APPENDIX 5F

Results of Potential Effects Model by Species Group

APPENDIX 5F-1

Invertebrate Species (Springsnails)

1.1 SPRINGSNAILS – POINT OCCURRENCE DATA ONLY

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

The point occurrence data (with 0.1 acre buffer per observation) overlap with current and future activities for the two Springsnail species summed to between 0.16 and 0.30 acres per species. Three current and no future activities have greater than or equal to 0.10 acres of overlap. The three current activities are Horses/burros <.25 mile from spring/streams, Private Land, and the Wildland Urban Interface. No current activity has an overlap of greater than 0.30 acres, although Horses/Burros < .25 from springs/streams had the greatest overlap with current activities. The Southeast Nevada springsnail was the only species with overlap greater than 0.10 acres. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others. Current activities accounted for all of the point occurrence area (with buffers) overlap, while no future activities overlapped with these species.

1.1.1.2 Potential Effects

The analysis of potential effects on Springsnails relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Tables 5F1-1 and 5F1-2). The majority of activities have a high (H) to total (TTL) impact on these species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area.

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species (Tables 5F1-3). The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Table 5F1-4). The aggregated current and future activities' potential effects are estimated to impact between 33 and 54 percent of the occupied sites of the Springsnails. All potential effects equal to or greater than ten percent are noteworthy, and three current and no future activities meet this criteria. The current activities are from the CUA AOI, Horses/Burros <.25 mile from spring/stream, and Private Lands.

Three of the current activities account for the majority of the percent potential effect on the Springsnails, while no future activity has a potential effect on either of the species.

The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category (Table 5F1-5). Note that the majority of the potential effects on known point occurrences are moderate to high (0.25 - 0.75).

1.1.1.3 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on springsnails (Tables 5F1-6 and 5F1-7). The three categories of conservation measures are avoidance, minimization, and mitigation. In order to determine the benefit of conservation measures, the potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures.Avoidance

1.1.1.4 Avoidance

One of the current activities with avoidance measures has greater than a ten percent potential effect on the Springsnails, while no future activity has an effect (Table 5F1-8). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 26 and 39 percent of the point occurrence locations (with buffers) of Springsnails.

The effects intensity aggregated for all activities with avoidance measures on each Springsnail species indicates no area has complete elimination of point occurrence sites, while the majority of the effects are in moderate to high intensity categories (0.25 – 0.75; Table 5F1-9). Avoidance measures are conferring a small benefit to the Springsnails. Future low-intensity effects will have no potential effect on these species.

1.1.1.5 Minimization

All potential effects (with minimization measures, using point occurrence data) equal to or greater than ten percent are noteworthy, and most of the current activities and no future activity meet this criteria (Table 5F1-10). The current activity effects exceed ten percent for two of the activities. The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 25 and 43 percent of the occupied sites of Springsnails.

The effects intensity aggregated for all activities with minimization measures on each Springsnail plant species indicates that no area has complete elimination of point occurrence locations for these species, while the majority of the effects are in moderate to high intensity categories (0.25 – 0.75; Table 5F1-11). Minimization measures are conferring a small benefit to the plant species.

1.1.1.6 Mitigation

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than ten percent are highlighted with bold text, and three current and no future activity meets this criteria. The three activities are the CUA AOI, Horses/burros <.25 mile from spring/stream, and Private Lands. The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 27 and 47 percent of the occupied sites of Springsnails.

The effects intensity aggregated for all activities with mitigation measures on each Springsnail indicates no area has complete elimination of point occurrences of these species, while the majority of the effects are in moderate to high intensity categories (0.25 – 0.75). Mitigation

measures are conferring a small benefit to these Springsnail species by lowering the effects intensity.

QUALITATIVE ANALYSIS

The results of the nature serve analysis by species is contained in Tables 5F1-12 and 5F1-13.

SUMMARY

Ranking of Magnitude of Potential Effects

Species: Spring Mountains springsnail (*Pyrgulopsis deaconi*)	Activities to be Included in the Model																																												Management Activities not Included in the Model			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			Elk		WUI	Result of Fire Suppres-sion	Exotic Plants	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	< 0.25 Mile of Water	≥ 0.25 Mile of Water	Foot print	Foot print	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																																
Death	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X	O	X				
Injury (trampling/crushing/picking)	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X	O	X				
Disturbance/Harassment	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X	O	X				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity level	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X	O	X				
Impairment of activities/behavior/health	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																																
Habitat loss																																																
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O	X	X	O	X	O	X	O				
Temporary destruction/displacement	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	O	O	X	O	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X	O	X				
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																																
Soil impacts	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	O	O	X	O	O	O	O	O	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil erosion	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Debris deposition	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litter	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Spring and seep modifications	X	X	X	X	X	X	X	X	X	Xb	X	Xb	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	X	O	O	X	O	X	O	O	X	X	X	X	X	X	X				
Structural modification of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	X	O	X	O	O	O	O	O	X	O	O	X	O	X	O	O	X	X	O	X	O	X	O				
Structural habitat change	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	X	O	X	O	O	O	O	O	X	O	O	X	O	X	O	O	X	X	O	X	O	X	O				
Loss of vegetation groundcover	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of vegetation groundcover	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Change in species composition	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Introduction of non-native plants	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																																
Assigned Effect Index Value	TTL	L	TTL	L	TTL	M	TTL	M	TTLc	TR	TTLc	L	L	TR	L	TR	L	TR	TR	TR	N	N	TTL	L	TTL	L	N	N	N	TR	Ha	N	N	Ha	N	TR	N	N	L	TTLc	TR	TTLc	TR				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; O = absence of effect
a = dependant on clean oxygenated water
b = run off could pollute the water in the springs or seeps
c = habitat not located in these areas

Species: Southeast Nevada springsnail (*Pyrgulopsis turbatrix*)	Activities to be Included in the Model																																								Management Activities not Included in the Model			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			Elk		WUI	Result of Fire Suppres-sion	Exotic Plants	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	< 0.25 Mile of Water	≥ 0.25 Mile of Water	Foot print	Foot print	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																															
Death	X	X	X	X	X	X	X	X	O	X	O	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X				
Injury (trampling/crushing/picking)	X	X	X	X	X	X	X	X	O	X	O	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X				
Disturbance/Harassment	X	X	X	X	X	X	X	X	O	X	O	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X				
Interference with movements	X	X	X	X	X	X	X	X	O	X	O	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity level	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/health	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																															
Habitat loss																																															
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacement	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	O	O	X	O	X	O	O	O	X	X	O	O	X	O	X	O	O	X	O	X	O	X				
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																															
Soil impacts	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	O	O	X	O	O	O	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O				
Soil erosion	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O				
Debris deposition	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litter	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Spring and seep modifications	X	X	X	X	X	X	X	X	X	Xb	X	Xb	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	X	O	O	X	O	X	O	O	X	X	X	X	X				
Structural modification of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	X	O	X	O	O	O	O	O	X	O	O	X	O	X	O	O	O	X	O	X	O				
Structural habitat change	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	X	O	X	O	O	O	O	O	X	O	O	X	O	X	O	O	O	X	O	X	O				
Loss of vegetation groundcover	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of vegetation groundcover	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Change in species composition	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Introduction of non-native plants	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																															
Assigned Effect Index Value	TTL	L	TTL	L	TTL	M	TTL	M	TTLa	L	TTLa	L	L	TR	L	TR	L	TR	TR	TR	N	N	TTL	L	TTL	L	N	N	N	TR	Ha	N	N	Ha	N	TR	N	N	L	TTLa	TR	TTLa	TR				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; O = absence of effect
a = dependant on clean oxygenated water
b = run off could pollute the water in the springs or seeps
c = habitat not located in these areas

Value of Conservation Measures

Species

Spring Mountains Springsnail

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Horses/Burros < .25 mile from spring/stream	L	TR	L	L	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace ben
NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Southeast Nevada Springsnail

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	NM	
Horses/Burros < .25 mile from spring/stream	L	TR	L	L	
Motorized Trail (closed) AOI	L	TR	NM	M	
Motorized Trail (closed) Footprint	L	L	NM	M	
Private Land	M	NM	NM	NM	
Unpaved Road AOI	L	TR	L	M	
Unpaved Road Footprint	L	L	NM	M	
Wildland Urban Interface	NM	NM	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace ben
NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Summary Tables

Table SS10
Summary of Individual Activity Effect Acreage on Point Occurrence Data of Springsnails

	Southeast Nevada springsnail	***Spring Mountains springsnail***
Activities		
Current Activities		
Site Occurance Area by Species (0.1 acre buffer)	*0.40*	*0.20*
Campground AOI		
Campground Footprint		
Cave/Tunnel		
Climbing Area		
CUA AOI	0.097	
CUA Footprint		
Firewood Gathering Area		
FS Structure AOI		
FS Structure Footprint		
High Mileage System Trail AOI		
High Mileage System Trail Footprint		
Horses/Burros .25 - 1.0 mile from spring/stream		
Horses/Burros < .25 mile from spring/stream	**0.300**	**0.100**
Horses/Burros > 1.0 mile from spring/stream		0.061
Low Mileage System Trail AOI		
Low Mileage System Trail Footprint		
Motorized Trail (closed) AOI	0.026	
Motorized Trail (closed) Footprint	0.002	
Motorized Trail (open) AOI		
Motorized Trail (open) Footprint		
Non System Trail AOI		
Non System Trail Footprint		
Paved Road AOI		
Paved Road Footprint		
Picnic Area AOI		
Picnic Area Footprint		
Private Land	**0.200**	
PVT Building AOI		
PVT Building Footprint		
Ski Area AOI		
Ski Area Footprint		
Snowplay Area		
Trailhead in Developed Canyon AOI		
Trailhead in Developed Canyon Footprint		
Trailhead out of Developed Canyon AOI		
Trailhead out of Developed Canyon Footprint		
Unpaved Road AOI	0.038	
Unpaved Road Footprint	0.005	
Wildland Urban Interface	**0.100**	
All Current Activities Combined (Aggregated)	*0.30*	*0.16*
Future Activities		
Future Campground AOI		
Future Campground Footprint		
Future EEA AOI		
Future EEA Footprint		
Future Foot Bridge AOI		
Future Foot Bridge Footprint		
Future High Mileage System Trail AOI		
Future High Mileage System Trail Footprint		
Future Low Mileage System Trail AOI		
Future Low Mileage System Trail Footprint		
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI		
Future Ski Area Footprint		
Future Trailhead AOI		
Future Trailhead Footprint		
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI		
West Side PO Camping Footprint		
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI		
West Side PO Minor Trailhead Footprint		
West Side PO Motorized Trails AOI		
West Side PO Motorized Trails Footprint		
West Side PO Non Motorized Trails AOI		
West Side PO Non Motorized Trails Footprint		
All Current and Future Activities Combined (Aggregated)	*0.0*	*0.0*

**** Bold text indicates activities with >= 0.10 ac overlap with species area***

Table SS11
Percent Potential Effect of Activities on Point Occurrence Data by Species - Springsnails

	Southeast Nevada springsnail	***Spring Mountains springsnail***
Activities		
Current Activities		
Site Occurance Area by Species (0.1 acre buffer)	*0.40*	*0.20*
Campground AOI		
Campground Footprint		
Cave/Tunnel		
Climbing Area		
CUA AOI	**12%**	
CUA Footprint		
Firewood Gathering Area		
FS Structure AOI		
FS Structure Footprint		
High Mileage System Trail AOI		
High Mileage System Trail Footprint		
Horses/Burros .25 - 1.0 mile from spring/stream		
Horses/Burros < .25 mile from spring/stream	**37%**	**25%**
Horses/Burros > 1.0 mile from spring/stream		8%
Low Mileage System Trail AOI		
Low Mileage System Trail Footprint		
Motorized Trail (closed) AOI	2%	
Motorized Trail (closed) Footprint	0%	
Motorized Trail (open) AOI		
Motorized Trail (open) Footprint		
Non System Trail AOI		
Non System Trail Footprint		
Paved Road AOI		
Paved Road Footprint		
Picnic Area AOI		
Picnic Area Footprint		
Private Land	**12%**	
PVT Building AOI		
PVT Building Footprint		
Ski Area AOI		
Ski Area Footprint		
Snowplay Area		
Trailhead in Developed Canyon AOI		
Trailhead in Developed Canyon Footprint		
Trailhead out of Developed Canyon AOI		
Trailhead out of Developed Canyon Footprint		
Unpaved Road AOI	5%	
Unpaved Road Footprint	1%	
Wildland Urban Interface	6%	
All Current Activities Combined (Aggregated)	54%	33%
Future Activities		
Future Campground AOI		
Future Campground Footprint		
Future EEA AOI		
Future EEA Footprint		
Future Foot Bridge AOI		
Future Foot Bridge Footprint		
Future High Mileage System Trail AOI		
Future High Mileage System Trail Footprint		
Future Low Mileage System Trail AOI		
Future Low Mileage System Trail Footprint		
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI		
Future Ski Area Footprint		
Future Trailhead AOI		
Future Trailhead Footprint		
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI		
West Side PO Camping Footprint		
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI		
West Side PO Minor Trailhead Footprint		
West Side PO Motorized Trails AOI		
West Side PO Motorized Trails Footprint		
West Side PO Non Motorized Trails AOI		
West Side PO Non Motorized Trails Footprint		
All Current and Future Activities Combined (Aggregated)		

**** Bold text indicates activities with >= 10% Potential Effect***

Table SS12
Percent Potential Effect of Activities with Avoidance Measures on Point Occurrence Data by Species - Springsnails

	Southeast Nevada springsnail	***Spring Mountains springsnail***
Activities		
Current Activities		
Site Occurance Area by Species (0.1 acre buffer)	*0.40*	*0.20*
Campground AOI		
Campground Footprint		
Cave/Tunnel		
Climbing Area		
CUA AOI	8%	
CUA Footprint		
Firewood Gathering Area		
FS Structure AOI		
FS Structure Footprint		
High Mileage System Trail AOI		
High Mileage System Trail Footprint		
Horses/Burros .25 - 1.0 mile from spring/stream		
Horses/Burros < .25 mile from spring/stream	**27%**	**18%**
Horses/Burros > 1.0 mile from spring/stream		8%
Low Mileage System Trail AOI		
Low Mileage System Trail Footprint		
Motorized Trail (closed) AOI	1%	
Motorized Trail (closed) Footprint	0%	
Motorized Trail (open) AOI		
Motorized Trail (open) Footprint		
Non System Trail AOI		
Non System Trail Footprint		
Paved Road AOI		
Paved Road Footprint		
Picnic Area AOI		
Picnic Area Footprint		
Private Land	6%	
PVT Building AOI		
PVT Building Footprint		
Ski Area AOI		
Ski Area Footprint		
Snowplay Area		
Trailhead in Developed Canyon AOI		
Trailhead in Developed Canyon Footprint		
Trailhead out of Developed Canyon AOI		
Trailhead out of Developed Canyon Footprint		
Unpaved Road AOI	3%	
Unpaved Road Footprint	1%	
Wildland Urban Interface	6%	
All Current Activities Combined (Aggregated)	39%	26%
Future Activities		
Future Campground AOI		
Future Campground Footprint		
Future EEA AOI		
Future EEA Footprint		
Future Foot Bridge AOI		
Future Foot Bridge Footprint		
Future High Mileage System Trail AOI		
Future High Mileage System Trail Footprint		
Future Low Mileage System Trail AOI		
Future Low Mileage System Trail Footprint		
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI		
Future Ski Area Footprint		
Future Trailhead AOI		
Future Trailhead Footprint		
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI		
West Side PO Camping Footprint		
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI		
West Side PO Minor Trailhead Footprint		
West Side PO Motorized Trails AOI		
West Side PO Motorized Trails Footprint		
West Side PO Non Motorized Trails AOI		
West Side PO Non Motorized Trails Footprint		
All Current and Future Activities Combined (Aggregated)		

**** Bold text indicates activities with >= 10% Potential Effect with Avoidance Conservation Measures***

Table SS13
Percent Potential Effect of Activities with Minimization Measures on Point Occurrence Data by Species - Springsnails

	Southeast Nevada springsnail	***Spring Mountains springsnail***
Activities		
Current Activities		
Site Occurance Area by Species (0.1 acre buffer)	*0.40*	*0.20*
Campground AOI		
Campground Footprint		
Cave/Tunnel		
Climbing Area		
CUA AOI	9%	
CUA Footprint		
Firewood Gathering Area		
FS Structure AOI		
FS Structure Footprint		
High Mileage System Trail AOI		
High Mileage System Trail Footprint		
Horses/Burros .25 - 1.0 mile from spring/stream		
Horses/Burros < .25 mile from spring/stream	**28%**	**19%**
Horses/Burros > 1.0 mile from spring/stream		6%
Low Mileage System Trail AOI		
Low Mileage System Trail Footprint		
Motorized Trail (closed) AOI	2%	
Motorized Trail (closed) Footprint	0%	
Motorized Trail (open) AOI		
Motorized Trail (open) Footprint		
Non System Trail AOI		
Non System Trail Footprint		
Paved Road AOI		
Paved Road Footprint		
Picnic Area AOI		
Picnic Area Footprint		
Private Land	**12%**	
PVT Building AOI		
PVT Building Footprint		
Ski Area AOI		
Ski Area Footprint		
Snowplay Area		
Trailhead in Developed Canyon AOI		
Trailhead in Developed Canyon Footprint		
Trailhead out of Developed Canyon AOI		
Trailhead out of Developed Canyon Footprint		
Unpaved Road AOI	4%	
Unpaved Road Footprint	1%	
Wildland Urban Interface	6%	
All Current Activities Combined (Aggregated)	43%	25%
Future Activities		
Future Campground AOI		
Future Campground Footprint		
Future EEA AOI		
Future EEA Footprint		
Future Foot Bridge AOI		
Future Foot Bridge Footprint		
Future High Mileage System Trail AOI		
Future High Mileage System Trail Footprint		
Future Low Mileage System Trail AOI		
Future Low Mileage System Trail Footprint		
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI		
Future Ski Area Footprint		
Future Trailhead AOI		
Future Trailhead Footprint		
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI		
West Side PO Camping Footprint		
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI		
West Side PO Minor Trailhead Footprint		
West Side PO Motorized Trails AOI		
West Side PO Motorized Trails Footprint		
West Side PO Non Motorized Trails AOI		
West Side PO Non Motorized Trails Footprint		
All Current and Future Activities Combined (Aggregated)		

**** Bold text indicates activities with >= 10% Potential Effect with Minimization Conservation Measures***

Table SS30
Potential Effects on Springsnails for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities - Potential Effects		
Effects Index	***SE Nevada springsnail***	***Spring Mountains springsnail***
0.000	0.00	0.00
0.001 - 0.050	0.00	0.00
0.051 - 0.250	0.00	0.06
0.251 - 0.500	0.00	0.10
0.501 - 0.750	0.26	0.00
0.751 - 0.999	0.04	0.00
1.000	0.00	0.00
Current and Future Activities - Potential Effects		
0.000		
0.001 - 0.050		
0.051 - 0.250		
0.251 - 0.500		
0.501 - 0.750		
0.751 - 0.999		
1.000		
Total Species Distribution (ac)	**0.40**	**0.20**

Table SS31
Potential Effects with Avoidance Measures on Springsnails for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects with Avoidance Measures		
Effects Index	***SE Nevada springsnail***	***Spring Mountains springsnail***
0.000	0.00	0.00
0.001 - 0.050	0.00	0.00
0.051 - 0.250	0.00	0.06
0.251 - 0.500	0.10	0.10
0.501 - 0.750	0.19	0.00
0.751 - 0.999	0.00	0.00
1.000	0.00	0.00
Current and Future Activities Potential Effects with Avoidance Measures		
0.000		
0.001 - 0.050		
0.051 - 0.250		
0.251 - 0.500		
0.501 - 0.750		
0.751 - 0.999		
1.000		
Total Species Distribution (ac)	**0.40**	**0.20**

Table SS32
Potential Effects with Minimization Measures on Springsnails for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects with Minimization Measures		
Effects Index	***SE Nevada springsnail***	***Spring Mountains springsnail***
0.000	0.00	0.00
0.001 - 0.050	0.00	0.00
0.051 - 0.250	0.00	0.06
0.251 - 0.500	0.10	0.10
0.501 - 0.750	0.19	0.00
0.751 - 0.999	0.00	0.00
1.000	0.00	0.00
Current and Future Activities Potential Effects with Minimization Measures		
0.000		
0.001 - 0.050		
0.051 - 0.250		
0.251 - 0.500		
0.501 - 0.750		
0.751 - 0.999		
1.000		
Total Species Distribution (ac)	**0.40**	**0.20**

Table SS33
Potential Effects with Mitigation Measures on Springsnails for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects with Mitigation Measures		
Effects Index	***SE Nevada springsnail***	***Spring Mountains springsnail***
0.000	0.00	0.00
0.001 - 0.050	0.00	0.00
0.051 - 0.250	0.00	0.06
0.251 - 0.500	0.10	0.10
0.501 - 0.750	0.17	0.00
0.751 - 0.999	0.03	0.00
1.000	0.00	0.00
Current and Future Activities Potential Effects with Mitigation Measures		
0.000		
0.001 - 0.050		
0.051 - 0.250		
0.251 - 0.500		
0.501 - 0.750		
0.751 - 0.999		
1.000		
Total Species Distribution (ac)	**0.40**	**0.20**

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Southeast Nevada springsnail (*Pyrgulopsis turbatrix*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5 (5)	High	U	<1	Stable	Low	High	Moderate	
Current Condition Spring Mountains				1-5 (5)	High	U	<1	Stable	Low	High	Moderate	Moderate
Current Condition Rangewide	MDE	Very narrow	Highly vulnerable	6-20 (10)	Moderate	U	<1	Moderate	Moderate	High	Moderate	Moderate
Comments	Rangewide reference condition was 11 sites, but species extirpated at Grapevine Springs in Red Rock Canyon NCA and extirpated at Willow Spring in Red Rock Canyon NCA but restocked in 2001 so current condition rangewide is 10 sites; population trends based on # of occurrences not on population size; threat severity for current condition rangewide based on anthropogenic threats at lower elevation springs											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Spring Mountains springsnail (*Pyrgulopsis deaconi*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5 (2)	High	U	<1	Stable	Negligible	High	Moderate	
Current Condition Spring Mountains				1-5 (2)	High	U	<1	Stable	Low	High	Moderate	Moderate
Current Condition Rangewide	MDE	Very narrow	Highly vulnerable	1-5 (4)	Moderate	U	<1	Rapid decline	Moderate	High	Moderate	Moderate
Comments	Rangewide reference condition was 6 sites, but species extirpated at Manse Spring in Pahrump and Willow Springs in Red Rock Canyon NCA so current condition rangewide is 4; population trends based on # of occurrences not on population size; severity of threats for current condition rangewide based on anthropogenic threats at lower elevation springs											

APPENDIX 5F-2

Invertebrate Species (Butterflies)

1.1 BUTTERFLIES

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

The point occurrence data (with 0.1 acre buffer per observation) overlap with current and future activities for each species summed to between 0.60 and 4.27 acres per species for the butterfly species. Horses and Burros at all distances from springs/streams have a large overlap; however, the current activity with the greatest amount of overlap of the current activities is the Wildland Urban Interface. The only future activity with more than 0.10 acres of overlap is the Future Low Mileage System Trail AOI. The Nevada admiral and Spring Mountains comma skipper are affected by the most activities.

Current activities account for the vast majority of the overlap with all butterfly species considered. Future activities will potentially overlap a relatively small area of all species.

1.1.1.2 Potential Effects

The analysis of potential effects on butterfly species relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Tables 5F2-1 to 5F2-9) The majority of activities have a high (H) to total (TTL) impact on these butterfly species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area.

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species (Table 5F2-10)). The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Table 5F2-11) {excel table tab2}. The aggregated current and future activities' potential effects are estimated to impact between 18 and 50 percent of the occupied sites of the butterfly species. All potential effects equal to or greater than five percent are highlighted with bold text, and 5 current and one future activity meet these criteria. The current activities are CUA AOI, Firewood Gathering Area, Horses/Burros < .25 mile from spring/stream, Private Land, and Wildland Urban Interface and the planned activity is the Future EEA Footprint.

Horses/Burros <.25 mile from spring/stream has the greatest effect with a 42% effect on Bret's Blue and a 29% effect on Dark Blue Butterfly. Current activities by far have the greatest potential effect on all butterfly species. Except for the 5% potential effect of Future EEA Footprint on the Mount Charleston Blue Butterfly, no proposed activities have greater than 3% potential effect on any butterfly species (Table 5F2-11).

The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category as it corresponds to the species figures (Table 5F2-12). Note that while the majority of habitat degradation is at a moderate level (between 0.051 and 0.750), every species except for Bret's Blue has some level of complete habitat degradation (1.000).

1.1.1.3 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on butterfly species (Tables 5F2-13 to 5F2-20). The three categories of conservation measures are avoidance, minimization, and mitigation. In order to determine the benefit of conservation measures, the potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures. The percentage potential effect with and without conservation measures is reviewed in the following sections.

1.1.1.4 Avoidance

Four current and no future activities with avoidance measures were greater than five percent of the point occurrence with buffers area (Table 5F2-21). Firewood Gathering Area, Private Lands and Wildland Urban Interface activities with avoidance measures had potential effects of up to 6%. The current activity of horses/burros < 0.25 mile of spring/stream have a potential effect of 10% on Nevada Admiral, 21% on Dark Blue Butterfly and 26% on Bret's Blue. The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 12 and 38 percent of the suitable habitat of butterfly species.

The effects intensity aggregated for all activities with avoidance measures on each butterfly species indicates only a minimal area has complete elimination of point occurrence sites for these species, while the majority of the effects are in moderate and high-intensity categories (0.05 to 0.99; Table 5F2-22). Avoidance measures are benefiting these butterfly species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing points of occurrence.

1.1.1.5 Minimization

All potential effects (with minimization measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and five current and one future activity meets this criteria (Table 5F2-23). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 17 and 50 percent of the occupied sites of butterfly species.

The effects intensity aggregated for all activities with minimization measures on each butterfly species indicates a small area has complete elimination of point occurrence sites for these species, while the majority of the effects are in moderate and high-intensity categories (0.05 to 0.99; Table 5F2-23). Minimization measures are conferring a small benefit to the butterfly species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

1.1.1.6 Mitigation

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and four current and one future activity meet this criteria (Table 5F2-24). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 16 and 40 percent of the occupied sites of butterfly species.

The effects intensity aggregated for all activities with mitigation measures on each butterfly species indicates a small area has complete elimination of point occurrences of these species, while the majority of the effects are in moderate and high-intensity categories (0.05 to 0.99; Table 5F2-25). Mitigation measures are conferring a small benefit to these butterfly species by reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing points of occurrence.

QUALITY ANALYSIS

The results of the nature serve analysis by species is contained in Tables 5F2-26 to 5F2-33.

Ranking of Magnitude of Potential Effects

Species: Spring Mountains Checkerspot Butterfly (*Chlosyne acastus robusta*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	X	X	X	X	O	O	O	O	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	X	O	O	O	O				
Disturbance/Harassment	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	X	O	X	O	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	X	X	X	O	X	O	O	X	O	X	X	X	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	X	X	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil erosion	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O				
Debris deposition	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																												
	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	X	O	O	O	O	X	O	X	O	X				
Assigned Effect Index Value	TTLa	L	TTLa	L	TTLa	L	La	L	a	Lb	TTLa	Lb	H	L	TTLa	L	TTLa	L	H	L	Mc	L	TTL	L	TTLa	L	TR	TR	TR	M	Md	L	L	Me	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = host plants can not grow in this area
b = mowing along roadsides could destroy host plants
c = this species prefers open areas
d = this species is primarily found in riparian areas
e = while immediate loss of host plants could occur, opening of the canopy could create additional habitat for host plants
f = fire suppression may hinder growth of larval host plant

Species: Bret's Blue (*Euphilotes bernardino inyomontana*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	X	X	X	X	O	O	O	O	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	X	O	O	O	O				
Disturbance/Harassment	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	X	O	X	O	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	X	X	X	O	X	O	O	X	O	X	X	X	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	X	X	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil erosion	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O				
Debris deposition	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																												
	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	X	O	O	O	O	X	O	X	O	X				
Assigned Effect Index Value	TTLa	L	TTLa	L	TTLa	L	La	L	a	Lb	TTLa	Lb	H	L	TTLa	L	TTLa	L	H	L	Mc	L	H	M	TTLa	L	TR	TR	TR	M	Md	L	L	Le	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = host plants can not grow in this area
b = mowing along roadsides could destroy host plants
c = this species prefers disturbed, open areas
d = this species is almost always found near water
e = while immediate loss of host plants could occur, opening of the canopy could create additional habitat for host plants

Species: Dark Blue Butterfly (*Euphilotes enoptes* var. *purpurea*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	X	X	X	X	O	O	O	O	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	X	O	O	O	O				
Disturbance/Harassment	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	X	O	X	O	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	X	X	X	O	X	O	O	X	O	X	X	X	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	Xb	X	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil erosion	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O				
Debris deposition	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																										
	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	X	O	O	O	O	X	O	X	O	X				
Assigned Effect Index Value	TTLa	L	TTLa	L	TTLa	L	La	L	a	Lb	TTLa	Lb	H	L	TTLa	L	TTLa	L	H	L	Hc	L	TTL	L	TTLa	L	TR	TR	TR	M	Hd	L	L	Me	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = host plants can not grow in this area
b = mowing along roadsides could destroy host plants
c = this species prefers disturbed, open areas
d = this species is almost always found near water
e = while immediate loss of host plants could occur, opening of the canopy could create additional habitat for host plants

Species: Morand's Checkerspot Butterfly (*Euphydryas anicia morandi*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	X	X	X	X	O	O	O	O	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	X	O	O	O	O				
Disturbance/Harassment	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	X	O	X	O	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	X	X	X	O	X	O	O	X	O	X	X	X	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	Xb	X	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil erosion	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O				
Debris deposition	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTLa	L	TTLa	L	TTLa	L	La	L	a	Lb	TTLa	Lb	H	L	TTLa	L	TTLa	L	H	L	Mc	L	TTL	L	TTLa	L	TR	TR	TR	M	M	L	L	Ld	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = host plants can not grow in this area
b = mowing along roadsides could destroy host plants
c = this species prefers open areas
d = while immediate loss of host plants could occur, opening of the canopy could create additional habitat for host plants
e = fire suppression may hinder growth of larval host plant

Species: Spring Mountains Comma Skipper (*Hesperia comma mojavensis*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	X	X	X	X	O	O	O	O	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	X	O	O	O	O				
Disturbance/Harassment	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	X	O	X	O	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	X	X	X	O	X	O	O	X	O	X	X	X	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	X	X	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil erosion	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O				
Debris deposition	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																										
	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	X	O	O	O	O	X	O	X	O	X				
Assigned Effect Index Value	TTLa	L	TTLa	L	TTLa	L	La	L	a	Lb	TTLa	Lb	H	L	TTLa	L	TTLa	L	H	L	Mc	L	TTL	L	TTLa	L	TR	TR	TR	M	M	L	L	Ld	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = host plants can not grow in this area
b = mowing along roadsides could destroy host plants
c = this species prefers open areas
d = while immediate loss of host plants could occur, opening of the canopy could create additional habitat for host plants
e = fire suppression may hinder growth of larval host plant

Species: Spring Mountains Icarioides Blue (*Icaricia icarioides austinorum*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	X	X	X	X	O	O	O	O	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	X	O	O	O	O				
Disturbance/Harassment	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	X	O	X	O	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	X	X	X	O	X	O	O	X	O	X	X	X	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	X	X	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil erosion	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O				
Debris deposition	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																										
	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	X	O	O	O	O	X	O	X	O	X				
Assigned Effect Index Value	TTLa	L	TTLa	L	TTLa	L	La	L	a	Lb	TTLa	Lb	H	L	TTLa	L	TTLa	L	H	L	Mc	L	TTL	L	TTLa	L	TR	TR	TR	M	Md	L	L	Le	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = host plants can not grow in this area
b = mowing along roadsides could destroy host plants
c = this species prefers disturbed, open areas
d = this species is almost always found near water
e = while immediate loss of host plants could occur, opening of the canopy could create additional habitat for host plants

Species: Mount Charleston Blue Butterfly (*Icaricia shasta charlestonensis*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	X	X	X	X	O	O	O	O	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	X	O	O	O	O				
Disturbance/Harassment	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	X	O	X	O	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	X	X	X	O	X	O	O	X	O	X	X	X	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	Xb	X	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil erosion	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O				
Debris deposition	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Value	TTLa	L	TTLa	L	TTLa	L	La	L	a	Lb	TTLa	Lb	H	L	TTLa	L	TTLa	L	H	L	Hc	L	TTL	L	TTLa	L	TR	TR	TR	M	M	L	L	Md	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = host plants can not grow in this area
b = mowing along roadsides could destroy host plants
c = this species prefers open areas
d = while immediate loss of host plants could occur, opening of the canopy could create additional habitat for host plants
e = fire suppression may hinder growth of larval host plant

Species: Nevada Admiral (*Limenitis weidemeyerii nevadae*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	X	X	X	X	O	O	O	O	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	X	O	O	O	O				
Disturbance/Harassment	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	X	O	X	O	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	X	X	X	O	X	O	O	X	O	X	X	X	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	X	X	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil erosion	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O				
Debris deposition	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTLa	L	TTLa	L	TTLa	L	La	L	a	Lb	TTLa	Lb	H	L	TTLa	L	TTLa	L	H	L	Hc	L	TTL	L	TTLa	L	TR	TR	TR	M	Hd	L	L	Le	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = host plants can not grow in this area
b = mowing along roadsides could destroy host plants
c = this species prefers open areas
d = this species is primarily found in riparian areas
e = while immediate loss of host plants could occur, opening of the canopy could create additional habitat for host plants
f = fire suppression may hinder growth of larval host plant

Species: Carole's Silverspot (*Speyeria zerene carolae*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	X	X	X	X	O	O	O	O	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	X	O	O	O	O				
Disturbance/Harassment	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	X	O	X	O	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	X	X	O	X	X	X	O	X	O	O	X	O	X	X	X	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	Xa	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	X	X	X	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil compaction	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	X	O	X	X	O	O	X	O	O	O	O				
Soil erosion	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O				
Debris deposition	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Value	TTLa	L	TTLa	L	TTLa	L	La	L	a	Lb	TTLa	Lb	H	L	TTLa	L	TTLa	L	H	L	Mc	L	TTL	L	TTLa	L	TR	TR	TR	M	M	L	L	Ld	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = host plants can not grow in this area
b = mowing along roadsides could destroy host plants
c = this species prefers open areas
d = while immediate loss of host plants could occur, opening of the canopy could create additional habitat for host plants
e = fire suppression may hinder growth of larval host plant

Value of Conservation Measures

Species
Spring Mountains Checkerspot Butterfly

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	NM	NM	TR	TR	
CUA Footprint	NM	NM	TR	TR	
Campground AOI	NM	NM	TR	TR	
Firewood Gathering Area	NM	NM	TR	TR	
Future Low Mileage System Trail AOI	NM	NM	TR	TR	
High Mileage System Trail AOI	NM	NM	TR	TR	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	TR	TR	
Horses/Burros < .25 mile from spring/stream	NM	NM	TR	TR	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	TR	TR	
Motorized Trail (closed) AOI	NM	NM	TR	TR	
Motorized Trail (open) AOI	NM	NM	TR	TR	
Motorized Trail (open) Footprint	NM	NM	TR	TR	
Non System Trail AOI	NM	NM	TR	TR	
Non System Trail Footprint	NM	NM	TR	TR	
Paved Road AOI	NM	NM	TR	TR	
Paved Road Footprint	NM	NM	TR	TR	
Picnic Area AOI	NM	NM	TR	TR	
Picnic Area Footprint	NM	NM	TR	TR	
Private Land	NM	NM	TR	TR	
Unpaved Road AOI	NM	NM	TR	TR	
Unpaved Road Footprint	NM	NM	TR	TR	
West Side PO Camping AOI	NM	NM	TR	TR	
West Side PO Camping Footprint	NM	NM	TR	TR	
Wildland Urban Interface	L	L	L	TR	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Bret's Blue Butterfly

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Horses/Burros .25 - 1.0 mile from spring/stream	L	L	L	L	
Horses/Burros < .25 mile from spring/stream	L	L	L	L	
Private Land	TR	L	L	L	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Dark Blue Butterfly

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	L	TR	L	
CUA Footprint	TR	L	TR	L	
Future Low Mileage System Trail AOI	TR	L	TR	L	
Horses/Burros .25 - 1.0 mile from spring/stream	TR	L	TR	L	
Horses/Burros < .25 mile from spring/stream	TR	L	TR	L	
Horses/Burros > 1.0 mile from spring/stream	TR	L	TR	L	
Low Mileage System Trail AOI	TR	L	TR	L	
Motorized Trail (closed) AOI	TR	L	TR	L	
Motorized Trail (closed) Footprint	TR	L	TR	L	
Motorized Trail (open) AOI	TR	L	TR	L	
Motorized Trail (open) Footprint	TR	L	TR	L	
Non System Trail AOI	TR	L	TR	L	
Non System Trail Footprint	TR	L	TR	L	
Picnic Area AOI	TR	L	TR	L	
Picnic Area Footprint	TR	L	TR	L	
Private Land	TR	L	TR	L	
Unpaved Road AOI	TR	L	TR	L	
Unpaved Road Footprint	TR	L	TR	L	
Wildland Urban Interface	L	L	TR	L	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Morand's Checkerspot Butterfly

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	TR	TR	
Future Low Mileage System Trail AOI	L	L	TR	TR	
Future Ski Area Footprint	L	L	TR	L	
Future Trailhead AOI	L	L	TR	TR	
Future Trailhead Footprint	L	L	TR	TR	
High Mileage System Trail AOI	L	L	TR	TR	
Horses/Burros < .25 mile from spring/stream	L	L	TR	TR	
Horses/Burros > 1.0 mile from spring/stream	L	L	TR	TR	
Ski Area AOI	L	L	TR	L	
Ski Area Footprint	L	L	L	L	
Unpaved Road AOI	L	L	TR	TR	
Unpaved Road Footprint	L	L	L	TR	
Wildland Urban Interface	L	L	TR	L	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Spring Mountains Comma Skipper

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	L	
CUA Footprint	L	L	L	L	
Campground AOI	L	L	L	L	
FS Structure AOI	L	L	L	L	
Firewood Gathering Area	L	L	L	L	
Future Campground AOI	L	L	L	L	
Future EEA AOI	L	L	L	L	
Future EEA Footprint	L	L	L	L	
Future Low Mileage System Trail AOI	L	L	L	L	
Future Trailhead AOI	L	L	L	L	
Future Trailhead Footprint	L	L	L	L	
High Mileage System Trail AOI	L	L	L	L	
Horses/Burros .25 - 1.0 mile from spring/stream	L	L	L	L	
Horses/Burros < .25 mile from spring/stream	L	L	L	L	
Horses/Burros > 1.0 mile from spring/stream	L	L	L	L	
Low Mileage System Trail AOI	L	L	L	L	
Motorized Trail (closed) AOI	L	L	L	L	
Motorized Trail (closed) Footprint	L	L	L	L	
Motorized Trail (open) AOI	L	L	L	L	
Motorized Trail (open) Footprint	L	L	L	L	
Non System Trail AOI	L	L	L	L	
Non System Trail Footprint	L	L	L	L	
PVT Building AOI	L	L	L	L	
Paved Road AOI	L	L	L	L	
Paved Road Footprint	L	L	L	L	
Picnic Area AOI	L	L	L	L	
Picnic Area Footprint	L	L	L	L	
Private Land	L	L	L	L	
Ski Area AOI	L	L	L	L	
Ski Area Footprint	L	L	L	L	
Snowplay Area	L	L	L	L	
Unpaved Road AOI	L	L	L	L	
Unpaved Road Footprint	L	L	L	L	
West Side PO Camping AOI	L	L	L	L	
West Side PO Camping Footprint	L	L	L	L	
West Side PO Motorized Trails AOI	L	L	L	L	
West Side PO Motorized Trails Footprint	L	L	L	L	
Wildland Urban Interface	L	L	L	L	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit; NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Spring Mountains Icarioides Blue Butterfly

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	L	
CUA Footprint	L	L	L	L	
Campground AOI	L	L	L	L	
FS Structure AOI	L	L	L	L	
Firewood Gathering Area	L	L	L	L	
Future Low Mileage System Trail AOI	L	L	L	L	
Future Trailhead AOI	L	L	L	L	
Future Trailhead Footprint	L	L	L	L	
High Mileage System Trail AOI	L	L	L	L	
Horses/Burros < .25 mile from spring/stream	L	L	L	L	
Horses/Burros > 1.0 mile from spring/stream	L	L	L	L	
Low Mileage System Trail AOI	L	L	L	L	
Motorized Trail (closed) AOI	L	L	L	L	
Motorized Trail (closed) Footprint	L	L	L	L	
Non System Trail AOI	L	L	L	L	
Non System Trail Footprint	L	L	L	L	
Paved Road AOI	L	L	L	L	
Paved Road Footprint	L	L	L	L	
Picnic Area AOI	L	L	L	L	
Picnic Area Footprint	L	L	L	L	
Private Land	L	L	L	L	
Ski Area AOI	L	L	L	L	
Ski Area Footprint	L	L	L	L	
Unpaved Road AOI	L	L	L	L	
Unpaved Road Footprint	L	L	L	L	
West Side PO Camping AOI	L	L	L	L	
West Side PO Camping Footprint	L	L	L	L	
Wildland Urban Interface	L	L	L	L	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit; NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Mount Charleston Blue Butterfly

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	TR	TR	
Firewood Gathering Area	L	L	TR	TR	
Future EEA AOI	L	L	TR	TR	
Future EEA Footprint	L	L	TR	TR	
Future Ski Area AOI	L	L	TR	L	
Future Ski Area Footprint	L	L	TR	TR	
High Mileage System Trail AOI	L	L	TR	TR	
High Mileage System Trail Footprint	L	L	TR	TR	
Horses/Burros .25 - 1.0 mile from spring/stream	L	L	TR	TR	
Horses/Burros < .25 mile from spring/stream	L	L	TR	TR	
Low Mileage System Trail AOI	L	L	TR	TR	
Motorized Trail (open) AOI	L	L	TR	TR	
Motorized Trail (open) Footprint	L	L	TR	TR	
Paved Road AOI	L	L	TR	TR	
Paved Road Footprint	L	L	TR	TR	
Ski Area AOI	L	L	TR	L	
Ski Area Footprint	L	L	L	L	
Snowplay Area	L	L	TR	L	
Unpaved Road AOI	L	L	TR	TR	
Unpaved Road Footprint	L	L	L	TR	
Wildland Urban Interface	L	L	TR	L	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit; NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Nevada Admiral

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	L	
CUA Footprint	L	L	L	L	
Campground AOI	L	L	L	L	
FS Structure AOI	L	L	L	L	
Firewood Gathering Area	L	L	L	L	
Future EEA AOI	L	L	L	L	
Future EEA Footprint	L	L	L	L	
Future Low Mileage System Trail AOI	L	L	L	L	
Future Low Mileage System Trail Footprint	L	L	L	L	
Future Trailhead AOI	L	L	L	L	
Future Trailhead Footprint	L	L	L	L	
Horses/Burros .25 - 1.0 mile from spring/stream	L	L	L	L	
Horses/Burros < .25 mile from spring/stream	L	L	L	L	
Horses/Burros > 1.0 mile from spring/stream	L	L	L	L	
Low Mileage System Trail AOI	L	L	L	L	
Motorized Trail (closed) AOI	L	L	L	L	
Motorized Trail (closed) Footprint	L	L	L	L	
Non System Trail AOI	L	L	L	L	
Non System Trail Footprint	L	L	L	L	
PVT Building AOI	L	L	L	L	
Paved Road AOI	L	L	L	L	
Paved Road Footprint	L	L	L	L	
Picnic Area AOI	L	L	L	L	
Picnic Area Footprint	L	L	L	L	
Private Land	L	L	L	L	
Ski Area AOI	L	L	L	L	
Ski Area Footprint	L	L	L	L	
Snowplay Area	L	L	L	L	
Unpaved Road AOI	L	L	L	L	
Unpaved Road Footprint	L	L	L	L	
West Side PO Camping AOI	L	L	L	L	
West Side PO Camping Footprint	L	L	L	L	
West Side PO Motorized Trails AOI	L	L	L	L	
West Side PO Motorized Trails Footprint	L	L	L	L	
Wildland Urban Interface	L	L	L	L	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit; NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Carole's Silverspot Butterfly

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	L	TR	L	
Campground AOI	TR	L	TR	L	
FS Structure AOI	TR	L	TR	L	
Firewood Gathering Area	TR	L	TR	L	
Future Campground AOI	TR	L	TR	L	
Future EEA AOI	TR	L	TR	L	
Future EEA Footprint	M	L	TR	L	
Future Low Mileage System Trail AOI	TR	L	TR	L	
Future Trailhead AOI	TR	L	TR	L	
Future Trailhead Footprint	M	L	TR	L	
High Mileage System Trail AOI	TR	L	TR	L	
Horses/Burros .25 - 1.0 mile from spring/stream	TR	L	TR	L	
Horses/Burros < .25 mile from spring/stream	TR	L	TR	L	
Horses/Burros > 1.0 mile from spring/stream	TR	L	TR	L	
Low Mileage System Trail AOI	TR	L	TR	L	
Motorized Trail (open) AOI	TR	L	TR	L	
Motorized Trail (open) Footprint	TR	L	TR	L	
Non System Trail AOI	TR	L	TR	L	
Paved Road AOI	TR	L	TR	L	
Paved Road Footprint	TR	L	TR	L	
Picnic Area AOI	TR	L	TR	L	
Picnic Area Footprint	TR	L	TR	L	
Private Land	TR	L	TR	L	
Ski Area AOI	TR	L	TR	L	
Ski Area Footprint	L	L	TR	L	
Snowplay Area	TR	L	TR	L	
Unpaved Road AOI	TR	L	TR	L	
Unpaved Road Footprint	TR	L	TR	L	
West Side PO Camping AOI	TR	L	TR	L	
West Side PO Camping Footprint	L	L	TR	L	
Wildland Urban Interface	L	L	TR	L	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit; NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Summary Tables

Table BUTO31

Potential Effects with Avoidance Measures on Butterflies for Current Activities as well as Current and Future Activities.

Effects Index	Bret's Blue	Carole's Silverspot	Dark Blue	Morands Checkerspot	Mount Charleston Blue	Nevada Admiral	Spring Mountains Checkerspot	Spring Mountains Comma Skipper	Spring Mountains Icarioides Blue
Current Activities - Potential Effects with Avoidance Measures									
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.06	0.00	0.00	0.06	0.06	0.00	0.06	0.00
0.051 - 0.250	0.10	1.35	0.37	0.29	0.32	1.40	0.59	2.07	0.63
0.251 - 0.500	0.50	0.56	0.47	0.17	0.37	1.09	1.01	1.35	0.92
0.501 - 0.750	0.00	0.21	1.26	0.03	0.03	1.00	0.32	0.34	0.18
0.751 - 0.999	0.00	0.25	0.19	0.00	0.04	0.14	0.08	0.31	0.15
1.000	0.00	0.00	0.01	0.00	0.00	0.00	0.40	0.00	0.00
Current and Future Activities - Potential Effects with Avoidance Measures									
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	0.10	1.37	0.41	0.31	0.33	1.57	0.72	2.16	0.75
0.251 - 0.500	0.50	0.72	0.47	0.28	0.47	1.15	1.01	1.40	0.92
0.501 - 0.750	0.00	0.22	1.26	0.04	0.07	1.03	0.42	0.34	0.14
0.751 - 0.999	0.00	0.25	0.19	0.02	0.04	0.15	0.08	0.36	0.21
1.000	0.00	0.00	0.01	0.00	0.00	0.01	0.40	0.01	0.00
Total Species Distribution (ac)	**0.60**	**5.00**	**3.10**	**1.60**	**1.50**	**5.80**	**3.90**	**7.30**	**3.40**

Table BUTO10
Summary of Individual Effect Acreage of Each Activity on Butterfly Species

	Bret's Blue	Carole's Silverspot	Dark Blue Butterfly	*Morand's Checkerspot Butterfly*	*Mount Charleston Blue Butterfly*	*Nevada Admiral*	*Spring Mountains Checkerspot*	*Spring Mountains Comma Skipper*	*Spring Mountains Icarioides Blue*
Activities									
Current Activities									
Occupied Acreage by Species (with 0.1 ac buffer)	*0.6*	*5.0*	*3.1*	*1.6*	*1.5*	*5.8*	*3.9*	*7.3*	*3.4*
Campground AOI		0.00			0.10	0.00	0.00	0.00	0.00
Campground Footprint									
Cave/Tunnel									
Climbing Area									
CUA AOI		**0.23**	**0.64**	0.10		**0.61**	**0.48**	**0.54**	**0.45**
CUA Footprint			0.10			0.10	0.14	0.16	0.06
Firewood Gathering Area		**0.50**			0.10	**0.50**	**0.40**	**0.62**	**0.31**
FS Structure AOI		0.03				0.03		0.03	0.03
FS Structure Footprint									
High Mileage System Trail AOI		0.00		0.00	0.05		0.01	0.00	0.00
High Mileage System Trail Footprint					0.00				
Horses/Burros .25 - 1.0 mile from spring/stream	0.10	0.20	**0.30**		0.20	0.10	**0.50**	**0.50**	
Horses/Burros < .25 mile from spring/stream	**0.50**	0.10	**1.20**	0.10	0.10	**1.20**	**0.30**	**0.80**	**0.60**
Horses/Burros > 1.0 mile from spring/stream		**0.30**	0.20	0.10		**0.50**	**0.30**	**0.70**	0.20
Low Mileage System Trail AOI		0.01	0.01		0.01	0.01		0.01	0.01
Low Mileage System Trail Footprint									
Motorized Trail (closed) AOI			0.03			0.05	0.00	0.05	0.05
Motorized Trail (closed) Footprint			0.00			0.01		0.01	0.01
Motorized Trail (open) AOI		0.06	0.06		0.03		0.06	0.06	
Motorized Trail (open) Footprint		0.01	0.01		0.01		0.01	0.01	
Non System Trail AOI		0.01	0.03			0.02	0.09	0.03	0.04
Non System Trail Footprint			0.00			0.00	0.01	0.00	0.00
Paved Road AOI		0.09			0.03	0.08	0.11	0.12	0.06
Paved Road Footprint		0.16			0.04	0.07	0.13	0.11	0.09
Picnic Area AOI		0.04	0.03			0.05	0.04	0.04	0.03
Picnic Area Footprint		0.07	0.07			0.16	0.07	0.07	0.07
Private Land	0.20	0.10	**0.30**			**0.24**	0.20	0.14	0.10
PVT Building AOI						0.06		0.06	
PVT Building Footprint									
Ski Area AOI		0.03		0.03	0.03	0.03		0.03	0.03
Ski Area Footprint		0.07		0.07	0.07	0.07		0.07	0.07
Snowplay Area		0.12			0.10	0.10		0.10	
Trailhead in Developed Canyon AOI									
Trailhead in Developed Canyon Footprint									
Trailhead out of Developed Canyon AOI									
Trailhead out of Developed Canyon Footprint									
Unpaved Road AOI		0.20	0.18	0.04	0.03	**0.25**	**0.22**	**0.42**	0.17
Unpaved Road Footprint		0.14	0.08	0.03	0.02	0.17	0.13	**0.30**	0.11
Wildland Urban Interface		**0.94**	**0.49**	0.20	0.14	**1.23**	**0.59**	**1.17**	**0.78**
All Current Activities Combined (Aggregated)	*0.60*	*2.42*	*2.31*	*0.50*	*0.82*	*3.68*	*2.39*	*4.12*	*1.89*
Future Activities									
Future Campground AOI		0.01						0.01	
Future Campground Footprint									
Future EEA AOI		0.00			0.00	0.00		0.00	
Future EEA Footprint		0.10			0.10	0.10		0.10	
Future Foot Bridge AOI									
Future Foot Bridge Footprint									
Future High Mileage System Trail AOI									
Future High Mileage System Trail Footprint									
Future Low Mileage System Trail AOI		0.11	0.09	0.05		**0.21**	0.11	0.11	0.11
Future Low Mileage System Trail Footprint						0.00			
Future Picnic AOI									
Future Picnic Area Footprint									
Future Ski Area AOI					0.01				
Future Ski Area Footprint				0.10	0.09				
Future Trailhead AOI		0.03		0.03		0.03		0.03	0.03
Future Trailhead Footprint		0.00		0.02		0.00		0.00	0.00
Future Visitor Center AOI									
Future Visitor Center Footprint									
West Side PO Camping AOI		0.10				0.10	0.10	0.10	0.10
West Side PO Camping Footprint		0.00				0.00	0.10	0.10	0.10
West Side PO Major Trailhead AOI									
West Side PO Major Trailhead Footprint									
West Side PO Minor Trailhead AOI									
West Side PO Minor Trailhead Footprint									
West Side PO Motorized Trails AOI						0.06		0.06	
West Side PO Motorized Trails Footprint						0.01		0.01	
West Side PO Non Motorized Trails AOI									
West Side PO Non Motorized Trails Footprint									
All Current and Future Activities Combined (Aggregated)	*0.60*	*2.56*	*2.34*	*0.64*	*0.92*	*3.91*	*2.63*	*4.27*	*2.02*

**** Bold text indicates activities with > 0.20 ac overlap with species area***

Table BUTO11
Percent Activity Potential Effect by Species - Butterflies

	Bret's Blue	Carole's Silverspot	Dark Blue Butterfly	*Morand's Checkerspot Butterfly*	*Mount Charleston Blue Butterfly*	*Nevada Admiral*	*Spring Mountains Checkerspot*	*Spring Mountains Comma Skipper*	*Spring Mountains Icarioides Blue*
Activities									
Current Activities									
Occupied Acreage by Species (with 0.1 ac buffer)	*0.6*	*5.0*	*3.1*	*1.6*	*1.5*	*5.8*	*3.9*	*7.3*	*3.4*
Campground AOI		0%			2%	0%	0%	0%	0%
Campground Footprint									
Cave/Tunnel									
Climbing Area									
CUA AOI		1%	**5%**	2%		3%	3%	2%	3%
CUA Footprint			3%			2%	4%	2%	2%
Firewood Gathering Area		**5%**			3%	4%	**5%**	4%	**5%**
FS Structure AOI		0%				0%		0%	0%
FS Structure Footprint									
High Mileage System Trail AOI		0%		0%	1%		0%	0%	0%
High Mileage System Trail Footprint					0%				
Horses/Burros .25 - 1.0 mile from spring/stream	4%	1%	2%		3%	0%	3%	2%	
Horses/Burros < .25 mile from spring/stream	**42%**	1%	**29%**	3%	3%	**16%**	4%	**5%**	**9%**
Horses/Burros > 1.0 mile from spring/stream		1%	2%	2%		2%	2%	2%	1%
Low Mileage System Trail AOI		0%	0%		0%	0%		0%	0%
Low Mileage System Trail Footprint									
Motorized Trail (closed) AOI			0%			0%	0%	0%	0%
Motorized Trail (closed) Footprint			0%			0%		0%	0%
Motorized Trail (open) AOI		0%	0%		1%		0%	0%	
Motorized Trail (open) Footprint		0%	0%		0%		0%	0%	
Non System Trail AOI		0%	0%			0%	1%	0%	0%
Non System Trail Footprint			0%			0%	0%	0%	0%
Paved Road AOI		0%			1%	0%	1%	0%	0%
Paved Road Footprint		3%			3%	1%	3%	1%	3%
Picnic Area AOI		0%	0%			0%	0%	0%	0%
Picnic Area Footprint		1%	2%			2%	1%	1%	2%
Private Land	**8%**	1%	2%			1%	1%	0%	1%
PVT Building AOI						1%		0%	
PVT Building Footprint									
Ski Area AOI		0%		0%	0%	0%		0%	0%
Ski Area Footprint		1%		2%	4%	1%		1%	1%
Snowplay Area		0%			0%	0%		0%	
Trailhead in Developed Canyon AOI									
Trailhead in Developed Canyon Footprint									
Trailhead out of Developed Canyon AOI									
Trailhead out of Developed Canyon Footprint									
Unpaved Road AOI		1%	1%	1%	1%	1%	1%	1%	1%
Unpaved Road Footprint		3%	3%	2%	1%	3%	3%	4%	3%
Wildland Urban Interface		**5%**	**8%**	3%	**5%**	**5%**	**8%**	4%	**6%**
All Current Activities Combined (Aggregated)	50%	21%	52%	13%	25%	37%	34%	27%	31%
Future Activities									
Future Campground AOI		0%						0%	
Future Campground Footprint									
Future EEA AOI		0%			0%	0%		0%	
Future EEA Footprint		1%			**5%**	1%		1%	
Future Foot Bridge AOI									
Future Foot Bridge Footprint									
Future High Mileage System Trail AOI									
Future High Mileage System Trail Footprint									
Future Low Mileage System Trail AOI		1%	1%	1%		1%	1%	0%	1%
Future Low Mileage System Trail Footprint						0%			
Future Picnic AOI									
Future Picnic Area Footprint									
Future Ski Area AOI					0%				
Future Ski Area Footprint				3%	3%				
Future Trailhead AOI		0%		1%		0%		0%	0%
Future Trailhead Footprint		0%		1%		0%		0%	0%
Future Visitor Center AOI									
Future Visitor Center Footprint									
West Side PO Camping AOI		0%				0%	1%	0%	1%
West Side PO Camping Footprint		0%				0%	2%	1%	2%
West Side PO Major Trailhead AOI									
West Side PO Major Trailhead Footprint									
West Side PO Minor Trailhead AOI									
West Side PO Minor Trailhead Footprint									
West Side PO Motorized Trails AOI						0%		0%	
West Side PO Motorized Trails Footprint						0%		0%	
West Side PO Non Motorized Trails AOI									
West Side PO Non Motorized Trails Footprint									
All Current and Future Activities Combined (Aggre	50%	24%	52%	18%	34%	40%	37%	29%	32%

**** Bold text indicates activities with >= 5% Potential Effect***

Table BUTO12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Butterflies

	Bret's Blue	Carole's Silverspot	Dark Blue Butterfly	*Morand's Checkerspot Butterfly*	*Mount Charleston Blue Butterfly*	*Nevada Admiral*	*Spring Mountains Checkerspot*	*Spring Mountains Comma Skipper*	*Spring Mountains Icarioides Blue*
Activities									
Current Activities									
Occupied Acreage by Species (with 0.1 ac buffer)	*0.6*	*5.0*	*3.1*	*1.6*	*1.5*	*5.8*	*3.9*	*7.3*	*3.4*
Campground AOI		0%			1%	0%	0%	0%	0%
Campground Footprint									
Cave/Tunnel									
Climbing Area									
CUA AOI		1%	4%	1%		2%	3%	1%	2%
CUA Footprint			2%			1%	4%	1%	1%
Firewood Gathering Area		4%			2%	3%	**5%**	3%	3%
FS Structure AOI		0%				0%		0%	0%
FS Structure Footprint									
High Mileage System Trail AOI		0%		0%	1%		0%	0%	0%
High Mileage System Trail Footprint					0%				
Horses/Burros .25 - 1.0 mile from spring/stream	3%	1%	2%		2%	0%	3%	1%	
Horses/Burros < .25 mile from spring/stream	**26%**	1%	**21%**	2%	2%	**10%**	4%	3%	**6%**
Horses/Burros > 1.0 mile from spring/stream		1%	1%	1%		1%	2%	1%	1%
Low Mileage System Trail AOI		0%	0%		0%	0%		0%	0%
Low Mileage System Trail Footprint									
Motorized Trail (closed) AOI			0%			0%	0%	0%	0%
Motorized Trail (closed) Footprint			0%			0%		0%	0%
Motorized Trail (open) AOI		0%	0%		0%		0%	0%	
Motorized Trail (open) Footprint		0%	0%		0%		0%	0%	
Non System Trail AOI		0%	0%			0%	1%	0%	0%
Non System Trail Footprint			0%			0%	0%	0%	0%
Paved Road AOI		0%			0%	0%	1%	0%	0%
Paved Road Footprint		2%			2%	1%	3%	1%	2%
Picnic Area AOI		0%	0%			0%	0%	0%	0%
Picnic Area Footprint		1%	1%			1%	1%	0%	1%
Private Land	**6%**	0%	2%			1%	1%	0%	0%
PVT Building AOI						0%		0%	
PVT Building Footprint									
Ski Area AOI		0%		0%	0%	0%		0%	0%
Ski Area Footprint		0%		1%	2%	1%		0%	1%
Snowplay Area		0%			0%	0%		0%	
Trailhead in Developed Canyon AOI									
Trailhead in Developed Canyon Footprint									
Trailhead out of Developed Canyon AOI									
Trailhead out of Developed Canyon Footprint									
Unpaved Road AOI		1%	1%	0%	0%	1%	1%	1%	1%
Unpaved Road Footprint		2%	2%	1%	1%	2%	3%	3%	2%
Wildland Urban Interface		3%	**5%**	2%	3%	3%	**5%**	3%	4%
All Current Activities Combined (Aggregated)	32%	16%	37%	8%	16%	24%	31%	18%	20%
Future Activities									
Future Campground AOI		0%						0%	
Future Campground Footprint									
Future EEA AOI		0%			0%	0%		0%	
Future EEA Footprint		1%			3%	1%		1%	
Future Foot Bridge AOI									
Future Foot Bridge Footprint									
Future High Mileage System Trail AOI									
Future High Mileage System Trail Footprint									
Future Low Mileage System Trail AOI		0%	1%	1%		1%	1%	0%	1%
Future Low Mileage System Trail Footprint						0%			
Future Picnic AOI									
Future Picnic Area Footprint									
Future Ski Area AOI					0%				
Future Ski Area Footprint				2%	2%				
Future Trailhead AOI		0%		0%		0%		0%	0%
Future Trailhead Footprint		0%		1%		0%		0%	0%
Future Visitor Center AOI									
Future Visitor Center Footprint									
West Side PO Camping AOI		0%				0%	1%	0%	0%
West Side PO Camping Footprint		0%				0%	2%	1%	1%
West Side PO Major Trailhead AOI									
West Side PO Major Trailhead Footprint									
West Side PO Minor Trailhead AOI									
West Side PO Minor Trailhead Footprint									
West Side PO Motorized Trails AOI						0%		0%	
West Side PO Motorized Trails Footprint						0%		0%	
West Side PO Non Motorized Trails AOI									
West Side PO Non Motorized Trails Footprint									
All Current and Future Activities Combined (Aggregate	32%	17%	38%	12%	21%	26%	34%	19%	22%

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table BUTO13
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Butterflies

	Bret's Blue	Carole's Silverspot	Dark Blue Butterfly	*Morand's Checkerspot Butterfly*	*Mount Charleston Blue Butterfly*	*Nevada Admiral*	*Spring Mountains Checkerspot*	*Spring Mountains Comma Skipper*	*Spring Mountains Icarioides Blue*
Activities									
Current Activities									
Occupied Acreage by Species (with 0.1 ac buffer)	*0.6*	*5.0*	*3.1*	*1.6*	*1.5*	*5.8*	*3.9*	*7.3*	*3.4*
Campground AOI		0%			2%	0%	0%	0%	0%
Campground Footprint									
Cave/Tunnel									
Climbing Area									
CUA AOI		1%	**5%**	1%		2%	3%	1%	2%
CUA Footprint			3%			1%	3%	2%	1%
Firewood Gathering Area		**5%**			3%	3%	**5%**	3%	3%
FS Structure AOI		0%				0%		0%	0%
FS Structure Footprint									
High Mileage System Trail AOI		0%		0%	1%		0%	0%	0%
High Mileage System Trail Footprint					0%				
Horses/Burros .25 - 1.0 mile from spring/stream	3%	1%	2%		3%	0%	3%	1%	
Horses/Burros < .25 mile from spring/stream	**31%**	1%	**28%**	3%	3%	**12%**	4%	4%	**7%**
Horses/Burros > 1.0 mile from spring/stream		1%	2%	1%		2%	2%	2%	1%
Low Mileage System Trail AOI		0%	0%		0%	0%		0%	0%
Low Mileage System Trail Footprint									
Motorized Trail (closed) AOI			0%			0%	0%	0%	0%
Motorized Trail (closed) Footprint			0%			0%		0%	0%
Motorized Trail (open) AOI		0%	0%		0%		0%	0%	
Motorized Trail (open) Footprint		0%	0%		0%		0%	0%	
Non System Trail AOI		0%	0%			0%	1%	0%	0%
Non System Trail Footprint			0%			0%	0%	0%	0%
Paved Road AOI		0%			1%	0%	1%	0%	0%
Paved Road Footprint		3%			3%	1%	3%	1%	2%
Picnic Area AOI		0%	0%			0%	0%	0%	0%
Picnic Area Footprint		1%	2%			2%	1%	1%	1%
Private Land	**6%**	0%	2%			1%	1%	0%	1%
PVT Building AOI						0%		0%	
PVT Building Footprint									
Ski Area AOI		0%		0%	0%	0%		0%	0%
Ski Area Footprint		1%		2%	3%	1%		0%	1%
Snowplay Area		0%			0%	0%		0%	
Trailhead in Developed Canyon AOI									
Trailhead in Developed Canyon Footprint									
Trailhead out of Developed Canyon AOI									
Trailhead out of Developed Canyon Footprint									
Unpaved Road AOI		1%	1%	1%	1%	1%	1%	1%	1%
Unpaved Road Footprint		3%	3%	2%	1%	2%	3%	3%	3%
Wildland Urban Interface		4%	**8%**	3%	**5%**	4%	**6%**	3%	4%
All Current Activities Combined (Aggregated)	38%	20%	49%	12%	23%	29%	31%	21%	24%
Future Activities									
Future Campground AOI		0%						0%	
Future Campground Footprint									
Future EEA AOI		0%			0%	0%		0%	
Future EEA Footprint		1%			**5%**	1%		1%	
Future Foot Bridge AOI									
Future Foot Bridge Footprint									
Future High Mileage System Trail AOI									
Future High Mileage System Trail Footprint									
Future Low Mileage System Trail AOI		1%	1%	1%		1%	1%	0%	1%
Future Low Mileage System Trail Footprint						0%			
Future Picnic AOI									
Future Picnic Area Footprint									
Future Ski Area AOI					0%				
Future Ski Area Footprint				3%	3%				
Future Trailhead AOI		0%		0%		0%		0%	0%
Future Trailhead Footprint		0%		1%		0%		0%	0%
Future Visitor Center AOI									
Future Visitor Center Footprint									
West Side PO Camping AOI		0%				0%	1%	0%	1%
West Side PO Camping Footprint		0%				0%	2%	1%	2%
West Side PO Major Trailhead AOI									
West Side PO Major Trailhead Footprint									
West Side PO Minor Trailhead AOI									
West Side PO Minor Trailhead Footprint									
West Side PO Motorized Trails AOI						0%		0%	
West Side PO Motorized Trails Footprint						0%		0%	
West Side PO Non Motorized Trails AOI									
West Side PO Non Motorized Trails Footprint									
All Current and Future Activities Combined (Aggreg	38%	23%	50%	17%	30%	31%	34%	23%	26%

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table BUTO14
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Butterflies

	Bret's Blue	Carole's Silverspot	Dark Blue Butterfly	*Morand's Checkerspot Butterfly*	*Mount Charleston Blue Butterfly*	*Nevada Admiral*	*Spring Mountains Checkerspot*	*Spring Mountains Comma Skipper*	*Spring Mountains Icarioides Blue*
Activities									
Current Activities									
Occupied Acreage by Species (with 0.1 ac buffer)	*0.6*	*5.0*	*3.1*	*1.6*	*1.5*	*5.8*	*3.9*	*7.3*	*3.4*
Campground AOI		0%			2%	0%	0%	0%	0%
Campground Footprint									
Cave/Tunnel									
Climbing Area									
CUA AOI		1%	4%	1%		2%	3%	1%	2%
CUA Footprint			2%			1%	3%	2%	1%
Firewood Gathering Area		4%			3%	3%	**5%**	3%	3%
FS Structure AOI		0%				0%		0%	0%
FS Structure Footprint									
High Mileage System Trail AOI		0%		0%	1%		0%	0%	0%
High Mileage System Trail Footprint					0%				
Horses/Burros .25 - 1.0 mile from spring/stream	3%	1%	2%		3%	0%	3%	1%	
Horses/Burros < .25 mile from spring/stream	**31%**	1%	**22%**	3%	3%	**12%**	4%	4%	**7%**
Horses/Burros > 1.0 mile from spring/stream		1%	1%	1%		2%	2%	2%	1%
Low Mileage System Trail AOI		0%	0%		0%	0%		0%	0%
Low Mileage System Trail Footprint									
Motorized Trail (closed) AOI			0%			0%	0%	0%	0%
Motorized Trail (closed) Footprint			0%			0%		0%	0%
Motorized Trail (open) AOI		0%	0%		0%		0%	0%	
Motorized Trail (open) Footprint		0%	0%		0%		0%	0%	
Non System Trail AOI		0%	0%			0%	1%	0%	0%
Non System Trail Footprint			0%			0%	0%	0%	0%
Paved Road AOI		0%			1%	0%	1%	0%	0%
Paved Road Footprint		2%			3%	1%	3%	1%	2%
Picnic Area AOI		0%	0%			0%	0%	0%	0%
Picnic Area Footprint		1%	1%			2%	1%	1%	1%
Private Land	**6%**	0%	2%			1%	1%	0%	1%
PVT Building AOI						0%		0%	
PVT Building Footprint									
Ski Area AOI		0%		0%	0%	0%		0%	0%
Ski Area Footprint		1%		2%	3%	1%		0%	1%
Snowplay Area		0%			0%	0%		0%	
Trailhead in Developed Canyon AOI									
Trailhead in Developed Canyon Footprint									
Trailhead out of Developed Canyon AOI									
Trailhead out of Developed Canyon Footprint									
Unpaved Road AOI		1%	1%	1%	1%	1%	1%	1%	1%
Unpaved Road Footprint		2%	2%	2%	1%	2%	3%	3%	3%
Wildland Urban Interface		4%	**6%**	2%	4%	4%	**7%**	3%	4%
All Current Activities Combined (Aggregated)	38%	17%	39%	11%	22%	29%	33%	21%	24%
Future Activities									
Future Campground AOI		0%						0%	
Future Campground Footprint									
Future EEA AOI		0%			0%	0%		0%	
Future EEA Footprint		1%			**5%**	1%		1%	
Future Foot Bridge AOI									
Future Foot Bridge Footprint									
Future High Mileage System Trail AOI									
Future High Mileage System Trail Footprint									
Future Low Mileage System Trail AOI		0%	1%	1%		1%	1%	0%	1%
Future Low Mileage System Trail Footprint						0%			
Future Picnic AOI									
Future Picnic Area Footprint									
Future Ski Area AOI					0%				
Future Ski Area Footprint				2%	3%				
Future Trailhead AOI		0%		0%		0%		0%	0%
Future Trailhead Footprint		0%		1%		0%		0%	0%
Future Visitor Center AOI									
Future Visitor Center Footprint									
West Side PO Camping AOI		0%				0%	1%	0%	1%
West Side PO Camping Footprint		0%				0%	2%	1%	2%
West Side PO Major Trailhead AOI									
West Side PO Major Trailhead Footprint									
West Side PO Minor Trailhead AOI									
West Side PO Minor Trailhead Footprint									
West Side PO Motorized Trails AOI						0%		0%	
West Side PO Motorized Trails Footprint						0%		0%	
West Side PO Non Motorized Trails AOI									
West Side PO Non Motorized Trails Footprint									
All Current and Future Activities Combined (Aggre	38%	19%	40%	16%	29%	31%	35%	23%	26%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table BUTO30
Potential Effects on Butterflies for Current Activities as well as Current and Future Activities.

