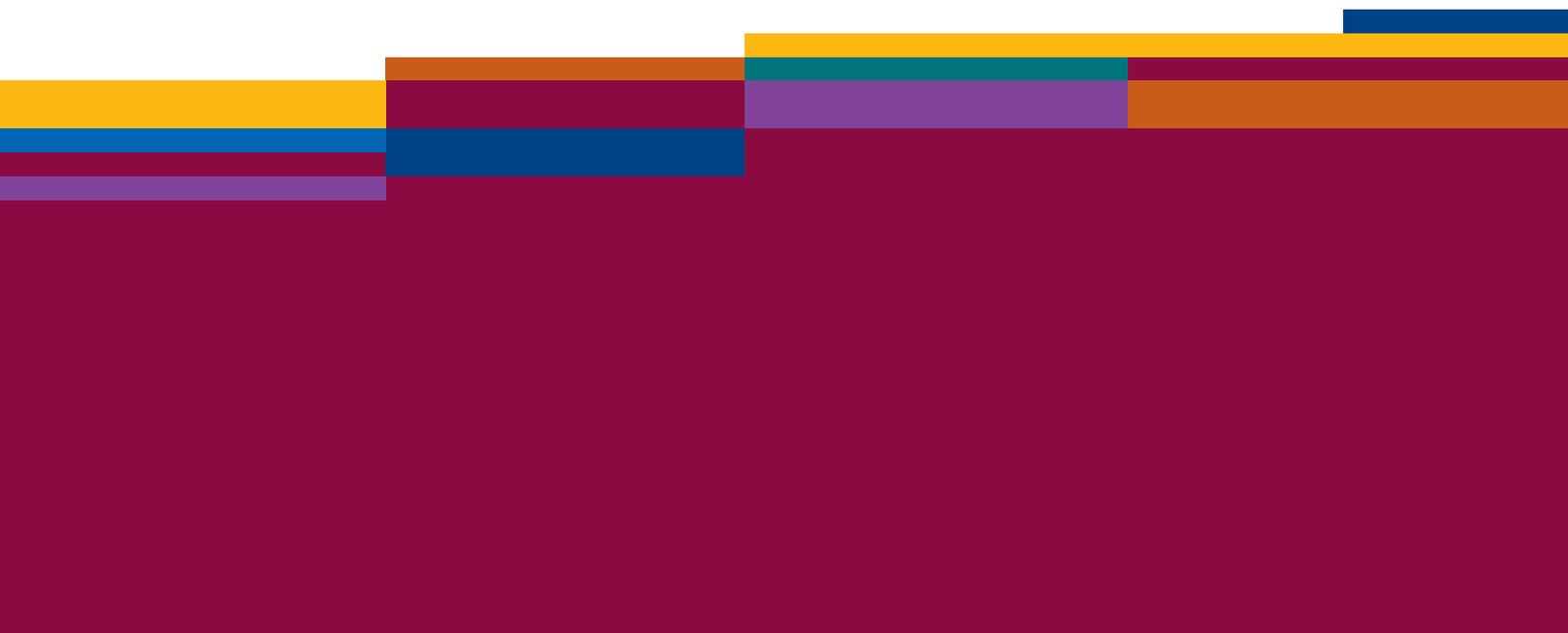


Ecological Site Descriptions For New Mexico



Acknowledgements

These site descriptions and map are for use in conducting range evaluation contests for 4H and FFA youth and are adapted from USDA-NRCS Ecological Site Descriptions for New Mexico.

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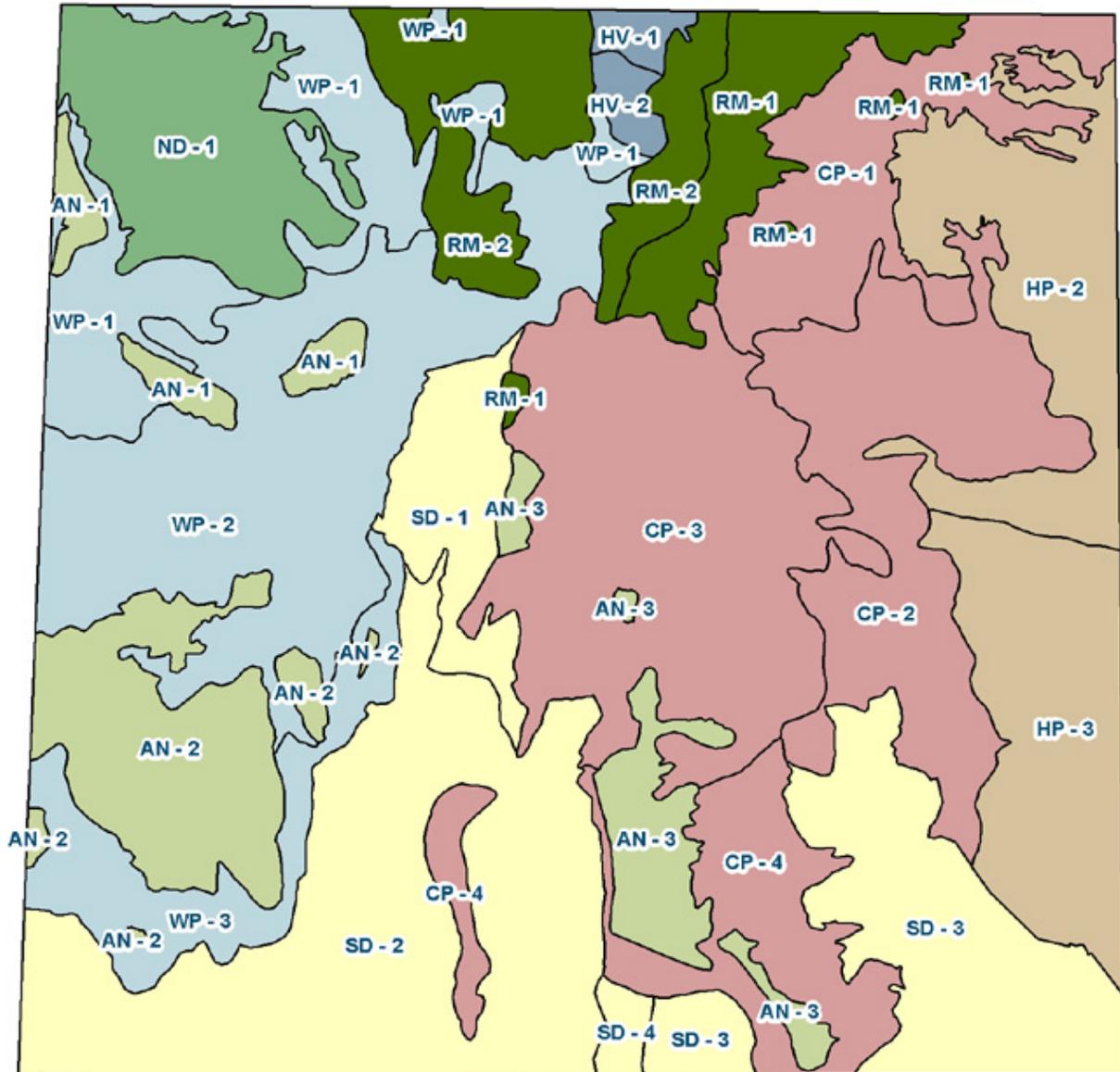
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- 77 - Southern High Plains



