

**INTERIM STORMWATER MANAGEMENT PLAN (SWMP) FOR  
DAKOTA 33-5 21-3 AND WRIGHT 33-5 21-1 WELLS**

**Prepared for:**

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**Prepared by:**



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March 2016

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## **1. Site Description**

### **a) Location, Size and Purpose:**

The proposed project area is located approximately 4.5 miles north of the Town of Arboles in Archuleta County, Colorado. The proposed project area is depicted on the Allison, Colo. 7.5' U.S. Geologic Survey (USGS) quadrangle map and lies within Section 21, Township 33 North, Range 5 West, NMPM (Figure 1). The project area is located on private parcel # 595921100013. The site is an existing well pad that is approximately 2.75 acres in size and includes two natural gas wells.

The proposed activity involves stabilizing and managing stormwater on the existing wellpad. The purpose of this Interim Stormwater Management Plan (SWMP) is to identify means to rectify current stormwater issues at the site as identified by the Colorado Oil and Gas Conservation Commission (COGCC), to control any disturbed sediment and reduce sediment from leaving the project area, and to work towards achieving final stabilization. This plan shall be implemented until the next phase of construction at the pad, which will occur when a third well is installed. This plan will be updated when construction plans for the third well are finalized. This time period is referred to the interim management period in this plan. Construction of the wellpad and Colorado Department of Health and Environment (CDPHE) regulatory compliance were covered under Petrox's field-wide SWMP. This stand-alone plan is specific to managing stormwater at this project site only, and has been designed specifically to address the requirements of COGCC.

### **b) Construction Sequence:**

The sequence for activities at the site includes minor earthwork followed by stabilization/reseeding.

### **c) Nearby Potential Pollution Sources:**

There are other well pads and oil and gas infrastructure in the vicinity of the project area and the site is located within a property used as a gravel mine; however, no potential pollution sources are upslope of the project area and there was no evidence of releases of hazardous material from these sites.

### **d) Surface Water Drainage:**

Surface water drainage from the site would flow south toward an unnamed tributary which flows east towards the Piedra River.

### **e) Receiving Waters:**

All stormwater from the site discharges to the Piedra River, which is 0.3 mile east of the project area.

### **f) Soils:**

According to the U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey, soils found within the analysis area are comprised of the Catdraw loam on 3 to 12 percent slopes. Approximately 85% of this map unit is located on the Catdraw Loam component. Slopes are 3 to 12 percent. This component is found on pediments. The parent material consists of alluvium derived from sandstone and shale. Depth

to a restrictive layer is more than 80 inches. The natural drainage class is well drained and the runoff class is medium (Web Soil Survey, 5/8/2015).

**g) Vegetation:**

The vegetative community surrounding the site is dominated by Piñon- Juniper community.

**h) Hydrology:**

The project area is located within the USGS-designated Piedra Watershed (HUC: 14080102). An unnamed ephemeral stream is located approximately 50 feet west of the project site that drains towards the Piedra River. The Piedra River, downstream of the project area, is not on the Colorado Department of Public Health and Environment (CDPHE) 2012 list of impaired waters (Regulation 93).

## **2. Site Map**

Figure 1 is an overall location map, which identifies the project boundaries. Figure 2 is a site specific aerial map, which depicts the approximate locations of proposed best management practices (BMPs).

## **3. Stormwater Management Controls**

### **a) SWMP Administrator**

The Stormwater Management Plan (SWMP) administrator is responsible for implementing this plan. The SWMP administrator develops, implements, and modifies required SWMP activities (i.e. evaluations, training, BMPs). The SWMP administrator is the key point of contact for all SWMP activities. The SWMP administrator has the authority to manage day-to-day stormwater quality management activities for the proposed project.

SWMP Administrator: Mr. Dusty Nystrom

### **b) Identification of Potential Pollutant Sources**

Potential pollutant sources include disturbed soils which could contribute sediment to stormwater. Within the boundaries of the proposed project all stormwater will be isolated and/or treated with BMPs.

### **c) Best Management Practices for Stormwater Pollution Prevention**

#### **i. Structural Practices for Erosion and Sediment Controls**

Structural practices involve the installation of devices to divert, store or limit runoff. These practices have several objectives, including sediment and erosion control or management of stormwater run-on and runoff. With the exception of one location (described in Section 3.c.iii below) SME did not observe concentrated stormwater runoff originating from the pad or adjacent side slopes. This is because the pad is comprised of level ground and there is uniformity of surrounding side slopes, precipitation directly falling on the site is anticipated to be infiltrated, evaporated, and/or dissipated via sheet flows. The structural practices specified below are primarily designed to de-energize and filter concentrated flows from stormwater run-on. BMPs are to be utilized within the project area and are depicted on the BMP Location Map

(Figure 2) and BMP Details (Figure 3). BMPs to be implemented at the site include the following:

### **Wood Fiber Wattles**

#### *Purpose*

- Filter sediment laden runoff.
- Help reduce sheet and rill erosion.
- Prevent sediment from entering areas of concentrated flow.

#### *Location*

Wattles will be installed as specified on BMP Technical Drawings and Site Specific BMP Maps. Specifically, existing wattles on a bare cut slope will remain in place. If necessary to install erosion control blankets (see below), the wattles may be temporarily removed, then re-installed. Additionally, wattles will be installed between the toe of an existing cutslope and an existing stormwater channel.

#### *Installation*

- Hand excavate a small trench at the location the wattles will be installed.
- Securely stake down wattles using pattern depicted on Figure 3.
- Be sure where two or more wattles are required that they securely abut each other.
- New wattles should be comprised of wood fiber instead of straw to deter browsing by horses.

#### *Maintenance*

- Inspect the straw wattles after a storm event.
- Repair or replace any damaged areas immediately.
- Check to make sure stakes are still secure and wattles are not eroding underneath.