Effects Index	Bret's Blue	Carole's Silverspot	Dark Blue	Morands Checkerspot	Mount Charleston Blue	Nevada Admiral	Spring Mountains Checkerspot	Spring Mountains Comma Skipper	Spring Mountains Icarioides Blue
Current Activities - Potential Effects									
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.06	0.00	0.00	0.06	0.06	0.00	0.06	0.00
0.051 - 0.250	0.10	1.29	0.37	0.26	0.29	1.22	0.59	1.66	0.57
0.251 - 0.500	0.30	0.40	0.45	0.11	0.15	0.38	0.84	1.07	0.47
0.501 - 0.750	0.20	0.29	0.46	0.10	0.25	0.89	0.48	0.69	0.45
0.751 - 0.999	0.00	0.07	0.62	0.00	0.00	0.78	0.00	0.08	0.14
1.000	0.00	0.31	0.41	0.03	0.07	0.36	0.47	0.57	0.26
Current and Future Activities - Potential Effects									
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	0.10	1.35	0.41	0.24	0.29	1.37	0.72	1.73	0.63
0.251 - 0.500	0.30	0.43	0.40	0.24	0.16	0.41	0.77	1.08	0.53
0.501 - 0.750	0.20	0.29	0.51	0.10	0.30	0.86	0.66	0.66	0.45
0.751 - 0.999	0.00	0.17	0.62	0.00	0.05	0.91	0.00	0.21	0.14
1.000	0.00	0.32	0.41	0.05	0.11	0.36	0.47	0.59	0.28
Total Species Distribution (ac)	**0.60**	**5.00**	**3.10**	**1.60**	**1.50**	**5.80**	**3.90**	**7.30**	**3.40**

Table BUTO032

Potential Effects with Minimization Measures on Butterflies for Current Activities as well as Current and Future Activities.

Effects Index	Bret's Blue	Carole's Silverspot	Dark Blue	Morands Checkerspot	Mount Charleston Blue	Nevada Admiral	Spring Mountains Checkerspot	Spring Mountains Comma Skipper	Spring Mountains Icarioides Blue
Current Activities - Potential Effects with Minimization Measures									
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.06	0.00	0.00	0.06	0.06	0.00	0.06	0.00
0.051 - 0.250	0.10	1.29	0.37	0.26	0.29	1.26	0.59	1.71	0.57
0.251 - 0.500	0.50	0.40	0.45	0.11	0.20	0.51	1.02	1.59	0.74
0.501 - 0.750	0.00	0.29	0.46	0.10	0.22	1.64	0.31	0.30	0.36
0.751 - 0.999	0.00	0.14	0.83	0.03	0.00	0.09	0.12	0.33	0.12
1.000	0.00	0.25	0.20	0.00	0.05	0.13	0.36	0.14	0.11
Current and Future Activities - Potential Effects with Minimization Measures									
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	0.10	1.35	0.41	0.24	0.29	1.37	0.72	1.73	0.63
0.251 - 0.500	0.50	0.43	0.40	0.24	0.25	0.58	1.01	1.65	0.80
0.501 - 0.750	0.00	0.34	0.51	0.10	0.28	1.74	0.42	0.39	0.36
0.751 - 0.999	0.00	0.19	0.83	0.03	0.05	0.09	0.12	0.26	0.05
1.000	0.00	0.25	0.20	0.02	0.05	0.13	0.36	0.23	0.19
Total Species Distribution (ac)	**0.60**	**5.00**	**3.10**	**1.60**	**1.50**	**5.80**	**3.90**	**7.30**	**3.40**

Table BUTO33

Potential Effects with Mitigation Measures on Butterflies for Current Activities as well as Current and Future Activities.

Effects Index	Bret's Blue	Carole's Silverspot	Dark Blue	Morands Checkerspot	Mount Charleston Blue	Nevada Admiral	Spring Mountains Checkerspot	Spring Mountains Comma Skipper	Spring Mountains Icarioides Blue
Current Activities - Potential Effects with Mitigation Measures									
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.06	0.00	0.00	0.06	0.06	0.00	0.06	0.00
0.051 - 0.250	0.10	1.35	0.37	0.26	0.29	1.26	0.59	1.71	0.57
0.251 - 0.500	0.50	0.56	0.47	0.11	0.20	0.51	0.85	1.59	0.74
0.501 - 0.750	0.00	0.21	1.23	0.10	0.21	1.64	0.48	0.30	0.36
0.751 - 0.999	0.00	0.11	0.22	0.00	0.02	0.09	0.12	0.33	0.12
1.000	0.00	0.13	0.01	0.03	0.05	0.13	0.36	0.14	0.11
Current and Future Activities - Potential Effects with Mitigation Measures									
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	0.10	1.37	0.41	0.24	0.29	1.37	0.72	1.73	0.63
0.251 - 0.500	0.50	0.63	0.47	0.24	0.25	0.58	0.78	1.65	0.80
0.501 - 0.750	0.00	0.31	1.23	0.10	0.26	1.74	0.65	0.39	0.36
0.751 - 0.999	0.00	0.11	0.22	0.00	0.07	0.09	0.12	0.26	0.05
1.000	0.00	0.13	0.01	0.05	0.05	0.13	0.36	0.23	0.19
Total Species Distribution (ac)	**0.60**	**5.00**	**3.10**	**1.60**	**1.50**	**5.80**	**3.90**	**7.30**	**3.40**

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Bret's blue butterfly (*Euphilotes bernardina inyomontana = E. battoides* sp.)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5 (1)	U	U	U	U	Low	Moderate	High	
Current Condition Spring Mountains				1-5 (3)	U	U	U	U	Low	Moderate	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderate	U	U	U	U	U	Low	Moderate	High	Low
Comments	No. of sites in reference and current condition likely low due to lack of surveys; information for current condition rangewide based on information in NatureServe (mostly provided threats information as this species is not ranked or tracked by any states)											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			Population Numbers and Areas of Occurrence				Population Trends	Threats, Protection, and Management			
Carole's silverspot butterfly (*Speyeria zerene carolae = S. carolae*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				21-80 (31)	High	U	U	Stable	Low	Low	High	
Current Condition Spring Mountains				21-80 (50)	High	U	U	Stable	Low	Low	High	Low
Current Condition Rangewide	SME	Moderate	Moderately vulnerable	21-80 (50)	High	U	U	Stable	Low	Low	High	Low
Comments	No. of sites in reference condition based on 31 sites in NNHP (Weiss et al. 1997 noted 37 occurences); population trend is based on no. of known sites and best professional judgment											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Dark blue butterfly (*Euphilotes ancilla purpura = E. enoptes purpurea*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (11)	High	U	U	U	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (11)	High	U	U	Stable	Low	Moderate	High	Moderate
Current Condition Rangewide	SME	Very narrow	Moderately vulnerable	6-20 (11)	High	U	U	Stable	Low	Moderate	High	Moderate
Comments	No. of sites in reference condition based on NNHP and Weiss et al. 1997; No. of sites in current condition based on Boyd and Austin 1999 and Boyd et al. 2000; proportion of sites with good viability based on best professional judgment that subspecies will continue to persist for 20 years at the 11 sites											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Morand's checkerspot butterfly (*Euphydryas anicia morandi*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (8)	High	U	U	U	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (8)	High	U	U	Stable	Low	Moderate	High	Moderate
Current Condition Rangewide	SME	Very narrow	Highly vulnerable	6-20 (8)	High	U	U	Stable	Low	Moderate	High	Moderate
Comments	No. of sites in reference condition based on NNHP as of 1998; no. of sites in current condition based on Boyd et al. 2000 and Boyd and Austin 2002 [LVSSR (avalanche chutes above ski runs and Three Springs), Foxtail Canyon, North Loop Trail, South Loop Trail, Kyle Canyon (Big Falls Canyon and ephemeral at Acastus site below campground), Griffith Peak Trail, Wallace Canyon and Harris Mtn Rd]											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			Population Numbers and Areas of Occurrence				Population Trends	Threats, Protection, and Management			
Mt. Charleston blue butterfly (*Icaricia shasta charlestonensis*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (6)	Small	U	11-50	Decline	Moderate	High	High	
Current Condition Spring Mountains				1-5 (2)	Small	U	6-10	Rapid decline	High	High	High	Moderate
Current Condition Rangewide	SME	Very narrow	Highly vulnerable	1-5 (2)	Small	U	6-10	Rapid decline	High	High	High	Moderate
Comments	No. of sites for current condition based on 2 element occurrences; threats overall based on stochastic events (e.g., monsoon during flight season) coupled with human activities were determinants in severity and scope											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Nevada admiral (*Limenitis weidermeyerii nevadae*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				U	U	U	U	U	Low	Low	High	
Current Condition Spring Mountains				21-80 (58)	High	U	U	Stable	Low	Low	High	Low
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	21-80 (58)	High	U	U	Stable	Low	Low	High	Low
Comments	Intrinsic vulnerability is moderate because host plants are susceptible to natural succession without disturbance											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Spring Mountains checkerspot butterfly (*Chlosyne acastus robusta*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (12)	Moderate	U	U	U	Moderate	Moderate	High	
Current Condition Spring Mountains				6-20 (8)	High	U	U	Rapid decline	Moderate	Moderate	High	Moderate
Current Condition Rangewide	SME	Narrow	Moderately vulnerable	6-20 (8)	High	U	U	Rapid decline	Moderate	Moderate	High	Moderate
Comments	No. of sites in reference condition based on Weiss et al. 1997; no. of sites in current condition based on 4 NNHP sites (Kyle Canyon wash, north side of Mt. Stirling, west slope of Clark Canyon and Mt. Potosi), Boyd et al 2000 reported at upper end of Harris Mtn Rd and Griffith Peak Trail, and Boyd and Austin 2002 at Trough Spring; proportion of sites with good viability in reference condition based on the majority of 12 sites still persisting, however subspecies no longer found at sites (subspecies exhibiting metapopulation dynamics and reasons for subspecies maintaining populations at certain sites while not at others is unknown); proportion of sites with good viability in current condition based on best professional judgment that subspecies will continue to persis at the 5 sites for 20 years											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			Population Numbers and Areas of Occurrence				Population Trends	Threats, Protection, and Management			
Spring Mountains comma skipper (*Hesperia colorado* [= *comma*] *mojavensis*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				U	U	U	U	U	Low	Low	High	
Current Condition Spring Mountains				21-80 (73)	High	U	U	Stable	Low	Low	High	Low
Current Condition Rangewide	SME	Moderate	Not intrinsically vulnerable	21-80 (73)	High	U	U	Stable	Low	Low	High	Low
Comments	Intrinsic vulnerability rating based on its wide distribution throughout NRA in a variety of habitats											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Spring Mountains icarioides blue butterfly (*Icaricia icarioides austinorum*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (17)	High	U	U	U	Low	Low	High	
Current Condition Spring Mountains				21-80 (34)	High	U	U	Stable	Low	Low	High	Low
Current Condition Rangewide	SME	Moderate	Not intrinsically vulnerable	21-80 (34)	High	U	U	Stable	Low	Low	High	Low
Comments												

APPENDIX 5F-3

Invertebrate Species (Insects)

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Charleston ant (*Lasius nevadensis*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5 (1)	U	U	<1	U	High	High	High	
Current Condition Spring Mountains				1-5 (1)	U	U	<1	U	High	High	High	Moderate
Current Condition Rangewide	SME	U	U	1-5 (1)	U	U	<1	U	High	High	High	Moderate
Comments	No. of sites for current and reference condition (1 site -- 6 observed colonies or nests) based on only one known survey/sighting in 1956; the threat categories for this species could have been unknown since survey and life history information for this species is severely lacking; threat rankings based on current situation where only one occurrence has been documented and this occurrence is in Kyle Canyon -- one of the two most heavily used canyons on the east side of the NRA											

APPENDIX 5F-4

Mammal Species (Bats)

1.1 BATS

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

The point occurrence data (with 0.1 acre buffer per observation) overlap with current and future activities for each species summed to between 30.24 and 41.63 acres per species for the bat species. Horses and Burros at all distances from springs/streams have the greatest overlap of current activities. The only future activity with more than 1.0 acres of overlap is the West Side PO Camping Footprint. The long-eared myotis and long-legged myotis are effected by the most activities.

Current activities account for the vast majority of the overlap with all bat species considered. Future activities will potentially overlap a relatively small area of all species.

1.1.1.2 Potential Effects

The analysis of potential effects on bat species relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Tables 5F4-1 to 5F4-6) The majority of activities have a high (H) to total (TTL) impact on these bat species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area. However, the activity with largest area of overlap (Horses and Burros) has no impact on any of the bat species.

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species (Table 5F4-7). The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Table 5F4-8). The aggregated current and future activities' potential effects are estimated to impact between 10 and 14 percent of the occupied sites of the bat species. All potential effects equal to or greater than five percent are noteworthy, and no current and one future activity meet this criteria. The planned activity is the West Side PO Camping Footprint. Long-eared myotis is the only species with an activity effect of at least five percent.

Current activities each have less than a three percent potential effect on the bat species, while future activity of West Side PO Camping Footprint has a three to five percent impact on all six bat species considered (Table 5F4-7 and 5F4-8).

The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category as it corresponds to the species figures (Table 5F4-9). Note that nearly all of the potential effects on known point occurrences do not degrade the habitat at all (0.000) or at a low level within an activity area (less than 0.250).

1.1.1.3 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on bat species. The three categories of conservation measures are avoidance, minimization, and mitigation (Table 5F4-10 to 5F4-15). In order to determine the benefit of conservation measures, the potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures.

1.1.1.4 Avoidance

No current or future activity with avoidance measures was greater than five percent of the point occurrence with buffers area (Table 5F4-16). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 5 and 12 percent of the suitable habitat of bat species.

The effects intensity aggregated for all activities with avoidance measures on each bat species indicates only a minimal area has complete elimination of point occurrence sites for these species, while the majority of the effects are in moderate and high-intensity categories (0.05 to 0.99; Table 5F4-17). Avoidance measures are benefiting these bat species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing points of occurrence. Future high-intensity effects will have a relatively greater impact on al six bat species compared to current effects.

1.1.1.5 Minimization

All potential effects (with minimization measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and no current or future activity meets this criteria (Table 5F4-18). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 5 and 13 percent of the occupied sites of bat species.

The effects intensity aggregated for all activities with minimization measures on each bat species indicates only a minimal area has complete elimination of point occurrence sites for these species, while the majority of the effects are in moderate and high-intensity categories (0.05 to 0.99; Table 5F4-19). Minimization measures are conferring a small benefit to the bat species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

1.1.1.6 Mitigation

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and no current or future activities meet this criteria (Table 5F4-20). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 5 and 13 percent of the occupied sites of bat species.

The effects intensity aggregated for all activities with mitigation measures on each bat species indicates only a minimal area has complete elimination of point occurrences of these species,

while the majority of the effects are in moderate and high-intensity categories (0.05 to 0.99; Table 5F4-21). Mitigation measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing points of occurrence.

QUALITATIVE ANALYSIS

The results of the nature serve analysis by species is contained in Tables 5F4-22 and 5F4-28.

Ranking of Magnitude of Potential Effects

Species: Pale Townsend's Big-eared Bat (*Corynorhinus townsendii pallescens*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Disturbance/Harassmen	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	X	X	O	X	F	O	O	X	X	O	X	O	X				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	X	O	X	O				
Temporary destruction/displacemen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil compaction	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil erosion	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Debris depositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Introduction of non-native plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTLg	Lg	TTLg	Lg	TTLg	Lg	Lc	Lc	TTL	L	TTL	L	TTLa	La	TTLg	Lg	TTLg	Lg	TTLa	La	TTL	L	TTLa	Lad	TTL	Lg	Hb	Hb	TR	La	Nd	N	N	Ma	Le	TTLf	Mf	TTLf	Mf				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect on roost; O = absence of effect
a = Could be roosting in a dead tree
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c= could cause disturbance when within 1/4-mile of a roost
d = Modification or loss of surface water at springs
e = effects by pets or people to possible roots in private land
f = bat may roost or forage in and around buildings
g= could cause disturbance when within 1/8-mile of a roost

Species: Allen's Lappet-browed Bat (*Idionycteris phyllotis*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Disturbance/Harassmen	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	X	X	O	X	O	O	O	X	X	O	X	O	X				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	X	O	X	O				
Temporary destruction/displacemen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil compaction	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil erosion	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Debris depositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litter	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Introduction of non-native plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTLg	Lg	TTLg	Lg	TTLc	Lc	Lc	Lc	TTL	L	TTL	L	TTLa	La	TTLg	Lg	TTLg	Lg	TTLa	La	TTL	L	TTLad	Lad	TTLg	Lg	Hb	Hb	TR	La	Nd	N	N	Ha	Le	TTLf	Mf	TTLf	Mf				

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g= could cause disturbance when within 1/8-mile of a roost

Species: Western Small-footed Myotis (*Myotis ciliolabrum*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Disturbance/Harassmen	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	X	X	O	X	O	O	O	X	X	O	X	O	X				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	X	O	X	O				
Temporary destruction/displacemen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil compaction	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil erosion	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Debris depositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litter	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Introduction of non-native plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTLg	Lg	TTLg	Lg	TTLg	Lg	Lc	Lc	TTL	L	TTL	L	TTLa	La	TTLg	Lg	TTLg	Lg	TTLa	La	TTL	L	TTLa	La	TTLg	Lg	Hb	Hb	TR	La	Nd	N	N	Ma	Le	TTLf	Mf	TTLf	Mf				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect on roost; O = absence of effect
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d = Modification or loss of surface water at springs
e = effects by pets or people to possible roots in private land
f = bat may roost or forage in and around buildings
g= could cause disturbance when within 1/8-mile of a roost

Species: Long-eared Myotis (*Myotis evotis*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O			
Injury (trampling/crushing/picking	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O			
Disturbance/Harassmen	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	X	X	O	X	F	O	O	X	X	O	X	O	X			
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O			
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O			
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O			
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O			
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	X	O	X	O			
Temporary destruction/displacemen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O			
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Habitat degradation																																										
Soil impacts	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Soil compaction	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Soil erosion	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Debris depositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Pollution/Litter	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O			
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O			
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O			
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Introduction of non-native plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O			
Other Mechanisms																																										
Assigned Effect Index Valu	TTLg	Lg	TTLg	Lg	TTLc	Lc	Lc	Lc	TTL	L	TTL	L	TTLa	La	TTLg	Lg	TTLg	Lg	TTLa	La	TTL	L	TTLad	Lad	TTLg	Lg	Hb	Hb	TR	La	Nd	N	N	Ha	Le	TTLf	Mf	TTLf	Mf				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect on roost; O = absence of effect
a = Could be roosting in a dead tree
b = Roost disturbance
c= could cause disturbance when within 1/4-mile of a roost
d = Modification or loss of surface water at springs
e = effects by pets or people to possible roots in private land
f = bat may roost or forage in and around buildings
g= could cause disturbance when within 1/8-mile of a roost

Species: Fringed Myotis (*Myotis thysanodes*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Disturbance/Harassmen	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	X	X	O	X	O	O	O	X	X	O	X	O	X				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	X	O	X	O				
Temporary destruction/displacemen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil compaction	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil erosion	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Debris depositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litter	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Introduction of non-native plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTLg	Lg	TTLg	Lg	TTLg	Lg	Lc	Lc	TTL	L	TTL	L	TTLa	La	TTLg	Lg	TTLg	Lg	TTLa	La	TTL	L	TTLa	Lad	TTLg	Lg	Hb	Hb	TR	La	Nd	N	N	Ma	Le	TTLf	Mf	TTLf	Mf				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect on roost; O = absence of effect
a = Could be roosting in a dead tree
b = Roost disturbance
c= could cause disturbance when within 1/4-mile of a roost
d = Modification or loss of surface water at springs
e = effects by pets or people to possible roots in private land
f = bat may roost or forage in and around buildings
g= could cause disturbance when within 1/8-mile of a roost

Species: Long-legged Myotis (*Myotis volans*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	X	O	O	O	O				
Disturbance/Harassmen	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	X	X	O	X	F	O	O	X	X	O	X	O	X				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	X	O	X	O				
Temporary destruction/displacemen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil compaction	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil erosion	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Debris depositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litter	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O	O	O	O	O	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Introduction of non-native plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTLg	Lg	TTLg	Lg	TTLc	Lc	Lc	Lc	TTL	L	TTL	L	TTLa	La	TTLg	Lg	TTLg	Lg	TTLa	La	TTL	L	TTLad	Lad	TTLg	Lg	Hb	Hb	TR	La	Nd	N	N	Ha	Le	TTLf	Mf	TTLf	Mf				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect on roost; O = absence of effect
a = Could be roosting in a dead tree
b = Roost disturbance
c= could cause disturbance when within 1/4-mile of a roost
d = Modification or loss of surface water at springs
e = effects by pets or people to possible roots in private land
f = bat may roost or forage in and around buildings
g= could cause disturbance when within 1/8-mile of a roost

Value of Conservation Measures

Species

Pale Townsend's Big-Eared Ba

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Cave/Tunnel	M	N/A	M	M	
CUA AOI	M	N/A	M	M	
CUA Footprint	M	N/A	M	M	
Horses/Burros .25 - 1.0 mile from spring/stream	M	N/A	M	M	
Horses/Burros < .25 mile from spring/stream	M	N/A	M	M	
Horses/Burros > 1.0 mile from spring/stream	M	N/A	M	M	
Low Mileage System Trail AOI	M	N/A	M	M	
Low Mileage System Trail Footprint	M	N/A	M	M	
Motorized Trail (closed) AOI	M	N/A	M	M	
Motorized Trail (closed) Footprint	M	N/A	M	M	
Motorized Trail (open) AOI	M	N/A	M	M	
Motorized Trail (open) Footprint	M	N/A	M	M	
Non System Trail AOI	M	N/A	M	M	
Non System Trail Footprint	M	N/A	M	M	
Private Land	M	N/A	M	M	
Unpaved Road AOI	M	N/A	M	M	
Unpaved Road Footprint	M	N/A	M	M	
West Side PO Camping Footprint	M	N/A	M	M	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefi
NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Allen's Lappet-Browed Ba

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Cave/Tunnel	M	N/A	M	L	
CUA AOI	TR	N/A	TR	TR	
CUA Footprint	TR	N/A	TR	TR	
Horses/Burros .25 - 1.0 mile from spring/stream	TR	N/A	TR	TR	
Horses/Burros < .25 mile from spring/stream	TR	N/A	TR	TR	
Horses/Burros > 1.0 mile from spring/stream	TR	N/A	TR	TR	
Low Mileage System Trail AOI	TR	N/A	TR	TR	
Low Mileage System Trail Footprint	TR	N/A	TR	TR	
Motorized Trail (closed) AOI	TR	N/A	TR	TR	
Motorized Trail (closed) Footprint	TR	N/A	TR	TR	
Motorized Trail (open) AOI	TR	N/A	TR	TR	
Motorized Trail (open) Footprint	TR	N/A	TR	TR	
Non System Trail AOI	TR	N/A	TR	TR	
Non System Trail Footprint	TR	N/A	TR	TR	
Private Land	TR	N/A	TR	TR	
Unpaved Road AOI	TR	N/A	TR	TR	
Unpaved Road Footprint	TR	N/A	TR	TR	
West Side PO Camping Footprint	TR	N/A	TR	TR	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefi
NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Western Small-Footed Myotis

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Cave/Tunnel	M	N/A	L	M	
CUA AOI	TR	N/A	TR	TR	
CUA Footprint	TR	N/A	TR	TR	
Horses/Burros .25 - 1.0 mile from spring/stream	TR	N/A	TR	TR	
Horses/Burros < .25 mile from spring/stream	TR	N/A	TR	TR	
Horses/Burros > 1.0 mile from spring/stream	TR	N/A	TR	TR	
Low Mileage System Trail AOI	TR	N/A	TR	TR	
Low Mileage System Trail Footprint	TR	N/A	TR	TR	
Motorized Trail (closed) AOI	TR	N/A	TR	TR	
Motorized Trail (closed) Footprint	TR	N/A	TR	TR	
Motorized Trail (open) AOI	TR	N/A	TR	TR	
Motorized Trail (open) Footprint	TR	N/A	TR	TR	
Non System Trail AOI	TR	N/A	TR	TR	
Non System Trail Footprint	TR	N/A	TR	TR	
Private Land	TR	N/A	TR	TR	
Unpaved Road AOI	TR	N/A	TR	TR	
Unpaved Road Footprint	TR	N/A	TR	TR	
West Side PO Camping Footprint	TR	N/A	TR	TR	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefi
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Long-Eared Myotis

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Cave/Tunnel	M	M	L	M	
CUA AOI	TR	TR	TR	TR	
CUA Footprint	TR	TR	TR	TR	
Firewood Gathering Area	M	TR	TR	TR	
Horses/Burros .25 - 1.0 mile from spring/stream	TR	NM	NM	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	NM	NM	
Horses/Burros > 1.0 mile from spring/stream	TR	NM	NM	NM	
Low Mileage System Trail AOI	TR	NM	NM	NM	
Low Mileage System Trail Footprint	TR	TR	TR	TR	
Motorized Trail (closed) AOI	TR	TR	TR	TR	
Motorized Trail (closed) Footprint	TR	TR	TR	TR	
Motorized Trail (open) AOI	TR	TR	TR	TR	
Motorized Trail (open) Footprint	TR	TR	TR	TR	
Non System Trail AOI	TR	TR	TR	TR	
Non System Trail Footprint	TR	TR	TR	TR	
Paved Road AOI	TR	TR	TR	TR	
Paved Road Footprint	TR	TR	TR	TR	
Picnic Area AOI	TR	TR	TR	TR	
Private Land	TR	TR	TR	TR	
Unpaved Road AOI	TR	TR	TR	TR	
Unpaved Road Footprint	TR	TR	TR	TR	
West Side PO Camping AOI	TR	TR	TR	TR	
West Side PO Camping Footprint	TR	TR	TR	TR	
Wildland Urban Interface	TR	TR	TR	TR	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefi
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Fringed Myotis

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Cave/Tunnel	M	N/A	L	M	
CUA AOI	TR	N/A	TR	TR	
CUA Footprint	TR	N/A	TR	TR	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	N/A	NM	NM	
Horses/Burros < .25 mile from spring/stream	NM	N/A	NM	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	N/A	NM	NM	
Low Mileage System Trail AOI	NM	N/A	NM	NM	
Low Mileage System Trail Footprint	TR	N/A	TR	TR	
Motorized Trail (closed) AOI	TR	N/A	TR	TR	
Motorized Trail (closed) Footprint	TR	N/A	TR	TR	
Motorized Trail (open) AOI	TR	N/A	TR	TR	
Motorized Trail (open) Footprint	TR	N/A	TR	TR	
Non System Trail AOI	TR	N/A	TR	TR	
Non System Trail Footprint	TR	N/A	TR	TR	
Private Land	TR	N/A	TR	TR	
Unpaved Road AOI	TR	N/A	TR	TR	
Unpaved Road Footprint	TR	N/A	TR	TR	
West Side PO Camping Footprint	TR	N/A	TR	TR	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefi
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Long-legged Myotis

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Cave/Tunnel	M	N/A	L	M	
CUA AOI	TR	N/A	TR	TR	
CUA Footprint	TR	N/A	TR	TR	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	N/A	NM	NM	
Horses/Burros < .25 mile from spring/stream	NM	N/A	NM	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	N/A	NM	NM	
Low Mileage System Trail AOI	NM	N/A	NM	NM	
Low Mileage System Trail Footprint	TR	N/A	TR	TR	
Motorized Trail (closed) AOI	TR	N/A	TR	TR	
Motorized Trail (closed) Footprint	TR	N/A	TR	TR	
Motorized Trail (open) AOI	TR	N/A	TR	TR	
Motorized Trail (open) Footprint	TR	N/A	TR	TR	
Non System Trail AOI	TR	N/A	TR	TR	
Non System Trail Footprint	TR	N/A	TR	TR	
Paved Road AOI	TR	N/A	TR	TR	
Paved Road Footprint	TR	N/A	TR	TR	
Picnic Area AOI	TR	N/A	TR	TR	
Private Land	TR	N/A	TR	TR	
Unpaved Road AOI	TR	N/A	TR	TR	
Unpaved Road Footprint	TR	N/A	TR	TR	
West Side PO Camping Footprint	TR	N/A	TR	TR	
Wildland Urban Interface	TR	N/A	TR	TR	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefi
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Summary Tables for Bats

Table BAT010
Summary of Individual Effect Acreage of Each Activity on Bat Species

	Allen's lappet-browed bat	*Fringed myotis*	*Long-eared myotis*	*Long-legged myotis*	*Pale Townsend's big-eared bat*	*Western small-footed myotis*
Activities						
Current Activities						
Area of Roost Site by Species (with 150' buffer)	*43.18*	*43.18*	*56.16*	*56.16*	*61.03*	*44.80*
Campground AOI						
Campground Footprint						
Cave/Tunnel	0.951	0.951	0.980	1.009	1.039	0.951
Climbing Area						
CUA AOI	4.328	4.328	4.328	5.163	5.163	4.328
CUA Footprint	0.220	0.220	0.220	0.247	0.247	0.220
Firewood Gathering Area			1.301			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI						
High Mileage System Trail Footprint						
Horses/Burros .25 - 1.0 mile from spring/stream	8.114	8.114	12.981	9.736	12.976	9.732
Horses/Burros < .25 mile from spring/stream	1.622	1.622	3.245	3.244	4.868	1.622
Horses/Burros > 1.0 mile from spring/stream	17.078	17.078	20.322	20.322	18.699	17.078
Low Mileage System Trail AOI	0.171	0.171	0.171	1.052	0.171	0.171
Low Mileage System Trail Footprint	0.001	0.001	0.001	0.018	0.001	0.001
Motorized Trail (closed) AOI	0.052	0.052	0.052	0.052	0.052	0.052
Motorized Trail (closed) Footprint	0.009	0.009	0.009	0.009	0.009	0.009
Motorized Trail (open) AOI	0.118	0.118	0.118	0.118	0.118	0.118
Motorized Trail (open) Footprint	0.015	0.015	0.015	0.015	0.015	0.015
Non System Trail AOI	0.021	0.021	0.021	0.021	0.021	0.021
Non System Trail Footprint	0.001	0.001	0.001	0.001	0.001	0.001
Paved Road AOI			0.252	0.252		
Paved Road Footprint			0.325	0.325		
Picnic Area AOI			0.097	0.097		
Picnic Area Footprint						
Private Land	2.150	2.150	4.389	5.394	6.007	3.768
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	1.021	1.021	1.236	1.289	1.144	1.144
Unpaved Road Footprint	0.622	0.622	0.759	0.780	0.685	0.685
Wildland Urban Interface			1.622	1.622		
All Current Activities Combined (Aggregated)	*28.62*	*28.62*	*38.47*	*37.66*	*38.41*	*30.24*
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI						
Future Ski Area Footprint						
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI			0.593			
West Side PO Camping Footprint	1.622	1.622	2.570	1.622	1.622	1.622
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	*30.24*	*30.24*	*41.63*	*39.28*	*40.03*	*31.86*

**** Bold text indicates activities with > 0.20 ac overlap with species area***

Table BAT011
Percent Activity Potential Effect by Species - Bats

	Allen's lappet-browed bat	*Fringed myotis*	*Long-eared myotis*	*Long-legged myotis*	*Pale Townsend's big-eared bat*	*Western small-footed myotis*
Activities						
Current Activities						
Area of Roost Site by Species (with 150' buffer)	*43.18*	*43.18*	*56.16*	*56.16*	*61.03*	*44.80*
Campground AOI						
Campground Footprint						
Cave/Tunnel	2%	2%	1%	1%	1%	2%
Climbing Area						
CUA AOI	3%	3%	2%	2%	2%	2%
CUA Footprint	1%	1%	0%	0%	0%	0%
Firewood Gathering Area			1%			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI						
High Mileage System Trail Footprint						
Horses/Burros .25 - 1.0 mile from spring/stream	0%	0%	0%	0%	0%	0%
Horses/Burros < .25 mile from spring/stream	0%	0%	0%	0%	0%	0%
Horses/Burros > 1.0 mile from spring/stream	0%	0%	0%	0%	0%	0%
Low Mileage System Trail AOI	0%	0%	0%	0%	0%	0%
Low Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) AOI	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) Footprint	0%	0%	0%	0%	0%	0%
Motorized Trail (open) AOI	0%	0%	0%	0%	0%	0%
Motorized Trail (open) Footprint	0%	0%	0%	0%	0%	0%
Non System Trail AOI	0%	0%	0%	0%	0%	0%
Non System Trail Footprint	0%	0%	0%	0%	0%	0%
Paved Road AOI			0%	0%		
Paved Road Footprint			1%	1%		
Picnic Area AOI			0%	0%		
Picnic Area Footprint						
Private Land	1%	1%	2%	2%	2%	2%
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	1%	1%	1%	1%	0%	1%
Unpaved Road Footprint	1%	1%	1%	1%	1%	2%
Wildland Urban Interface			2%	2%		
All Current Activities Combined (Aggregated)	7%	7%	9%	11%	7%	8%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI						
Future Ski Area Footprint						
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI			0%			
West Side PO Camping Footprint	4%	4%	5%	3%	3%	4%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	11%	11%	14%	13%	10%	12%

**** Bold text indicates activities with >= 5% Potential Effect***

Table BAT012
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Bats

	Allen's lappet-browed bat	*Fringed myotis*	*Long-eared myotis*	*Long-legged myotis*	*Pale Townsend's big-eared bat*	*Western small-footed myotis*
Activities						
Current Activities						
Area of Roost Site by Species (with 150' buffer)	*43.18*	*43.18*	*56.16*	*56.16*	*61.03*	*44.80*
Campground AOI						
Campground Footprint						
Cave/Tunnel	1%	1%	0%	1%	1%	1%
Climbing Area						
CUA AOI	2%	2%	2%	2%	1%	2%
CUA Footprint	0%	0%	0%	0%	0%	0%
Firewood Gathering Area			0%			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI						
High Mileage System Trail Footprint						
Horses/Burros .25 - 1.0 mile from spring/stream	0%	0%	0%	0%	0%	0%
Horses/Burros < .25 mile from spring/stream	0%	0%	0%	0%	0%	0%
Horses/Burros > 1.0 mile from spring/stream	0%	0%	0%	0%	0%	0%
Low Mileage System Trail AOI	0%	0%	0%	0%	0%	0%
Low Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) AOI	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) Footprint	0%	0%	0%	0%	0%	0%
Motorized Trail (open) AOI	0%	0%	0%	0%	0%	0%
Motorized Trail (open) Footprint	0%	0%	0%	0%	0%	0%
Non System Trail AOI	0%	0%	0%	0%	0%	0%
Non System Trail Footprint	0%	0%	0%	0%	0%	0%
Paved Road AOI			0%	0%		
Paved Road Footprint			1%	1%		
Picnic Area AOI			0%	0%		
Picnic Area Footprint						
Private Land	1%	1%	2%	2%	1%	2%
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	1%	1%	1%	1%	0%	1%
Unpaved Road Footprint	1%	1%	1%	1%	1%	1%
Wildland Urban Interface			2%	2%		
All Current Activities Combined (Aggregated)	6%	6%	7%	10%	4%	7%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI						
Future Ski Area Footprint						
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI			0%			
West Side PO Camping Footprint	4%	4%	4%	3%	1%	3%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	10%	10%	12%	12%	5%	10%

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table BAT013
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Bats

	Allen's lappet-browed bat	*Fringed myotis*	*Long-eared myotis*	*Long-legged myotis*	*Pale Townsend's big-eared bat*	*Western small-footed myotis*
Activities						
Current Activities						
Area of Roost Site by Species (with 150' buffer)	*43.18*	*43.18*	*56.16*	*56.16*	*61.03*	*44.80*
Campground AOI						
Campground Footprint						
Cave/Tunnel	1%	1%	1%	1%	1%	1%
Climbing Area						
CUA AOI	2%	2%	2%	2%	1%	2%
CUA Footprint	0%	0%	0%	0%	0%	0%
Firewood Gathering Area			1%			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI						
High Mileage System Trail Footprint						
Horses/Burros .25 - 1.0 mile from spring/stream	0%	0%	0%	0%	0%	0%
Horses/Burros < .25 mile from spring/stream	0%	0%	0%	0%	0%	0%
Horses/Burros > 1.0 mile from spring/stream	0%	0%	0%	0%	0%	0%
Low Mileage System Trail AOI	0%	0%	0%	0%	0%	0%
Low Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) AOI	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) Footprint	0%	0%	0%	0%	0%	0%
Motorized Trail (open) AOI	0%	0%	0%	0%	0%	0%
Motorized Trail (open) Footprint	0%	0%	0%	0%	0%	0%
Non System Trail AOI	0%	0%	0%	0%	0%	0%
Non System Trail Footprint	0%	0%	0%	0%	0%	0%
Paved Road AOI			0%	0%		
Paved Road Footprint			1%	1%		
Picnic Area AOI			0%	0%		
Picnic Area Footprint						
Private Land	1%	1%	2%	2%	1%	2%
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	1%	1%	1%	1%	0%	1%
Unpaved Road Footprint	1%	1%	1%	1%	1%	1%
Wildland Urban Interface			2%	2%		
All Current Activities Combined (Aggregated)	6%	7%	8%	10%	4%	7%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI						
Future Ski Area Footprint						
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI			0%			
West Side PO Camping Footprint	4%	4%	4%	3%	1%	3%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	10%	10%	13%	13%	5%	11%

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table BAT014
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Bats

	Allen's lappet-browed bat	*Fringed myotis*	*Long-eared myotis*	*Long-legged myotis*	*Pale Townsend's big-eared bat*	*Western small-footed myotis*
Activities						
Current Activities						
Area of Roost Site by Species (with 150' buffer)	*43.18*	*43.18*	*56.16*	*56.16*	*61.03*	*44.80*
Campground AOI						
Campground Footprint						
Cave/Tunnel	1%	1%	1%	1%	1%	1%
Climbing Area						
CUA AOI	2%	2%	2%	2%	1%	2%
CUA Footprint	0%	0%	0%	0%	0%	0%
Firewood Gathering Area			1%			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI						
High Mileage System Trail Footprint						
Horses/Burros .25 - 1.0 mile from spring/stream	0%	0%	0%	0%	0%	0%
Horses/Burros < .25 mile from spring/stream	0%	0%	0%	0%	0%	0%
Horses/Burros > 1.0 mile from spring/stream	0%	0%	0%	0%	0%	0%
Low Mileage System Trail AOI	0%	0%	0%	0%	0%	0%
Low Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) AOI	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) Footprint	0%	0%	0%	0%	0%	0%
Motorized Trail (open) AOI	0%	0%	0%	0%	0%	0%
Motorized Trail (open) Footprint	0%	0%	0%	0%	0%	0%
Non System Trail AOI	0%	0%	0%	0%	0%	0%
Non System Trail Footprint	0%	0%	0%	0%	0%	0%
Paved Road AOI			0%	0%		
Paved Road Footprint			1%	1%		
Picnic Area AOI			0%	0%		
Picnic Area Footprint						
Private Land	1%	1%	2%	2%	1%	2%
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	1%	1%	1%	1%	0%	1%
Unpaved Road Footprint	1%	1%	1%	1%	1%	1%
Wildland Urban Interface			2%	2%		
All Current Activities Combined (Aggregated)	7%	6%	8%	10%	4%	7%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI						
Future Ski Area Footprint						
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI			0%			
West Side PO Camping Footprint	4%	4%	4%	3%	1%	3%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggrega	10%	10%	13%	12%	5%	10%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table BAT030
Potential Effects on Bats for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Allen's lappet-browed bat*	*Fringed myotis*	*Long-eared myotis*	*Long-legged myotis*	*Pale Townsend's big-eared bat*	*Western small-footed myotis*
Current Activities - Potential Effects						
0.000	20.62	20.62	26.58	23.00	25.63	20.62
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	5.94	5.94	8.18	10.45	10.42	7.38
0.251 - 0.500	0.39	0.39	0.39	0.66	0.51	0.51
0.501 - 0.750	0.75	0.75	1.73	1.73	0.81	0.75
0.751 - 0.999	0.16	0.16	0.50	0.53	0.18	0.16
1.000	0.76	0.76	1.09	1.29	0.85	0.82
Current and Future Activities - Potential Effects						
0.000	20.62	20.62	26.58	23.00	25.63	20.62
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	5.94	5.94	8.42	10.45	10.42	7.38
0.251 - 0.500	0.39	0.39	0.74	0.66	0.51	0.51
0.501 - 0.750	0.75	0.75	1.73	1.73	0.81	0.75
0.751 - 0.999	0.16	0.16	0.50	0.53	0.18	0.16
1.000	2.38	2.38	3.66	2.91	2.47	2.45
Total Species Distribution (ac)	**43.2**	**43.2**	**56.2**	**56.2**	**61.0**	**44.8**

Table BAT031

Potential Effects with Avoidance Measures on Bats for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Allen's lappet-browed bat*	*Fringed myotis*	*Long-eared myotis*	*Long-legged myotis*	*Pale Townsend's big-eared bat*	*Western small-footed myotis*
Current Activities - Potential Effects with Avoidance Measures						
0.000	20.62	20.62	26.58	23.00	25.63	20.62
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	5.94	5.94	8.96	10.45	10.93	7.38
0.251 - 0.500	1.28	1.28	0.54	1.61	1.55	1.40
0.501 - 0.750	0.01	0.01	0.95	0.96	0.29	0.01
0.751 - 0.999	0.53	0.53	0.88	0.92	0.00	0.53
1.000	0.23	0.23	0.55	0.71	0.00	0.29
Current and Future Activities - Potential Effects with Avoidance Measures						
0.000	20.62	20.62	26.58	23.00	25.63	20.62
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	5.94	5.94	9.20	10.45	10.93	7.38
0.251 - 0.500	1.28	1.28	0.90	1.61	2.43	1.40
0.501 - 0.750	0.01	0.01	0.95	0.96	1.03	0.01
0.751 - 0.999	1.41	1.41	2.35	1.80	0.02	1.41
1.000	0.98	0.98	1.65	1.46	0.00	1.04
Total Species Distribution (ac)	**43.2**	**43.2**	**56.2**	**56.2**	**61.0**	**44.8**

Table BAT032
Potential Effects with Minimization Measures on Bats for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Allen's lappet-browed bat*	*Fringed myotis*	*Long-eared myotis*	*Long-legged myotis*	*Pale Townsend's big-eared bat*	*Western small-footed myotis*
Current Activities - Potential Effects with Minimization Measures						
0.000	20.62	20.62	26.58	23.00	25.63	20.62
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	5.94	5.94	8.18	10.45	10.93	7.38
0.251 - 0.500	1.28	0.39	0.39	0.66	1.55	0.51
0.501 - 0.750	0.01	0.89	1.87	1.90	0.29	0.89
0.751 - 0.999	0.53	0.55	0.89	0.94	0.00	0.55
1.000	0.23	0.23	0.55	0.71	0.00	0.29
Current and Future Activities - Potential Effects with Minimization Measures						
0.000	20.62	20.62	26.58	23.00	25.63	20.62
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	5.94	5.94	8.42	10.45	10.93	7.38
0.251 - 0.500	1.28	0.39	0.74	0.66	2.43	0.51
0.501 - 0.750	0.01	0.89	1.87	1.90	1.03	0.89
0.751 - 0.999	1.41	1.42	1.77	1.81	0.02	1.42
1.000	0.98	0.98	2.25	1.46	0.00	1.04
Total Species Distribution (ac)	**43.2**	**43.2**	**56.2**	**56.2**	**61.0**	**44.8**

Table BAT033

Potential Effects with Mitigation Measures on Bats for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Allen's lappet-browed bat*	*Fringed myotis*	*Long-eared myotis*	*Long-legged myotis*	*Pale Townsend's big-eared bat*	*Western small-footed myotis*
Current Activities - Potential Effects with Mitigation Measures						
0.000	20.62	20.62	26.58	23.00	25.63	20.62
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	5.94	5.94	8.18	10.45	10.93	7.38
0.251 - 0.500	0.39	1.28	1.31	1.61	1.55	1.40
0.501 - 0.750	0.89	0.01	0.96	0.96	0.29	0.01
0.751 - 0.999	0.55	0.53	0.88	0.92	0.00	0.53
1.000	0.23	0.23	0.55	0.71	0.00	0.29
Current and Future Activities - Potential Effects with Mitigation Measures						
0.000	20.62	20.62	26.58	23.00	25.63	20.62
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	5.94	5.94	8.42	10.45	10.93	7.38
0.251 - 0.500	0.39	1.28	1.66	1.61	2.43	1.40
0.501 - 0.750	0.89	0.01	0.96	0.96	1.03	0.01
0.751 - 0.999	1.42	1.41	1.76	1.80	0.02	1.41
1.000	0.98	0.98	2.25	1.46	0.00	1.04
Total Species Distribution (ac)	**43.2**	**43.2**	**56.2**	**56.2**	**61.0**	**44.8**

Conservation Status of Bats

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			Population Numbers and Areas of Occurrence				Population Trends	Threats, Protection, and Management			
Allen's big-eared bat (*Idionycteris phyllotis*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5 (2)	High	U	U	Stable	Low	Moderate	High	
Current Condition Spring Mountains				1-5 (3)	High	U	U	Stable	Low	Moderate	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	21-80 (70)	U	100,101-1,000,000	U	Stable	Moderate	U	High	Low
Comments	Environmental specificity due to species moderate need for caves, mines and rock crevices; no. of sites in reference condition based on Ramsey 2007; no. of sites in current condition based on NNHP where 3 of 11 of Nevada sitings on NRA and in low elevation Mojave desert scrub; known area of occupied habitat in Spring Mountains is unknown because there are no known roost sites; threats in the Spring Mountains mostly based on effects to roosting sites (largely, increased caving activity), however NRA actively pursuing protection of mines and caves; information for current condition rangewide based on information in NatureServe											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Fringed myotis (*Myotis thysanodes*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5 (4)	High	U	U	Stable	Low	Low	High	
Current Condition Spring Mountains				6-20 (11)	High	U	U	Stable	Low	Low	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	81-300 (100+)	High	100,101-1,000,000	U	Moderate decline	Moderate	Low	High	Low
Comments	Environmental specificity is due to moderate need for caves and mines; known area of occupied habitat for Spring Mountains is unknown since there are no known roost sites; Spring Mountains threats mostly based on effects to roosting sites (largely, increased caving activity), however NRA actively pursuing protection of mines and caves; information for current condition rangewide based on information in NatureServe											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Long-eared myotis (*Myotis evotis*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (8)	High	U	5-10 (8)	Stable	Low	Low	High	
Current Condition Spring Mountains				6-20 (8)	High	U	5-10 (8)	Stable	Low	Low	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	81-300 (100+)	U	100,101-1,000,000	U	Stable	Low	Low	High	Low
Comments	Environmental specificity due to moderate need for caves and mines; no. of sites in current condition based on NNHP (8) (58 sightings on NRA from 1929 to 2006); known area of occupied habitat based on 8 historical and current roost sites at approximately 1 acre per roost site (determination of foraging range for each roost site unknown); Spring Mountains threats mostly based on effects to roosting sites (largely, increased caving activity), however NRA actively pursuing protection of mines and caves; information for current condition rangewide based on information in NatureServe											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Long-legged myotis (*Myotis volans*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (6)	High	U	U	Stable	Low	Low	High	
Current Condition Spring Mountains				6-20 (10)	High	U	5-10 (6)	Stable	Low	Low	High	Low
Current Condition Rangewide	Wide-ranging	Broad	Moderately vulnerable	81-300 (240)	U	101,101-1,000,000	U	Stable	Low	Low	High	Low
Comments	Environmental specificity categorized as broad because species is not solely dependent on caves and mines; no. of sites in reference condition based on Ramsey (1997); known area of occupied habitat based on 6 known roost sites at approximately 1 acre per roost site (determination of foraging range for each roost site unknown); Spring Mountains threats mostly based on effects to roosting sites (largely, increased caving activity), however NRA actively pursuing protection of mines and caves; information for current condition rangewide based on information in NatureServe											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Pale Townsend's big-eared bat (*Corynorhinus townsendii pallescens*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (6)	U	U	U	Stable	Low	Low	High	
Current Condition Spring Mountains				6-20 (11)	Moderate	U	10-50 (11)	Stable	Low	Low	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	>300	U	2,500-10,000	U	Stable	Moderate	Low	High	Low
Comments	Environmental specificity is based on moderate need for caves and mines; known area of occupied habitat for current condition ia based on known roost sites at approximately 1 acre per roost site (determination of foraging range for each roost site unknown); population trend for current condition is best professional judgment which indicates that threats from caving have increased at roost sites for species, but effect to species population trend is unknown; Threats mostly based on effects to roosting sites (mostly increased caving activity) however NRA actively pursuing protection of mines and caves; information for current condition rangewide based on information in NatureServe at the species (*C. townsendii*) level as subspecies information for *pallescens* was not available											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Silver-haired bat (*Lasionycteris noctivagans*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5 (1)	High	U	U	Stable	Low	Moderate	High	
Current Condition Spring Mountains				1-5 (3)	High	U	U	Stable	Low	Moderate	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	U	U	100,101-1,000,000	U	Stable	Low	Low	High	Low
Comments	Species is widely distributed in Nevada in conifer forests at elevations below 9,000 feet with limited and scattered occurrences in NRA as a migratory species; no. of known sites in reference and current condition in Spring Mountains based on NNHP; no roost sites documented in NRA, therefore, area of occupied habitat is unknown; information for current condition rangewide based on information in NatureServe											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Western small-footed myotis (*Myotis ciliolabrum*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5 (4)	High	U	<1	Stable	Low	Low	High	
Current Condition Spring Mountains				6-20 (8)	High	U	<1	Stable	Low	Low	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	81-300	U	U	U	U	Moderate	Low	High	Low
Comments	Environmental specificity is due to moderate need for caves and mines; no. of sites in current condition for Spring Mountains based on NNHP (8) however O'Farrell (2002) documented 18 sites (53 sightings on NRA from 1939 to 2006); known area of occupied habitat based on 1 known roost site at approximately 1 acre per roost site (determination of foraging range for each roost site unknown) although surveys of roost sites for species is limited; threats in the Spring Mountains mostly based on effects to roosting sites (largely increased caving activity), however NRA activel pursuing protection of mines and caves; information for current condition rangewide based on information in NatureServe											

APPENDIX 5F-5

Mammal Species (Rodents)

1.1 PALMER'S CHIPMUNK

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

1.1.1.2 Point Occurrence Data

The point occurrence data (with 0.1 acre buffer per observation) overlap with current and future activities for Palmer's Chipmunk was 7.2 acres. Four current and no future activities have greater than 1.0 acres of overlap. The four current activities are the Campground Footprint, Picnic Area Footprint, Private Land, and the Wildland Urban Interface. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities accounted for 7.0 acres of the overlap, while future activities are only 0.2 acres.

1.1.1.3 Suitable Habitat Data

The habitat suitability overlap with current and future activities for each species summed to 35,859 acres per species for the Palmer's Chipmunk. Values of overlap of an activity on a species that exceeded 500 acres are noteworthy, and four current and no future activity meets this criteria. The current activities are the two Horses/burros categories, Private Land, and the Wildlife Urban Interface. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities of Horses/burros with Palmer's Chipmunk accounts for most of the overlap, while future activities are anticipated to overlap a low proportion of suitable habitat. The Ski Area and West Side PO Camping Footprints account for the majority of planned overlap with the Chipmunk, while other future activities are expected to be relatively small.

1.1.1.4 Potential Effects

The analysis of potential effects on Palmer's Chipmunk relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Table 5F5-1) The majority of activities have a high (H) to total (TTL) impact on these plant species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area.

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species.

1.1.1.5 Point Occurrence Data

The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Tables 5F5-2 (note - previous PCPO10) and 5F5-3 (previous

PCPO11)**)**. The aggregated current and future activities' potential effects are estimated to impact 50 percent of the occupied sites of the Palmer's Chipmunk. All potential effects equal to or greater than five percent are noteworthy, and four current and no future activities meet this criteria. The current activities are from the Campground Footprint, Paved Road Footprint, Picnic Area, and Wildland Urban Interface.

The current activities account for 48.1 percent of the potential effects on the Palmer's Chipmunk, while future activity will affect only less than 2 percent (Tables 5F5-2 and 5F5-3).

The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category as it corresponds to the species figures (Table 5F5-4). Note that a quarter of the Palmer's Chipmunk's distribution in the SMNRA is being completely affected by current activities, meaning that approximately 3 acres will be completely unsuitable for maintained presence of the Chipmunk. Future activities will cause complete elimination of a small area within the Chipmunk's distribution.

1.1.1.6 Suitable Habitat Data

The percentage potential effect of each activity on suitable habitat for each species was calculated and summarized (Tables 5F5-5 (note - previous PCSH10) and 5F5-6 (previous PCSH11). The aggregated current and future activities' potential effects are estimated to impact 7.4 percent of the occupied sites of the Palmer's Chipmunk. All potential effects equal to or greater than one percent are noteworthy, and two current and no future activities meet this criteria. The current activities effects are from the Horse/burros .25 – 1 mile from spring/stream and the Wildland Urban Interface categories.

Current activities account for the majority of the potential effects on Palmer's Chipmunk, while future effects are minimal (Tables 5F5-5 and 5F5-6).

Other locations with activity effects do not have suitable habitat present for these species. The aggregated potential effects intensity index for the Chipmunk provides the acreage of geographic area that falls within each effects index category as it corresponds to the figure (Table 5F5-7). Note that the majority of the potential effects are partial (less than 1.0) and degrade habitat within an activity area, although a significant acreage is currently and will be made completely unsuitable for the Palmer's Chipmunk (values of 1.0).

1.1.1.7 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on Palmer's chipmunk (Table 5F5-8). The three categories of conservation measures are avoidance, minimization, and mitigation. In order to determine the benefit of conservation measures, the potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures.

1.1.1.8 Avoidance

POINT OCCURRENCE DATA

Three current activities with avoidance measures have greater than a five percent potential effect on the Palmer's Chipmunk, while no future activity has an effect greater than 5 percent (Table 5F5-9). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact 40.8 percent of the point occurrence locations (with buffers) of the Chipmunk.

The effects intensity aggregated for all activities with avoidance measures on the Palmer's Chipmunk will shift the current activity effects in large part to lower effect intensity categories, although the majority of the effects are still in moderate to high intensity categories (0.50 – 1.0; Table 5F5-10). Avoidance measures are conferring a reduction in effect intensity on Chipmunk habitat. Future effects will have a small but high intensity effect on the Chipmunk.

Potential Habitat Data

One current and no future activities with avoidance measures affected more than one percent of the suitable habitat (Table 5F5-11). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact 5.8 percent of the suitable habitat of Palmer's Chipmunk.

The effects intensity aggregated for all activities with avoidance measures on Palmer's Chipmunk indicates only a minimal area has complete elimination of suitable habitat, while the majority of the effects are in low intensity categories (less than 0.26) and moderate intensity category (0.51-0.75); Table 5F5-12). Avoidance measures are having a noted effect toward reducing the effects of current and future activities, whereby most of the acreage with an effects index value of 1.0 is reduced.

1.1.1.9 Minimization

POINT OCCURRENCE DATA

All potential effects (with minimization measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and four of the current activities and no future activity meet this criteria (Table 5F5-13). The current activities are the Campground Footprint, Paved Road Footprint, Picnic Area Footprint, and Wildland Urban Interface. The aggregated current and future activities' potential effects with minimization measures are estimated to impact 48.3 percent of the occupied sites of the Palmer's Chipmunk.

The effects intensity aggregated for all activities with minimization measures on Palmer's Chipmunk indicates that a large area has complete elimination of point occurrence locations, with most effects being from current activities (Table 5F5-14). Minimization measures are conferring a small benefit to the Chipmunk by reducing the effect intensity.

POTENTIAL HABITAT DATA

All potential effects (with minimization measures) equal to or greater than one percent are highlighted with bold text, and two current and no future activities meet this criteria (Table 5F5-

15). The aggregated current and future activities' potential effects with minimization measures are estimated to impact 7.1 percent of suitable habitat for Palmer's Chipmunk. The two current activities are from Horses/burros .25-1.0 mile from spring/stream and Wildland Urban Interface.

The effects intensity aggregated for all activities with minimization measures on Palmer's Chipmunk indicates a reduced area has complete elimination of suitable habitat, while the majority of the effects are in lower intensity categories (less than 0.26; Table 5F5-16). Minimization measures are conferring a benefit to the Chipmunk by reducing the intensity of activity impact from higher categories to lower ones.

1.1.1.10 Mitigation

POINT OCCURRENCE DATA

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and the same four current activities as with minimization measures meet this criteria (Table 5F5-17). The aggregated current and future activities' potential effects with minimization measures are estimated to impact 48.3 percent of the occupied sites of Palmer's Chipmunk.

The effects intensity aggregated for all activities with mitigation measures on palmer's Chipmunk indicates that a large area has complete elimination of point occurrence locations, with most effects being from current activities (Table 5F5-18). Mitigation measures are conferring a small benefit to the Chipmunk by reducing the effect intensity.

POTENTIAL HABITAT DATA

All potential effects (with mitigation measures) equal to or greater than one percent are highlighted with bold text, and the same activities as seen with minimization measures meet this criteria (Table 5F5-19). The aggregated current and future activities' potential effects with minimization measures are estimated to impact 7.1 percent of the suitable habitat for Palmer's Chipmunk.

The effects intensity aggregated for all activities with mitigation measures on Palmer's Chipmunk indicates only a reduced area has complete elimination of suitable habitat, while the majority of the effects are in lower intensity categories (less than 0.26; Table 5F5-20). As with minimization measures, mitigation is conferring a benefit to the Chipmunk by reducing the intensity of activity impact from higher categories to lower ones.

QUALITATIVE ANALYSIS

The results of the nature serve analysis by species is contained in Tables 5F5-21.

