CHAPTER VIII VEGETATION

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APPENDIX VIII-3

Vegetation of the 4th East, 6th West,
And 14th/15th West Areas

VEGETATION
of the
4TH EAST, 6TH WEST, &
14TH/15TH WEST AREAS

at the
EMERY MINE SITE

for
CONSOL ENERGY

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VEGETATION
of the
4TH EAST, 6TH WEST, & 14TH/15TH WEST AREAS

INTRODUCTION

Consolidation Coal Company (Consol) has plans to continue their underground coal mining operations to other areas of the Emery Mine. Because full extraction mining methods will be employed, some subsidence on the ground surface is anticipated.

Vegetation maps have been prepared and included in this report that show the surface locations directly above the new mining operations (Figures 1 and 2). A discussion about the plant communities in the study areas, as well as the potential for the occurrence of threatened or endangered species, have also been included in this document.

METHODS

Field work was conducted in the new areas on February 28, March 1, and March 15, 2007. The field work included recording qualitative data, surveying for potential sensitive species habitats, and plant community mapping.

Potential threatened and endangered species lists were compiled after consulting previously

with the U.S. Fish & Wildlife Service, Salt Lake City, Utah and files located at *Mt. Nebo Scientific, Inc.*, Springville, Utah.

RESULTS

PLANT COMMUNITIES

Table 1 lists the plant communities of the study areas and indicates where they can be found.

Table 1: Plant Communities of the Study Areas.

PLANT COMMUNITY	6TH WEST	4TH EAST	14TH/15TH WEST
Shadscale	X	X	X
Greasewood	X	X	X
Saltgrass		X	X
Tamarisk		X	
Cattail/Saltgrass			X
Mat Saltbush			X
Greasewood/Tamarisk			X
Pasture Land (dry)	X		X
Pasture Land (irrigated)	X		X
Barren			X

Shadscale

A Shadscale plant community occupied portions of all three study areas. As the community name suggests, this community was dominated by shadscale (*Atriplex confertifolia*), but several other species of shrubs, forbs, and grasses can also be common in this community.

Greasewood

Greasewood communities can also be found in all three study areas. This community is known for its relatively low species diversity with the dominant plant species comprised of greasewood (*Sarcobatus vermiculatus*) and, to a lesser extent, Torrey's seepweed (*Suaeda torreyana*).

Saltgrass

The lower elevation topography of the study areas was often comprised of a Saltgrass community. The water that flows within these areas is often derived from natural groundwater and surface water as well as runoff from irrigated pasture lands up-gradient. The dominant species in these communities was often almost exclusively comprised of saltgrass (*Distichlis spicatus*). However, there were other saltgrass areas that were comprised of additional species that were represented as co-dominants; these communities were separated

on the vegetation maps and also described separately in this report.

Tamarisk

Tamarisk, or salt cedar (*Tamarisk chinensis*), is a non-native plant that has become a problem in Utah because it out-competes and often displaces other native species. A native of Eurasia, it was once cultivated as an ornamental and has become naturalized along seeps, streams, and reservoirs in our area. Nearly pure stands of tamarisk have become established in some locations of the study areas. These areas were often in wetter areas where previous land disturbance has impacted the native plant communities (i.e. removal of native species to increase pasture land).

Cattail/Saltgrass

Some of the most wet sites in 14th/15th West area were comprised of a plant community where the dominant two species were cattail (*Typha domingensis*) and saltgrass.

Mat Saltbush

Some areas, particularly in the 14th/15th West area, had a plant community that was almost exclusively mat saltbush (*Atriplex corrugata*). These were lo sloped areas of clay soils, that are often sodic and saline.

Greasewood/Tamarisk

Another plant community was separated on the vegetation maps because it had two dominant plant species – greasewood and tamarisk. This community was found in the 14th/15th West study area.

Pasture Lands

Some of the lower elevation areas have been converted to pasture land. A portion of the pasture lands are currently irrigated; others had been irrigated in the past and are currently dry-farmed. This differentiation was also delineated on the vegetation map included in this report.

Barren

Although not a plant community, a characterization called "Barren" was delineated on the vegetation maps. These areas were nearly devoid of vegetation, but probably have a few annual and perennial species that can be observed when adequate precipitation events occur.

Threatened and Endangered Species

There are several federally listed plant species that are known to occur in Emery County, Utah (Table 2). It is unlikely, but possible, that some of these species may occur in the study areas. The most likely plant communities for such occurrences would be the shadscale and mat saltbush communities. A sensitive species survey could be conducted in these areas if required by the State of Utah, Division of Oil, Gas & Mining (DOGM). Timing for the surveys should be in the spring ranging from late-April through May.

Table 2: Potential Threatened or Endangered Plant Species in the Study Areas of the Emery Mine

Scientific Name	Common Name	Status
Pediocactus winkleri	Winkler Footcactus	T
Pediocactus despainii	Despain Footcactus	E
Schoencrambe barnebyi	Barneby's schoencrambe	E
Sclerocactus wrightiae	Wright Fishhook Cactus	E
Townsendia aprica	Last Chance Townsendia	T
Erigeron maguirei	Maguire Daisy	T
Cycladenia humilis var. jonesii	Jones Cycladenia	T

E = Federal Protection, Endangered
T = Federal Protection, Threatened

COLOR PHOTOGRAPHS
of the
PLANT COMMUNITIES

Photo 1: Shadscale

Photo 2: Greasewood

Photo 3: Saltgrass

Photo 4: Tamarisk

Photo 5: Cattail/Saltgrass

Photo 6: Mat Saltbush

Photo 7: Greasewood/Tamarisk

Photo 8: Pasture Land (dry, typical)

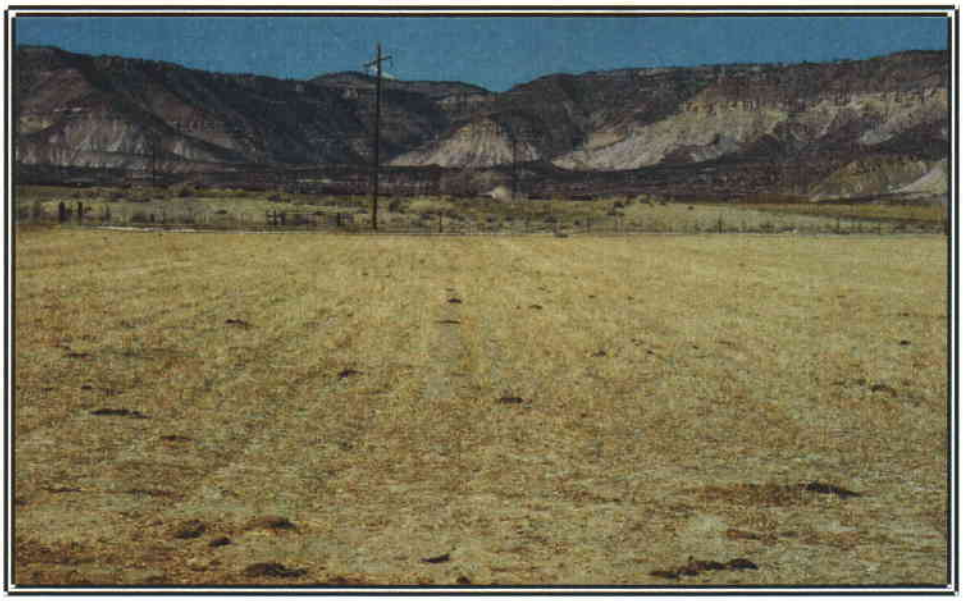

Photo 9: Pasture Land (irrigated)

Photo 10: Barren