### **Rock Check Dams**

#### *Purpose*

- Slow water flows to allow suspended sediments to settle out.
- Filter sediment laden runoff.
- Prevent erosion and head-cutting in channels.
- Use as coffer dam to divert stormwater channel

#### *Location or use with other BMPs*

Check dams will be installed as specified on BMP Technical Drawings and Site Specific BMP Maps. Use of check dams are specified at two locations: 1) in an area where a stormwater channel descends a steep slope to prevent head-cutting; and 2) to divert water from an existing stormwater channel back to its natural flowpath.

#### *Installation*

- Place rock in a channel in a manner that will allow for shallow ponding.
- Secure the dam as necessary to prevent a wash out during a large storm.
- Install completely across the drainage.

- Use large enough rocks or stones to prevent washouts.
- Stack and/or compact rocks tightly as possible.
- Dam should be lowest in elevation in the center and extend up the banks to prevent overflows from going around the dam.

#### *Maintenance*

- Inspect after each storm event.
- Periodically remove sediment build up to avoid water flowing around the sides and properly disposed of according to the SWMP. Specifically, sediment should be removed when it reaches 50% of the dam height.
- Replace rocks or stones as needed.

### **Soil Retention Blanket**

#### *Purpose*

- To control erosion and retain sediment resulting from sheet flow runoff.
- Protect newly seeded areas.

#### *Location or use with other BMPs*

Soil retention blankets will be used on cut slopes that are currently either devoid of vegetation or only sparsely vegetated. The blankets should be comprised of coir fiber, coconut fiber, and/or wood fiber. Straw blankets should not be used due to site access by horses. Soil retention blankets will be installed as specified on BMP Details (Figure 3) and BMP Location Map (Figure 2).

#### *Installation*

- Lay in blankets similar to roof shingles; start at the lowest part of the slope, then work your way up. Uphill pieces overlap downhill sections.
- Secure blanket as necessary to prevent a wash out during a large storm.
- Do not stretch blankets.
- Applying native seed mix prior to installing blankets.

#### *Maintenance*

- Re-anchor loosened matting and replace missing matting and staples as required.
- Repair or replace blanket as needed.

### **Sediment Trap**

#### *Purpose*

- Slow or stop water flows to allow suspended sediments to settle out.
- Manage concentrated stormwater run-on.

#### *Location or use with other BMPs*

A small sediment trap will be constructed at the location where concentrated flows leave the project site, immediately up-gradient of an existing access road. The compacted access road shall be used as an earthen berm at the downstream end of the sediment trap, and the existing

culvert shall be used as an overflow outlet. The area upstream of the road should be excavated as specified on BMP Details (Figure 3) and BMP Location Map (Figure 2).

#### *Installation*

- Excavate the specified location in a manner that will allow for shallow ponding.
- Trap should be oblong in shape and approximately twice as long as wide.
- Install completely across the drainage to prevent stormflows from bypassing the trap.
- Install rock along portion of access road to be used as an earthen berm to prevent erosion of the road shoulder.

#### *Maintenance*

- Periodically remove sediment as needed to avoid water flowing around the sides or over the top of structure and properly disposed of sediment.
- Specifically, sediment should not be allowed to accumulate to the bottom of the culvert.

### **Rock Outlet Scour Protection**

#### *Purpose*

- Prevent scour downstream of existing culvert.
- Provide increased stability of existing culvert/roadway.

#### *Location or use with other BMPs*

Rock scour protection will be installed at the downstream end of the existing culvert as depicted on the BMP Location Map (Figure 2).

#### *Installation*

- Place rock in a manner that will dissipate concentrated flows
- Install geotextile fabric beneath rock.
- Length of the rock “apron” should be 4 X the diameter of the culvert.
- Width of rock “apron” at downstream end should be 3 X the diameter of the culvert.

#### *Maintenance*

- Replace any rock that is washed out during high flows.
- Lengthen or widen rock apron if significant scour is observed below or adjacent to rock.

### **ii) Non-Structural Practices for Erosion and Sediment Controls**

The following non-structural BMPs will be utilized, as practical, to initiate runoff management, and improve and facilitate the management of stormwater impacts.

**Vehicle and Equipment Maintenance:** All vehicles left on-site will be properly maintained and serviced regularly. Vehicles will be inspected daily for leaks or signs of wear which could lead to leaks in the future.

**Minimize Clearing:** Minimization of clearing activities incorporates several components of BMPs for runoff control; only the existing cover will be removed where necessary for the operation of equipment or installation of BMPs. The site includes a large amount of woody

debris at the base of the eastern and southern cut slopes located below the pad. Although this woody debris is unlikely to provide useful erosion control, removing it would result in an increase in exposed soils, and is not recommended.

**Seeding:** A native seed mix shall be applied to all cut slopes, both above and below the pad. Per the NRCS 2009 Recommended Planting Rates, seeding is defined as the amount of seed of an individual species that's needed to achieve an adequate stand. This is expressed in pure live seed (PLS) pounds per acre and is based on planting a predetermined number of live seeds per square foot to achieve a specific plant density. For conservation purposes, seeding rates have been established to achieve the desired plant density of around 20-60 live seeds per square foot. Seed mixes ordered to specify the PLS % is recommended to ensure successful seeding rates and final successful vegetative cover. A Pinyon-Juniper Woodlands Native Mix recommended by Colorado Parks and Wildlife (Appendix A) would be appropriate for the site, and should be applied at specified rates. Broadcast seeding will be the preferred seeding method onsite due to steep slopes that cannot be adequately accessed with other seeding equipment. Seed will be broadcast with a mechanical or hand seeder immediately after the seedbed has been prepared (i.e., raked) and the soil is loose. This will allow the seeds to be lightly covered as the soil settles. Broadcast seeding will occur immediately prior to installation of erosion fabric or application of mulch (straw or wood). The seed will then be raked or harrowed into the ground so that the seed is planted no deeper than 0.25 inch below the surface.