Ranking of Magnitude of Potential Effects

Species: Palmer's Chipmunk (*Neotamias palmeri*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	Xa	Xa	Xa	Xa	X	X	X	X	X	X	X	X	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	O	O	Xa	Xa	Xa	Xa	O	O	O	O	O	O	O	O	Xa	O	Xa	O	O				
Injury (trampling/crushing/picking	Xa	Xa	Xa	Xa	X	X	X	X	X	X	X	X	Xa	Xa	Xa	Xa	Xa	Xa	Xa	Xa	O	O	Xa	Xa	Xa	Xa	O	O	O	O	O	O	O	O	Xa	O	Xa	O	O				
Disturbance/Harassmen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	X	O	O	X	O	O	O	X	O	O	O	O	O				
Interference with movements	X	O	O	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	O	O	O	X	O	O	O	O	O	O	O	O	O				
Increase of activity leve	X	X	X	X	O	O	O	O	O	O	O	O	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	O	O	X	O	O	O	X	O	O	O	O	O				
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habita	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	X	O	X	X	X	O	O	O	O	O	X	X	O	O	X	X	O	X	O				
Temporary destruction/displacemen	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	(Xb)	X	X	X	O	X	X	O	X	O	X				
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	X	X	X	O	O	O	O	O	O	O				
Soil compaction	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	Xb	O	O	(Xb)	Xb	Xb	Xb	O	O	O	O	O	O	O				
Soil erosion	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Debris depositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litter	Xc	Xc	Xc	Xc	Xc	Xc	O	O	O	O	O	O	O	O	Xc	Xc	Xc	Xc	Xc	Xc	O	O	Xc	Xc	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	X	O	O	O	O	O	X	X	X	X				
Edge effects	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	X	O	O	O	O	O	X	X	X	X				
Micro-habitat modifications	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	Xd	O	O	Xd	Xd	Xd	Xd	O	O	O	Xd	O	O	O	X	O	O	O	O	O				
Structural modification of habita	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	X	O	O	O	X	O	O	O	O	O				
Structural habitat change	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	O	X	O	O	O	X	O	O	O	O	O				
Loss of vegetation groundcove	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O				
Introduction of non-native plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Valu	TTLe	Me	TTL	Le	TTL	He	L	Le	TTL	H	TTL	H	He	Me	TTL	Me	TTL	Le	He	Me	TTL	M	TTLe	Le	TTL	Le	L	L	L	H	L	L	TR	Hf	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = death or injury resulting from pets
b = could result in loss of or damage to burrow sites
c = removal of cover such as downed logs or large rocks
d = ingestion of unhealthy litter
e = this species is likely negatively affected by recreation, both on and off trails
f = removes/degrades habitat for this species
g = results in an increased chance for large, hot fires that would consume habitat

Value of Conservation Measures

Species

Palmer's Chipmunk

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	NM	TR	TR	
CUA Footprint	L	NM	TR	TR	
Campground AOI	L	NM	TR	TR	
Campground Footprint	L	NM	TR	TR	
Cave/Tunnel	L	NM	TR	TR	
Climbing Area	L	NM	TR	TR	
FS Structure AOI	L	NM	TR	TR	
FS Structure Footprint	L	NM	TR	TR	
Firewood Gathering Area	L	NM	TR	TR	
High Mileage System Trail AOI	L	NM	TR	TR	
High Mileage System Trail Footprint	L	NM	TR	TR	
Horses/Burros .25 - 1.0 mile from spring/stream	L	NM	TR	TR	
Horses/Burros < .25 mile from spring/stream	L	NM	TR	TR	
Horses/Burros > 1.0 mile from spring/stream	L	NM	TR	TR	
Low Mileage System Trail AOI	L	NM	TR	TR	
Low Mileage System Trail Footprint	L	NM	TR	TR	
Motorized Trail (closed) AOI	L	NM	TR	TR	
Motorized Trail (closed) Footprint	L	NM	TR	TR	
Motorized Trail (open) AOI	L	NM	TR	TR	
Motorized Trail (open) Footprint	L	NM	TR	TR	
Non System Trail AOI	L	NM	TR	TR	
Non System Trail Footprint	L	NM	TR	TR	
PVT Building AOI	L	NM	TR	TR	
PVT Building Footprint	L	NM	TR	TR	
Paved Road AOI	L	NM	TR	TR	
Paved Road Footprint	L	NM	TR	TR	
Picnic Area AOI	L	NM	TR	TR	
Picnic Area Footprint	L	NM	TR	TR	
Private Land	L	NM	TR	TR	
Ski Area AOI	L	NM	TR	TR	
Ski Area Footprint	L	NM	TR	TR	
Snowplay Area	L	NM	TR	TR	
Trailhead in Developed Canyon AOI	L	NM	TR	TR	
Trailhead in Developed Canyon Footprint	L	NM	TR	TR	
Trailhead out of Developed Canyon AOI	L	NM	TR	TR	
Trailhead out of Developed Canyon Footprint	L	NM	TR	TR	
Unpaved Road AOI	L	NM	TR	TR	
Unpaved Road Footprint	L	NM	TR	TR	
Wildland Urban Interface	L	NM	TR	TR	
Future Campground AOI	L	NM	TR	TR	
Future Campground Footprint	L	NM	TR	TR	
Future EEA AOI	L	NM	TR	TR	
Future EEA Footprint	L	NM	TR	TR	
Future Foot Bridge AOI	L	NM	TR	TR	
Future Foot Bridge Footprint	L	NM	TR	TR	
Future High Mileage System Trail AOI	L	NM	TR	TR	
Future High Mileage System Trail Footprint	L	NM	TR	TR	
Future Low Mileage System Trail AOI	L	NM	TR	TR	
Future Ski Area AOI	L	NM	TR	TR	
Future Ski Area Footprint	L	NM	TR	TR	
West Side PO Camping AOI	L	NM	TR	TR	
West Side PO Camping Footprint	L	NM	TR	TR	
West Side PO Minor Trailhead AOI	L	NM	TR	TR	
West Side PO Minor Trailhead Footprint	L	NM	TR	TR	
West Side PO Motorized Trails AOI	L	NM	TR	TR	
West Side PO Motorized Trails Footprint	L	NM	TR	TR	
West Side PO Non Motorized Trails AOI	L	NM	TR	TR	
West Side PO Non Motorized Trails Footprint	L	NM	TR	TR	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefi
NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Summary Tables

Table PCPO10
Summary of Individual Activity Effect Acreage on Point Occurrence Data of Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Site Occurance Area by Species (0.1 acre buffer)	*12.8*
Campground AOI	0.01
Campground Footprint	**1.19**
Cave/Tunnel	
Climbing Area	
CUA AOI	
CUA Footprint	
Firewood Gathering Area	0.10
FS Structure AOI	0.14
FS Structure Footprint	0.06
High Mileage System Trail AOI	0.03
High Mileage System Trail Footprint	0.00
Horses/Burros .25 - 1.0 mile from spring/stream	0.10
Horses/Burros < .25 mile from spring/stream	
Horses/Burros > 1.0 mile from spring/stream	
Low Mileage System Trail AOI	0.10
Low Mileage System Trail Footprint	
Motorized Trail (closed) AOI	
Motorized Trail (closed) Footprint	
Motorized Trail (open) AOI	
Motorized Trail (open) Footprint	
Non System Trail AOI	
Non System Trail Footprint	
Paved Road AOI	0.54
Paved Road Footprint	0.69
Picnic Area AOI	0.03
Picnic Area Footprint	**1.40**
Private Land	**2.39**
PVT Building AOI	
PVT Building Footprint	
Ski Area AOI	
Ski Area Footprint	
Snowplay Area	0.25
Trailhead in Developed Canyon AOI	
Trailhead in Developed Canyon Footprint	
Trailhead out of Developed Canyon AOI	
Trailhead out of Developed Canyon Footprint	
Unpaved Road AOI	0.34
Unpaved Road Footprint	0.21
Wildland Urban Interface	**6.01**
All Current Activities Combined (Aggregated)	*7.0*
Future Activities	
Future Campground AOI	0.04
Future Campground Footprint	0.16
Future EEA AOI	
Future EEA Footprint	
Future Foot Bridge AOI	
Future Foot Bridge Footprint	
Future High Mileage System Trail AOI	
Future High Mileage System Trail Footprint	
Future Low Mileage System Trail AOI	0.04
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	
Future Ski Area Footprint	
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	
West Side PO Camping Footprint	
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	
West Side PO Minor Trailhead Footprint	
West Side PO Motorized Trails AOI	
West Side PO Motorized Trails Footprint	
West Side PO Non Motorized Trails AOI	
West Side PO Non Motorized Trails Footprint	
All Current and Future Activities Combined (Aggregated)	*7.2*

**** Bold text indicates activities with > 1.0 ac overlap with species area***

Table PCPO11
Percent Potential Effect of Activities on Point Occurrence Data by Species - Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Site Occurance Area by Species (0.1 acre buffer)	*12.84*
Campground AOI	0.0%
Campground Footprint	**6.9%**
Cave/Tunnel	
Climbing Area	
CUA AOI	
CUA Footprint	
Firewood Gathering Area	0.6%
FS Structure AOI	0.5%
FS Structure Footprint	0.5%
High Mileage System Trail AOI	0.1%
High Mileage System Trail Footprint	0.0%
Horses/Burros .25 - 1.0 mile from spring/stream	0.2%
Horses/Burros < .25 mile from spring/stream	
Horses/Burros > 1.0 mile from spring/stream	
Low Mileage System Trail AOI	0.4%
Low Mileage System Trail Footprint	
Motorized Trail (closed) AOI	
Motorized Trail (closed) Footprint	
Motorized Trail (open) AOI	
Motorized Trail (open) Footprint	
Non System Trail AOI	
Non System Trail Footprint	
Paved Road AOI	3.1%
Paved Road Footprint	**5.4%**
Picnic Area AOI	0.1%
Picnic Area Footprint	**8.2%**
Private Land	4.7%
PVT Building AOI	
PVT Building Footprint	
Ski Area AOI	
Ski Area Footprint	
Snowplay Area	0.5%
Trailhead in Developed Canyon AOI	
Trailhead in Developed Canyon Footprint	
Trailhead out of Developed Canyon AOI	
Trailhead out of Developed Canyon Footprint	
Unpaved Road AOI	2.0%
Unpaved Road Footprint	1.7%
Wildland Urban Interface	**35.1%**
All Current Activities Combined (Aggregated)	48.1%
Future Activities	
Future Campground AOI	0.1%
Future Campground Footprint	1.0%
Future EEA AOI	
Future EEA Footprint	
Future Foot Bridge AOI	
Future Foot Bridge Footprint	
Future High Mileage System Trail AOI	
Future High Mileage System Trail Footprint	
Future Low Mileage System Trail AOI	0.1%
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	
Future Ski Area Footprint	
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	
West Side PO Camping Footprint	
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	
West Side PO Minor Trailhead Footprint	
West Side PO Motorized Trails AOI	
West Side PO Motorized Trails Footprint	
West Side PO Non Motorized Trails AOI	
West Side PO Non Motorized Trails Footprint	
All Current and Future Activities Combined (Aggregated)	49.6%

**** Bold text indicates activities with > 5% Potential Effect***

Table PCPO12
Percent Potential Effect of Activities with Avoidance Measures on Point Occurrence Data by Species - Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Site Occurance Area by Species (0.1 acre buffer)	*12.84*
Campground AOI	0.0%
Campground Footprint	**5.2%**
Cave/Tunnel	
Climbing Area	
CUA AOI	
CUA Footprint	
Firewood Gathering Area	0.4%
FS Structure AOI	0.4%
FS Structure Footprint	0.3%
High Mileage System Trail AOI	0.0%
High Mileage System Trail Footprint	0.0%
Horses/Burros .25 - 1.0 mile from spring/stream	0.1%
Horses/Burros < .25 mile from spring/stream	
Horses/Burros > 1.0 mile from spring/stream	
Low Mileage System Trail AOI	0.3%
Low Mileage System Trail Footprint	
Motorized Trail (closed) AOI	
Motorized Trail (closed) Footprint	
Motorized Trail (open) AOI	
Motorized Trail (open) Footprint	
Non System Trail AOI	
Non System Trail Footprint	
Paved Road AOI	2.4%
Paved Road Footprint	4.0%
Picnic Area AOI	0.1%
Picnic Area Footprint	**6.2%**
Private Land	3.5%
PVT Building AOI	
PVT Building Footprint	
Ski Area AOI	
Ski Area Footprint	
Snowplay Area	0.4%
Trailhead in Developed Canyon AOI	
Trailhead in Developed Canyon Footprint	
Trailhead out of Developed Canyon AOI	
Trailhead out of Developed Canyon Footprint	
Unpaved Road AOI	1.5%
Unpaved Road Footprint	1.2%
Wildland Urban Interface	**26.3%**
All Current Activities Combined (Aggregated)	39.3%
Future Activities	
Future Campground AOI	0.1%
Future Campground Footprint	0.7%
Future EEA AOI	
Future EEA Footprint	
Future Foot Bridge AOI	
Future Foot Bridge Footprint	
Future High Mileage System Trail AOI	
Future High Mileage System Trail Footprint	
Future Low Mileage System Trail AOI	0.1%
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	
Future Ski Area Footprint	
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	
West Side PO Camping Footprint	
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	
West Side PO Minor Trailhead Footprint	
West Side PO Motorized Trails AOI	
West Side PO Motorized Trails Footprint	
West Side PO Non Motorized Trails AOI	
West Side PO Non Motorized Trails Footprint	
All Current and Future Activities Combined (Aggregated)	40.8%

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table PCPO13
Percent Potential Effect of Activities with Minimization Measures on Point Occurrence Data by Species - Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Site Occurance Area by Species (0.1 acre buffer)	*12.84*
Campground AOI	0.0%
Campground Footprint	**6.6%**
Cave/Tunnel	
Climbing Area	
CUA AOI	
CUA Footprint	
Firewood Gathering Area	0.6%
FS Structure AOI	0.5%
FS Structure Footprint	0.4%
High Mileage System Trail AOI	0.1%
High Mileage System Trail Footprint	0.0%
Horses/Burros .25 - 1.0 mile from spring/stream	0.2%
Horses/Burros < .25 mile from spring/stream	
Horses/Burros > 1.0 mile from spring/stream	
Low Mileage System Trail AOI	0.4%
Low Mileage System Trail Footprint	
Motorized Trail (closed) AOI	
Motorized Trail (closed) Footprint	
Motorized Trail (open) AOI	
Motorized Trail (open) Footprint	
Non System Trail AOI	
Non System Trail Footprint	
Paved Road AOI	3.0%
Paved Road Footprint	**5.1%**
Picnic Area AOI	0.1%
Picnic Area Footprint	**7.8%**
Private Land	4.4%
PVT Building AOI	
PVT Building Footprint	
Ski Area AOI	
Ski Area Footprint	
Snowplay Area	0.5%
Trailhead in Developed Canyon AOI	
Trailhead in Developed Canyon Footprint	
Trailhead out of Developed Canyon AOI	
Trailhead out of Developed Canyon Footprint	
Unpaved Road AOI	1.9%
Unpaved Road Footprint	1.6%
Wildland Urban Interface	**33.4%**
All Current Activities Combined (Aggregated)	46.7%
Future Activities	
Future Campground AOI	0.1%
Future Campground Footprint	0.9%
Future EEA AOI	
Future EEA Footprint	
Future Foot Bridge AOI	
Future Foot Bridge Footprint	
Future High Mileage System Trail AOI	
Future High Mileage System Trail Footprint	
Future Low Mileage System Trail AOI	0.1%
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	
Future Ski Area Footprint	
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	
West Side PO Camping Footprint	
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	
West Side PO Minor Trailhead Footprint	
West Side PO Motorized Trails AOI	
West Side PO Motorized Trails Footprint	
West Side PO Non Motorized Trails AOI	
West Side PO Non Motorized Trails Footprint	
All Current and Future Activities Combined (Aggregated)	48.3%

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table PCPO14
Percent Potential Effect of Activities with Mitigation Measures on Point Occurrence Data by Species - Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Site Occurance Area by Species (0.1 acre buffer)	*12.84*
Campground AOI	0.0%
Campground Footprint	**6.6%**
Cave/Tunnel	
Climbing Area	
CUA AOI	
CUA Footprint	
Firewood Gathering Area	0.6%
FS Structure AOI	0.5%
FS Structure Footprint	0.4%
High Mileage System Trail AOI	0.1%
High Mileage System Trail Footprint	0.0%
Horses/Burros .25 - 1.0 mile from spring/stream	0.2%
Horses/Burros < .25 mile from spring/stream	
Horses/Burros > 1.0 mile from spring/stream	
Low Mileage System Trail AOI	0.4%
Low Mileage System Trail Footprint	
Motorized Trail (closed) AOI	
Motorized Trail (closed) Footprint	
Motorized Trail (open) AOI	
Motorized Trail (open) Footprint	
Non System Trail AOI	
Non System Trail Footprint	
Paved Road AOI	3.0%
Paved Road Footprint	**5.1%**
Picnic Area AOI	0.1%
Picnic Area Footprint	**7.8%**
Private Land	4.4%
PVT Building AOI	
PVT Building Footprint	
Ski Area AOI	
Ski Area Footprint	
Snowplay Area	0.5%
Trailhead in Developed Canyon AOI	
Trailhead in Developed Canyon Footprint	
Trailhead out of Developed Canyon AOI	
Trailhead out of Developed Canyon Footprint	
Unpaved Road AOI	1.9%
Unpaved Road Footprint	1.6%
Wildland Urban Interface	**33.4%**
All Current Activities Combined (Aggregated)	46.7%
Future Activities	
Future Campground AOI	0.1%
Future Campground Footprint	0.9%
Future EEA AOI	
Future EEA Footprint	
Future Foot Bridge AOI	
Future Foot Bridge Footprint	
Future High Mileage System Trail AOI	
Future High Mileage System Trail Footprint	
Future Low Mileage System Trail AOI	0.1%
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	
Future Ski Area Footprint	
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	
West Side PO Camping Footprint	
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	
West Side PO Minor Trailhead Footprint	
West Side PO Motorized Trails AOI	
West Side PO Motorized Trails Footprint	
West Side PO Non Motorized Trails AOI	
West Side PO Non Motorized Trails Footprint	
All Current and Future Activities Combined (Aggregated)	48.3%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table PCPO30
Potential Effects on Palmer's Chipmunk for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects	
Effects Index	***Palmer's chipmunk***
0.000	0.00
0.001 - 0.050	0.00
0.051 - 0.250	0.23
0.251 - 0.500	0.10
0.501 - 0.750	1.25
0.751 - 0.999	2.35
1.000	3.07
Current and Future Activities Potential Effects	
0.000	0.00
0.001 - 0.050	0.00
0.051 - 0.250	0.23
0.251 - 0.500	0.10
0.501 - 0.750	1.25
0.751 - 0.999	2.35
1.000	3.27
Total Species Distribution (ac)	**12.8**

Table PCPO31
Potential Effects with Avoidance Measures on Palmer's Chipmunk for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects with Avoidance	
Effects Index	***Palmer's chipmunk***
0.000	0.00
0.001 - 0.050	0.00
0.051 - 0.250	0.23
0.251 - 0.500	0.10
0.501 - 0.750	3.98
0.751 - 0.999	1.71
1.000	0.98
Current and Future Activities Potential Effects with Avoidance	
0.000	0.00
0.001 - 0.050	0.00
0.051 - 0.250	0.23
0.251 - 0.500	0.10
0.501 - 0.750	3.98
0.751 - 0.999	1.71
1.000	1.18
Total Species Distribution (ac)	**12.84**

Table PCPO32
Potential Effects with Minimization Measures on Palmer's Chipmunk for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects with Minimization Measures	
Effects Index	***Palmer's chipmunk***
0.000	0.00
0.001 - 0.050	0.00
0.051 - 0.250	0.23
0.251 - 0.500	0.10
0.501 - 0.750	1.25
0.751 - 0.999	2.74
1.000	2.68

Current and Future Activities Potential Effects with Minimization Measures	
0.000	0.00
0.001 - 0.050	0.00
0.051 - 0.250	0.23
0.251 - 0.500	0.10
0.501 - 0.750	1.25
0.751 - 0.999	2.74
1.000	2.88
Total Species Distribution (ac)	**12.84**

Table PCPO33
Potential Effects with Mitigation Measures on Palmer's Chipmunk for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects with Mitigation	
Effects Index	***Palmer's chipmunk***
0.000	0.00
0.001 - 0.050	0.00
0.051 - 0.250	0.23
0.251 - 0.500	0.10
0.501 - 0.750	1.25
0.751 - 0.999	2.74
1.000	2.68
Current and Future Activities Potential Effects with Mitigation Measures	
0.000	0.00
0.001 - 0.050	0.00
0.051 - 0.250	0.23
0.251 - 0.500	0.10
0.501 - 0.750	1.25
0.751 - 0.999	2.74
1.000	2.88
Total Species Distribution (ac)	**12.8**

Table PCSH10
Summary of Individual Activity Effect Acreage on Suitable Habitat of Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Suitable Habitat Area (acres)	*35859*
Campground AOI	29.0
Campground Footprint	86.2
Cave/Tunnel	0.0
Climbing Area	0.1
CUA AOI	118.5
CUA Footprint	10.5
Firewood Gathering Area	182.9
FS Structure AOI	20.0
FS Structure Footprint	3.0
High Mileage System Trail AOI	57.9
High Mileage System Trail Footprint	3.9
Horses/Burros .25 - 1.0 mile from spring/stream	**1659.1**
Horses/Burros < .25 mile from spring/stream	207.3
Horses/Burros > 1.0 mile from spring/stream	**1826.3**
Low Mileage System Trail AOI	62.6
Low Mileage System Trail Footprint	1.1
Motorized Trail (closed) AOI	5.1
Motorized Trail (closed) Footprint	0.8
Motorized Trail (open) AOI	0.7
Motorized Trail (open) Footprint	0.1
Non System Trail AOI	42.1
Non System Trail Footprint	2.8
Paved Road AOI	80.8
Paved Road Footprint	106.0
Picnic Area AOI	13.7
Picnic Area Footprint	47.8
Private Land	**641.4**
PVT Building AOI	20.0
PVT Building Footprint	3.2
Ski Area AOI	56.0
Ski Area Footprint	58.2
Snowplay Area	27.3
Trailhead in Developed Canyon AOI	0.4
Trailhead in Developed Canyon Footprint	0.3
Trailhead out of Developed Canyon AOI	0.1
Trailhead out of Developed Canyon Footprint	0.1
Unpaved Road AOI	115.6
Unpaved Road Footprint	72.7
Wildland Urban Interface	**1367.3**
All Current Activities Combined (Aggregated)	*5983*
Future Activities	
Future Campground AOI	
Future Campground Footprint	
Future EEA AOI	1.7
Future EEA Footprint	2.9
Future Foot Bridge AOI	3.8
Future Foot Bridge Footprint	0.4
Future High Mileage System Trail AOI	4.2
Future High Mileage System Trail Footprint	0.3
Future Low Mileage System Trail AOI	
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	163.3
Future Ski Area Footprint	160.2
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	24.3
West Side PO Camping Footprint	208.8
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	1.9
West Side PO Minor Trailhead Footprint	23.6
West Side PO Motorized Trails AOI	0.7
West Side PO Motorized Trails Footprint	0.1
West Side PO Non Motorized Trails AOI	36.2
West Side PO Non Motorized Trails Footprint	2.4
All Current and Future Activities Combined (Aggregated)	*6616*

**** Bold text indicates activities with > 500 ac overlap with species area***

Table PCSH11
Percent Potential Effect of Activities on Suitable Habitat by Species - Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Suitable Habitat Area (acres)	*35859*
Campground AOI	0.04%
Campground Footprint	0.18%
Cave/Tunnel	0.00%
Climbing Area	0.00%
CUA AOI	0.08%
CUA Footprint	0.03%
Firewood Gathering Area	0.38%
FS Structure AOI	0.03%
FS Structure Footprint	0.01%
High Mileage System Trail AOI	0.04%
High Mileage System Trail Footprint	0.01%
Horses/Burros .25 - 1.0 mile from spring/stream	**1.16%**
Horses/Burros < .25 mile from spring/stream	0.14%
Horses/Burros > 1.0 mile from spring/stream	0.25%
Low Mileage System Trail AOI	0.09%
Low Mileage System Trail Footprint	0.00%
Motorized Trail (closed) AOI	0.00%
Motorized Trail (closed) Footprint	0.00%
Motorized Trail (open) AOI	0.00%
Motorized Trail (open) Footprint	0.00%
Non System Trail AOI	0.03%
Non System Trail Footprint	0.01%
Paved Road AOI	0.17%
Paved Road Footprint	0.30%
Picnic Area AOI	0.02%
Picnic Area Footprint	0.10%
Private Land	0.45%
PVT Building AOI	0.03%
PVT Building Footprint	0.01%
Ski Area AOI	0.08%
Ski Area Footprint	0.16%
Snowplay Area	0.02%
Trailhead in Developed Canyon AOI	0.00%
Trailhead in Developed Canyon Footprint	0.00%
Trailhead out of Developed Canyon AOI	0.00%
Trailhead out of Developed Canyon Footprint	0.00%
Unpaved Road AOI	0.24%
Unpaved Road Footprint	0.20%
Wildland Urban Interface	**2.86%**
All Current Activities Combined (Aggregated)	6.1%
Future Activities	
Future Campground AOI	
Future Campground Footprint	
Future EEA AOI	0.00%
Future EEA Footprint	0.01%
Future Foot Bridge AOI	0.01%
Future Foot Bridge Footprint	0.00%
Future High Mileage System Trail AOI	0.00%
Future High Mileage System Trail Footprint	0.00%
Future Low Mileage System Trail AOI	
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	0.23%
Future Ski Area Footprint	0.45%
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	0.03%
West Side PO Camping Footprint	0.44%
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	0.00%
West Side PO Minor Trailhead Footprint	0.07%
West Side PO Motorized Trails AOI	0.00%
West Side PO Motorized Trails Footprint	0.00%
West Side PO Non Motorized Trails AOI	0.03%
West Side PO Non Motorized Trails Footprint	0.01%
All Current and Future Activities Combined (Aggregated)	7.4%

**** Bold text indicates activities with >= 1% Potential Effect***

Table PCSH12
Percent Potential Effect of Activities with Avoidance Measures on Suitable Habitat by Species - Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Suitable Habitat Area (acres)	*35859*
Campground AOI	0.03%
Campground Footprint	0.14%
Cave/Tunnel	0.00%
Climbing Area	0.00%
CUA AOI	0.06%
CUA Footprint	0.02%
Firewood Gathering Area	0.29%
FS Structure AOI	0.02%
FS Structure Footprint	0.01%
High Mileage System Trail AOI	0.03%
High Mileage System Trail Footprint	0.01%
Horses/Burros .25 - 1.0 mile from spring/stream	0.87%
Horses/Burros < .25 mile from spring/stream	0.11%
Horses/Burros > 1.0 mile from spring/stream	0.19%
Low Mileage System Trail AOI	0.07%
Low Mileage System Trail Footprint	0.00%
Motorized Trail (closed) AOI	0.00%
Motorized Trail (closed) Footprint	0.00%
Motorized Trail (open) AOI	0.00%
Motorized Trail (open) Footprint	0.00%
Non System Trail AOI	0.02%
Non System Trail Footprint	0.01%
Paved Road AOI	0.13%
Paved Road Footprint	0.22%
Picnic Area AOI	0.01%
Picnic Area Footprint	0.08%
Private Land	0.34%
PVT Building AOI	0.02%
PVT Building Footprint	0.01%
Ski Area AOI	0.06%
Ski Area Footprint	0.12%
Snowplay Area	0.01%
Trailhead in Developed Canyon AOI	0.00%
Trailhead in Developed Canyon Footprint	0.00%
Trailhead out of Developed Canyon AOI	0.00%
Trailhead out of Developed Canyon Footprint	0.00%
Unpaved Road AOI	0.18%
Unpaved Road Footprint	0.15%
Wildland Urban Interface	**2.14%**
All Current Activities Combined (Aggregated)	4.8%
Future Activities	
Future Campground AOI	
Future Campground Footprint	
Future EEA AOI	0.00%
Future EEA Footprint	0.00%
Future Foot Bridge AOI	0.01%
Future Foot Bridge Footprint	0.00%
Future High Mileage System Trail AOI	0.00%
Future High Mileage System Trail Footprint	0.00%
Future Low Mileage System Trail AOI	
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	0.17%
Future Ski Area Footprint	0.33%
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	0.03%
West Side PO Camping Footprint	0.33%
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	0.00%
West Side PO Minor Trailhead Footprint	0.05%
West Side PO Motorized Trails AOI	0.00%
West Side PO Motorized Trails Footprint	0.00%
West Side PO Non Motorized Trails AOI	0.02%
West Side PO Non Motorized Trails Footprint	0.01%
All Current and Future Activities Combined (Aggregated)	5.8%

**** Bold text indicates activities with >= 1% Potential Effect with Avoidance Conservation Measures***

Table PCSH13
Percent Potential Effect of Activities with Minimization Measures on Suitable Habitat by Species - Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Suitable Habitat Area (acres)	*35859.02*
Campground AOI	0.04%
Campground Footprint	0.17%
Cave/Tunnel	0.00%
Climbing Area	0.00%
CUA AOI	0.08%
CUA Footprint	0.03%
Firewood Gathering Area	0.36%
FS Structure AOI	0.03%
FS Structure Footprint	0.01%
High Mileage System Trail AOI	0.04%
High Mileage System Trail Footprint	0.01%
Horses/Burros .25 - 1.0 mile from spring/stream	**1.10%**
Horses/Burros < .25 mile from spring/stream	0.14%
Horses/Burros > 1.0 mile from spring/stream	0.24%
Low Mileage System Trail AOI	0.08%
Low Mileage System Trail Footprint	0.00%
Motorized Trail (closed) AOI	0.00%
Motorized Trail (closed) Footprint	0.00%
Motorized Trail (open) AOI	0.00%
Motorized Trail (open) Footprint	0.00%
Non System Trail AOI	0.03%
Non System Trail Footprint	0.01%
Paved Road AOI	0.16%
Paved Road Footprint	0.28%
Picnic Area AOI	0.02%
Picnic Area Footprint	0.10%
Private Land	0.42%
PVT Building AOI	0.03%
PVT Building Footprint	0.01%
Ski Area AOI	0.07%
Ski Area Footprint	0.15%
Snowplay Area	0.02%
Trailhead in Developed Canyon AOI	0.00%
Trailhead in Developed Canyon Footprint	0.00%
Trailhead out of Developed Canyon AOI	0.00%
Trailhead out of Developed Canyon Footprint	0.00%
Unpaved Road AOI	0.23%
Unpaved Road Footprint	0.19%
Wildland Urban Interface	**2.72%**
All Current Activities Combined (Aggregated)	5.9%
Future Activities	
Future Campground AOI	
Future Campground Footprint	
Future EEA AOI	0.0%
Future EEA Footprint	0.0%
Future Foot Bridge AOI	0.0%
Future Foot Bridge Footprint	0.0%
Future High Mileage System Trail AOI	0.0%
Future High Mileage System Trail Footprint	0.0%
Future Low Mileage System Trail AOI	
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	0.2%
Future Ski Area Footprint	0.4%
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	0.0%
West Side PO Camping Footprint	0.4%
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	0.0%
West Side PO Minor Trailhead Footprint	0.1%
West Side PO Motorized Trails AOI	0.0%
West Side PO Motorized Trails Footprint	0.0%
West Side PO Non Motorized Trails AOI	0.0%
West Side PO Non Motorized Trails Footprint	0.0%
All Current and Future Activities Combined (Aggregated)	7.1%

**** Bold text indicates activities with >= 1% Potential Effect with Minimization Conservation Measures***

Table PCSH14
Percent Potential Effect of Activities with Mitigation Measures on Suitable Habitat by Species - Palmer's Chipmunk.

	Palmer's chipmunk
Activities	
Current Activities	
Suitable Habitat Area (acres)	*35859*
Campground AOI	0.04%
Campground Footprint	0.17%
Cave/Tunnel	0.00%
Climbing Area	0.00%
CUA AOI	0.08%
CUA Footprint	0.03%
Firewood Gathering Area	0.36%
FS Structure AOI	0.03%
FS Structure Footprint	0.01%
High Mileage System Trail AOI	0.04%
High Mileage System Trail Footprint	0.01%
Horses/Burros .25 - 1.0 mile from spring/stream	**1.10%**
Horses/Burros < .25 mile from spring/stream	0.14%
Horses/Burros > 1.0 mile from spring/stream	0.24%
Low Mileage System Trail AOI	0.08%
Low Mileage System Trail Footprint	0.00%
Motorized Trail (closed) AOI	0.00%
Motorized Trail (closed) Footprint	0.00%
Motorized Trail (open) AOI	0.00%
Motorized Trail (open) Footprint	0.00%
Non System Trail AOI	0.03%
Non System Trail Footprint	0.01%
Paved Road AOI	0.16%
Paved Road Footprint	0.28%
Picnic Area AOI	0.02%
Picnic Area Footprint	0.10%
Private Land	0.42%
PVT Building AOI	0.03%
PVT Building Footprint	0.01%
Ski Area AOI	0.07%
Ski Area Footprint	0.15%
Snowplay Area	0.02%
Trailhead in Developed Canyon AOI	0.00%
Trailhead in Developed Canyon Footprint	0.00%
Trailhead out of Developed Canyon AOI	0.00%
Trailhead out of Developed Canyon Footprint	0.00%
Unpaved Road AOI	0.23%
Unpaved Road Footprint	0.19%
Wildland Urban Interface	**2.72%**
All Current Activities Combined (Aggregated)	5.9%
Future Activities	
Future Campground AOI	
Future Campground Footprint	
Future EEA AOI	0.00%
Future EEA Footprint	0.01%
Future Foot Bridge AOI	0.01%
Future Foot Bridge Footprint	0.00%
Future High Mileage System Trail AOI	0.00%
Future High Mileage System Trail Footprint	0.00%
Future Low Mileage System Trail AOI	
Future Low Mileage System Trail Footprint	
Future Picnic AOI	
Future Picnic Area Footprint	
Future Ski Area AOI	0.22%
Future Ski Area Footprint	0.42%
Future Trailhead AOI	
Future Trailhead Footprint	
Future Visitor Center AOI	
Future Visitor Center Footprint	
West Side PO Camping AOI	0.03%
West Side PO Camping Footprint	0.41%
West Side PO Major Trailhead AOI	
West Side PO Major Trailhead Footprint	
West Side PO Minor Trailhead AOI	0.00%
West Side PO Minor Trailhead Footprint	0.06%
West Side PO Motorized Trails AOI	0.00%
West Side PO Motorized Trails Footprint	0.00%
West Side PO Non Motorized Trails AOI	0.02%
West Side PO Non Motorized Trails Footprint	0.01%
All Current and Future Activities Combined (Aggregated)	7.1%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table PCSH30
Potential Effects on Palmer's Chipmunk for Current Activities as well as Current and Future Activities, Suitable Habitat Data

Current Activities Potential Effects	
Effects Index	***Palmer's chipmunk***
0.000	0.0
0.001 - 0.050	1,803.6
0.051 - 0.250	2,325.7
0.251 - 0.500	122.6
0.501 - 0.750	879.6
0.751 - 0.999	326.9
1.000	525.1
Current and Future Activities Potential Effects	
0.000	0.0
0.001 - 0.050	1,803.6
0.051 - 0.250	2,348.6
0.251 - 0.500	319.3
0.501 - 0.750	1,088.5
0.751 - 0.999	333.6
1.000	722.4
Total Species Distribution (ac)	**35,859**

Table PCSH31
Potential Effects with Avoidance Measures on Palmer's Chipmunk for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Current Activities Potential Effects with Avoidance	
Effects Index	***Palmer's chipmunk***
0.000	0.0
0.001 - 0.050	1,803.6
0.051 - 0.250	2,326.3
0.251 - 0.500	123.6
0.501 - 0.750	1,374.8
0.751 - 0.999	200.5
1.000	154.7
Current and Future Activities Potential Effects with Avoidance	
0.000	0.0
0.001 - 0.050	1,803.6
0.051 - 0.250	2,354.2
0.251 - 0.500	320.5
0.501 - 0.750	1,764.2
0.751 - 0.999	213.5
1.000	159.9
Total Species Distribution (ac)	**35,859**

Table PCSH32
Potential Effects with Minimization Measures on Palmer's Chipmunk for Current Activities as well as Current and Future Activities, Suitable Habitat Data

Current Activities Potential Effects with Minimization	
Effects Index	***Palmer's chipmunk***
0.000	0.0
0.001 - 0.050	1,803.6
0.051 - 0.250	2,325.7
0.251 - 0.500	122.6
0.501 - 0.750	884.1
0.751 - 0.999	492.5
1.000	355.0
Current and Future Activities Potential Effects with Minimization	
0.000	0.0
0.001 - 0.050	1,803.6
0.051 - 0.250	2,348.6
0.251 - 0.500	321.4
0.501 - 0.750	1,092.3
0.751 - 0.999	680.8
1.000	369.3
Total Species Distribution (ac)	**35,859.0**

Table PCSH33
Potential Effects with Mitigation Measures on Palmer's Chipmunk for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Current Activities Potential Effects with Mitigation	
Effects Index	***Palmer's chipmunk***
0.000	0.0
0.001 - 0.050	1,803.6
0.051 - 0.250	2,325.7
0.251 - 0.500	122.6
0.501 - 0.750	884.1
0.751 - 0.999	492.5
1.000	355.0
Current and Future Activities Potential Effects with Mitigation	
0.000	0.0
0.001 - 0.050	1,803.6
0.051 - 0.250	2,348.6
0.251 - 0.500	321.4
0.501 - 0.750	1,092.3
0.751 - 0.999	680.8
1.000	369.3
Total Species Distribution (ac)	**35,859**

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			Population Numbers and Areas of Occurrence				Population Trends	Threats, Protection, and Management			
Palmer's chipmunk (*Neotamias palmeri*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (11)	High	51-250 (192)	U	U	Low	Low	Low	
Current Condition Spring Mountains				81-300 (96)	Moderate	51-250 (186)	U	Rapid decline	Low	Low	Low	Low
Current Condition Rangewide	SME	Moderate	Moderately vulnerable	81-300 (96)	Moderate	51-250 (186)	U	Rapid decline	Low	Low	Low	Low
Comments	Increase in no. of known sites likely attributed to increase in surveys; population trends based on density figures in species account											

APPENDIX 5F-6

Avian Species (Birds)

1.1 BIRDS

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

POINT OCCURRENCE DATA

The point occurrence data (with 0.1 acre buffer per observation for northern goshawk and 1.0 hectare buffer for flammulated owl) overlap with current and future activities for each species summed to between 0.70 and 28.44 acres per species for the birds. No current or future activity has an overlap of greater than 0.10 acres with the northern goshawk, although fifteen current activities and three future activities have an overlap of greater than 0.20 acres with the flammulated owl. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities overlapped with the majority of the point occurrence area (with buffers) of the northern goshawk, while no future activities overlapped with this species. Current activities overlapped with a relatively small amount of the point occurrence area (with buffers) of the flammulated owl, while very few future activities overlapped with this species.

POTENTIAL HABITAT DATA

The potential habitat overlap with current and future activities for each species summed to between 1662.57 and 3384.17 acres per species for the bird species. Values of overlap of an activity on a species that exceeded 100 acres are highlighted with bold text, and nine current and one future activity meets this criteria. The current activities are the Concentrated Use Areas AOI, Firewood Gathering Area, Horses/burros (all three categories), Paved Road Footprint, Private Land, Unpaved Road AOI, and Wildlife Urban Interface. The future activity with greater than 100 acres of overlap with these birds is the West Side PO Camping Footprint. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current overlap of the Wildland Urban Interface with these bird species accounts for the majority of the overlap, while future activities accounted for a very low portion of the total overlap. The West Side PO Camping Footprint accounts for the majority of planned overlap on these two bird species, while other future activities are expected to be relatively small.

1.1.1.2 Potential Effects

The analysis of potential effects on bird species relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Tables 5F6-1 and 5F6-2) The majority of activities have a high (H) to total (TTL) impact on these bird species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species.

POINT OCCURRENCE DATA

The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Tables 5F6-3 (previous BIR010) and 5F6-4 (previous BIR011). The aggregated current and future activities' potential effects are estimated to impact between 18 and 26 percent of the occupied sites of the bird species. All potential effects equal to or greater than five percent are noteworthy, and four current and no future activities meet this criteria. The current activities are from Concentrated Use Areas AOI, Unpaved Roads (both categories), and the Wildland-Urban Interface.

All four of the current activities that have greater than a five percent potential effect on the bird species have this impact on the northern goshawk, while only the Wildland-Urban Interface has this level of impact on the flammulated owl (Tables 5F6-3 and 5F6-4).

The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category as it corresponds to the species figures (Table 5F6-5). Note that all of the potential effects on known point occurrences of the flammulated owl are greater than 0.051 and degrade habitat at moderate to high levels within an activity area.

POTENTIAL HABITAT DATA

The percentage potential effect of each activity on potential habitat for each species was calculated and summarized (Table 5F6-6**)**. The aggregated current and future activities' potential effects are estimated to impact between 7 and 14 percent of the occupied sites of the bird species. All potential effects equal to or greater than five percent are noteworthy, and one current and no future activities meet this criteria. The current activity effect is from the Wildland Urban Interface categories.

Current activities account for the majority of the potential effects on the bird species, as the only future activity with some effect is the West Side PO Camping Footprint (Table 5F6-7).

Other locations with activity effects do not have suitable habitat present for these bird species. The aggregated potential effects intensity index for each species provides the acreage of geographic area of each species that falls within each effects index category as it corresponds to the species figures (Table 5F6-8). Note that the majority of the potential effects are partial (less than 1.0) and degrade habitat within an activity area. The majority of the potential effects have either no effect (0.00) or a moderate intensity (between 0.25 and 0.75).

1.1.1.3 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on bird species (Tables 5F6-9 and 10. The three categories of conservation measures are avoidance, minimization, and mitigation. In order to determine the benefit of conservation measures, the

potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures.

1.1.1.4 Avoidance

POINT OCCURRENCE DATA

The only current activity with avoidance measures with greater than a five percent potential effect on the flammulated owl is Wildlife Urban Interface. No current activities have a potential effect greater than 5% on the northern goshawk. No future activities with avoidance measures have a potential effect on either of these species (Table 5F6-11). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 10 and 14 percent of the point occurrence locations (with buffers) of bird species.

The effects intensity aggregated for all current and future activities with avoidance measures on the flammulated owl indicates all the effects are in moderate to high intensity categories (greater than 0.051; Table 5F6-12). The effects intensity aggregated for all current activities with avoidance measures on the northern goshawk indicates all the effects are in low to moderate intensity categories (less than 0.750; Table 5F6-12). Avoidance measures are conferring some benefit to these bird species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing points of occurrence.

POTENTIAL HABITAT DATA

No current or future activities with avoidance measures were greater than five percent of the suitable habitat (Table 5F6-13). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 5 and 6 percent of the suitable habitat of bird species.

The effects intensity aggregated for all activities with avoidance measures on both bird species indicates only a minimal area has complete elimination of suitable habitat for these species, while the majority of the effects are in lower intensity categories (less than 0.50; Table 5F6-14). Avoidance measures are having only a small effect on offsetting the current activities, although most of the acreage with an effects index value of 1.0 will be reduced. Future effects are proportionately minimal relative to the current activities.

1.1.1.5 Minimization

POINT OCCURRENCE DATA

All potential effects (with minimization measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and two current activities and no future activities meet this criteria (Table 5F6-15). Effects of Unpaved Road Footprint is five percent for the northern goshawk and effects of Wildland Urban Interface is seven percent for the flammulated owl. The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 17 and 21 percent of the occupied sites of these bird species.

The effects intensity aggregated for all activities with minimization measures on each bird species indicates only a small area has complete elimination of point occurrence locations for these species, while the majority of the effects are in low to moderate intensity categories (0 to 0.75; Table 5F6-16). Minimization measures are conferring a small benefit to the bird species by reducing the deleterious activity effects and allowing point occurrences (with buffers) to be maintained across more of the existing area.

SUITABLE HABITAT DATA

All potential effects (with minimization measures) equal to or greater than five percent are highlighted with bold text, and no current or future activities meet this criteria (Table 5F6-17). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 7 and 11 percent of the occupied sites of bird species.

The effects intensity aggregated for all activities with minimization measures on both bird species indicates only a relatively small area has complete elimination of suitable habitat for these species, while the majority of the effects are in lower intensity categories (less than 0.50; Table 5F6-17). Minimization measures are conferring a negligible benefit to the bird species by reducing the deleterious activity effects.

1.1.1.6 Mitigation

POINT OCCURRENCE DATA

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and only one current and no future activities meet this criteria (Table 5F6-18). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 14 and 17 percent of the occupied sites of bird species.

The effects intensity aggregated for all activities with mitigation measures on the flammulated owl indicates only a small area has complete elimination of point occurrences of these species, while the effects on the northern goshawk are in low to moderate intensity categories (less than 0.75; Table 5F6-19). Mitigation measures are conferring a small benefit to these bird species by reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing points of occurrence.

POTENTIAL HABITAT DATA

All potential effects (with mitigation measures) equal to or greater than five percent are highlighted with bold text, and no current or future activities meet this criteria (Table 5F6-20). The aggregated current and future activities' potential effects with minimization measures are estimated to have an impact of 7 percent of the occupied sites of both bird species.

The effects intensity aggregated for all activities with mitigation measures on both bird species indicates only a small area has complete elimination of suitable habitat for these species, while the majority of the effects are in lower intensity categories (less than 0.50; Table 5F6-21). Mitigation measures are conferring a small benefit to these bird species by offsetting the current and future activity effects.

QUALITATIVE ANALYSIS

The results of the nature serve analysis by species is contained in Tables 5F1-22 and 5F1-23.

Species: Northern Goshawk (*Accipiter gentilis*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Injury (trampling/crushing/picking	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Disturbance/Harassment	X	X	X	X	O	O	O	O	X	X	X	X	O	O	O	O	O	O	O	O	O	O	X	X	(X)	(X)	O	O	O	X	O	O	O	O	O	X	O	O	X	X	X	X	X	X
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Increase of activity leve	X	X	X	X	O	O	O	O	X	X	X	X	O	O	O	O	O	O	O	O	O	O	X	X	(X)	(X)	O	O	O	X	O	O	O	O	O	X	O	O	X	X	X	X	X	X
Impairment of activities/behavior/healtl	X	X	X	X	O	O	O	O	X	X	X	X	O	O	O	O	O	O	O	O	O	O	X	X	(X)	(X)	O	O	O	X	O	O	O	O	O	X	O	O	X	X	X	X	X	X
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X	O
Temporary destruction/displacemen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	X	O	O	O	O	O	O	X	O	X	O	X	O	X	X
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Habitat degradation																																												
Soil impacts	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Soil compaction	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Soil erosion	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Debris deposition	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Pollution/Litte	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Edge effects	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	O	O	O	Oa	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Xb	X	O	X	X	X	X	X	X
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	Xb	Xb	O	O	O	O	O	X	O	O	O	O	O	Xb	Xd	O	X	X	X	X	X	X
Structural habitat change	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Xc	O	O	O	O	O	Xb	Xd	O	X	X	X	X	X	X
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Xb	Xb	O	O	O	O	O	O	O	O	O	O	O	Xb	O	O	X	X	X	X	X	X
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O	O
Introduction of non-native plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Other Mechanisms																																												
Assigned Effect Index Value	TTL	M	TTL	M	TTL	M	L	L	TTL	M	TTL	M	TTL	M	TTL	M	TTL	M	TTL	M	TTL	M	TTL	M	TTL	M	L	L	TR	M	N	N	N	Mbc	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species uses openings/edges for nesting
b = could result in loss of foraging habitat
c = could result in loss of nest trees
d = this species nests in dense forested habitat

Species: Flammulated Owl (*Otus flammeolus*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Injury (trampling/crushing/picking	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Disturbance/Harassment	X	X	X	X	O	O	O	O	X	X	X	X	O	O	O	O	O	O	O	O	O	O	X	X	(X)	(X)	O	O	O	X	O	O	O	X	X	X	X	X				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O				
Increase of activity leve	X	X	X	X	O	O	O	O	X	X	X	X	O	O	O	O	O	O	O	O	O	O	X	X	(X)	(X)	O	O	O	X	O	O	O	X	X	X	X	X				
Impairment of activities/behavior/healtl	X	X	X	X	O	O	O	O	X	X	X	X	O	O	O	O	O	O	O	O	O	O	X	X	(X)	(X)	O	O	O	X	O	O	O	X	X	X	X	X				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habita	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	X	X	O	X				
Temporary destruction/displacemen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	X	O	O	O	O	X	O	X	O	X			
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil compaction	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Soil erosion	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Debris deposition	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Pollution/Litte	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Edge effects	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	Oa	O	O	O	Oa	O	O	O	O	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Xb	X	X	X	X				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	Xb	Xb	O	O	O	O	O	X	O	O	O	Xb	X	X	X	X				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Xc	O	O	O	Xb	X	X	X	X				
Loss of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	Xb	Xb	O	O	O	O	O	O	O	O	O	Xb	X	X	X	X				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O	X	O	O	O				
Introduction of non-native plant	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	M	TTL	M	TTL	M	L	L	TTL	M	TTL	M	M	L	TTL	M	TTL	L	M	L	TTL	M	TTL	L	TTL	M	L	L	TR	M	N	N	N	Mbc	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species uses openings/edges for nesting
b = could result in loss of foraging habitat
c = could result in loss of nest trees
d = this species nests in dense forested habitat

Value of Conservation Measures

Species

Northern Goshawk

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	M	L	L	M	
CUA Footprint	M	L	L	M	
Campground AOI	M	L	L	M	
Campground Footprint	M	L	L	M	
FS Structure AOI	M	L	L	M	
FS Structure Footprint	M	L	L	M	
Firewood Gathering Area	M	L	L	M	
High Mileage System Trail AOI	M	L	L	M	
High Mileage System Trail Footprint	M	L	L	M	
Horses/Burros .25 - 1.0 mile from spring/stream	M	L	L	M	
Horses/Burros < .25 mile from spring/stream	M	L	L	M	
Horses/Burros > 1.0 mile from spring/stream	M	L	L	M	
Low Mileage System Trail AOI	M	L	L	M	
Low Mileage System Trail Footprint	M	L	L	M	
Motorized Trail (closed) AOI	M	L	L	M	
Motorized Trail (closed) Footprint	M	L	L	M	
Motorized Trail (open) AOI	M	L	L	M	
Motorized Trail (open) Footprint	M	L	L	M	
Non System Trail AOI	M	L	L	M	
Non System Trail Footprint	M	L	L	M	
PVT Building AOI	M	L	L	M	
PVT Building Footprint	M	L	L	M	
Paved Road AOI	M	L	L	M	
Paved Road Footprint	M	L	L	M	
Picnic Area AOI	M	L	L	M	
Picnic Area Footprint	M	L	L	M	
Private Land	M	L	L	M	
Ski Area AOI	M	L	L	M	
Ski Area Footprint	M	L	L	M	
Snowplay Area	M	L	L	M	
Trailhead in Developed Canyon AOI	M	L	L	M	
Trailhead in Developed Canyon Footprint	M	L	L	M	
Trailhead out of Developed Canyon AOI	M	L	L	M	
Trailhead out of Developed Canyon Footprint	M	L	L	M	
Unpaved Road AOI	M	L	L	M	
Unpaved Road Footprint	M	L	L	M	
Wildland Urban Interface	M	L	L	M	
Future Campground AOI	M	L	L	M	
Future Campground Footprint	M	L	L	M	
Future EEA AOI	M	L	L	M	
Future Foot Bridge AOI	M	L	L	M	
Future Foot Bridge Footprint	M	L	L	M	
Future Ski Area AOI	M	L	L	M	
Future Ski Area Footprint	M	L	L	M	
Future Trailhead AOI	M	L	L	M	
Future Trailhead Footprint	M	L	L	M	
Future High Mileage System Trail AOI	M	L	L	M	
Future High Mileage System Trail Footprint	M	L	L	M	
Future Low Mileage System Trail AOI	M	L	L	M	
Future Low Mileage System Trail Footprint	M	L	L	M	
West Side PO Camping AOI	M	L	L	M	
West Side PO Camping Footprint	M	L	L	M	
West Side PO Minor Trailhead AOI	M	L	L	M	
West Side PO Minor Trailhead Footprint	M	L	L	M	
West Side PO Motorized Trails AOI	M	L	L	M	
West Side PO Motorized Trails Footprint	M	L	L	M	
West Side PO Non Motorized Trails AOI	M	L	L	M	
West Side PO Non Motorized Trails Footprint	M	L	L	M	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace ben
NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Flammulated Ow

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	TR	TR	TR	
CUA Footprint	L	TR	TR	TR	
Campground AO	L	TR	TR	TR	
Campground Footprin	L	TR	TR	TR	
FS Structure AOI	L	TR	TR	TR	
FS Structure Footprint	L	TR	TR	TR	
Firewood Gathering Area	L	TR	TR	TR	
High Mileage System Trail AO	L	TR	TR	TR	
High Mileage System Trail Footprin	L	TR	TR	TR	
Horses/Burros .25 - 1.0 mile from spring/strear	L	TR	TR	TR	
Horses/Burros < .25 mile from spring/strear	L	TR	TR	TR	
Horses/Burros > 1.0 mile from spring/strear	L	TR	TR	TR	
Low Mileage System Trail AO	L	TR	TR	TR	
Low Mileage System Trail Footprir	L	TR	TR	TR	
Motorized Trail (closed) AO	L	TR	TR	TR	
Motorized Trail (closed) Footprir	L	TR	TR	TR	
Non System Trail AO	L	TR	TR	TR	
Non System Trail Footprin	L	TR	TR	TR	
PVT Building AOI	L	TR	TR	TR	
PVT Building Footprint	L	TR	TR	TR	
Paved Road AOI	L	TR	TR	TR	
Paved Road Footprin	L	TR	TR	TR	
Picnic Area AOI	L	TR	TR	TR	
Picnic Area Footprint	L	TR	TR	TR	
Private Land	L	TR	TR	TR	
Ski Area AOI	L	TR	TR	TR	
Ski Area Footprint	L	TR	TR	TR	
Snowplay Area	L	TR	TR	TR	
Trailhead in Developed Canyon AO	L	TR	TR	TR	
Trailhead in Developed Canyon Footprir	L	TR	TR	TR	
Unpaved Road AO	L	TR	TR	TR	
Unpaved Road Footprin	L	TR	TR	TR	
Wildland Urban Interface	L	TR	TR	TR	
Future Campground AO	L	TR	TR	TR	
Future Campground Footprin	L	TR	TR	TR	
Future EEA AOI	L	TR	TR	TR	
Future Foot Bridge AO	L	TR	TR	TR	
Future Foot Bridge Footprin	L	TR	TR	TR	
Future Low Mileage System Trail AO	L	TR	TR	TR	
Future Low Mileage System Trail Footprir	L	TR	TR	TR	
Future Ski Area AOI	L	TR	TR	TR	
Future Ski Area Footprin	L	TR	TR	TR	
Future Trailhead AO	L	TR	TR	TR	
Future Trailhead Footprin	L	TR	TR	TR	
West Side PO Camping AOI	L	TR	TR	TR	
West Side PO Camping Footprint	L	TR	TR	TR	
West Side PO Minor Trailhead AOI	L	TR	TR	TR	
West Side PO Minor Trailhead Footprint	L	TR	TR	TR	
West Side PO Non Motorized Trails AOI	L	TR	TR	TR	
West Side PO Non Motorized Trails Footprint	L	TR	TR	TR	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace ben
NM = no conservation measure applies; N/A = not applicable to the activity.

[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Summary Tables

Table BIR010
Summary of Individual Effect Acreage of Each Activity on Bird Species

Activities	*Flammulated owl* 1.0 hectare buffer	*Northern goshawk* 0.1 acre buffer
Current Activities		
Site Occurance Area by Species (acres)	*93.80*	*1.10*
Campground AOI		
Campground Footprint		
Cave/Tunnel		
Climbing Area		
CUA AOI	3.92	0.10
CUA Footprint	0.37	
Firewood Gathering Area	2.13	
FS Structure AOI	0.45	0.09
FS Structure Footprint	0.06	0.00
High Mileage System Trail AOI	0.68	
High Mileage System Trail Footprint	0.05	
Horses/Burros .25 - 1.0 mile from spring/stream		0.10
Horses/Burros < .25 mile from spring/stream		0.20
Horses/Burros > 1.0 mile from spring/stream		
Low Mileage System Trail AOI	5.99	
Low Mileage System Trail Footprint	0.10	
Motorized Trail (closed) AOI		
Motorized Trail (closed) Footprint		
Motorized Trail (open) AOI		
Motorized Trail (open) Footprint		
Non System Trail AOI	2.15	0.07
Non System Trail Footprint	0.15	0.01
Paved Road AOI	1.35	0.03
Paved Road Footprint	1.82	0.02
Picnic Area AOI		
Picnic Area Footprint		
Private Land	0.16	0.10
PVT Building AOI	0.27	
PVT Building Footprint	0.04	
Ski Area AOI		
Ski Area Footprint		
Snowplay Area	0.60	
Trailhead in Developed Canyon AOI	0.16	
Trailhead in Developed Canyon Footprint		
Trailhead out of Developed Canyon AOI		
Trailhead out of Developed Canyon Footprint		
Unpaved Road AOI	1.66	0.12
Unpaved Road Footprint	1.05	0.07
Wildland Urban Interface	13.71	0.10
All Current Activities Combined (Aggregated)	*25.99*	*0.70*
Future Activities		
Future Campground AOI		
Future Campground Footprint		
Future EEA AOI	0.74	
Future EEA Footprint		
Future Foot Bridge AOI	0.85	
Future Foot Bridge Footprint	0.11	
Future High Mileage System Trail AOI		
Future High Mileage System Trail Footprint		
Future Low Mileage System Trail AOI		
Future Low Mileage System Trail Footprint		
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI		
Future Ski Area Footprint		
Future Trailhead AOI		
Future Trailhead Footprint		
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI		
West Side PO Camping Footprint		
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI		
West Side PO Minor Trailhead Footprint		
West Side PO Motorized Trails AOI		
West Side PO Motorized Trails Footprint		
West Side PO Non Motorized Trails AOI	0.50	
West Side PO Non Motorized Trails Footprint	0.03	
All Current and Future Activities Combined (Aggregated)	*28.44*	

**** Bold text indicates activities with > 0.20 ac overlap with species area***

Table BIR011
Percent Activity Potential Effect by Species - Birds

Activities	*Flammulated owl*	*Northern goshawk*
Current Activities	**1.0 hectare buffer**	**0.1 acre buffer**
Site Occurance Area by Species (acres)	*93.80*	*1.10*
Campground AOI		
Campground Footprint		
Cave/Tunnel		
Climbing Area		
CUA AOI	1%	5%
CUA Footprint	0%	
Firewood Gathering Area	1%	
FS Structure AOI	0%	4%
FS Structure Footprint	0%	0%
High Mileage System Trail AOI	0%	
High Mileage System Trail Footprint	0%	
Horses/Burros .25 - 1.0 mile from spring/stream		0%
Horses/Burros < .25 mile from spring/stream		0%
Horses/Burros > 1.0 mile from spring/stream		
Low Mileage System Trail AOI	3%	
Low Mileage System Trail Footprint	0%	
Motorized Trail (closed) AOI		
Motorized Trail (closed) Footprint		
Motorized Trail (open) AOI		
Motorized Trail (open) Footprint		
Non System Trail AOI	1%	3%
Non System Trail Footprint	0%	0%
Paved Road AOI	1%	2%
Paved Road Footprint	2%	2%
Picnic Area AOI		
Picnic Area Footprint		
Private Land	0%	2%
PVT Building AOI	0%	
PVT Building Footprint	0%	
Ski Area AOI		
Ski Area Footprint		
Snowplay Area	0%	
Trailhead in Developed Canyon AOI	0%	
Trailhead in Developed Canyon Footprint		
Trailhead out of Developed Canyon AOI		
Trailhead out of Developed Canyon Footprint		
Unpaved Road AOI	1%	6%
Unpaved Road Footprint	1%	6%
Wildland Urban Interface	7%	5%
All Current Activities Combined (Aggregated)	16%	26%
Future Activities		
Future Campground AOI		
Future Campground Footprint		
Future EEA AOI	0%	
Future EEA Footprint		
Future Foot Bridge AOI	0%	
Future Foot Bridge Footprint	0%	
Future High Mileage System Trail AOI		
Future High Mileage System Trail Footprint		
Future Low Mileage System Trail AOI		
Future Low Mileage System Trail Footprint		
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI		
Future Ski Area Footprint		
Future Trailhead AOI		
Future Trailhead Footprint		
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI		
West Side PO Camping Footprint		
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI		
West Side PO Minor Trailhead Footprint		
West Side PO Motorized Trails AOI		
West Side PO Motorized Trails Footprint		
West Side PO Non Motorized Trails AOI	0%	
West Side PO Non Motorized Trails Footprint	0%	
All Current and Future Activities Combined (Aggregated)	18%	

**** Bold text indicates activities with >= 5% Potential Effect***

Table BIR012
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Birds

	Flammulated owl	***Northern goshawk***
Activities	**1.0 hectare**	**0.1 acre**
Current Activities	**buffer**	**buffer**
Site Occurance Area by Species (acres)	*93.80*	*1.10*
Campground AOI		
Campground Footprint		
Cave/Tunnel		
Climbing Area		
CUA AOI	1%	2%
CUA Footprint	0%	
Firewood Gathering Area	1%	
FS Structure AOI	0%	2%
FS Structure Footprint	0%	0%
High Mileage System Trail AOI	0%	
High Mileage System Trail Footprint	0%	
Horses/Burros .25 - 1.0 mile from spring/stream		0%
Horses/Burros < .25 mile from spring/stream		0%
Horses/Burros > 1.0 mile from spring/stream		
Low Mileage System Trail AOI	2%	
Low Mileage System Trail Footprint	0%	
Motorized Trail (closed) AOI		
Motorized Trail (closed) Footprint		
Motorized Trail (open) AOI		
Motorized Trail (open) Footprint		
Non System Trail AOI	1%	1%
Non System Trail Footprint	0%	0%
Paved Road AOI	1%	1%
Paved Road Footprint	1%	1%
Picnic Area AOI		
Picnic Area Footprint		
Private Land	0%	1%
PVT Building AOI	0%	
PVT Building Footprint	0%	
Ski Area AOI		
Ski Area Footprint		
Snowplay Area	0%	
Trailhead in Developed Canyon AOI	0%	
Trailhead in Developed Canyon Footprint		
Trailhead out of Developed Canyon AOI		
Trailhead out of Developed Canyon Footprint		
Unpaved Road AOI	1%	2%
Unpaved Road Footprint	1%	2%
Wildland Urban Interface	5%	2%
All Current Activities Combined (Aggregated)	12%	10%
Future Activities		
Future Campground AOI		
Future Campground Footprint		
Future EEA AOI	0%	
Future EEA Footprint		
Future Foot Bridge AOI	0%	
Future Foot Bridge Footprint	0%	
Future High Mileage System Trail AOI		
Future High Mileage System Trail Footprint		
Future Low Mileage System Trail AOI		
Future Low Mileage System Trail Footprint		
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI		
Future Ski Area Footprint		
Future Trailhead AOI		
Future Trailhead Footprint		
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI		
West Side PO Camping Footprint		
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI		
West Side PO Minor Trailhead Footprint		
West Side PO Motorized Trails AOI		
West Side PO Motorized Trails Footprint		
West Side PO Non Motorized Trails AOI	0%	
West Side PO Non Motorized Trails Footprint	0%	
All Current and Future Activities Combined (Aggregated)	14%	

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table BIR013
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Birds

	Flammulated owl	***Northern goshawk***
Activities	**1.0 hectare buffer**	**0.1 acre buffer**
Current Activities		
Site Occurance Area by Species (acres)	*93.80*	*1.10*
Campground AOI		
Campground Footprint		
Cave/Tunnel		
Climbing Area		
CUA AOI	1%	3%
CUA Footprint	0%	
Firewood Gathering Area	1%	
FS Structure AOI	0%	3%
FS Structure Footprint	0%	0%
High Mileage System Trail AOI	0%	
High Mileage System Trail Footprint	0%	
Horses/Burros .25 - 1.0 mile from spring/stream		0%
Horses/Burros < .25 mile from spring/stream		0%
Horses/Burros > 1.0 mile from spring/stream		
Low Mileage System Trail AOI	3%	
Low Mileage System Trail Footprint	0%	
Motorized Trail (closed) AOI		
Motorized Trail (closed) Footprint		
Motorized Trail (open) AOI		
Motorized Trail (open) Footprint		
Non System Trail AOI	1%	2%
Non System Trail Footprint	0%	0%
Paved Road AOI	1%	1%
Paved Road Footprint	2%	1%
Picnic Area AOI		
Picnic Area Footprint		
Private Land	0%	2%
PVT Building AOI	0%	
PVT Building Footprint	0%	
Ski Area AOI		
Ski Area Footprint		
Snowplay Area	0%	
Trailhead in Developed Canyon AOI	0%	
Trailhead in Developed Canyon Footprint		
Trailhead out of Developed Canyon AOI		
Trailhead out of Developed Canyon Footprint		
Unpaved Road AOI	1%	4%
Unpaved Road Footprint	1%	5%
Wildland Urban Interface	7%	3%
All Current Activities Combined (Aggregated)	15%	21%
Future Activities		
Future Campground AOI		
Future Campground Footprint		
Future EEA AOI	0%	
Future EEA Footprint		
Future Foot Bridge AOI	0%	
Future Foot Bridge Footprint	0%	
Future High Mileage System Trail AOI		
Future High Mileage System Trail Footprint		
Future Low Mileage System Trail AOI		
Future Low Mileage System Trail Footprint		
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI		
Future Ski Area Footprint		
Future Trailhead AOI		
Future Trailhead Footprint		
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI		
West Side PO Camping Footprint		
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI		
West Side PO Minor Trailhead Footprint		
West Side PO Motorized Trails AOI		
West Side PO Motorized Trails Footprint		
West Side PO Non Motorized Trails AOI	0%	
West Side PO Non Motorized Trails Footprint	0%	
All Current and Future Activities Combined (Aggregated)	17%	

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table BIR014
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Birds

	Flammulated owl	***Northern goshawk***
Activities	**1.0 hectare buffer**	**0.1 acre buffer**
Current Activities		
Site Occurance Area by Species (acres)	*93.80*	*1.10*
Campground AOI		
Campground Footprint		
Cave/Tunnel		
Climbing Area		
CUA AOI	1%	2%
CUA Footprint	0%	
Firewood Gathering Area	1%	
FS Structure AOI	0%	2%
FS Structure Footprint	0%	0%
High Mileage System Trail AOI	0%	
High Mileage System Trail Footprint	0%	
Horses/Burros .25 - 1.0 mile from spring/stream		0%
Horses/Burros < .25 mile from spring/stream		0%
Horses/Burros > 1.0 mile from spring/stream		
Low Mileage System Trail AOI	3%	
Low Mileage System Trail Footprint	0%	
Motorized Trail (closed) AOI		
Motorized Trail (closed) Footprint		
Motorized Trail (open) AOI		
Motorized Trail (open) Footprint		
Non System Trail AOI	1%	2%
Non System Trail Footprint	0%	0%
Paved Road AOI	1%	1%
Paved Road Footprint	2%	1%
Picnic Area AOI		
Picnic Area Footprint		
Private Land	0%	1%
PVT Building AOI	0%	
PVT Building Footprint	0%	
Ski Area AOI		
Ski Area Footprint		
Snowplay Area	0%	
Trailhead in Developed Canyon AOI	0%	
Trailhead in Developed Canyon Footprint		
Trailhead out of Developed Canyon AOI		
Trailhead out of Developed Canyon Footprint		
Unpaved Road AOI	1%	3%
Unpaved Road Footprint	1%	3%
Wildland Urban Interface	7%	2%
All Current Activities Combined (Aggregated)	15%	14%
Future Activities		
Future Campground AOI		
Future Campground Footprint		
Future EEA AOI	0%	
Future EEA Footprint		
Future Foot Bridge AOI	0%	
Future Foot Bridge Footprint	0%	
Future High Mileage System Trail AOI		
Future High Mileage System Trail Footprint		
Future Low Mileage System Trail AOI		
Future Low Mileage System Trail Footprint		
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI		
Future Ski Area Footprint		
Future Trailhead AOI		
Future Trailhead Footprint		
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI		
West Side PO Camping Footprint		
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI		
West Side PO Minor Trailhead Footprint		
West Side PO Motorized Trails AOI		
West Side PO Motorized Trails Footprint		
West Side PO Non Motorized Trails AOI	0%	
West Side PO Non Motorized Trails Footprint	0%	
All Current and Future Activities Combined (Aggregated)	17%	

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table BIR030
Potential Effects on Birds for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities - Potential Effects		
Effects Index	***Flammulated owl***	***Northern goshawk***
0.000	0.00	0.30
0.001 - 0.050	0.00	0.00
0.051 - 0.250	3.01	0.03
0.251 - 0.500	15.12	0.09
0.501 - 0.750	4.19	0.11
0.751 - 0.999	0.48	0.06
1.000	3.19	0.10
Current and Future Activities - Potential Effects		
0.000	0.00	
0.001 - 0.050	0.00	
0.051 - 0.250	3.01	
0.251 - 0.500	15.63	
0.501 - 0.750	5.08	
0.751 - 0.999	0.95	
1.000	3.77	
Total Species Distribution (ac)	**93.80**	**1.10**

Table BIR031
Potential Effects with Avoidance Measures on Birds for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects with Avoidance Measures		
Effects Index	***Flammulated owl***	***Northern goshawk***
0.000	0.00	0.30
0.001 - 0.050	0.00	0.00
0.051 - 0.250	3.01	0.16
0.251 - 0.500	15.78	0.20
0.501 - 0.750	5.07	0.03
0.751 - 0.999	1.99	0.00
1.000	0.15	0.00
Current and Future Activities Potential Effects with Avoidance Measures		
0.000	0.00	
0.001 - 0.050	0.00	
0.051 - 0.250	3.01	
0.251 - 0.500	16.93	
0.501 - 0.750	5.82	
0.751 - 0.999	2.23	
1.000	0.45	
Total Species Distribution (ac)	**93.80**	**1.10**

Table BIR032
Potential Effects with Minimization Measures on Birds for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects with Minimization Measures		
Effects Index	***Flammulated owl***	***Northern goshawk***
0.000	0.00	0.30
0.001 - 0.050	0.00	0.00
0.051 - 0.250	3.01	0.03
0.251 - 0.500	15.20	0.13
0.501 - 0.750	4.11	0.17
0.751 - 0.999	1.59	0.03
1.000	2.09	0.04
Current and Future Activities Potential Effects with Minimization Measures		
0.000	0.00	
0.001 - 0.050	0.00	
0.051 - 0.250	3.01	
0.251 - 0.500	15.91	
0.501 - 0.750	5.01	
0.751 - 0.999	1.88	
1.000	2.63	
Total Species Distribution (ac)	**93.80**	**1.10**

Table BIR033
Potential Effects with Mitigation Measures on Birds for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities Potential Effects with Mitigation Measures		
Effects Index	***Flammulated owl***	***Northern goshawk***
0.000	0.00	0.30
0.001 - 0.050	0.00	0.00
0.051 - 0.250	3.01	0.13
0.251 - 0.500	15.20	0.20
0.501 - 0.750	4.11	0.06
0.751 - 0.999	1.59	0.00
1.000	2.09	0.00
Current and Future Activities Potential Effects with Mitigation Measures		
0.000	0.00	
0.001 - 0.050	0.00	
0.051 - 0.250	3.01	
0.251 - 0.500	15.91	
0.501 - 0.750	5.01	
0.751 - 0.999	1.88	
1.000	2.63	
Total Species Distribution (ac)	**93.80**	**1.10**

Table BIR10
Summary of Individual Effect Acreage of Each Activity on Bird Species, Suitable Habitat Data

	Flammulated owl	***Northern goshawk***
Activities		
Current Activities		
Suitable Habitat Area by Species (acres)	*7086.51*	*9019.05*
Campground AOI	18.67	27.66
Campground Footprint	54.85	72.96
Cave/Tunnel		
Climbing Area		
CUA AOI	46.52	175.55
CUA Footprint	3.76	17.62
Firewood Gathering Area	42.90	313.99
FS Structure AOI	16.04	26.30
FS Structure Footprint	2.35	4.13
High Mileage System Trail AOI	13.73	10.76
High Mileage System Trail Footprint	0.92	0.72
Horses/Burros .25 - 1.0 mile from spring/stream	460.44	903.71
Horses/Burros < .25 mile from spring/stream	36.65	104.19
Horses/Burros > 1.0 mile from spring/stream	271.80	535.24
Low Mileage System Trail AOI	29.01	47.62
Low Mileage System Trail Footprint	0.48	0.89
Motorized Trail (closed) AOI	0.80	9.91
Motorized Trail (closed) Footprint	0.12	1.47
Motorized Trail (open) AOI		0.47
Motorized Trail (open) Footprint		0.06
Non System Trail AOI	13.94	45.28
Non System Trail Footprint	0.94	3.04
Paved Road AOI	32.94	79.03
Paved Road Footprint	43.08	105.97
Picnic Area AOI	9.17	12.18
Picnic Area Footprint	33.67	48.28
Private Land	209.48	399.14
PVT Building AOI	12.64	17.69
PVT Building Footprint	1.97	3.22
Ski Area AOI	1.95	10.10
Ski Area Footprint	0.34	3.73
Snowplay Area	25.22	30.78
Trailhead in Developed Canyon AOI	0.43	1.28
Trailhead in Developed Canyon Footprint	0.35	0.95
Trailhead out of Developed Canyon AOI		0.65
Trailhead out of Developed Canyon Footprint		1.74
Unpaved Road AOI	59.56	139.02
Unpaved Road Footprint	37.86	89.82
Wildland Urban Interface	553.21	937.05
All Current Activities Combined (Aggregated)	*1636.14*	*3267.44*
Future Activities		
Future Campground AOI	3.81	7.49
Future Campground Footprint	1.65	9.26
Future EEA AOI	1.71	2.07
Future EEA Footprint		
Future Foot Bridge AOI	1.51	2.02
Future Foot Bridge Footprint	0.15	0.28
Future High Mileage System Trail AOI		7.56
Future High Mileage System Trail Footprint		0.51
Future Low Mileage System Trail AOI	3.13	10.82
Future Low Mileage System Trail Footprint	0.06	0.18
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI	2.32	8.65
Future Ski Area Footprint	1.23	14.50
Future Trailhead AOI	0.29	0.69
Future Trailhead Footprint	0.91	2.81
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI	0.26	23.71
West Side PO Camping Footprint	6.27	113.22
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI	0.42	1.06
West Side PO Minor Trailhead Footprint	10.15	15.88
West Side PO Motorized Trails AOI		7.26
West Side PO Motorized Trails Footprint		1.10
West Side PO Non Motorized Trails AOI	7.99	13.70
West Side PO Non Motorized Trails Footprint	0.54	0.91
All Current and Future Activities Combined (Aggregated)	*1662.57*	*3384.17*

Table BIR11
Summary of Potential Effect Percentage of Each Activity on Bird Species, Suitable Habitat Data.

	Flammulated owl	***Northern goshawk***
Activities		
Current Activities		
Suitable Habitat Area by Species (acres)	*7086.51*	*9019.05*
Campground AOI	0%	0%
Campground Footprint	0%	1%
Cave/Tunnel		
Climbing Area		
CUA AOI	0%	1%
CUA Footprint	0%	0%
Firewood Gathering Area	0%	2%
FS Structure AOI	0%	0%
FS Structure Footprint	0%	0%
High Mileage System Trail AOI	0%	0%
High Mileage System Trail Footprint	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream	0%	0%
Horses/Burros < .25 mile from spring/stream	0%	0%
Horses/Burros > 1.0 mile from spring/stream	0%	0%
Low Mileage System Trail AOI	0%	0%
Low Mileage System Trail Footprint	0%	0%
Motorized Trail (closed) AOI	0%	0%
Motorized Trail (closed) Footprint	0%	0%
Motorized Trail (open) AOI		0%
Motorized Trail (open) Footprint		0%
Non System Trail AOI	0%	0%
Non System Trail Footprint	0%	0%
Paved Road AOI	0%	0%
Paved Road Footprint	1%	1%
Picnic Area AOI	0%	0%
Picnic Area Footprint	0%	1%
Private Land	1%	1%
PVT Building AOI	0%	0%
PVT Building Footprint	0%	0%
Ski Area AOI	0%	0%
Ski Area Footprint	0%	0%
Snowplay Area	0%	0%
Trailhead in Developed Canyon AOI	0%	0%
Trailhead in Developed Canyon Footprint	0%	0%
Trailhead out of Developed Canyon AOI		0%
Trailhead out of Developed Canyon Footprint		0%
Unpaved Road AOI	0%	1%
Unpaved Road Footprint	1%	1%
Wildland Urban Interface	4%	5%
All Current Activities Combined (Aggregated)	7%	12%
Future Activities		
Future Campground AOI	0%	0%
Future Campground Footprint	0%	0%
Future EEA AOI	0%	0%
Future EEA Footprint		
Future Foot Bridge AOI	0%	0%
Future Foot Bridge Footprint	0%	0%
Future High Mileage System Trail AOI		0%
Future High Mileage System Trail Footprint		0%
Future Low Mileage System Trail AOI	0%	0%
Future Low Mileage System Trail Footprint	0%	0%
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI	0%	0%
Future Ski Area Footprint	0%	0%
Future Trailhead AOI	0%	0%
Future Trailhead Footprint	0%	0%
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI	0%	0%
West Side PO Camping Footprint	0%	1%
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI	0%	0%
West Side PO Minor Trailhead Footprint	0%	0%
West Side PO Motorized Trails AOI		0%
West Side PO Motorized Trails Footprint		0%
West Side PO Non Motorized Trails AOI	0%	0%
West Side PO Non Motorized Trails Footprint	0%	0%
All Current and Future Activities Combined (Aggregated)	7%	14%

**** Bold text indicates activities with >= 5% Potential Effect***

Table BIR12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Birds, Suitable Habitat Data.

