

### 3.4 VEGETATION, INVASIVE PLANT SPECIES, AND SENSITIVE HABITAT TYPES

Two Tetra Tech biologists conducted a reconnaissance level site visit on October 16-17, 2006. In addition, an EMPS biologist surveyed the proposed freshwater well site on November 29, 2006. A 250 ft radius around the proposed drilling and well sites was assessed to characterize the dominant vegetative community, determine the potential for special status plant species to be present, document the presence of invasive species, and determine the degree of infestation if invasive species were present.

#### **Native Vegetation Communities**

In general, vegetation found in the ROI is typical of the Great Basin. The sites are predominantly composed of two different Great Basin vegetation communities: greasewood, and salt and alkali flat.

The greasewood vegetation community is found around the majority of the proposed sites. Four sites are located on the western side of the Bunejug Mountains, and five others are found between the Bunejug Mountains and the adjacent Eightmile Flat. Observed species in this plant community include shadscale (*Atriplex confertifolia*), winterfat (*Krascheninnikovia lanata*), alkali seepweed (*Suaeda torreyana*), spiny hop sage (*Grayia spinosa*), black greasewood (*Sarcobatus vermiculatus*), rabbitbrush (*Chrysothamnus nauseosus*), Mormon tea (*Ephedra nevadensis*), snakeweed (*Gutierrezia sarothrae*), halogeton (*Halogeton glomeratus*), Russian thistle (*Salsola tragus*), and four-wing saltbush (*Atriplex canescens*). The greasewood community around the project sites contains sparse understory vegetation. Understory species observed in this community were primarily grasses, such as Indian ricegrass (*Oryzopsis hymenoides*), inland saltgrass (*Distichlis spicata* var. *stricta*), and cheatgrass (*Bromus tectorum*).

Vegetation typical of salt and alkali flat communities dominates one site on the northwestern portion of Vulcan Power's leased land. This site is located one mile east of the Bunejug Mountains, and two miles south of Highway 50. While salt and alkali flats tend to be devoid of vegetation, iodine bush (*Allenrolfea occidentalis*) and inland saltgrass may establish there. This portion of the project area is located at the transition between the greasewood community and the barren salt flat. As a result, there are several areas where saltgrass vegetation is well established.

#### **Non-native and Invasive Species**

Several non-native and invasive plant species, including cheatgrass and Russian thistle, were observed and widespread at most of the sites. Halogeton was sparse but present at several locations. Most disturbed areas supported populations of Russian thistle, and it was prevalent along most dirt roads in the area. Cheatgrass was widespread and appeared as an understory species throughout the project vicinity. Halogeton was largely confined to areas with fairly firmly packed soils, such as vehicle turnouts. Salt cedar (*Tamarix* sp.) and tall whitetop (*Lepidium latifolium*) are the two noxious weed species identified by the state of Nevada (NAC 2003) that occur in the area. They were not observed at any of the sites during field surveys.

#### **Wetlands and Riparian areas**

Two types of wetlands, playa and ephemeral wash, were observed at the proposed drilling sites. These are discussed below in "Sensitive Habitat Types." No riparian areas were observed

during field surveys; nearby, however, on the east side of the road within Eightmile Flat, there are springs and associated riparian vegetation.

#### ***Sensitive Habitat Types***

Two sensitive habitat types, playa and ephemeral wash, were found at the proposed action sites. Although dry most of the year, ephemeral washes may carry a significant amount of water during storms and are protected as waters of the US by the US Army Corps of Engineers under Section 404 of the Clean Water Act. Several features may indicate the presence of ephemeral washes, including a defined bed and bank, sorted gravel and sand deposits, scour lines, and matted vegetation on the upstream sides of vegetation. Three possible ephemeral washes were found at the proposed drilling sites, and are indicated on Figure 3-2.

Similarly, playas are ephemeral wetlands, characterized by a defined basin, hard, cracked, clayey soils, and salt on the soil surface. The freshwater well and well CLB 41-20, indicated in Figure 2-1, are located on a playa. In some cases, the US Army Corps of Engineers may take jurisdiction over such areas as “special aquatic sites.” It is unclear as to whether the US Army Corps of Engineers would take jurisdiction over these sites, therefore it is recommended that well sites be located outside of playas. The edges of playas are usually marked by a distinct break in vegetation from extremely low-lying species within the playas to more shrubby plant types outside of the playas, as well as a distinct topographical change from very flat inside the playas to more varied terrain outside of the playas.

3-2 Ephemeral Wash Sites in the Project Area

