### **3.1 Safety Considerations**

Safety concerns that could affect the work tasks include the following:

- Weather.
- Working around uneven/unstable walking surfaces.
- Working around traffic.
- Working around heavy equipment.
- Ground disturbance.
- Working around and under overhead utilities.

To minimize the potential for harm to personnel, equipment, and/or the environment, the work will be reviewed and the appropriate CoW items, such as Daily Toolbox Meeting Records, TRAs, and any applicable permits will be completed prior to initiating any tasks.

Required PPE will include work gloves, hard hats, safety glasses, long-sleeved shirts, high visibility outer wear, and steel-toed boots. The Contractor will be responsible for developing an

Atlantic Richfield-approved Site-Specific Health and Safety Plan (SSHASP) that identifies the risks/hazards and appropriate control measures associated with completing the work described in this Work Plan. Work will be conducted according to the policies and procedures outlined in the contractor's SSHASP and the Remediation Management (RM) *Site Remediation Technologies Engineering Integrity Manual* (BP, 2016).

### **3.2 Working Around Heavy Equipment**

The tasks necessary to complete the UR-06 BMPs will require working with and around heavy equipment. The contractor will be responsible for following policies and procedures outlined in the RM Heavy Equipment Defined Procedure.

### **3.3 Ground Disturbance**

The work necessary to complete the UR-06 BMPs will require excavation and backfilling, which by definition is considered Ground Disturbance. The Contractor will be responsible for following policies and procedures outlined in the RM Ground Disturbance Defined Procedure including completing all applicable permits.

### **3.4 Working Around Overhead Utilities**

The tasks necessary to complete the UR-06 BMPs will require working around high voltage overhead power lines, which by definition is considered an overhead hazard. The contractor will be responsible for following policies and procedures outlined in the RM Overhead Utilities Defined Procedure including completing all applicable permits.

### **3.5 Job Zone Control and Traffic Management**

The tasks necessary to complete the UR-06 BMPs will require conducting activities that affect the public (public roadways and adjacent private property). The contractor will be responsible for following policies and procedures as outlined in the RM Job Zone Control and Traffic Management Defined Procedure.

## **4.0 DESCRIPTION OF WORK**

The UR-06 BMPs Project is scheduled to be installed in the second quarter of 2023 and maintained until final site remediation is performed. Temporary BMPs will be completed using various measures such as a gravel import, silt fence, and rock wattles.

### **4.1 Pre-Job Safety Meeting**

A pre-job safety meeting will be held to coordinate all work activities, safety roles, and complete any necessary permits. All necessary Atlantic Richfield, Contractor, and Pioneer personnel will be present at the pre-job safety meeting.

## **4.2 Temporary BMPs**

As stated above, the Site BMPs were designed to mitigate sediment loading into existing BSB infrastructure downgradient of the Site. Storm water flows and sediment movement will be controlled by a gravel pad, silt fence, and rock wattles. BMP efforts will follow the Location of BMPs figure (Appendix A) and the Technical Specifications for BMP installation (Appendix B).

### **4.2.1 Gravel Pad**

The Site will incorporate a small gravel pad to filter out sediment where ponding has occurred and reduce the potential sediment transportation of heavy vehicle traffic from the motel to East Granite Street. Approximately 8 yards of 3/4-inch gravel will be placed along the broken sidewalk, south of the Site on East Granite Street. Compaction may be required to reduce the spread of gravel onto the roadway. Excess gravel can be used if additional material is required for the silt fence backfill. A detail of the gravel pad is shown in the Location of BMPs figure (Appendix A).

### **4.2.2 Silt Fence**

Approximately 90 feet of silt fence will be installed to capture sediment and storm water from reaching storm water inlet AB-I-5961. The silt fence will start on Arizona Street near the power pole 50 feet north of AB-I-5961. The fence will then run west 25 feet along the sidewalk where the gravel pad will be installed. Do not block or impede the alleyway that accesses the lower level of the motel. The silt fence will run north along the east side of the alleyway for 15 feet. The silt fence will be installed per the Location of BMPs figure (Appendix A) and the Technical Specifications for BMP installation (Appendix B).