	Flammulated owl	***Northern goshawk***
Activities		
Current Activities		
Suitable Habitat Area by Species (acres)	*7086.51*	*9019.05*
Campground AOI	0%	0%
Campground Footprint	0%	0%
Cave/Tunnel		
Climbing Area		
CUA AOI	0%	0%
CUA Footprint	0%	0%
Firewood Gathering Area	0%	1%
FS Structure AOI	0%	0%
FS Structure Footprint	0%	0%
High Mileage System Trail AOI	0%	0%
High Mileage System Trail Footprint	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream	0%	0%
Horses/Burros < .25 mile from spring/stream	0%	0%
Horses/Burros > 1.0 mile from spring/stream	0%	0%
Low Mileage System Trail AOI	0%	0%
Low Mileage System Trail Footprint	0%	0%
Motorized Trail (closed) AOI	0%	0%
Motorized Trail (closed) Footprint	0%	0%
Motorized Trail (open) AOI		0%
Motorized Trail (open) Footprint		0%
Non System Trail AOI	0%	0%
Non System Trail Footprint	0%	0%
Paved Road AOI	0%	0%
Paved Road Footprint	0%	0%
Picnic Area AOI	0%	0%
Picnic Area Footprint	0%	0%
Private Land	1%	0%
PVT Building AOI	0%	0%
PVT Building Footprint	0%	0%
Ski Area AOI	0%	0%
Ski Area Footprint	0%	0%
Snowplay Area	0%	0%
Trailhead in Developed Canyon AOI	0%	0%
Trailhead in Developed Canyon Footprint	0%	0%
Trailhead out of Developed Canyon AOI		0%
Trailhead out of Developed Canyon Footprint		0%
Unpaved Road AOI	0%	0%
Unpaved Road Footprint	0%	0%
Wildland Urban Interface	3%	2%
All Current Activities Combined (Aggregated)	5%	5%
Future Activities		
Future Campground AOI	0%	0%
Future Campground Footprint	0%	0%
Future EEA AOI	0%	0%
Future EEA Footprint		
Future Foot Bridge AOI	0%	0%
Future Foot Bridge Footprint	0%	0%
Future High Mileage System Trail AOI		0%
Future High Mileage System Trail Footprint		0%
Future Low Mileage System Trail AOI	0%	0%
Future Low Mileage System Trail Footprint	0%	0%
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI	0%	0%
Future Ski Area Footprint	0%	0%
Future Trailhead AOI	0%	0%
Future Trailhead Footprint	0%	0%
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI	0%	0%
West Side PO Camping Footprint	0%	0%
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI	0%	0%
West Side PO Minor Trailhead Footprint	0%	0%
West Side PO Motorized Trails AOI		0%
West Side PO Motorized Trails Footprint		0%
West Side PO Non Motorized Trails AOI	0%	0%
West Side PO Non Motorized Trails Footprint	0%	0%
All Current and Future Activities Combined (Aggregated)	5%	6%

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table BIR13

Percent Activity Potential Effect with Minimization Conservation Measures by Species - Birds, Suitable Habitat Data.

	Flammulated owl	***Northern goshawk***
Activities		
Current Activities		
Suitable Habitat Area by Species (acres)	*7086.51*	*9019.05*
Campground AOI	0%	0%
Campground Footprint	0%	1%
Cave/Tunnel		
Climbing Area		
CUA AOI	0%	1%
CUA Footprint	0%	0%
Firewood Gathering Area	0%	1%
FS Structure AOI	0%	0%
FS Structure Footprint	0%	0%
High Mileage System Trail AOI	0%	0%
High Mileage System Trail Footprint	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream	0%	0%
Horses/Burros < .25 mile from spring/stream	0%	0%
Horses/Burros > 1.0 mile from spring/stream	0%	0%
Low Mileage System Trail AOI	0%	0%
Low Mileage System Trail Footprint	0%	0%
Motorized Trail (closed) AOI	0%	0%
Motorized Trail (closed) Footprint	0%	0%
Motorized Trail (open) AOI		0%
Motorized Trail (open) Footprint		0%
Non System Trail AOI	0%	0%
Non System Trail Footprint	0%	0%
Paved Road AOI	0%	0%
Paved Road Footprint	1%	1%
Picnic Area AOI	0%	0%
Picnic Area Footprint	0%	0%
Private Land	1%	1%
PVT Building AOI	0%	0%
PVT Building Footprint	0%	0%
Ski Area AOI	0%	0%
Ski Area Footprint	0%	0%
Snowplay Area	0%	0%
Trailhead in Developed Canyon AOI	0%	0%
Trailhead in Developed Canyon Footprint	0%	0%
Trailhead out of Developed Canyon AOI		0%
Trailhead out of Developed Canyon Footprint		0%
Unpaved Road AOI	0%	1%
Unpaved Road Footprint	1%	1%
Wildland Urban Interface	4%	4%
All Current Activities Combined (Aggregated)	7%	10%
Future Activities		
Future Campground AOI	0%	0%
Future Campground Footprint	0%	0%
Future EEA AOI	0%	0%
Future EEA Footprint		
Future Foot Bridge AOI	0%	0%
Future Foot Bridge Footprint	0%	0%
Future High Mileage System Trail AOI		0%
Future High Mileage System Trail Footprint		0%
Future Low Mileage System Trail AOI	0%	0%
Future Low Mileage System Trail Footprint	0%	0%
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI	0%	0%
Future Ski Area Footprint	0%	0%
Future Trailhead AOI	0%	0%
Future Trailhead Footprint	0%	0%
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI	0%	0%
West Side PO Camping Footprint	0%	1%
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI	0%	0%
West Side PO Minor Trailhead Footprint	0%	0%
West Side PO Motorized Trails AOI		0%
West Side PO Motorized Trails Footprint		0%
West Side PO Non Motorized Trails AOI	0%	0%
West Side PO Non Motorized Trails Footprint	0%	0%
All Current and Future Activities Combined (Aggregated)	7%	11%

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table BIR14
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Birds, Suitable Habitat Data.

	Flammulated owl	***Northern goshawk***
Activities		
Current Activities		
Suitable Habitat Area by Species (acres)	*7086.51*	*9019.05*
Campground AOI	0%	0%
Campground Footprint	0%	0%
Cave/Tunnel		
Climbing Area		
CUA AOI	0%	0%
CUA Footprint	0%	0%
Firewood Gathering Area	0%	1%
FS Structure AOI	0%	0%
FS Structure Footprint	0%	0%
High Mileage System Trail AOI	0%	0%
High Mileage System Trail Footprint	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream	0%	0%
Horses/Burros < .25 mile from spring/stream	0%	0%
Horses/Burros > 1.0 mile from spring/stream	0%	0%
Low Mileage System Trail AOI	0%	0%
Low Mileage System Trail Footprint	0%	0%
Motorized Trail (closed) AOI	0%	0%
Motorized Trail (closed) Footprint	0%	0%
Motorized Trail (open) AOI		0%
Motorized Trail (open) Footprint		0%
Non System Trail AOI	0%	0%
Non System Trail Footprint	0%	0%
Paved Road AOI	0%	0%
Paved Road Footprint	1%	1%
Picnic Area AOI	0%	0%
Picnic Area Footprint	0%	0%
Private Land	1%	1%
PVT Building AOI	0%	0%
PVT Building Footprint	0%	0%
Ski Area AOI	0%	0%
Ski Area Footprint	0%	0%
Snowplay Area	0%	0%
Trailhead in Developed Canyon AOI	0%	0%
Trailhead in Developed Canyon Footprint	0%	0%
Trailhead out of Developed Canyon AOI		0%
Trailhead out of Developed Canyon Footprint		0%
Unpaved Road AOI	0%	0%
Unpaved Road Footprint	1%	0%
Wildland Urban Interface	4%	3%
All Current Activities Combined (Aggregated)	7%	7%
Future Activities		
Future Campground AOI	0%	0%
Future Campground Footprint	0%	0%
Future EEA AOI	0%	0%
Future EEA Footprint		
Future Foot Bridge AOI	0%	0%
Future Foot Bridge Footprint	0%	0%
Future High Mileage System Trail AOI		0%
Future High Mileage System Trail Footprint		0%
Future Low Mileage System Trail AOI	0%	0%
Future Low Mileage System Trail Footprint	0%	0%
Future Picnic AOI		
Future Picnic Area Footprint		
Future Ski Area AOI	0%	0%
Future Ski Area Footprint	0%	0%
Future Trailhead AOI	0%	0%
Future Trailhead Footprint	0%	0%
Future Visitor Center AOI		
Future Visitor Center Footprint		
West Side PO Camping AOI	0%	0%
West Side PO Camping Footprint	0%	1%
West Side PO Major Trailhead AOI		
West Side PO Major Trailhead Footprint		
West Side PO Minor Trailhead AOI	0%	0%
West Side PO Minor Trailhead Footprint	0%	0%
West Side PO Motorized Trails AOI		0%
West Side PO Motorized Trails Footprint		0%
West Side PO Non Motorized Trails AOI	0%	0%
West Side PO Non Motorized Trails Footprint	0%	0%
All Current and Future Activities Combined (Aggregated)	7%	7%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table BIR30
Potential Effects on Birds for Current Activities as well as Current and Future Activities.

Current Activities Potential Effects		
Effects Index	***Flammulated owl***	***Northern goshawk***
0.000	754.07	1,471.65
0.001 - 0.050	13.16	12.70
0.051 - 0.250	138.07	225.99
0.251 - 0.500	402.33	831.67
0.501 - 0.750	209.42	351.96
0.751 - 0.999	27.59	46.85
1.000	91.50	326.62
Current and Future Activities Potential Effects		
0.000	754.07	1,442.94
0.001 - 0.050	12.88	12.44
0.051 - 0.250	138.65	224.45
0.251 - 0.500	410.41	839.74
0.501 - 0.750	213.00	347.78
0.751 - 0.999	29.24	48.04
1.000	104.32	468.77
Total Species Distribution (ac)	**7,086.51**	**9,019.05**

Table BIR31
Potential Effects with Avoidance Measures on Birds for Current Activities as well as Current and Future Activities.

Current Activities Potential Effects with Avoidance Measures		
Effects Index	***Flammulated owl***	***Northern goshawk***
0.000	754.07	1,471.65
0.001 - 0.050	13.16	12.70
0.051 - 0.250	140.77	1,184.41
0.251 - 0.500	506.64	515.89
0.501 - 0.750	151.56	82.75
0.751 - 0.999	49.08	0.04
1.000	20.86	0.00
Current and Future Activities Potential Effects with Avoidance Measures		
0.000	754.07	1,442.94
0.001 - 0.050	12.88	12.44
0.051 - 0.250	141.63	1,190.45
0.251 - 0.500	515.37	622.60
0.501 - 0.750	164.82	115.68
0.751 - 0.999	51.22	0.06
1.000	22.58	0.00
Total Species Distribution (ac)	**7,086.51**	**9,019.05**

Table BIR32
Potential Effects with Minimization Measures on Birds for Current Activities as well as Current and Future Activities.

Current Activities Potential Effects with Minimization Measures		
Effects Index	***Flammulated owl***	***Northern goshawk***
0.000	754.07	1,471.65
0.001 - 0.050	13.16	12.70
0.051 - 0.250	138.07	230.39
0.251 - 0.500	408.77	954.02
0.501 - 0.750	204.40	330.48
0.751 - 0.999	47.85	176.64
1.000	69.83	91.56
Current and Future Activities Potential Effects with Minimization Measures		
0.000	754.07	1,442.94
0.001 - 0.050	12.88	12.44
0.051 - 0.250	138.65	228.85
0.251 - 0.500	416.70	961.60
0.501 - 0.750	208.12	411.00
0.751 - 0.999	58.80	202.53
1.000	73.35	124.81
Total Species Distribution (ac)	**7,086.51**	**9,019.05**

Table BIR33
Potential Effects with Mitigation Measures on Birds for Current Activities as well as Current and Future Activities.

Current Activities Potential Effects with Mitigation Measures		
Effects Index	***Flammulated owl***	***Northern goshawk***
0.000	754.07	1,471.65
0.001 - 0.050	13.16	12.70
0.051 - 0.250	138.07	1,057.66
0.251 - 0.500	408.77	457.23
0.501 - 0.750	204.40	237.04
0.751 - 0.999	47.85	31.12
1.000	69.83	0.04
Current and Future Activities Potential Effects with Mitigation Measures		
0.000	754.07	1,442.94
0.001 - 0.050	12.88	12.44
0.051 - 0.250	138.65	1,064.19
0.251 - 0.500	416.70	537.26
0.501 - 0.750	208.12	281.55
0.751 - 0.999	58.80	45.73
1.000	73.35	0.06
Total Species Distribution (ac)	**7,086.51**	**9,019.05**

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Flammulated Owl (*Otus flammeolus*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				6-20 (6)	High	1-50 (12)	10-50 (44)	Stable	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (16)	High	1-50 (32)	100-125 (126)	Stable	Low	Moderate	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	>300	Moderate	2,501-10,000	U	U	Low	Moderate	High	Low
Comments	No. of sites for reference condition likely low due to few surveys conducted; est. population size based on no. of known sites assuming one pair per location; known area of occupied habitat based on a maximum est. home range of 7.4 acres (18.3 ha) (Mika 2007); ; information for current condition rangewide based on information in NatureServe											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Northern goshawk (*Accipiter gentilis*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5	U	1-50	1,000-5,000	Stable	Low	Low	High	
Current Condition Spring Mountains				1-5	High	1-50	1,000-5,000	Stable	Low	Low	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	>300	High	100,101-1,000,000	>25,000	Stable	Moderate	Low	High	Low
Comments	Proportion of sites with good viability in current condition based on 2 nesting sites and 1 with a fledgling; population trend for reference condition based on historic surveys that were very site specific and not conducted throughout the Spring Mountains, thus species likely existed pre-1998 in similar numbers to current condition; information for current condition rangewide based on information in NatureServe											

APPENDIX 5F-7

Reptilian Species (Snakes, Lizards, Tortoises)

QUALITATIVE ANALYSIS

The results of the nature serve analysis by species is contained in Tables 5F7-1.

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Western red-tailed skink (*Eumeces gilberti rubricaudatus*)	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Threats - Anticipated Increase or Shift**
Reference Condition Spring Mountains				1-5 (2)	High	U	U	U	Low	Moderate	High	
Current Condition Spring Mountains				1-5 (3)	High	U	U	U	Low	Moderate	High	Low
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	81-300	High	U	U	U	U	U	U	U
Comments	Environmental specificity based on preference for rocky areas or areas with logs or leaf cover*near permanent or intermittent streams*; intrinsic vulnerability based on average clutch size of 3 to 9 eggs; no. of sites in the reference condition based on incidental sightings [4 total at 2 locations (at junction of Deer Creek hwy & Lee Canyon Rd, and below the junction along Lee Canyon Rd)] (RECON 2000); no. of sites in current condition based on presumption that the 2 lower Lee Canyon sites have persisted and a survey that located a skink in the rocky cliffs at Middle Kyle; note -- the no. of sites are likely very underestimated for this subspecies as very few surveys have been conducted throughout the NRA; information for current condition rangewide based on information in NatureServe											

APPENDIX 5F-8

Plant Species (Alpine and Sub-Alpine)

1.1 ALPINE AND SUB-ALPINE PLANTS

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

POINT OCCURRENCE DATA

The point occurrence data (with 0.1 acre buffer per observation) overlap with current and future activities for each species summed to between 0.0 and 0.45 acres per species for the Alpine and Sub-Alpine plant species (Excel Table ASPO10). No current or future activity has an overlap of greater than 0.30 acres, although Private Land had the greatest overlap of current activities and the Future Ski Area Footprint had the greatest planned activity overlap. The Charleston Ivesia has no point occurrence data, while the Clokey Silene does not have any overlap of activities with occurrences. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities account for the majority of the overlap with the Jaeger Whitlowgrass, while future activities will potentially overlap a proportionately large area of Charleston Pussytoes, Charleston Kittentails, and Charleston Tansy (Excel Table ASPO10**,** Appendix D.1).

POLYGON LOCALITY DATA

The polygon locality data overlap with current and future activities for each species summed to between 0.7 and 24.9 acres per species for the Alpine and Sub-Alpine plant species (Excel Table ASPL10). No polygon data is available for Charleston Pussytoes. One current and two future activities had an overlap of greater than five acres. The current activity was on Private Land, while the future activities are the Ski Area AOI and Footprint. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities account for the majority of the overlap with the Charleston Tansy and Charleston Ivesia, while future activities only will overlap Charleston Kittentails (Excel Table ASPL10, Appendix D.2).

SUITABLE HABITAT DATA

The habitat suitability overlap with current and future activities for each species summed to between 8.8 and 231.8 acres per species for the Alpine and Sub-Alpine plant species (Excel Table AS10. Values of overlap of an activity on a species that exceeded 25 acres are highlighted with bold text, and one current and four future activities meet this criteria. The current activity is the High Mileage Trail System AOI. The future activities with greater than 25 acres of overlap with these plants are: Future Campground AOI and Footprint, and the Future Ski Area AOI and Footprint. Three species, Charleston Ivesia, Clokey Silene, and Charleston Tansy, have no overlap greater than 25 acres with current or future activities. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities account for the majority of the overlap on the Charleston Ivesia, Charleston Tansy, and Clokey Silene, while future activities will potentially overlap a proportionately large area of Charleston Pussytoes, Charleston Kittentails, and Jaeger Whitlowgrass (Excel Table AS10, Appendix D.3). The ski area and the campground account for the majority of planned overlap on these three species, while other future activities are expected to be small.

1.1.1.2 Potential Effects

The analysis of potential effects on Alpine and Sub-Alpine plant species relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Appendix A, Table AS21) The majority of activities have a high (H) to total (TTL) impact on these plant species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area.

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species (Appendix D.1).

POINT OCCURRENCE DATA

The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Table ASPO11**)**. The aggregated current and future activities' potential effects are estimated to impact between 0 and 25 percent of the occupied sites of the Alpine and Sub-Alpine plant species. All potential effects equal to or greater than five percent are highlighted with bold text, and no current and two future activities meet this criteria. The planned activities are the Ski Area Footprint and the West Side PO Camping Footprint. Charleston Kittentails and Clokey Silene were the only species with no activity effect greater than five percent.

Current activities each have less than a two percent potential effect on the Alpine and Sub-Alpine plant species, while future activities have a proportionately large effect on Charleston Pussytoes, Jaeger Whitlowgrass, and Charleston Tansy (Table ASPO11). The activities have no potential effect on the Clokey Silene known occurrence areas.

Maps of the effect intensity of current and future activities on point occurrences are presented with suitable habitat data for each Alpine and Sub-Alpine plant species in Figures AS1-6. The areas of point occurrences that overlap colored shading indicate locations where the Alpine and Sub-Alpine species have been observed and current or future activities exist or are proposed. The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category as it corresponds to the species figures (Figures AS1-6, Table ASPO30). Note that nearly all of the potential effects on known point occurrences are partial (less than 1.0) and degrade habitat at a low level within an activity area.

POLYGON LOCALITY DATA

The percentage potential effect of each activity using polygon locality data for each species was calculated and summarized (Table ASPL11**)** by activity. The aggregated current and future activities' potential effects are estimated to impact between 2 and 19 percent of the occupied

sites of the Alpine and Sub-Alpine plant species. All potential effects equal to or greater than five percent are highlighted with bold text, and no current and one future activity meets this criteria. The planned activity is the Future Ski Area Footprint, which overlaps Charleston Kittentails. No other species had potential effects by future activities, or a current activity effect greater than four percent.

Maps of the effect intensity of current and future activities using polygon locality data are presented for each Alpine and Sub-Alpine plant species in Figures AS1-6. The areas of polygon localities that overlap colored shading indicate locations where the Alpine and Sub-Alpine species have been observed and current or future activities exist or are proposed. The aggregated potential effects intensity index for each species provides the acreage of polygon localities of each species that fall within each effects index category as it corresponds to the species figures (Figures AS1-6, Table ASPL30). Note that nearly all of the potential effects on known polygons are partial (less than 1.0) and degrade habitat at a low level within an activity area.

SUITABLE HABITAT DATA

The percentage potential effect of each activity on suitable habitat for each species was calculated and summarized (Table AS11). The aggregated current and future activities' potential effects are estimated to impact between 1.2 and 3.8 percent of the occupied sites of the Alpine and Sub-Alpine plant species. All potential effects equal to or greater than one percent are highlighted with bold text, and one current and two future activities meet this criteria. The current activity is on Private Land, while the planned activities are the Future Campground and Ski Area Footprints. Jaeger Whitlowgrass and Charleston Ivesia were the only species with no activity effect greater than one percent.

Current activities account for the majority of the potential effects on the Charleston Ivesia, Charleston Tansy, and the Clokey Silene, while future activities have a proportionately large effect on Charleston Pussytoes, Jaeger Whitlowgrass, and Charleston Kittentails (Table AS11). The planned activities have no potential effect on the Charleston Ivesia.

Maps of the effect intensity of current and future activities on suitable habitat are presented with species occurrence data for each Alpine and Sub-Alpine plant species in Figures AS1-6. The areas of suitable habitat that overlap colored shading indicate locations where the Alpine and Sub-Alpine species have been observed and current or future activities exist or are proposed. Other locations with activity effects do not have suitable habitat present for these plant species. The aggregated potential effects intensity index for each species provides the acreage of geographic area of each species that falls within each effects index category as it corresponds to the species figures (Figures AS1-6, Table AS30). Note that the majority of the potential effects are partial (less than 1.0) and degrade habitat within an activity area.

1.1.1.3 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on Alpine and Sub-Alpine plant species. The three categories of conservation measures are avoidance, minimization, and mitigation. In order to determine the benefit of conservation measures, the potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures. The acreage results are provided by species in

Appendix D.1, while the percentage potential effect with and without conservation measures is reviewed in the following sections.

1.1.1.4 Avoidance

POINT OCCURRENCE DATA

No current activity with avoidance measures was greater than five percent of the point occurrence with buffers area, while one future activity was greater than five percent (Table ASPO12). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 0 and 6.0 percent of the suitable habitat of Alpine and Sub-Alpine species.

The effects intensity aggregated for all activities with avoidance measures on each Alpine and Sub-Alpine plant species indicates that no area has complete elimination of point occurrence sites for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table ASPO31). Avoidance measures are benefiting these plant species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing points of occurrence. Future low-intensity effects will have a relatively greater impact on the Charleston Pussytoes and Charleston Tansy, while no current or future impacts are expected for Charleston Ivesia and Clokey Silene.

POLYGON LOCALITY DATA

No current or future activity with avoidance measures was greater than five percent using the polygon locality data (Table ASPL12). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 0.04 and 2.98 percent of the suitable habitat of Alpine and Sub-Alpine species.

The effects intensity aggregated for all activities with avoidance measures on each Alpine and Sub-Alpine plant species indicates only a minimal area has complete elimination using polygon locality data for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table ASPL31). Avoidance measures are benefiting these plant species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing polygons. Future low-intensity effects will have a relatively greater impact on the Charleston Kittentails, while no future impacts are expected for the remaining Alpine and Sub-Alpine species.

SUITABLE HABITAT DATA

No current or future activities with avoidance measures were greater than one percent of the suitable habitat (Table AS12). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 0.4 and 1.3 percent of the suitable habitat of Alpine and Sub-Alpine species.

The effects intensity aggregated for all activities with avoidance measures on each Alpine and Sub-Alpine plant species indicates only a minimal area has complete elimination of suitable habitat for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table AS31). Avoidance measures are benefiting these plant species by reducing the

deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence. Future low-intensity effects will have a relatively greater impact on the Charleston Kittentails, Charleston Pussytoes, and Jaeger Whitlowgrass, while minimal future impacts are expected for Charleston Ivesia, Charleston Tansy, and Clokey Silene.

1.1.1.5 Minimization

POINT OCCURRENCE DATA

All potential effects (with minimization measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and no current and one future activity meets this criteria (Table ASPO13). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 0 and 18.8 percent of the occupied sites of Alpine and Sub-Alpine plant species. The future activity effect is on the Ski Area Footprint.

The effects intensity aggregated for all activities with minimization measures on each Alpine and Sub-Alpine plant species indicates only a small area has complete elimination of point occurrence locations for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table ASPO32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

POLYGON LOCALITY DATA

All potential effects (with minimization measures, using polygon locality data) equal to or greater than five percent are highlighted with bold text, and no current and one future activity meets this criteria (Table ASPL13). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 0.17 and 8.45 percent of the occupied sites of Alpine and Sub-Alpine plant species. The only future activity effect is from the Ski Area Footprint on Charleston Kittentails.

The effects intensity aggregated for all activities with minimization measures on each Alpine and Sub-Alpine plant species indicates only a small area has complete elimination of polygon localities for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table ASPL32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing species polygons to be maintained.

SUITABLE HABITAT DATA

All potential effects (with minimization measures) equal to or greater than one percent are highlighted with bold text, and one current and two future activities meet this criteria (Table AS13). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 0.8 and 2.8 percent of the occupied sites of Alpine and Sub-Alpine plant species. The current activity is on Private Land, while future activities are the future Campground and Ski Area Footprints.

The effects intensity aggregated for all activities with minimization measures on each Alpine and Sub-Alpine plant species indicates only a small area has complete elimination of suitable habitat for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table AS32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

1.1.1.6 Mitigation

POINT OCCURRENCE DATA

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and no current and one future activity meets this criteria (Table ASPO14). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 0 and 18.8 percent of the occupied sites of Alpine and Sub-Alpine plant species. The future activity effect is on the Ski Area Footprint. Three species, the Jaeger Whitlowgrass, Clokey Silene, and Charleston Kittentails, have no potential effects (with mitigation measures) greater than one percent.

The effects intensity aggregated for all activities with mitigation measures on each Alpine and Sub-Alpine plant species indicates only a small area has complete elimination of point occurrences of these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table ASPO33). Mitigation measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing points of occurrence.

POLYGON LOCALITY DATA

All potential effects (with mitigation measures, using polygon locality data) equal to or greater than five percent are highlighted with bold text, and no current and one future activity meets this criteria (Table ASPL14). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 2 and 14 percent of the occupied sites of Alpine and Sub-Alpine plant species. The future activity effect is the Ski Area Footprint. All species had less than or equal to a total of five percent potential effects from current and future activities (with mitigation measures), except for Charleston Kittentails. No polygon data was available for Charleston Pussytoes.

The effects intensity aggregated for all activities with mitigation measures on each Alpine and Sub-Alpine plant species indicates only a small area has complete elimination of point occurrences of these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table ASPL33). Mitigation measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing polygon localities to be maintained across more of the existing area.

SUITABLE HABITAT DATA

All potential effects (with mitigation measures) equal to or greater than one percent are highlighted with bold text, and one current and two future activities meet this criteria (Table AS14). The aggregated current and future activities' potential effects with minimization

measures are estimated to impact between 1.0 and 2.9 percent of the occupied sites of Alpine and Sub-Alpine plant species. The current activity is on Private Land, and the future activities are the Campground and Ski Area Footprints. Two species, Jaeger Whitlowgrass and Charleston Ivesia, have no potential effects (with mitigation measures) greater than one percent.

The effects intensity aggregated for all activities with mitigation measures on each Alpine and Sub-Alpine plant species indicates only a small area has complete elimination of suitable habitat for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table AS33). Mitigation measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

Ranking of Magnitude of Potential Effects

Species: Charleston Pussytoes (*Antennaria soliceps*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassmen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habita	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris depositior	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Valu	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	Lb	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = opening the canopy would not be beneficial; they prefer more sheltered areas

Species: Jaeger Whitlowgrass (*Draba jaegeri*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassmen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habita	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris depositior	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	Hb	Lc	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = this species is found on steep slopes
c = this species could be affected by staging activities

Species: Charleston Ivesia (*Ivesia cryptocaulis*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassmen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris depositior	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	M	TTL	La	H	L	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping

Species: Clokey Silene (*Silene clokeyi*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassmen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinators	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris depositior	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	L	Lb	L	Mc	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = this species occurs at snow drifts
c = this species occurs along wetland margins (SWCA ranks as LE, not sure why)

Species: Charleston Tansy (*Sphaeromeria compacta*)	Activities to be Included in the Model																																								Management Activities not Included in the Model			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassmen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habita	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris depositior	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	Ma	Ha	Ma	TTL	Ma	TTL	Ma	Ha	M	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping

Species: Charleston Kittentails (*Synthyris ranunculina*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassmen	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predatior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healt	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habita	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris depositior	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Valu	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	Lb	Lc	L	Md	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = this species could be affected by staging activities
c = this species occurs at snow drifts
d = this species occurs along wetland margins
e = results in increased susceptibility to fire

Value of Conservation Measures

Species
Charleston Pussytoes

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	NM	
CUA Footprint	L	L	NM	NM	
High Mileage System Trail AOI	L	TR	M	L	
High Mileage System Trail Footprint	L	L	NM	NM	
Low Mileage System Trail AOI	L	TR	M	L	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	M	L	
Non System Trail Footprint	L	L	NM	NM	
Private Land	H	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Jaeger Whitlowgrass

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	NM	
CUA Footprint	L	L	NM	NM	
High Mileage System Trail AOI	L	TR	M	L	
High Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	M	L	
Non System Trail Footprint	L	L	NM	NM	
Private Land	H	NM	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	M	L	
Low Mileage System Trail Footprint	L	L	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Charleston Ivesia

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
High Mileage System Trail AOI	L	TR	M	L	
High Mileage System Trail Footprint	L	L	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
Non System Trail AOI	L	TR	M	L	
Non System Trail Footprint	L	L	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Private Land	H	NM	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Clokey Silene

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
High Mileage System Trail AOI	L	TR	M	L	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Private Land	H	NM	NM	NM	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Charleston Tansy

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
High Mileage System Trail AOI	L	TR	M	L	
High Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	M	L	
Non System Trail Footprint	L	L	NM	NM	
Private Land	H	NM	NM	NM	
CUA AOI	L	L	L	NM	
CUA Footprint	L	L	NM	NM	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	
Future Ski Area Footprint	M	M	L	L	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Charleston Kittentails

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	NM	
CUA Footprint	L	L	NM	NM	
Climbing Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	M	L	
High Mileage System Trail Footprint	L	L	NM	NM	
Low Mileage System Trail AOI	L	TR	M	L	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	M	L	
Non System Trail Footprint	L	L	NM	NM	
Private Land	H	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Summary Tables

Table AS10
Summary of Individual Activity Effect Acreage on Suitable Habitat of Alpine and Sub-Alpine Plants

	Charleston Pussytoes	Jaeger Whitlowgrass	Charleston Ivesia	Clokey Silene	Charleston Tansy	Charleston Kittentails
Activities						
Current Activities						
Acreage of Suitable Habitat by Species	*2676.2*	*4257.6*	*212.4*	*392.7*	*905.0*	*3500.4*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						0.03
CUA AOI	1.69	3.64			0.98	1.69
CUA Footprint	0.02	0.09			0.02	0.02
Firewood Gathering Area			0.07			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	9.44	**25.34**	7.48	1.04	16.34	11.25
High Mileage System Trail Footprint	0.63	1.71	0.53	0.07	1.12	0.75
Horses/Burros .25 - 1.0 mile from spring/stream		0.90		1.43		
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI	2.93	4.58				4.11
Low Mileage System Trail Footprint	0.05	0.07				0.07
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI	1.94	2.75	0.29		1.10	1.94
Non System Trail Footprint	0.13	0.18	0.02		0.07	0.13
Paved Road AOI			0.09			
Paved Road Footprint			0.05			
Picnic Area AOI						
Picnic Area Footprint						
Private Land	0.46	14.12	0.00	15.81	60.13	5.09
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI	11.15	2.86				11.15
Ski Area Footprint	7.58	0.94				7.58
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	0.13					0.13
Unpaved Road Footprint	0.10					0.10
Wildland Urban Interface	0.01	0.00	0.15			0.01
All Current Activities Combined (Aggregated)	*36.0*	*56.8*	*8.8*	*18.4*	*80.1*	*43.8*
Future Activities						
Future Campground AOI	**86.33**					
Future Campground Footprint	**84.54**					
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		**45.79**				**94.81**
Future Ski Area Footprint		**35.52**			0.00	**87.85**
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI	1.33	5.45				1.33
West Side PO Camping Footprint	1.69	7.95				1.69
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI	1.88	4.54		0.29	0.34	2.38
West Side PO Non Motorized Trails Footprint	0.13	0.30		0.02	0.02	0.16
All Current and Future Activities Combined (Aggregated)	*211.7*	*155.0*	*8.8*	*18.7*	*80.4*	*231.8*

**** Bold text indicates activities with > 25 ac overlap with species area***

Table AS11
Percent Potential Effect of Activities on Suitable Habitat by Species - Alpine and Sub-Alpine Plants

	Charleston Pussytoes	Jaeger Whitlowgrass	Charleston Ivesia	Clokey Silene	Charleston Tansy	Charleston Kittentails
Activities						
Current Activities						
Acreage of Suitable Habitat by Species	*2676*	*4258*	*212*	*393*	*905*	*3500*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						0.001%
CUA AOI	0.032%	0.043%			0.054%	0.024%
CUA Footprint	0.001%	0.002%			0.002%	0.001%
Firewood Gathering Area			0.009%			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	0.088%	0.149%	0.881%	0.066%	0.451%	0.080%
High Mileage System Trail Footprint	0.024%	0.040%	0.248%	0.018%	0.124%	0.021%
Horses/Burros .25 - 1.0 mile from spring/stream		0.005%		0.091%		
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI	0.027%	0.027%				0.029%
Low Mileage System Trail Footprint	0.002%	0.002%				0.002%
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI	0.018%	0.016%	0.034%		0.030%	0.014%
Non System Trail Footprint	0.005%	0.004%	0.009%		0.008%	0.004%
Paved Road AOI			0.021%			
Paved Road Footprint			0.023%			
Picnic Area AOI						
Picnic Area Footprint						
Private Land	0.004%	0.083%	0.000%	**1.007%**	**1.661%**	0.036%
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI	0.104%	0.017%				0.080%
Ski Area Footprint	0.213%	0.017%				0.163%
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	0.002%					0.002%
Unpaved Road Footprint	0.004%					0.003%
Wildland Urban Interface	0.000%	0.000%	0.018%			0.000%
All Current Activities Combined (Aggregated)	0.5%	0.4%	1.3%	1.2%	2.3%	0.5%
Future Activities						
Future Campground AOI	0.806%					
Future Campground Footprint	**2.369%**					
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		0.269%				0.677%
Future Ski Area Footprint		0.626%			0.000%	**1.882%**
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI	0.025%	0.064%				0.019%
West Side PO Camping Footprint	0.047%	0.140%				0.036%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI	0.018%	0.027%		0.019%	0.009%	0.017%
West Side PO Non Motorized Trails Footprint	0.005%	0.007%		0.005%	0.002%	0.005%
All Current and Future Activities Combined (Aggregated)	3.8%	1.5%	1.3%	1.2%	2.4%	3.1%

**** Bold text indicates activities with > 1 percent overlap with species area***

Table AS12
Percent Potential Effect of Activities with Avoidance Measures on Suitable Habitat by Species - Alpine and Sub-Alpine Plants

	Charleston Pussytoes	Jaeger Whitlowgrass	Charleston Ivesia	Clokey Silene	Charleston Tansy	Charleston Kittentails
Activities						
Current Activities						
Acreage of Suitable Habitat by Species	*2676*	*4258*	*212*	*393*	*905*	*3500*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						0.001%
CUA AOI	0.020%	0.027%			0.034%	0.015%
CUA Footprint	0.001%	0.001%			0.001%	0.000%
Firewood Gathering Area			0.008%			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	0.064%	0.108%	0.639%	0.048%	0.327%	0.058%
High Mileage System Trail Footprint	0.015%	0.025%	0.155%	0.011%	0.077%	0.013%
Horses/Burros .25 - 1.0 mile from spring/stream		0.005%		0.091%		
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI	0.020%	0.019%				0.021%
Low Mileage System Trail Footprint	0.001%	0.001%				0.001%
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI	0.013%	0.012%	0.024%		0.022%	0.010%
Non System Trail Footprint	0.003%	0.003%	0.006%		0.005%	0.002%
Paved Road AOI			0.019%			
Paved Road Footprint			0.021%			
Picnic Area AOI						
Picnic Area Footprint						
Private Land	0.001%	0.021%	0.000%	0.252%	0.415%	0.009%
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI	0.096%	0.016%				0.074%
Ski Area Footprint	0.197%	0.015%				0.150%
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	0.002%					0.001%
Unpaved Road Footprint	0.002%					0.002%
Wildland Urban Interface	0.000%	0.000%	0.018%			0.000%
All Current Activities Combined (Aggregated)	0.4%	0.3%	0.9%	0.4%	0.9%	0.4%
Future Activities						
Future Campground AOI	0.202%					
Future Campground Footprint	0.592%					
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		0.067%				0.169%
Future Ski Area Footprint		0.156%			0.000%	0.471%
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI	0.012%	0.030%				0.009%
West Side PO Camping Footprint	0.022%	0.067%				0.017%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI	0.013%	0.019%		0.014%	0.007%	0.012%
West Side PO Non Motorized Trails Footprint	0.001%	0.002%		0.001%	0.001%	0.001%
All Current and Future Activities Combined (Aggregated)	1.3%	0.6%	0.9%	0.4%	0.9%	1.0%

**** Bold text indicates activities with > 1 percent overlap with species area***

Table AS13
Percent Potential Effect of Activities with Minimization Measures on Suitable Habitat by Species - Alpine and Sub-Alpine Plants

	Charleston Pussytoes	Jaeger Whitlowgrass	Charleston Ivesia	Clokey Silene	Charleston Tansy	Charleston Kittentails
Activities						
Current Activities						
Acreage of Suitable Habitat by Species	*2676*	*4258*	*212*	*393*	*905*	*3500*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						0.001%
CUA AOI	0.024%	0.032%			0.041%	0.018%
CUA Footprint	0.001%	0.002%			0.002%	0.001%
Firewood Gathering Area			0.008%			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	0.044%	0.074%	0.440%	0.033%	0.226%	0.040%
High Mileage System Trail Footprint	0.024%	0.040%	0.248%	0.018%	0.124%	0.021%
Horses/Burros .25 - 1.0 mile from spring/stream		0.004%		0.068%		
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI	0.014%	0.013%				0.015%
Low Mileage System Trail Footprint	0.002%	0.002%				0.002%
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI	0.009%	0.008%	0.017%		0.015%	0.007%
Non System Trail Footprint	0.005%	0.004%	0.009%		0.008%	0.004%
Paved Road AOI			0.016%			
Paved Road Footprint			0.023%			
Picnic Area AOI						
Picnic Area Footprint						
Private Land	0.004%	0.083%	0.000%	**1.007%**	**1.661%**	0.036%
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI	0.078%	0.013%				0.060%
Ski Area Footprint	0.159%	0.012%				0.122%
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	0.002%					0.001%
Unpaved Road Footprint	0.004%					0.003%
Wildland Urban Interface	0.000%	0.000%	0.018%			0.000%
All Current Activities Combined (Aggregated)	0.4%	0.3%	0.8%	1.1%	2.1%	0.3%
Future Activities						
Future Campground AOI	0.605%					
Future Campground Footprint	**1.777%**					
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		0.202%				0.508%
Future Ski Area Footprint		0.469%			0.000%	**1.412%**
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI	0.019%	0.048%				0.014%
West Side PO Camping Footprint	0.035%	0.105%				0.027%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI	0.013%	0.020%		0.014%	0.007%	0.013%
West Side PO Non Motorized Trails Footprint	0.005%	0.007%		0.005%	0.002%	0.005%
All Current and Future Activities Combined (Aggregated)	2.8%	1.1%	0.8%	1.1%	2.1%	2.3%

**** Bold text indicates activities with > 1 percent overlap with species area***

Table AS14
Percent Potential Effect of Activities with Mitigation Measures on Suitable Habitat by Species - Alpine and Sub-Alpine Plants

	Charleston Pussytoes	Jaeger Whitlowgrass	Charleston Ivesia	Clokey Silene	Charleston Tansy	Charleston Kittentails
Activities						
Current Activities						
Acreage of Suitable Habitat by Species	*2676*	*4258*	*212*	*393*	*905*	*3500*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						0.001%
CUA AOI	0.032%	0.043%			0.054%	0.024%
CUA Footprint	0.001%	0.002%			0.002%	0.001%
Firewood Gathering Area			0.009%			
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	0.066%	0.112%	0.661%	0.050%	0.339%	0.060%
High Mileage System Trail Footprint	0.024%	0.040%	0.248%	0.018%	0.124%	0.021%
Horses/Burros .25 - 1.0 mile from spring/stream		0.005%		0.091%		
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI	0.021%	0.020%				0.022%
Low Mileage System Trail Footprint	0.002%	0.002%				0.002%
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI	0.014%	0.012%	0.025%		0.023%	0.010%
Non System Trail Footprint	0.005%	0.004%	0.009%		0.008%	0.004%
Paved Road AOI			0.021%			
Paved Road Footprint			0.023%			
Picnic Area AOI						
Picnic Area Footprint						
Private Land	0.004%	0.083%	0.000%	**1.007%**	**1.661%**	0.036%
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI	0.078%	0.013%				0.060%
Ski Area Footprint	0.159%	0.012%				0.122%
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI	0.002%					0.002%
Unpaved Road Footprint	0.004%					0.003%
Wildland Urban Interface	0.000%	0.000%	0.018%			0.000%
All Current Activities Combined (Aggregated)	0.4%	0.3%	1.0%	1.2%	2.2%	0.4%
Future Activities						
Future Campground AOI	0.605%					
Future Campground Footprint	**1.777%**					
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		0.202%				0.508%
Future Ski Area Footprint		0.469%			0.000%	**1.412%**
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI	0.019%	0.048%				0.014%
West Side PO Camping Footprint	0.035%	0.105%				0.027%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI	0.018%	0.027%		0.019%	0.009%	0.017%
West Side PO Non Motorized Trails Footprint	0.005%	0.007%		0.005%	0.002%	0.005%
All Current and Future Activities Combined (Aggregated)	2.9%	1.2%	1.0%	1.2%	2.2%	2.4%

**** Bold text indicates activities with > 1 percent overlap with species area***

Table AS30

Potential Effects on Alpine & Subalpine Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data

Effects Index	*Charleston ivesia*	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Current Activities - Potential Effects						
0.000	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	8.09	33.31	25.69	77.89	18.29	50.19
0.251 - 0.500	0.02	1.56	1.56	0.99	0.00	3.29
0.501 - 0.750	0.09	7.85	7.82	0.00	0.00	1.27
0.751 - 0.999	0.00	0.00	0.00	0.00	0.00	0.00
1.000	0.59	1.08	0.93	1.21	0.07	2.05
Total	**2.68**	**16.04**	**13.974**	**21.18**	**4.640**	**17.15**
Current and Future Activities - Potential Effects						
0.000		0.00	0.00	0.00	0.00	0.00
0.001 - 0.050		0.00	0.00	0.00	0.00	0.00
0.051 - 0.250		130.30	113.72	78.19	18.58	99.23
0.251 - 0.500		2.81	2.81	1.01	0.00	8.06
0.501 - 0.750		97.34	94.00	0.00	0.00	44.77
0.751 - 0.999		0.12	0.12	0.00	0.00	0.60
1.000		1.23	1.06	1.23	0.09	2.35
Total		**108.29**	**101.455**	**21.28**	**4.740**	**65.16**

Table AS31

Potential Effects with Avoidance Measures on Alpine & Subalpine Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Effects Index	*Charleston ivesia*	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Current Activities - Potential Effects with Avoidance Measures						
0.000	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	8.09	33.31	25.69	77.89	18.29	50.19
0.251 - 0.500	0.02	1.80	1.80	0.99	0.00	3.62
0.501 - 0.750	0.63	8.67	8.50	1.21	0.07	2.97
0.751 - 0.999	0.00	0.02	0.02	0.00	0.00	0.02
1.000	0.05	0.00	0.00	0.00	0.00	0.00
Total	**1.92**	**12.54**	**11.595**	**8.07**	**1.590**	**10.72**
Current and Future Activities - Potential Effects with Avoidance Measures						
0.000		0.00	0.00	0.00	0.00	0.00
0.001 - 0.050		0.00	0.00	0.00	0.00	0.00
0.051 - 0.250		219.55	199.63	78.22	18.60	139.72
0.251 - 0.500		3.56	3.56	1.01	0.00	12.29
0.501 - 0.750		8.67	8.50	1.21	0.07	2.97
0.751 - 0.999		0.02	0.02	0.00	0.00	0.02
1.000		0.00	0.00	0.00	0.00	0.00
Total		**36.39**	**34.197**	**8.13**	**1.650**	**25.19**

Table AS32

Potential Effects with Minimization Measures on Alpine & Subalpine Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data

Effects Index	*Charleston ivesia*	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Current Activities - Potential Effects with Minimization Measures						
0.000	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	8.10	33.31	25.69	77.90	18.29	50.20
0.251 - 0.500	0.06	1.80	1.80	0.98	0.00	3.61
0.501 - 0.750	0.04	7.61	7.58	0.00	0.00	0.94
0.751 - 0.999	0.00	0.00	0.00	0.00	0.00	0.00
1.000	0.59	1.08	0.93	1.21	0.07	2.05
Total	**1.66**	**11.56**	**9.865**	**18.83**	**4.420**	**12.23**
Current and Future Activities - Potential Effects with Minimization Measures						
0.000		0.00	0.00	0.00	0.00	0.00
0.001 - 0.050		0.00	0.00	0.00	0.00	0.00
0.051 - 0.250		130.30	113.72	78.22	18.58	99.25
0.251 - 0.500		3.12	3.12	0.98	0.00	9.02
0.501 - 0.750		97.15	93.80	0.00	0.00	44.38
0.751 - 0.999		0.00	0.00	0.00	0.00	0.00
1.000		1.23	1.06	1.23	0.09	2.35
Total		**80.87**	**75.594**	**18.92**	**4.500**	**48.36**

Table AS33

Potential Effects with Mitigation Measures on Alpine & Subalpine Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Current Activities - Potential Effects with Mitigation Measures						
Effects Index	***Charleston ivesia***	***Charleston kittentails***	***Charleston pussytoes***	***Charleston tansy***	***Clokey silene***	***Jaeger whitlowgrass***
0.000	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	8.09	33.31	25.69	77.89	18.29	50.19
0.251 - 0.500	0.02	1.56	1.56	0.99	0.00	3.29
0.501 - 0.750	0.09	7.85	7.82	0.00	0.00	1.27
0.751 - 0.999	0.00	0.00	0.00	0.00	0.00	0.00
1.000	0.59	1.08	0.93	1.21	0.07	2.05
Total	**2.18**	**12.87**	**10.984**	**20.07**	**4.590**	**14.79**
Current and Future Activities - Potential Effects with Mitigation Measures						
0.000		0.00	0.00	0.00	0.00	0.00
0.001 - 0.050		0.00	0.00	0.00	0.00	0.00
0.051 - 0.250		130.30	113.72	78.19	18.58	99.23
0.251 - 0.500		2.88	2.88	1.01	0.00	8.72
0.501 - 0.750		97.39	94.04	0.00	0.00	44.70
0.751 - 0.999		0.00	0.00	0.00	0.00	0.00
1.000		1.23	1.06	1.23	0.09	2.35
Total		**82.32**	**76.824**	**20.18**	**4.670**	**51.15**

Table ASPL10
Summary of Individual Activity Effect Acreage using Polygon Locality Data of Alpine and Sub-Alpine Plants

	Charleston ivesia	***Charleston kittentails***	***Charleston pussytoes***	***Charleston tansy***	***Clokey silene***	***Jaeger whitlowgrass***
Activities						
Current Activities						
Occupied Acreage by Species	*127.5*	*61.3*	*0.0*	*118.4*	*3.9*	*13.4*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI				0.3		
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	4.7	0.9		4.6		0.8
High Mileage System Trail Footprint	0.3	0.1		0.3		0.1
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI						
Non System Trail Footprint						
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land	**16.2**			**19.8**	0.7	
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						
All Current Activities Combined (Aggregated)	*21.4*	*1.0*	*N/A*	*24.9*	*0.7*	*0.9*
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		**8.1**				
Future Ski Area Footprint		**12.0**				
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	*21.4*	*21.1*	*N/A*	*24.9*	*0.7*	*0.9*

**** Bold text indicates activities with > 5 ac overlap with species area***

Table ASPL11
Percent Potential Effect of Activities using Polygon Locality Data by Species - Alpine and Sub-Alpine Plants

	Charleston ivesia	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Activities						
Current Activities						
Occupied Acreage by Species	*127.5*	*61.3*	*0.0*	*118.4*	*3.9*	*13.4*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI				0%		
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	1%	0%		1%		2%
High Mileage System Trail Footprint	0%	0%		0%		0%
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI						
Non System Trail Footprint						
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land	3%			4%	4%	
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						
All Current Activities Combined (Aggregated)	4%	0%	N/A	6%	4%	2%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		3%				
Future Ski Area Footprint		**15%**				
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	4%	19%	N/A	6%	4%	2%

**** Bold text indicates activities with >= 5% Potential Effect***

Table ASPL12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Alpine Plants

	Charleston ivesia	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Activities						
Current Activities						
Occupied Acreage by Species	*127.5*	*61.3*	*0.0*	*118.4*	*3.9*	*13.4*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI				0%		
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	1%	0%		1%		1%
High Mileage System Trail Footprint	0%	0%		0%		0%
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI						
Non System Trail Footprint						
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land	1%			1%	1%	
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						
All Current Activities Combined (Aggregated)	2%	0%		2%	1%	1%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		1%				
Future Ski Area Footprint		4%				
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	2%	5%		2%	1%	1%

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table ASPL13
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Alpine Plants

	Charleston ivesia	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Activities						
Current Activities						
Occupied Acreage by Species	*127.5*	*61.3*	*0.0*	*118.4*	*3.9*	*13.4*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI				0%		
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	0%	0%		0%		1%
High Mileage System Trail Footprint	0%	0%		0%		0%
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI						
Non System Trail Footprint						
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land	3%			4%	4%	
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						
All Current Activities Combined (Aggregated)	4%	0%		5%	4%	1%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		2%				
Future Ski Area Footprint		11%				
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	4%	14%		5%	4%	1%

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table ASPL14
Percent Potential Effect of Activities with Mitigation Measures using Polygon Locality Data by Species
Alpine and Sub-Alpine Plants

	Charleston ivesia	***Charleston kittentails***	***Charleston pussytoes***	***Charleston tansy***	***Clokey silene***	***Jaeger whitlowgrass***
Activities						
Current Activities						
Occupied Acreage by Species	*127.5*	*61.3*	*0.0*	*118.4*	*3.9*	*13.4*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI				0%		
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI	1%	0%		1%		1%
High Mileage System Trail Footprint	0%	0%		0%		0%
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI						
Non System Trail Footprint						
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land	3%			4%	4%	
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						
All Current Activities Combined (Aggregated)	4%	0%	N/A	5%	4%	2%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		2%				
Future Ski Area Footprint		**11%**				
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggrega	4%	14%	N/A	5%	4%	2%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table ASPL30

Potential Effects on Alpine & Subalpine Plants for Current Activities as well as Current and Future Activities, Polygon Locality Data

Current Activities - Potential Effects						
Effects Index	***Charleston ivesia***	***Charleston kittentails***	***Charleston pussytoes***	***Charleston tansy***	***Clokey silene***	***Jaeger whitlowgrass***
0.000	0.00	0.00		0.00	0.00	0.00
0.001 - 0.050	0.00	0.00		0.00	0.00	0.00
0.051 - 0.250	21.09	0.94		24.25	0.67	0.81
0.251 - 0.500	0.00	0.00		0.24	0.00	0.00
0.501 - 0.750	0.00	0.00		0.10	0.00	0.00
0.751 - 0.999	0.00	0.00		0.00	0.00	0.00
1.000	0.33	0.06		0.31	0.00	0.05
Total	**5.60**	**0.30**		**6.55**	**0.167**	**0.258**
Current and Future Activities - Potential Effects						
0.000		0.00				
0.001 - 0.050		0.00				
0.051 - 0.250		9.00				
0.251 - 0.500		0.00				
0.501 - 0.750		12.04				
0.751 - 0.999		0.00				
1.000		0.06				
Total		**11.34**				

Table ASPL31

Potential Effects with Avoidance Measures on Alpine & Subalpine Plant for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Current Activities - Potential Effects with Avoidance Measures						
Effects Index	***Charleston ivesia***	***Charleston kittentails***	***Charleston pussytoes***	***Charleston tansy***	***Clokey silene***	***Jaeger whitlowgrass***
0.000	0.00	0.00		0.00	0.00	0.00
0.001 - 0.050	0.00	0.00		0.00	0.00	0.00
0.051 - 0.250	21.09	0.94		24.25	0.67	0.81
0.251 - 0.500	0.00	0.00		0.34	0.00	0.00
0.501 - 0.750	0.33	0.06		0.30	0.00	0.05
0.751 - 0.999	0.00	0.00		0.01	0.00	0.00
1.000	0.00	0.00		0.00	0.00	0.00
Total	**2.11**	**0.21**		**2.37**	**0.042**	**0.181**
Current and Future Activities - Potential Effects with Avoidance Measures						
0.000		0.00				
0.001 - 0.050		0.00				
0.051 - 0.250		21.04				
0.251 - 0.500		0.00				
0.501 - 0.750		0.06				
0.751 - 0.999		0.00				
1.000		0.00				
Total		**2.98**				

Table ASPL32

Potential Effects with Minimization Measures on Alpine & Subalpine Plant for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Current Activities - Potential Effects with Minimization Measures						
Effects Index	***Charleston ivesia***	***Charleston kittentails***	***Charleston pussytoes***	***Charleston tansy***	***Clokey silene***	***Jaeger whitlowgrass***
0.000	0.00	0.00		0.00	0.00	0.00
0.001 - 0.050	0.00	0.00		0.00	0.00	0.00
0.051 - 0.250	21.09	0.94		24.25	0.67	0.81
0.251 - 0.500	0.00	0.00		0.34	0.00	0.00
0.501 - 0.750	0.00	0.00		0.00	0.00	0.00
0.751 - 0.999	0.00	0.00		0.00	0.00	0.00
1.000	0.33	0.06		0.31	0.00	0.05
Total	**4.99**	**0.18**		**5.95**	**0.167**	**0.156**
Current and Future Activities - Potential Effects with Minimization Measures						
0.000		0.00				
0.001 - 0.050		0.00				
0.051 - 0.250		9.00				
0.251 - 0.500		0.00				
0.501 - 0.750		12.04				
0.751 - 0.999		0.00				
1.000		0.06				
Total		**8.45**				

Table ASPL33

Potential Effects with Mitigation Measures on Alpine & Subalpine Plant for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Current Activities - Potential Effects with Mitigation Measures						
Effects Index	***Charleston ivesia***	***Charleston kittentails***	***Charleston pussytoes***	***Charleston tansy***	***Clokey silene***	***Jaeger whitlowgrass***
0.000	0.00	0.00		0.00	0.00	0.00
0.001 - 0.050	0.00	0.00		0.00	0.00	0.00
0.051 - 0.250	21.09	0.94		24.25	0.67	0.81
0.251 - 0.500	0.00	0.00		0.24	0.00	0.00
0.501 - 0.750	0.00	0.00		0.10	0.00	0.00
0.751 - 0.999	0.00	0.00		0.00	0.00	0.00
1.000	0.33	0.06		0.31	0.00	0.05
Total	**5.30**	**0.24**		**6.27**	**0.167**	**0.207**
Current and Future Activities - Potential Effects with Mitigation Measures						
0.000		0.00				
0.001 - 0.050		0.00				
0.051 - 0.250		9.00				
0.251 - 0.500		0.00				
0.501 - 0.750		12.04				
0.751 - 0.999		0.00				
1.000		0.06				
Total		**8.54**				

Table ASPO10
Summary of Individual Activity Effect Acreage on Point Occurrence Data of Alpine and Sub-Alpine Plants

	Charleston ivesia	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Activities						
Current Activities						
Point Occurrence Area by Species (with 0.1 ac buffer)	*0.00*	*2.59*	*2.49*	*0.30*	*0.20*	*1.29*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI						
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI			0.05			0.09
High Mileage System Trail Footprint			0.00			0.01
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI		0.01				0.05
Non System Trail Footprint						0.00
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land		0.10	0.10			
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						0.011
All Current Activities Combined (Aggregated)	*N/A*	*0.11*	*0.15*	*0.00*	*0.00*	*0.16*
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		0.13				
Future Ski Area Footprint			0.30	0.10		
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						0.10
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	*N/A*	*0.24*	*0.45*	*0.10*	*0.00*	*0.26*

Table ASPO11
Percent Potential Effect of Activities on Point Occurrence Data by Species - Alpine and Sub-Alpine Plants

	Charleston ivesia	***Charleston kittentails***	***Charleston pussytoes***	***Charleston tansy***	***Clokey silene***	***Jaeger whitlowgrass***
Activities						
Current Activities						
Occupied Acreage by Species (with 0.1 ac buffer)	*0.00*	*2.59*	*2.49*	*0.30*	*0.20*	*1.29*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI						
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI			0.5%			1.8%
High Mileage System Trail Footprint			0.1%			0.5%
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI		0.1%				0.9%
Non System Trail Footprint						0.3%
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land		1.0%	1.0%			
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						0.2%
All Current Activities Combined (Aggregated)	*N/A*	1%	2%	0%	0%	4%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		1.3%				
Future Ski Area Footprint			**9.0%**	**25.0%**		
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						**5.8%**
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	*N/A*	2%	11%	25%	0%	9%

**** Bold text indicates activities with >= 5% Potential Effect***

Table ASPO12

Percent Potential Effect of Activities with Avoidance Measures on Point Occurrence Data by Species - Alpine and Sub-Alpine Plants

	Charleston ivesia	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Activities						
Current Activities						
Occupied Acreage by Species (with 0.1 ac buffer)	*0.00*	*2.59*	*2.49*	*0.30*	*0.20*	*1.29*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI						
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI			0.4%			1.3%
High Mileage System Trail Footprint			0.1%			0.3%
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI		0.1%				0.7%
Non System Trail Footprint						0.2%
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land		0.2%	0.3%			
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						0.2%
All Current Activities Combined (Aggregated)	*N/A*	0.3%	0.7%	0.0%	0.0%	2.6%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		0.3%				
Future Ski Area Footprint			2.3%	**6.3%**		
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						2.7%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	*N/A*	0.6%	2.9%	6.0%	0.0%	5.4%

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table ASPO13
Percent Potential Effect of Activities with Minimization Measures on Point Occurrence Data by Species - Alpine and Sub-Alpine Plants

	Charleston ivesia	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Activities						
Current Activities						
Occupied Acreage by Species (with 0.1 ac buffer)	*0.00*	*2.59*	*2.49*	*0.30*	*0.20*	*1.29*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI						
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI			0.2%			0.9%
High Mileage System Trail Footprint			0.1%			0.5%
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI		0.05%				0.5%
Non System Trail Footprint						0.3%
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land		1.0%	1.0%			
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						0%
All Current Activities Combined (Aggregated)	*N/A*	1.0%	1.4%	0.0%	0.0%	2.3%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		1.0%				
Future Ski Area Footprint			**6.8%**	**18.8%**		
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						4.3%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	*N/A*	2.0%	8.1%	18.8%	0.0%	6.6%

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table ASPO14
Percent Potential Effect of Activities with Mitigation Measures on Point Occurrence Data by Species - Alpine and Sub-Alpine Plants

	Charleston ivesia	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Activities						
Current Activities						
Occupied Acreage by Species (with 0.1 ac buffer)	*0.00*	*2.59*	*2.49*	*0.30*	*0.20*	*1.29*
Campground AOI						
Campground Footprint						
Cave/Tunnel						
Climbing Area						
CUA AOI						
CUA Footprint						
Firewood Gathering Area						
FS Structure AOI						
FS Structure Footprint						
High Mileage System Trail AOI			0.4%			1.3%
High Mileage System Trail Footprint			0.1%			0.5%
Horses/Burros .25 - 1.0 mile from spring/stream						
Horses/Burros < .25 mile from spring/stream						
Horses/Burros > 1.0 mile from spring/stream						
Low Mileage System Trail AOI						
Low Mileage System Trail Footprint						
Motorized Trail (closed) AOI						
Motorized Trail (closed) Footprint						
Motorized Trail (open) AOI						
Motorized Trail (open) Footprint						
Non System Trail AOI		0.1%				0.7%
Non System Trail Footprint						0.3%
Paved Road AOI						
Paved Road Footprint						
Picnic Area AOI						
Picnic Area Footprint						
Private Land		1.0%	1.0%			
PVT Building AOI						
PVT Building Footprint						
Ski Area AOI						
Ski Area Footprint						
Snowplay Area						
Trailhead in Developed Canyon AOI						
Trailhead in Developed Canyon Footprint						
Trailhead out of Developed Canyon AOI						
Trailhead out of Developed Canyon Footprint						
Unpaved Road AOI						
Unpaved Road Footprint						
Wildland Urban Interface						0.2%
All Current Activities Combined (Aggregated)	*N/A*	1.0%	1.5%	0.0%	0.0%	3.0%
Future Activities						
Future Campground AOI						
Future Campground Footprint						
Future EEA AOI						
Future EEA Footprint						
Future Foot Bridge AOI						
Future Foot Bridge Footprint						
Future High Mileage System Trail AOI						
Future High Mileage System Trail Footprint						
Future Low Mileage System Trail AOI						
Future Low Mileage System Trail Footprint						
Future Picnic AOI						
Future Picnic Area Footprint						
Future Ski Area AOI		1.0%				
Future Ski Area Footprint			**6.8%**	**18.8%**		
Future Trailhead AOI						
Future Trailhead Footprint						
Future Visitor Center AOI						
Future Visitor Center Footprint						
West Side PO Camping AOI						
West Side PO Camping Footprint						4.3%
West Side PO Major Trailhead AOI						
West Side PO Major Trailhead Footprint						
West Side PO Minor Trailhead AOI						
West Side PO Minor Trailhead Footprint						
West Side PO Motorized Trails AOI						
West Side PO Motorized Trails Footprint						
West Side PO Non Motorized Trails AOI						
West Side PO Non Motorized Trails Footprint						
All Current and Future Activities Combined (Aggregated)	*N/A*	2.0%	8.2%	18.8%	0.0%	7.3%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table ASPO30
Potential Effects on Alpine & Subalpine Plants for Current Activities as well as Current and Future Activities.

Effects Index	*Charleston ivesia*	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Current Activities - Potential Effects						
0.000		0.00	0.00			0.00
0.001 - 0.050		0.00	0.00			0.00
0.051 - 0.250		0.11	0.15			0.15
0.251 - 0.500		0.00	0.00			0.00
0.501 - 0.750		0.00	0.00			0.00
0.751 - 0.999		0.00	0.00			0.00
1.000		0.00	0.00			0.01
Total		**0.027**	**0.040**			**0.048**
Current and Future Activities - Potential Effects						
0.000		0.00	0.00	0.00		0.00
0.001 - 0.050		0.00	0.00	0.00		0.00
0.051 - 0.250		0.24	0.15	0.00		0.15
0.251 - 0.500		0.00	0.00	0.00		0.00
0.501 - 0.750		0.00	0.30	0.10		0.10
0.751 - 0.999		0.00	0.00	0.00		0.00
1.000		0.00	0.00	0.00		0.01
Total		**0.060**	**0.264**	**0.074**		**0.122**

Table ASPO31

Potential Effects with Avoidance Measures on Alpine & Subalpine Plant for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Charleston ivesia*	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Current Activities - Potential Effects with Avoidance Measures						
0.000		0.00	0.00			0.00
0.001 - 0.050		0.00	0.00			0.00
0.051 - 0.250		0.11	0.15			0.15
0.251 - 0.500		0.00	0.00			0.00
0.501 - 0.750		0.00	0.00			0.01
0.751 - 0.999		0.00	0.00			0.00
1.000		0.00	0.00			0.00
Total		**0.008**	**0.017**			**0.034**
Current and Future Activities - Potential Effects with Avoidance Measures						
0.000		0.00	0.00	0.00		0.00
0.001 - 0.050		0.00	0.00	0.00		0.00
0.051 - 0.250		0.24	0.45	0.10		0.15
0.251 - 0.500		0.00	0.00	0.00		0.10
0.501 - 0.750		0.00	0.00	0.00		0.01
0.751 - 0.999		0.00	0.00	0.00		0.00
1.000		0.00	0.00	0.00		0.00
Total		**0.016**	**0.073**	**0.018**		**0.070**

Table ASPO32

Potential Effects with Minimization Measures on Alpine & Subalpine Plant for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Charleston ivesia*	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Current Activities - Potential Effects with Minimization Measures						
0.000		0.00	0.00			0.00
0.001 - 0.050		0.00	0.00			0.00
0.051 - 0.250		0.11	0.15			0.15
0.251 - 0.500		0.00	0.00			0.00
0.501 - 0.750		0.00	0.00			0.00
0.751 - 0.999		0.00	0.00			0.00
1.000		0.00	0.00			0.01
Total		**0.026**	**0.034**			**0.030**
Current and Future Activities - Potential Effects with Minimization Measures						
0.000		0.00	0.00	0.00		0.00
0.001 - 0.050		0.00	0.00	0.00		0.00
0.051 - 0.250		0.24	0.15	0.00		0.15
0.251 - 0.500		0.00	0.00	0.00		0.00
0.501 - 0.750		0.00	0.30	0.10		0.10
0.751 - 0.999		0.00	0.00	0.00		0.00
1.000		0.00	0.00	0.00		0.01
Total		**0.051**	**0.202**	**0.056**		**0.086**

Table ASPO33

Potential Effects with Mitigation Measures on Alpine & Subalpine Plant for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Charleston ivesia*	*Charleston kittentails*	*Charleston pussytoes*	*Charleston tansy*	*Clokey silene*	*Jaeger whitlowgrass*
Current Activities - Potential Effects with Mitigation Measures						
0.000		0.00	0.00			0.00
0.001 - 0.050		0.00	0.00			0.00
0.051 - 0.250		0.11	0.15			0.15
0.251 - 0.500		0.00	0.00			0.00
0.501 - 0.750		0.00	0.00			0.00
0.751 - 0.999		0.00	0.00			0.00
1.000		0.00	0.00			0.01
Total		**0.027**	**0.037**			**0.039**
Current and Future Activities - Potential Effects with Mitigation Measures						
0.000		0.00	0.00	0.00		0.00
0.001 - 0.050		0.00	0.00	0.00		0.00
0.051 - 0.250		0.24	0.15	0.00		0.15
0.251 - 0.500		0.00	0.00	0.00		0.00
0.501 - 0.750		0.00	0.30	0.10		0.10
0.751 - 0.999		0.00	0.00	0.00		0.00
1.000		0.00	0.00	0.00		0.01
Total		**0.051**	**0.205**	**0.056**		**0.095**

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Antennaria soliceps	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (7)	High	100,001 - 1,000,000	100-250	Stable	Low	Moderate	High	
Current Condition Spring Mountains				1-5 (5)	High	100,001 - 1,000,000	100-250	Stable	Low	Moderate	High	Moderate
Current Condition Rangewide	SME	Very Narrow	Moderately vulnerable	1-5 (5)	High	100,001 - 1,000,000	100-250	Stable	Low	Moderate	High	Moderate
Comments	Used Smith (1995) Status Report and NNHP (Morefield 2001) as sources. The reduced number of reference to current occurrences is because some sites were combined to meet EO rules and new occurrences. Pop. size is 12200 individuals over 188 acres for reference and current condition. Threat scope is moderatelow because <10% of occupied habitat is overlapped by private land and trail corridors with additional areas in the ski area.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Draba jaegeri	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (9)	High	1,001 -2,500	50-100	U	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (8)	High	2,501-10,000	50-100	Stable	Low	Moderate	High	Low
Current Condition Rangewide	SME	Narrow	Moderately vulnerable	6-20 (8)	High	2,501-10,000	50-100	Stable	Low	Moderate	High	Low
Comments	Missing in 2007 alpine transect and 2005 Bristelcone macroplot - but still present in ares. Need to watch in monitoring. No. of sites (9 reference to 8 current due to better survey information), population estimates (2449 for reference and 2529 for current) and occupied habitat (reference and current 100 acres) from NNHP and Morefield 2001.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Ivesia cryptocaulis	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (2)	High	100,001-1,000,000	100-250	Stable	Low	Low	High	
Current Condition Spring Mountains				1-5 (2)	High	100,001-1,000,000	100-250	Stable	Low	Low	High	Moderate
Current Condition Rangewide	SME	Very Narrow	Highly Vulnerable	1-5 (2)	High	100,001-1,000,000	100-250	Stable	Low	low	High	Moderate
Comments	Very Narrow because of small amount of alpine habitat (ca 500 ac); Highly vulnerable because Ivesia tends to be a slow reproducing genus; While only 2 occurrences, these have good viability; Pop size is 130 for current and reference and occupied habitat is 127 acres (Entrix GIS analysis). Threat scope is low because 17% of occupied habitat (127 ac) is overlapped by private land (16 ac) and trail corridors (6 ac)											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Silene clokeyi	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (3)	High	10,001 - 100,000	5-10	Stable	Low	Moderate	High	
Current Condition Spring Mountains				1-5 (3)	High	10,001 - 100,000	5-10	Stable	low	Moderate	High	Moderate
Current Condition Rangewide	SME	Very Narrow	Highly vulnerable	1-5 (3)	High	10,001 - 100,000	5-10	Stable	Low	Moderate	High	Moderate
Comments	Environmental Specificity is Very Narrow because of small amount of alpine habitat (ca 500 ac); Intrinsic Vulnerability is Highly Vulnerable because species is infertile (A. R. Kruckenberg (1961) in FNA (2007); Population size is based on Nachlinger (1994) of 10722 for both reference and current; Habitat is 8 acres for current and occupied. Threat scope is moderate because of private land (17%) and recreational activities.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Sphaemeria compacta	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (5)	High	10,001 - 100,000	100-250	Stable	Low	Moderate	High	
Current Condition Spring Mountains				1-5 (5)	High	10,001 - 100,000	100-250	Stable	Low	Moderate	High	Moderate
Current Condition Rangewide	SME	Very Narrow	Highly Vulnerable	1-5 (5)	High	10,001 - 100,000	100-250	Stable	Low	Moderate	High	Moderate
Comments	Number of occurrences and area occupied of 116 for reference and current is from Morefield (2001). Population size of 23350 for reference and current is from Smith (1995). Threat Scope is Moderate because 21% of known occupied habitat (118 ac) is overlapped by private land (20 ac) pluse trail corridors (6 ac).											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS

	Natural History Characteristics			Population Numbers and Areas of Occurrence				Population Trends	Threats, Protection, and Management			
Synthyris ranunculia	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (5)	High	100,001 - 1,000,000	50-100	Moderate decline	Low	Moderate	High	
Current Condition Spring Mountains				1-5 (5)	High	100,001 - 1,000,000	50-100	Stable	Low	Moderate	High	Moderate
Current Condition Rangewide	SME	Very Narrow	Moderately vulnerable	1-5 (5)	High	100,001 - 1,000,000	50-100	Stable	Low	Moderate	High	Moderate
Comments	Number of individuals from Nachlinger and Sheldon (1997) of 221,000 and occupied acres from Morefield (2001) of 91. Moderate population decline because 20% of sites were reported currently or potentially threatened with spring diversions, and another 20% slightly impacted by recreation and wild horse trampling (Nachlinger and Sheldon 1997). Moderate scope because while less than 1% of occupied habitat is overlapped by private land (1 ac), seven spring sites with the largest number of species have current or potential spring modifications threating the integrity of the springs and minor recreation impacts are documented (Nachlinger and Sheldon, 1997)											

APPENDIX 5F-9

Plant Species (Cliffs and Steep Slopes)

1.1 CLIFFS AND STEEP SLOPES

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

POINT OCCURRENCE DATA

The point occurrence data (with 0.1 acre buffer per observation) overlap with current and future activities for each species summed to between 0 and 0.8 acres per species for the Cliffs and Steep Slopes plant species (Excel Table CSSO10). One current and no future activity has an overlap of greater than 0.2 acres. The Wildland Urban Interface was the only activity affecting more than 0.2 acres, and it overlapped with the Jaeger Ivesia. The Clokey Greasebush does not have overlap of any activities with occurrences. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities account for the majority of the overlap with the Cliffs and Steep Slope species, and of concern is that there was complete overlap with the Smooth Dwarf Greasebush and Smooth Pungent Greasebush, which have extremely small areas of occurrence. Future activities have the greatest overlap with the Inch High Fleabane and Jaeger Ivesia, although the overlap is only with a small portion of the distribution (Excel Table CSSO10, Appendix D.1).