**HV-1
Swale Range**

This site is a monoculture of western wheatgrass with scattered shrubs, and mostly fourwing saltbrush. Forbs are a very minor part of the potential plant community.

Swale Range Site

GRASSES	75-85%
Western Wheatgrass	70-75
Bottlebrush Squirreltail	5-10
Other perennial grasses	1-3
Woody	10-20%
Fourwing Saltbrush	10-15
Fringed Sagewort	5-10
Green Rabbitbrush	5-10
Broom Snakeweed	5-10
Forbs	0-5%
Fleabane	1-5
Globemallow	1-5
Others*	1-3
Shrubs, half-shrubs, vines and trees	1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Spike Muhly, Junegrass, and Sageworts.

**HV-1
Dry Loamy Range**

This site is a mixed grassland-shrub site characterized by Wyoming big sagebrush and cool- and warm-seasoned grasses. There are no trees found on this site.

Dry Loamy Range Site

GRASSES	55-65%
Indian ricegrass	20-35
Galleta	5-10
Bottlebrush Squirrel Tail	5-10
Blue Grama	4-6
Others*	3-5
Woody	25-35%
Wyoming Big Sagebrush	20-25
Broom Snakeweed	2-4
Others*	T-5
Forbs	5-10%
Aster	T-1
Scarlet Globemallow	T-2
Penstemon	T
Indian Paintbrush	T
Other Perennial Forbs	2-4
Other Annual Forbs	2-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Dropseeds, Ring Muhly, Sideoats Grama, and Mustards.

**HV-1
Loamy Range**

This site is a western wheatgrass grassland site with scattered shrubs of big sagebrush. The other grasses and shrubs occur in lesser amounts.

Loamy Range Site

GRASSES	55-65%
Western Wheatgrass	40-50
Sideoats Grama	0-5
Bottlebrush Squirreltail	2-5
Blue Grama	2-4
Others*	T-5
Woody	20-25%
Big Mountain Sagebrush	15-20
Fourwing Saltbrush	T-3
Pingue	1-2
Broom Snakeweed	1-2
Rubber Rabbitbrush	T-1
Others*	T-4
Forbs	5-10%
Aster	1-1
Eriogonum	T-1
Astragalus (ASTRA)	T-1
Scarlet Globemallow	T-2
Wooly Indianwheat	T-2
Other Perennial Forbs	T-2
Other Annual Forbs	T-1

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Indian Ricegrass, Prairie Junegrass, Muttongrass, Muhly Species, Dropseeds, Threeawns, Phlox, Penstemon, Indian Paintbrush, Russian Thistle, and Winterfat.

HV-1
Salty Bottomland Range

This site is a shrub-grass mixture characterized by mid-grasses, alkali sacaton, and western wheatgrass. The characteristic shrubs are black greasewood and fourwing saltbrush. Perennial forbs are a minor component of the plant community. Annual forbs and grasses occur in relative abundance during the spring in years which have above average growing conditions. When the potential plant community deteriorates, there is a marked increase in relative abundance of shrubs, cacti, perennial and annual forbs. In severe vegetative deterioration, the site will consist dominantly of shrubs, but can also be dominated by greasewood, sagebrush, annual forbs and annual grasses, with lesser amounts of perennial grasses and large areas of unprotected soils.

Salty Bottomland Range Site

GRASSES and GRASSLIKE		65%
Alkali Sacaton		30-35
Indian Ricegrass		5-10
Western Wheatgrass		20-25
Bottlebrush Squirreltail		10-15
Galleta		10-15
Blue Grama		5-10
Inland Saltgrass	}	
Mat Muhly	}	5-10
Woody		25%
Black Greasewood		3-5
Shadscale		3-5
Big Sagebrush		3-5
Fourwing Saltbrush		5-10
Winterfat		3-5
Bud Sagebrush		1-3
Forbs		10%
Iodinebush	}	
Goldenweed	}	3-5
Western Ragweed	}	
Groundsel	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Broom Snakeweed, Annual Bromes, Foxtail Barley,

Threeawns, Russian Thistle, Western Ragweed, Rocky Mountain Beeplant, Threadleaf Groundsel, Cheatgrass, and Sand Dropseed.

**HV-1
Gravelly Loam Range**

This site is a grassland site that is characterized by cool season grasses and scattered shrubs, but noticeably lacking in significant amounts of big sagebrush due to low effective winter moisture.

