

# **Yellow Jacket Expansion Project**

## **Conceptual Storm Water Management Plan**

### **Kinder Morgan CO<sub>2</sub> Company, LP**

#### **INTRODUCTION**

The conceptual Stormwater Management Plan includes conceptual best management practices (BMPs) and reclamation plans for Kinder Morgan's Yellow Jacket Expansion Project in accordance with the Colorado Department of Public Health and Environment requirements. When finalized, this document will function as a supplemental attachment to Kinder Morgan's Master Stormwater Plan (MSWMP) for oil and gas construction activities in the McElmo Dome and Doe Canyon units. BMP diagrams and additional general stormwater information are included in the MSWMP. The Kinder Morgan contact person is Bob Clayton and his contact information is:

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#### **PROJECT LOCATION AND DESCRIPTION**

The proposed expansion of the existing Kinder Morgan-Yellow Jacket Plant is located in Township 37 North, Range 18 West, Section 13 at an elevation range of 6,600 to 6,700 feet. The expansion project would be located east and southeast of the existing plant, in a mix of piñon-juniper woodland and sage grassland. The project is located on gently sloping topography with 2-5 degree slopes. Disturbance associated with the construction of the project would include removal of top soil to create a level area for construction, cut and fill associated with the expansion building, excavation for utilities and foundations, and placement of fill for access and parking areas. Total disturbance for the proposed action would be less than 39 acres.

#### **ESTIMATED TOTAL AREA OF THE SITE TO UNDERGO CLEARING, EXCAVATION, OR GRADING**

The maximum disturbance associated with the expansion project is less than 39 acres.

#### **EXISTING GEOLOGY AND SOIL DATA**

Surface geology of the project area and vicinity consists of loam residuum, slope alluvium and Eolian deposits derived from sandstone and shale. Geologic formations present include the Dakota Sandstone

and Burro Canyon formation (USGS 2008<sup>1</sup>). Surveyed soils for the project area consist of three types described in Table 1 below (NRCS, 2012<sup>2</sup>).

**Table 1. Soils found in the project area<sup>1</sup>**

Soil Name	Drainage	Wind Erosion Potential	Water Erosion Potential
Romberg-Crosscan complex, 6 to 25 percent slopes	Well drained	Slight	Severe
Barx-Gapmesa complex, 2 to 6 percent slopes	Well drained	Moderate	Moderate
Wetherill loam 1 to 3 percent slopes	Well drained	Moderate	Slight

<sup>1</sup> U.S. Geological Survey (USGS) Gap Analysis Program. *1:500,000 Scale Geology for the Southwestern U.S.* [Computer file]. Logan, Utah, USA: RS/GIS Laboratory, College of Natural Resources, Utah State University, 2008.

<sup>2</sup> Natural Resources Conservation Service (NRCS). 2011. Web Soil Survey. Available online at: <http://websoilsurvey.nrcs.usda.gov/app/>. Accessed December 7, 2011.

#### DESCRIPTION OF EXISTING VEGETATION AND ESTIMATE OF PERCENT OF GROUND COVER

The majority of the expansion project would be located on undisturbed piñon-juniper woodland. The southern portion of the expansion (construction and equipment storage areas) would be located in a previously disturbed sage grassland and on agricultural land. Dominant vegetation within the project area include piñon-juniper trees, sagebrush, western wheat, and cheat grass. Vegetative cover was visually estimated at 40 percent. The project area contains no riparian or aquatic habitats; therefore no natural drainages will be modified or impeded as part of development activities.

#### NAME OF RECEIVING WATER AND TYPE OF OUTFALLS

Storm water from the project area generally flows southwest via unnamed washes, into Yellow Jacket Canyon. Yellow Jacket Canyon experiences springtime perennial flows, which eventually reach McElmo Creek. There are no perennial water sources, wetlands, seeps, springs, or riparian areas within the expansion property.

#### STRUCTURAL BMPs

The following are conceptual BMPs identified by Ecosphere. Site specific BMPs will be installed pre-construction and during the construction process. BMPs will be maintained or amended by Kinder Morgan as site conditions change throughout the construction and reclamation process. A map showing the project area is attached. Table 2 describes structural BMPs that may be used at the Yellow Jacket Compression Expansion project.

**Table 2. Structural BMPs.**

BMP	How It Works	Location
Fiber Wattle (Sediment Control Logs)	Fiber Wattles on the downhill side of a disturbed area filter stormwater.	Disturbed areas and around stock piled soils.
Culvert Protection	Inlet and outlet protection prevent soil and debris from entering storm drain inlets and preventing scouring at outlets by reducing flow.	At culvert outlet along existing county road.
Concrete Washout Facility	The washout facility consolidates solids for easier disposal and prevents runoff of liquids.	To be determined.
Fuel and Chemical Containment	Fuel and chemicals stored within the project area will be within secondary containment to reduce the potential for spills or releases.	To be determined.
Tracking Control	An effective vehicle tracking control helps remove sediment (mud or dirt) from vehicles, reducing tracking onto the paved surface.	County Road U has a gravel surface that will be utilized as tracking control unless conditions warrant further protection.