POLYGON LOCALITY DATA

The polygon locality data overlap with current and future activities for each species summed to between 0 and 21.03 acres per species for the Cliffs and Steep Slopes plant species (Excel Table CSSL10). Polygon data is only available for the Jaeger ivesia. One current and no future activities had an overlap of greater than five acres. The current activity was Wildland Urban Interface with an overlap of 14.9 acres. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities account for the majority of the overlap with the Jaeger Ivesia as future activities all have an overlap of less than 0.03 acres (Excel Table CSSL10, Appendix D.2).

SUITABLE HABITAT DATA

The habitat suitability overlap with current and future activities for each species summed to between 11.77 and 3030.05 acres per species for the Cliffs and Steep Slopes plant species (Excel Table CS10). Values of overlap of an activity on a species that exceeded 25 acres are highlighted with bold text, and twelve current and three future activities meet this criteria. The current activities with greater than 25 acres of overlap with these plants are: the Concentrated Use Area AOI, the Firewood Gathering Area, the High Mileage System Trail AOI, all three Horses/Burros categories, the Low Mileage System Trail AOI, the Non System Trail AOI, Private Land, the Unpaved Road AOI and Footprint, and the Wildland Urban Interface. The future activities are the Future Ski Area AOI and Footprint and the West Side PO Camping Footprint. One species, Clokey Greasebush, has no overlap greater than 25 acres with current or future activities. Three species (inch high fleabane, smooth dwarf greasebush, and smooth pungent greasebush) have no overlap of suitable habitat and current or future activities. Note that

the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Most current and some future activities account for the majority of the overlap and potential overlap on the Jaeger Ivesia, while current activities account for most of the overlap of the Clokey Greasebush (Excel Table CS10, Appendix D.3). Horses/Burros activities, the Wildland Urban Interface, and Private Land account for the majority of current overlap on the Jaeger Ivesia, while the Ski Area accounts for the majority of planned overlap on this species. The Clokey Greasebush has limited overlap with both current and future activities.

1.1.1.2 Potential Effects

The analysis of potential effects on Cliffs and Steep Slopes plant species relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Appendix A, Table CS21) The majority of activities have a high (H) to total (TTL) impact on these plant species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species (Appendix D.1).

POINT OCCURRENCE DATA

The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Table CSSO11**)**. The aggregated current and future activities' potential effects are estimated to impact between 0 and 20 percent of the occupied sites of the Cliffs and Steep Slopes plant species. All potential effects equal to or greater than five percent are highlighted with bold text, and three current and no future activities meet this criteria. The current activities are the Concentrated Use Area AOI, Private Land, and the Wildland Urban Interface. Smooth Dwarf Greasebush was the only species with no activity effect greater than five percent.

Future activities each have less than a four percent potential effect on the Cliffs and Steep Slopes plant species, while current activities have a proportionately large effect on Inch High Fleabane, Smooth Pungent Greasebush, and Jaeger Ivesia (Table CSSO11). The activities have no potential effect on the Clokey Greasebush known occurrence areas.

Maps of the effect intensity of current and future activities on point occurrences are presented with suitable habitat data for each Cliffs and Steep Slopes plant species in Figures CS1-4. Since there is no overlap with Clokey Greasebush, no figure is provided for this species. The areas of point occurrences that overlap colored shading indicate locations where the Cliffs and Steep Slopes species have been observed and current or future activities exist or are proposed. The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category as it corresponds to the species figures (Figures CS1-4, Table CSSO30). Note that nearly all of the potential effects on known point occurrences are partial (less than 1.0) and degrade habitat at a low level within an activity area.

POLYGON LOCALITY DATA

The percentage potential effect of each activity on polygon locality data for the Jaeger ivesia was calculated and summarized (Table CSSL11) {excel table tab2}. The aggregated current and future activities' potential effects are estimated to impact 14 percent of the occupied sites of this species. All potential effects equal to or greater than five percent are highlighted with bold text. and one current and no future activity meets this criteria. The current activity is the Wildland Urban Interface.

Maps of the effect intensity of current and future activities on polygon localities are presented with suitable habitat data for the Jaeger ivesia in Figures CSS1. The areas of polygon occurrences that overlap colored shading indicate locations where the Cliffs and Steep Slopes plant species have been observed and current or future activities exist or are proposed. The aggregated potential effects intensity index for each species provides the acreage of polygon occurrences of each species that fall within each effects index category as it corresponds to the species figures (Figures CSS1, Table CSSL30). The effects intensity aggregated for all activities on Jaeger ivesia indicates only a minimal area has complete elimination of polygon occurrence sites for this species; however, the majority of the effects are in moderate to high intensity categories (between 0.05 and 0.99).

SUITABLE HABITAT DATA

The percentage potential effect of each activity on suitable habitat for each species was calculated and summarized (Table CS11**)** {excel table tab2}. The aggregated current and future activities' potential effects are estimated to impact between 1.0 and 2.0 percent of the suitable habitat of the Cliffs and Steep Slopes plant species. All potential effects equal to or greater than one percent are highlighted with bold text. Only the current activity Private Land meets this criteria.

Current activities account for potential effects on the Clokey Greasebush and Jaeger ivesia, while future activities only have a small effect on Jaeger ivesia (Table CS11).

Maps of the effect intensity of current and future activities on suitable habitat are presented with species occurrence data for each Cliffs and Steep Slopes plant species in Figures CS1-2. The areas of suitable habitat that overlap colored shading indicate locations where the Cliffs and Steep Slopes species have been observed and current or future activities exist or are proposed. Other locations with activity effects do not have suitable habitat present for these plant species. The aggregated potential effects intensity index for each species provides the acreage of geographic area of each species that falls within each effects index category as it corresponds to the species figures (Figures CS1-2, Table CS30). The effects intensity aggregated for all activities on Cliffs and Steep Slopes plant species indicates a relatively small area has complete elimination of suitable habitat for these species while the majority of effects are in the low to moderate intensity categories (between 0.00 and 0.50).

1.1.2 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on Cliffs and Steep Slopes plant species. The three categories of conservation measures are avoidance, minimization, and mitigation. In order to determine the benefit of conservation measures, the

potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures. The acreage results are provided by species in Appendix D.1, while the percentage potential effect with and without conservation measures is reviewed in the following sections.

1.1.2.1 Avoidance

POINT OCCURRENCE DATA

No future activity with avoidance measures was greater than five percent of the point occurrence with buffers area, while four current activities were five percent or greater (Table CSSO12). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 11.0 and 18.0 percent of the point occurrence locations of Cliffs and Steep Slopes species.

The effects intensity aggregated for all activities with avoidance measures on each Cliffs and Steep Slopes plant species indicates only a small area has complete elimination of point occurrences for the Jaeger Ivesia, while the majority of the effects are in lower intensity categories (less than 0.26) for all these species (Table CSSO31). Avoidance measures are benefiting these plant species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing points of occurrence. Future low-intensity effects will have a relatively greater impact on the Jaeger Ivesia and Inch High Fleabane, while no future impacts are expected for Clokey Greasebush, Smooth Dwarf Greasebush, and Smooth Pungent Greasebush.

POLYGON LOCALITY DATA

Only one current activity with avoidance measures was greater than five percent of the polygon occurrence area, while no future activity was greater than five percent (Table CSSL12). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact 13 percent of the polygon occurrences of Jaeger ivesia.

The effects intensity aggregated for all activities with avoidance measures on Jaeger ivesia indicates only a minimal area has complete elimination of polygon occurrence sites for this species; however, the majority of the effects are in moderate to high intensity categories (between 0.05 and 0.99; Table CSSL31). Avoidance measures are benefiting this plant species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing polygons of occurrence. Future impacts are expected to be minimal for Jaeger ivesia.

SUITABLE HABITAT DATA

No current or future activities with avoidance measures were greater than one percent of the suitable habitat (Table CS12). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact about 1.0 percent of the suitable habitat of Cliffs and Steep Slopes species.

The effects intensity aggregated for all activities with avoidance measures on each Cliffs and Steep Slopes plant species indicates only a small area has complete elimination of suitable

habitat for these species, while the majority of the effects are in low to moderate intensity categories (< 0.51; Table CS31). Avoidance measures are benefiting these plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence. Minimal future impacts are expected for Clokey Greasebush and Jaeger Ivesia.

1.1.2.2 Minimization

POINT OCCURRENCE DATA

All potential effects (with minimization measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and three current and no future activity meets this criteria (Table CSSO13). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 10.0 and 18.0 percent of the occupied sites of Cliffs and Steep Slopes plant species. The current activities effects are on the Concentrated Use Area AOI, Private Land, and the Wildland Urban Interface.

The effects intensity aggregated for all activities with minimization measures on each Cliffs and Steep Slopes plant species indicates only a small area has complete elimination of point occurrences for the Jaeger Ivesia, while the majority of the effects are in lower intensity categories (less than 0.26) for all these species (Table CSSO32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

POLYGON LOCALITY DATA

All potential effects (with minimization measures, using polygon occurrence data) equal to or greater than five percent are highlighted with bold text, and one current and no future activity meets this criteria (Table CSSL13). The aggregated current and future activities' potential effects with minimization measures are estimated to impact 13 percent of the occupied sites of Jaeger ivesia. The current activity effect is the Wildlife Urban Interface.

The effects intensity aggregated for all activities with minimization measures on Jaeger ivesia indicates only a small area has complete elimination of polygon occurrence locations for these species; however, the majority of the effects are in moderate to high intensity categories (between 0.05 and 0.99; Table CSSL32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing known occurrences to be maintained across more of the existing polygons of occurrence.

SUITABLE HABITAT DATA

All potential effects (with minimization measures) equal to or greater than one percent are highlighted with bold text, but no current or future activities meet these criteria (Table CS13). The aggregated current and future activities' potential effects with minimization measures are estimated to impact up to 2.0 percent of the suitable habitat of Cliffs and Steep Slopes plant species.

The effects intensity aggregated for all activities with minimization measures on each Cliffs and Steep Slopes plant species indicates only a small area has complete elimination of suitable

habitat for these species, while the majority of the effects are in low to moderate intensity categories (< 0.51; Table CS32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

1.1.2.3 Mitigation

POINT OCCURRENCE DATA

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and three current and no future activity meets this criteria (Table CSSO14). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 13.0 and 19.0 percent of the occupied sites of Cliffs and Steep Slopes plant species. The current activities effects are on the Concentrated Use Area AOI, Private Land, and the Wildland Urban Interface. Two species, the Clokey Greasebush and Smooth Dwarf Greasebush, have no potential effects (with mitigation measures) greater than one percent.

The effects intensity aggregated for all activities with mitigation measures on each Cliffs and Steep Slopes plant species indicates only a small area has complete elimination of point occurrences for the Jaeger Ivesia, while the majority of the effects are in lower intensity categories (less than 0.26) for all these species (Table CSSO33). Mitigation measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing points of occurrence.

POLYGON LOCALITY DATA

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and one current and no future activity meets this criteria (Table CSSL14). The aggregated current and future activities' potential effects with minimization measures are estimated to impact 13 percent of the occupied sites of Jaeger ivesia. The current activity effect is the Wildlife Urban Interface.

The effects intensity aggregated for all activities with mitigation measures on Jaeger Ivesia indicates only a small area has complete elimination of point occurrences of these species; however, the majority of the effects are in moderate to high intensity categories (between 0.05 and 0.99; Table CSSL33). Mitigation measures are conferring a small benefit to this plant species by reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing polygons of occurrence.

SUITABLE HABITAT DATA

All potential effects (with mitigation measures) greater than one percent are highlighted with bold text, but no current or future activities meet these criteria (Table CS14). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 1.0 and 2.0 percent of the suitable habitat of Cliffs and Steep Slopes plant species. Both species, Clokey Greasebush and Jaeger Ivesia, have no potential effects (with mitigation measures) greater than one percent.

The effects intensity aggregated for all activities with mitigation measures on each Cliffs and Steep Slopes plant species indicates only a small area has complete elimination of suitable habitat for these species, while the majority of the effects are in low to moderate intensity categories (< 0.51; Table CS33). Mitigation measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

Ranking of Magnitude of Potential Effects

Species: Clokey Greasebush (*Glossopetalon clokeyi*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	N	N	TTL	Ma	TTL	La	Hab	Lc	L	L	N	N	N	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking and rock climbing
b = this species is associated with vertical limestone cliff faces
c = this species could be affected by staging activities

Species: Jaeger Ivesia (*Ivesia jaegeri*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	(X)	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL ab	Lb	TTL ab	Lb	TTL	M	L	L	TTL	Mc	TTL	Mc	Hb	Mb	TTL	Mb	TTL	Mb	H	M	N	N	TTL	M	TTL ab	La	H	Ld	L	L	N	N	N	Le	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species is found on large rocks on hiking trails, which is why it is ranked as a high effect rather than a total loss
b = this species has a negative response to hiking, horseback riding, and rock climbing
c = threatened by parking off designated roads
d = this species could be affected by staging activities
e = this species is usually found in sunny places; opening up the canopy is beneficial
f = closing of the canopy may harm plants growing on large rocks while plants growing on cliff faces would likely not be affected

Species: Inch High Fleabane (*Erigeron uncialis* var. *conjugans*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	N	N	TTL	Ma	TTL	La	Hb	Lc	L	L	N	N	N	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, camping, and rock climbing
b = this species is found on limestone slopes
c = this species could be affected by staging activities

Species: Smooth Dwarf Greasebush (*Glossopetalon pungens* var. *glabrum*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	H	M	TTL	Ma	TTL	Ma	H	M	N	N	TTL	Ma	TTL	La	Hab	Lc	L	L	N	N	N	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking and rock climbing
b = this species is associated with vertical limestone cliff faces
c = this species could be affected by staging activities

Species: Smooth Pungent Greasebush (*Glossopetalon pungens* var. *pungens*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	H	M	TTL	Ma	TTL	Ma	Ha	Ma	N	N	TTL	Ma	TTL	La	Hab	Lc	L	L	N	N	N	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking and rock climbing
b = this species is associated with vertical limestone cliff faces
c = this species could be affected by staging activities

Value of Conservation Measures

Species
Clokey Greasebush

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Horses/Burros .25 - 1.0 mile from spring/stream	N/A	N/A	N/A	N/A	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Private Land	M	NM	NM	NM	
Future Ski Area AOI	N/A	N/A	N/A	N/A	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Jaeger Ivesia

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	TR	L	NM	
CUA Footprint	TR	TR	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
Cave/Tunnel	TR	TR	L	NM	
Climbing Area	M	M	L	NM	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	N/A	N/A	N/A	N/A	
Horses/Burros < .25 mile from spring/stream	N/A	N/A	N/A	N/A	
Horses/Burros > 1.0 mile from spring/stream	N/A	N/A	N/A	N/A	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	M	NM	NM	NM	
Ski Area AOI	N/A	N/A	N/A	N/A	
Ski Area Footprint	N/A	N/A	N/A	N/A	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future EEA AOI	L	TR	L	L	
Future Ski Area AOI	N/A	N/A	N/A	N/A	
Future Ski Area Footprint	N/A	N/A	N/A	N/A	
Future Low Mileage System Trail AOI	L	TR	L	NM	
Future Low Mileage System Trail Footprint	M	M	NM	NM	
West Side PO Camping AOI	L	TR	L	L	
West Side PO Camping Footprint	TR	TR	TR	L	
West Side PO Minor Trailhead AOI	TR	TR	L	L	
West Side PO Minor Trailhead Footprint	NM	NM	NM	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Summary Tables

Table CS10
Summary of Individual Activity Effect Acreage on Suitable Habitat of Cliffs and Steep Slopes Plants

	Clokey greasebush	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Activities					
Current Activities					
Suitable Habitat Area by Species	*119.35*	*0.00*	*30,150.51*	*0.00*	*0.00*
Campground AOI			7.57		
Campground Footprint			13.57		
Cave/Tunnel			0.06		
Climbing Area			0.14		
CUA AOI			60.16		
CUA Footprint			3.87		
Firewood Gathering Area			57.19		
FS Structure AOI			3.43		
FS Structure Footprint			0.49		
High Mileage System Trail AOI			77.72		
High Mileage System Trail Footprint			5.21		
Horses/Burros .25 - 1.0 mile from spring/stream	4.09		884.36		
Horses/Burros < .25 mile from spring/stream			150.69		
Horses/Burros > 1.0 mile from spring/stream			756.05		
Low Mileage System Trail AOI	0.65		58.01		
Low Mileage System Trail Footprint	0.01		0.97		
Motorized Trail (closed) AOI			0.84		
Motorized Trail (closed) Footprint			0.13		
Motorized Trail (open) AOI			0.04		
Motorized Trail (open) Footprint			0.00		
Non System Trail AOI			28.94		
Non System Trail Footprint			1.93		
Paved Road AOI			10.30		
Paved Road Footprint			12.55		
Picnic Area AOI			2.80		
Picnic Area Footprint			5.82		
Private Land	6.92		361.82		
PVT Building AOI			3.87		
PVT Building Footprint			0.50		
Ski Area AOI			14.53		
Ski Area Footprint			9.88		
Snowplay Area			7.51		
Trailhead in Developed Canyon AOI			0.93		
Trailhead in Developed Canyon Footprint			0.39		
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI			41.77		
Unpaved Road Footprint			26.57		
Wildland Urban Interface			412.19		
All Current Activities Combined (Aggregated)	*11.67*		*2788.00*		
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI			0.04		
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI					
Future Low Mileage System Trail Footprint					
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI	0.09		100.43		
Future Ski Area Footprint			75.81		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI			15.94		
West Side PO Camping Footprint			37.67		
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI			0.03		
West Side PO Minor Trailhead Footprint			2.14		
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI	0.01		13.67		
West Side PO Non Motorized Trails Footprint	0.00		0.91		
All Current and Future Activities Combined (Aggregated)	*11.77*	*N/A*	*3030.05*	*N/A*	*N/A*

Table CS11
Percent Potential Effect of Activities on Suitable Habitat by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	***Inch high fleabane***	***Jaeger Ivesia***	***Smooth dwarf greasebush***	***Smooth pungent greasebush***
Activities					
Current Activities					
Suitable Habitat Area by Species	*119.35*	*0.00*	*30,150.51*	*0.00*	*0.00*
Campground AOI			0.01%		
Campground Footprint			0.03%		
Cave/Tunnel			0.00%		
Climbing Area			0.00%		
CUA AOI			0.10%		
CUA Footprint			0.01%		
Firewood Gathering Area			0.05%		
FS Structure AOI			0.01%		
FS Structure Footprint			0.00%		
High Mileage System Trail AOI			0.06%		
High Mileage System Trail Footprint			0.02%		
Horses/Burros .25 - 1.0 mile from spring/stream	0.00%		0.00%		
Horses/Burros < .25 mile from spring/stream			0.00%		
Horses/Burros > 1.0 mile from spring/stream			0.00%		
Low Mileage System Trail AOI	0.14%		0.05%		
Low Mileage System Trail Footprint	0.01%		0.00%		
Motorized Trail (closed) AOI			0.00%		
Motorized Trail (closed) Footprint			0.00%		
Motorized Trail (open) AOI			0.00%		
Motorized Trail (open) Footprint			0.00%		
Non System Trail AOI			0.02%		
Non System Trail Footprint			0.01%		
Paved Road AOI			0.02%		
Paved Road Footprint			0.04%		
Picnic Area AOI			0.00%		
Picnic Area Footprint			0.01%		
Private Land	1.45%		0.30%		
PVT Building AOI			0.01%		
PVT Building Footprint			0.00%		
Ski Area AOI			0.00%		
Ski Area Footprint			0.00%		
Snowplay Area			0.01%		
Trailhead in Developed Canyon AOI			0.00%		
Trailhead in Developed Canyon Footprint			0.00%		
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI			0.07%		
Unpaved Road Footprint			0.09%		
Wildland Urban Interface			0.34%		
All Current Activities Combined (Aggregated)	1.59%		1.15%		
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI			0.00%		
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI			0.00%		
Future Low Mileage System Trail Footprint			0.00%		
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI	0.00%		0.00%		
Future Ski Area Footprint			0.00%		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI			0.03%		
West Side PO Camping Footprint			0.09%		
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI			0.00%		
West Side PO Minor Trailhead Footprint			0.01%		
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI	0.00%		0.01%		
West Side PO Non Motorized Trails Footprint	0.00%		0.00%		
All Current and Future Activities Combined (Aggregated)	1.59%		1.29%		

**** Bold text indicates activities with >= 5% Potential Effect***

Table CS12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	***Inch high fleabane***	***Jaeger Ivesia***	***Smooth dwarf greasebush***	***Smooth pungent greasebush***
Activities					
Current Activities					
Suitable Habitat Area by Species	*119.35*	*0.00*	*30,150.51*	*0.00*	*0.00*
Campground AOI			0%		
Campground Footprint			0%		
Cave/Tunnel			0%		
Climbing Area			0%		
CUA AOI			0%		
CUA Footprint			0%		
Firewood Gathering Area			0%		
FS Structure AOI			0%		
FS Structure Footprint			0%		
High Mileage System Trail AOI			0%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream	0%		0%		
Horses/Burros < .25 mile from spring/stream			0%		
Horses/Burros > 1.0 mile from spring/stream			0%		
Low Mileage System Trail AOI	0%		0%		
Low Mileage System Trail Footprint	0%		0%		
Motorized Trail (closed) AOI			0%		
Motorized Trail (closed) Footprint			0%		
Motorized Trail (open) AOI			0%		
Motorized Trail (open) Footprint			0%		
Non System Trail AOI			0%		
Non System Trail Footprint			0%		
Paved Road AOI			0%		
Paved Road Footprint			0%		
Picnic Area AOI			0%		
Picnic Area Footprint			0%		
Private Land	1%		0%		
PVT Building AOI			0%		
PVT Building Footprint			0%		
Ski Area AOI			0%		
Ski Area Footprint			0%		
Snowplay Area			0%		
Trailhead in Developed Canyon AOI			0%		
Trailhead in Developed Canyon Footprint			0%		
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI			0%		
Unpaved Road Footprint			0%		
Wildland Urban Interface			0%		
All Current Activities Combined (Aggregated)	1%		1%		
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI			0%		
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI			0%		
Future Low Mileage System Trail Footprint			0%		
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI	0%		0%		
Future Ski Area Footprint			0%		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI			0%		
West Side PO Camping Footprint			0%		
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI			0%		
West Side PO Minor Trailhead Footprint			0%		
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI	0%		0%		
West Side PO Non Motorized Trails Footprint	0%		0%		
All Current and Future Activities Combined (Aggregated)	1%		1%		

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table CS13
Percent Potential Effect of Activities with Minimization Measures on Suitable Habitat by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Activities					
Current Activities					
Suitable Habitat Area by Species	*119.35*	*0.00*	*30,150.51*	*0.00*	*0.00*
Campground AOI			0%		
Campground Footprint					
Cave/Tunnel					
Climbing Area					
CUA AOI					
CUA Footprint					
Firewood Gathering Area					
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI					
High Mileage System Trail Footprint					
Horses/Burros .25 - 1.0 mile from spring/stream	0%				
Horses/Burros < .25 mile from spring/stream					
Horses/Burros > 1.0 mile from spring/stream					
Low Mileage System Trail AOI	0%				
Low Mileage System Trail Footprint	0%				
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI					
Non System Trail Footprint					
Paved Road AOI					
Paved Road Footprint					
Picnic Area AOI					
Picnic Area Footprint					
Private Land	1%				
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI					
Unpaved Road Footprint					
Wildland Urban Interface					
All Current Activities Combined (Aggregated)	2%				
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI			0%		
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI			0%		
Future Low Mileage System Trail Footprint			0%		
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI	0%		0%		
Future Ski Area Footprint			0%		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI			0%		
West Side PO Camping Footprint			0%		
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI			0%		
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI	0%				
West Side PO Non Motorized Trails Footprint	0%				
All Current and Future Activities Combined (Aggregated)	2%				

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table CS14
Percent Potential Effect of Activities with Mitigation Measures on Suitable Habitat by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Activities					
Current Activities					
Suitable Habitat Area by Species	*119.35*	*0.00*	*30,150.51*	*0.00*	*0.00*
Campground AOI			0%		
Campground Footprint			0%		
Cave/Tunnel			0%		
Climbing Area			0%		
CUA AOI			0%		
CUA Footprint			0%		
Firewood Gathering Area			0%		
FS Structure AOI			0%		
FS Structure Footprint			0%		
High Mileage System Trail AOI			0%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream	0%		0%		
Horses/Burros < .25 mile from spring/stream			0%		
Horses/Burros > 1.0 mile from spring/stream			0%		
Low Mileage System Trail AOI	0%		0%		
Low Mileage System Trail Footprint	0%		0%		
Motorized Trail (closed) AOI			0%		
Motorized Trail (closed) Footprint			0%		
Motorized Trail (open) AOI			0%		
Motorized Trail (open) Footprint			0%		
Non System Trail AOI			0%		
Non System Trail Footprint			0%		
Paved Road AOI			0%		
Paved Road Footprint			0%		
Picnic Area AOI			0%		
Picnic Area Footprint			0%		
Private Land	1%		0%		
PVT Building AOI			0%		
PVT Building Footprint			0%		
Ski Area AOI			0%		
Ski Area Footprint			0%		
Snowplay Area			0%		
Trailhead in Developed Canyon AOI			0%		
Trailhead in Developed Canyon Footprint			0%		
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI			0%		
Unpaved Road Footprint			0%		
Wildland Urban Interface			0%		
All Current Activities Combined (Aggregated)	2%		1%		
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI			0%		
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI			0%		
Future Low Mileage System Trail Footprint			0%		
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI	0%		0%		
Future Ski Area Footprint			0%		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI			0%		
West Side PO Camping Footprint			0%		
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI			0%		
West Side PO Minor Trailhead Footprint			0%		
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI	0%		0%		
West Side PO Non Motorized Trails Footprint	0%		0%		
All Current and Future Activities Combined (Aggregat	2%		1%		

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table CS30
Potential Effects on Cliff & Steep Slope Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects					
0.000	4.09		1,797.27		
0.001 - 0.050	0.00		0.00		
0.051 - 0.250	7.57		705.08		
0.251 - 0.500	0.00		160.90		
0.501 - 0.750	0.00		52.27		
0.751 - 0.999	0.00		18.45		
1.000	0.01		54.04		
Total	**1.901**		**347.51**		
Current and Future Activities - Potential Effects					
0.000	4.18		1,971.18		
0.001 - 0.050	0.00		0.00		
0.051 - 0.250	7.57		716.62		
0.251 - 0.500	0.00		176.04		
0.501 - 0.750	0.00		89.61		
0.751 - 0.999	0.00		19.48		
1.000	0.01		57.13		
Total	**1.903**		**389.84**		

Table CS31
Potential Effects with Avoidance Measures on Cliff & Steep Slope Plant for Current Activities as well as Current and Future Activities.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects with Avoidance Measures					
0.000	4.09		1,797.27		
0.001 - 0.050	0.00		0.00		
0.051 - 0.250	7.57		705.18		
0.251 - 0.500	0.00		186.98		
0.501 - 0.750	0.01		57.71		
0.751 - 0.999	0.00		24.97		
1.000	0.00		15.91		
Total	**0.988**		**276.51**		
Current and Future Activities - Potential Effects with Avoidance Measures					
0.000	4.18		1,971.18		
0.001 - 0.050	0.00		0.00		
0.051 - 0.250	7.57		717.49		
0.251 - 0.500	0.00		202.96		
0.501 - 0.750	0.01		94.22		
0.751 - 0.999	0.00		26.11		
1.000	0.00		18.08		
Total	**0.989**		**315.07**		

Table CS32

Potential Effects with Minimization Measures on Cliff & Steep Slope Plant for Current Activities as well as Current and Future Activities.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects with Minimization Measures					
0.000	4.09		1,797.27		
0.001 - 0.050	0.00		0.00		
0.051 - 0.250	7.57		705.08		
0.251 - 0.500	0.00		207.09		
0.501 - 0.750	0.00		9.03		
0.751 - 0.999	0.00		17.71		
1.000	0.01		51.83		
Total	**1.860**		**321.11**		
Current and Future Activities - Potential Effects with Minimization Measures					
0.000	4.18		1,971.18		
0.001 - 0.050	0.00		0.00		
0.051 - 0.250	7.57		716.62		
0.251 - 0.500	0.00		223.06		
0.501 - 0.750	0.00		45.53		
0.751 - 0.999	0.00		18.78		
1.000	0.01		54.88		
Total	**1.862**		**359.28**		

Table CS33
Potential Effects with Mitigation Measures on Cliff & Steep Slope Plant for Current Activities as well as Current and Future Activities.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects with Mitigation Measures					
0.000	4.09		1,797.27		
0.001 - 0.050	0.00		0.00		
0.051 - 0.250	7.57		705.08		
0.251 - 0.500	0.00		172.78		
0.501 - 0.750	0.00		55.36		
0.751 - 0.999	0.00		5.91		
1.000	0.01		51.61		
Total	**1.901**		**342.73**		
Current and Future Activities - Potential Effects with Mitigation Measures					
0.000	4.18		1,971.18		
0.001 - 0.050	0.00		0.00		
0.051 - 0.250	7.57		716.62		
0.251 - 0.500	0.00		188.71		
0.501 - 0.750	0.00		94.96		
0.751 - 0.999	0.00		6.06		
1.000	0.01		52.52		
Total	**1.903**		**375.52**		

Table CSSL10
Summary of Individual Effect Acreage of Each Activity on Cliff & Steep Slopes Plant Species, Polygon Locality Data

	Clokey greasebush	***Inch high fleabane***	***Jaeger Ivesia***	***Smooth dwarf greasebush***	***Smooth pungent greasebush***
Activities					
Current Activities					
Polygon Occurrence Area by Species	*0.00*	*0.00*	*60.25*	*0.00*	*0.00*
Campground AOI					
Campground Footprint					
Cave/Tunnel			0.058		
Climbing Area					
CUA AOI					
CUA Footprint					
Firewood Gathering Area			0.265		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			2.980		
High Mileage System Trail Footprint			0.203		
Horses/Burros .25 - 1.0 mile from spring/stream					
Horses/Burros < .25 mile from spring/stream			0.359		
Horses/Burros > 1.0 mile from spring/stream			0.438		
Low Mileage System Trail AOI			1.953		
Low Mileage System Trail Footprint			0.031		
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI			0.115		
Non System Trail Footprint			0.007		
Paved Road AOI			0.054		
Paved Road Footprint			0.115		
Picnic Area AOI			1.602		
Picnic Area Footprint			3.763		
Private Land					
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI			0.900		
Unpaved Road Footprint			0.566		
Wildland Urban Interface			14.882		
All Current Activities Combined (Aggregated)	*N/A*	*N/A*	*21.03*	*N/A*	*N/A*
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI					
Future Low Mileage System Trail Footprint					
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint					
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI			0.027		
West Side PO Non Motorized Trails Footprint			0.001		
All Current and Future Activities Combined (Aggregated)	*N/A*	*N/A*	*21.03*	*N/A*	*N/A*

**** Bold text indicates activities with > 0.20 ac overlap with species area***

Table CSSL11
Percent Activity Potential Effect by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Activities					
Current Activities					
Polygon Occurrence Area by Species	*0.00*	*0.00*	*60.25*	*0.00*	*0.00*
Campground AOI					
Campground Footprint					
Cave/Tunnel					
Climbing Area			0%		
CUA AOI					
CUA Footprint					
Firewood Gathering Area			0%		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			1%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream					
Horses/Burros < .25 mile from spring/stream			0%		
Horses/Burros > 1.0 mile from spring/stream			0%		
Low Mileage System Trail AOI			1%		
Low Mileage System Trail Footprint			0%		
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI			0%		
Non System Trail Footprint			0%		
Paved Road AOI			0%		
Paved Road Footprint			0%		
Picnic Area AOI			1%		
Picnic Area Footprint			5%		
Private Land					
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI			1%		
Unpaved Road Footprint			1%		
Wildland Urban Interface			6%		
All Current Activities Combined (Aggregated)			14%		
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI					
Future Low Mileage System Trail Footprint					
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint					
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI			0%		
West Side PO Non Motorized Trails Footprint			0%		
All Current and Future Activities Combined (Aggregated)			14%		

**** Bold text indicates activities with >= 5% Potential Effect***

Table CSSL12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Activities					
Current Activities					
Polygon Occurrence Area by Species	*0.00*	*0.00*	*60.25*	*0.00*	*0.00*
Campground AOI					
Campground Footprint					
Cave/Tunnel					
Climbing Area			0%		
CUA AOI					
CUA Footprint					
Firewood Gathering Area			0%		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			1%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream					
Horses/Burros < .25 mile from spring/stream			0%		
Horses/Burros > 1.0 mile from spring/stream			0%		
Low Mileage System Trail AOI			1%		
Low Mileage System Trail Footprint			0%		
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI			0%		
Non System Trail Footprint			0%		
Paved Road AOI			0%		
Paved Road Footprint			0%		
Picnic Area AOI			1%		
Picnic Area Footprint			4%		
Private Land					
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI			1%		
Unpaved Road Footprint			1%		
Wildland Urban Interface			6%		
All Current Activities Combined (Aggregated)			13%		
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI					
Future Low Mileage System Trail Footprint					
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint					
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI			0%		
West Side PO Non Motorized Trails Footprint			0%		
All Current and Future Activities Combined (Aggregated)			13%		

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table CSSL13
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Activities					
Current Activities					
Polygon Occurrence Area by Species	*0.00*	*0.00*	*60.25*	*0.00*	*0.00*
Campground AOI					
Campground Footprint					
Cave/Tunnel					
Climbing Area			0%		
CUA AOI					
CUA Footprint					
Firewood Gathering Area			0%		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			1%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream					
Horses/Burros < .25 mile from spring/stream			0%		
Horses/Burros > 1.0 mile from spring/stream			0%		
Low Mileage System Trail AOI			1%		
Low Mileage System Trail Footprint			0%		
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI			0%		
Non System Trail Footprint			0%		
Paved Road AOI			0%		
Paved Road Footprint			0%		
Picnic Area AOI			1%		
Picnic Area Footprint			4%		
Private Land					
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI			1%		
Unpaved Road Footprint			1%		
Wildland Urban Interface			6%		
All Current Activities Combined (Aggregated)			13%		
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI					
Future Low Mileage System Trail Footprint					
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint					
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI			0%		
West Side PO Non Motorized Trails Footprint			0%		
All Current and Future Activities Combined (Aggregated)			13%		

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table CSSL14
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Activities					
Current Activities					
Polygon Occurrence Area by Species	*0.00*	*0.00*	*60.25*	*0.00*	*0.00*
Campground AOI					
Campground Footprint					
Cave/Tunnel					
Climbing Area			0%		
CUA AOI					
CUA Footprint					
Firewood Gathering Area			0%		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			1%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream					
Horses/Burros < .25 mile from spring/stream			0%		
Horses/Burros > 1.0 mile from spring/stream			0%		
Low Mileage System Trail AOI			1%		
Low Mileage System Trail Footprint			0%		
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI			0%		
Non System Trail Footprint			0%		
Paved Road AOI			0%		
Paved Road Footprint			0%		
Picnic Area AOI			1%		
Picnic Area Footprint			4%		
Private Land					
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI			1%		
Unpaved Road Footprint			1%		
Wildland Urban Interface			6%		
All Current Activities Combined (Aggregated)			13%		
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI					
Future Low Mileage System Trail Footprint					
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint					
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI			0%		
West Side PO Non Motorized Trails Footprint			0%		
All Current and Future Activities Combined (Aggrega			13%		

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table CSSL30
Potential Effects on Cliff & Steep Slope Plants for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects					
0.000			0.80		
0.001 - 0.050			0.00		
0.051 - 0.250			13.90		
0.251 - 0.500			0.13		
0.501 - 0.750			1.84		
0.751 - 0.999			2.85		
1.000			1.51		
Total			**8.676**		
Current and Future Activities - Potential Effects					
0.000			0.80		
0.001 - 0.050			0.00		
0.051 - 0.250			13.89		
0.251 - 0.500			0.15		
0.501 - 0.750			1.84		
0.751 - 0.999			2.85		
1.000			1.51		
Total			**8.681**		

Table CSSL31
Potential Effects with Avoidance Measures on Cliff & Steep Slope Plant for Current Activities as well as Current and Future Activities.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects with Avoidance Measures					
0.000			0.80		
0.001 - 0.050			0.00		
0.051 - 0.250			13.90		
0.251 - 0.500			1.92		
0.501 - 0.750			0.49		
0.751 - 0.999			3.43		
1.000			0.49		
Total			**7.759**		
Current and Future Activities - Potential Effects with Avoidance Measures					
0.000			0.80		
0.001 - 0.050			0.00		
0.051 - 0.250			13.89		
0.251 - 0.500			1.94		
0.501 - 0.750			0.49		
0.751 - 0.999			3.43		
1.000			0.49		
Total			**7.763**		

Table CSSL32
Potential Effects with Minimization Measures on Cliff & Steep Slope Plant for Current Activities as well as Current and Future Activities.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects with Minimization Measures					
0.000			0.80		
0.001 - 0.050			0.00		
0.051 - 0.250			13.90		
0.251 - 0.500			1.94		
0.501 - 0.750			0.08		
0.751 - 0.999			3.39		
1.000			0.92		
Total			**8.009**		
Current and Future Activities - Potential Effects with Minimization Measures					
0.000			0.80		
0.001 - 0.050			0.00		
0.051 - 0.250			13.89		
0.251 - 0.500			1.96		
0.501 - 0.750			0.08		
0.751 - 0.999			3.39		
1.000			0.92		
Total			**8.013**		

Table CSSL33
Potential Effects with Mitigation Measures on Cliff & Steep Slope Plant for Current Activities as well as Current and Future Activities.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects with Mitigation Measures					
0.000			0.80		
0.001 - 0.050			0.00		
0.051 - 0.250			13.90		
0.251 - 0.500			1.66		
0.501 - 0.750			3.12		
0.751 - 0.999			0.64		
1.000			0.92		
Total			**7.897**		
Current and Future Activities - Potential Effects with Mitigation Measures					
0.000			0.80		
0.001 - 0.050			0.00		
0.051 - 0.250			13.89		
0.251 - 0.500			1.68		
0.501 - 0.750			3.12		
0.751 - 0.999			0.64		
1.000			0.92		
Total			**7.902**		

Table CSSO10
Summary of Individual Effect Acreage of Each Activity on Cliff & Steep Slopes Plant Species, Point Occurrence Data.

	Clokey greasebush	***Inch high fleabane***	***Jaeger Ivesia***	***Smooth dwarf greasebush***	***Smooth pungent greasebush***
Activities					
Current Activities					
Site Occurance Area by Species (with 0.1 ac buffer)	*0.60*	*0.60*	*1.38*	*0.10*	*0.20*
Campground AOI					
Campground Footprint					
Cave/Tunnel					
Climbing Area					
CUA AOI		0.099			
CUA Footprint		0.001			
Firewood Gathering Area			0.099		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			0.048		
High Mileage System Trail Footprint			0.003		
Horses/Burros .25 - 1.0 mile from spring/stream			0.099	0.099	0.099
Horses/Burros < .25 mile from spring/stream					
Horses/Burros > 1.0 mile from spring/stream		0.099			0.099
Low Mileage System Trail AOI		0.001	0.048		
Low Mileage System Trail Footprint					
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI			0.010		
Non System Trail Footprint					
Paved Road AOI			0.065		
Paved Road Footprint			0.055		
Picnic Area AOI			0.005		
Picnic Area Footprint			0.094		
Private Land			0.002		0.099
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI					
Unpaved Road Footprint					
Wildland Urban Interface			**0.392**		
All Current Activities Combined (Aggregated)	*0.00*	*0.10*	*0.60*	*0.10*	*0.20*
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI		0.098	0.097		
Future Low Mileage System Trail Footprint		0.001	0.002		
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint			0.099		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI					
West Side PO Non Motorized Trails Footprint					
All Current and Future Activities Combined (Aggregated)	*0.00*	*0.20*	*0.80*	*0.00*	*0.00*

**** Bold text indicates activities with > 0.20 ac overlap with species area***

Table CSSO11
Percent Potential Effect of Activities on Point Occurrence Data by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	***Inch high fleabane***	***Jaeger Ivesia***	***Smooth dwarf greasebush***	***Smooth pungent greasebush***
Activities					
Current Activities					
Site Occurance Area by Species (with 0.1 ac buffer)	*0.60*	*0.60*	*1.38*	*0.10*	*0.20*
Campground AOI					
Campground Footprint					
Cave/Tunnel					
Climbing Area					
CUA AOI		8%			
CUA Footprint		0%			
Firewood Gathering Area			2%		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			1%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream			0%	0%	0%
Horses/Burros < .25 mile from spring/stream					
Horses/Burros > 1.0 mile from spring/stream		0%			0%
Low Mileage System Trail AOI		0%	1%		
Low Mileage System Trail Footprint					
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI			0%		
Non System Trail Footprint					
Paved Road AOI			2%		
Paved Road Footprint			4%		
Picnic Area AOI			0%		
Picnic Area Footprint			5%		
Private Land			0%		12%
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI					
Unpaved Road Footprint					
Wildland Urban Interface			7%		
All Current Activities Combined (Aggregated)	0%	8%	18%	0%	13%
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI		4%	2%		
Future Low Mileage System Trail Footprint		0%	0%		
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint			0%		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI					
West Side PO Non Motorized Trails Footprint					
All Current and Future Activities Combined (Aggregated)	0%	13%	20%	0%	13%

**** Bold text indicates activities with >= 5% Potential Effect***

Table CSSO12

Percent Potential Effect of Activities with Avoidance Measures on Point Occurrence Data by Species - Cliff & Steep Slopes Plants

	Clokey greasebush	***Inch high fleabane***	***Jaeger Ivesia***	***Smooth dwarf greasebush***	***Smooth pungent greasebush***
Activities					
Current Activities					
Site Occurance Area by Species (with 0.1 ac buffer)	*0.60*	*0.60*	*1.38*	*0.10*	*0.20*
Campground AOI					
Campground Footprint					
Cave/Tunnel					
Climbing Area					
CUA AOI		8%			
CUA Footprint		0%			
Firewood Gathering Area			2%		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			1%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream			0%	0%	0%
Horses/Burros < .25 mile from spring/stream					
Horses/Burros > 1.0 mile from spring/stream		0%			0%
Low Mileage System Trail AOI		0%	1%		
Low Mileage System Trail Footprint					
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI			0%		
Non System Trail Footprint					
Paved Road AOI			2%		
Paved Road Footprint			4%		
Picnic Area AOI			0%		
Picnic Area Footprint			5%		
Private Land			0%		6%
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI					
Unpaved Road Footprint					
Wildland Urban Interface			7%		
All Current Activities Combined (Aggregated)		8%	17%	0%	6%
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI		3%	1%		
Future Low Mileage System Trail Footprint		0%	0%		
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint			0%		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI					
West Side PO Non Motorized Trails Footprint					
All Current and Future Activities Combined (Aggregated)		11%	18%		

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table CSSO13

Percent Potential Effect of Activities with Minimization Measures on Point Occurrence Data by Species - Cliff & Steep Slopes Pla

	Clokey greasebush	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Activities					
Current Activities					
Site Occurance Area by Species (with 0.1 ac buffer)	*0.60*	*0.60*	*1.38*	*0.10*	*0.20*
Campground AOI					
Campground Footprint					
Cave/Tunnel					
Climbing Area					
CUA AOI		6%			
CUA Footprint		0%			
Firewood Gathering Area			2%		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			1%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream			0%	0%	0%
Horses/Burros < .25 mile from spring/stream					
Horses/Burros > 1.0 mile from spring/stream		0%			0%
Low Mileage System Trail AOI		0%	1%		
Low Mileage System Trail Footprint					
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI					
Non System Trail Footprint					
Paved Road AOI			2%		
Paved Road Footprint			4%		
Picnic Area AOI			0%		
Picnic Area Footprint			5%		
Private Land			0%		12%
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI					
Unpaved Road Footprint					
Wildland Urban Interface			7%		
All Current Activities Combined (Aggregated)		6%	17%	0%	13%
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI		3%	1%		
Future Low Mileage System Trail Footprint		0%	0%		
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint			0%		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI					
West Side PO Non Motorized Trails Footprint					
All Current and Future Activities Combined (Aggregated)		10%	18%		

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table CSSO14

Percent Potential Effect of Activities with Mitigation Measures on Point Occurrence Data by Species - Cliff & Steep Slopes F

	Clokey greasebush	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Activities					
Current Activities					
Site Occurance Area by Species (with 0.1 ac buffer)	*0.60*	*0.60*	*1.38*	*0.10*	*0.20*
Campground AOI					
Campground Footprint					
Cave/Tunnel					
Climbing Area					
CUA AOI		8%			
CUA Footprint		0%			
Firewood Gathering Area			2%		
FS Structure AOI					
FS Structure Footprint					
High Mileage System Trail AOI			1%		
High Mileage System Trail Footprint			0%		
Horses/Burros .25 - 1.0 mile from spring/stream			0%	0%	0%
Horses/Burros < .25 mile from spring/stream					
Horses/Burros > 1.0 mile from spring/stream		0%			0%
Low Mileage System Trail AOI		0%	1%		
Low Mileage System Trail Footprint					
Motorized Trail (closed) AOI					
Motorized Trail (closed) Footprint					
Motorized Trail (open) AOI					
Motorized Trail (open) Footprint					
Non System Trail AOI			0%		
Non System Trail Footprint					
Paved Road AOI			2%		
Paved Road Footprint			4%		
Picnic Area AOI			0%		
Picnic Area Footprint			4%		
Private Land			0%		12%
PVT Building AOI					
PVT Building Footprint					
Ski Area AOI					
Ski Area Footprint					
Snowplay Area					
Trailhead in Developed Canyon AOI					
Trailhead in Developed Canyon Footprint					
Trailhead out of Developed Canyon AOI					
Trailhead out of Developed Canyon Footprint					
Unpaved Road AOI					
Unpaved Road Footprint					
Wildland Urban Interface			7%		
All Current Activities Combined (Aggregated)		8%	17%	0%	13%
Future Activities					
Future Campground AOI					
Future Campground Footprint					
Future EEA AOI					
Future EEA Footprint					
Future Foot Bridge AOI					
Future Foot Bridge Footprint					
Future High Mileage System Trail AOI					
Future High Mileage System Trail Footprint					
Future Low Mileage System Trail AOI		4%	2%		
Future Low Mileage System Trail Footprint		0%	0%		
Future Picnic AOI					
Future Picnic Area Footprint					
Future Ski Area AOI					
Future Ski Area Footprint			0%		
Future Trailhead AOI					
Future Trailhead Footprint					
Future Visitor Center AOI					
Future Visitor Center Footprint					
West Side PO Camping AOI					
West Side PO Camping Footprint					
West Side PO Major Trailhead AOI					
West Side PO Major Trailhead Footprint					
West Side PO Minor Trailhead AOI					
West Side PO Minor Trailhead Footprint					
West Side PO Motorized Trails AOI					
West Side PO Motorized Trails Footprint					
West Side PO Non Motorized Trails AOI					
West Side PO Non Motorized Trails Footprint					
All Current and Future Activities Combined (Aggrega		13%	19%		

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table CSSO30

Potential Effects on Cliff & Steep Slope Plants for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects					
0.000		0.00	0.10	0.10	0.10
0.001 - 0.050		0.00	0.00	0.00	0.00
0.051 - 0.250		0.00	0.23	0.00	0.10
0.251 - 0.500		0.10	0.10	0.00	0.00
0.501 - 0.750		0.00	0.04	0.00	0.00
0.751 - 0.999		0.00	0.04	0.00	0.00
1.000		0.00	0.09	0.00	0.00
Current and Future Activities - Potential Effects					
0.000		0.00	0.20		
0.001 - 0.050		0.00	0.00		
0.051 - 0.250		0.10	0.33		
0.251 - 0.500		0.10	0.10		
0.501 - 0.750		0.00	0.04		
0.751 - 0.999		0.00	0.04		
1.000		0.00	0.09		
Total Species Distribution (ac)	**0.60**	**0.60**	**1.38**	**0.10**	**0.20**

Table CSSO31
Potential Effects with Avoidance Measures on Cliff & Steep Slope Plant for Current Activities as well as Current and Future Activities

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects with Avoidance Measures					
0.000		0.00	0.10	0.10	0.10
0.001 - 0.050		0.00	0.00	0.00	0.00
0.051 - 0.250		0.00	0.23	0.00	0.10
0.251 - 0.500		0.10	0.10	0.00	0.00
0.501 - 0.750		0.00	0.04	0.00	0.00
0.751 - 0.999		0.00	0.04	0.00	0.00
1.000		0.00	0.09	0.00	0.00
Current and Future Activities - Potential Effects with Avoidance Measures					
0.000		0.00	0.20		
0.001 - 0.050		0.00	0.00		
0.051 - 0.250		0.10	0.33		
0.251 - 0.500		0.10	0.10		
0.501 - 0.750		0.00	0.04		
0.751 - 0.999		0.00	0.04		
1.000		0.00	0.09		
Total Species Distribution (ac)	**0.60**	**0.60**	**1.38**	**0.10**	**0.20**

Table CSSO32

Potential Effects with Minimization Measures on Cliff & Steep Slope Plant for Current Activities as well as Current and Future Activities.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects with Minimization Measures					
0.000		0.00	0.10	0.10	0.10
0.001 - 0.050		0.00	0.00	0.00	0.00
0.051 - 0.250		0.00	0.23	0.00	0.10
0.251 - 0.500		0.10	0.14	0.00	0.00
0.501 - 0.750		0.00	0.00	0.00	0.00
0.751 - 0.999		0.00	0.08	0.00	0.00
1.000		0.00	0.06	0.00	0.00
Current and Future Activities - Potential Effects with Minimization Measures					
0.000		0.00	0.20		
0.001 - 0.050		0.00	0.00		
0.051 - 0.250		0.10	0.33		
0.251 - 0.500		0.10	0.14		
0.501 - 0.750		0.00	0.00		
0.751 - 0.999		0.00	0.08		
1.000		0.00	0.06		
Total Species Distribution (ac)	**0.60**	**0.60**	**1.38**	**0.10**	**0.20**

Table CSSO33

Potential Effects with Mitigation Measures on Cliff & Steep Slope Plant for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Clokey greasebush*	*Inch high fleabane*	*Jaeger Ivesia*	*Smooth dwarf greasebush*	*Smooth pungent greasebush*
Current Activities - Potential Effects with Mitigation Measures					
0.000		0.00	0.10	0.10	0.10
0.001 - 0.050		0.00	0.00	0.00	0.00
0.051 - 0.250		0.00	0.23	0.00	0.10
0.251 - 0.500		0.10	0.10	0.00	0.00
0.501 - 0.750		0.00	0.08	0.00	0.00
0.751 - 0.999		0.00	0.03	0.00	0.00
1.000		0.00	0.06	0.00	0.00
Current and Future Activities - Potential Effects with Mitigation Measures					
0.000		0.00	0.20		
0.001 - 0.050		0.00	0.00		
0.051 - 0.250		0.10	0.33		
0.251 - 0.500		0.10	0.10		
0.501 - 0.750		0.00	0.08		
0.751 - 0.999		0.00	0.03		
1.000		0.00	0.06		
Total Species Distribution (ac)	**0.60**	**0.60**	**1.38**	**0.10**	**0.20**

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Erigeron uncialis var. conjugans	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (5)	High	U	U	U	Low	Low	High	
Current Condition Spring Mountains				6-20 (6)	High	U	U	U	Low	Low	High	Low
Current Condition Rangewide	Wide-ranging	Narrow	Moderately vulnerable	6-20 (9)	High	U	U	U	Low	Low	High	Low
Comments	No. of sites from Morefield 2001. Rangewide estimate of 9 does not include Sheep Mountains sites which are not mapped. Viability extimates high due to 3 of 6 sites in wilderness and typically impacts to habitat. Wide-ranging but all occurrence on HTNF; NEW DATA not included: Since 1998, 2 EOs in lower Kyle Canyon, MKC surveys with 767 plants and C. Beyer found 10 plants.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Glossopetalon clokeyi	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (6)	High	2,501-10,000	10-50	Stable	Low	Low	High	
Current Condition Spring Mountains				6-20 (7)	High	2,501-10,000	10-50	Stable	Low	Low	High	Low
Current Condition Rangewide	SME	Narrow	Highly vulnerable	6-20 (7)	High	2,501-10,000	10-50	Stable	Low	Low	High	Low
Comments	Reference for viability estimated from Nachlinger 1994. Pop. size for SM (both reference and current in 7446 and rangewide is 6982. Occupied habitat is only estimated from SM pop and is 27. Trend is stable for reference (Nachlinger 1994) and current (Recon 2000).											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Glossopetalon pungens var. glabrum	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (3)	High	U	U	U	Low	HIgh	High	
Current Condition Spring Mountains				1-5 (4)	High	1-50	U	U	Low	High	High	Low
Current Condition Rangewide	MDE	Narrow	Highly vulnerable	1-5 (5)	High	51-250	U	U	Low	HIgh	High	Low
Comments	Good viability - Mt. Potosi subjected to mining claims, but Sheep and Red Rock secure. New pop. in wilderness also. Pop. size is estimated at 203 rangewide (Morefield 2001) which is also rangewide. Populations trend in an estimate 1)due to the inaccessbility of some habitat. Issue for rare species with some potential from mining and climing impacts.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			Population Numbers and Areas of Occurrence				Population Trends	Threats, Protection, and Management			
Glossopetalon pungens var. pungens	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (1)	U	U	U	U	Low	High	High	
Current Condition Spring Mountains				1-5 (1)	U	U	U	U	Low	High	High	Low
Current Condition Rangewide	MDE	Narrow	Highly vulnerable	6-20 (8)	U	51-250	U	U	Low	Low	High	Low
Comments	SM populations have no new information since 1967. Pop. Size is estimated at 211 rangewide (pops off SM), Scope - High since only one occurrence; Immediacy - high due to on-going climging											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Ivesia jaegeri	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (18)	High	10,001-100,000	50-100	Stable	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (14)	High	10,001-100,000	50-100	Stable	Low	Moderate	High	Low
Current Condition Rangewide	MDE	Narrow	Moderately vulnerable	21-80 (21)	High	10,001-100,000	50-100	Stable	Low	Moderate	High	Low
Comments	Popuation size and occupied habitat and scope of threats from Nachlinger 19945, MDE - most of all plants in SM on east side; one population only in CA; *18 EO differs from ENTRIX; Pop. size of 25055 for SM and 25355 rangewide. Acres of occupied habitat are 75 for SM and 80 for rangewide. NEED to add 17,750 to count from MKC survey in future evaluations.											

APPENDIX 5F-10

Plant Species (Low Elevation)

1.1 LOW ELEVATION

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

POINT OCCURRENCE DATA

The point occurrence data (with 0.1 acre buffer per observation) overlap with current and future activities for each species summed to between 0.10 and 0.90 acres per species for the Low Elevation plants (Excel Table LEPO10). No current activity has an overlap of greater than 0.50 acres, although Horses/Burros less than a mile from springs/streams had the greatest overlap with current activities. The Death Valley Beardtongue was the only species with overlap greater than 0.20 acres. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities overlapped with the majority of the point occurrence area (with buffers), while no future activities overlapped with these species. (Excel Table LEPO10**,** Appendix D.1).

POLYGON LOCALITY DATA

Polygon data was available only for the Death Valley Beardtongue, but not the other three species. The overlap with current activities for Death Valley Beardtongue was 84.7 acres, while no overlap was found with future activities (Excel Table LEPL10**,** Appendix D.2). Two current activities, Horses/burros < 0.25 miles from spring/stream and .25-1.0 mile from spring/stream, had an overlap of greater than five acres. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

SUITABLE HABITAT DATA

The habitat suitability overlap with current and future activities for each species summed to between 4210 and 6317 acres per species for the Low Elevation plant species (Excel Table LE10). Values of overlap of an activity on a species that exceeded 100 acres are highlighted with bold text, and four current and one future activity meets this criteria. The current activities are the three Horses/burros categories and the Wildlife Urban Interface. The future activity with greater than 100 acres of overlap with these plants is the Campground Footprint. No suitable habitat data was available for the Spring Mountains Milkvetch. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current overlap of Horses/burros with Low Elevation plants accounts for nearly all of the overlap, while future activities accounted for a very low portion of the total overlap (Excel Table LE10, Appendix D.3). The Future Campground Footprint accounts for the majority of planned overlap on these three species, while other future activities are expected to be relatively small.

1.1.1.2 Potential Effects

The analysis of potential effects on Low Elevation plant species relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Appendix A, Table LE21) The majority of activities have a high (H) to total (TTL) impact on these plant species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species (Appendix D.1).

1.1.1.3 Point Occurrence Data

The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Table LEPO11**)**. The aggregated current and future activities' potential effects are estimated to impact between 17 and 46 percent of the occupied sites of the Low Elevation plant species. All potential effects equal to or greater than five percent are highlighted with bold text, and eight current and no future activities meet this criteria. The current activities are from Horses/Burros (all three categories), Paved Roads (both categories), Unpaved Roads (both categories), and the Wildland-Urban Interface.

The majority of the current activities have greater than a five percent potential effect on the Low Elevation plant species, while no future activities have a potential effect on any of these species (Table LEPO11).

Maps of the effect intensity of current and future activities on point occurrences are presented with suitable habitat data for each Low Elevation plant species in Figures LE1-4. The areas of point occurrences that overlap colored shading indicate locations where the Low Elevation species have been observed and current or future activities exist or are proposed. The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category as it corresponds to the species figures (Figures LE1-4, Table LEPO30). Note that nearly all of the potential effects on known point occurrences are partial (less than 1.0) and degrade habitat at a low level within an activity area.

POLYGON LOCALITY DATA

The percentage potential effect of each activity using polygon locality data for Death Valley Beardtongue was calculated and summarized (Table LEPL11**)** by activity. The aggregated current and future activities' potential effects are estimated to impact 40.3 percent of the occupied sites of the Death Valley Beardtongue. All potential effects equal to or greater than five percent are highlighted with bold text, and two current activities and no future activity meets this criteria. The current activities were Horses/burros 0-.25 mile and < 1 mile from spring/stream categories.

Maps of the effect intensity of current and future activities using polygon locality data are presented for the only Low Elevation plant species with data, Death Valley Beardtongue, in Figure LE1. The areas of polygon localities that overlap colored shading indicate locations where

the Death Valley Beardtongue has been observed and where current activities exist. The aggregated potential effects intensity index for each species provides the acreage of polygon localities of each species that fall within each effects index category as it corresponds to the species figure (Figure LE1, Table LEPL30). Note that nearly all of the potential effects on known polygons are partial (less than 1.0) and degrade habitat at a moderate level within an activity area.

SUITABLE HABITAT DATA

The percentage potential effect of each activity on suitable habitat for each species was calculated and summarized (Table LE11**)**. The aggregated current and future activities' potential effects are estimated to impact between 18 and 24 percent of the occupied sites of the Low Elevation plant species. All potential effects equal to or greater than five percent are highlighted with bold text, and three current and no future activities meet this criteria. The current activities effects are from the three Horse/burros categories.

Current activities account for the majority of the potential effects on the Low Elevation plant species, while future effects are minimal (Table LE11).

Maps of the effect intensity of current and future activities on suitable habitat are presented with species occurrence data for each Low Elevation plant species in Figures LE1-3. The areas of suitable habitat that overlap colored shading indicate locations where the Low Elevation species have been observed and current or future activities exist or are proposed. Other locations with activity effects do not have suitable habitat present for these plant species. The aggregated potential effects intensity index for each species provides the acreage of geographic area of each species that falls within each effects index category as it corresponds to the species figures (Figures LE1-3, Table LE30). Note that the majority of the potential effects are partial (less than 1.0) and degrade habitat within an activity area. The majority of the potential effects are low intensity (below 0.26).

1.1.2 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on Alpine and Sub-Alpine plant species. The three categories of conservation measures are avoidance, minimization, and mitigation. In order to determine the benefit of conservation measures, the potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures. The acreage results are provided by species in Appendix D.1, while the percentage potential effect with and without conservation measures is reviewed in the following sections.

1.1.2.1 Avoidance

POINT OCCURRENCE DATA

The majority of the current activities with avoidance measures have greater than a five percent potential effect on the Low Elevation plant species, while no future activities have a potential effect on any of these species (Table LEPO12). The aggregated current and future activities'

potential effects with avoidance measures are estimated to impact between 17 and 46 percent of the point occurrence locations (with buffers) of Low Elevation species.

The effects intensity aggregated for all activities with avoidance measures on each Low Elevation plant species indicates only a minimal area has complete elimination of point occurrence sites for one species (Clokey Buckwheat), while the majority of the effects are in lower intensity categories (less than 0.51; Table LEPO31). Avoidance measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing points of occurrence. Future low-intensity effects will have no potential effect on Low Elevation plant species.

POLYGON LOCALITY DATA

Two current activities with avoidance measures were greater than five percent using the polygon locality data (Table LEPL12). The aggregated current activities' potential effects with avoidance measures on the Death Valley Beardtongue are estimated to impact 38.4 percent of the polygon localities. No future activities are anticipated to affect this species.

The effects intensity aggregated for all activities with avoidance measures on the Death Valley Beardtongue indicates no area has complete elimination using polygon locality data for this species, while the majority of the effects are in moderate intensity categories (less than 0.51; Table LEPL31). Avoidance measures are benefiting this species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing polygons. No future impacts are expected for the remaining Death Valley Beardtongue.

SUITABLE HABITAT DATA

Three current and no future activities with avoidance measures were greater than five percent of the suitable habitat (Table LE12). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 17 and 22 percent of the suitable habitat of Low Elevation plant species.

The effects intensity aggregated for all activities with avoidance measures on each Low Elevation plant species indicates only a minimal area has complete elimination of suitable habitat for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table LE31). Avoidance measures are having only a negligible effect on offsetting the current activities, although most of the acreage with an effects index value of 1.0 will be reduced. Future effects are proportionately minimal relative to the current activities.

1.1.2.2 Minimization

POINT OCCURRENCE DATA

All potential effects (with minimization measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and most of the current activities and no future activity meet this criteria (Table LEPO13). The current activity effects exceed five percent for all species from at least two of the activities. The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 15 and 41 percent of the occupied sites of Low Elevation plant species.

The effects intensity aggregated for all activities with minimization measures on each Low Elevation plant species indicates only a small area has complete elimination of point occurrence locations for these species, while the majority of the effects are in lower intensity categories (less than 0.51; Table LEPO32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing point occurrences (with buffers) to be maintained across more of the existing area.

POLYGON LOCALITY DATA

All potential effects (with minimization measures, using polygon locality data) equal to or greater than five percent are highlighted with bold text, and only two current activities meet this criteria (Table LEPL13). The aggregated current activities' potential effects with minimization measures are estimated to impact 30.3 percent of the occupied sites of Low Elevation plant species – limited to the Death Valley Beardtongue.

The effects intensity aggregated for all activities with minimization measures on the Death Valley Beardtongue indicates no area has complete elimination of polygon localities for this species, while the majority of the effects are in lower intensity categories (less than 0.51; Table LEPL32). Minimization measures are conferring a negligible benefit to the plant species by reducing the deleterious activity effects and allowing species polygons to be maintained.

SUITABLE HABITAT DATA

All potential effects (with minimization measures) equal to or greater than five percent are highlighted with bold text, and two current and no future activities meet this criteria (Table LE13). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 14 and 18 percent of the occupied sites of Low Elevation plant species. The two current activities are from Horses/burros.

The effects intensity aggregated for all activities with minimization measures on each Low Elevation plant species indicates only a small area has complete elimination of suitable habitat for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table LE32). Minimization measures are conferring a neglible benefit to the plant species by reducing the deleterious activity effects.

1.1.2.3 Mitigation

POINT OCCURRENCE DATA

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and most current and no future activity meets this criteria (Table LEPO14). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 17 and 46 percent of the occupied sites of Low Elevation plant species.

The effects intensity aggregated for all activities with mitigation measures on each Low Elevation plant species indicates only a small area has complete elimination of point occurrences of these species, while the majority of the effects are in lower intensity categories (less than 0.51; Table LEPO33). Mitigation measures are conferring a small benefit to these plant species by

reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing points of occurrence.

POLYGON LOCALITY DATA

All potential effects (with mitigation measures, using polygon locality data) equal to or greater than five percent are highlighted with bold text, and two current activities meet this criteria (Table LEPL14). The aggregated current potential effects with mitigation measures are estimated to impact 40.1 percent of the occupied sites of Low Elevation plant species. The Death Valley Beardtongue had less than or equal to a total of five percent potential effects from current and future activities (with mitigation measures), from Horses/burrow < 1.0 mile from spring/streams.

The effects intensity aggregated for all activities with mitigation measures on Low Elevation plant species indicates only a small area has complete elimination of point occurrences of these species, while the majority of the effects are in moderate intensity categories (less than 0.51; Table LEPL33). Mitigation measures are conferring nearly no benefit to the Death Valley Beardtongue by reducing the deleterious activity effects and allowing polygon localities to be maintained across more of the existing area.

SUITABLE HABITAT DATA

All potential effects (with mitigation measures) equal to or greater than five percent are highlighted with bold text, and three current and no future activities meet this criteria (Table LE14). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 18 and 23 percent of the occupied sites of Low Elevation plant species. The three current activities are from the Horses/burros.