Gravelly Loam Range Site

GRASSES		55-65%
Western Wheatgrass		20-30
Indian Ricegrass		10-15
Needleandthread		10-15
Sideoats Grama		9-12
Bottlebrush Squirreltail	}	
Blue Grama	}	6-8
Others*		T-5
Woody		20-30%
Green Rabbitbrush		13-18
Fourwing Saltbrush		3-6
Big Mountain Sagebrush		1-3
Pingue	}	
Broom Snakeweed	}	2-4
Others*		2-5
Forbs		5-10%
Aster	}	
Astragalus (ASTRA)	}	
Eriogonum	}	
Indian Paintbrush	}	2-5
Scarlet Gloemallow		1-3
Other Perennial Forbs		T-1
Other Annual Forbs		1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Prairie Junegrass, Muhly Species, and Threawns.

**HV-1
(Basalt) Breaks Range**

This site is a mixture of grasses, forbs, and shrubs. Scrubby oneseed juniper and/or pinyon do occur on cooler exposures, but they make up a minor part of the plant community.

(Basalt) Breaks Range Site

GRASSES and GRASSLIKE	45-60%
Black Grama 1/	5-20
Sideoats Grama	5-10
Needleandthread }	
New Mexico Feathergrass }	
Western Wheatgrass }	
Indian Ricegrass }	5-10
Prairie Junegrass 2/ }	
Muttongrass 2/ }	3-10
Galleta }	
Blue Grama }	
Hairy Grama }	3-8
Little Bluestem }	
Cane Bluestem }	3-5
Pine Dropseed }	
Mountain Muhly }	
Spike Muhly }	
New Mexico Muhly }	3-5
Wolftail }	
Other }	3-5
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Woody	25-40%
Mountain Big Sagebrush	5-15
Fourwing Saltbrush }	
Winterfat }	3-7
Skunkbush Sumac }	
Currant spp. }	
Oak spp. }	3-7
New Mexico Olive }	
Apacheplume }	
Mountain Mahogany }	1-5
Pinyon }	
Juniper }	1-7
Others	

Forbs	5-15%
Indian Paintbrush	}
Wild Buckwheat	}
Fleabane	}
Asters	}
Others	5-15

1/ On south and west exposures, black grama may be the dominant grass species, but on cooler exposures it is a minor component.

2/ At higher elevation and on northern exposures, these species are abundant components of the herbaceous community.

Other species include: Bottlebrush Squirreltail, Plains Bristlegrass, Dropseeds, Threeawns, Brome spp., Arizona Fescue, Letterman Needlegrass, Phlox, Penstemon, Locoweed, Pingue, Rabbitbrush, Yucca spp., and Broom Snakeweed.

**HV-1
Stony Loam Range**

This site is a grassland-shrub site predominantly characterized by perennial, cool-season grasses, and shrubs. Very few, if any, trees grow on this site.

Stony Loam Range Site

GRASSES and GRASSLIKE	55-65%
Western Wheatgrass }	
Spike Muhly }	25-45
Blue Grama	5-10
Galleta	5-10
Needleandthread }	
New Mexico Feathergrass }	5-15
Bottlebrush Squirreltail	3-8
Indian Ricegrass	0-5
Sideoats Grama }	
Little Bluestem }	0-5
Others	
Woody	15-25%
Mountain Big Sagebrush	10-20
Rubber Rabbitbrush }	
Broom Snakeweed }	1-3
Fourwing Saltbrush }	
Winterfat }	3-5
Oneseed Juniper }	
Pinyon }	0-3
*Gooseberry	1-3
Others }	3-5
Forbs	5-10%
Locoweed }	
Wild Buckwheat }	
Globemallow }	
Other Perennials }	3-8
Other Annuals	1-3

*Gooseberry is restricted to the HV-1 sub-resource area.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Prairie Junegrass, Muttongrass, Muhly spp., Sideoats Grama, Wolf tail, Little Bluestem, Penstemon, Phlox spp., Aster, Fleabane, Yucca spp., Pingue, and Cactus spp.

**HV-1
Salt Meadow Range**

This site is a bottomland site that is a grassland plant community characterized by inland saltgrass and alkali sacaton. Fourwing saltbrush, the dominant shrub, makes up less than 5% of the vegetation. Forbs, such as seepweed and iodinebush, are present in small amounts. When the plant community deteriorates it is dominated by inland saltgrass, seepweed, iodinebush, saltcedar, and large interspaces of bare crusted ground.

Salt Meadow Range Site

GRASSES and GRASSLIKE		90%
Inland Saltgrass		30-35
Alkali Sacaton		15-20
Saltsedge		5-10
Foxtail Barley		3-5
Mat Muhly		3-5
Western Wheatgrass		5-10
Nuttall Alkaligrass		5-10
Alkali Cordgrass		15-20
Woody		5%
Fourwing Saltbrush	}	
Pale Wolfberry	}	3-5
Forbs		5%
Iodinebush	}	
Seepweed	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Kochia, Saltcedar, Lanceleaf, Goldenweed, Russian Thistle, and Wedgegrass.

**HV-1
Malpais Range**

This site is a grassland shrub mixture characterized dominantly by mid grasses and shrubs. Perennial forbs are a minor component of the potential plant community. Big sagebrush will occur in higher concentrations on the upper slopes of this site often as an under story to invading trees. Annual forbs and grasses occur in abundance during the spring months in years of above average growing condition.

Malpais Range Site

GRASSES and GRASSLIKE	65-75%
Blue Grama	5-10
Sideoats Grama	5-10
Bottlebrush Squirreltail	5-8
Western Wheatgrass	15-20
Needleandthread }	
New Mexico Feathergrass }	5-10
Muttongrass }	
Prairie Junegrass }	5-7
Little Bluestem	0-5
Galleta	10-15
Black Grama*	0-7
Indian Ricegrass	3-5
Others	5-8
<hr/>	
Woody	15-25%
Big Sagebrush	10-20
Oneseed Juniper	0-3
Winterfat }	
Fourwing Saltbrush }	5-15
<hr/>	
Forbs	10-15%
Broom Snakeweed }	3-5
Pingue }	
Goldenweed }	
Annual and Perennial Forbs	3-5

*Black Grama is restricted to the HV-2 sub resource area.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Muhlies, Wolftail, Threeawns spp., Rubber Rabbitbrush, Sunflower, Foxtail Barley, Woolly Indianwheat, Silverleaf Nightshade, Annual Bromes, Daisies, Rocky Mountain Beeplant, Threadleaf Groundsel, Locoweed, Penstemons, Asters, Giliac, and Globemallows.