**Mulching:** Mulching, in conjunction with seeding, provides erosion protection prior to the onset of plant growth. In addition, mulching protects newly-applied seeds, providing a higher likelihood of successful re-vegetation. On cut slopes, the specified wood fiber erosion control blankets are anticipated to provide appropriate cover. Other areas to be seeded (see Section 3.c.iii below) should be covered with certified weed free straw or wood fiber mulch applied at a rate of 90 pounds per 1,000 square feet. To maintain its effectiveness, mulch will be anchored to resist wind displacement. Wood fiber mulch should be applied with a tackifier, and straw mulch should be anchored into the ground via crimping to a depth of 1 to 2 inches in order too effectively reduce erosion and encourage plant growth. Do not apply dry straw mulch when windy conditions are present.

**Weed Management:** Previous COGCC inspection have noted the presence of cheatgrass (*Bromus tectorum*), yellow tumbled mustard (*Sisymbrium altissimum*), Russian thistle (*Salsola tragus*), and annual sunflower (*Helianthus annuus*) on side slopes below the pad. Of these species, only cheatgrass is currently listed as a noxious weed by the Colorado Department of Agriculture (CDA), and it is "List C" species. Annual sunflower is a native species; however, Russian thistle and yellow tumbled mustard are undesirable non-native species that do not provide adequate surface cover for erosion control purposes and should be removed where present. Re-seeding of this area with native seed is anticipated to increase density of desirable, native species on these slopes. Any remaining yellow tumbled mustard, Russian thistle or other broadleaf noxious weeds listed by CDA as occurring in Archuleta County (Appendix B) should be treated with an appropriate broadleaf herbicide during site inspections (See Section 5 below). Alternatively, these species may be hand-pulled, bagged, and properly disposed of. Actions to eradicate cheatgrass are not recommended at this time

as such actions would potentially damage desirable native ground cover species. Reseeding with native grasses is anticipated to prevent further spread of cheatgrass on exposed slopes. This approach complies with the Colorado Noxious Weed Act, C.R.S. §35-5.5-115 and current management plans for noxious weeds within Archuleta County.

### **iii) Other Earthwork Required for Erosion and Sediment Control**

A hole was observed on the eastern side slope below the pad. This hole allows for concentrated flows to form which may lead to the erosion of the side slope in this area, and subsequent discharge of sediment outside of the project site. This hole (and any other holes or evidence of concentrated flows present) should be filled with clean fill dirt, compacted, and revegetated using the seeding/mulching guidelines above.

### **iv) Materials Handling and Spill Prevention Controls**

Potential pollutant sources are areas in which construction activities are exposed to stormwater. The following items identify the procedure for the handling of materials that may contribute pollutants to runoff.

- Absorbent pads will be used for any leaking vehicles or generators.
- No heavy equipment will be stored in streams or open water sources including wetlands, etc.
- Contractors will not conduct fueling or lubricating of construction equipment or other motor vehicles within 100 ft of open water sources or other aquatic resource areas (including wetlands), etc.
- Major construction equipment repairs will be performed offsite, where practicable.
- Storage of chemicals, petroleum products or other hazardous materials will have secondary containment.
- Containment structures sufficiently impervious to prevent a discharge to aquatic resources, such as containment dikes, containment walls, drip pans, or equivalent protection actions, are to be constructed and maintained around all qualifying bulk oil storage facilities, including tank batteries, consistent with the U.S. Environmental Protection Agency's (EPA) Spill Prevention Control and Countermeasures (SPCC) regulation (40 CFR 112) as required.
- Spill prevention and responses are further discussed below.

**Spill Prevention:** A spill preventive program involves inspections and maintenance of stormwater management devices and routine inspections of facility operations to detect faulty equipment. Storage areas and equipment, such as tanks, containers, and drums, will be checked regularly for signs of deterioration. No solid materials, including floatable debris, will be stored in or near waters. Vehicle tracking, materials, and sediment, along with the generation of dust, will be minimized. Waste receptacles will be onsite and adequately maintained; sanitary facilities will be provided onsite at all times.

### **v) Dedicated Concrete or Asphalt Batch Plants**

There will be no concrete or asphalt batch plants utilized on this site.

#### **vi) Vehicle Tracking Control**

All vehicles and construction equipment shall utilize existing dirt/gravel access roads to prevent the need for a vehicle tracking pad.

#### **vii) Waste Management and Disposal, Including Concrete Washout**

Trash receptacles will be available and maintained to facilitate a sanitary work environment. Use of concrete is not required to implement this SWMP; however, if concrete is utilized as part of site operations, a concrete washout will be implemented, where appropriate.

#### **viii) Groundwater and Stormwater Dewatering**

No dewatering will be necessary to implement this SWMP.

### **4. Standards for Interim Site Stabilization**

Interim stabilization will be considered complete for the purposes of this plan when uniform vegetative cover on side slopes has been established with a density of at least 80% of pre-disturbance levels, excluding weeds. Adjacent non-disturbed areas surrounding the pad exhibit approximately 50% total ground cover, indicating that 40% ground cover by desirable native species is sufficient for this site. When these standards are reached, wattles shall be removed, unless only comprised entirely of bio-and/or photo-degradable materials. Other structural BMPs are designed to remain throughout this interim management period.

### **5. Inspection and Maintenance Procedures**

Inspections will be conducted at least once every six months and will not be performed when snow cover exists over the entire site for an extended period (December – February of a typical year). The inspector will monitor local weather patterns and terrain at similar elevations to determine if snow cover exists at the site.

