

3.11 WILD HORSES AND BURROS

3.11.1 Affected Environment

Wild horses and burros occur throughout the assessment area in a number of Herd Management Areas (HMA), where horses and burros are maintained and managed, and Herd Areas (HA) where they are neither maintained nor managed. Most HAs occur within checkerboard lands where the complex mixture of public and private lands prevents herd management. Table 3.11-1 lists these areas and geothermal assessment areas that are most closely associated with each HMA and HA. There are approximately 5,200 wild horses and 460 burros managed within the HMAs and HAs within the assessment area.

3.11.2 Environmental Impacts

Wild horses and burros could be affected by geothermal resource development within each PVA or KGRA; however, any effects would vary with each site, and would be assessed in site-specific EAs prepared for development of individual leases. Geothermal development could affect wild horses and burros by reducing water availability (i.e., decreasing spring discharge), polluting surface waters, modifying herd movement patterns, and disturbing animals by constructing, operating, and maintaining fences, power lines, and roads. These effects (particularly with water supplies) could have an undesired impact on wild horses and burros because, unlike livestock, they cannot be removed from the range and provided water.

Table 3.11-1 lists wild horse and burro HMAs within the assessment area, hydrographic basins where they occur, and proximate PVAs/KGRAs.

**TABLE 3.11-1
HERD MANAGEMENT AREAS**

Management Area	Hydrographic Basin	PVA/KGRA
Antelope Range*	4, 5	8
Augusta Mountains	4, 10	13, Dixie Valley
Black Rock Range East	2	3
Black Rock Range West	2	None
Blue Wing Mountains	5	8
Buffalo Hills	2	None
Calico Mountains	2	Gerlach
East Range*	10	10, 12
Fox Lake Range	2, 5, 6	8, San Emidio
Granite Range	2	Gerlach

Management Area	Hydrographic Basin	PVA/KGRA
Humboldt*	4, 8	9, Lovelock, Imlay
Jackson Mountains	2	4
Kamma Mountains	4	None
Lava Beds	2, 5	8
Little Owyhee	2, 4	5, 6
McGee Mountain	1	1, McGee Mountain
Nightingale Mountains	5, 6	8, Brady
North Stillwater	10	13, Dixie Valley
Selenite Range*	2, 5,	8, Gerlach
Seven Troughs	5	8
Shawave Mountains	5, 6	8, Brady
Snowstorm Mountains	4	6
Sonoma Range*	4	7 (S, E), 11
Tobin Range	4, 10	13, Dixie Valley
Trinity Range*	4, 5	8, 9, Lovelock
Warm Springs Canyon	2	None

* Denotes Herd Areas

3.11.2.1 Proposed Action

Direct Impacts – There are no direct impacts to issuing leases for future geothermal exploration, development, and production activities.

Indirect Impacts – When considering the “reasonably foreseeable development scenario,” there are no problematic environmental impacts concerning wild horses and burros under the Proposed Action. Using an updated PEA as the guideline for new leases would more adequately provide the level of protection required to ensure that these biological resources are protected under current Federal and State statutes.

The following are the potential environmental impacts on wild horses and burros when analyzing the “reasonably foreseeable development scenario.”

Exploration. The environmental impacts on wild horses and burros are expected to be short-lived and restricted to small geographical areas during the geothermal energy exploration phase. Displacement of wild horses and burros is not expected to make significant long-term changes to habitat or animal life styles. The greatest short-term impacts would occur during mating and foaling periods and during road and fence construction. Watering sources could be affected by

drilling residue and/or by excessive groundwater extraction (i.e., decreasing discharge from springs used as water sources).

Development. The development phase would be very similar to the exploration phase though it would be expected to last somewhat longer and create more disruption to wild horse and/or burro movement, and water resources.

Production. During the production phase, long-term impacts could occur to wild horses and burros depending on where the permanent facilities and electrical power transmission lines are built. With production lasting up to several decades, these impacts would be long lasting; however they would be restricted to small geographical areas. It is expected that wild horses and burros would quickly adjust to the commercial development and be able to cohabitate with minimum disruption.

Close-Out. Close-out of a developed geothermal production operation could cause short-term changes to wild horse and burro activity due to increased dismantling activity and noise. Once the commercial activity has been closed-out and returned to its original, natural configuration, wild horse and burro rehabilitation is expected to occur over a comparatively short period of time. This would depend on the speed of regrowth of cover and forage.

3.11.2.2 No Action Alternative

Direct Impacts – There are no direct impacts to issuing leases for future geothermal exploration, development, and production activities.

Indirect Impacts – Indirect impacts from the No Action Alternative would be similar to those described in the Proposed Action; however, updated mitigation measures and stipulations would not apply using the 1982 Geothermal EA.