**HV-1
Limy Range**

This site is a site where winterfat dominates the community with perennial grasses well distributed throughout the site. Other shrubs, such as fourwing saltbrush, are scattered throughout this site. Annual grasses and forbs are in relative abundance in spring months but generally are a minor component on this site.

Limy Range Site

GRASSES and GRASSLIKE	45-50%
Western Wheatgrass 1/ }	
Indian Ricegrass 1/ }	20-25
Needleandthread }	
New Mexico Feathergrass }	5-8
Bottlebrush Squirreltail	5-8
Blue Grama }	
Galleta }	3-7
Sand Dropseed }	
Others* }	3-5
<hr/>	
Woody	35-45%
Winterfat	25-35
Fourwing Saltbrush	3-5
Rabbitbrush }	
Broom Snakeweed }	3-5
Yucca }	
Others }	1-5
<hr/>	
Forbs	3-7%
Fringed Sagewort }	
Wild Buckwheat }	
Wooly Indianwheat }	
Others }	3-7

1/ On very moist sites and sites with finer textured soils, western wheatgrass would be the dominant perennial grass. On drier sites and sites with coarser-textured soils, Indian ricegrass would be the dominant perennial grass.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Threeawns, Muttongrass, Prairie Junegrass, Spike Muhly, Ring Muhly, Sideoats Grama, Sixweeks Fescue, False Buffalograss, Threadleaf Groundsel, Globemallow, Aster, and Cactus species.

**HV-1
Gravelly Fan Range**

This site is a mixed grassland shrub complex having an over story of scattered oneseed juniper and pinyon. Mountain big sagebrush and cool season grasses dominate but warm season grasses and forbs do occur in lesser amounts.

Gravelly Fan Range Site

GRASSES and GRASSLIKE		55-65%
Western Wheatgrass		20-30
Indian Ricegrass		15-20
Sideoats Grama		8-12
Prairie Junegrass	}	
Blue Grama	}	
Bottlebrush Squirreltail	}	5-8
Little Bluestem	}	
Others	}	4-7
Woody		20-25%
Mountain Big Sagebrush		10-15
Fourwing Saltbrush		3-5
Gooseberry		T-1
Oneseed Juniper	}	
Pinyon	}	4-6
Yucca		T-2
Indian Paintbrush		5-7
Apacheplume		1-3
Forbs		10-15%
Asters	}	
Eriogonum	}	
Astragalus	}	
Prickly Pear	}	5-7
Scarlet Globemallow		2-3
Other perennial forbs		2-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Dropseeds, Threeawns, and Broom Snakeweed.

**HV-2
Gravelly Fan Range**

This site is a mixed grassland shrub complex having an over story of scattered oneseed juniper and pinyon. Mountain big sagebrush and cool season grasses dominate but warm season grasses and forbs do occur in lesser amounts.

Gravelly Fan Range Site

GRASSES and GRASSLIKE		55-65%
Western Wheatgrass		20-30
Indian Ricegrass		15-20
Sideoats Grama		8-12
Prairie Junegrass	}	
Blue Grama	}	
Bottlebrush Squirreltail	}	5-8
Little Bluestem	}	
Others	}	4-7
Woody		20-25%
Mountain Big Sagebrush		10-15
Fourwing Saltbrush		3-5
Gooseberry		T-1
Oneseed Juniper	}	
Pinyon	}	4-6
Yucca		T-2
Indian Paintbrush		5-7
Apacheplume		1-3
Forbs		10-15%
Asters	}	
Eriogonum	}	
Astragalus	}	
Prickly Pear	}	5-7
Scarlet Globemallow		2-3
Other perennial forbs		2-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Dropseeds, Threawns, and Broom Snakeweed.

**HV-2
Gravelly Slopes Range**

This site is a mixed grassland shrub complex. In some areas, especially in the southern portion of HV-2, pinyon and juniper also occur on this site. When a part of a potential plant community, the pinyon juniper is more abundant on north and east facing slopes with a canopy ranging from three to ten percent.

Gravelly Slopes Range Site

GRASSES and GRASSLIKE	55-65%
Needleandthread }	
New Mexico Feathergrass }	10-20
Indian Ricegrass	10-15
Western Wheatgrass	5-15
Black Grama 1/ Galleta }	0-15
Blue Grama }	5-12
Sideoats Grama 2/	3-10
Muttongrass Junegrass	3-7
Bottlebrush Squirreltail	3-5
Mountain Muhly	1-5
Little Bluestem	0-5
Others	10-12
Woody	15-25%
Big Sagebrush	5-15
Fourwing Saltbrush }	
Winterfat }	3-7
Scrub Oak }	
Cliff Fendlerbush }	
Cliff Rose }	
Antelope Bitterbrush }	0-5
Oneseed Juniper }	
Pinyon }	3-7
Mountain Mahogany }	
Skunkbush Sumac }	1-3
Others	0-3
Forbs	10-12%
Wild Buckwheat }	
Locoweed }	
Indian Paintbrush }	
Aster }	5-7

Others

3-5

1/ Usually restricted to south exposures.

2/ Usually most common on north exposures.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sand Dropseeds, Pine Dropseed, Muhly spp., Woolly Indianwheat, Yucca spp., Pingue, Rabbitbrush, Broom Snakeweed, and Threadleaf Groundsel.

**HV-2
Limy Range**

This site is a site where winterfat dominates the community with perennial grasses well distributed throughout the site. Other shrubs, such as fourwing saltbrush, are scattered throughout this site. Annual grasses and forbs are in relative abundance in spring months but generally are a minor component on this site.