Temporary and permanent erosion and sediment control BMPs will be inspected and maintained, as necessary, to assure continued performance of their intended function. Site inspections will be conducted by a person knowledgeable in the principles and practices of erosion and sediment controls. This person will possess the skills to assess conditions at the site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the entire site. Inspection forms are located in Attachment C.

#### **Inspection procedures:**

Inspections will include all areas of the site disturbed by activity. The site inspector(s) must look for evidence of, or the potential for, pollutants entering the stormwater conveyance system. Sedimentation and erosion control measures will be observed to ensure proper operation. Discharge locations will be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to downstream aquatic resources (wetlands, streams, ponds). Locations where vehicles enter or exit the site will be inspected for evidence of off-site sediment tracking. During SWMP

inspections seeded areas will be assessed for revegetation progress. Weed species will be monitored by personnel familiar with invasive species identification on an annual basis during growing season. Additionally, corrective action of deficiencies in certain BMPs or invasive species observed in the inspection will be noted and corrected. Monitoring records will be maintained with the stormwater inspection sheets. The following would be observed during inspections:

- Construction site perimeter and discharge points.
- All disturbed areas.
- Areas used for material storage that are exposed to precipitation.
- Other areas determined to have a significant potential for stormwater pollution.
- Erosion and sediment control measures identified in the SWMP.
- Any other structural BMPs that may require maintenance, such as secondary containment around fuel tanks or the condition of spill response kits.
- Seeded areas will be assessed for revegetation progress and weed species will be identified by a knowledgeable person

### **Maintenance Procedures**

Temporary and permanent erosion and sediment control BMPs will be maintained and repaired as needed to assure continued performance of their intended function. All maintenance and repair will be conducted in accordance with BMP inspections. Maintenance activities to correct problems noted during inspections must be documented. If a BMP is replaced or added, this SWMP must be updated in a timely manner. Updates made by hand should be initialed and dated by the SWMP administrator.

All structural control measures will be properly installed and maintained in accordance with any relevant manufacturer specifications and good engineering practices. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the SWMP manager would replace or modify the control for site situations as soon as possible. If litter, debris or chemicals could be exposed to stormwater, they need to be prevented from becoming a pollutant source in stormwater discharges.

Temporary erosion and sediment control BMPs (wattles) will be removed after interim site stabilization standards are achieved or after the temporary BMPs are no longer needed. Trapped sediment will be removed or stabilized on site. Disturbed soil areas resulting from removal of BMPs or vegetation will be permanently stabilized as soon as possible.

### **Record Keeping**

Documentation of the inspections would be conducted and maintained throughout the interim management period. The following items will be documented during the inspections:

- Date of Inspection.

- Any incidence of non-compliance and a brief explanation of measures to be taken to prevent future violations and measures taken to clean up the sediment that has left the site.
- The report will contain a signed certification indicating the site is in compliance once adequate measures have been taken and recorded to correct any problems.
- Any notes on the need for and performance of preventative maintenance and other repairs.

## **References**

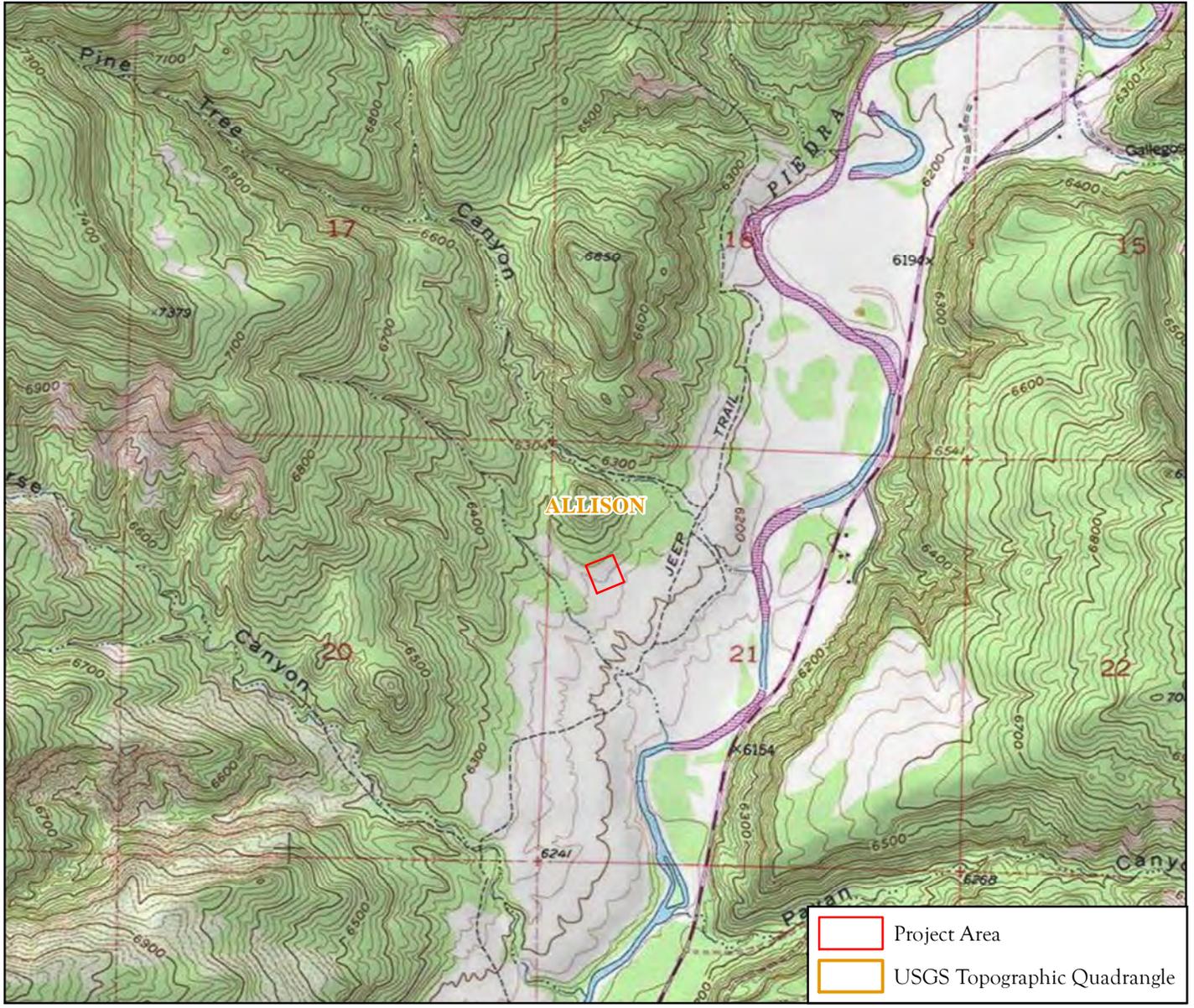
Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at <http://websoilsurvey.nrcs.usda.gov/>. Accessed [03/15/2016].