### **4.2.3 Rock Wattles**

Rock Wattles are an affordable redundancy plan for inlet protection where upgradient BMPs may fail. Inlet AB-I-5961 requires 10 feet of rock wattles placed per the Technical Specifications for BMP installation provided in Appendix B.

## **5.0 POST-CONSTRUCTION OPERATIONS AND MAINTENANCE**

Once the Temporary BMPs are complete, post-construction operations will consist of monitoring the performance within 24 hours of a 0.25-inch storm event and providing as-needed maintenance of the installed BMPs. Pioneer will document the construction as completed and provide a construction completion report of the Temporary BMP installation. BMPs will be removed upon approval of the Site Evaluation report and determined Remedial Action, if required.

## **6.0 REFERENCES**

BP, 2016. Remediation Management Site Remediation Technologies Engineering Integrity Manual. November 2016.

# **Appendix A**

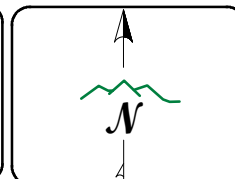
## **Location of Site BMPs**



- ▭ UNRECLAIMED SITE BOUNDARY
- - - SOURCE AREA
- - - ROCK WADDLE
- ▨ SEDIMENT REMOVAL/DRAINAGE ROCK
- SILT FENCE

- Human Health, Storm Water, and >5,000 ppm Exceedance
- ⊕ >5,000 ppm Exceedance
- Human Health and >5,000 ppm Exceedance
- ⊕ No Exceedance

All data conclusions are based off preliminary review of XRF and Lab data.



DISPLAYED AS: \_\_\_\_\_  
 PROJECTION/ZONE: MSP  
 DATUM: NAD 83  
 UNITS: INT'L FT  
 SOURCE: PIONEER/AR/QSL 2020

Feet

**FIGURE 1**

**PIONEER**  
TECHNICAL SERVICES, INC.

**LOCATION OF SITE BMPs**  
**UR-06 2022**

DATE: 11/4/2022

# **Appendix B**

## **Technical Specifications for BMP Installation**



# **MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

## **STORM WATER MANAGEMENT DURING CONSTRUCTION FIELD GUIDE FOR BEST MANAGEMENT PRACTICES**





## **ACRONYMS**

ACE – Army Corps of Engineers  
BMP – Best Management Practice  
CWA - Clean Water Act  
DEQ - Montana Department of Environmental Quality  
ELG - Effluent Limitation Guidelines  
EPA - Environmental Protection Agency  
MDT - Montana Department of Transportation  
MPDES - Montana Pollution Discharge Elimination System  
MS4 - Municipal Separate Storm Sewer System  
NOI – Notice of Intent  
NOT – Notice of Termination  
NOV – Notice of Violation  
NPDES - National Pollutant Discharge Elimination System  
SWPPP - Stormwater Pollution Prevention Plan  
WPB – Water Protection Bureau, within the Montana Department of Environmental Quality

## **PURPOSE OF THIS FIELD GUIDE**

This MTDEQ BMP Field Guide has been designed and developed for use by storm water management professionals in the field during construction. This Field Guide includes:

- Construction Storm Water Permit information
- Storm water management fundamentals
- Erosion and sediment control practices
- Installation details for a wide range of Best Management Practices (BMPs)
- Photographic examples of correct and incorrect installations of BMPs
- Contact information

## **STORM WATER REGULATORY BACKGROUND**

The Montana Department of Environmental Quality (DEQ) administers the Montana Pollutant Discharge Elimination System (MPDES) Permit Program through the Montana Water Quality Act. The goal of the MPDES Permit Program is to control point source discharges of wastewater, process water and storm water, so water quality in state surface water is protected. The MPDES Permit Program is delegated to the State of Montana through the Clean Water Act and the United States Environmental Protection Agency. Tribal lands and federally funded projects on federal lands remain under the National Pollutant Discharge Elimination System (NPDES).