Limy Range Site

GRASSES and GRASSLIKE	45-50%
Western Wheatgrass 1/ }	
Indian Ricegrass 1/ }	20-25
Needleandthread }	
New Mexico Feathergrass }	5-8
Bottlebrush Squirreltail	5-8
Blue Grama }	
Galleta }	3-7
Sand Dropseed }	
Others* }	3-5
<hr/>	
Woody	35-45%
Winterfat	25-35
Fourwing Saltbrush	3-5
Rabbitbrush }	
Broom Snakeweed }	3-5
Yucca }	
Others }	1-5
<hr/>	
Forbs	3-7%
Fringed Sagewort }	
Wild Buckwheat }	
Wooly Indianwheat }	
Others }	3-7

1/ On very moist sites and sites with finer textured soils, western wheatgrass would be the dominant perennial grass. On drier sites and sites with coarser-textured soils, Indian ricegrass would be the dominant perennial grass.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Threeawns, Muttongrass, Prairie Junegrass, Spike Muhly,

Ring Muhly, Sideoats Grama, Sixweeks Fescue, False Buffalograss, Threadleaf Groundsel, Globemallow, Aster, and Cactus species.

**HV-2
Loamy Range**

This site is a grassland site with scattered shrubs throughout the site. Forbs are conspicuous when in bloom but otherwise a minor component.

Loamy Range Site

GRASSES and GRASSLIKE		70-75%
Western Wheatgrass		20-30
Indian Ricegrass	}	
Needleandthread	}	
New Mexico Feathergrass	}	10-15
Galleta		5-10
Blue Grama		5-10
Alkali Sacaton	}	
Spike Muhly	}	3-10
Muttongrass	}	
Prairie Junegrass	}	3-7
Bottlebrush Squirreltail		3-7
Others*		1-5
Woody		15-20%
Big Sagebrush		5-10
Fourwing Saltbrush	}	
Winterfat	}	5-10
Rabbitbrush	}	
Spineless Horsebrush	}	
Others	}	1-5
Forbs		5-10%
Fringed Sagewort	}	
Locoweed	}	
Indian Paintbrush	}	
Alfileria	}	
Wild Buckwheat	}	
Others	}	5-10

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sideoats Grama, Sand Dropseed, Pine Dropseed, Mat

Muhly, Cheatgrass, Pingue, Woolly Indianwheat, Globemallow, Prairie Conflower, Oneseed Juniper, Pinyon, Pale Wolfberry, Broom Snakeweed, Yucca species, Cholla Cactus, and Antelope Bitterbrush.

**HV-2
Meadows Range**

This site is a grassland characterized dominantly by short and mid grasses. Some trees and shrubs are scattered on this site, usually on the fringes where the water table is lower. Sedges and rushes are conspicuous. Annual and perennial forbs are present in small amounts.

Meadows Range Site

GRASSES and GRASSLIKE		80-90%
Western Wheatgrass		20-40
Mountain Brome		5-10
Muttongrass		5-10
Slender Wheatgrass		5-10
Sedges and Rushes		10-20
Others		3-5
Sand Reedgrass*		10-30
Woody		3-5%
Willow	}	
Others	}	0-5
Forbs		5-10%
Clovers		3-5
Western Yarrow	}	
Gentian	}	
Wild Licorice	}	
Goldenpea	}	
Silver Cinquiefoil	}	3-5

*Seeps and springs.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Water Hemlock, Tufted Hairgrass, Red Fescue, Barnyard Grass, Dandelion, Asters, Balsamroot, Mat Muhly, Canaigre, Iris, and Geranium.

**HV-2
Salt Meadow Range**

This site is a bottomland site that is a grassland plant community characterized by inland saltgrass and alkali sacaton. Fourwing saltbrush, the dominant shrub, makes up less than five percent of the vegetation. Forbs, such as seepweed and iodinebush, are present in small amounts. When the plant community deteriorates it is dominated by inland saltgrass, seepweed, iodinebush, saltcedar, and large interspaces of bare crusted ground.

Salt Meadow Range Site

GRASSES and GRASSLIKE		90%
Inland Saltgrass		30-35
Alkali Sacaton		15-20
Saltsedge		5-10
Foxtail Barley		3-5
Mat Muhly		3-5
Western Wheatgrass		5-10
Nuttall Alkaligrass		5-10
Alkali Cordgrass		15-20
Woody		5%
Fourwing Saltbrush	}	
Pale Wolfberry	}	3-5
Forbs		5%
Iodinebush	}	
Seepweed	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Kochia, Saltcedar, Lanceleaf, Goldenweed, Russian Thistle, and Wedgegrass.

**HV-2
(Basalt) Breaks Range**

This site is a mixture of grasses, forbs, and shrubs. Scrubby oneseed juniper and/or pinyon do occur on cooler exposures, but they make up a minor part of the plant community.

(Basalt) Breaks Range Site

GRASSES and GRASSLIKE	45-60%
Black Grama 1/	5-20
Sideoats Grama	5-10
Needleandthread }	
New Mexico Feathergrass }	
Western Wheatgrass }	
Indian Ricegrass }	5-10
Prairie Junegrass 2/ }	
Muttongrass 2/ }	3-10
Galleta }	
Blue Grama }	
Hairy Grama }	3-8
Little Bluestem }	
Cane Bluestem }	3-5
Pine Dropseed }	
Mountain Muhly }	
Spike Muhly }	
New Mexico Muhly }	3-5
Wolftail }	
Other }	3-5
<hr/>	
Woody	25-40%
Mountain Big Sagebrush	5-15
Fourwing Saltbrush }	
Winterfat }	3-7
Skunkbush Sumac }	
Currant spp. }	
Oak spp. }	3-7
New Mexico Olive }	
Apacheplume }	
Mountain Mahogany }	1-5
Pinyon }	
Juniper }	1-7
Others	

Forbs	5-15%
Indian Paintbrush	}
Wild Buckwheat	
Fleabane	
Asters	
Others	

1/ On south and west exposures, black grama may be the dominant grass species, but on cooler exposures it is a minor component.

