

4.4 VEGETATION, INVASIVE PLANT SPECIES, AND SENSITIVE HABITAT TYPES

Proposed Action

Direct Impacts

Construction and operation of geothermal exploratory drilling sites, including well pads, the freshwater well, and roads, would result in long-term removal of vegetation in those areas. The majority of vegetation within the project area is typical Great Basin greasewood-dominated vegetation communities, and is abundant in the surrounding areas. Long-term removal of vegetation from construction of drilling sites would occur initially on 10.63 acres. This would include vegetation removal on the ten 150-foot by 300-foot (9.2 acres) well pads, the 100 ft x 100 ft water well location and 3 miles of new roads approximately 10 feet wide (1.2 acres). Some additional vegetation may be removed during construction activities, such as staging and temporary storage, but the amount disturbed would be minimal. The total amount of vegetation to be initially removed (10.63 acres) for exploratory drilling would be small compared to the amount of similar surrounding vegetation on surrounding lands. Potential impacts to special status plant species are described in Section 4.6.

If initial well drilling finds a site unsuitable for geothermal resources, it is likely that removal of the wellhead and associated equipment would allow the site to restore itself to pre-existing conditions over time. In this instance, removal of vegetation would be short-term. If, however, a productive geothermal resource is discovered, the site would be expanded, leading to long-term vegetation removal over a greater area. If all ten drill sites were expanded, the total vegetation removal for well pads and roads would cover 38.23 acres. In areas where vegetation is removed, potential infestation of invasive weed species such as cheat grass could occur. The proposed action would not impact existing salt cedar or tall whitetop populations and probably would not be a factor in new invasions of these species.

In the most developed scenario above, vegetation removal would expand to 38 acres and the potential for invasive plant species to occur would increase while the amount of plants removed would also increase. Staging areas if utilized would require vegetation clearing and potential grading. Even though acreage affected by the project would increase in size in this scenario, the vegetation present has no special status listing, and does not provide valuable habitat. In addition, standard operating procedures for dealing with invasive species and BMPs would be implemented to reduce or prevent the introduction of invasive species. Also, where feasible, staging would occur on already disturbed areas, such as existing roads and off-highway vehicle trails.

Wetlands and Riparian Areas: The springs and associated riparian areas on the east side of the road within Eightmile Flat would not be affected by the proposed action.

Indirect Impacts Based on a Reasonably Foreseeable Development Scenario

Constructing and operating geothermal wells is assumed to be a precursor to development of a geothermal power plant. Although no such plant is yet proposed, it is assumed that such construction would result in long-term removal of vegetation in the construction area. It is further assumed that such a plant would be constructed in the vicinity of the proposed

geothermal wells, and that the affected vegetation community would be similar to that which would be affected by well construction. The geothermal plant would be situated to avoid sensitive resources, including ephemeral drainages and wetlands. Overall impacts would be similar to, but possibly greater in extent, impacts from the construction of geothermal wells, and would be associated with construction and operation of the plant, staging areas, and access roads.

Subsequent NEPA analysis would determine the actual impact to vegetation resources.

No Action Alternative

Under the No Action Alternative, there would be no impacts to vegetation resources because there would be no changes to the existing conditions.