Construction activities that result in the “disturbance” of equal to or greater than one acre of total land area are required to obtain permit coverage under the General Permit for Storm Water Discharges Associated with Construction Activity (Construction General Permit). (Activities deemed to be maintenance, with less than 5-acres of disturbance are not included.) Additional construction activities requiring permit coverage include 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 will ultimately disturb one acre or more. “Disturbance” related to construction activities is defined as any area that is subject to clearing, excavating, grading, stockpiling earth materials, and placement/removal of earth material.

The permittee is typically the construction project owner, primary earthwork contractor, or general contractor for the project, although it could be another party.

## **WHAT IS THE CONCERN WITH STORM WATER RUN-OFF FROM CONSTRUCTION ACTIVITIES?**

Storm water runoff is generated when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. Storm water runoff from construction activities can have a significant impact on water quality, because it may carry pollutants from the construction site directly to a storm sewer system or a state water body.

Sediment runoff rates from construction sites are 10 to 20 times greater than those from agricultural lands, and 1,000 to 2,000 times greater than those of forestlands. During a short period of time, construction activity can contribute more sediment to streams than is naturally deposited over several decades.

## **THE FUNDAMENTALS OF STORM WATER MANAGEMENT DURING CONSTRUCTION**

Individuals seeking permit coverage under the Construction General Permit are required to develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP). The purpose of the SWPPP is to identify potential sources of pollutants and select Best Management Practices (BMPs) to minimize or eliminate the potential for these pollutants to reach state surface waters in storm water runoff. *BMPs can be: schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, pollution prevention, and practices to control site runoff, spillage or leaks, waste disposal, or drainage from material storage.* State waters are defined as any waters on the earth's surface including

but not limited to, streams, lakes, ponds, and reservoirs, and irrigation and drainage systems discharging directly into a stream, lake, pond, reservoir, or other surface water.

After assessing site characteristics and how storm water run-off may impact the construction site, the permittee should identify all potential pollutant sources, such as sediment from disturbed areas, stored wastes and fuels. BMPs, which will function to minimize or eliminate the potential for these pollutants to reach surface waters through storm water runoff, should then be selected and implemented. These BMPs are then detailed in the site specific SWPPP, which provides a written (through the narrative) and visual (through the detail drawings and site map) strategy for successful pollution control and storm water management.

BMPs at construction sites should consist of various erosion and sediment control measures for exposed soils, as well as materials handling and waste management measures. These practices and control measures are either installed (physical or structural in nature) or implemented (procedural or activity driven). It is the responsibility of the permittee to verify potential BMP restrictions with other regulatory agencies (e.g., US Army Corps of Engineers, municipalities).

Erosion and sediment control for areas of disturbance and controls for materials and waste are best accomplished with the proper selection, installation, evaluation and maintenance of appropriate control features.

All control features require routine inspections and maintenance to ensure continuous, effective operation. Periodic site inspections by qualified

personnel (such as the SWPPP Administrator) are required under the Construction General Permit and should focus on effective management of pollutants and preventive maintenance of BMPs. BMPs should be monitored for function, with any accumulated sediments removed frequently.

Impacts on exposed soils from storm water runoff can generally be separated into two distinct categories; surface erosion and sedimentation, and there are different BMPs to manage them.

*Erosion Control* is preferred over *Sediment Control*, as *Erosion Control* is a preventive measure, focusing on the cause of sedimentation. *Sediment Controls* are considered secondary BMPs, because they are responsive as opposed to preventive. They come into play after the damage from erosion has already impacted the site.