2/ At higher elevation and on northern exposures, these species are abundant components of the herbaceous community.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Bottlebrush Squirreltail, Plains Bristlegrass, Dropseeds, Threeawns, Brome spp., Arizona Fescue, Letterman Needlegrass, Phlox, Penstemon, Locoweed, Pingue, Rabbitbrush, Yucca spp., and Broom Snakeweed.

HV-2
Stony Loam Range

This site is a grassland-shrub site predominantly characterized by perennial, cool-season grasses, and shrubs. Very few, if any, trees grow on this site.

Stony Loam Range Site

GRASSES and GRASSLIKE	55-65%
Western Wheatgrass }	
Spike Muhly }	25-45
Blue Grama	5-10
Galleta	5-10
Needleandthread }	
New Mexico Feathergrass }	5-15
Bottlebrush Squirreltail	3-8
Indian Ricegrass	0-5
Sideoats Grama }	
Little Bluestem }	0-5
Others	
Woody	15-25%
Mountain Big Sagebrush	10-20
Rubber Rabbitbrush }	
Broom Snakeweed }	1-3
Fourwing Saltbrush }	
Winterfat }	3-5
Oneseed Juniper }	
Pinyon }	0-3
Others }	3-5
Forbs	5-10%
Locoweed }	
Wild Buckwheat }	
Globemallow }	
Other Perennials }	3-8
Other Annuals	1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Prairie Junegrass, Muttongrass, Muhly spp., Sideoats

Grass, Wolf tail, Little Bluestem, Penstemon, Phlox spp., Aster, Fleabane, Yucca spp.,
Pinguicula, and Cactus spp.

**HV-2
Shallow Gravelly Range**

This site is a grassland site with scattered shrubs and forbs. Occasionally junipers are uncommon.

Shallow Gravelly Range Site

GRASSES and GRASSLIKE		65-75%
Needleandthread	}	
New Mexico Feathergrass	}	20-25
Sideoats Grama		5-15
Galleta		3-7
Indian Ricegrass		3-7
Black Grama*		0-5
Bottlebrush Squirreltail		3-7
Western Wheatgrass		3-7
Blue Grama		3-5
Others		3-7
Woody		10-15%
Mountain Big Sagebrush		4-8
Fourwing Saltbrush		3-7
Winterfat		1-5
Gray Horsebrush	}	
Rabbitbrush	}	
Broom Snakeweed	}	1-3
Others		0-3
Forbs		10-15%
Wild Buckwheat		1-3
Locoweed	}	
Indian Paintbrush	}	
Phlox spp.,	}	10-12
Others		

*Black grama is restricted to the HV-2 sub-resource area.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sand Dropseed, Muhly spp., Wolftail, Aster, Penstemon, Cactus, Yucca, and Oneseed Juniper.

**HV-2
Salty Bottomland Range**

This site is a shrub-grass mixture characterized by mid-grasses, alkali sacaton, and western wheatgrass. The characteristic shrubs are black greasewood and fourwing saltbrush. Perennial forbs are a minor component of the plant community. Annual forbs and grasses occur in relative abundance during the spring in years which have above average growing conditions. When the potential plant community deteriorates, there is a marked increase in relative abundance of shrubs, cacti, perennial and annual forbs. In severe vegetative deterioration, the site will consist dominantly of shrubs, but can also be dominated by greasewood, sagebrush, annual forbs and annual grasses, with lesser amounts of perennial grasses and large areas of unprotected soils.

Salty Bottomland Range Site

GRASSES and GRASSLIKE		65%
Alkali Sacaton		30-35
Indian Ricegrass		5-10
Western Wheatgrass		20-25
Bottlebrush Squirreltail		10-15
Galleta		10-15
Blue Grama		5-10
Inland Saltgrass	}	
Mat Muhly	}	5-10
Woody		25%
Black Greasewood		3-5
Shadscale		3-5
Big Sagebrush		3-5
Fourwing Saltbrush		5-10
Winterfat		3-5
Bud Sagebrush		1-3
Forbs		10%
Iodinebush	}	
Goldenweed	}	3-5
Western Ragweed	}	
Groundsel	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Broom Snakeweed, Annual Bromes, Foxtail Barley,

Threeawns, Russian Thistle, Western Ragweed, Rocky Mountain Beeplant, Threadleaf Groundsel, Cheatgrass, and Sand Dropseed.

**ND-1
Salty Bottomland Range**

This site is a shrub-grass mixture characterized by mid-grasses, alkali sacaton, and western wheatgrass. The characteristic shrubs are black greasewood and fourwing saltbrush. Perennial forbs are a minor component of the plant community. Annual forbs and grasses occur in relative abundance during the spring in years which have above average growing conditions. When the potential plant community deteriorates, there is a marked increase in relative abundance of shrubs, cacti, perennial and annual forbs. In severe vegetative deterioration, the site will consist dominantly of shrubs, but can also be dominated by greasewood, sagebrush, annual forbs and annual grasses, with lesser amounts of perennial grasses and large areas of unprotected soils.

Salty Bottomland Range Site

GRASSES and GRASSLIKE		65%
Alkali Sacaton		30-35
Indian Ricegrass		5-10
Western Wheatgrass		20-25
Bottlebrush Squirreltail		10-15
Galleta		10-15
Blue Grama		5-10
Inland Saltgrass	}	
Mat Muhly	}	5-10
Woody		25%
Black Greasewood		3-5
Shadscale		3-5
Big Sagebrush		3-5
Fourwing Saltbrush		5-10
Winterfat		3-5
Bud Sagebrush		1-3
Forbs		10%
Iodinebush	}	
Goldenweed	}	3-5
Western Ragweed	}	
Groundsel	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Broom Snakeweed, Annual Bromes, Foxtail Barley,

Threeawns, Russian Thistle, Western Ragweed, Rocky Mountain Beeplant, Threadleaf Groundsel, Cheatgrass, and Sand Dropseed.