**PROJECT LOCATION:**

SW¼NW¼ Section 21 Township 33 North, Range 5 West  
 New Mexico Principal Meridian  
 Archuleta County, Colorado.

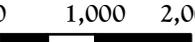
**Project Area Centroid (NAD 1983):**

37.09301°, -107.40384°



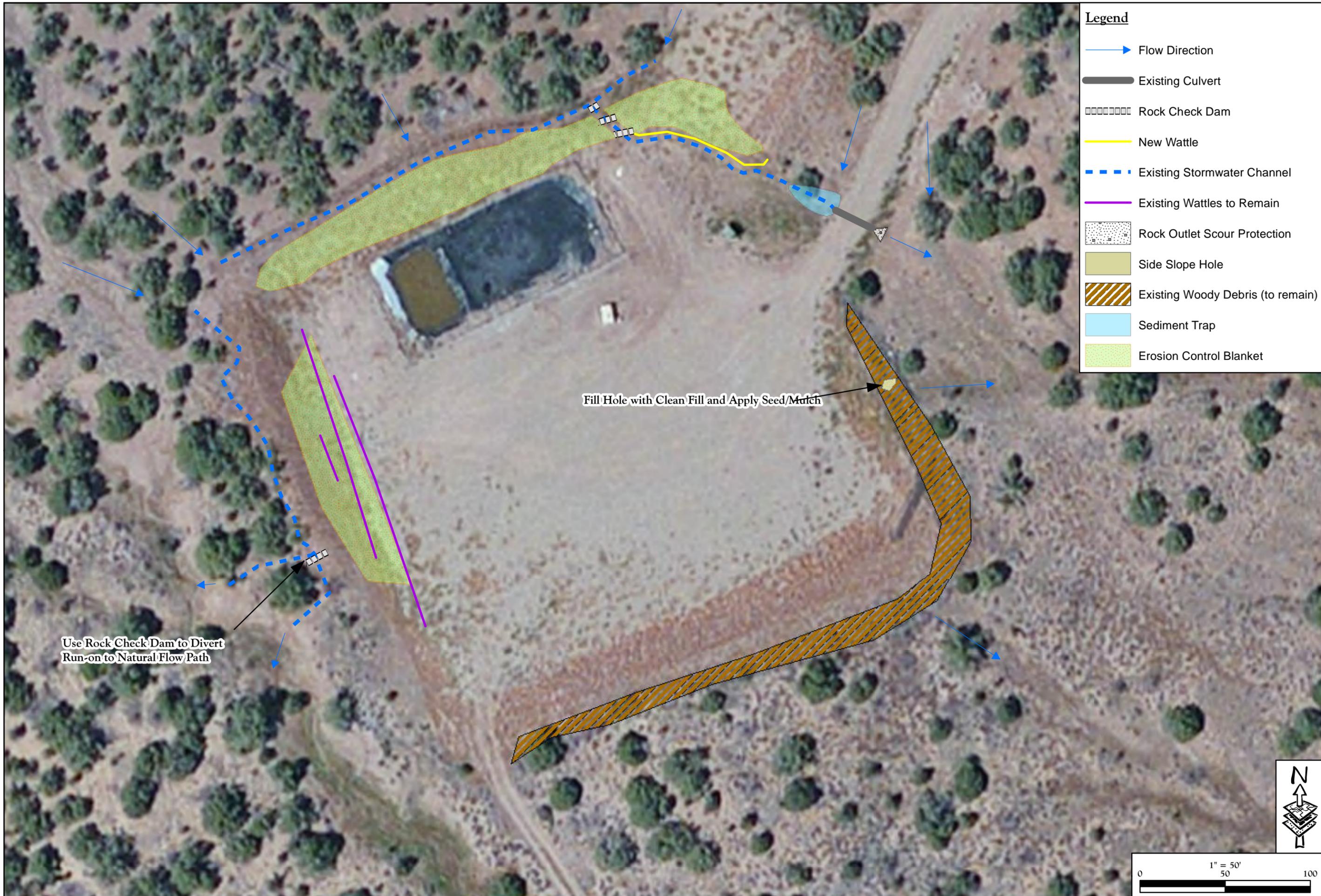
**ENVIRONMENTAL CONSULTANTS**

679 East 2nd Ave. Unit E2, Durango, Colorado 81301  
 www.sme-env.com (970) 259-9595

Drawn by:	Rvwd. by:	Project No.:	
AR	TF	160006	
Date:	Rsvd. Date:	Scale:	
3/16/2016	NA	1" = 2,000'	
		 0 1,000 2,000 Feet	