The effects intensity aggregated for all activities with mitigation measures on each Low Elevation plant species indicates only a small area has complete elimination of suitable habitat for these species, while the majority of the effects are in lower intensity categories (less than 0.26; Table LE33). Mitigation measures are conferring virtually no benefit to these plant species by offsetting the current and future activity effects.

Ranking of Magnitude of Potential Effects

Species: Black Woollypod (*Astragalus funereus*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	(X)	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	Lc	L	L	M	L	L	Ld	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = this species could be affected by staging activities
d = opening up the canopy is beneficial; this species is most successful in open areas

Species: Spring Mountains Milkvetch (*Astragalus remotus*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	(X)	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	Lc	L	L	M	L	L	Ld	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = this species could be affected by staging activities
d = opening up the canopy is beneficial; this species is most successful in open areas

Species: Clokey Buckwheat (*Eriogonum hermannii var. clokeyi*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = increased susceptibility to fire resulting from introduction of non-native grasses

Species: Death Valley Beardtongue (*Penstemon fructiciformis* var. *amargosae*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	L	L	L	Mc	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = highly dependent on wetlands (Note: where did this info come from???)
d = results in increased susceptibility to fire

Value of Conservation Measures

Species
Black Woollypod

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	TR	L	NM	
CUA Footprint	TR	TR	NM	NM	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Private Land	M	NM	NM	NM	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future Campground AOI	M	TR	L	L	
Future Campground Footprint	M	TR	L	L	
Future High Mileage System Trail AOI	L	TR	L	NM	
Future High Mileage System Trail Footprint	M	M	NM	NM	
Future Low Mileage System Trail AOI	L	TR	L	NM	
Future Low Mileage System Trail Footprint	M	M	NM	NM	
Future Picnic AOI	M	TR	L	L	
Future Picnic Area Footprint	M	TR	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Minor Trailhead AOI	M	TR	L	L	
West Side PO Minor Trailhead Footprint	M	TR	L	L	
West Side PO Motorized Trails AOI	M	TR	L	NM	
West Side PO Motorized Trails Footprint	M	M	NM	NM	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Clokey Buckwheat

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	TR	L	NM	
CUA Footprint	TR	TR	NM	NM	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Motorized Trail (closed) AOI	L	TR	NM	M	
Motorized Trail (closed) Footprint	L	L	NM	M	
Motorized Trail (open) AOI	L	TR	L	M	
Motorized Trail (open) Footprint	L	L	NM	M	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Private Land	M	NM	NM	NM	
Unpaved Road AOI	L	TR	L	M	
Unpaved Road Footprint	L	L	NM	M	
Wildland Urban Interface	NM	NM	NM	NM	
Future Campground AOI	M	TR	L	L	
Future Campground Footprint	M	TR	L	L	
Future High Mileage System Trail AOI	L	TR	L	NM	
Future High Mileage System Trail Footprint	M	M	NM	NM	
Future Low Mileage System Trail AOI	L	TR	L	NM	
Future Low Mileage System Trail Footprint	M	M	NM	NM	
Future Trailhead AOI	M	TR	L	L	
Future Trailhead Footprint	M	TR	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Motorized Trails AOI	M	TR	L	NM	
West Side PO Motorized Trails Footprint	M	TR	L	NM	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Death Valley Beardtongue

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	TR	
CUA Footprint	L	L	NM	TR	
Firewood Gathering Area	TR	TR	TR	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Motorized Trail (closed) AOI	L	TR	NM	M	
Motorized Trail (closed) Footprint	L	L	NM	M	
Motorized Trail (open) AOI	L	TR	L	M	
Motorized Trail (open) Footprint	L	L	NM	M	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Private Land	M	NM	NM	NM	
Unpaved Road AOI	L	TR	L	M	
Unpaved Road Footprint	L	L	NM	M	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Major Trailhead AOI	M	TR	L	L	
West Side PO Major Trailhead Footprint	M	TR	L	L	
West Side PO Motorized Trails AOI	M	TR	L	NM	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Spring Mountains Milkvetch

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Horses/Burros .25 - 1.0 mile from spring/stream	1.00	1.00	0.75	1.00	
Private Land	0.50	1.00	1.00	1.00	
Wildland Urban Interface	1.00	1.00	1.00	1.00	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Summary Tables

Table LE10
Summary of Individual Activity Effect Acreage on Suitable Habitat of Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Suitable Habitat Area by Species	*9,762.8*	*5,434.8*	*7,079.9*	*0.0*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI	11.9	27.3	20.2	
CUA Footprint	0.7	4.3	0.7	
Firewood Gathering Area	33.4	58.5	46.5	
FS Structure AOI	1.4	0.2		
FS Structure Footprint	0.2	0.0		
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream	**1631.4**	**433.9**	**2608.2**	
Horses/Burros < .25 mile from spring/stream	**109.4**	**196.4**	**893.0**	
Horses/Burros > 1.0 mile from spring/stream	**4186.3**	**3271.3**	**1451.1**	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI	16.3	23.1	6.2	
Motorized Trail (closed) Footprint	2.4	3.5	0.9	
Motorized Trail (open) AOI	8.0	11.4	5.0	
Motorized Trail (open) Footprint	1.2	1.6	0.8	
Non System Trail AOI	17.0	46.7	5.1	
Non System Trail Footprint	1.1	3.1	0.3	
Paved Road AOI	9.1	26.7	0.0	
Paved Road Footprint	10.8	33.1		
Picnic Area AOI				
Picnic Area Footprint				
Private Land	12.0	81.9	1.0	
PVT Building AOI	0.3			
PVT Building Footprint	0.0			
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	52.2	65.9	13.6	
Unpaved Road Footprint	33.4	41.7	8.3	
Wildland Urban Interface	**130.2**	**101.0**		
All Current Activities Combined (Aggregated)	*6133*	*4079*	*5013*	*N/A*
Future Activities				
Future Campground AOI	35.5	33.3		
Future Campground Footprint	**117.3**	**100.0**		
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI	2.4	1.0		
Future High Mileage System Trail Footprint	0.2	0.1		
Future Low Mileage System Trail AOI	31.7	23.4		
Future Low Mileage System Trail Footprint	0.6	0.4		
Future Picnic AOI	5.0			
Future Picnic Area Footprint	25.0			
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI		0.2		
Future Trailhead Footprint		2.1		
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI	7.7	1.2	20.3	
West Side PO Camping Footprint	39.9	5.4	70.4	
West Side PO Major Trailhead AOI			0.6	
West Side PO Major Trailhead Footprint			5.6	
West Side PO Minor Trailhead AOI	1.8			
West Side PO Minor Trailhead Footprint	27.7			
West Side PO Motorized Trails AOI	1.1	0.8	0.0	
West Side PO Motorized Trails Footprint	0.2	0.1		
West Side PO Non Motorized Trails AOI	6.2	5.8	4.1	
West Side PO Non Motorized Trails Footprint	0.4	0.4	0.3	
All Current and Future Activities Combined (Aggregated)	*6317*	*4210*	*5103*	*N/A*

**** Bold text indicates activities with > 100 ac overlap with species area***

Table LE11
Percent Potential Effect of Activities on Suitable Habitat by Species - Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Suitable Habitat Area by Species	*9,762.84*	*5,434.77*	*7,079.91*	*0.00*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI	0.06%	0.25%	0.14%	
CUA Footprint	0.01%	0.08%	0.01%	
Firewood Gathering Area	0.09%	0.27%	0.16%	
FS Structure AOI	0.01%	0.00%		
FS Structure Footprint	0.00%	0.00%		
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream	4.18%	2.00%	**9.21%**	
Horses/Burros < .25 mile from spring/stream	0.56%	1.81%	**6.31%**	
Horses/Burros > 1.0 mile from spring/stream	**10.72%**	**15.05%**	**5.12%**	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI	0.04%	0.11%	0.02%	
Motorized Trail (closed) Footprint	0.01%	0.02%	0.00%	
Motorized Trail (open) AOI	0.04%	0.10%	0.04%	
Motorized Trail (open) Footprint	0.01%	0.03%	0.01%	
Non System Trail AOI	0.04%	0.21%	0.02%	
Non System Trail Footprint	0.01%	0.06%	0.00%	
Paved Road AOI	0.05%	0.25%	0.00%	
Paved Road Footprint	0.11%	0.61%		
Picnic Area AOI				
Picnic Area Footprint				
Private Land	0.03%	0.38%	0.00%	
PVT Building AOI	0.00%			
PVT Building Footprint	0.00%			
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	0.27%	0.61%	0.10%	
Unpaved Road Footprint	0.34%	0.77%	0.12%	
Wildland Urban Interface	0.33%	0.46%		
All Current Activities Combined (Aggregated)	17%	22%	21%	N/A
Future Activities				
Future Campground AOI	0%	0%		
Future Campground Footprint	0.90%	1.38%		
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI	0.01%	0.00%		
Future High Mileage System Trail Footprint	0.00%	0.00%		
Future Low Mileage System Trail AOI	0.08%	0.11%		
Future Low Mileage System Trail Footprint	0.01%	0.01%		
Future Picnic AOI	0.03%			
Future Picnic Area Footprint	0.19%			
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI		0.00%		
Future Trailhead Footprint		0.04%		
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI	0.04%	0.01%	0.14%	
West Side PO Camping Footprint	0.31%	0.07%	0.75%	
West Side PO Major Trailhead AOI			0.00%	
West Side PO Major Trailhead Footprint			0.08%	
West Side PO Minor Trailhead AOI	0.01%			
West Side PO Minor Trailhead Footprint	0.28%			
West Side PO Motorized Trails AOI	0.01%	0.01%	0.00%	
West Side PO Motorized Trails Footprint	0.00%	0.00%		
West Side PO Non Motorized Trails AOI	0.02%	0.03%	0.01%	
West Side PO Non Motorized Trails Footprint	0.00%	0.01%	0.00%	
All Current and Future Activities Combined (Aggregated)	18%	24%	22%	N/A

**** Bold text indicates activities with >= 5% Potential Effect***

Table LE12
Percent Potential Effect of Activities with Avoidance Measures on Suitable Habitat by Species - Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Suitable Habitat Area by Species	*9,762.84*	*5,434.77*	*7,079.91*	*0.00*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI	0.06%	0.23%	0.09%	
CUA Footprint	0.01%	0.07%	0.01%	
Firewood Gathering Area	0.08%	0.25%	0.15%	
FS Structure AOI	0.01%	0.00%		
FS Structure Footprint	0.00%	0.00%		
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream	4.18%	2.00%	**9.21%**	
Horses/Burros < .25 mile from spring/stream	0.53%	1.72%	**5.99%**	
Horses/Burros > 1.0 mile from spring/stream	**10.72%**	**15.05%**	**5.12%**	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI	0.03%	0.08%	0.02%	
Motorized Trail (closed) Footprint	0.00%	0.01%	0.00%	
Motorized Trail (open) AOI	0.03%	0.08%	0.03%	
Motorized Trail (open) Footprint	0.01%	0.02%	0.01%	
Non System Trail AOI	0.03%	0.16%	0.01%	
Non System Trail Footprint	0.01%	0.04%	0.00%	
Paved Road AOI	0.04%	0.23%	0.00%	
Paved Road Footprint	0.10%	0.56%		
Picnic Area AOI				
Picnic Area Footprint				
Private Land	0.02%	0.19%	0.00%	
PVT Building AOI	0.00%			
PVT Building Footprint	0.00%			
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	0.19%	0.44%	0.07%	
Unpaved Road Footprint	0.21%	0.48%	0.07%	
Wildland Urban Interface	0.33%	0.46%		
All Current Activities Combined (Aggregated)	16%	21%	21%	N/A
Future Activities				
Future Campground AOI	0.09%	0.15%		
Future Campground Footprint	0.43%	0.66%		
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI	0.00%	0.00%		
Future High Mileage System Trail Footprint	0.00%	0.00%		
Future Low Mileage System Trail AOI	0.06%	0.08%		
Future Low Mileage System Trail Footprint	0.00%	0.00%		
Future Picnic AOI	0.01%			
Future Picnic Area Footprint	0.09%			
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI		0.00%		
Future Trailhead Footprint		0.02%		
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI	0.02%	0.01%	0.07%	
West Side PO Camping Footprint	0.15%	0.04%	0.35%	
West Side PO Major Trailhead AOI			0.00%	
West Side PO Major Trailhead Footprint			0.04%	
West Side PO Minor Trailhead AOI	0.00%			
West Side PO Minor Trailhead Footprint	0.13%			
West Side PO Motorized Trails AOI	0.00%	0.00%	0.00%	
West Side PO Motorized Trails Footprint	0.00%	0.00%		
West Side PO Non Motorized Trails AOI	0.01%	0.02%	0.01%	
West Side PO Non Motorized Trails Footprint	0.00%	0.00%	0.00%	
All Current and Future Activities Combined (Aggregated)	17%	22%	21%	N/A

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table LE13
Percent Potential Effect of Activities with Minimization Measures on Suitable Habitat by Species - Low Elevation F

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Suitable Habitat Area by Species	*9,763*	*5,435*	*7,080*	*0*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI	0.05%	0.19%	0.11%	
CUA Footprint	0.01%	0.08%	0.01%	
Firewood Gathering Area	0.08%	0.26%	0.16%	
FS Structure AOI	0.01%	0.00%		
FS Structure Footprint	0.00%	0.00%		
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream	3.13%	1.50%	**6.91%**	
Horses/Burros < .25 mile from spring/stream	0.42%	1.35%	4.73%	
Horses/Burros > 1.0 mile from spring/stream	**8.04%**	**11.29%**	3.84%	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI	0.04%	0.11%	0.02%	
Motorized Trail (closed) Footprint	0.01%	0.02%	0.00%	
Motorized Trail (open) AOI	0.03%	0.08%	0.03%	
Motorized Trail (open) Footprint	0.01%	0.03%	0.01%	
Non System Trail AOI	0.03%	0.16%	0.01%	
Non System Trail Footprint	0.01%	0.06%	0.00%	
Paved Road AOI	0.04%	0.18%	0.00%	
Paved Road Footprint	0.11%	0.61%		
Picnic Area AOI				
Picnic Area Footprint				
Private Land	0.03%	0.38%	0.00%	
PVT Building AOI	0.00%			
PVT Building Footprint	0.00%			
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	0.20%	0.45%	0.07%	
Unpaved Road Footprint	0.34%	0.77%	0.12%	
Wildland Urban Interface	0.33%	0.46%		
All Current Activities Combined (Aggregated)	13%	17%	16%	N/A
Future Activities				
Future Campground AOI	0.14%	0.23%		
Future Campground Footprint	0.68%	1.04%		
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI	0.00%	0.00%		
Future High Mileage System Trail Footprint	0.00%	0.00%		
Future Low Mileage System Trail AOI	0.06%	0.08%		
Future Low Mileage System Trail Footprint	0.01%	0.01%		
Future Picnic AOI	0.02%			
Future Picnic Area Footprint	0.14%			
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI		0.00%		
Future Trailhead Footprint		0.03%		
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI	0.03%	0.01%	0.11%	
West Side PO Camping Footprint	0.23%	0.06%	0.56%	
West Side PO Major Trailhead AOI			0.00%	
West Side PO Major Trailhead Footprint			0.06%	
West Side PO Minor Trailhead AOI	0.01%			
West Side PO Minor Trailhead Footprint	0.21%			
West Side PO Motorized Trails AOI	0.00%	0.01%	0.00%	
West Side PO Motorized Trails Footprint	0.00%	0.00%		
West Side PO Non Motorized Trails AOI	0.01%	0.02%	0.01%	
West Side PO Non Motorized Trails Footprint	0.00%	0.01%	0.00%	
All Current and Future Activities Combined (Aggregated)	14%	18%	17%	N/A

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table LE14
Percent Potential Effect of Activities with Mitigation Measures on Suitable Habitat by Species - Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Suitable Habitat Area by Species	*9,763*	*5,435*	*7,080*	*0*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI	0.06%	0.25%	0.14%	
CUA Footprint	0.01%	0.08%	0.01%	
Firewood Gathering Area	0.09%	0.27%	0.16%	
FS Structure AOI	0.01%	0.00%		
FS Structure Footprint	0.00%	0.00%		
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream	4.18%	2.00%	**9.21%**	
Horses/Burros < .25 mile from spring/stream	0.56%	1.81%	**6.31%**	
Horses/Burros > 1.0 mile from spring/stream	**10.72%**	**15.05%**	**5.12%**	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI	0.04%	0.05%	0.01%	
Motorized Trail (closed) Footprint	0.01%	0.01%	0.00%	
Motorized Trail (open) AOI	0.04%	0.05%	0.02%	
Motorized Trail (open) Footprint	0.01%	0.02%	0.01%	
Non System Trail AOI	0.04%	0.21%	0.02%	
Non System Trail Footprint	0.01%	0.06%	0.00%	
Paved Road AOI	0.05%	0.25%	0.00%	
Paved Road Footprint	0.11%	0.61%		
Picnic Area AOI				
Picnic Area Footprint				
Private Land	0.03%	0.38%	0.00%	
PVT Building AOI	0.00%			
PVT Building Footprint	0.00%			
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	0.27%	0.30%	0.05%	
Unpaved Road Footprint	0.34%	0.38%	0.06%	
Wildland Urban Interface	0.33%	0.46%		
All Current Activities Combined (Aggregated)	17%	21%	21%	N/A
Future Activities				
Future Campground AOI	0.14%	0.23%		
Future Campground Footprint	0.68%	1.04%		
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI	0.01%	0.00%		
Future High Mileage System Trail Footprint	0.00%	0.00%		
Future Low Mileage System Trail AOI	0.08%	0.11%		
Future Low Mileage System Trail Footprint	0.01%	0.01%		
Future Picnic AOI	0.02%			
Future Picnic Area Footprint	0.14%			
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI		0.00%		
Future Trailhead Footprint		0.03%		
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI	0.03%	0.01%	0.11%	
West Side PO Camping Footprint	0.23%	0.06%	0.56%	
West Side PO Major Trailhead AOI			0.00%	
West Side PO Major Trailhead Footprint			0.06%	
West Side PO Minor Trailhead AOI	0.01%			
West Side PO Minor Trailhead Footprint	0.21%			
West Side PO Motorized Trails AOI	0.01%	0.01%	0.00%	
West Side PO Motorized Trails Footprint	0.00%	0.00%		
West Side PO Non Motorized Trails AOI	0.02%	0.03%	0.01%	
West Side PO Non Motorized Trails Footprint	0.00%	0.01%	0.00%	
All Current and Future Activities Combined (Aggregated)	18%	23%	22%	N/A

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table LE30
Potential Effects on Low Elevation Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data

Effects Index	*Black woollypod*	*Clokey buckwheat*	*Death Valley beardtongue*	*Spring Mountains milkvetch*
Current Activities - Potential Effects				
0.000	0.0	0.0	0.0	
0.001 - 0.050	0.0	0.0	0.0	
0.051 - 0.250	5,868.1	3,629.1	4,087.9	
0.251 - 0.500	168.6	217.9	882.8	
0.501 - 0.750	47.2	138.2	30.6	
0.751 - 0.999	2.1	11.1	1.8	
1.000	47.0	83.1	10.1	
Current and Future Activities - Potential Effects				
0.000	0.0	0.0	0.0	
0.001 - 0.050	0.0	0.0	0.0	
0.051 - 0.250	5,805.7	3,631.4	4,080.4	
0.251 - 0.500	198.0	239.3	902.7	
0.501 - 0.750	177.0	217.3	96.8	
0.751 - 0.999	49.1	27.1	5.8	
1.000	87.3	94.4	17.0	
Total Species Distribution (ac)	**9,763**	**5,435**	**7,080**	**N/A**

Table LE31
Potential Effects with Avoidance Measures on Low Elevation Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Effects Index	*Black woollypod*	*Clokey buckwheat*	*Death Valley beardtongue*	*Spring Mountains milkvetch*
Current Activities - Potential Effects with Avoidance Measures				
0.000	0.0	0.0	0.0	
0.001 - 0.050	0.0	0.0	0.0	
0.051 - 0.250	5,868.1	3,629.1	4,087.9	
0.251 - 0.500	188.6	248.2	898.4	
0.501 - 0.750	56.4	144.3	22.5	
0.751 - 0.999	9.3	31.1	4.4	
1.000	10.6	26.8	0.0	
Current and Future Activities - Potential Effects with Avoidance Measures				
0.000	0.0	0.0	0.0	
0.001 - 0.050	0.0	0.0	0.0	
0.051 - 0.250	5,838.8	3,659.5	4,099.9	
0.251 - 0.500	363.3	336.9	971.7	
0.501 - 0.750	88.2	148.6	26.3	
0.751 - 0.999	16.0	37.6	4.7	
1.000	10.7	26.9	0.0	
Total Species Distribution (ac)	**9,763**	**5,435**	**7,080**	**N/A**

Table LE32
Potential Effects with Minimization Measures on Low Elevation Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data

Effects Index	*Black woollypod*	*Clokey buckwheat*	*Death Valley beardtongue*	*Spring Mountains milkvetch*
Current Activities - Potential Effects with Minimization Measures				
0.000	0.00	0.00	0.00	
0.001 - 0.050	0.00	0.00	0.00	
0.051 - 0.250	5,868.14	3,629.09	4,087.91	
0.251 - 0.500	201.14	323.90	900.58	
0.501 - 0.750	16.72	43.38	14.71	
0.751 - 0.999	0.00	0.09	0.00	
1.000	47.00	82.98	10.08	
Current and Future Activities - Potential Effects with Minimization Measures				
0.000	0.00	0.00	0.00	
0.001 - 0.050	0.00	0.00	0.00	
0.051 - 0.250	5,805.65	3,631.37	4,080.40	
0.251 - 0.500	242.57	347.34	921.59	
0.501 - 0.750	188.55	142.56	87.32	
0.751 - 0.999	31.99	4.34	2.71	
1.000	48.24	83.90	10.68	
Total Species Distribution (ac)	**9,762.84**	**5,434.77**	**7,079.91**	**N/A**

Table LE33
Potential Effects with Mitigation Measures on Low Elevation Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Effects Index	*Black woollypod*	*Clokey buckwheat*	*Death Valley beardtongue*	*Spring Mountains milkvetch*
Current Activities - Potential Effects with Mitigation Measures				
0.000	0.0	0.0	0.0	
0.001 - 0.050	0.0	0.0	0.0	
0.051 - 0.250	5,868.1	3,650.3	4,088.6	
0.251 - 0.500	169.8	247.4	893.9	
0.501 - 0.750	46.0	130.2	28.0	
0.751 - 0.999	2.1	11.1	1.8	
1.000	47.0	40.4	1.0	
Current and Future Activities - Potential Effects with Mitigation Measures				
0.000	0.0	0.0	0.0	
0.001 - 0.050	0.0	0.0	0.0	
0.051 - 0.250	5,805.7	3,646.0	4,081.0	
0.251 - 0.500	215.4	274.1	915.0	
0.501 - 0.750	205.9	228.0	99.2	
0.751 - 0.999	41.7	19.3	5.9	
1.000	48.3	42.0	1.5	
Total Species Distribution (ac)	**9,763**	**5,435**	**7,080**	**N/A**

Table LEPL10
Summary of Individual Activity Effect Acreage using Polygon Locality Data of Low Elevation Plants.

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Polygon Occurance Area by Species	*0.0*	*0.0*	*84.7*	*0.0*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI			2.5	
CUA Footprint			0.0	
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**36.8**	
Horses/Burros < .25 mile from spring/stream			**47.9**	
Horses/Burros > 1.0 mile from spring/stream				
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI			1.4	
Motorized Trail (closed) Footprint			0.2	
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI				
Paved Road Footprint				
Picnic Area AOI				
Picnic Area Footprint				
Private Land				
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI			0.2	
Unpaved Road Footprint			0.1	
Wildland Urban Interface				
All Current Activities Combined (Aggregated)	*N/A*	*N/A*	*84.7*	*N/A*
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)	*N/A*	*N/A*	*84.7*	*N/A*

**** Bold text indicates activities with > 5 ac overlap with species area***

Table LEPL11
Percent Potential Effect of Activities using Polygon Locality Data by Species - Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Polygon Occurance Area by Species	*0.0*	*0.0*	*84.7*	*0.0*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI			1.5%	
CUA Footprint			0.03%	
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**10.9%**	
Horses/Burros < .25 mile from spring/stream			**28.3%**	
Horses/Burros > 1.0 mile from spring/stream				
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI			0.4%	
Motorized Trail (closed) Footprint			0.1%	
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI				
Paved Road Footprint				
Picnic Area AOI				
Picnic Area Footprint				
Private Land				
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI			0.1%	
Unpaved Road Footprint			0.1%	
Wildland Urban Interface				
All Current Activities Combined (Aggregated)	*N/A*	*N/A*	40.3%	*N/A*
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)	*N/A*	*N/A*	40.3%	*N/A*

**** Bold text indicates activities with >= 5% Potential Effect***

Table LEPL12
Percent Potential Effect of Activities with Avoidance Measures using Polygon Locality Data by Species - Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Polygon Occurance Area by Species	*0.0*	*0.0*	*84.7*	*0.0*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI			0.9%	
CUA Footprint			0.0%	
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**10.9%**	
Horses/Burros < .25 mile from spring/stream			**26.8%**	
Horses/Burros > 1.0 mile from spring/stream				
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI			0.3%	
Motorized Trail (closed) Footprint			0.04%	
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI				
Paved Road Footprint				
Picnic Area AOI				
Picnic Area Footprint				
Private Land				
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI			0.1%	
Unpaved Road Footprint			0.1%	
Wildland Urban Interface				
All Current Activities Combined (Aggregated)	N/A	N/A	38.4%	N/A
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)	N/A	N/A	38%	N/A

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table LEPL13
Percent Potential Effect of Activities with Minimization Measures using Polygon Locality Data by Species - Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Polygon Occurance Area by Species	*0.0*	*0.0*	*84.7*	*0.0*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI			1.1%	
CUA Footprint			0.03%	
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**8.2%**	
Horses/Burros < .25 mile from spring/stream			**21.2%**	
Horses/Burros > 1.0 mile from spring/stream				
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI			0.4%	
Motorized Trail (closed) Footprint			0.1%	
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI				
Paved Road Footprint				
Picnic Area AOI				
Picnic Area Footprint				
Private Land				
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI			0.1%	
Unpaved Road Footprint			0.1%	
Wildland Urban Interface				
All Current Activities Combined (Aggregated)	N/A	N/A	30.3%	N/A
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)	N/A	N/A	30.3%	N/A

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table LEPL14
Percent Potential Effect of Activities with Mitigation Measures using Polygon Locality Data by Species - Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Polygon Occurance Area by Species	*0.0*	*0.0*	*84.7*	*0.0*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI			1.4%	
CUA Footprint			0.03%	
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**10.9%**	
Horses/Burros < .25 mile from spring/stream			**28.3%**	
Horses/Burros > 1.0 mile from spring/stream				
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI			0.2%	
Motorized Trail (closed) Footprint			0.0%	
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI				
Paved Road Footprint				
Picnic Area AOI				
Picnic Area Footprint				
Private Land				
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI			0.0%	
Unpaved Road Footprint			0.1%	
Wildland Urban Interface				
All Current Activities Combined (Aggregated)	N/A	N/A	40.1%	N/A
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)	N/A	N/A	40%	N/A

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table LEPL30
Potential Effects on Low Elevation Plants for Current Activities as well as Current and Future Activities, Polygon Locality Data

Effects Index	*Black woollypod*	*Clokey buckwheat*	*Death Valley beardtongue*	*Spring Mountains milkvetch*
Current Activities - Potential Effects				
0.000			0.0	
0.001 - 0.050			0.0	
0.051 - 0.250			35.9	
0.251 - 0.500			45.2	
0.501 - 0.750			3.1	
0.751 - 0.999			0.4	
1.000			0.1	
Current and Future Activities - Potential Effects				
0.000				
0.001 - 0.050				
0.051 - 0.250				
0.251 - 0.500				
0.501 - 0.750				
0.751 - 0.999				
1.000				
Total Species Distribution (ac)	**N/A**	**N/A**	**84.7**	**N/A**

Table LEPL31
Potential Effects with Avoidance Measures on Low Elevation Plants for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Effects Index	*Black woollypod*	*Clokey buckwheat*	*Death Valley beardtongue*	*Spring Mountains milkvetch*
Current Activities - Potential Effects with Avoidance Measures				
0.000			0.0	
0.001 - 0.050			0.0	
0.051 - 0.250			35.9	
0.251 - 0.500			46.0	
0.501 - 0.750			2.7	
0.751 - 0.999			0.1	
1.000			0.0	
Current and Future Activities - Potential Effects with Avoidance Measures				
0.000				
0.001 - 0.050				
0.051 - 0.250				
0.251 - 0.500				
0.501 - 0.750				
0.751 - 0.999				
1.000				
Total Species Distribution (ac)	**N/A**	**N/A**	**84.7**	**N/A**

Table LEPL32
Potential Effects with Minimization Measures on Low Elevation Plants for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Current Activities - Potential Effects with Minimization Measures				
Effects Index	***Black woollypod***	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
0.000			0.00	
0.001 - 0.050			0.00	
0.051 - 0.250			35.86	
0.251 - 0.500			46.63	
0.501 - 0.750			2.08	
0.751 - 0.999			0.00	
1.000			0.12	
Current and Future Activities - Potential Effects with Minimization Measures				
0.000				
0.001 - 0.050				
0.051 - 0.250				
0.251 - 0.500				
0.501 - 0.750				
0.751 - 0.999				
1.000				
Total Species Distribution (ac)	**N/A**	**N/A**	**84.7**	**N/A**

Table LEPL33
Potential Effects on Low Elevation Plants for Current Activities as well as Current and Future Activities, Polygon Locality Data

Effects Index	*Black woollypod*	*Clokey buckwheat*	*Death Valley beardtongue*	*Spring Mountains milkvetch*
Current Activities - Potential Effects with Mitigation Measures				
0.000			0.00	
0.001 - 0.050			0.00	
0.051 - 0.250			35.86	
0.251 - 0.500			45.25	
0.501 - 0.750			3.21	
0.751 - 0.999			0.35	
1.000			0.03	
Current and Future Activities - Potential Effects with Mitigation Measures				
0.000				
0.001 - 0.050				
0.051 - 0.250				
0.251 - 0.500				
0.501 - 0.750				
0.751 - 0.999				
1.000				
Total Species Distribution (ac)	**N/A**	**N/A**	**84.7**	**N/A**

Table LEPO10
Summary of Individual Activity Effect Acreage on Point Occurrence Data of Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Site Occurance Area by Species (with 0.1 ac buffer)	*0.20*	*0.20*	*0.90*	*0.30*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI				
CUA Footprint				
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**0.30**	0.10
Horses/Burros < .25 mile from spring/stream			**0.50**	
Horses/Burros > 1.0 mile from spring/stream	0.10	0.10	0.10	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI				
Motorized Trail (closed) Footprint				
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI		0.04		
Paved Road Footprint		0.04		
Picnic Area AOI				
Picnic Area Footprint				
Private Land			0.10	0.001
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	0.03			
Unpaved Road Footprint	0.03			
Wildland Urban Interface		0.10		0.10
All Current Activities Combined (Aggregated)	*0.10*	*0.20*	*0.90*	*0.20*
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)	*0.10*	*0.20*	*0.90*	*0.20*

**** Bold text indicates activities with > 0.20 ac overlap with species area***

Table LEPO11
Percent Potential Effect of Activities on Point Occurrence Data by Species - Alpine and Sub-Alpine Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Site Occurance Area by Species (with 0.1 ac buffer)	*0.20*	*0.20*	*0.90*	*0.30*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI				
CUA Footprint				
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**8%**	**8%**
Horses/Burros < .25 mile from spring/stream			**28%**	
Horses/Burros > 1.0 mile from spring/stream	**13%**	**13%**	3%	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI				
Motorized Trail (closed) Footprint				
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI		**10%**		
Paved Road Footprint		**19%**		
Picnic Area AOI				
Picnic Area Footprint				
Private Land			3%	0%
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	**9%**			
Unpaved Road Footprint	**16%**			
Wildland Urban Interface		**13%**		**8%**
All Current Activities Combined (Aggregated)	31%	46%	40%	17%
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)	31%	46%	40%	17%

**** Bold text indicates activities with >= 5% Potential Effect***

Table LEPO12
Percent Potential Effect of Activities with Avoidance Measures on Point Occurrence Data by Species - Low Elevation Plants

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Site Occurance Area by Species (with 0.1 ac buffer)	*0.20*	*0.20*	*0.90*	*0.30*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI				
CUA Footprint				
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**8%**	**8%**
Horses/Burros < .25 mile from spring/stream			**26%**	
Horses/Burros > 1.0 mile from spring/stream	**13%**	**13%**	3%	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI				
Motorized Trail (closed) Footprint				
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI		**9%**		
Paved Road Footprint		**17%**		
Picnic Area AOI				
Picnic Area Footprint				
Private Land			1%	0%
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	**6%**			
Unpaved Road Footprint	**10%**			
Wildland Urban Interface		**13%**		**8%**
All Current Activities Combined (Aggregated)	24%	46%	38%	17%
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)	24%	46%	38%	17%

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table LEPO13
Percent Potential Effect of Activities with Minimization Measures on Point Occurrence Data by Species - Low Elevation Plants.

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Site Occurance Area by Species (with 0.1 ac buffer)	*0.20*	*0.20*	*0.90*	*0.30*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI				
CUA Footprint				
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**6%**	**6%**
Horses/Burros < .25 mile from spring/stream			**21%**	
Horses/Burros > 1.0 mile from spring/stream	**9%**	**9%**	2%	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI				
Motorized Trail (closed) Footprint				
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI		**7%**		
Paved Road Footprint		**19%**		
Picnic Area AOI				
Picnic Area Footprint				
Private Land			3%	0%
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	**6%**			
Unpaved Road Footprint	**16%**			
Wildland Urban Interface		**13%**		**8%**
All Current Activities Combined (Aggregated)	27%	41%	30%	15%
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)				

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table LEPO14
Percent Potential Effect of Activities with Mitigation Measures on Point Occurrence Data by Species - Low Elevation Plants.

	Black woollypod	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
Activities				
Current Activities				
Site Occurance Area by Species (with 0.1 ac buffer)	*0.20*	*0.20*	*0.90*	*0.30*
Campground AOI				
Campground Footprint				
Cave/Tunnel				
Climbing Area				
CUA AOI				
CUA Footprint				
Firewood Gathering Area				
FS Structure AOI				
FS Structure Footprint				
High Mileage System Trail AOI				
High Mileage System Trail Footprint				
Horses/Burros .25 - 1.0 mile from spring/stream			**8%**	**8%**
Horses/Burros < .25 mile from spring/stream			**28%**	
Horses/Burros > 1.0 mile from spring/stream	**13%**	**13%**	3%	
Low Mileage System Trail AOI				
Low Mileage System Trail Footprint				
Motorized Trail (closed) AOI				
Motorized Trail (closed) Footprint				
Motorized Trail (open) AOI				
Motorized Trail (open) Footprint				
Non System Trail AOI				
Non System Trail Footprint				
Paved Road AOI		**10%**		
Paved Road Footprint		**19%**		
Picnic Area AOI				
Picnic Area Footprint				
Private Land			3%	0%
PVT Building AOI				
PVT Building Footprint				
Ski Area AOI				
Ski Area Footprint				
Snowplay Area				
Trailhead in Developed Canyon AOI				
Trailhead in Developed Canyon Footprint				
Trailhead out of Developed Canyon AOI				
Trailhead out of Developed Canyon Footprint				
Unpaved Road AOI	**9%**			
Unpaved Road Footprint	**16%**			
Wildland Urban Interface		**13%**		**8%**
All Current Activities Combined (Aggregated)	31%	46%	40%	17%
Future Activities				
Future Campground AOI				
Future Campground Footprint				
Future EEA AOI				
Future EEA Footprint				
Future Foot Bridge AOI				
Future Foot Bridge Footprint				
Future High Mileage System Trail AOI				
Future High Mileage System Trail Footprint				
Future Low Mileage System Trail AOI				
Future Low Mileage System Trail Footprint				
Future Picnic AOI				
Future Picnic Area Footprint				
Future Ski Area AOI				
Future Ski Area Footprint				
Future Trailhead AOI				
Future Trailhead Footprint				
Future Visitor Center AOI				
Future Visitor Center Footprint				
West Side PO Camping AOI				
West Side PO Camping Footprint				
West Side PO Major Trailhead AOI				
West Side PO Major Trailhead Footprint				
West Side PO Minor Trailhead AOI				
West Side PO Minor Trailhead Footprint				
West Side PO Motorized Trails AOI				
West Side PO Motorized Trails Footprint				
West Side PO Non Motorized Trails AOI				
West Side PO Non Motorized Trails Footprint				
All Current and Future Activities Combined (Aggregated)	31%	46%	40%	17%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table LEPO30
Potential Effects on Low Elevation Plants for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities - Potential Effects				
Effects Index	***Black woollypod***	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
0.000	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00
0.051 - 0.250	0.03	0.12	0.40	0.20
0.251 - 0.500	0.00	0.00	0.40	0.00
0.501 - 0.750	0.03	0.04	0.10	0.00
0.751 - 0.999	0.00	0.00	0.00	0.00
1.000	0.03	0.04	0.00	0.00
Current and Future Activities - Potential Effects				
0.000				
0.001 - 0.050				
0.051 - 0.250				
0.251 - 0.500				
0.501 - 0.750				
0.751 - 0.999				
1.000				
Total Species Distribution (ac)	**0.20**	**0.20**	**0.90**	**0.30**

Table LEPO31

Potential Effects with Avoidance Measures on Low Elevation Plants for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Black woollypod*	*Clokey buckwheat*	*Death Valley beardtongue*	*Spring Mountains milkvetch*
Current Activities - Potential Effects with Avoidance Measures				
0.000	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00
0.051 - 0.250	0.03	0.12	0.40	0.20
0.251 - 0.500	0.03	0.00	0.40	0.00
0.501 - 0.750	0.03	0.04	0.10	0.00
0.751 - 0.999	0.00	0.00	0.00	0.00
1.000	0.00	0.04	0.00	0.00
Current and Future Activities - Potential Effects with Avoidance Measures				
0.000				
0.001 - 0.050				
0.051 - 0.250				
0.251 - 0.500				
0.501 - 0.750				
0.751 - 0.999				
1.000				
Total Species Distribution (ac)	**0.20**	**0.20**	**0.90**	**0.30**

Table LEPO32
Potential Effects with Minimization Measures on Low Elevation Plants for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities - Potential Effects with Minimization Measures				
Effects Index	***Black woollypod***	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
0.000	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00
0.051 - 0.250	0.03	0.12	0.40	0.20
0.251 - 0.500	0.03	0.04	0.50	0.00
0.501 - 0.750	0.00	0.00	0.00	0.00
0.751 - 0.999	0.00	0.00	0.00	0.00
1.000	0.03	0.04	0.00	0.00
Current and Future Activities - Potential Effects with Minimization Measures				
0.000				
0.001 - 0.050				
0.051 - 0.250				
0.251 - 0.500				
0.501 - 0.750				
0.751 - 0.999				
1.000				
Total Species Distribution (ac)	**0.20**	**0.20**	**0.90**	**0.30**

Table LEPO33
Potential Effects with Mitigation Measures on Low Elevation Plants for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Current Activities - Potential Effects with Mitigation Measures				
Effects Index	***Black woollypod***	***Clokey buckwheat***	***Death Valley beardtongue***	***Spring Mountains milkvetch***
0.000	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00
0.051 - 0.250	0.03	0.12	0.40	0.20
0.251 - 0.500	0.00	0.00	0.40	0.00
0.501 - 0.750	0.03	0.04	0.10	0.00
0.751 - 0.999	0.00	0.00	0.00	0.00
1.000	0.03	0.04	0.00	0.00
Current and Future Activities - Potential Effects with Mitigation Measures				
0.000				
0.001 - 0.050				
0.051 - 0.250				
0.251 - 0.500				
0.501 - 0.750				
0.751 - 0.999				
1.000				
Total Species Distribution (ac)	**0.20**	**0.20**	**0.90**	**0.30**

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Astragalus funereus	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (2)	U	U	U	U	Low	Moderate	Low	
Current Condition Spring Mountains				1-5 (2)	U	1-50	<1	U	Low	Moderate	Low	Low
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	6-20 (17)	U	1,001-2,500	1,000-5,000	U	Low	Moderate	Moderate	Low
Comments	No specific information for Spring Mountains; Occurrences have not been seen for 20+ years in SM but more recent surveys in CA; moderate immediacy due to wildfire threat; Moderate threat (immediacy) in current condition rangewide is due to wildfire.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Astragalus remotus	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (3)	U	U	U	U	Moderate	High	High	
Current Condition Spring Mountains				1-5 (3)	U	U	U	U	Moderate	High	High	Low
Current Condition Rangewide	SME	Narrow	Moderately vulnerable	6-20 (16)	U	2,501-10,000	250-500	U	Moderate	High	High	Low
Comments	Unknown in populations size and occupied habitat since no estimates given in literature specific to sites on Spring Mountains. Rangewide estimates for No. of sites (16 EO, 17 sites in NNHP), pop size (5018), and habitat (299). Trend unknown rangewide from Morefield 2001, populations on SM have not been visited recently. Moderate severity threat = fire, OHV, grazing all seem reasonable to assume; also assume these are small populations. High as scope of threats are potential at all sites. High threats immediacy because all threats are happening now											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Eriogonum heermannii var clokey	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (2)	U	U	U	U	Low	Moderate	Moderate	
Current Condition Spring Mountains				1-5 (2)	U	U	U	U	Low	Moderate	Moderate	Low
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	6-20 (10)	U	251-1,000	U	U	Moderate	High	Moderate	U
Comments	; U* based on Morefield and no new site visits; Pop size rangewide is 459, unknown for SM. Severity low since cliff species on SM; scope and immedicy rating due to wildfire in low elevations rangewide.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Penstemon fruticiformis ssp. armagosae	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (7)	U	251-1,000	50-100	U	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (8)	High	251-1,000	50-100	Stable	Low	Moderate	High	Low
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	21-80 (29)	High	U	5,000-25,000	U	U	U	U	U
Comments	No. of sites from 7 to 8 in SM - new site added since reference at Mt. Stirling; 18 occurence in NV with 11 in CA. Viability rangewide high due to plants in CA and SM pop; 10 pop off Forest in NV are at risk; pop. Size from Niles 1999 as >500 in survey, acres 85 in SM and 7000+ rangewidel pop. stable trend based on Niles 1999. U - Not very endangered in CA; threatened in NV											

APPENDIX 5F-11

Plant Species (Mixed Conifer)

1.1 MIXED CONIFER

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

1.1.1.1.1 Point Occurrence Data

The point occurrence data (with 0.1 acre buffer per observation) overlap with current and future activities for each species summed to between 0 and 1.23 acres per species for the Mixed Conifer plant species (Excel Table MCO10). Two current and no future activity has an overlap of greater than 0.2 acres. The Horses/Burros > 1.0 mile from Spring/Stream and Wildland Urban Interface were the only activities affecting more than 0.2 acres. No current or future activities overlap with Nevada Willowherb point occurrences data.

Current activities account for the majority of the overlap with the Mixed Conifer species (Excel Table MCO10, Appendix D.1).

1.1.1.1.2 Polygon Locality Data

The polygon locality data overlap with current and future activities for each species summed to between 0.5 and 581.8 acres per species for the Mixed Conifer plant species (Excel Table MCL10). Sixteen current and three future activities had an overlap of greater than five acres. The current activities were the Campground AOI, Concentrated Use Areas AOI, Firewood Gathering Area, High Mileage System Trail AOI, Horsess/Burros (all three distances from spring/stream), Low Mileage System Trail AOI, Motorized Trail AOI (open and closed), Non System Trail AOI, Private Land, Snowplay Area, Unpaved Road (footprint and AOI), and Wildland Urban Interface. The future activities were the Future Ski Area (footprint and AOI) and the West Side PO Camping Footprint. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities account for the majority of the overlap with the Mixed Conifer plant species as no future activity has an overlap of more than 40 acres (Excel Table MCL10, Appendix D.2).

1.1.1.1.3 Suitable Habitat Data

The habitat suitability overlap with current and future activities for each species summed to between 143 and 33092 acres per species for the Mixed Conifer plant species (Excel Table MC10{Clf&StpSlp_activitytables_SuitHab-fortext.xls}). Values of overlap of an activity on a species that exceeded 100 acres are highlighted with bold text, and twelve current and four future activities meet this criteria. The current activities with greater than 100 acres of overlap with these plants are: the Concentrated Use Area AOI, the Firewood Gathering Area, the High Mileage System Trail AOI, all three Horses/Burros categories, the Non System Trail AOI, Paved Road Footprint, Private Land, the Unpaved Road AOI and Footprint, and the Wildland Urban Interface. The future activities are the Future Ski Area AOI and Footprint and the West Side PO

Camping AOI and Footprint. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Current activities account for most of the overlap of the Mixed Conifer plant species (Excel Table CS10, Appendix D.3). Horses/Burros activities, the Wildland Urban Interface, and Private Land account for the majority of current overlap with the Mixed Conifer plant species, while the West Side PO Camping Footprint accounts for the majority of planned overlap on this species.

1.1.1.2 Potential Effects

The analysis of potential effects on Mixed Conifer plant species relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Appendix A, <Excel table species rankings.xls> Table MC21< CM values by species summary >) The majority of activities have a high (H) to total (TTL) impact on these plant species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species (Appendix D.1).

1.1.1.2.1 Point Occurrence Data

The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Table MCO11). The aggregated current and future activities' potential effects are estimated to impact between 0 and 29 percent of the occupied sites of the Mixed Conifer plant species. All potential effects greater than five percent are highlighted with bold text, and four current and one future activity meet this criteria. The current activities are the Horses/Burros >1/0 mile from Spring/Stream, Paved Road Footprint, Picnic Area Footprint, and the Wildland Urban Interface. The future activity is the West Side PO Camping Footprint.

Future activities have less potential effect on the Mixed Conifer species compared to current activities (Table CSSO11). The activities have no potential effect on the Nevada Willowherb's known occurrence areas.

Maps of the effect intensity of current and future activities on point occurrences are presented with suitable habitat data for each Mixed Conifer plant species in Figures MC1-15. The areas of point occurrences that overlap colored shading indicate locations where the Mixed Conifer species have been observed and current or future activities exist or are proposed. The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category as it corresponds to the species figures (Figures MC1-15, Table MCO30). Note that although a majority of the potential effects on known point occurrences are partial (less than 1.0), there is or will be low to moderate-level degradation of habitat from current and future activities.

1.1.1.2.2 Polygon Locality Data

The percentage potential effect of each activity on polygon locality data for the Mixed Conifer plant species was calculated and summarized (Table MCL11) {excel table tab2}. The aggregated

current and future activities' potential effects are estimated to impact between 1 and 36 percent of the occupied sites of this species. All potential effects greater than five percent are highlighted with bold text. and three current and two future activities meet this criteria. The current activities are the Concentrated Use Areas (AOI, Horses/Burros > 1.0 mile from Spring/Stream, and Wildland Urban Interface. The future activities are the Future Ski Area Footprint and West Side PO Camping Footprint.

Maps of the effect intensity of current and future activities on polygon localities are presented with suitable habitat data for the Mixed Conifer plant species in Figures MC1-15. The areas of polygon occurrences that overlap colored shading indicate locations where the Mixed Conifer plant species have been observed and current or future activities exist or are proposed. The aggregated potential effects intensity index for each species provides the acreage of polygon occurrences of each species that fall within each effects index category as it corresponds to the species figures (Figures MC1-15, Table MCL30). The effects intensity aggregated for all activities on Mixed Conifer plant species indicates only a relatively small area has complete elimination of polygon occurrence sites for Mixed Conifer plant species; however, the majority of the effects are in moderate intensity categories (between 0.05 and 0.75).

1.1.1.2.3 Suitable Habitat Data

The percentage potential effect of each activity on suitable habitat for each species was calculated and summarized (Table MC11). The aggregated current and future activities' potential effects are estimated to impact between 1 and 24 percent of the suitable habitat of the Mixed Conifer plant species. All potential effects greater than five percent are highlighted with bold text. Only the current activity Horses/Burros > 1.0 mile from Spring/Stream meets this criteria.

Current activities account for majority of the impact compared to future activities (Table MC11).

Maps of the effect intensity of current and future activities on suitable habitat are presented with species occurrence data for each Mixed Conifer plant species in Figures MC1-16. The areas of suitable habitat that overlap colored shading indicate locations where the Mixed Conifer species have been observed and current or future activities exist or are proposed. Other locations with activity effects do not have suitable habitat present for these plant species. The aggregated potential effects intensity index for each species provides the acreage of geographic area of each species that falls within each effects index category as it corresponds to the species figures (Figures MC1-16, Table MC30). The effects intensity aggregated for all activities on Mixed Conifer plant species indicates a relatively small area has complete elimination of suitable habitat for these species while the majority of effects are in the moderate intensity categories (between 0.05 and 0.75).

1.1.1.2.4 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on Mixed Conifer plant species. The three categories of conservation measures are avoidance, minimization, and mitigation. In order to determine the benefit of conservation measures, the potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures. The acreage results are provided by species in Appendix

D.1, while the percentage potential effect with and without conservation measures is reviewed in the following sections.

1.1.1.3 Avoidance

1.1.1.3.1 Point Occurrence Data

No future activity with avoidance measures was greater than five percent of the point occurrence with buffers area, while four current activities were greater than five percent (Table MCO12). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 0 and 23 percent of the point occurrence locations of Mixed Conifer species.

The effects intensity aggregated for all activities with mitigation measures on each Mixed Conifer plant species indicates only a small area has complete elimination of point occurrences, while the majority of the effects are in low to moderate intensity categories (between 0.05 and 0.75) for these species (Table MCO31). Avoidance measures are benefiting these plant species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing points of occurrence.

1.1.1.3.2 Polygon Locality Data

Two current activities with avoidance measures were greater than five percent of the polygon locality area, while no future activity was greater than five percent (Table MCL12). These activities are Horses/Burros > 1.0 miles from Spring/Stream and Wildland Urban Interface. The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 1 and 28 percent of the polygon occurrences for Mixed Conifer plant species.

The effects intensity aggregated for all activities with avoidance measures on Mixed Conifer plant species indicates only a relatively small area has complete elimination of polygon locality sites; however, the majority of the effects are in moderate intensity categories (between 0.05 and 0.75; Table MCL31). Avoidance measures are benefiting this plant species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing polygons of occurrence.

1.1.1.3.3 Suitable Habitat Data

One current and no future activities with avoidance measures were greater than five percent of the suitable habitat (Table MC12). This activity is the Horses/Burros > 1.0 mile from Spring/Stream. The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 1 and 21 percent of the suitable habitat of Mixed Conifer species.

The effects intensity aggregated for all activities with minimization measures on Mixed Conifer plant species indicates only a relatively small area has complete elimination of suitable; however, the majority of the effects are in moderate intensity categories (between 0.05 and 0.75; Table MMC31). Avoidance measures are benefiting these plant species by reducing the deleterious

activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

1.1.1.4 Minimization

1.1.1.4.1 Point Occurrence Data

All potential effects (with minimization measures, using point occurrence data) greater than five percent are highlighted with bold text, and three current and one future activity meet this criteria (Table MCO13). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 3 and 24 percent of the occupied sites of Mixed Conifer plant species. The current activities effects are on the Horses/Burros >1/0 mile from Spring/Stream, Paved Road Footprint, and the Wildland Urban Interface. The future activity is the West Side PO Camping Footprint.

The effects intensity aggregated for all activities with mitigation measures on each Mixed Conifer plant species indicates only a small area has complete elimination of point occurrences, while the majority of the effects are in moderate intensity categories (between 0.05 and 0.75) for these species (Table MCO32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

1.1.1.4.2 Polygon Locality Data

All potential effects (with minimization measures, using polygon occurrence data) greater than five percent are highlighted with bold text, and two current and two future activities meet this criteria (Table MCL13). These current activities are Horses/Burros > 1.0 miles from Spring/Stream and Wildland Urban Interface and future activities are Future Ski Area Footprint and West Side PO Camping Footprint. The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 1 and 28 percent of the polygon occurrences for Mixed Conifer plant species.

The effects intensity aggregated for all activities with minimization measures on Mixed Conifer plant species indicates only a relatively small area has complete elimination of polygon occurrence sites; however, the majority of the effects are in moderate intensity categories (between 0.05 and 0.75; Table MCL32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing known occurrences to be maintained across more of the existing polygons of occurrence.

1.1.1.4.3 Suitable Habitat Data

All potential effects (with minimization measures) greater than five percent are highlighted with bold text. Only one current and no future activities meet these criteria (Table MC13). This activity is the Horses/Burros > 1.0 mile from Spring/Stream. The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 1 and 19 percent of the suitable habitat of Mixed Conifer plant species.

The effects intensity aggregated for all activities with minimization measures on Mixed Conifer plant species indicates only a relatively small area has complete elimination of suitable; however, the majority of the effects are in moderate intensity categories (between 0.05 and 0.75; Table MC32). Minimization measures are conferring a small benefit to the plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence.

1.1.1.5 Mitigation

1.1.1.5.1 Point Occurrence Data

All potential effects (with mitigation measures, using point occurrence data) greater than five percent are highlighted with bold text, and four current and no future activity meets this criteria (Table MCO14). The aggregated current and future activities' potential effects with mitigation measures are estimated to impact between 3 and 25 percent of the occupied sites of Mixed Conifer plant species. The current activities effects are the Horses/Burros >1/0 mile from Spring/Stream, Paved Road Footprint, Picnic Area Footprint, and the Wildland Urban Interface.

The effects intensity aggregated for all activities with mitigation measures on each Mixed Conifer plant species indicates only a small area has complete elimination of point occurrences, while the majority of the effects are in moderate intensity categories (between 0.05 and 0.75) for these species (Table MCO33). Mitigation measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing points of occurrence.

1.1.1.5.2 Polygon Locality Data

All potential effects (with mitigation measures) greater than five percent are highlighted with bold text, and three current and two future activities meet this criteria (Table MCL14). These current activities are Concentrated Use Areas AOI, Horses/Burros > 1.0 miles from Spring/Stream, and Wildland Urban Interface and future activities are Future Ski Area Footprint and West Side PO Camping Footprint. The aggregated current and future activities' potential effects with mitigation measures are estimated to impact between 1 and 34 percent of the polygon occurrences for Mixed Conifer plant species.

The effects intensity aggregated for all activities with mitigation measures on Mixed Conifer plant species indicates only a relatively small area has complete elimination of polygon occurrence sites; however, the majority of the effects are in moderate intensity categories (between 0.05 and 0.75; Table MCL33). Mitigation measures are conferring a small benefit to this plant species by reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing polygons of occurrence.

1.1.1.5.3 Suitable Habitat Data

All potential effects (with mitigation measures) greater than five percent are highlighted with bold text. Only one current and no future activities meet these criteria (Table CS14). This activity is the Horses/Burros > 1.0 mile from Spring/Stream. The aggregated current and future

activities' potential effects with minimization measures are estimated to impact between 1 and 22 percent of the suitable habitat of Mixed Conifer plant species.

The effects intensity aggregated for all activities with mitigation measures on Mixed Conifer plant species indicates only a relatively small area has complete elimination of suitable habitat; however, the majority of the effects are in moderate intensity categories (between 0.05 and 0.75; Table MC33). Mitigation measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing area.

Ranking of Magnitude of Potential Effects

Species: Rough Angelica (*Angelica scabrida*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	(X)	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	Lab	TTL	La	TTL	Mab	L	Lab	TTL	Mc	TTL	Mc	H	Mab	TTL	Mab	TTL	Mab	Hab	Mab	H	L	TTL	Ma	TTL	Lab	H	L	L	L	M	L	L	Ld	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species prefers disturbed areas
b = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
c = threatened by parking off designated roads
d = opening up the canopy is beneficial

Species: Rosy King Sandwort (*Arenaria kingii* ssp. *rosea*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	(X)	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	Lb	L	L	M	L	L	Lb	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = opening up the canopy is beneficial; this species is most successful in open areas

Species: Clokey Milkvetch (*Astragalus aequalis*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	(X)	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	Lab	TTL	Lab	TTL	Mab	L	Lab	TTL	Mc	TTL	Mc	Hab	Mab	TTL	Mab	TTL	Mab	Hab	Mab	H	L	TTL	Mab	TTL	Lab	H	L	L	L	M	L	L	Ld	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species prefers disturbed areas
b = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
c = threatened by parking off designated roads
d = opening up the canopy is beneficial

Species: Clokey Eggvetch (*Astragalus oophorus* var. *clokeyanus*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	(X)	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	H	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	Lc	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = opening of the canopy would be beneficial; this species is most successful in open areas

Species: Clokey Paintbrush (*Castilleja martini* var. *clokeyi*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = increased susceptibility to fire resulting from introduction of non-native grasses

Species: Clokey Thistle (*Cirsium eatonii* var. *clokeyi*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	L	Lc	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = this species occurs at snow drifts
d = results in increased susceptibility to fire

Species: Charleston Draba (*Draba paucifructa*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	Lb	Lc	L	Md	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = this species could be affected by staging activities
c = this species occurs at snow drifts
d = this species occurs along wetland margins
e = results in increased susceptibility to fire

Species: Nevada Willowherb (*Epilobium nevadense*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	Hb	Lc	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, camping, and rock climbing
b = this species is found on limestone slopes
c = this species could be affected by staging activities

Species: Charleston Goldenbush (*Ericameria compacta*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	H	M	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	Lb	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = opening the canopy would not be beneficial; they prefer more sheltered areas

Species: Charleston Pinewood Lousewort (*Pedicularis semibarbata* var. *charlestonensis*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	Ha	M	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = results in increased susceptibility to fire

Species: Charleston Beardtongue (*Penstemon leiophyllus var. kekii*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	(X)	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	(X)	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	L	H	L	L	L	M	L	L	Lb	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = this species prefers open areas
c = results in increased susceptibility to fire

Species: Jaeger Beardtongue (*Penstemon thompsoniae* ssp. *jaegeri*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	H	M	H	L	TTL	Ma	TTL	La	H	L	L	L	Mc	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = this species is associated with drainages
d = results in increased susceptibility to fire

Species: Hitchcock Bladderpod (*Physaria hitchcockii* var. *hitchcockii*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	M	TTL	M	Ha	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, horseback riding, OHV use, and camping
b = results in increased susceptibility to fire

Species: Clokey Mountain Sage (*Salvia dorii* var. *clokeyi*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	H	Ma	TTL	Ma	TTL	Ma	H	M	H	L	TTL	Ma	TTL	La	H	L	L	L	Mc	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = this species is associated with drainages

Species: Charleston Grounddaisy (*Townsendia jonesii var. tumulosa*)	Activities to be Included in the Model																																						Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																										
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																										
Habitat loss																																										
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																										
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																										
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	H	Ma	TTL	Ma	TTL	Ma	H	M	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = results in increased susceptibility to fire

Species: Charleston Violet (*Viola charlestonensis*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	H	Ma	TTL	Ma	TTL	Ma	H	M	H	L	TTL	Ma	TTL	La	H	L	L	L	M	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = results in increased susceptibility to fire

Value of Conservation Measures

Species
Rough Angelica

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	NM	
CUA Footprint	L	L	NM	NM	
Cave/Tunnel	TR	TR	TR	NM	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	TR	TR	
PVT Building Footprint	NM	NM	TR	TR	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	M	L	
Picnic Area Footprint	TR	TR	M	L	
Private Land	M	NM	NM	NM	
Snowplay Area	TR	TR	NM	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	M	
Unpaved Road Footprint	L	L	NM	M	
Wildland Urban Interface	NM	NM	NM	NM	
Future High Mileage System Trail AOI	L	TR	L	NM	
Future High Mileage System Trail Footprint	M	M	NM	NM	
West Side PO Camping Footprint	H	TR	M	L	
West Side PO Minor Trailhead AOI	M	TR	L	L	
West Side PO Minor Trailhead Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
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Species
Rosy King Sandwort

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	TR	
CUA Footprint	L	L	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future EEA AOI	M	TR	L	L	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Clokey Milkvetch

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	TR	
CUA Footprint	L	L	NM	TR	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
Private Land	M	NM	NM	NM	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Snowplay Area	TR	TR	M	M	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Trailhead out of Developed Canyon AOI	TR	TR	L	L	
Trailhead out of Developed Canyon Footprint	NM	NM	NM	L	
Future High Mileage System Trail AOI	L	TR	L	NM	
Future High Mileage System Trail Footprint	M	M	NM	NM	
Future Campground AOI	M	TR	L	L	
Future Campground Footprint	M	TR	TR	L	
Future Low Mileage System Trail AOI	L	TR	L	NM	
Future Low Mileage System Trail Footprint	M	M	NM	NM	
Future Trailhead AOI	M	TR	L	L	
Future Trailhead Footprint	M	TR	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	TR	L	
West Side PO Minor Trailhead AOI	M	TR	L	L	
West Side PO Minor Trailhead Footprint	M	TR	L	L	
West Side PO Motorized Trails AOI	L	TR	L	NM	
West Side PO Motorized Trails Footprint	M	M	NM	NM	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Clokey Eggvetch

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	TR	L	NM	
CUA Footprint	TR	TR	NM	NM	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Campground AOI	L	TR	L	M	
Campground Footprint	TR	TR	TR	M	
High Mileage System Trail AOI	M	L	L	L	
High Mileage System Trail Footprint	M	M	M	L	
Low Mileage System Trail AOI	M	L	L	L	
Low Mileage System Trail Footprint	M	M	M	L	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Non System Trail AOI	M	L	L	L	
Non System Trail Footprint	M	M	M	L	
Picnic Area AOI	L	TR	L	M	
Picnic Area Footprint	TR	TR	TR	M	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Future Campground AOI	H	TR	L	M	
Future Campground Footprint	H	TR	L	M	
Future EEA AOI	M	TR	L	L	
Future Foot Bridge AOI	L	TR	L	NM	
Future Foot Bridge Footprint	L	L	NM	NM	
Future Low Mileage System Trail AOI	M	L	L	L	
Future Low Mileage System Trail Footprint	M	M	NM	L	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
Future Trailhead AOI	M	TR	L	L	
Future Trailhead Footprint	M	TR	L	L	
West Side PO Camping AOI	H	TR	L	M	
West Side PO Camping Footprint	H	TR	L	M	
West Side PO Minor Trailhead AOI	M	TR	L	L	
West Side PO Minor Trailhead Footprint	M	TR	L	L	
West Side PO Motorized Trails AOI	H	TR	L	NM	
West Side PO Motorized Trails Footprint	H	M	NM	NM	
West Side PO Non Motorized Trails AOI	M	L	L	L	
West Side PO Non Motorized Trails Footprint	M	M	NM	L	

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Species
Clokey Paintbrush

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	TR	
CUA Footprint	L	L	NM	TR	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Private Land	M	NM	NM	NM	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Cave/Tunnel					
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Trailhead out of Developed Canyon AOI	TR	TR	L	L	
Trailhead out of Developed Canyon Footprint	NM	NM	NM	L	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
Future EEA AOI	M	TR	L	L	
Future Foot Bridge AOI	L	TR	L	NM	
Future Foot Bridge Footprint	L	L	NM	NM	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Clokey Thistle

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	NM	
CUA Footprint	L	L	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	M	
Unpaved Road Footprint	L	L	NM	M	
Wildland Urban Interface	NM	NM	NM	NM	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Charleston Draba

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	NM	
CUA Footprint	L	L	NM	NM	
High Mileage System Trail AOI	L	TR	M	L	
High Mileage System Trail Footprint	L	L	NM	NM	
Low Mileage System Trail AOI	L	TR	M	L	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	M	L	
Non System Trail Footprint	L	L	NM	NM	
Private Land	H	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Nevada Willowherb

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	TR	L	NM	
CUA Footprint	TR	TR	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
Cave/Tunnel	TR	TR	L	NM	
Climbing Area	M	M	L	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Private Land	M	NM	NM	NM	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Charleston Goldenbush

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	TR	L	NM	
CUA Footprint	TR	TR	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future EEA AOI	M	TR	L	L	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species

Charleston Pinewood Lousewort

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	TR	
CUA Footprint	L	L	NM	TR	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Trailhead out of Developed Canyon AOI	TR	TR	L	L	
Trailhead out of Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Future EEA AOI	L	TR	L	L	
Future Foot Bridge AOI	L	TR	L	NM	
Future Foot Bridge Footprint	L	L	NM	NM	
Future EEA Footprint	M	TR	L	L	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Minor Trailhead AOI	M	TR	L	L	
West Side PO Minor Trailhead Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Charleston Beardtongue

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	NM	
CUA Footprint	L	L	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	M	L	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	M	L	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	M	L	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	0.25	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future EEA AOI	M	TR	L	L	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Jaeger Beardtongue

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	TR	L	NM	
CUA Footprint	TR	TR	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
Cave/Tunnel	TR	TR	TR	NM	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Trailhead out of Developed Canyon AOI	TR	TR	L	L	
Trailhead out of Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future EEA AOI	M	TR	L	L	
Future High Mileage System Trail AOI	L	TR	L	NM	
Future High Mileage System Trail Footprint	M	M	NM	NM	
Future Ski Area AOI	M	M	L	L	
Future Low Mileage System Trail AOI	L	TR	L	NM	
Future Low Mileage System Trail Footprint	M	M	NM	NM	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Minor Trailhead AOI	M	TR	L	L	
West Side PO Minor Trailhead Footprint	M	TR	L	L	
West Side PO Motorized Trails AOI	M	TR	L	NM	
West Side PO Motorized Trails Footprint	M	M	NM	NM	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Hitchcock Bladderpod

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	TR	L	NM	
CUA Footprint	TR	TR	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
Climbing Area	TR	TR	TR	NM	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future EEA AOI	M	TR	L	L	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Clokey Mountain Sage

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	TR	TR	L	NM	
CUA Footprint	TR	TR	NM	NM	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
FS Structure AOI	NM	NM	L	L	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Trailhead out of Developed Canyon AOI	TR	TR	L	L	
Trailhead out of Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future EEA AOI	M	TR	L	L	
Future Ski Area AOI	M	M	L	L	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Minor Trailhead AOI	M	TR	L	L	
West Side PO Minor Trailhead Footprint	M	TR	L	L	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Charleston Grounddaisy

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	TR	
CUA Footprint	L	L	NM	TR	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Trailhead out of Developed Canyon AOI	TR	TR	L	L	
Trailhead out of Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	
Future EEA AOI	M	TR	L	L	
Future High Mileage System Trail AOI	L	TR	L	NM	
Future High Mileage System Trail Footprint	M	M	NM	NM	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Minor Trailhead AOI	M	TR	L	L	
West Side PO Minor Trailhead Footprint	M	TR	L	L	
West Side PO Motorized Trails AOI	M	TR	L	NM	
West Side PO Motorized Trails Footprint	M	M	NM	NM	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	

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Species
Charleston Violet

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
CUA AOI	L	L	L	TR	
CUA Footprint	L	L	NM	TR	
Campground AOI	L	TR	L	L	
Campground Footprint	TR	TR	TR	L	
FS Structure AOI	NM	NM	L	L	
FS Structure Footprint	NM	NM	NM	NM	
Firewood Gathering Area	TR	TR	TR	NM	
High Mileage System Trail AOI	L	TR	L	NM	
High Mileage System Trail Footprint	L	L	NM	NM	
Horses/Burros .25 - 1.0 mile from spring/stream	NM	NM	L	NM	
Horses/Burros < .25 mile from spring/stream	TR	NM	L	NM	
Horses/Burros > 1.0 mile from spring/stream	NM	NM	L	NM	
Low Mileage System Trail AOI	L	TR	L	NM	
Low Mileage System Trail Footprint	L	L	NM	NM	
Motorized Trail (closed) AOI	L	TR	NM	NM	
Motorized Trail (closed) Footprint	L	L	NM	NM	
Motorized Trail (open) AOI	L	TR	L	NM	
Motorized Trail (open) Footprint	L	L	NM	NM	
Non System Trail AOI	L	TR	L	NM	
Non System Trail Footprint	L	L	NM	NM	
PVT Building AOI	NM	NM	NM	NM	
PVT Building Footprint	NM	NM	NM	NM	
Paved Road AOI	TR	TR	L	NM	
Paved Road Footprint	TR	TR	NM	NM	
Picnic Area AOI	L	TR	L	L	
Picnic Area Footprint	TR	TR	TR	L	
Private Land	M	NM	NM	NM	
Ski Area AOI	TR	TR	L	L	
Ski Area Footprint	TR	TR	L	L	
Snowplay Area	TR	TR	M	NM	
Trailhead in Developed Canyon AOI	TR	TR	L	L	
Trailhead in Developed Canyon Footprint	NM	NM	NM	L	
Trailhead out of Developed Canyon AOI	TR	TR	L	L	
Trailhead out of Developed Canyon Footprint	NM	NM	NM	L	
Unpaved Road AOI	L	TR	L	NM	
Unpaved Road Footprint	L	L	NM	NM	
Wildland Urban Interface	L	NM	NM	NM	
Future Campground AOI	M	TR	L	L	
Future Campground Footprint	M	TR	L	L	
Future EEA AOI	M	TR	L	L	
Future Foot Bridge AOI	L	TR	L	NM	
Future Foot Bridge Footprint	L	L	NM	NM	
Future High Mileage System Trail AOI	L	TR	L	NM	
Future High Mileage System Trail Footprint	M	M	NM	NM	
Future Low Mileage System Trail AOI	L	TR	L	NM	
Future Low Mileage System Trail Footprint	M	M	NM	NM	
Future Ski Area AOI	M	M	L	L	
Future Ski Area Footprint	M	M	L	L	
Future Trailhead AOI	M	TR	L	L	
Future Trailhead Footprint	M	TR	L	L	
Future Visitor Center AOI	H	TR	M	L	
Future Visitor Center Footprint	H	TR	M	NM	
West Side PO Camping AOI	M	TR	L	L	
West Side PO Camping Footprint	M	TR	L	L	
West Side PO Minor Trailhead AOI	M	TR	L	L	
West Side PO Minor Trailhead Footprint	M	TR	L	L	
West Side PO Motorized Trails AOI	M	TR	L	NM	
West Side PO Motorized Trails Footprint	M	M	NM	NM	
West Side PO Non Motorized Trails AOI	L	TR	L	NM	
West Side PO Non Motorized Trails Footprint	M	M	NM	NM	
Future EEA Footprint	M	TR	L	L	