### **Erosion Control**

Erosion control BMPs usually consist of a ground cover BMP used to prevent any of the forms of erosion from occurring. Emphasis should be placed on controlling erosion through preventative practices and control measures, which include: planning, project phasing, vegetative cover, and grading controls.

### **Sediment Control**

Sediment control BMPs are designed to prevent soil particles already being carried in storm water from discharging from the construction site. Sediment control BMPs are not as effective as erosion control BMPs and are typically considered secondary practices installed after all opportunities for erosion control have been implemented. Examples of sediment control BMPs include: inlet protection, silt fence, straw

wattles, sediment traps, and other perimeter control devices.

## HOUSEKEEPING PRACTICES

Additional pollutant sources associated with construction projects include the following sources: materials handling/management and waste management practices.

**Materials Handling** includes the storage and use of construction materials. These areas include fueling operations, equipment staging areas, maintenance areas, concrete or asphalt batch plants, and material borrow areas.

**Waste Management** includes worker trash, portable sanitary facilities, demolition materials, remnants from construction, and sawing/cutting operations.

**Petroleum Products, Fertilizers, Herbicides, and Building Materials** that are stored and used on construction project sites can contribute hydrocarbons, metals, and other toxic substances in runoff.

**Concrete Washout** in liquid form contains particles and is highly alkaline. High pH values are toxic to aquatic organisms.

## ADDITIONAL DEQ PERMIT INFORMATION

Construction Dewatering General Permit authorizes the discharge of water from cofferdams, trenches, excavation pits or other excavations associated with construction where sediment-laden groundwater or surface water inflow must be discharged to state surface water. This permit also applies to sediment laden water from well pump tests, well development, drill hole or pylon development when the discharged water

may contain visible suspended and bed load sediment that must be settled prior to discharge.

318 Authorizations: authorizes a short term exceedence of a water quality standard for turbidity.

Sand and Gravel General Permit authorizes the discharge of wash water, transport water, scrubber water, and pit dewatering water or other process water to state waters.

Petroleum Clean Up General Permit authorizes the discharge of petroleum-related, contaminated water treatment facilities to state waters.

## **MDT STANDARDS**

*The information depicted in this manual may differ from the information included in MDT's Detailed Drawings. No information depicted in this manual supersedes MDT's contractual terms and conditions. In the event of a conflict between this manual and MDT's contract, the contractual language takes precedence.*

## **ACKNOWLEDGEMENTS**

The Montana Department of Environmental Quality would like to acknowledge: the Montana Department of Transportation, Montana Contractor's Association and Altitude Training Associates for making this BMP Field Guide possible. All BMP photography and the Inlet Protection detail drawings by Tom Gore, Altitude Training Associates.

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## SEDIMENT CONTROL BMPs

### SILT FENCE

Sediment controls are secondary BMPs pursued after erosion control practices have been maximized. Therefore, *Silt Fencing* should be implemented after all other opportunities for erosion control have been exhausted.

*Silt Fencing* performs as a barrier, intercepting runoff and impounding it. The fabric promotes ponding because very little run-off discharges through the material. Silt fencings ability to weep is further diminished if the material becomes clogged with sediment accumulations

*Silt Fencing* has many limitations that must be carefully evaluated prior to installation. Understanding these limitations will help to determine if it is the appropriate BMP for the site conditions and ensure that it can be sited correctly for maximum performance.