**FIGURE 1**  
 TOPOGRAPHIC LOCATION MAP

**STORMWATER MANAGEMENT PLAN**  
 DAKOTA 33-5 21-3 & WRIGHT 33-21-1  
 PETROX RESOURCES, INC.



**Legend**

- Flow Direction
- Existing Culvert
- Rock Check Dam
- New Wattle
- Existing Stormwater Channel
- Existing Wattles to Remain
- Rock Outlet Scour Protection
- Side Slope Hole
- Existing Woody Debris (to remain)
- Sediment Trap
- Erosion Control Blanket

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PRELIMINARY NOT  
 FOR CONSTRUCTION OR  
 RECORDING

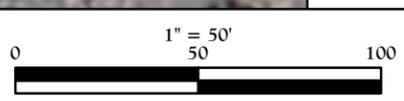
**BMP LOCATION MAP  
 STORMWATER MANAGEMENT PLAN  
 DAKOTA 33-5 21-3 & WRIGHT 33-5 21-1**

Date: 03/15/2016  
 Pro. #: 160006  
 Drawn By: T. Funk  
 Revision:

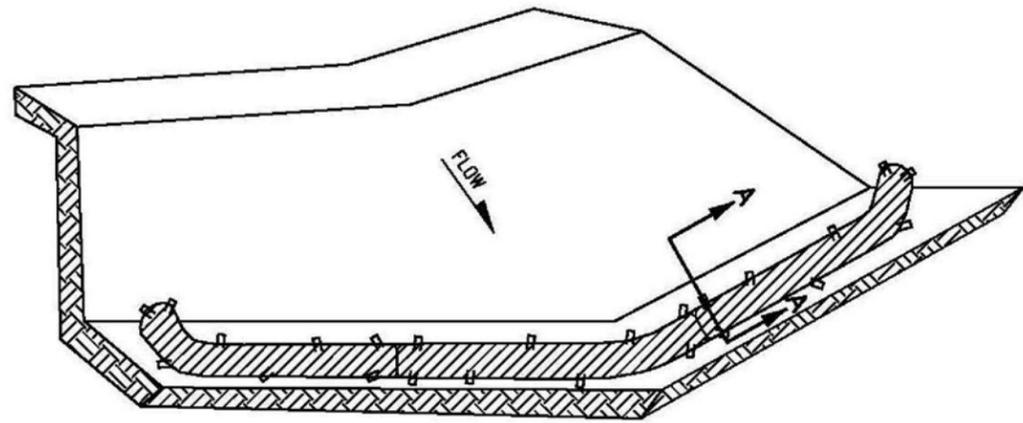
Imagery Date: 05/21/10  
 Source: Aerial photo  
 provided by ESRI  
 ArcGIS Online.

Use Rock Check Dam to Divert  
 Run-on to Natural Flow Path

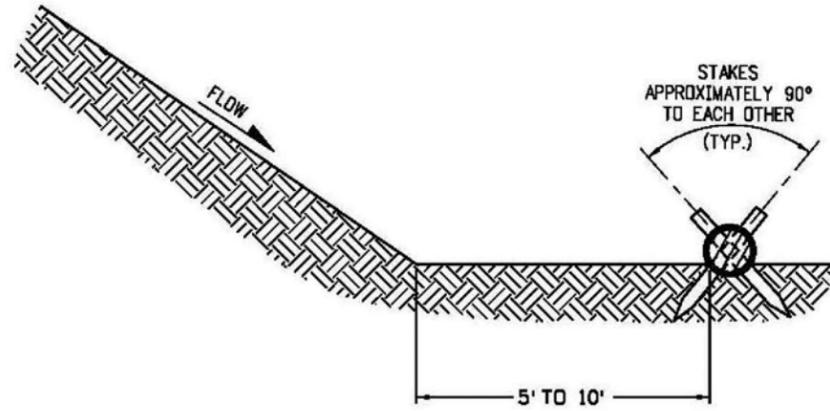
Fill Hole with Clean Fill and Apply Seed/Mulch



# Erosion Logs (Wattles)



**ISOMETRIC VIEW**

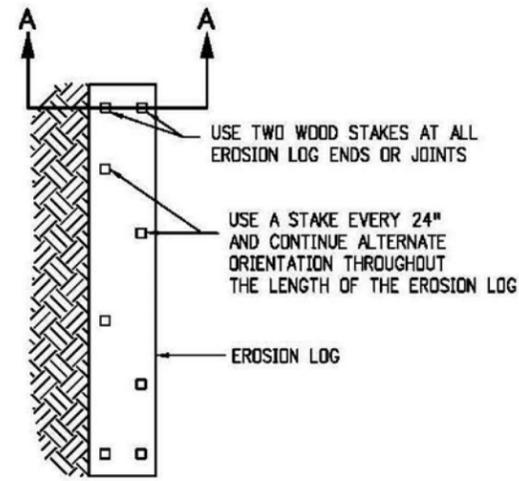


**SECTION A-A**

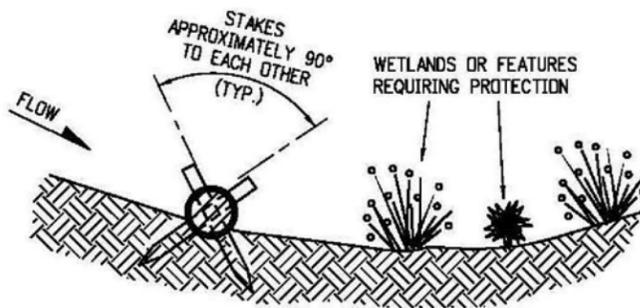
**NOTES:**

1. EROSION LOGS USED AT TOE OF SLOPE SHALL BE PLACED 5 TO 10 FEET BEYOND TOE OF SLOPE TO PROVIDE STORAGE CAPACITY.
2. EROSION LOGS SHALL BE PLACED ON THE CONTOUR, WITH ENDS FLARED UP SLOPE.