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Summary Tables

Table MC10
Summary of Individual Effect Acreage of Each Activity on Mixed Conifer Plant Species, Suitable Habitat Data

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada Willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Suitable Habitat Acreage by Species	*11,663.91*	*2,497.28*	*5,552.58*	*31,429.19*	*24,227.66*	*22,668.94*	*6,455.41*	*46,156.67*	*19,308.38*	*32,817.55*	*6,838.12*	*15,412.43*	*68,177.69*	*2,865.28*	*20,679.37*	*1,845.49*
Campground AOI	7.57		7.57	4.53	14.69	31.12	15.51	9.02	9.30	21.11	0.00	9.30	8.40	1.65	9.30	
Campground Footprint	13.57		13.54	8.75	47.69	85.67	51.25	8.94	16.63	69.15	0.03	16.63	17.91	1.03	16.63	
Cave/Tunnel										0.10			0.32	0.03		0.03
Climbing Area												0.03		0.03		
CUA AOI	9.90	1.69	2.07	157.85	113.99	208.92	71.82	150.27	68.67	83.94	6.86	18.18	217.37	0.31	48.26	9.10
CUA Footprint	0.23	0.02	0.04	10.32	9.45	18.14	6.83	11.88	4.69	6.77	0.14	0.94	13.46	0.00	3.70	0.89
Firewood Gathering Area	0.05		0.05	263.32	184.39	365.14	121.56	406.95	89.50	67.89		0.28	354.08		22.07	23.48
FS Structure AOI	2.63		1.37	1.61	19.76	21.28	11.20	5.70	0.04	12.84	0.57	4.07	2.94		3.09	7.67
FS Structure Footprint	0.40		0.20	0.21	2.80	3.14	1.84	0.70		2.06	0.10	0.63	0.46		0.47	0.93
High Mileage System Trail AOI	51.75	9.14	17.91	9.27	48.08	7.45	5.30		56.62	100.63	38.07	65.97	15.04	6.39	44.74	1.87
High Mileage System Trail Footprint	3.48	0.61	1.20	0.62	3.22	0.49	0.35		3.80	6.75	2.56	4.43	1.00	0.44	3.01	0.12
Horses/Burros .25 - 1.0 mile from spring/stream	59.05		2.75	2996.68	1005.42	1358.36	425.73	5426.68	797.57	1155.43	53.47	61.70	8130.88	7.15	619.40	
Horses/Burros < .25 mile from spring/stream				191.33	68.55	215.06	9.62	597.15	68.08	118.09			805.19		37.51	
Horses/Burros > 1.0 mile from spring/stream				13907.65	739.89	4804.52	3683.68	24510.95	1720.87	280.80			22210.75		295.23	
Low Mileage System Trail AOI	48.29	2.93	26.56	10.84	71.98	31.65	6.94	6.33	53.61	53.95	19.19	75.48	24.07	13.33	55.97	33.28
Low Mileage System Trail Footprint	0.80	0.05	0.44	0.16	1.20	0.53	0.12	0.10	0.88	0.91	0.32	1.27	0.40	0.24	0.93	0.55
Motorized Trail (closed) AOI				18.22	6.25	26.90	7.66	46.68	3.79	3.82			42.15		2.55	
Motorized Trail (closed) Footprint				2.80	0.94	4.01	1.19	7.01	0.56	0.59			6.52		0.40	
Motorized Trail (open) AOI				10.01	0.04	14.65	4.17	52.85		0.20			23.77		0.04	
Motorized Trail (open) Footprint				1.48	0.00	2.16	0.65	7.94		0.03			3.56		0.00	
Non System Trail AOI	11.10	1.94	5.33	113.62	38.47	139.25	13.63	186.32	67.78	23.39	5.90	15.88	37.75	1.34	23.60	4.92
Non System Trail Footprint	0.73	0.13	0.35	7.60	2.58	9.33	0.91	12.47	4.53	1.56	0.39	1.05	2.52	0.08	1.57	0.33
Paved Road AOI	3.59		3.17	22.35	53.37	96.74	29.99	30.35	8.93	40.28		6.04	17.32	0.03	11.14	15.89
Paved Road Footprint	4.02		3.67	28.28	68.32	123.55	38.93	39.06	11.11	51.38		7.17	21.52	0.00	13.58	20.07
Picnic Area AOI	1.07		1.07	3.90	11.56	11.81	9.61	2.05	1.45	12.95		1.45	1.89		3.82	1.57
Picnic Area Footprint	2.05		2.05	11.33	39.58	42.30	38.14	4.16	2.20	42.92		2.20	2.44		6.56	4.11
Private Land	135.62	0.46	120.90	522.25	485.42	466.48	183.05	310.48	313.31	407.41	20.80	190.26	934.08	57.95	289.34	130.38
PVT Building AOI	3.38		2.97	1.72	11.88	15.21	4.33	5.29	2.80	4.74		5.86	4.65	0.13	3.20	14.96
PVT Building Footprint	0.44		0.51	0.31	1.86	2.31	0.62	0.96	0.45	0.66		0.80	0.66	0.01	0.50	2.20
Ski Area AOI	14.53	11.15	4.79	1.52	1.95	5.83	5.83		1.95	54.56	9.74	54.56	1.95		51.58	
Ski Area Footprint	9.88	7.58	1.63	0.30	0.34	2.14	2.14		0.34	56.16	8.25	56.16	0.34		32.63	
Snowplay Area	1.42		0.51	6.20	28.78	26.81	18.98	6.36	1.88	24.78		2.54	1.88		6.35	11.61
Trailhead in Developed Canyon AOI	0.93		0.36	0.30	0.88	0.88	0.30	0.21	0.55	0.43	0.50	1.46	0.55		0.35	0.64
Trailhead in Developed Canyon Footprint	0.39		0.25	0.23	0.55	0.64	0.23	0.18	0.33	0.35	0.05	0.49	0.33		0.29	0.45
Trailhead out of Developed Canyon AOI				0.14	0.35	1.38		1.20	0.14	0.14			0.14			
Trailhead out of Developed Canyon Footprint				0.12	0.85	3.17		3.03	0.12	0.12			0.12			
Unpaved Road AOI	17.11	0.13	15.97	121.76	91.53	200.50	66.11	198.45	39.81	54.97	1.86	21.57	223.50	2.68	34.49	25.86
Unpaved Road Footprint	10.80	0.10	10.02	75.97	57.34	125.81	41.48	125.23	24.86	34.23	1.18	13.52	141.30	1.67	21.44	16.30
Wildland Urban Interface	184.77	0.01	160.44	402.01	943.35	1232.09	498.47	290.71	176.14	934.66	2.80	256.91	683.51	64.12	443.14	215.32
All Current Activities Combined (Aggregated)	*498.98*	*35.69*	*315.96*	*17893.71*	*3513.79*	*8466.41*	*4759.99*	*31213.97*	*3343.57*	*3153.85*	*167.90*	*765.44*	*32469.06*	*138.99*	*1872.20*	*409.86*
Future Activities																
Future Campground AOI						4.65	3.92	4.54								
Future Campground Footprint						1.66	1.65	1.66								
Future EEA AOI	0.04		0.04	0.04	1.71	1.71	1.71		0.04	1.71		0.04	0.04		0.04	
Future EEA Footprint					2.73	0.00										
Future Foot Bridge AOI					1.51	1.51	1.51			1.51						
Future Foot Bridge Footprint					0.15	0.15	0.15			0.15						
Future High Mileage System Trail AOI				6.96		38.56		17.58					0.05			0.29
Future High Mileage System Trail Footprint				0.47		2.60		1.21					0.00			0.02
Future Low Mileage System Trail AOI						46.21	3.13	4.70		0.00			0.90			
Future Low Mileage System Trail Footprint						0.90	0.06	0.09					0.02			
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI	88.06	86.33	18.58		2.44	6.34	6.34		0.22	0.19	71.12	153.57	0.09	3.12	95.61	
Future Ski Area Footprint	71.78	84.54	18.50		1.23	10.61	10.61			151.32	54.36	153.41		1.44	84.42	
Future Trailhead AOI						0.29	0.29	0.29								
Future Trailhead Footprint						0.91	0.91	0.91								
Future Visitor Center AOI						1.40										
Future Visitor Center Footprint						1.27										
West Side PO Camping AOI	10.00	1.33	11.91	75.81	28.08	20.67	34.37	131.83	20.30	34.26	10.00	11.52	189.42		12.99	
West Side PO Camping Footprint	12.64	1.69	62.14	349.03	129.79	115.00	199.23	581.43	65.73	163.74	12.64	19.04	911.12		79.75	6.17
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI				1.62	0.94	2.64	0.87	4.35	0.28				4.28			0.94
West Side PO Minor Trailhead Footprint				12.96	11.67	43.07	15.00	61.51	6.69				56.47			10.07
West Side PO Motorized Trails AOI				8.27		6.04	6.90	19.50					11.11			
West Side PO Motorized Trails Footprint				1.23		0.92	1.03	2.92					1.66			
West Side PO Non Motorized Trails AOI	6.28	1.88	4.21	25.72	21.76	27.53	21.43	82.13	7.27	23.20	6.28	7.76	82.03	0.15	8.99	4.12
West Side PO Non Motorized Trails Footprint	0.42	0.13	0.28	1.72	1.45	1.84	1.43	5.49	0.48	1.55	0.42	0.52	5.48	0.01	0.60	0.27
All Current and Future Activities Combined (Aggregate	*685*	*211*	*429*	*17952*	*3707*	*8710*	*4783*	*31433*	*3440*	*3666*	*320*	*1106*	*33092*	*143*	*2149*	*429*

Table MC11
Percent Activity Potential Effect by Species - Mixed Conifer Plants, Suitable Habitat Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada Willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Suitable Habitat Acreage by Species	*11,663.91*	*2,497.28*	*5,552.58*	*31,429.19*	*24,227.66*	*22,668.94*	*6,455.41*	*46,156.67*	*19,308.38*	*32,817.55*	*6,838.12*	*15,412.43*	*68,177.69*	*2,865.28*	*20,679.37*	*1,845.49*
Campground AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Campground Footprint	0%		0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	
Cave/Tunnel										0%			0%	0%		0%
Climbing Area												0%		0%		
CUA AOI	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CUA Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Firewood Gathering Area	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
FS Structure AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
FS Structure Footprint	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%		0%	0%
High Mileage System Trail AOI	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%
High Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream	0%		0%	2%	1%	1%	2%	3%	1%	1%	0%	0%	3%	0%	1%	
Horses/Burros < .25 mile from spring/stream				0%	0%	0%	0%	1%	0%	0%			1%		0%	
Horses/Burros > 1.0 mile from spring/stream				11%	1%	5%	14%	13%	2%	0%			8%		0%	
Low Mileage System Trail AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Low Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) AOI				0%	0%	0%	0%	0%	0%	0%			0%		0%	
Motorized Trail (closed) Footprint				0%	0%	0%	0%	0%	0%	0%			0%		0%	
Motorized Trail (open) AOI				0%	0%	0%	0%	0%		0%			0%		0%	
Motorized Trail (open) Footprint				0%	0%	0%	0%	0%		0%			0%		0%	
Non System Trail AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Non System Trail Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Paved Road AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
Paved Road Footprint	0%		0%	0%	0%	1%	1%	0%	0%	0%		0%	0%	0%	0%	1%
Picnic Area AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Picnic Area Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Private Land	0%	0%	1%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	0%	2%
PVT Building AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
PVT Building Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
Ski Area AOI	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	
Ski Area Footprint	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	
Snowplay Area	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Trailhead in Developed Canyon AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
Trailhead in Developed Canyon Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
Trailhead out of Developed Canyon AOI				0%	0%	0%		0%	0%	0%			0%			
Trailhead out of Developed Canyon Footprint				0%	0%	0%		0%	0%	0%			0%			
Unpaved Road AOI	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Unpaved Road Footprint	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Wildland Urban Interface	0%	0%	1%	0%	1%	1%	2%	0%	0%	1%	0%	0%	0%	1%	1%	3%
All Current Activities Combined (Aggregated)	*1%*	*1%*	*2%*	*15%*	*5%*	*12%*	*22%*	*18%*	*5%*	*3%*	*1%*	*2%*	*13%*	*1%*	*3%*	*9%*
Future Activities																
Future Campground AOI						0%	0%	0%								
Future Campground Footprint						0%	0%	0%								
Future EEA AOI	0%		0%	0%	0%	0%	0%		0%	0%		0%	0%		0%	
Future EEA Footprint					0%	0%										
Future Foot Bridge AOI					0%	0%	0%			0%						
Future Foot Bridge Footprint					0%	0%	0%			0%						
Future High Mileage System Trail AOI				0%		0%		0%					0%			0%
Future High Mileage System Trail Footprint				0%		0%		0%					0%			0%
Future Low Mileage System Trail AOI						0%	0%	0%		0%			0%			
Future Low Mileage System Trail Footprint						0%	0%	0%					0%			
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI	0%	1%	0%		0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	
Future Ski Area Footprint	0%	3%	0%		0%	0%	0%			0%	1%	1%		0%	0%	
Future Trailhead AOI						0%	0%	0%								
Future Trailhead Footprint						0%	0%	0%								
Future Visitor Center AOI						0%										
Future Visitor Center Footprint						0%										
West Side PO Camping AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
West Side PO Camping Footprint	0%	0%	1%	1%	0%	0%	2%	1%	0%	0%	0%	0%	1%		0%	0%
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI				0%	0%	0%	0%	0%	0%				0%			0%
West Side PO Minor Trailhead Footprint				0%	0%	0%	0%	0%	0%				0%			1%
West Side PO Motorized Trails AOI				0%		0%	0%	0%					0%			
West Side PO Motorized Trails Footprint				0%		0%	0%	0%					0%			
West Side PO Non Motorized Trails AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
West Side PO Non Motorized Trails Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
All Current and Future Activities Combined (Aggregated)	*2%*	*4%*	*3%*	*16%*	*5%*	*13%*	*24%*	*19%*	*5%*	*4%*	*2%*	*3%*	*14%*	*1%*	*4%*	*10%*

**** Bold text indicates activities with >= 5% Potential Effect***

Table MC12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Mixed Conifer Plants, Suitable Habitat Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada Willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Suitable Habitat Acreage by Species	*11,663.91*	*2,497.28*	*5,552.58*	*31,429.19*	*24,227.66*	*22,668.94*	*6,455.41*	*46,156.67*	*19,308.38*	*32,817.55*	*6,838.12*	*15,412.43*	*68,177.69*	*2,865.28*	*20,679.37*	*1,845.49*
Campground AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Campground Footprint	0%		0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	
Cave/Tunnel										0%			0%	0%		0%
Climbing Area												0%		0%		
CUA AOI	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CUA Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Firewood Gathering Area	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
FS Structure AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
FS Structure Footprint	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%		0%	0%
High Mileage System Trail AOI	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%
High Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream	0%		0%	2%	1%	1%	2%	3%	1%	1%	0%	0%	3%	0%	1%	
Horses/Burros < .25 mile from spring/stream				0%	0%	0%	0%	1%	0%	0%			1%		0%	
Horses/Burros > 1.0 mile from spring/stream				11%	1%	5%	14%	13%	2%	0%			8%		0%	
Low Mileage System Trail AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Low Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) AOI				0%	0%	0%	0%	0%	0%	0%			0%		0%	
Motorized Trail (closed) Footprint				0%	0%	0%	0%	0%	0%	0%			0%		0%	
Motorized Trail (open) AOI				0%	0%	0%	0%	0%		0%			0%		0%	
Motorized Trail (open) Footprint				0%	0%	0%	0%	0%		0%			0%		0%	
Non System Trail AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Non System Trail Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Paved Road AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
Paved Road Footprint	0%		0%	0%	0%	1%	1%	0%	0%	0%		0%	0%	0%	0%	1%
Picnic Area AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Picnic Area Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Private Land	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
PVT Building AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
PVT Building Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
Ski Area AOI	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	
Ski Area Footprint	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	
Snowplay Area	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Trailhead in Developed Canyon AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
Trailhead in Developed Canyon Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
Trailhead out of Developed Canyon AOI				0%	0%	0%		0%	0%	0%			0%			
Trailhead out of Developed Canyon Footprint				0%	0%	0%		0%	0%	0%			0%			
Unpaved Road AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Unpaved Road Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Wildland Urban Interface	0%	0%	1%	0%	1%	1%	2%	0%	0%	1%	0%	0%	0%	1%	1%	3%
All Current Activities Combined (Aggregated)	1%	0%	2%	15%	4%	11%	21%	18%	5%	3%	1%	2%	13%	1%	3%	7%
Future Activities																
Future Campground AOI						0%	0%	0%								
Future Campground Footprint						0%	0%	0%								
Future EEA AOI	0%		0%	0%	0%	0%	0%		0%	0%		0%	0%		0%	
Future EEA Footprint					0%	0%										
Future Foot Bridge AOI					0%	0%	0%			0%						
Future Foot Bridge Footprint					0%	0%	0%			0%						
Future High Mileage System Trail AOI				0%		0%		0%					0%			0%
Future High Mileage System Trail Footprint				0%		0%		0%					0%			0%
Future Low Mileage System Trail AOI						0%	0%	0%		0%			0%			
Future Low Mileage System Trail Footprint						0%	0%	0%					0%			
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI	0%	0%	0%		0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	
Future Ski Area Footprint	0%	1%	0%		0%	0%	0%			0%	0%	0%		0%	0%	
Future Trailhead AOI						0%	0%	0%								
Future Trailhead Footprint						0%	0%	0%								
Future Visitor Center AOI						0%										
Future Visitor Center Footprint						0%										
West Side PO Camping AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
West Side PO Camping Footprint	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%		0%	0%
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI				0%	0%	0%	0%	0%	0%				0%			0%
West Side PO Minor Trailhead Footprint				0%	0%	0%	0%	0%	0%				0%			0%
West Side PO Motorized Trails AOI				0%		0%	0%	0%					0%			
West Side PO Motorized Trails Footprint				0%		0%	0%	0%					0%			
West Side PO Non Motorized Trails AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
West Side PO Non Motorized Trails Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
All Current and Future Activities Combined (Aggregated)	1%	1%	2%	15%	5%	11%	21%	18%	5%	3%	1%	2%	13%	1%	3%	8%

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table MC13
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Mixed Conifer Plants, Suitable Habitat Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada Willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Suitable Habitat Acreage by Species	*11,663.91*	*2,497.28*	*5,552.58*	*31,429.19*	*24,227.66*	*22,668.94*	*6,455.41*	*46,156.67*	*19,308.38*	*32,817.55*	*6,838.12*	*15,412.43*	*68,177.69*	*2,865.28*	*20,679.37*	*1,845.49*
Campground AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Campground Footprint	0%		0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	
Cave/Tunnel										0%			0%	0%		0%
Climbing Area												0%		0%		
CUA AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CUA Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Firewood Gathering Area	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
FS Structure AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
FS Structure Footprint	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%		0%	0%
High Mileage System Trail AOI	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%
High Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream	0%		0%	2%	1%	1%	1%	2%	1%	1%	0%	0%	2%	0%	1%	
Horses/Burros < .25 mile from spring/stream				0%	0%	0%	0%	0%	0%	0%			0%		0%	
Horses/Burros > 1.0 mile from spring/stream				8%	1%	4%	11%	10%	2%	0%			6%		0%	
Low Mileage System Trail AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Low Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) AOI				0%	0%	0%	0%	0%	0%	0%			0%		0%	
Motorized Trail (closed) Footprint				0%	0%	0%	0%	0%	0%	0%			0%		0%	
Motorized Trail (open) AOI				0%	0%	0%	0%	0%		0%			0%		0%	
Motorized Trail (open) Footprint				0%	0%	0%	0%	0%		0%			0%		0%	
Non System Trail AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Non System Trail Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Paved Road AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
Paved Road Footprint	0%		0%	0%	0%	1%	1%	0%	0%	0%		0%	0%	0%	0%	1%
Picnic Area AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Picnic Area Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Private Land	0%	0%	1%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	0%	2%
PVT Building AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
PVT Building Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
Ski Area AOI	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	
Ski Area Footprint	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	
Snowplay Area	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Trailhead in Developed Canyon AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
Trailhead in Developed Canyon Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
Trailhead out of Developed Canyon AOI				0%	0%	0%		0%	0%	0%			0%			
Trailhead out of Developed Canyon Footprint				0%	0%	0%		0%	0%	0%			0%			
Unpaved Road AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Unpaved Road Footprint	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%
Wildland Urban Interface	0%	0%	1%	0%	1%	1%	2%	0%	0%	1%	0%	0%	0%	1%	1%	3%
All Current Activities Combined (Aggregated)	1%	0%	2%	12%	4%	10%	17%	14%	4%	3%	1%	2%	10%	1%	2%	8%
Future Activities																
Future Campground AOI						0%	0%	0%								
Future Campground Footprint						0%	0%	0%								
Future EEA AOI	0%		0%	0%	0%	0%	0%		0%	0%		0%	0%		0%	
Future EEA Footprint					0%	0%										
Future Foot Bridge AOI					0%	0%	0%			0%						
Future Foot Bridge Footprint					0%	0%	0%			0%						
Future High Mileage System Trail AOI				0%		0%		0%					0%			0%
Future High Mileage System Trail Footprint				0%		0%		0%					0%			0%
Future Low Mileage System Trail AOI						0%	0%	0%		0%			0%			
Future Low Mileage System Trail Footprint						0%	0%	0%					0%			
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI	0%	1%	0%		0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	
Future Ski Area Footprint	0%	2%	0%		0%	0%	0%			0%	0%	1%		0%	0%	
Future Trailhead AOI						0%	0%	0%								
Future Trailhead Footprint						0%	0%	0%								
Future Visitor Center AOI						0%										
Future Visitor Center Footprint						0%										
West Side PO Camping AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
West Side PO Camping Footprint	0%	0%	1%	1%	0%	0%	2%	1%	0%	0%	0%	0%	1%		0%	0%
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI				0%	0%	0%	0%	0%	0%				0%			0%
West Side PO Minor Trailhead Footprint				0%	0%	0%	0%	0%	0%				0%			0%
West Side PO Motorized Trails AOI				0%		0%	0%	0%					0%			
West Side PO Motorized Trails Footprint				0%		0%	0%	0%					0%			
West Side PO Non Motorized Trails AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
West Side PO Non Motorized Trails Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
All Current and Future Activities Combined (Aggregated)	2%	3%	3%	12%	5%	10%	19%	15%	4%	3%	1%	2%	11%	1%	3%	9%

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table MC14
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Mixed Conifer Plants, Suitable Habitat Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada Willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Suitable Habitat Acreage by Species	*11,663.91*	*2,497.28*	*5,552.58*	*31,429.19*	*24,227.66*	*22,668.94*	*6,455.41*	*46,156.67*	*19,308.38*	*32,817.55*	*6,838.12*	*15,412.43*	*68,177.69*	*2,865.28*	*20,679.37*	*1,845.49*
Campground AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Campground Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cave/Tunnel										0%			0%	0%		0%
Climbing Area												0%		0%		
CUA AOI	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
CUA Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Firewood Gathering Area	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
FS Structure AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
FS Structure Footprint	0%		0%	0%	0%	0%	0%	0%		0%	0%	0%	0%		0%	0%
High Mileage System Trail AOI	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%
High Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream	0%		0%	2%	1%	1%	2%	3%	1%	1%	0%	0%	3%	0%	1%	
Horses/Burros < .25 mile from spring/stream				0%	0%	0%	0%	1%	0%	0%			1%		0%	
Horses/Burros > 1.0 mile from spring/stream				11%	1%	5%	14%	13%	2%	0%			8%		0%	
Low Mileage System Trail AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Low Mileage System Trail Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Motorized Trail (closed) AOI				0%	0%	0%	0%	0%	0%	0%			0%		0%	
Motorized Trail (closed) Footprint				0%	0%	0%	0%	0%	0%	0%			0%		0%	
Motorized Trail (open) AOI				0%	0%	0%	0%	0%		0%			0%		0%	
Motorized Trail (open) Footprint				0%	0%	0%	0%	0%		0%			0%		0%	
Non System Trail AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Non System Trail Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Paved Road AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
Paved Road Footprint	0%		0%	0%	0%	1%	1%	0%	0%	0%		0%	0%	0%	0%	1%
Picnic Area AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Picnic Area Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Private Land	0%	0%	1%	0%	1%	1%	1%	0%	0%	0%	0%	0%	0%	1%	0%	2%
PVT Building AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
PVT Building Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%
Ski Area AOI	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	
Ski Area Footprint	0%	0%	0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	
Snowplay Area	0%		0%	0%	0%	0%	0%	0%	0%	0%		0%	0%		0%	0%
Trailhead in Developed Canyon AOI	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
Trailhead in Developed Canyon Footprint	0%		0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	0%
Trailhead out of Developed Canyon AOI				0%	0%	0%		0%	0%	0%			0%			
Trailhead out of Developed Canyon Footprint				0%	0%	0%		0%	0%	0%			0%			
Unpaved Road AOI	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Unpaved Road Footprint	0%	0%	0%	0%	0%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wildland Urban Interface	0%	0%	1%	0%	1%	1%	2%	0%	0%	1%	0%	0%	0%	1%	1%	3%
All Current Activities Combined (Aggregated)	1%	0%	2%	15%	5%	12%	21%	18%	5%	3%	1%	2%	13%	1%	3%	8%
Future Activities																
Future Campground AOI						0%	0%	0%								
Future Campground Footprint						0%	0%	0%								
Future EEA AOI	0%		0%	0%	0%	0%	0%		0%	0%		0%	0%		0%	
Future EEA Footprint					0%	0%										
Future Foot Bridge AOI					0%	0%	0%			0%						
Future Foot Bridge Footprint					0%	0%	0%			0%						
Future High Mileage System Trail AOI				0%		0%		0%					0%			0%
Future High Mileage System Trail Footprint				0%		0%		0%					0%			0%
Future Low Mileage System Trail AOI						0%	0%	0%		0%			0%			
Future Low Mileage System Trail Footprint						0%	0%	0%					0%			
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI	0%	1%	0%		0%	0%	0%		0%	0%	0%	0%	0%	0%	0%	
Future Ski Area Footprint	0%	2%	0%		0%	0%	0%			0%	0%	1%		0%	0%	
Future Trailhead AOI						0%	0%	0%								
Future Trailhead Footprint						0%	0%	0%								
Future Visitor Center AOI						0%										
Future Visitor Center Footprint						0%										
West Side PO Camping AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		0%	
West Side PO Camping Footprint	0%	0%	1%	1%	0%	0%	1%	1%	0%	0%	0%	0%	1%		0%	0%
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI				0%	0%	0%	0%	0%	0%				0%			0%
West Side PO Minor Trailhead Footprint				0%	0%	0%	0%	0%	0%				0%			0%
West Side PO Motorized Trails AOI				0%		0%	0%	0%					0%			
West Side PO Motorized Trails Footprint				0%		0%	0%	0%					0%			
West Side PO Non Motorized Trails AOI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
West Side PO Non Motorized Trails Footprint	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
All Current and Future Activities Combined (Aggregat	2%	3%	3%	16%	5%	12%	22%	19%	5%	4%	2%	3%	14%	1%	3%	9%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table MC30

Potential Effects on Mixed Conifer Plants for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Effects Index	*Charleston beardtongue*	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Current Activities - Potential Effects																
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	378.55	25.39	219.22	16,745.78	2,743.50	7,034.49	4,201.77	29,486.06	3,022.45	2,387.30	146.51	560.54	30,255.83	117.33	1,520.77	270.74
0.251 - 0.500	52.10	1.56	43.55	764.93	387.87	686.45	240.57	1,196.00	189.31	394.41	7.52	69.16	1,632.81	14.61	199.99	52.12
0.501 - 0.750	30.20	7.82	21.13	227.08	157.66	334.08	146.29	297.82	61.08	171.81	7.74	85.02	357.73	3.55	82.56	40.75
0.751 - 0.999	14.13	0.00	13.41	28.36	65.26	105.04	65.35	32.84	18.28	76.74	0.61	16.82	36.25	1.05	20.72	4.00
1.000	24.00	0.91	18.64	127.56	159.50	306.36	106.01	201.25	52.46	123.59	5.54	33.89	186.44	2.45	48.17	42.25
Current and Future Activities - Potential Effects																
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	469.84	113.41	239.30	16,394.85	2,757.22	7,080.43	3,999.84	28,983.07	3,027.08	2,547.43	221.70	716.87	29,770.85	119.92	1,619.71	273.83
0.251 - 0.500	61.46	2.81	55.78	779.87	415.85	702.74	229.83	1,213.14	207.95	427.49	16.50	79.19	1,737.29	14.92	211.48	52.11
0.501 - 0.750	114.53	94.00	99.92	295.66	290.87	435.47	171.80	511.19	125.43	483.80	74.66	257.30	842.69	4.95	245.72	46.66
0.751 - 0.999	14.93	0.12	15.23	305.92	70.22	124.70	238.96	406.10	19.68	81.76	1.38	17.86	421.55	1.08	22.52	4.44
1.000	24.64	1.04	18.92	175.55	172.53	366.71	143.03	319.81	59.84	125.97	6.18	35.13	319.45	2.46	49.49	52.11
Total Species Distribution (ac)	**11,663.91**	**2,497.28**	**5,552.58**	**31,429.19**	**24,227.66**	**22,668.94**	**6,455.41**	**46,156.67**	**19,308.38**	**32,817.55**	**6,838.12**	**15,412.43**	**68,177.69**	**2,865.28**	**20,679.37**	**1,845.49**

Table MC31

Potential Effects with Avoidance Measures on Mixed Conifer Plant for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Effects Index	Charleston beardtongue	Charleston draba	Charleston goldenbush	Charleston grounddaisy	Charleston pinewood lousewort	Charleston violet	Clokey eggvetch	Clokey milkvetch	Clokey mountain sage	Clokey paintbrush	Clokey thistle	Hitchcock bladderpod	Jaeger beardtongue	Nevada whillowherb	rosy King sandwort	Rough angelica
Current Activities - Potential Effects with Avoidance Measures																
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	378.55	25.39	219.22	16,746.30	2,743.84	7,145.84	4,202.53	29,486.10	3,022.45	2,387.30	146.51	560.66	30,255.85	117.34	1,520.77	271.20
0.251 - 0.500	69.95	1.80	59.86	919.48	475.91	781.07	288.68	1,387.75	214.53	475.13	8.35	88.95	1,729.54	18.02	238.91	68.53
0.501 - 0.750	26.61	8.48	15.78	147.62	131.96	268.13	131.17	227.58	65.22	135.45	10.92	82.75	380.29	2.47	71.59	39.35
0.751 - 0.999	16.38	0.02	14.66	53.80	83.68	150.00	75.66	72.95	28.63	87.51	1.48	22.06	73.83	1.15	26.58	13.49
1.000	7.49	0.00	6.45	26.51	78.40	121.37	61.94	39.58	12.75	68.46	0.65	11.03	29.55	0.02	14.35	17.29
Current and Future Activities - Potential Effects with Avoidance Measures																
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	551.39	199.32	270.17	16,403.33	2,787.97	7,223.58	4,014.19	29,006.17	3,046.39	2,733.77	285.47	881.49	29,876.72	121.66	1,716.75	281.05
0.251 - 0.500	83.50	3.56	122.08	1,277.02	621.87	920.71	477.45	1,961.32	285.15	640.98	21.89	108.30	2,657.91	18.05	319.53	77.03
0.501 - 0.750	26.64	8.48	15.80	182.38	134.25	286.32	144.71	332.40	66.85	135.67	10.92	83.49	435.04	2.47	71.71	39.83
0.751 - 0.999	16.38	0.02	14.66	62.35	83.91	157.27	84.07	91.07	28.83	87.54	1.48	22.06	89.19	1.15	26.58	13.94
1.000	7.49	0.00	6.45	26.77	78.69	122.17	63.05	42.35	12.75	68.49	0.65	11.03	32.97	0.02	14.35	17.29
Total Species Distribution (ac)	**11,663.91**	**2,497.28**	**5,552.58**	**31,429.19**	**24,227.66**	**22,668.94**	**6,455.41**	**46,156.67**	**19,308.38**	**32,817.55**	**6,838.12**	**15,412.43**	**68,177.69**	**2,865.28**	**20,679.37**	**1,845.49**

Table MC32

Potential Effects with Minimization Measures on Mixed Conifer Plant for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Effects Index	*Charleston beardtongue*	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Current Activities - Potential Effects with Minimization Measures																
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	378.81	25.39	219.22	16,746.30	2,743.50	7,034.49	4,201.77	29,486.06	3,022.45	2,387.30	146.51	560.54	30,255.83	117.33	1,520.77	270.74
0.251 - 0.500	72.14	1.80	61.80	935.50	505.04	939.82	351.82	1,395.44	236.86	492.69	8.54	97.75	1,860.26	18.03	243.35	85.68
0.501 - 0.750	12.20	7.58	3.97	71.95	48.81	105.03	46.53	122.20	16.99	81.22	7.82	59.40	149.91	0.15	41.96	11.99
0.751 - 0.999	14.65	0.00	14.34	15.92	69.78	100.69	69.43	11.12	16.99	87.93	0.31	17.67	19.04	1.03	21.10	1.80
1.000	21.17	0.91	16.63	124.05	146.66	286.39	90.43	199.15	50.29	104.71	4.73	30.08	184.03	2.45	45.03	39.64
Current and Future Activities - Potential Effects with Minimization Measures																
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	470.70	113.41	239.30	16,395.37	2,757.22	7,081.55	3,999.84	28,983.07	3,027.08	2,547.43	221.70	716.87	29,770.85	119.92	1,619.71	273.83
0.251 - 0.500	81.90	3.12	74.12	989.04	535.87	960.26	359.29	1,489.39	256.20	527.74	18.48	109.22	2,012.51	18.34	256.25	92.00
0.501 - 0.750	96.56	93.80	84.48	387.98	194.58	261.65	228.47	281.85	87.32	396.89	74.77	231.89	1,026.66	1.59	206.14	20.71
0.751 - 0.999	14.65	0.00	14.34	52.65	70.44	111.95	102.42	448.86	18.15	88.03	0.31	17.77	89.07	1.03	21.20	2.46
1.000	21.59	1.04	16.91	126.81	148.58	294.63	93.43	230.14	51.23	106.36	5.15	30.60	192.73	2.46	45.63	40.14
Total Species Distribution (ac)	**11,663.91**	**2,497.28**	**5,552.58**	**31,429.19**	**24,227.66**	**22,668.94**	**6,455.41**	**46,156.67**	**19,308.38**	**32,817.55**	**6,838.12**	**15,412.43**	**68,177.69**	**2,865.28**	**20,679.37**	**1,845.49**

Table MC33

Potential Effects with Mitigation Measures on Mixed Conifer Plant for Current Activities as well as Current and Future Activities, Suitable Habitat Data.

Effects Index	*Charleston beardtongue*	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Current Activities - Potential Effects with Mitigation Measures																
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	378.55	25.39	219.22	16,746.30	2,743.50	7,034.49	4,203.25	29,486.06	3,022.45	2,387.30	147.50	560.54	30,255.83	117.33	1,520.77	278.01
0.251 - 0.500	61.45	1.56	52.46	773.24	419.49	726.91	318.41	1,202.26	199.82	429.64	7.51	81.33	1,644.15	16.26	214.33	67.36
0.501 - 0.750	34.44	7.82	25.07	231.42	181.06	372.57	126.10	301.88	65.22	205.74	8.59	89.04	362.01	2.92	86.67	37.20
0.751 - 0.999	3.57	0.00	2.76	20.89	27.62	54.05	22.45	29.53	6.10	28.16	0.79	4.66	23.36	0.02	5.59	3.83
1.000	20.96	0.91	16.45	121.85	142.11	278.39	89.78	194.24	49.98	103.02	3.51	29.87	183.72	2.45	44.84	23.45
Current and Future Activities - Potential Effects with Mitigation Measures																
0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.051 - 0.250	469.84	113.41	239.30	16,395.37	2,757.22	7,080.43	4,002.09	28,983.07	3,027.08	2,547.43	222.70	716.87	29,770.85	119.92	1,619.71	280.37
0.251 - 0.500	71.59	2.88	64.79	852.57	449.29	749.50	492.75	1,318.91	219.12	464.03	17.24	92.22	1,828.18	16.57	226.65	67.69
0.501 - 0.750	118.80	94.04	105.58	515.09	326.25	515.76	140.29	763.50	135.44	520.93	75.54	261.50	1,174.42	4.36	250.82	52.20
0.751 - 0.999	3.80	0.00	2.76	60.47	29.43	75.33	56.74	157.27	7.40	29.38	1.02	5.38	120.58	0.02	6.30	4.72
1.000	21.38	1.04	16.73	128.34	144.50	289.03	91.59	210.56	50.93	104.69	3.92	30.39	197.79	2.46	45.44	24.16
Total Species Distribution (ac)	**11,663.91**	**2,497.28**	**5,552.58**	**31,429.19**	**24,227.66**	**22,668.94**	**6,455.41**	**46,156.67**	**19,308.38**	**32,817.55**	**6,838.12**	**15,412.43**	**68,177.69**	**2,865.28**	**20,679.37**	**1,845.49**

Table MCL10
Summary of Individual Effect Acreage of Each Activity on Mixed Conifer Plant Species, Polygon Locality Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Occupied Acreage by Species	*137.53*	*54.83*	*122.29*	*1,048.85*	*202.27*	*537.79*	*23.13*	*291.33*	*437.66*	*124.16*	*5.05*	*9.75*	*350.86*	*0.00*	*114.77*	*126.79*
Campground AOI					0.164	0.247		0.643							6.071	
Campground Footprint															3.064	
Cave/Tunnel																
Climbing Area																
CUA AOI			3.568	4.657	25.252	38.268		19.024	24.620	0.980			20.847		0.028	2.058
CUA Footprint			0.082	0.597	2.407	3.893		1.656	2.659	0.026			3.010			0.265
Firewood Gathering Area				5.853	5.027	6.792		54.421	57.823				2.274			
FS Structure AOI							0.006									
FS Structure Footprint																
High Mileage System Trail AOI	4.466		9.665	4.438	1.137	2.278	0.374		11.231	6.117	0.493	0.046			6.619	2.160
High Mileage System Trail Footprint	0.302		0.649	0.297	0.077	0.154	0.026		0.758	0.422	0.033	0.003			0.446	0.148
Horses/Burros .25 - 1.0 mile from spring/stream						7.439		54.210					17.186			
Horses/Burros < .25 mile from spring/stream						0.553		7.480								
Horses/Burros > 1.0 mile from spring/stream				552.069	1.303	37.939	0.419	127.202	92.930	9.781			2.475			
Low Mileage System Trail AOI					0.739	0.748		1.868	0.000						0.214	8.738
Low Mileage System Trail Footprint					0.003	0.007		0.034							0.001	0.143
Motorized Trail (closed) AOI				4.318	5.477	7.510		5.057	0.205	1.165			11.283			
Motorized Trail (closed) Footprint				0.663	0.840	1.133		0.833	0.031	0.181			1.828			
Motorized Trail (open) AOI				12.567	0.272	2.248		0.470					8.524			
Motorized Trail (open) Footprint				1.905	0.036	0.332		0.060					1.287			
Non System Trail AOI			0.110	43.143	5.412	18.143		12.755	12.731	1.276						0.032
Non System Trail Footprint			0.007	2.895	0.365	1.216		0.874	0.850	0.086						0.002
Paved Road AOI			0.078	0.974	1.064	1.054		0.545	0.050							0.556
Paved Road Footprint			0.057	1.329	1.515	1.452		0.251	0.003							0.681
Picnic Area AOI					0.718											0.175
Picnic Area Footprint					0.611											1.097
Private Land				0.083	10.198	10.296	0.050	0.047				1.162	0.637			7.541
PVT Building AOI					0.622											4.107
PVT Building Footprint					0.124											1.768
Ski Area AOI							0.776									
Ski Area Footprint							0.014									
Snowplay Area					2.585	3.220										7.170
Trailhead in Developed Canyon AOI			0.114		0.139	0.144		0.120								0.944
Trailhead in Developed Canyon Footprint			0.115		0.115	0.115		0.109								0.087
Trailhead out of Developed Canyon AOI										0.059						
Trailhead out of Developed Canyon Footprint										0.098						
Unpaved Road AOI	0.329		0.780	0.958	3.383	5.505	0.213	17.143	12.077	1.338		0.086	5.243			2.341
Unpaved Road Footprint	0.207		0.485	0.551	1.947	3.480	0.045	11.308	7.409	0.791		0.057	3.145			1.374
Wildland Urban Interface				13.054	69.700	54.205	11.410	7.554	0.607			1.162	25.198		12.764	31.309
All Current Activities Combined (Aggregated)	*5.30*		*15.05*	*581.79*	*98.61*	*161.58*	*13.29*	*218.00*	*167.87*	*20.91*	*0.53*	*1.36*	*61.47*	*0.00*	*20.07*	*56.80*

Table MCL11
Percent Activity Potential Effect by Species - Mixed Conifer Plants, Polygon Locality Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Occupied Acreage by Species	*137.53*	*54.83*	*122.29*	*1,048.85*	*202.27*	*537.79*	*23.13*	*291.33*	*437.66*	*124.16*	*5.05*	9.75	*350.86*	*0.00*	*114.77*	*126.79*
Campground AOI					0%	0%		0%							3%	
Campground Footprint															2%	
Cave/Tunnel																
Climbing Area																
CUA AOI			1%	0%	6%	4%		3%	3%	0%			3%		0%	1%
CUA Footprint			0%	0%	1%	1%		1%	1%	0%			1%			0%
Firewood Gathering Area				0%	1%	0%		5%	3%				0%			
FS Structure AOI							0%									
FS Structure Footprint																
High Mileage System Trail AOI	1%		2%	0%	0%	0%	0%		1%	1%	2%	0%			1%	0%
High Mileage System Trail Footprint	0%		1%	0%	0%	0%	0%		0%	0%	1%	0%			0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream						0%		5%					1%			
Horses/Burros < .25 mile from spring/stream						0%		1%								
Horses/Burros > 1.0 mile from spring/stream				13%	0%	2%	0%	11%	5%	2%			0%			
Low Mileage System Trail AOI					0%	0%		0%	0%						0%	2%
Low Mileage System Trail Footprint					0%	0%		0%							0%	0%
Motorized Trail (closed) AOI				0%	1%	0%		0%	0%	0%			1%			
Motorized Trail (closed) Footprint				0%	0%	0%		0%	0%	0%			0%			
Motorized Trail (open) AOI				1%	0%	0%		0%					1%			
Motorized Trail (open) Footprint				0%	0%	0%		0%					0%			
Non System Trail AOI			0%	1%	1%	1%		1%	1%	0%						0%
Non System Trail Footprint			0%	0%	0%	0%		0%	0%	0%						0%
Paved Road AOI			0%	0%	0%	0%		0%	0%							0%
Paved Road Footprint			0%	0%	1%	0%		0%	0%							1%
Picnic Area AOI					0%											0%
Picnic Area Footprint					0%											1%
Private Land				0%	1%	0%	0%	0%				3%	0%			1%
PVT Building AOI					0%											2%
PVT Building Footprint					0%											1%
Ski Area AOI							1%									
Ski Area Footprint							0%									
Snowplay Area					0%	0%										1%
Trailhead in Developed Canyon AOI			0%		0%	0%		0%								0%
Trailhead in Developed Canyon Footprint			0%		0%	0%		0%								0%
Trailhead out of Developed Canyon AOI										0%						
Trailhead out of Developed Canyon Footprint										0%						
Unpaved Road AOI	0%		0%	0%	1%	1%	0%	3%	1%	1%		0%	1%			1%
Unpaved Road Footprint	0%		0%	0%	1%	1%	0%	4%	2%	1%		1%	1%			1%
Wildland Urban Interface				0%	9%	3%	12%	1%	0%			3%	2%		3%	6%
All Current Activities Combined (Aggregated)	*1%*		*5%*	*16%*	*21%*	*12%*	*15%*	*29%*	*15%*	*6%*	*3%*	*6%*	*9%*		*8%*	*17%*

Table MCL10
Summary of Individual Effect Acreage of Each Activity on Mixed Conifer Plant Species, Polygon Locality Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI					1.013	0.678										
Future EEA Footprint					0.005	0.016										
Future Foot Bridge AOI					0.621	0.442										
Future Foot Bridge Footprint					0.029	0.000										
Future High Mileage System Trail AOI								0.035								
Future High Mileage System Trail Footprint								0.002								
Future Low Mileage System Trail AOI								0.387								
Future Low Mileage System Trail Footprint								0.000								
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		5.607					0.001									
Future Ski Area Footprint		13.234														
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI						1.058		1.857					1.918			
West Side PO Camping Footprint						6.009		38.744	0.525				19.490			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI								1.102								
West Side PO Motorized Trails Footprint								0.166								
West Side PO Non Motorized Trails AOI	0.081					0.734		0.614	0.133	0.052			0.594			
West Side PO Non Motorized Trails Footprint	0.005					0.049		0.041	0.008	0.003			0.038			
All Current and Future Activities Combined (Aggregated)	*5.4*	*18.8*	*15.1*	*581.8*	*99.8*	*165.3*	*13.3*	*218.6*	*167.9*	*21.0*	*0.5*	*1.4*	*82.9*	*0.0*	*20.1*	*56.8*

Table MCL11
Percent Activity Potential Effect by Species - Mixed Conifer Plants, Polygon Locality Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI					0%	0%										
Future EEA Footprint					0%	0%										
Future Foot Bridge AOI					0%	0%										
Future Foot Bridge Footprint					0%	0%										
Future High Mileage System Trail AOI								0%								
Future High Mileage System Trail Footprint								0%								
Future Low Mileage System Trail AOI								0%								
Future Low Mileage System Trail Footprint								0%								
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		3%					0%									
Future Ski Area Footprint		18%														
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI						0%		0%					0%			
West Side PO Camping Footprint						1%		10%	0%				4%			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI								0%								
West Side PO Motorized Trails Footprint								0%								
West Side PO Non Motorized Trails AOI	0%					0%		0%	0%	0%			0%			
West Side PO Non Motorized Trails Footprint	0%					0%		0%	0%	0%			0%			
All Current and Future Activities Combined (Aggregated)	*1%*	*3%*			*21%*	*13%*	*15%*	*36%*	*15%*	*6%*			*14%*			

**** Bold text indicates activities with >= 5% Potential Effect***

Table MCL12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Mixed Conifer Plants, Polygon Locality Data

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Occupied Acreage by Species	*137.53*	*54.83*	*122.29*	*1,048.85*	*202.27*	*537.79*	*23.13*	*291.33*	*437.66*	*124.16*	*5.05*	*9.75*	*350.86*	*0.00*	*114.77*	*126.79*
Campground AOI					0%	0%		0%							2%	
Campground Footprint															2%	
Cave/Tunnel																
Climbing Area																
CUA AOI			1%	0%	4%	2%		2%	3%	0%			3%		0%	1%
CUA Footprint			0%	0%	1%	0%		0%	1%	0%			1%			0%
Firewood Gathering Area				0%	1%	0%		4%	3%				0%			
FS Structure AOI							0%									
FS Structure Footprint																
High Mileage System Trail AOI	1%		1%	0%	0%	0%	0%		0%	1%	2%	0%			1%	0%
High Mileage System Trail Footprint	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%			0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream						0%		5%					1%			
Horses/Burros < .25 mile from spring/stream						0%		1%								
Horses/Burros > 1.0 mile from spring/stream				13%	0%	2%	0%	11%	5%	2%			0%			
Low Mileage System Trail AOI					0%	0%		0%	0%						0%	1%
Low Mileage System Trail Footprint					0%	0%		0%							0%	0%
Motorized Trail (closed) AOI				0%	0%	0%		0%	0%	0%			1%			
Motorized Trail (closed) Footprint				0%	0%	0%		0%	0%	0%			0%			
Motorized Trail (open) AOI				0%	0%	0%		0%					1%			
Motorized Trail (open) Footprint				0%	0%	0%		0%					0%			
Non System Trail AOI			0%	1%	0%	1%		1%	1%	0%						0%
Non System Trail Footprint			0%	0%	0%	0%		0%	0%	0%						0%
Paved Road AOI			0%	0%	0%	0%		0%	0%							0%
Paved Road Footprint			0%	0%	1%	0%		0%	0%							0%
Picnic Area AOI					0%											0%
Picnic Area Footprint					0%											1%
Private Land				0%	1%	0%	0%	0%				1%	0%			1%
PVT Building AOI					0%											2%
PVT Building Footprint					0%											1%
Ski Area AOI							1%									
Ski Area Footprint							0%									
Snowplay Area					0%	0%		0%								1%
Trailhead in Developed Canyon AOI			0%		0%	0%		0%								0%
Trailhead in Developed Canyon Footprint			0%		0%	0%										0%
Trailhead out of Developed Canyon AOI										0%						
Trailhead out of Developed Canyon Footprint										0%						
Unpaved Road AOI	0%		0%	0%	1%	0%	0%	2%	1%	0%		0%	1%			1%
Unpaved Road Footprint	0%		0%	0%	1%	0%	0%	2%	1%	0%		0%	1%			1%
Wildland Urban Interface				0%	9%	2%	12%	1%	0%			3%	2%		3%	6%
All Current Activities Combined (Aggregated)	1%		4%	15%	17%	9%	14%	26%	13%	5%	2%	5%	7%		7%	15%

Table MCL12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Mixed Conifer Plants, Polygon Locality Data

	Charleston beardtongue	***Charleston draba***	***Charleston goldenbush***	***Charleston grounddaisy***	***Charleston pinewood lousewort***	***Charleston violet***	***Clokey eggvetch***	***Clokey milkvetch***	***Clokey mountain sage***	***Clokey paintbrush***	***Clokey thistle***	***Hitchcock bladderpod***	***Jaeger beardtongue***	***Nevada willowherb***	***rosy King sandwort***	***Rough angelica***
Activities																
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI					0%	0%										
Future EEA Footprint					0%	0%										
Future Foot Bridge AOI					0%	0%										
Future Foot Bridge Footprint					0%	0%										
Future High Mileage System Trail AOI								0%								
Future High Mileage System Trail Footprint								0%								
Future Low Mileage System Trail AOI								0%								
Future Low Mileage System Trail Footprint								0%								
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		1%					0%									
Future Ski Area Footprint		5%														
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI						0%		0%					0%			
West Side PO Camping Footprint						0%		5%	0%				2%			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI								0%								
West Side PO Motorized Trails Footprint								0%								
West Side PO Non Motorized Trails AOI	0%					0%		0%	0%	0%			0%			
West Side PO Non Motorized Trails Footprint	0%					0%		0%	0%	0%			0%			
All Current and Future Activities Combined (Aggregated)	1%	5%			17%	9%	14%	28%	13%	5%			10%			

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table MCL13
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Mixed Conifer Plants, Polygon Locality Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Occupied Acreage by Species	*137.53*	*54.83*	*122.29*	*1,048.85*	*202.27*	*537.79*	*23.13*	*291.33*	*437.66*	*124.16*	*5.05*	*9.75*	*350.86*	*0.00*	*114.77*	*126.79*
Campground AOI					0%	0%		0%							2%	
Campground Footprint															2%	
Cave/Tunnel																
Climbing Area																
CUA AOI			1%	0%	5%	3%		2%	2%	0%			2%		0%	1%
CUA Footprint			0%	0%	1%	1%		1%	1%	0%			1%			0%
Firewood Gathering Area				0%	1%	0%		4%	3%				0%			
FS Structure AOI							0%									
FS Structure Footprint																
High Mileage System Trail AOI	0%		1%	0%	0%	0%	0%		0%	1%	2%	0%			1%	0%
High Mileage System Trail Footprint	0%		1%	0%	0%	0%	0%		0%	0%	1%	0%			0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream						0%		3%					1%			
Horses/Burros < .25 mile from spring/stream						0%		1%								
Horses/Burros > 1.0 mile from spring/stream				10%	0%	1%	0%	8%	4%	1%			0%			
Low Mileage System Trail AOI					0%	0%		0%	0%						0%	1%
Low Mileage System Trail Footprint					0%	0%		0%							0%	0%
Motorized Trail (closed) AOI				0%	1%	0%		0%	0%	0%			1%			
Motorized Trail (closed) Footprint				0%	0%	0%		0%	0%	0%			0%			
Motorized Trail (open) AOI				0%	0%	0%		0%					1%			
Motorized Trail (open) Footprint				0%	0%	0%		0%					0%			
Non System Trail AOI			0%	1%	1%	1%		1%	1%	0%						0%
Non System Trail Footprint			0%	0%	0%	0%		0%	0%	0%						0%
Paved Road AOI			0%	0%	0%	0%		0%	0%							0%
Paved Road Footprint			0%	0%	1%	0%		0%	0%							1%
Picnic Area AOI					0%											0%
Picnic Area Footprint					0%											0%
Private Land				0%	1%	0%	0%	0%				3%	0%			1%
PVT Building AOI					0%											2%
PVT Building Footprint					0%											1%
Ski Area AOI							1%									
Ski Area Footprint							0%									
Snowplay Area					0%	0%										1%
Trailhead in Developed Canyon AOI			0%		0%	0%		0%								0%
Trailhead in Developed Canyon Footprint			0%		0%	0%		0%								0%
Trailhead out of Developed Canyon AOI										0%						
Trailhead out of Developed Canyon Footprint										0%						
Unpaved Road AOI	0%		0%	0%	1%	0%	0%	2%	1%	0%		0%	1%			1%
Unpaved Road Footprint	0%		0%	0%	1%	1%	0%	4%	2%	1%		1%	1%			1%
Wildland Urban Interface				0%	9%	3%	12%	1%	0%			3%	2%		3%	6%
All Current Activities Combined (Aggregated)	1%		4%	12%	18%	10%	14%	24%	12%	5%	2%	6%	7%		7%	16%

Table MCL13
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Mixed Conifer Plants, Polygon Locality Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI					0%	0%										
Future EEA Footprint					0%	0%										
Future Foot Bridge AOI					0%	0%										
Future Foot Bridge Footprint					0%	0%										
Future High Mileage System Trail AOI								0%								
Future High Mileage System Trail Footprint								0%								
Future Low Mileage System Trail AOI								0%								
Future Low Mileage System Trail Footprint								0%								
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		2%					0%									
Future Ski Area Footprint		14%														
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI						0%		0%					0%			
West Side PO Camping Footprint						1%		9%	0%				3%			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI								0%								
West Side PO Motorized Trails Footprint								0%								
West Side PO Non Motorized Trails AOI	0%					0%		0%	0%	0%			0%			
West Side PO Non Motorized Trails Footprint	0%					0%		0%	0%	0%			0%			
All Current and Future Activities Combined (Aggregated)	1%	16%			19%	11%	14%	31%	12%	5%			11%			

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table MCL14
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Mixed Conifer Plants, Polygon Locality Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Occupied Acreage by Species	*137.53*	*54.83*	*122.29*	*1,048.85*	*202.27*	*537.79*	*23.13*	*291.33*	*437.66*	*124.16*	*5.05*	*9.75*	*350.86*	*0.00*	*114.77*	*126.79*
Campground AOI					0%	0%		0%							2%	
Campground Footprint															2%	
Cave/Tunnel																
Climbing Area																
CUA AOI			1%	0%	6%	3%		3%	3%	0%			3%		0%	1%
CUA Footprint			0%	0%	1%	1%		1%	1%	0%			1%			0%
Firewood Gathering Area				0%	1%	0%		5%	3%				0%			
FS Structure AOI							0%									
FS Structure Footprint																
High Mileage System Trail AOI	1%		2%	0%	0%	0%	0%		1%	1%	2%	0%			1%	0%
High Mileage System Trail Footprint	0%		1%	0%	0%	0%	0%		0%	0%	1%	0%			0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream						0%		5%					1%			
Horses/Burros < .25 mile from spring/stream						0%		1%								
Horses/Burros > 1.0 mile from spring/stream				13%	0%	2%	0%	11%	5%	2%			0%			
Low Mileage System Trail AOI					0%	0%		0%	0%						0%	2%
Low Mileage System Trail Footprint					0%	0%		0%							0%	0%
Motorized Trail (closed) AOI				0%	1%	0%		0%	0%	0%			1%			
Motorized Trail (closed) Footprint				0%	0%	0%		0%	0%	0%			0%			
Motorized Trail (open) AOI				1%	0%	0%		0%					1%			
Motorized Trail (open) Footprint				0%	0%	0%		0%					0%			
Non System Trail AOI			0%	1%	1%	1%		1%	1%	0%						0%
Non System Trail Footprint			0%	0%	0%	0%		0%	0%	0%						0%
Paved Road AOI			0%	0%	0%	0%		0%	0%							0%
Paved Road Footprint			0%	0%	1%	0%		0%	0%							1%
Picnic Area AOI					0%											0%
Picnic Area Footprint					0%											0%
Private Land				0%	1%	0%	0%	0%				3%	0%			1%
PVT Building AOI					0%											2%
PVT Building Footprint					0%											1%
Ski Area AOI							1%									
Ski Area Footprint							0%									
Snowplay Area					0%	0%										1%
Trailhead in Developed Canyon AOI			0%		0%	0%		0%								0%
Trailhead in Developed Canyon Footprint			0%		0%	0%		0%								0%
Trailhead out of Developed Canyon AOI										0%						
Trailhead out of Developed Canyon Footprint										0%						
Unpaved Road AOI	0%		0%	0%	1%	1%	0%	3%	1%	1%		0%	1%			0%
Unpaved Road Footprint	0%		0%	0%	1%	1%	0%	4%	2%	1%		1%	1%			1%
Wildland Urban Interface				0%	9%	3%	12%	1%	0%			3%	2%		3%	6%
All Current Activities Combined (Aggregated)	1%		5%	16%	20%	12%	15%	29%	15%	6%	3%	6%	9%		7%	16%

Table MCL14
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Mixed Conifer Plants, Polygon Locality Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada willowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI					0%	0%										
Future EEA Footprint					0%	0%										
Future Foot Bridge AOI					0%	0%										
Future Foot Bridge Footprint					0%	0%										
Future High Mileage System Trail AOI								0%								
Future High Mileage System Trail Footprint								0%								
Future Low Mileage System Trail AOI								0%								
Future Low Mileage System Trail Footprint								0%								
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		2%					0%									
Future Ski Area Footprint		14%														
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI						0%		0%					0%			
West Side PO Camping Footprint						1%		7%	0%				3%			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI								0%								
West Side PO Motorized Trails Footprint								0%								
West Side PO Non Motorized Trails AOI	0%					0%		0%	0%	0%			0%			
West Side PO Non Motorized Trails Footprint	0%					0%		0%	0%	0%			0%			
All Current and Future Activities Combined (Aggrega	1%	16%			21%	12%	15%	34%	15%	6%			13%			

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table MCL30

Potential Effects on Mixed Conifer Plants for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Effects Index	Charleston beardtongue	Charleston draba	Charleston goldenbush	Charleston grounddaisy	Charleston pinewood lousewort	Charleston violet	Clokey eggvetch	Clokey milkvetch	Clokey mountain sage	Clokey paintbrush	Clokey thistle	Hitchcock bladderpod	Jaeger beardtongue	Nevada whillowherb	rosy King sandwort	Rough angelica
Current Activities - Potential Effects																
0.000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.001 - 0.050	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.051 - 0.250	4.47		9.20	516.81	54.80	93.14	12.99	128.81	110.01	15.83	0.49	0.05	23.24		10.46	36.58
0.251 - 0.500	0.33		3.97	43.60	13.58	36.30	0.17	47.41	25.62	3.65	0.00	1.25	15.15		0.03	10.38
0.501 - 0.750	0.00		0.49	12.42	22.52	20.89	0.05	24.02	18.69	0.02	0.00	0.00	16.22		6.07	4.65
0.751 - 0.999	0.00		0.00	1.44	1.03	0.93	0.00	3.74	2.17	0.00	0.00	0.00	0.61		3.06	0.53
1.000	0.51		1.39	7.53	6.68	10.32	0.08	14.02	11.38	1.42	0.03	0.06	6.25		0.45	4.66
Current and Future Activities - Potential Effects																
0.000	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00			0.00			
0.001 - 0.050	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00			0.00			
0.051 - 0.250	4.51	5.61			54.55	92.65	12.99	120.05	109.70	15.84			23.24			
0.251 - 0.500	0.35	0.00			14.52	34.46	0.17	27.60	25.60	3.66			16.19			
0.501 - 0.750	0.00	13.23			22.92	22.78	0.05	18.34	18.59	0.02			27.75			
0.751 - 0.999	0.00	0.00			1.07	1.69	0.00	30.23	2.53	0.00			4.17			
1.000	0.51	0.00			6.71	13.72	0.08	22.35	11.48	1.42			11.57			
Total Species Distribution (ac)	**138**	**55**	**122**	**1049**	**202**	**538**	**23**	**291**	**438**	**124**	**5**	**10**	**351**	**N/A**	**115**	**127**

Table MCL31

Potential Effects with Avoidance Measures on Mixed Conifer Plant for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Effects Index	Charleston beardtongue	Charleston draba	Charleston goldenbush	Charleston grounddaisy	Charleston pinewood lousewort	Charleston violet	Clokey eggvetch	Clokey milkvetch	Clokey mountain sage	Clokey paintbrush	Clokey thistle	Hitchcock bladderpod	Jaeger beardtongue	Nevada whillowherb	rosy King sandwort	Rough angelica
Current Activities - Potential Effects with Avoidance Measures																
0.000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.001 - 0.050	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.051 - 0.250	4.47		9.20	516.81	54.80	103.44	13.01	128.81	110.01	15.83	0.49	0.05	23.24		10.46	36.58
0.251 - 0.500	0.33		3.97	54.40	32.59	44.72	0.21	57.62	29.46	3.65	0.00	1.25	17.09		6.10	12.46
0.501 - 0.750	0.51		1.59	8.49	7.88	9.98	0.05	22.18	21.71	1.34	0.03	0.06	17.95		0.45	3.74
0.751 - 0.999	0.00		0.12	0.73	1.49	1.81	0.01	8.62	5.26	0.00	0.00	0.00	0.77		3.06	1.51
1.000	0.00		0.17	1.36	1.86	1.63	0.00	0.77	1.43	0.10	0.00	0.00	2.42		0.00	2.51
Current and Future Activities - Potential Effects with Avoidance Measures																
0.000	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00			0.00			
0.001 - 0.050	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00			0.00			
0.051 - 0.250	4.51	18.84			54.55	103.92	13.02	120.05	109.71	15.84			24.28			
0.251 - 0.500	0.35	0.00			33.77	45.01	0.21	45.87	29.74	3.67			31.76			
0.501 - 0.750	0.51	0.00			8.10	12.81	0.05	42.22	21.75	1.34			22.13			
0.751 - 0.999	0.00	0.00			1.49	1.93	0.01	9.13	5.29	0.00			1.77			
1.000	0.00	0.00			1.86	1.64	0.00	1.29	1.43	0.10			2.98			
Total Species Distribution (ac)	**138**	**55**	**122**	**1049**	**202**	**538**	**23**	**291**	**438**	**124**	**5**	**10**	**351**	**N/A**	**115**	**127**

Table MCL32

Potential Effects with Minimization Measures on Mixed Conifer Plant for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Effects Index	*Charleston beardtongue*	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Current Activities - Potential Effects with Minimization Measures																
0.000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.001 - 0.050	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.051 - 0.250	4.47		9.20	516.81	54.80	93.14	12.99	128.81	110.01	15.83	0.49	0.05	23.24		10.46	36.58
0.251 - 0.500	0.33		4.45	54.40	30.30	53.55	0.24	57.58	37.95	3.65	0.00	1.25	28.94		6.10	13.67
0.501 - 0.750	0.00		0.01	3.05	6.47	4.57	0.01	17.59	8.52	0.02	0.00	0.00	3.05		0.00	2.09
0.751 - 0.999	0.00		0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		3.06	1.56
1.000	0.51		1.39	7.53	6.58	10.32	0.05	14.02	11.38	1.42	0.03	0.06	6.25		0.45	2.90
Current and Future Activities - Potential Effects with Minimization Measures																
0.000	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00			0.00			
0.001 - 0.050	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00			0.00			
0.051 - 0.250	4.53	5.61			54.55	92.65	12.99	120.05	109.70	15.84			23.24			
0.251 - 0.500	0.33	0.00			31.44	51.96	0.24	37.05	37.91	3.66			30.27			
0.501 - 0.750	0.00	13.23			6.70	9.72	0.01	11.97	8.81	0.02			20.05			
0.751 - 0.999	0.00	0.00			0.47	0.61	0.00	28.70	0.10	0.00			1.90			
1.000	0.51	0.00			6.61	10.37	0.05	20.80	11.38	1.42			7.47			
Total Species Distribution (ac)	**138**	**55**	**122**	**1049**	**202**	**538**	**23**	**291**	**438**	**124**	**5**	**10**	**351**	**N/A**	**115**	**127**

Table MCL33

Potential Effects with Mitigation Measures on Mixed Conifer Plant for Current Activities as well as Current and Future Activities, Polygon Locality Data.