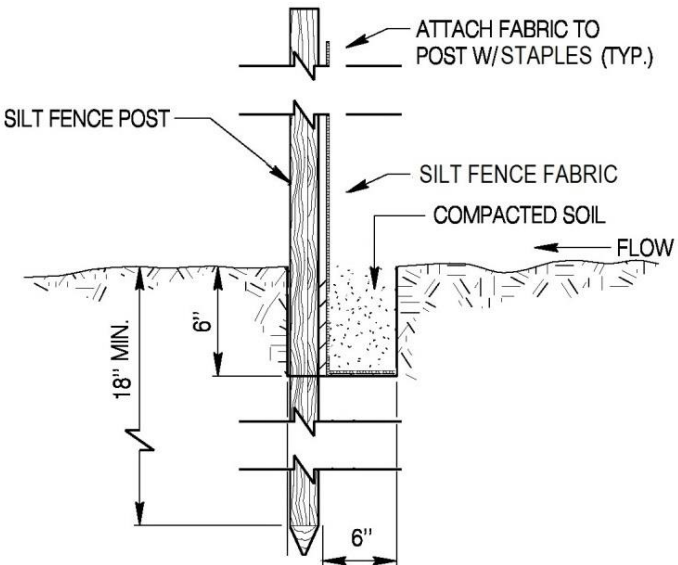
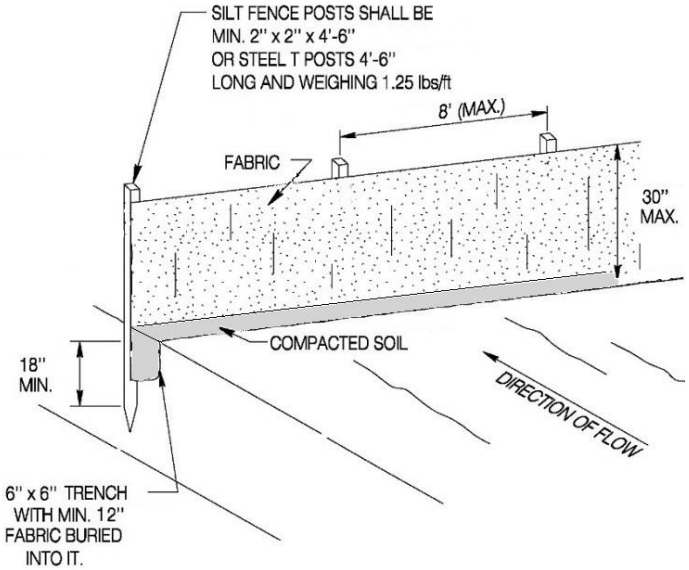
*Silt Fencing* cannot:

- Function in concentrated flow
- Manage large drainage areas alone
- Perform if not installed along the grade contour
- Work well installed right at the toe of a slope

*Silt Fence* functions in limited drainage areas, typically no more than  $\frac{1}{4}$  acre of disturbance discharging to 100 linear ft. of fencing (if *Silt Fencing* is the only BMP implemented to manage the area).

Maintenance should be triggered if sediment accumulations impact its ability to function. Also, if the fabric is not: taut, intact, secured to the stakes, trenched in, adjoined correctly, or if stakes are not upright or are broken.

# SILT FENCE (con.)



Adapted from WYDOT Temp. Erosion Control Measures

**Silt Fencing must be installed correctly (according to the selected detail) in order to function as intended.**

## SILT FENCE (con.)



If sited and installed correctly, *Silt Fence* can perform well as a sediment barrier and to pond storm water.



*Silt Fence* is not designed to divert run-off and cannot function if it is installed running up and down a grade.

## SILT FENCE (con.)



***Silt Fence*** functions best when backed away from the toe of a slope. Note the buffer zone of ***Surface Roughening*** here.



***Silt Fence*** is not designed to work in a concentrated flow. Adding additional rows will not alter that design standard.

## INLET PROTECTION

Often referred to as the last line of defense, *Inlet Protection* is installed to prevent sediment-laden run-off from entering a storm drain inlet. The 'last line of defense' label relates to the frequent inability to implement treatment, once there has been a discharge to the box. Similar to other sediment control devices, *Inlet Protection* intercepts flows, but unlike most barriers, it is designed to discharge. Depending on the style implemented, *Inlet Protection* is designed to either filter or pond and overtop into the inlet.