**EROSION LOG TOE OF SLOPE PROTECTION**



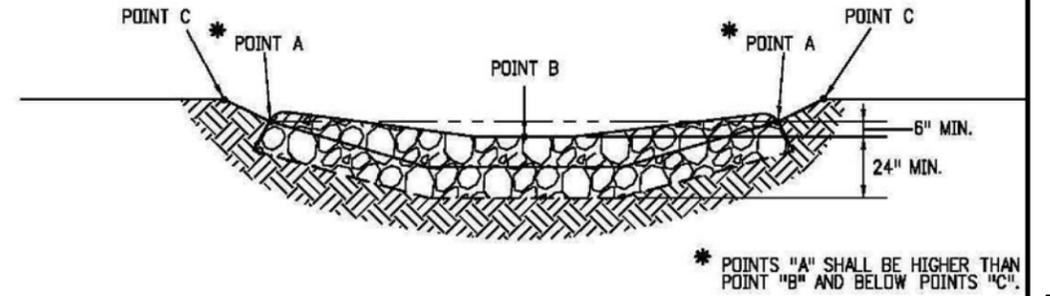
**PLAN VIEW**



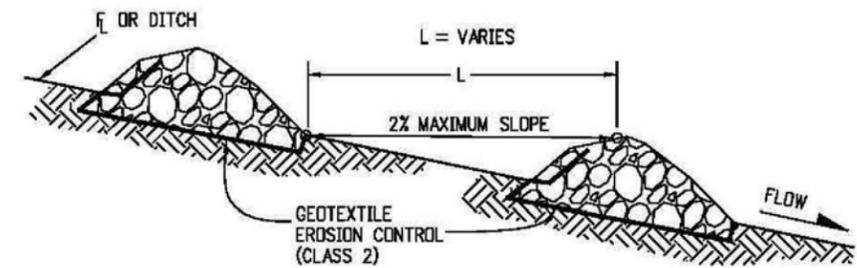
**SECTION A-A**

**TYPICAL STAKE INSTALLATION**

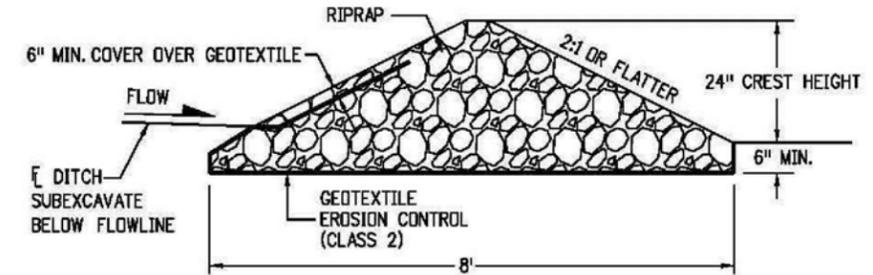
# Rock Check Dam



**TYPICAL SECTION VIEW**



**SECTION VIEW ALONG DITCH FLOWLINE**



**SECTION DETAIL**

**NOTES:**

1. RIPRAP SIZE  $D_{50} = 6"$  OR AS SHOWN ON THE PLANS.
2. THE ENDS OF RIPRAP CHECK DAM SHALL BE A MINIMUM OF 6 IN. HIGHER THAN CENTER OF CHECK DAM.

**ROCK CHECK DAM**



**ATTACHMENT A**  
**PINYON JUNIPER WOODLAND SEED MIX**

**Ecotype: Pinyon/Juniper Woodlands-Sagebrush**

Species

GRASSES	Variety*	% of mix	FRPLS*	PLS rate/acre
Western wheatgrass	Arriba	10%	8	0.8
Bluebunch wheatgrass	Secar/Goldar	15%	10	1.5
Sandberg bluegrass	"UP release"	15%	2	0.3
Muttongrass	(UP Colona)	10%	1	0.1
Junegrass	Uncompahgre	15%	1	0.15
Indian ricegrass	White River	10%	6	0.6
Sand dropseed		10%	1	0.1
Blue grama	Hatchita	5%	1.5	0.075
Galleta	Viva	10%	6	0.6

\*Select 5 of 9 species based on availability

100%

\*recommended variety unless locally collected seed is available, in which case locally collected seed is preferred

\*based on drill seeding; 2x if broadcasting

FORBS	Variety*	% of mix	FRPLS*	PLS rate/acre
Utah sweetvetch	(UP Uncompahgre) TIMP	15%	15	2.25
Lewis flax	Maple grove	15%	4	0.6
Penstemon cyanocaulis* (bluestem)	(UP San Miguel)	15%	1	0.15
Penstemon comarrhenus (dusty)	(UP Delta)	15%	1	0.15
Penstemon palmeri (palmer)		15%	2	0.3
Penstemon eatonii (firecracker)		15%	1	0.15
Silky lupine -sericeus*		15%	20	3
Gooseberryleaf globemallow		15%	2	0.3
Oregon daisy	(UP Dry Fork)	15%	1	0.15

\*Select 5 of 9 species based on availability

SHRUBS*	Variety	PLS rate/acre
Artemesia** (+)		1
Fourwing saltbush		1
Winterfat	Hatch	1
Fringed sage		0.5
cliffrose		1

\*\*wyomingensis or nova depending on site

(+) to be included in all PJ/SS mixes

\*Select 3 of the 5 species based on availability

NOTE: (UP)- The UP varieties are in development and may not be available in sufficient quantities.