**ND-1
Salt Meadow Range**

This site is a bottomland site that is a grassland plant community characterized by inland saltgrass and alkali sacaton. Fourwing saltbrush, the dominant shrub, makes up less than five percent of the vegetation. Forbs, such as seepweed and iodinebush, are present in small amounts. When the plant community deteriorates it is dominated by inland saltgrass, seepweed, iodinebush, saltcedar, and large interspaces of bare crusted ground.

Salt Meadow Range Site

GRASSES and GRASSLIKE		90%
Inland Saltgrass		30-35
Alkali Sacaton		15-20
Saltsedge		5-10
Foxtail Barley		3-5
Mat Muhly		3-5
Western Wheatgrass		5-10
Nuttall Alkaligrass		5-10
Alkali Cordgrass		15-20
Woody		5%
Fourwing Saltbrush	}	
Pale Wolfberry	}	3-5
Forbs		5%
Iodinebush	}	
Seepweed	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Kochia, Saltcedar, Lanceleaf, Goldenweed, Russian Thistle, and Wedgegrass.

**ND-1
Loamy Range**

This site is a site that is dominantly grasslands characterized by short and mid-grasses. Shrubs and perennial forbs are a minor component of the plant community. Big sagebrush will occur in higher concentration on the upper slopes of the site, often as an under story to invading juniper trees. Annual forbs occur in relative abundance during the spring months, in years of above average growing conditions.

Loamy Range Site

GRASSES	70%
Galleta	10-15
Indian Ricegrass	10-20
Needleandthread }	
New Mexico Feathergrass }	5-10
Western Wheatgrass	3-5
Bottlebrush Squirreltail	5-10
Blue Grama	10-20
Sand Dropseed	5-10
Sideoats Grama	2-5
Threeawns spp.	3-5
Alkali sacaton	3-8
Woody	15%
Big Sagebrush	5-15
Fourwing Saltbrush	5-10
Cutler's Mormon-tea }	
Winterfat }	3-5
Douglas Rabbitbrush }	
Pale Wolfberry }	
Spiney Horsebrush }	3-5
Forbs	5-10%
Scarlet Gloemallow }	
Threadleaf Groundsel }	
Broom Snakeweed }	3-5
Wooly Indian Wheat }	
Fleabane }	3-5
Locoweed }	
Milkweed }	

Aster	}	
Penstemon	}	
Western Ragweed	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Foxtail Barley, Sixweeks Fescue, Sixweeks Grama, Annual Bromes, Silverleaf Nightshade, Ring Muhly, Fiddleneck, Tansymustard, and Yerba-de-pasmo.

**ND-1
Sandy Range**

This site is a site that is dominantly grasslands characterized by short and mid-grasses. Shrubs and perennial forbs are a minor component of the plant community. Annual forbs occur in relative abundance during the spring and summer months in years of above average growing conditions.

Sandy Range Site

GRASSES	70%
Indian Ricegrass	20-25
Needleandthread }	
New Mexico Feathergrass }	5-10
Sand Dropseed }	
Giant Dropseed }	
Mesa Dropseed }	
Spike Dropseed }	10-15
Blue Grama	5-10
Purple Threeawns spp.	3-5
Bottlebrush Squirreltail	3-5
Galleta	3-5
Alkali Sacaton	5-10
<hr/>	
Woody	20%
Winterfat	3-8
Big Sagebrush	3-8
Fourwing Saltbrush	5-10
Cutler's Mormon-Tea }	
Spiney Horsebrush }	2-5
<hr/>	
Forbs	10%
Small Soapweed }	
Broom Snakeweed }	3-5
Penstemon }	
Lambsquarters }	
Locoweed }	
Milkweed }	
Tansymustard }	
Fiddleneck }	3-5

Rocky Mountain Bee Plant	}	
Buckwheat	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Foxtail Barley, Verbena, Sixweeks Fescue, Sixweeks Grama, Annual Bromes, Silverleaf Nightshade, Ring Muhly, Russian Thistle, Western Wheatgrass, Indian-Wheat, and Cacti.

**ND-1
Limy Range**

This site is a grassland site characterized by short and mid-grasses. Shrubs and perennial forbs are a relatively small component of the plant community. Annual forbs are always present in varying amounts, according to the current growing conditions.

Limy Range Site

GRASSES		65%
New Mexico Feathergrass	}	
Needleandthread	}	20-25
Indian Ricegrass		15-20
Galleta		5-10
Blue Grama		5-10
Threeawns spp.		5-10
Sand Dropseed	}	
Spike Dropseed	}	5-10
Alkali Sacation		10-15
Woody		20%
Fourwing Saltbrush		3-5
Mormon-Tea		3-5
Winterfat		10-15
Douglas Rabbitbrush		1-3
Big Sagebrush	}	
Black Sage	}	3-5
Forbs		0-5%
Broom Snakeweed		3-5
Buckwheat	}	
Indian-Wheat	}	
Small Soapweed	}	
Tansymustard	}	
Milkweed	}	
Groundsel	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Slim Tridens, Fluffgrass, Sixweeks Fescue, Annual Bromegrasses, Sixweeks Grama, Ring Muhly, Russian Thistle, Cholla Cacti, Pricklypear Cacti, and Rocky Mountain Beeplant.

**ND-1
Clayey Range**

This site is a grassland site characterized by short and mid-grasses. Shrubs and perennial forbs are a relatively small component of the plant community. Annual forbs and grasses occur in relative abundance during spring months, in years of above average growing conditions.

Clayey Range Site

GRASSES		70%
Galleta		15-20
Blue Grama		5-10
Indian Ricegrass		3-5
Needleandthread	}	
New Mexico Feathergrass	}	3-5
Alkali sacaton		10-15
Western Wheatgrass		3-5
Bottlebrush Squirreltail	}	
Spike Dropseed	}	
Threeawns spp.	}	3-5
Woody		20%
Big Sagebrush		5-10
Fourwing Saltbrush		3-5
Winterfat		1-3
Douglas Rabbitbrush	}	
Pale Wolfberry	}	
Spiney Horsebrush	}	3-5
Forbs		10%
Broom Snakeweed		3-5
Wooly Indian-Wheat	}	
Locoweed	}	
Western Ragweed	}	
Threadleaf groundsel	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Burrograss, Sixweeks Fescue, Cheatgrass, Foxtail Barely, Sixweeks Grama, Ring Muhly, Sunflowers, Daisy, Milkweed, and Verbena.