Effects Index	Charleston beardtongue	Charleston draba	Charleston goldenbush	Charleston grounddaisy	Charleston pinewood lousewort	Charleston violet	Clokey eggvetch	Clokey milkvetch	Clokey mountain sage	Clokey paintbrush	Clokey thistle	Hitchcock bladderpod	Jaeger beardtongue	Nevada whillowherb	rosy King sandwort	Rough angelica
Current Activities - Potential Effects with Mitigation Measures																
0.000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.001 - 0.050	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.051 - 0.250	4.47		9.20	516.81	54.80	93.14	12.99	128.81	110.01	15.83	0.49	0.05	23.24		10.46	36.58
0.251 - 0.500	0.33		3.99	43.60	14.40	36.41	0.17	47.87	25.62	3.65	0.00	1.25	15.15		6.10	12.04
0.501 - 0.750	0.00		0.53	12.42	22.26	20.85	0.08	23.92	18.69	0.08	0.00	0.00	16.22		3.06	4.89
0.751 - 0.999	0.00		0.04	1.85	0.91	2.25	0.00	3.68	2.17	0.03	0.00	0.00	0.61		0.00	1.84
1.000	0.51		1.30	7.12	6.25	8.93	0.05	13.72	11.38	1.33	0.03	0.06	6.25		0.45	1.45
Current and Future Activities - Potential Effects with Mitigation Measures																
0.000	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00			0.00			
0.001 - 0.050	0.00	0.00			0.00	0.00	0.00	0.00	0.00	0.00			0.00			
0.051 - 0.250	4.51	5.61			54.55	92.65	12.99	120.05	109.70	15.84			23.24			
0.251 - 0.500	0.35	0.00			15.45	34.90	0.17	28.69	25.60	3.66			16.47			
0.501 - 0.750	0.00	13.23			22.55	23.09	0.08	25.15	18.91	0.08			30.66			
0.751 - 0.999	0.00	0.00			0.94	5.59	0.00	29.94	2.29	0.03			4.97			
1.000	0.51	0.00			6.28	9.07	0.05	14.73	11.40	1.33			7.58			
Total Species Distribution (ac)	**138**	**55**	**122**	**1049**	**202**	**538**	**23**	**291**	**438**	**124**	**5**	**10**	**351**	**N/A**	**115**	**127**

Table MCO10
Summary of Individual Effect Acreage of Each Activity for Mixed Conifer Plant Species, Point Occurrence Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Point Occurrence Area by Species (with 0.1 ac buffer)	*2.1*	*1.8*	*0.9*	*1.3*	*1.2*	*1.7*	*1.9*	*1.3*	*0.5*	*3.5*	*2.7*	*2.4*	*1.4*	*0.5*	*1.2*	*0.8*
Campground AOI					0.077											
Campground Footprint																
Cave/Tunnel																
Climbing Area																
CUA AOI							0.175				0.091	0.084				
CUA Footprint												0.016				
Firewood Gathering Area						0.099	0.099						0.160		0.067	
FS Structure AOI					0.066											
FS Structure Footprint																
High Mileage System Trail AOI			0.032	0.050	0.048	0.009	0.105			0.019	0.072	0.058			0.019	0.017
High Mileage System Trail Footprint			0.002	0.003	0.003		0.006			0.001	0.005	0.003			0.001	0.001
Horses/Burros .25 - 1.0 mile from spring/stream				0.199			0.099	0.199					0.199			
Horses/Burros < .25 mile from spring/stream								0.099								
Horses/Burros > 1.0 mile from spring/stream						0.099	**0.597**	**0.298**		0.099			0.199		0.199	
Low Mileage System Trail AOI			0.135							0.039						
Low Mileage System Trail Footprint			0.003													
Motorized Trail (closed) AOI																
Motorized Trail (closed) Footprint																
Motorized Trail (open) AOI																
Motorized Trail (open) Footprint																
Non System Trail AOI	0.058								0.049			0.048			0.000	0.058
Non System Trail Footprint	0.004								0.003			0.003				0.004
Paved Road AOI	0.033							0.022		0.056			0.028			0.031
Paved Road Footprint	0.024							0.078		0.073			0.005			0.012
Picnic Area AOI										0.015						
Picnic Area Footprint	0.099									0.084			0.099			0.099
Private Land	0.099						0.147	0.146		0.165	0.125	0.099				
PVT Building AOI																
PVT Building Footprint																
Ski Area AOI	0.083				0.026		0.083									
Ski Area Footprint	0.017				0.073		0.017									
Snowplay Area						0.018										
Trailhead in Developed Canyon AOI																
Trailhead in Developed Canyon Footprint																
Trailhead out of Developed Canyon AOI																
Trailhead out of Developed Canyon Footprint																
Unpaved Road AOI	0.024						0.060		0.002			0.049	0.003		0.027	
Unpaved Road Footprint	0.001						0.038					0.041			0.004	
Wildland Urban Interface	0.099				0.199	**0.398**	0.195	0.099		0.133	0.099	0.099	**0.298**		0.199	**0.375**
All Current Activities Combined (Aggregated)	*0.46*		*0.17*	*0.25*	*0.41*	*0.61*	*1.02*	*0.74*	*0.05*	*0.46*	*0.37*	*0.41*	*0.66*	*0.00*	*0.42*	*0.45*
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI																
Future EEA Footprint																
Future Foot Bridge AOI																
Future Foot Bridge Footprint																
Future High Mileage System Trail AOI								0.007								
Future High Mileage System Trail Footprint																
Future Low Mileage System Trail AOI										0.008						
Future Low Mileage System Trail Footprint																
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		0.099								0.085	0.019	0.062				
Future Ski Area Footprint	0.099									0.099	0.180	0.137				
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI																
West Side PO Camping Footprint							0.199						0.099			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI							0.001									
West Side PO Motorized Trails Footprint																
West Side PO Non Motorized Trails AOI							0.003									
West Side PO Non Motorized Trails Footprint																
All Current and Future Activities Combined (Aggregated)	*0.56*	*0.10*	*0.17*	*0.25*	*0.41*	*0.61*	*1.23*	*0.75*	*0.05*	*0.65*	*0.57*	*0.61*	*0.76*	*0.00*	*0.42*	*0.45*

**** Bold text indicates activities with > 0.20 ac overlap with species area***

Table MCO11
Percent Activity Potential Effect by Species - Mixed Conifer Plants, Point Occurrence Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Occupied Acreage by Species (with 0.1 ac buffer)	*2.1*	*1.8*	*0.9*	*1.3*	*1.2*	*1.7*	*1.9*	*1.3*	*0.5*	*3.5*	*2.7*	*2.4*	*1.4*	*0.5*	*1.2*	*0.8*
Campground AOI					3%											
Campground Footprint																
Cave/Tunnel																
Climbing Area																
CUA AOI							5%				2%	2%				
CUA Footprint												1%				
Firewood Gathering Area						1%	1%						3%		1%	
FS Structure AOI					3%											
FS Structure Footprint																
High Mileage System Trail AOI			1%	1%	1%	0%	1%			0%	1%	1%			0%	1%
High Mileage System Trail Footprint			0%	0%	0%		0%			0%	0%	0%			0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream				4%			1%	4%					4%			
Horses/Burros < .25 mile from spring/stream								4%								
Horses/Burros > 1.0 mile from spring/stream						1%	**8%**	**6%**		1%			4%		4%	
Low Mileage System Trail AOI			4%							0%						
Low Mileage System Trail Footprint			0%													
Motorized Trail (closed) AOI																
Motorized Trail (closed) Footprint																
Motorized Trail (open) AOI																
Motorized Trail (open) Footprint																
Non System Trail AOI	1%								2%			1%			0%	2%
Non System Trail Footprint	0%								1%			0%				1%
Paved Road AOI	1%							1%		1%			1%			2%
Paved Road Footprint	1%							**6%**		2%			0%			1%
Picnic Area AOI										0%						
Picnic Area Footprint	4%									2%			5%			**9%**
Private Land	1%						2%	3%		1%	1%	1%				
PVT Building AOI																
PVT Building Footprint																
Ski Area AOI	1%				1%		1%									
Ski Area Footprint	1%				5%		1%									
Snowplay Area						0%										
Trailhead in Developed Canyon AOI																
Trailhead in Developed Canyon Footprint																
Trailhead out of Developed Canyon AOI																
Trailhead out of Developed Canyon Footprint																
Unpaved Road AOI	1%						2%		0%			1%	0%		1%	
Unpaved Road Footprint	0%						2%					2%			0%	
Wildland Urban Interface	1%				4%	6%	3%	2%		1%	1%	1%	5%		4%	**12%**
All Current Activities Combined (Aggregated)	*9%*	*0%*	*5%*	*5%*	*16%*	*9%*	*19%*	*22%*	*3%*	*7%*	*5%*	*8%*	*17%*	*0%*	*11%*	*23%*
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI																
Future EEA Footprint																
Future Foot Bridge AOI																
Future Foot Bridge Footprint																
Future High Mileage System Trail AOI								0%								
Future High Mileage System Trail Footprint																
Future Low Mileage System Trail AOI										0%						
Future Low Mileage System Trail Footprint																
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		1%								1%	0%	1%				
Future Ski Area Footprint	4%									2%	5%	4%				
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI																
West Side PO Camping Footprint							**8%**						5%			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI							0%									
West Side PO Motorized Trails Footprint																
West Side PO Non Motorized Trails AOI							0%									
West Side PO Non Motorized Trails Footprint																
All Current and Future Activities Combined (Aggregated)	*13%*	*3%*	*5%*	*5%*	*16%*	*9%*	*29%*	*22%*	*3%*	*10%*	*10%*	*13%*	*23%*	*0%*	*11%*	*23%*

**** Bold text indicates activities with > 5% Potential Effect***

Table MCO12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Mixed Conifer Plants, Point Occurrence Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Occupied Acreage by Species (with 0.1 ac buffer)	*2.1*	*1.8*	*0.9*	*1.3*	*1.2*	*1.7*	*1.9*	*1.3*	*0.5*	*3.5*	*2.7*	*2.4*	*1.4*	*0.5*	*1.2*	*0.8*
Campground AOI					2%											
Campground Footprint																
Cave/Tunnel																
Climbing Area																
CUA AOI							4%				1%	2%				
CUA Footprint												1%				
Firewood Gathering Area						1%	1%						3%		1%	
FS Structure AOI					3%											
FS Structure Footprint																
High Mileage System Trail AOI			1%	1%	1%	0%	1%			0%	0%	0%			0%	0%
High Mileage System Trail Footprint			0%	0%	0%		0%			0%	0%	0%			0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream				4%			1%	4%					4%			
Horses/Burros < .25 mile from spring/stream								4%								
Horses/Burros > 1.0 mile from spring/stream						1%	8%	6%		1%			4%		4%	
Low Mileage System Trail AOI			3%							0%						
Low Mileage System Trail Footprint			0%													
Motorized Trail (closed) AOI																
Motorized Trail (closed) Footprint																
Motorized Trail (open) AOI																
Motorized Trail (open) Footprint																
Non System Trail AOI	1%								2%			0%			0%	1%
Non System Trail Footprint	0%								0%			0%				0%
Paved Road AOI	1%							1%		1%			1%			2%
Paved Road Footprint	1%							6%		2%			0%			1%
Picnic Area AOI										0%						
Picnic Area Footprint	3%									2%			5%			9%
Private Land	0%						1%	1%		1%	1%	1%				
PVT Building AOI																
PVT Building Footprint																
Ski Area AOI	1%				1%		1%									
Ski Area Footprint	1%				4%		1%									
Snowplay Area						0%										
Trailhead in Developed Canyon AOI																
Trailhead in Developed Canyon Footprint																
Trailhead out of Developed Canyon AOI																
Trailhead out of Developed Canyon Footprint																
Unpaved Road AOI	0%						1%		0%			1%	0%		1%	
Unpaved Road Footprint	0%						1%					1%			0%	
Wildland Urban Interface	1%				4%	4%	3%	2%		1%	1%	1%	5%		4%	12%
All Current Activities Combined (Aggregated)	8%		4%	5%	14%	8%	16%	21%	2%	6%	3%	6%	16%		10%	22%
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI																
Future EEA Footprint																
Future Foot Bridge AOI																
Future Foot Bridge Footprint																
Future High Mileage System Trail AOI								0%								
Future High Mileage System Trail Footprint																
Future Low Mileage System Trail AOI										0%						
Future Low Mileage System Trail Footprint																
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		1%								0%	0%	0%				
Future Ski Area Footprint	1%									1%	1%	1%				
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI																
West Side PO Camping Footprint							2%						3%			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI							0%									
West Side PO Motorized Trails Footprint																
West Side PO Non Motorized Trails AOI							0%									
West Side PO Non Motorized Trails Footprint																
All Current and Future Activities Combined (Aggregated)	9%	0%					23%	21%		7%	4%	7%	20%			

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table MCO13
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Mixed Conifer Plants, Point Occurrence Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Occupied Acreage by Species (with 0.1 ac buffer)	*2.1*	*1.8*	*0.9*	*1.3*	*1.2*	*1.7*	*1.9*	*1.3*	*0.5*	*3.5*	*2.7*	*2.4*	*1.4*	*0.5*	*1.2*	*0.8*
Campground AOI					2%											
Campground Footprint																
Cave/Tunnel																
Climbing Area																
CUA AOI							3%				1%	1%				
CUA Footprint												1%				
Firewood Gathering Area						1%	1%						3%		1%	
FS Structure AOI					2%											
FS Structure Footprint																
High Mileage System Trail AOI			1%	1%	1%	0%	1%			0%	1%	0%			0%	0%
High Mileage System Trail Footprint			0%	0%	0%		0%			0%	0%	0%			0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream				3%			1%	3%					3%			
Horses/Burros < .25 mile from spring/stream								3%								
Horses/Burros > 1.0 mile from spring/stream						1%	6%	4%		1%			3%		3%	
Low Mileage System Trail AOI			3%							0%						
Low Mileage System Trail Footprint			0%													
Motorized Trail (closed) AOI																
Motorized Trail (closed) Footprint																
Motorized Trail (open) AOI																
Motorized Trail (open) Footprint																
Non System Trail AOI	0%								2%			0%			0%	1%
Non System Trail Footprint	0%								1%			0%				1%
Paved Road AOI	1%							1%		1%			1%			1%
Paved Road Footprint	1%							6%		2%			0%			1%
Picnic Area AOI										0%						
Picnic Area Footprint	3%									2%			5%			5%
Private Land	1%						2%	3%		1%	1%	1%				
PVT Building AOI																
PVT Building Footprint																
Ski Area AOI	1%				0%		1%									
Ski Area Footprint	0%				3%		0%									
Snowplay Area						0%										
Trailhead in Developed Canyon AOI																
Trailhead in Developed Canyon Footprint																
Trailhead out of Developed Canyon AOI																
Trailhead out of Developed Canyon Footprint																
Unpaved Road AOI	0%						1%		0%			1%	0%		1%	
Unpaved Road Footprint	0%						2%					2%			0%	
Wildland Urban Interface	1%				4%	6%	3%	2%		1%	1%	1%	5%		4%	12%
All Current Activities Combined (Aggregated)	8%		4%	4%	13%	9%	16%	18%	3%	6%	4%	7%	15%		9%	19%
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI																
Future EEA Footprint																
Future Foot Bridge AOI																
Future Foot Bridge Footprint																
Future High Mileage System Trail AOI								0%								
Future High Mileage System Trail Footprint																
Future Low Mileage System Trail AOI										0%						
Future Low Mileage System Trail Footprint																
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		1%								0%	0%	0%				
Future Ski Area Footprint	3%									2%	4%	3%				
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI																
West Side PO Camping Footprint							6%						4%			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI							0%									
West Side PO Motorized Trails Footprint																
West Side PO Non Motorized Trails AOI							0%									
West Side PO Non Motorized Trails Footprint																
All Current and Future Activities Combined (Aggregated)	11%	1%					24%	18%		8%	8%	11%	20%			

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table MCO14
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Mixed Conifer Plants, Point Occurrence Data.

	Charleston beardtongue	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Activities																
Current Activities																
Occupied Acreage by Species (with 0.1 ac buffer)	*2.1*	*1.8*	*0.9*	*1.3*	*1.2*	*1.7*	*1.9*	*1.3*	*0.5*	*3.5*	*2.7*	*2.4*	*1.4*	*0.5*	*1.2*	*0.8*
Campground AOI					2%											
Campground Footprint																
Cave/Tunnel																
Climbing Area																
CUA AOI							5%				2%	2%				
CUA Footprint												1%				
Firewood Gathering Area						1%	1%						3%		1%	
FS Structure AOI					2%											
FS Structure Footprint																
High Mileage System Trail AOI			1%	1%	1%	0%	1%			0%	1%	1%			0%	1%
High Mileage System Trail Footprint			0%	0%	0%		0%			0%	0%	0%			0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream				4%			1%	4%					4%			
Horses/Burros < .25 mile from spring/stream								4%								
Horses/Burros > 1.0 mile from spring/stream						1%	8%	6%		1%			4%		4%	
Low Mileage System Trail AOI			4%							0%						
Low Mileage System Trail Footprint			0%													
Motorized Trail (closed) AOI																
Motorized Trail (closed) Footprint																
Motorized Trail (open) AOI																
Motorized Trail (open) Footprint																
Non System Trail AOI	1%								2%			1%			0%	2%
Non System Trail Footprint	0%								1%			0%				1%
Paved Road AOI	1%							1%		1%			1%			2%
Paved Road Footprint	1%							6%		2%			0%			1%
Picnic Area AOI										0%						
Picnic Area Footprint	3%									1%			4%			7%
Private Land	1%						2%	3%		1%	1%	1%				
PVT Building AOI																
PVT Building Footprint																
Ski Area AOI	1%				0%		1%									
Ski Area Footprint	0%				3%		0%									
Snowplay Area						0%										
Trailhead in Developed Canyon AOI																
Trailhead in Developed Canyon Footprint																
Trailhead out of Developed Canyon AOI																
Trailhead out of Developed Canyon Footprint																
Unpaved Road AOI	1%						2%		0%			1%	0%		1%	
Unpaved Road Footprint	0%						2%					2%			0%	
Wildland Urban Interface	1%				4%	6%	3%	2%		1%	1%	1%	5%		4%	12%
All Current Activities Combined (Aggregated)	8%		5%	5%	13%	9%	18%	22%	3%	6%	5%	8%	15%		11%	21%
Future Activities																
Future Campground AOI																
Future Campground Footprint																
Future EEA AOI																
Future EEA Footprint																
Future Foot Bridge AOI																
Future Foot Bridge Footprint																
Future High Mileage System Trail AOI								0%								
Future High Mileage System Trail Footprint																
Future Low Mileage System Trail AOI										0%						
Future Low Mileage System Trail Footprint																
Future Picnic AOI																
Future Picnic Area Footprint																
Future Ski Area AOI		1%								0%	0%	0%				
Future Ski Area Footprint	3%									2%	4%	3%				
Future Trailhead AOI																
Future Trailhead Footprint																
Future Visitor Center AOI																
Future Visitor Center Footprint																
West Side PO Camping AOI																
West Side PO Camping Footprint							4%						4%			
West Side PO Major Trailhead AOI																
West Side PO Major Trailhead Footprint																
West Side PO Minor Trailhead AOI																
West Side PO Minor Trailhead Footprint																
West Side PO Motorized Trails AOI							0%									
West Side PO Motorized Trails Footprint																
West Side PO Non Motorized Trails AOI							0%									
West Side PO Non Motorized Trails Footprint																
All Current and Future Activities Combined (Aggrega	11%	1%					25%	22%		9%	8%	12%	21%			

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table MCO30

Potential Effects on Mixed Conifer Plants for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	Charleston beardtongue	Charleston draba	Charleston goldenbush	Charleston grounddaisy	Charleston pinewood lousewort	Charleston violet	Clokey eggvetch	Clokey milkvetch	Clokey mountain sage	Clokey paintbrush	Clokey thistle	Hitchcock bladderpod	Jaeger beardtongue	Nevada whillowherb	rosy King sandwort	Rough angelica
Current Activities - Potential Effects																
0.000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.001 - 0.050	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.051 - 0.250	0.34		0.17	0.25	0.20	0.59	0.72	0.54	0.05	0.26	0.25	0.21	0.56		0.34	0.35
0.251 - 0.500	0.00		0.00	0.00	0.07	0.02	0.16	0.10	0.00	0.00	0.12	0.08	0.00		0.05	0.00
0.501 - 0.750	0.05		0.00	0.00	0.15	0.00	0.09	0.02	0.00	0.04	0.00	0.05	0.00		0.03	0.00
0.751 - 0.999	0.00		0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.00	0.00	0.07		0.00	0.06
1.000	0.07		0.00	0.00	0.00	0.00	0.04	0.08	0.00	0.10	0.00	0.06	0.03		0.01	0.05
Current and Future Activities - Potential Effects																
0.000	0.00	0.00					0.00	0.00		0.00	0.00	0.00	0.00			
0.001 - 0.050	0.00	0.00					0.00	0.00		0.00	0.00	0.00	0.00			
0.051 - 0.250	0.34	0.10					0.72	0.55		0.35	0.26	0.28	0.56			
0.251 - 0.500	0.00	0.00					0.16	0.10		0.00	0.12	0.08	0.00			
0.501 - 0.750	0.15	0.00					0.09	0.02		0.14	0.18	0.19	0.00			
0.751 - 0.999	0.00	0.00					0.11	0.00		0.05	0.00	0.00	0.16			
1.000	0.07	0.00					0.14	0.08		0.10	0.00	0.06	0.04			
Total Species Distribution (ac)	**2.09**	**1.79**	**0.90**	**1.29**	**1.19**	**1.69**	**1.89**	**1.29**	**0.50**	**3.48**	**2.69**	**2.39**	**1.39**	**0.50**	**1.19**	**0.80**

Table MCO31

Potential Effects with Avoidance Measures on Mixed Conifer Plant for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Charleston beardtongue*	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Current Activities - Potential Effects with Avoidance Measures																
0.000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.001 - 0.050	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.051 - 0.250	0.34		0.17	0.25	0.20	0.59	0.73	0.54	0.05	0.26	0.25	0.21	0.56		0.34	0.35
0.251 - 0.500	0.00		0.00	0.00	0.14	0.02	0.17	0.10	0.00	0.02	0.12	0.13	0.00		0.06	0.00
0.501 - 0.750	0.06		0.00	0.00	0.08	0.00	0.12	0.02	0.00	0.03	0.00	0.05	0.00		0.02	0.00
0.751 - 0.999	0.03		0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.12	0.00	0.02	0.07		0.00	0.06
1.000	0.03		0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.04	0.00	0.00	0.03		0.00	0.04
Current and Future Activities - Potential Effects with Avoidance Measures																
0.000	0.00	0.00					0.00	0.00		0.00	0.00	0.00	0.00			
0.001 - 0.050	0.00	0.00					0.00	0.00		0.00	0.00	0.00	0.00			
0.051 - 0.250	0.44	0.10					0.73	0.55		0.45	0.44	0.41	0.56			
0.251 - 0.500	0.00	0.00					0.27	0.10		0.02	0.12	0.13	0.00			
0.501 - 0.750	0.06	0.00					0.22	0.02		0.03	0.00	0.05	0.00			
0.751 - 0.999	0.03	0.00					0.01	0.00		0.12	0.00	0.02	0.17			
1.000	0.03	0.00					0.00	0.08		0.04	0.00	0.00	0.03			
Total Species Distribution (ac)	**2.09**	**1.79**	**0.90**	**1.29**	**1.19**	**1.69**	**1.89**	**1.29**	**0.50**	**3.48**	**2.69**	**2.39**	**1.39**	**0.50**	**1.19**	**0.80**

Table MCO32

Potential Effects with Minimization Measures on Mixed Conifer Plant for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	Charleston beardtongue	Charleston draba	Charleston goldenbush	Charleston grounddaisy	Charleston pinewood lousewort	Charleston violet	Clokey eggvetch	Clokey milkvetch	Clokey mountain sage	Clokey paintbrush	Clokey thistle	Hitchcock bladderpod	Jaeger beardtongue	Nevada whillowherb	rosy King sandwort	Rough angelica
Current Activities - Potential Effects with Minimization Measures																
0.000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.001 - 0.050	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.051 - 0.250	0.34		0.17	0.25	0.20	0.59	0.72	0.54	0.05	0.26	0.25	0.21	0.56		0.34	0.35
0.251 - 0.500	0.00		0.00	0.00	0.14	0.02	0.18	0.10	0.00	0.04	0.12	0.13	0.00		0.06	0.06
0.501 - 0.750	0.05		0.00	0.00	0.07	0.00	0.09	0.02	0.00	0.00	0.00	0.00	0.00		0.02	0.03
0.751 - 0.999	0.03		0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.08	0.00	0.00	0.09		0.00	0.00
1.000	0.04		0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.07	0.00	0.06	0.00		0.01	0.02
Current and Future Activities - Potential Effects with Minimization Measures																
0.000	0.00	0.00					0.00	0.00		0.00	0.00	0.00	0.00			
0.001 - 0.050	0.00	0.00					0.00	0.00		0.00	0.00	0.00	0.00			
0.051 - 0.250	0.34	0.10					0.72	0.55		0.35	0.26	0.28	0.56			
0.251 - 0.500	0.00	0.00					0.18	0.10		0.04	0.12	0.13	0.00			
0.501 - 0.750	0.15	0.00					0.19	0.02		0.10	0.18	0.14	0.10			
0.751 - 0.999	0.03	0.00					0.10	0.00		0.08	0.00	0.00	0.10			
1.000	0.04	0.00					0.04	0.08		0.07	0.00	0.06	0.00			
Total Species Distribution (ac)	**2.09**	**1.79**	**0.90**	**1.29**	**1.19**	**1.69**	**1.89**	**1.29**	**0.50**	**3.48**	**2.69**	**2.39**	**1.39**	**0.50**	**1.19**	**0.80**

Table MCO33

Potential Effects with Mitigation Measures on Mixed Conifer Plant for Current Activities as well as Current and Future Activities, Point Occurrence Data.

Effects Index	*Charleston beardtongue*	*Charleston draba*	*Charleston goldenbush*	*Charleston grounddaisy*	*Charleston pinewood lousewort*	*Charleston violet*	*Clokey eggvetch*	*Clokey milkvetch*	*Clokey mountain sage*	*Clokey paintbrush*	*Clokey thistle*	*Hitchcock bladderpod*	*Jaeger beardtongue*	*Nevada whillowherb*	*rosy King sandwort*	*Rough angelica*
Current Activities - Potential Effects with Mitigation Measures																
0.000	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.001 - 0.050	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
0.051 - 0.250	0.34		0.17	0.25	0.20	0.59	0.72	0.54	0.05	0.26	0.25	0.21	0.56		0.34	0.35
0.251 - 0.500	0.00		0.00	0.00	0.14	0.02	0.16	0.10	0.00	0.02	0.12	0.08	0.00		0.05	0.00
0.501 - 0.750	0.05		0.00	0.00	0.07	0.00	0.09	0.02	0.00	0.08	0.00	0.05	0.00		0.03	0.06
0.751 - 0.999	0.04		0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03	0.00	0.00	0.09		0.00	0.03
1.000	0.03		0.00	0.00	0.00	0.00	0.04	0.08	0.00	0.07	0.00	0.06	0.00		0.01	0.02
Current and Future Activities - Potential Effects with Mitigation Measures																
0.000	0.00	0.00					0.00	0.00		0.00	0.00	0.00	0.00			
0.001 - 0.050	0.00	0.00					0.00	0.00		0.00	0.00	0.00	0.00			
0.051 - 0.250	0.34	0.10					0.72	0.55		0.35	0.26	0.28	0.56			
0.251 - 0.500	0.00	0.00					0.26	0.10		0.02	0.12	0.08	0.00			
0.501 - 0.750	0.15	0.00					0.10	0.02		0.18	0.18	0.19	0.16			
0.751 - 0.999	0.04	0.00					0.11	0.00		0.03	0.00	0.00	0.03			
1.000	0.03	0.00					0.04	0.08		0.07	0.00	0.06	0.00			
Total Species Distribution (ac)	**2.09**	**1.79**	**0.90**	**1.29**	**1.19**	**1.69**	**1.89**	**1.29**	**0.50**	**3.48**	**2.69**	**2.39**	**1.39**	**0.50**	**1.19**	**0.80**

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Angelica scabrica	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (5)	Moderate	2,501-10,000	100-250	Moderate decline	Low	High	High	
Current Condition Spring Mountains				6-20 (5)	High	2,501-10,000	100-250	Stable	Low	High	High	Moderate
Current Condition Rangewide	SME	Narrow	Highly vulnerable	6-20 (12)	High	2,501-10,000	100-250	Stable	Low	High	High	Moderate
Comments	Current no. of sites of 5 does not include Cold Creek or Deer Creek. Population estimates for baseline is from Nachlinger 1994 (3630), current (7130) is from Nachlinger + Lovell + summer homes (2500), current rangewide is also includes BLM (additions 20 plants). The decrease in occupied acres is due to better mapping efforts from 137 (reference) to current (127); rangewide occupied acres >127 but no estimates from BLM sites. Scope is high due to fire suppression affecting habitat, recreational activities and other natural events.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			Population Numbers and Areas of Occurrence				Population Trends	Threats, Protection, and Management			
Arenaria kingii spp rosea	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (6)	High	100,001-1,000,000	100-250	Stable	Low	High	High	
Current Condition Spring Mountains				6-20 (8)	High	100,001-1,000,000	100-250	Stable	Low	High	High	Low
Current Condition Rangewide	SME	Broad	Moderately vulnerable	6-20 (8)	High	100,001-1,000,000	100-250	Stable	Low	High	High	Low
Comments	Information from Nachlinger and Sheldon, 1999; Population size 66,000 to 314,000 for all estimates. Occupied habitat estimated at 120. Threat scope and immediacy high because Nach & Shel stated most EOs had some threat currently presently.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Astragalus aequalis	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				21-80 (23)	High	2,501-10,000	100-250	Stable	Moderate	Moderate	High	
Current Condition Spring Mountains				21-80 (25)	High	2,501-10,000	250-500	Stable?	Moderate	Moderate	High	Moderate
Current Condition Rangewide	SME	Moderate	Moderately vulnerable	21-80 (25)	High	2,501-10,000	250-500	Stable?	Moderate	Moderate	High	Moderate
Comments	Population numbers from NNHP with current (SM and rangewide) of 3109 and reference 2021; Occupied habitat is 138 from reference and 291 acres for current (SM and rangewide). Make sure all new data is included to revise species status (e.g., Blue Tree Trail surveys, MKC surveys, etc.); Reference trend is stable based on Nachlinger 1994, current estimated the same - but it may be to moderate decline?. Threat severity is moderate instead of low because of fire suppression and we think this species needs fire.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Astragalus oophorus var. clokeyanus	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (14)	Moderate	2,501-10,000	10-50	Rapid decline	Low	High	High	
Current Condition Spring Mountains				6-20 (16)	High	2,501-10,000	10-50	Moderate decline	Low	High	High	Moderate
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	21-60 (32)	High	2,501-10,000	250-500	Moderate decline	Low	Moderate	High	Moderate
Comments	Data mostly from Smith (2001), and Walker, 2006 compilation of other data that ENTRIX had. Pop size of 4313 for reference SM from Morefield 2001, while current SM is based on all info and is 7229. Rangewide pop size based on Smitt and is 4443. Acres of habitat 23 for SM and estimated 260 from Smith for rangewide. Reference trend of 30-50% decline from Nachlinger 1995. Current population trend is reduced, but still 10-30% because we are not dependably relocating small populations - large ones are stable based on monitoring											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Castilleja martinii var. clokeyi	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				21-80 (25)	High	U	100-250	Stable	Low	Moderate	High	
Current Condition Spring Mountains				21-80 (26)	High	U	100-250	Stable	Low	Moderate	High	Moderate
Current Condition Rangewide	Wide-ranging	Broad	Not intrinsically vulnerable	21-80 (38)	U	2,501 - 10,000	U	U	U	U	U	U
Comments	Appears to tolerate some disturbance - disperse recreational use. Pop size rangewide is 3031 from Morefield 2001, and acres are 124 currently in SM. Trend stable based on professional estimates in SM due to continued presence in some disturbed habitats.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Cirsium eatonii var. clokeyi	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (12)	High	2,501-10,000	500-1,000	Stable	Low	Low	High	
Current Condition Spring Mountains				6-20 (12)	High	2,501-10,000	500-1,000	Stable	Low	Low	High	Low
Current Condition Rangewide	SME	Moderate	Not Intrinsically vulnerable	6-20 (12)	High	2,501-10,000	500-1,000	Stable	Low	Low	High	Low
Comments	Population size and occupied habitat are from NNHP with 9422 ind and 588 acres..											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Cryptantha tumulosa	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (3)	High	U	U	U	Low	Moderate	High	
Current Condition Spring Mountains				1-5 (3)	High	U	U	U	Low	Moderate	High	Moderate
Current Condition Rangewide	Wide-ranging	Broad	Moderately vulnerable	21 -80	High	10,001-100,000	250-1,000	Stable	Low	Low	High	Moderate
Comments	Not tracked in CA therefore used broad estimate for CA for no. of sites, population size, and occupied habitat; Middle Kyle Canyon was 2 of our NRA 3 sites. Distribution on SM is not well known and therefore trend is difficult to estimate although it is probably stable. NEED TO ADD NEW INFO IN FUTURE											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Draba paucifructa	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20	High	1,101 - 2,500	50 -100	Moderate decline	Low	Low	High	
Current Condition Spring Mountains				6-20	High	1,101 - 2,500	50 -100	Moderate decline	Low	Low	High	Low
Current Condition Rangewide	SME	Very Narrow	Moderately vulnerable	6-20	High	1,101 - 2,500	50 -100	Moderate decline	Low	Low	High	Low
Comments	Env Specificity - because of small amount of alpine/subalpine habitat (ca 500 ac) plus microsite requirements within them. Pop. size (1659) and area of occupied habitat (67) based on NNHP. Pop trend decline because high elevation monitoring over 10 years did not relocate the specis since found in 1998 baseline. Threat severity is low because Wilderness Designation provides protection of most occurrences, but springs are still being used by Ski Area and some pops are impacted by user-created trails. Also some protection has accrued from adherence to Conservation Agreement. Threat scope is low because ,1% of known habitat is overlapped by 0.25 acres of trail recreation activity.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Epilobium nevadense	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (5)	U	51-250	10-50	U	Moderate	Moderate	Moderate	
Current Condition Spring Mountains				6-20 (5)	U	51-250	10-50	U	Moderate	Moderate	Moderate	Low
Current Condition Rangewide	Wide-ranging	Very Narrow	Highly vulnerable	6-20	U	U	U	U	U	U	U	Low
Comments	Environmental specificity is very narrow because while the species occurs in a few, small, widely scattered populations over a wide range, suggesting unknown very limiting factors. Instrinsic vulnerability is high for the same reasons as above. No. of sites are unknown in Utah (but S1 - less than 6); distributed over 4 areas. Viability is unknown since many sites have not been visited for many years. Pop size is estimated at 111 individuals in SM over 35 acres.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Ericameria compacta	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (8)	High	2,501-10,000	U	Stable	Low	Low	High	
Current Condition Spring Mountains				6-20 (12)	High	2,501-10,000	U	Stable	Low	Low	High	Low
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	6-20 (14)	High	2,501-10,000	U	Stable	Low	Low	High	Low
Comments	No. of known sites: 2 of 12 in NNHP are from Sheep Range. This species may be underreported. Viability of sites is excellent because the species occurs widely at higher elevations and in steep slope to cliff habitats on rocky ground with limited impacts from dispersed recreation impact or fire so that it will persist within the time period. Trend based on habitat. Pop size is 6269 for SM (current and reference) and >6269 for rangewide.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Pedicularis semibarbata var. charlestonensis	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (4)	High	U	U	U	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (10)	High	2,501-10,000	100-250	Stable	Low	Moderate	High	Low
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	6-20 (14)	High	2,501-10,000	100-250	Stable	Low	Low	High	Low
Comments	Number of known sites, population, and site viability, etc. are best professional judgement as this species may be under reported. Species gets protection in Sheep Range. Best professional judgement is the population trend is stable. Future - neglibible because not any anticipated change in threats. Pop. size only estimated from 2005 surveys (2005 Matt et al.) and occupied habitat from Entrix GIS analysis which are also used for rangewide.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Penstemon leiophyllus var. keckii	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (10)	Moderate	251-1,000	100-250	Stable	Low	Low	High	
Current Condition Spring Mountains				6-20 (10)	High	1,001-2,500	100-250	Stable	Low	Moderate	High	Low
Current Condition Rangewide	SME	Moderate	Moderately vulnerable	6-20 (10)	High	1,001-2,500	100-250	Stable	Low	Moderate	High	Low
Comments	Number of known sites for more recent surveys in ski area, Lee Meadows, WUI. Pop size est at 630 for historic and 1630 for current when 2005 surveys in Lee Meadow added. Occupied habitat for historic is 102 acres and 138 with 205 survyes. Check Nachlinger for historic assessment.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Penstemon thompsoniae spp jaegeri	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (11)	High	U	U	U	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (15)	High	2,501-10,000	250-500	U	Low	Moderate	High	Moderate
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	21-80 (28)	High	2,501-10,000	250-500	U	Low	Low	High	Moderate
Comments	From SM and Sheep ranges; No. of sites from NNHP. Pop. Size is estimated from 6,701 from MKC and other survey counts. Occupied habitat from 251 from ENTRIX GIS analysis.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Salvia dorrii var. clokeyi	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (10)	High	10,001 - 100,000	250-500	Stable	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (15)	High	10,001 - 100,000	250-500	Stable	Low	Moderate	High	Moderate
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	21-80 (23)	High	10,001 - 100,000	250-500	Stable	Low	Low	High	U
Comments	No. of sites from refernce from NNHP with 10 occurring on SM with an additional sites in 1999 (Niles & Leary) and additional sites from Wallace Canyon, Aillow Peak , Griffin Peak, and Mt. Potosi (unknown undocumented site - not counted). Pop size from all surveys and source is 18,000 on SM with >18,0000 rangewide. Acres of occupied habitat for reference from Nachlinger 1994 of 260. Entrix estimates in SM known 438 based on all GIS info with rangewide >438 (little information for Sheep and RRNCA sites. Stable reference trend from Nachlinger 1994 with current still stable because no new changes in management or threats/issues.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			Population Numbers and Areas of Occurrence				Population Trends	Threats, Protection, and Management			
Townsendia jonesii var tumulosa	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (17)	High	251-1,000	10-50	Stable	Low	Moderate	High	
Current Condition Spring Mountains				6-20 (18)	High	1,001-2,500	1,000-5,000	Stable	Low	Moderate	High	Moderate
Current Condition Rangewide	MDE	Moderate	Moderately vulnerable	21-80 (28)	High	1,001-2,500	1,000-5,000	Stable	Low	Low	High	U
Comments	Population size ncreased since 1998 from project survey counts from 348 for reference (Nachlinger 1994) to 1052 from NNHP 2007; its number are still underestimated. *Occupied habitat has increased for the same reasons as populations from 18 acres in Morefield 2001 for reference to 1049 for current (SM) and >1049 for rangewide (no estimates for off Forest populations.. Scope is reduced because original threat is based on just 10 occurrences in east side canyons.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Viola charlestonensis	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (10)	High	101-250	10-50	Stable	Low	High	High	
Current Condition Spring Mountains				21-80 (22)	High	1,001-2,500	500-1,000	Stable	Low	Moderate	High	Moderate
Current Condition Rangewide	Wide-ranging	Moderate	Moderately vulnerable	21-80 (22+)	U	U	U	U	U	U	U	U
Comments	No. of sites rangewide is unknown. In Utah, the sites are from on isolated area with multiple collectionsi in Zion NP and surrounding BLM. The remaining information is unknown. In NV, all populations are only in Spring Mountains; 12 of 13 EO's are in NRA, 1 is in RRCNCA. *Population size dramatically increased since 1998 from project survey counts from 211 to >2011; its number are still underestimated. *Occupied habitat has increased for the same reasons as populations from 10 to 538. Scope is reduced because original threat is based on just 10 occurrences in east side canyons.											

APPENDIX 5F-12

Plant Species (Riparian and Springs)

1.1 RIPARIAN & SPRINGS – POINT OCCURRENCE DATA ONLY

1.1.1 Species/Activity Interaction

1.1.1.1 Species/Activity Overlap

1.1.1.1.1 Point Occurrence Data

The point occurrence data (with 0.1 acre buffer per observation) overlap with current and future activities for each species summed to between 0.0 and 0.27 acres per species for the Riparian and Springs plant species (Excel Table MOP010). No current or future activity has an overlap of greater than 0.10 acres, although Private Land and Wildlife Urban Interface have the greatest overlap of current activities and the Future Ski Area Footprint had the greatest planned activity overlap. The Slender Moonwort does not have any overlap with future activities. Note that the aggregated activity sum is not the sum of all activity acres, because some activities overlap others.

Both current and future activities account for the majority of the overlap with the both the Dainty Moonwort Upswept Moonwort (Excel Table MOP010, Appendix D.1).

1.1.1.2 Potential Effects

The analysis of potential effects on Riparian and Springs plant species relied on ranking each current and future activity's negative impact to a species directly or indirectly as an impact to its suitable habitat (Appendix A, Table MO21) The majority of activities have a high (H) to total (TTL) impact on these plant species within the footprint area, but a low (L) to moderate (M) impact outside the footprint area

While overlap indicates the geographic acreage of an activity on a species, the potential effects (while still expressed in acres) are scaled to account for the magnitude of effect of each activity (from none to 100 percent) on each species (Appendix D.1).

The percentage potential effect of each activity on point occurrence data for each species was calculated and summarized (Table MOPO11). The aggregated current and future activities' potential effects are estimated to impact between 0 and 15 percent of the occupied sites of the Riparian and Springs plant species. All potential effects equal to or greater than five percent are highlighted with bold text, and two current and one future activities meet this criteria. The current activities are Private Land and Wildlife Urban Interface and the planned activity is the Ski Area Footprint.

Current activities each have less than a three percent potential effect on Dainty Moonwort and Upswept Moonwort, but have a proportionately large effect on Slender Moonwort (Table MOPO11). However, the future activities have no potential effect on the Slender Moonwort known occurrence areas.

Maps of the effect intensity of current and future activities on point occurrences are presented with suitable habitat data for each Riparian and Springs plant species in Figures MOP1-3. The

areas of point occurrences that overlap colored shading indicate locations where the Riparian and Springs species have been observed and current or future activities exist or are proposed. The aggregated potential effects intensity index for each species provides the acreage of point occurrences (with buffers) of each species that fall within each effects index category as it corresponds to the species figures (Figures MOP1-3, Table MOPO30). Note that nearly all of the potential effects on known point occurrences are partial (less than 0.75) and degrade habitat at a low level within an activity area.

1.1.1.3 Potential Value of Existing Conservation Measures

Conservation measures are planned to offset current and future activities effects on Riparian and Springs plant species. The three categories of conservation measures are avoidance, minimization, and mitigation. In order to determine the benefit of conservation measures, the potential effects of activities using point occurrence data can be compared with the potential effects with conservation measures. The acreage results are provided by species in Appendix D.1, while the percentage potential effect with and without conservation measures is reviewed in the following sections.

1.1.1.3.1 Avoidance

No future activity with avoidance measures was greater than five percent of the point occurrence with buffers area, while one current activity was greater than five percent (Table MOPO12). The aggregated current and future activities' potential effects with avoidance measures are estimated to impact between 0 and 4.0 percent of the suitable habitat of Riparian and Springs species.

The effects intensity aggregated for all activities with avoidance measures on each Riparian and Springs plant species indicates that no area has complete elimination of point occurrence sites for these species, while the majority of the effects are in moderate intensity categories (between 0.05 and 0.75; Table MOP031). Avoidance measures are benefiting these plant species by reducing the deleterious activity effects and allowing documented sites to be maintained across more of the existing points of occurrence. Current low-intensity effects will have an impact on all Riparian and Springs plant species, while future low-intensity effects will have no impact on the Slender Moonwort.

1.1.1.3.2 Minimization

All potential effects (with minimization measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and two current and one future activity meets this criteria (Table MOP013). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 0 and 12 percent of the occupied sites of Riparian and Springs plant species. The current activity effect is on Private Land and Wildland Urban Interface and the future activity effect is on the Ski Area Footprint.

The effects intensity aggregated for all activities with avoidance measures on each Riparian and Springs plant species indicates that no area has complete elimination of point occurrence sites for these species, while the majority of the effects are in moderate intensity categories (between 0.05 and 0.75; Table MOPO32). Minimization measures are conferring a small benefit to the plant

species by reducing the deleterious activity effects and allowing suitable habitat to be maintained across more of the existing points of occurrence. Future and current effects have similar impacts for the Dainty Moonwort and Upswept Moonwort. Future effects will have no impact on the Slender Moonwort.

1.1.1.3.3 Mitigation

All potential effects (with mitigation measures, using point occurrence data) equal to or greater than five percent are highlighted with bold text, and two current and one future activity meets this criteria (Table MOPO14). The aggregated current and future activities' potential effects with minimization measures are estimated to impact between 0 and 13 percent of the occupied sites of Riparian and Springs plant species. The current activity effect is on Private Land and Wildland Urban Interface and the future activity effect is on the Ski Area Footprint.

The effects intensity aggregated for all activities with avoidance measures on each Riparian and Springs plant species indicates that no area has complete elimination of point occurrence sites for these species, while the majority of the effects are in moderate intensity categories (between 0.05 and 0.75; Table MOPO33). Mitigation measures are conferring a small benefit to these plant species by reducing the deleterious activity effects and allowing point occurrence locations to be maintained across more of the existing points of occurrence. Future and current effects have similar impacts for the Dainty Moonwort and Upswept Moonwort. Future effects will have no impact on the Slender Moonwort.

Ranking of Magnitude of Potential Effects

Species: Upswept Moonwort (*Botrychium ascendens*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	H	Ma	TTL	Ma	TTL	Ma	Ha	Ma	H	M	TTL	Ma	TTL	La	H	L	L	L	Mc	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = this species is associated with springs
d = results in increased susceptibility to fire

Species: Dainty Moonwort (*Botrychium crenulatum*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litter	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositior	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	H	M	H	M	TTL	Ma	TTL	La	H	L	L	L	Mc	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = this species occurs along wetland margins
d = results in increased susceptibility to fire

Species: Slender Moonwort (*Botrychium lineare*)	Activities to be Included in the Model																																								Management Activities not Included in the Mode			
	High Use/Low Miles Trails		Low Use/High Miles Trail		Open Motorized Trail		Closed Motorized Trail		Paved Roads		Unpaved Roads		Camp grounds		Developed Canyon Trailheads		Trailheads Out of Developed Canyons		Picnic Areas		Ski Area		Concen-trated Use Areas		Non-system Non-motorized Trails		Climbing	Caving	Snowplay	Firewood Gathering	Free Ranging Horse/Burro			WUI	Private Land	Private Buildings		Other Forest Service Structures		Fire History			Forest Health
	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Effect Area	Foot print	Foot print	Foot print	Foot print	< 0.25 Mile of Water	0.25-1 Mile of Water	Other Areas in HMA	Foot print	Foot print	Foot print	Effect Area	Foot print	Effect Area	1953-1970	1971-1988	1989-2005	Effect Area
Effects to the Individual																																												
Death	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Injury (trampling/crushing/picking	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Disturbance/Harassment	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Interference with movements	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increased predation	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Increase of activity leve	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impairment of activities/behavior/healtl	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Effects to Habitat																																												
Habitat loss																																												
Permanent loss of habitat	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	O	O	O	X	X	O	X	O				
Temporary destruction/displacemen	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	X	X	X	(X)	O	X	O	X	O	X				
Destruction/displacement of pollinator	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Impacts to larva/nectar host plan	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O				
Habitat degradation																																												
Soil impacts	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil compaction	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	O	X	X	X	(X)	O	X	O	X	O	X				
Soil erosion	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	X	(X)	O	X	O	O	O	O				
Debris deposition	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X	X	X	O	X	O	O	O	X	O	O	X	X	O	O	O	X	O	O	O	O				
Pollution/Litte	X	X	X	X	X	X	X	X	O	O	O	O	X	X	X	X	X	X	X	X	O	O	X	X	X	X	O	O	O	O	O	O	O	X	O	O	O	O				
Nutrient loading	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Habitat fragmentation	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	X	O	O	O	O				
Edge effects	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Micro-habitat modifications	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Structural modification of habita	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	X	X	O	O	O	O				
Structural habitat change	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Loss of vegetation groundcove	X	O	X	O	X	O	X	O	O	O	O	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	O	X	O	O	O	O				
Increase of vegetation groundcove	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O				
Change in species compositio	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	X	O	O	O	O				
Introduction of non-native plant	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O	O	X	O	O	O	O	O	O	O	X	O	O	O	O				
Other Mechanisms																																												
Assigned Effect Index Value	TTL	La	TTL	La	TTL	Ma	L	La	TTL	Mb	TTL	Mb	Ha	Ma	TTL	Ma	TTL	Ma	H	M	H	M	TTL	Ma	TTL	La	H	L	L	L	Mc	L	L	L	L	TTL	M	TTL	M				

Scale: TTL = total loss; H = high effect; M = moderate effect; L = low effect; TR = trace effect; N = no effect.
X = sources of effect; (X) = minor effect; O = absence of effect
a = this species has a negative response to hiking, biking, horseback riding, OHV use, and camping
b = threatened by parking off designated roads
c = this species occurs along wetland margins
d = results in increased susceptibility to fire

Value of Conservation Measures

Species
Upswept Moonwort

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Future Ski Area Footprint	H	M	L	L	
High Mileage System Trail AOI	M	L	L	NM	
High Mileage System Trail Footprint	M	M	M	NM	
Non System Trail AOI	M	L	L	NM	
Non System Trail Footprint	M	M	M	NM	
Private Land	M	NM	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Dainty Moonwort

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
Future Ski Area Footprint	H	M	L	L	
High Mileage System Trail AOI	M	L	L	NM	
High Mileage System Trail Footprint	M	M	M	NM	
Non System Trail AOI	M	L	L	NM	
Non System Trail Footprint	M	M	M	NM	
Private Land	M	NM	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Species
Slender Moonwort

	Avoidance		Minimization	Mitigation	
Intersecting Activities	**Resource Protection**	**Recreation Management**	**Habitat Measures**	**Habitat Restoration**	**Research/ Monitoring**
High Mileage System Trail AOI	M	L	L	NM	
High Mileage System Trail Footprint	M	M	M	NM	
Private Land	M	NM	NM	NM	
Wildland Urban Interface	NM	NM	NM	NM	

[1]Key: H = high benefit by adding the conservation measure; M = medium benefit; L = low benefit; TR = trace benefit;
NM = no conservation measure applies; N/A = not applicable to the activity.
[2]Research and monitoring was evaluated as an important conservation measure, but not incorporated into the landscape modeling.

Summary Tables

Table MOP010
Summary of Individual Effect Acreage of Each Activity on Riparian & Springs Plant Species

	Dainty moonwort	***Slender moonwort***	***Upswept moonwort***
Activities			
Current Activities			
Site Occurance Area by Species (with 0.1 ac buffer)	*0.99*	*0.30*	*0.90*
Campground AOI			
Campground Footprint			
Cave/Tunnel			
Climbing Area			
CUA AOI			
CUA Footprint			
Firewood Gathering Area			
FS Structure AOI			
FS Structure Footprint			
High Mileage System Trail AOI	0.048	0.048	0.048
High Mileage System Trail Footprint	0.003	0.003	0.003
Horses/Burros .25 - 1.0 mile from spring/stream			
Horses/Burros < .25 mile from spring/stream			
Horses/Burros > 1.0 mile from spring/stream			
Low Mileage System Trail AOI			
Low Mileage System Trail Footprint			
Motorized Trail (closed) AOI			
Motorized Trail (closed) Footprint			
Motorized Trail (open) AOI			
Motorized Trail (open) Footprint			
Non System Trail AOI	0.017		0.017
Non System Trail Footprint	0.001		0.001
Paved Road AOI			
Paved Road Footprint			
Picnic Area AOI			
Picnic Area Footprint			
Private Land	0.099	0.099	0.099
PVT Building AOI			
PVT Building Footprint			
Ski Area AOI			
Ski Area Footprint			
Snowplay Area			
Trailhead in Developed Canyon AOI			
Trailhead in Developed Canyon Footprint			
Trailhead out of Developed Canyon AOI			
Trailhead out of Developed Canyon Footprint			
Unpaved Road AOI			
Unpaved Road Footprint			
Wildland Urban Interface	0.099	0.099	0.099
All Current Activities Combined (Aggregated)	*0.17*	*0.15*	*0.17*
Future Activities			
Future Campground AOI			
Future Campground Footprint			
Future EEA AOI			
Future EEA Footprint			
Future Foot Bridge AOI			
Future Foot Bridge Footprint			
Future High Mileage System Trail AOI			
Future High Mileage System Trail Footprint			
Future Low Mileage System Trail AOI			
Future Low Mileage System Trail Footprint			
Future Picnic AOI			
Future Picnic Area Footprint			
Future Ski Area AOI			
Future Ski Area Footprint	0.099		0.099
Future Trailhead AOI			
Future Trailhead Footprint			
Future Visitor Center AOI			
Future Visitor Center Footprint			
West Side PO Camping AOI			
West Side PO Camping Footprint			
West Side PO Major Trailhead AOI			
West Side PO Major Trailhead Footprint			
West Side PO Minor Trailhead AOI			
West Side PO Minor Trailhead Footprint			
West Side PO Motorized Trails AOI			
West Side PO Motorized Trails Footprint			
West Side PO Non Motorized Trails AOI			
West Side PO Non Motorized Trails Footprint			
All Current and Future Activities Combined (Aggregated)	*0.27*	*0.15*	*0.27*

**** Bold text indicates activities with > 0.20 ac overlap with species area***

Table MOPO11
Percent Activity Potential Effect by Species - Riparian & Springs Plants

	Dainty moonwort	***Slender moonwort***	***Upswept moonwort***
Activities			
Current Activities			
Site Occurance Area by Species (with 0.1 ac buffer)	*0.99*	*0.30*	*0.90*
Campground AOI			
Campground Footprint			
Cave/Tunnel			
Climbing Area			
CUA AOI			
CUA Footprint			
Firewood Gathering Area			
FS Structure AOI			
FS Structure Footprint			
High Mileage System Trail AOI	1%	4%	1%
High Mileage System Trail Footprint	0%	1%	0%
Horses/Burros .25 - 1.0 mile from spring/stream			
Horses/Burros < .25 mile from spring/stream			
Horses/Burros > 1.0 mile from spring/stream			
Low Mileage System Trail AOI			
Low Mileage System Trail Footprint			
Motorized Trail (closed) AOI			
Motorized Trail (closed) Footprint			
Motorized Trail (open) AOI			
Motorized Trail (open) Footprint			
Non System Trail AOI	0%		0%
Non System Trail Footprint	0%		0%
Paved Road AOI			
Paved Road Footprint			
Picnic Area AOI			
Picnic Area Footprint			
Private Land	3%	8%	3%
PVT Building AOI			
PVT Building Footprint			
Ski Area AOI			
Ski Area Footprint			
Snowplay Area			
Trailhead in Developed Canyon AOI			
Trailhead in Developed Canyon Footprint			
Trailhead out of Developed Canyon AOI			
Trailhead out of Developed Canyon Footprint			
Unpaved Road AOI			
Unpaved Road Footprint			
Wildland Urban Interface	3%	8%	3%
All Current Activities Combined (Aggregated)	6%	17%	6%
Future Activities			
Future Campground AOI			
Future Campground Footprint			
Future EEA AOI			
Future EEA Footprint			
Future Foot Bridge AOI			
Future Foot Bridge Footprint			
Future High Mileage System Trail AOI			
Future High Mileage System Trail Footprint			
Future Low Mileage System Trail AOI			
Future Low Mileage System Trail Footprint			
Future Picnic AOI			
Future Picnic Area Footprint			
Future Ski Area AOI			
Future Ski Area Footprint	8%		8%
Future Trailhead AOI			
Future Trailhead Footprint			
Future Visitor Center AOI			
Future Visitor Center Footprint			
West Side PO Camping AOI			
West Side PO Camping Footprint			
West Side PO Major Trailhead AOI			
West Side PO Major Trailhead Footprint			
West Side PO Minor Trailhead AOI			
West Side PO Minor Trailhead Footprint			
West Side PO Motorized Trails AOI			
West Side PO Motorized Trails Footprint			
West Side PO Non Motorized Trails AOI			
West Side PO Non Motorized Trails Footprint			
All Current and Future Activities Combined (Aggregated)	13%		15%

**** Bold text indicates activities with >= 5% Potential Effect***

Table MOPO12
Percent Activity Potential Effect with Avoidance Conservation Measures by Species - Riparian & Springs Plants

	Dainty moonwort	***Slender moonwort***	***Upswept moonwort***
Activities			
Current Activities			
Site Occurance Area by Species (with 0.1 ac buffer)	*0.99*	*0.30*	*0.90*
Campground AOI			
Campground Footprint			
Cave/Tunnel			
Climbing Area			
CUA AOI			
CUA Footprint			
Firewood Gathering Area			
FS Structure AOI			
FS Structure Footprint			
High Mileage System Trail AOI	0%	2%	1%
High Mileage System Trail Footprint	0%	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream			
Horses/Burros < .25 mile from spring/stream			
Horses/Burros > 1.0 mile from spring/stream			
Low Mileage System Trail AOI			
Low Mileage System Trail Footprint			
Motorized Trail (closed) AOI			
Motorized Trail (closed) Footprint			
Motorized Trail (open) AOI			
Motorized Trail (open) Footprint			
Non System Trail AOI	0%		0%
Non System Trail Footprint	0%		0%
Paved Road AOI			
Paved Road Footprint			
Picnic Area AOI			
Picnic Area Footprint			
Private Land	1%	4%	1%
PVT Building AOI			
PVT Building Footprint			
Ski Area AOI			
Ski Area Footprint			
Snowplay Area			
Trailhead in Developed Canyon AOI			
Trailhead in Developed Canyon Footprint			
Trailhead out of Developed Canyon AOI			
Trailhead out of Developed Canyon Footprint			
Unpaved Road AOI			
Unpaved Road Footprint			
Wildland Urban Interface	3%	8%	3%
All Current Activities Combined (Aggregated)	4%	12%	4%
Future Activities			
Future Campground AOI			
Future Campground Footprint			
Future EEA AOI			
Future EEA Footprint			
Future Foot Bridge AOI			
Future Foot Bridge Footprint			
Future High Mileage System Trail AOI			
Future High Mileage System Trail Footprint			
Future Low Mileage System Trail AOI			
Future Low Mileage System Trail Footprint			
Future Picnic AOI			
Future Picnic Area Footprint			
Future Ski Area AOI			
Future Ski Area Footprint	0%		0%
Future Trailhead AOI			
Future Trailhead Footprint			
Future Visitor Center AOI			
Future Visitor Center Footprint			
West Side PO Camping AOI			
West Side PO Camping Footprint			
West Side PO Major Trailhead AOI			
West Side PO Major Trailhead Footprint			
West Side PO Minor Trailhead AOI			
West Side PO Minor Trailhead Footprint			
West Side PO Motorized Trails AOI			
West Side PO Motorized Trails Footprint			
West Side PO Non Motorized Trails AOI			
West Side PO Non Motorized Trails Footprint			
All Current and Future Activities Combined (Aggregated)	4%		4%

**** Bold text indicates activities with >= 5% Potential Effect with Avoidance Conservation Measures***

Table MOP013
Percent Activity Potential Effect with Minimization Conservation Measures by Species - Riparian & Springs Plants

	Dainty moonwort	***Slender moonwort***	***Upswept moonwort***
Activities			
Current Activities			
Site Occurance Area by Species (with 0.1 ac buffer)	*0.99*	*0.30*	*0.90*
Campground AOI			
Campground Footprint			
Cave/Tunnel			
Climbing Area			
CUA AOI			
CUA Footprint			
Firewood Gathering Area			
FS Structure AOI			
FS Structure Footprint			
High Mileage System Trail AOI	1%	3%	1%
High Mileage System Trail Footprint	0%	0%	0%
Horses/Burros .25 - 1.0 mile from spring/stream			
Horses/Burros < .25 mile from spring/stream			
Horses/Burros > 1.0 mile from spring/stream			
Low Mileage System Trail AOI			
Low Mileage System Trail Footprint			
Motorized Trail (closed) AOI			
Motorized Trail (closed) Footprint			
Motorized Trail (open) AOI			
Motorized Trail (open) Footprint			
Non System Trail AOI	0%		0%
Non System Trail Footprint	0%		0%
Paved Road AOI			
Paved Road Footprint			
Picnic Area AOI			
Picnic Area Footprint			
Private Land	3%	8%	3%
PVT Building AOI			
PVT Building Footprint			
Ski Area AOI			
Ski Area Footprint			
Snowplay Area			
Trailhead in Developed Canyon AOI			
Trailhead in Developed Canyon Footprint			
Trailhead out of Developed Canyon AOI			
Trailhead out of Developed Canyon Footprint			
Unpaved Road AOI			
Unpaved Road Footprint			
Wildland Urban Interface	3%	8%	3%
All Current Activities Combined (Aggregated)	5%	16%	6%
Future Activities			
Future Campground AOI			
Future Campground Footprint			
Future EEA AOI			
Future EEA Footprint			
Future Foot Bridge AOI			
Future Foot Bridge Footprint			
Future High Mileage System Trail AOI			
Future High Mileage System Trail Footprint			
Future Low Mileage System Trail AOI			
Future Low Mileage System Trail Footprint			
Future Picnic AOI			
Future Picnic Area Footprint			
Future Ski Area AOI			
Future Ski Area Footprint	6%		6%
Future Trailhead AOI			
Future Trailhead Footprint			
Future Visitor Center AOI			
Future Visitor Center Footprint			
West Side PO Camping AOI			
West Side PO Camping Footprint			
West Side PO Major Trailhead AOI			
West Side PO Major Trailhead Footprint			
West Side PO Minor Trailhead AOI			
West Side PO Minor Trailhead Footprint			
West Side PO Motorized Trails AOI			
West Side PO Motorized Trails Footprint			
West Side PO Non Motorized Trails AOI			
West Side PO Non Motorized Trails Footprint			
All Current and Future Activities Combined (Aggregated)	11%		12%

**** Bold text indicates activities with >= 5% Potential Effect with Minimization Conservation Measures***

Table MOP014
Percent Activity Potential Effect with Mitigation Conservation Measures by Species - Riparian & Springs Plants

	Dainty moonwort	***Slender moonwort***	***Upswept moonwort***
Activities			
Current Activities			
Site Occurance Area by Species (with 0.1 ac buffer)	*0.99*	*0.30*	*0.90*
Campground AOI			
Campground Footprint			
Cave/Tunnel			
Climbing Area			
CUA AOI			
CUA Footprint			
Firewood Gathering Area			
FS Structure AOI			
FS Structure Footprint			
High Mileage System Trail AOI	1%	4%	1%
High Mileage System Trail Footprint	0%	1%	0%
Horses/Burros .25 - 1.0 mile from spring/stream			
Horses/Burros < .25 mile from spring/stream			
Horses/Burros > 1.0 mile from spring/stream			
Low Mileage System Trail AOI			
Low Mileage System Trail Footprint			
Motorized Trail (closed) AOI			
Motorized Trail (closed) Footprint			
Motorized Trail (open) AOI			
Motorized Trail (open) Footprint			
Non System Trail AOI	0%		0%
Non System Trail Footprint	0%		0%
Paved Road AOI			
Paved Road Footprint			
Picnic Area AOI			
Picnic Area Footprint			
Private Land	3%	8%	3%
PVT Building AOI			
PVT Building Footprint			
Ski Area AOI			
Ski Area Footprint			
Snowplay Area			
Trailhead in Developed Canyon AOI			
Trailhead in Developed Canyon Footprint			
Trailhead out of Developed Canyon AOI			
Trailhead out of Developed Canyon Footprint			
Unpaved Road AOI			
Unpaved Road Footprint			
Wildland Urban Interface	3%	8%	3%
All Current Activities Combined (Aggregated)	6%	17%	6%
Future Activities			
Future Campground AOI			
Future Campground Footprint			
Future EEA AOI			
Future EEA Footprint			
Future Foot Bridge AOI			
Future Foot Bridge Footprint			
Future High Mileage System Trail AOI			
Future High Mileage System Trail Footprint			
Future Low Mileage System Trail AOI			
Future Low Mileage System Trail Footprint			
Future Picnic AOI			
Future Picnic Area Footprint			
Future Ski Area AOI			
Future Ski Area Footprint	6%		6%
Future Trailhead AOI			
Future Trailhead Footprint			
Future Visitor Center AOI			
Future Visitor Center Footprint			
West Side PO Camping AOI			
West Side PO Camping Footprint			
West Side PO Major Trailhead AOI			
West Side PO Major Trailhead Footprint			
West Side PO Minor Trailhead AOI			
West Side PO Minor Trailhead Footprint			
West Side PO Motorized Trails AOI			
West Side PO Motorized Trails Footprint			
West Side PO Non Motorized Trails AOI			
West Side PO Non Motorized Trails Footprint			
All Current and Future Activities Combined (Aggregated)	11%		13%

**** Bold text indicates activities with >= 5% Potential Effect with Mitigation Conservation Measures***

Table MOP030
Potential Effects on Riparian & Springs Plants for Current Activities as well as Current and Future Activities.

Current Activities - Potential Effects			
Effects Index	***Dainty moonwort***	***Slender moonwort***	***Upswept moonwort***
0.000	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00
0.051 - 0.250	0.07	0.05	0.07
0.251 - 0.500	0.10	0.10	0.10
0.501 - 0.750	0.00	0.00	0.00
0.751 - 0.999	0.00	0.00	0.00
1.000	0.00	0.00	0.00
Current and Future Activities - Potential Effects			
0.000	0.00		0.00
0.001 - 0.050	0.00		0.00
0.051 - 0.250	0.07		0.07
0.251 - 0.500	0.10		0.10
0.501 - 0.750	0.10		0.10
0.751 - 0.999	0.00		0.00
1.000	0.00		0.00
Total Species Distribution (ac)	**0.99**	**0.99**	**0.90**

Table MOP031

Potential Effects with Avoidance Measures on Riparian & Springs Plants for Current Activities as well as Current and Future Activities.

Current Activities - Potential Effects with Avoidance Measures			
Effects Index	***Dainty moonwort***	***Slender moonwort***	***Upswept moonwort***
0.000	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00
0.051 - 0.250	0.07	0.05	0.07
0.251 - 0.500	0.10	0.10	0.10
0.501 - 0.750	0.00	0.00	0.00
0.751 - 0.999	0.00	0.00	0.00
1.000	0.00	0.00	0.00
Current and Future Activities - Potential Effects with Avoidance Measures			
0.000	0.10		0.10
0.001 - 0.050	0.00		0.00
0.051 - 0.250	0.07		0.07
0.251 - 0.500	0.10		0.10
0.501 - 0.750	0.00		0.00
0.751 - 0.999	0.00		0.00
1.000	0.00		0.00
Total Species Distribution (ac)	**0.99**	**0.99**	**0.90**

Table MOP032
Potential Effects with Minimization Measures on Riparian & Springs Plant for Current Activities as well as Current and Future Activities.

Current Activities - Potential Effects with Minimization Measures			
Effects Index	***Dainty moonwort***	***Slender moonwort***	***Upswept moonwort***
0.000	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00
0.051 - 0.250	0.07	0.05	0.07
0.251 - 0.500	0.10	0.10	0.10
0.501 - 0.750	0.00	0.00	0.00
0.751 - 0.999	0.00	0.00	0.00
1.000	0.00	0.00	0.00
Current and Future Activities - Potential Effects with Minimization Measures			
0.000	0.00		0.00
0.001 - 0.050	0.00		0.00
0.051 - 0.250	0.07		0.07
0.251 - 0.500	0.10		0.10
0.501 - 0.750	0.10		0.10
0.751 - 0.999	0.00		0.00
1.000	0.00		0.00
Total Species Distribution (ac)	**0.99**	**0.99**	**0.90**

Table MOP033

Potential Effects with Mitigation Measures on Riparian & Springs Plant for Current Activities as well as Current and Future Activities.

Current Activities - Potential Effects with Mitigation Measures			
Effects Index	***Dainty moonwort***	***Slender moonwort***	***Upswept moonwort***
0.000	0.00	0.00	0.00
0.001 - 0.050	0.00	0.00	0.00
0.051 - 0.250	0.07	0.05	0.07
0.251 - 0.500	0.10	0.10	0.10
0.501 - 0.750	0.00	0.00	0.00
0.751 - 0.999	0.00	0.00	0.00
1.000	0.00	0.00	0.00
Current and Future Activities - Potential Effects with Mitigation Measures			
0.000	0.00		0.00
0.001 - 0.050	0.00		0.00
0.051 - 0.250	0.07		0.07
0.251 - 0.500	0.10		0.10
0.501 - 0.750	0.10		0.10
0.751 - 0.999	0.00		0.00
1.000	0.00		0.00
Total Species Distribution (ac)	**0.99**	**0.99**	**0.90**

Conservation Status

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Botrychium ascendens	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (7)	Moderate	U	2-5	Moderate decline	Moderate	High	High	
Current Condition Spring Mountains				6-20 (6)	High	1-50	2-5	Stable	Low	High	High	Moderate
Current Condition Rangewide	Wide-ranging	Narrow	Moderately vulnerable	6-20 (6 in NV)	High	1-50	2-5	Stable	Low	High	High	Moderate
Comments	Moonworts are restricted to a very specific microhabitat within the range. Reference condition includes Rainbow Falls whose locaiton is unknown. ONLY ANALYZING NV Status *Narrow - (Farrar, 2006); In addition to this analysis, make sure all SM sites get int NNHP; *No sites - used Farrar 2002; acres of occupied habitat are 0.5 acres per spring; threats (scope) high since all springs get some use. Pop. size is 42 for current known sites (SM and rangewide)											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Botrychium crenulatum	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				6-20 (7)	Moderate	51-250	2-5	Moderate decline	Moderate	High	High	
Current Condition Spring Mountains				6-20 (8)	Good	51-250	2-5	Stable	Low	High	High	Moderate
Current Condition Rangewide	Wide-ranging	Narrow	Moderately vulnerable	6-20 (12 in NV)	Good	1-50	2-5	Moderate decline	Moderate	High	High	Moderate
Comments	Moonworts are restricted to specific isolated microhabitats in its range. Only considering NV populations, INFO from various sources in SM files; Historic population size is 140; current population sizes vary from 8-285 depending on year; range-wide pop size is same as SM because less than <10 ind. known off SM. Occupid habitat baded on 0.5 acres per site. Threats - severity moderate for reference from horse impacts in Lee Canyon that was later removed and other habitat improvement projects; Threats (scope) high due to use at almost all springs; severity was moderate in SM but have been reduced due to managment activities i.e. trail re-routes; moderate rangewide due to livestock and spring development.											

SPRING MOUNTAINS SPECIES CONSERVATION STATUS FACTORS												
	Natural History Characteristics			**Population Numbers and Areas of Occurrence**				**Population Trends**	**Threats, Protection, and Management**			
Botrychium lineare	**Endemicity**	**Environmental specifity**	**Intrinsic vulnerability**	**No. of sites (animals) or occurrences (plants)**	**Proportion of sites (animals) or occurrences (plants) with good viability (likely to persist for 20 years)**	**Estimated Population size: (numbers of individuals)**	**Known area of occupied habitat**	**Known Population Trend**	**Threats - severity**	**Threats - scope**	**Threats - immediacy**	**Future - immediacy**
Reference Condition Spring Mountains				1-5 (1)	Small	1-50	<1	Severe decline	High	High	High	
Current Condition Spring Mountains				1-5 (3)	Moderate	1-50	2-5	Rapid decline	Moderate	High	High	Moderate
Current Condition Rangewide	Wide-ranging	Narrow	Moderately vulnerable	1-5 (3 in NV)	Moderate	1-50	2-5	Rapid decline	Moderate	High	High	Moderate
Comments	Moonworts are restricted to very isolated microhabitats. Material from BOLI complex has only been confirmed from Mary Jane Falls (possible the historic Rainbow Falls), Deer Creek, and Echo Springs (Farrar, 20007 communication). Rangewide - only considering NV sites Mary Jane Falls spring is at risk to being lost; other sites may be ok.											