In which case, the most appropriate available variety should be utilized

Supply and availability should increase in future years

at which time the UP varieties should be used.

**ATTACHMENT B**  
**CDA NOXIOUS WEED LIST FOR ARCHULETA COUNTY**

2016 Colorado Noxious Weed Statistics Summary  
List A & B

Archuleta

	# of Species Reported in County	Statewide Infested Acres	Statewide Counties Impacted		
<b>List A Species</b> 14 species in CO on List A (Japanese, Bohemian, and giant knotweeds grouped)	<b>1</b>	<b>Unknown</b>	<b>41</b>		
<b>List B Species</b> 32 species on List B (Several List B species grouped in the count; see the list below)	<b>17</b>	<b>719,155</b>	<b>64</b>		
<b>List A &amp; B Species</b> 46 species on List A & B	<b>18</b>	<b>Unknown</b>	<b>64</b>		

List A:

List A Species Reported*:	Myrtle spurge
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List B: **\*\* (Use the Funnel Symbol in the upper left corner to SORT the Table below)\*\***

Species	Infested Acres in County	Statewide Infested Acres	Statewide Counties Impacted	Management Status (View Containment Map)	Data Collection Year
Absinth wormwood	0	711	16	Eliminate by 2018	2013
Black henbane	0	206	18	Eliminate by 2018	2013
Bouncingbet	0	228	24	Eliminate by 2016	2011
Bull thistle	13	2,086	43	Eliminate by 2015	2009
Canada thistle	56	129,572	55	Suppress	2012
Corn, Mayweed, and Scentless Chamomiles	1	18,594	26	Eliminate by 2016	2011
Chinese clematis	0	330	13	Eliminate by 2018	2013
Common tansy	0	473	19	Eliminate by 2016	2011
Common teasel	0	3,365	18	Eliminate by 2014	2011
Cutleaf teasel	0	1,346	7	Eliminate by 2014	2011
Dalmatian toadflax	0	18,360	32	Eliminate by 2019	2014
Dames rocket	0	175	27	Eliminate by 2014	2010
Diffuse knapweed	2	68,968	45	Eliminate by 2019	2014
Eurasian watermilfoil	0	247	11	Eliminate by 2015	2009
Hoary cress	19	30,044	54	Contain: Figure 13.03	2014
Houndstongue	1	73,598	41	Eliminate by 2018	2013
Jointed goatgrass	10	15,717	28	Contain - See Figure 24.01	2010
Leafy spurge	71	39,577	48	Contain: Figure 12.03	2014
Moth mullein	0	339	11	Eliminate by 2014	2010
Musk thistle	53	46,490	52	Contain - See Figure 18.01	2009
Oxeye daisy	4	15,806	38	Contain - See Figure 7.01	2013
Perennial pepperweed	20	21,739	39	Eliminate by 2021	2014
Plumeless thistle	0	1,182	13	Eliminate by 2018	2013
Russian knapweed	61	55,719	52	Eliminate by 2021	2014
Russian olive	1	65,979	36	Eliminate by 2017	2012
Salt cedar	5	27,963	46	Eliminate by 2021	2014
Scotch thistle	2	25,586	40	Eliminate by 2015	2009
Spotted & hybrid knapweed	1	4,921	40	Eliminate by 2018	2013
Sulfur cinquefoil	0	1,139	15	Eliminate by 2012	2008
Wild caraway	0	114	8	Eliminate by 2016	2011
Yellow nutsedge	0	15,049	12	Eliminate by 2017	2012
Yellow & hybrid toadflax	120	33,532	46	Contain: Figure 8.01	2014

Data Updated 1/5/16

**ATTACHMENT C  
INSPECTION CHECKLIST**

## Dakota 33-5 21-3 and Wright 33-5 21-1 Interim SWMP Erosion and Sediment Control Inspection Form

Inspector(s): \_\_\_\_\_ Date: \_\_\_\_\_

Current Weather Conditions: \_\_\_\_\_

Description of current discharges: \_\_\_\_\_

\_\_\_\_\_

BMP Designation	O.K	Not O.K.	BMP Condition, Corrective Action, General Notes
<b>Construction Access</b> Vehicles Staying on Roads ? Mud Reaching Highway?			
<b>Soil Stabilization</b> Signs of Erosion: Gullies? Slope Failures? Rills?			
<b>Slope Protection</b> Grass Growing? Condition of Matting?			
<b>Perimeter Inspection</b> Sediment Leaving Site?			
<b>Conveyances Stable</b> Ditches Functioning? Check Dams Intact Check Dams Silted In?			

**Dakota 33-5 21-3 and Wright 33-5 21-1 Interim SWMP  
Erosion and Sediment Control Inspection Form**

BMP Designation	O.K	Not O.K.	BMP Condition, Corrective Action, General Notes
<b>Outlet Protection</b> Stabilized?			
<b>Sediment Trap</b> %filled w/ Sediment?			
<b>General BMP Maintenance</b> Wattles Staked Properly? %filled w/ Sediment?			
<b>Dust Control</b> Veg Cover?			
<b>Spill Prevention</b> Material Storage? Spill Containment Kit? Secondary Containment?			
<b>Condition of Discharge From Site</b> Sediment? Oil Sheen?			

**Dakota 33-5 21-3 and Wright 33-5 21-1 Interim SWMP  
Erosion and Sediment Control Inspection Form**

Location(s) of discharges of sediment or pollutants from the site: \_\_\_\_\_

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Location(s) of BMPs that need to be maintained: \_\_\_\_\_

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Location(s) of BMPs that failed to operate as designed or are inadequate: \_\_\_\_\_

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Corrective action required including any changes to the SWMP necessary and implementation dates: \_\_\_\_\_

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Additional Comments: \_\_\_\_\_

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Inspector Name and Title