### NON-STRUCTURAL BMPs

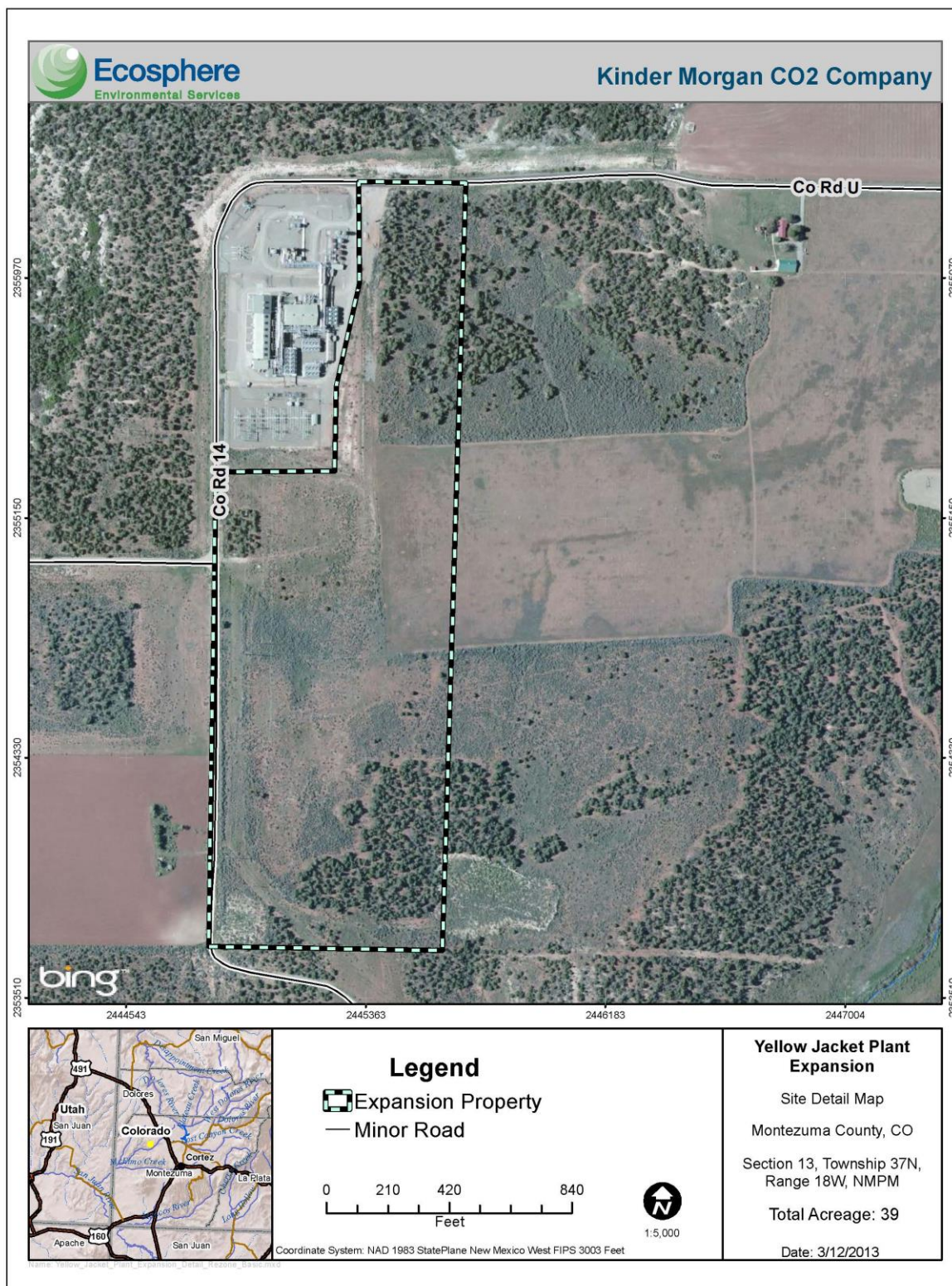
Table 3 describes non-structural BMPs used at the Yellow Jacket Compression Station Expansion Project.

**Table 3. Non-Structural BMPs.**

BMP	How It Works	Location
Soil Roughening	Surface roughening creates small ridges and gullies with the teeth of the bucket of the front end loader, or with the grooves of tracked equipment. These ridges and gullies go across the slope (or along the contour of the slope), trapping storm water and helping with re-vegetation. To create these ridges/gullies with tracked equipment, the equipment should be run up/ down the slope (or perpendicular to the contour of the slope).	All disturbed areas.
Equipment Storage	All equipment will be contained within the project area of disturbance.	Within disturbance area.

BMP	How It Works	Location
Rapid Reclamation	Rapid reclamation (surface contouring, surface roughening, seeding, and weed control) help to stabilize soil with vegetation.	Within disturbance area.

These non-structural BMPs will be applied to the entire project area beginning with construction and continuing until final stabilization is reached.



**Figure 1: Site Detail Map**