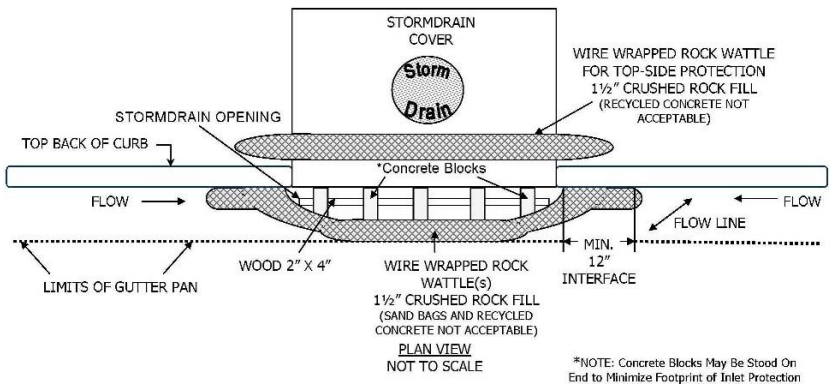
Functioning as a sediment removal device, *Inlet Protection* does have limitations, and almost universally must be implemented in conjunction with other, upgradient BMPs in order to function. Different styles of inlets will require correspondingly different styles of *Inlet Protection*. These various inlet styles will include: curb-side inlet in a sump condition, on grade curb-side inlet or an area/drop style inlet in a green belt, landscaped area, or on a paved section.

*Inlet Protection* must be installed such that it can overtop. This is specifically important for curb-side inlets, so as to not create a public safety hazard with large ponding in the lane of traffic. For curb-side *Inlet Protection*, installation should also ensure a lengthy interface and marriage with the curb.

Inspections and maintenance activities should reinforce on-going, optimal function of the installation. Features that have become damaged, dislodged, impacted with sediment and/or debris must be addressed, to restore them to a fully functional condition. Features that have been overwhelmed with sediment will require additional, upgradient controls.

## INLET PROTECTION (con.)

TYPICAL INLET PROTECTION INSTALLATION  
FOR SUMP INLET LOCATIONS



**Typical 8" diameter wire-mesh wrapped rock wattle style *Inlet Protection* for curb-side inlets in a sump condition.**



**Good example of a sump-style *Inlet Protection* installation with one, long, continuous rock wattle. Note the long interface with the curb facing at each end.**

## INLET PROTECTION (con.)



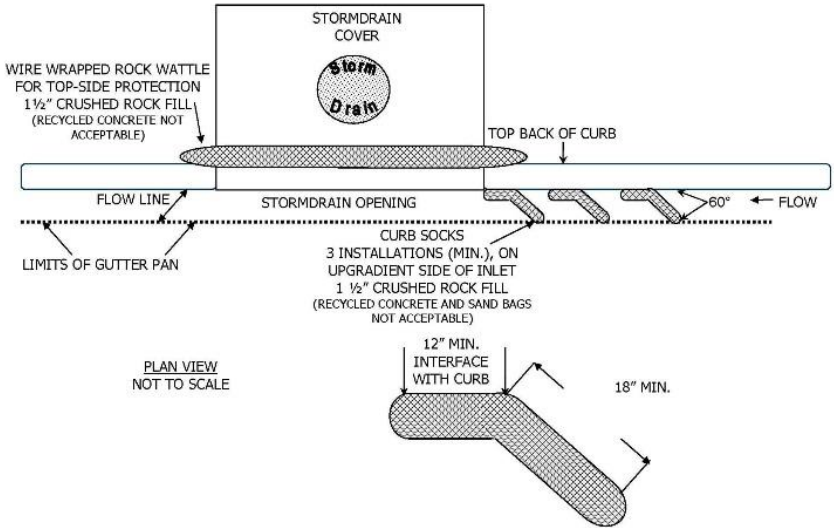
**Straw Wattles do not perform well as *Inlet Protection*. They do not filter flows and are prone to by-pass, because their light weight and buoyancy do not allow a good seal with the curb flowline.**



***Inlet Protection* is not designed to hold back large sediment plumes. The rock wattles are easily clogged, overwhelmed and sediment is discharged to the box.**

## INLET PROTECTION (con.)

### TYPICAL INLET PROTECTION INSTALLATION FOR ON-GRADE INLET LOCATIONS



**Curb Socks can assist with sediment removal in curb flowlines, prior to discharge to an inlet.**



## INLET PROTECTION (con.)



An appropriate style of curb sock must be selected to function as on-grade *Inlet Protection* to prevent by-pass.

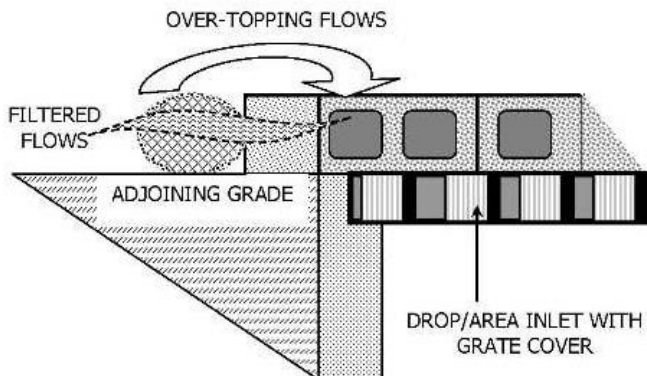


Curb Socks cannot be allowed to become overwhelmed with sediment. These features can no longer function as BMPs and need to be replaced with other features.

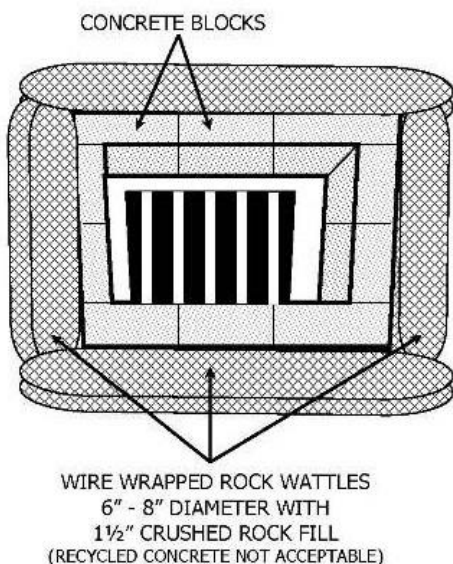
## INLET PROTECTION (con.)

### TYPICAL INLET PROTECTION INSTALLATION FOR DROP/AREA INLET LOCATIONS

NOT TO SCALE



NOTE: ADDITIONAL LAYERS OF CONCRETE BLOCKS AND  
ROCK WATTLES CAN BE ADDED, BASED ON ANTICIPATED  
FLOWS.



## INLET PROTECTION (con.)



**A gravel pack can be installed as a substitute to the wire mesh rock wattles for *Area Inlet Protection*, but may be more difficult to maintain or demolish.**



***Inlet Protection* must be maintained in good operating condition and should not allow sediment to discharge to the box.**

# CONTACT INFORMATION

## **MTDEQ Water Protection Bureau**

<http://deq.mt.gov/Permits.mcp#waterprotection>  
(406) 444-3080

## **MTDEQ Construction Permit Information**

**Storm Water** - (406) 444-5349

**Dewatering** - (406) 444-3927

## **MTDEQ Spill Reporting**

(406) 444-0379

## **MTDES (Disaster and Emergency Services)**

(406) 431-0411

## **MDT's Environmental Services Bureau**

(406) 444-7228

## **US Army Corps of Engineers**

Helena – (406) 441-1375

Billings - (406) 657-5910

## **EPA Region 8 – Montana Operations Office**

Helena - (406) 457-5025

## **Montana Contractors' Association**

Helena – (406) 442-4162



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