**ND-1
Sand Flats Range**

This site is a shrub-grass mixture, characterized by short and mid grasses; shrubs are quite noticeable. Perennial forbs are a minor component of the plant community. Annual forbs and grasses occur in relative abundance during spring months, in years of above average growing conditions.

Sand Flats Range Site

GRASSES		60%
Alkali sacaton		20-25
Western Wheatgrass		5-10
Spike Dropseed	}	
Sand Dropseed	}	3-5
Threeawns spp.		3-5
Galleta		15-20
Needleandthread		3-10
Indian Ricegrass		5-10
Blue Grama		5-10
Inland Saltgrass		10-15
Woody		30%
Black Greasewood		5-10
Fourwing Saltbrush		10-15
Shadescale		5-10
Winterfat		3-5
Big Sagebrush		3-5
Douglas Rabbitbrush		3-5
Black Sagebrush		3-5
Forbs		10%
Broom Snakeweed		3-5
Tansymustard	}	
Cholla	}	
Iodinebush	}	
Groundsel	}	3-5
Wooly Indian-Wheat	}	
Western Ragweed	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Fluffgrass, Annual Bromes, Rocky Mountain Beeplant, Verbena, Sunflowers, Cocklebur, Pricklypear Cacti, Saltcedar, Mat Muhly, Russian Thistle, Sixweeks Fescue.

ND-1
Shallow Range

This site is a shrub-grass mixture characterized by short and mid grasses; shrubs and half shrubs are quite noticeable. Perennial forbs are a minor component of the plant community. Annual forbs and grasses occur in relative abundance during spring months, in years of above average growing conditions.

Shallow Range Site

GRASSES	75%
Indian Ricegrass	15-20
Blue Grama	5-10
Galleta	10-15
Threeawns spp.	3-5
Needleandthread	}
New Mexico Feathergrass	} 10-15
Sand Dropseed	3-5
Alkali sacaton	5-10
Bottlebrush Squirrel-tail	3-5
Woody	15%
Winterfat	3-5
Cutler's Mormon Tea	3-5
Big Sagebrush	3-5
Fourwing Saltbrush	3-5
Pale Wolfberry	}
Douglas Rabbitbrush	} 1-3
Forbs	10%
Broom Snakeweed	3-5
Groundsel	}
Tansymustard	}
Wooly Indian-Wheat	}
Pricklypear Cacti	}
Small Soapweed	}
Buckwheat	} 3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Fluffgrass, Sixweeks Grama, Annual Bromegrass, Russian

Thistle, Ring Muhly, Bladderpod, Sixweeks Fescue, Fleabane, Globemallow, Fiddleneck, Locoweed, Pale Wolfberry, Douglas Rabbitbrush, Feather Dalea, and Big Sagebrush.

**ND-1
Deep Sand Range**

This site is a shrub-grass mixture characterized by short and mid grasses; mid-grasses are prominent. Shrubs and perennial forbs compose 30 to 40 percent of the composition of the total vegetation. Annual forbs and grasses occur in relative abundance during spring and summer months, in years of above average growing conditions.

Deep Sand Range Site

GRASSES		60%
Indian Ricegrass		25-30
Galleta		3-5
Blue Grama		5-10
Sand Dropseed	}	
Spike Dropseed	}	
Mesa Dropseed	}	
Giant Dropseed	}	10-15
Sandhill Muhly		3-5
Needleandthread	}	
New Mexico Feathergrass	}	5-10
Bottlebrush Squirreltail		3-5
Alkali sacaton		5-10
Woody		25%
Mormon-Tea Ephedra		10-15
Fourwing Saltbrush		10-15
Sand Sagebrush		5-10
Rabbitbrush		3-5
Winterfat		3-5
Big Sagebrush		5-10
Cliffrose	}	
Black Sagebrush	}	3-5
Forbs		15%
Soaptree Yucca	}	
Plains Pricklypear	}	3-5
Broom Snakeweed		3-5
Globemallow	}	
Penstemon	}	
Locoweed	}	
Groundsel	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Threeawns spp., Sixweeks Grama, Fiddleneck, Annual Bromegrass, Russian Thistle, Fleabane, Pale Wolfberry, Tansymustard, Western Ragweed, Lambsquarters, Verbena, Whorled Milkweed, Woolly Indian-Wheat, and Rocky Mountain Beeplant.

ND-1
Sodic Slopes Range

This site is a shrub-grass mixture characterized by short and mid grasses; shrubs are quite noticeable. Perennial forbs are a minor component of the plant community. Annual forbs and grasses occur in relative abundance during spring months in years of above average growing conditions.

Sodic Slopes Range Site

GRASSES	60%
Alkali sacaton	25-30
Galleta	15-20
Needleandthread	5-10
Indian Ricegrass	10-15
Sand Dropseed	3-5
Threeawns spp.	3-5
Blue Grama	5-10
Bottlebrush Squirreltail	3-5
Woody	30%
Black Greasewood	5-10
Fourwing Saltbrush	5-10
Shadscale	3-5
Big Sagebrush	3-5
Douglas Rabbitbrush	1-3
Cholla Cacti	1-3
Pear Cacti	1-3
Forbs	10%
Broom Snakeweed	2-5
Groundsel	}
Wooly Indian-Wheat	}
Tansy Mustard	} 2-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Fluffgrass, Annual Brome Grasses, Rocky Mountain Beeplant, Sunflowers, Showy Daisy, Cutleaf Daisy, Gumweed, Bull Thistle, Russian Thistle, Sixweeks Grama, Sixweeks Fescue, and Indian Paintbrush.

**ND-1
Shale Hills Range**

This site is a scrub juniper-pinon savannah aspect under storied by a variety of shrubs, half shrubs, grasses and forbs. North slopes support more trees than south slopes, which are fairly open.

Shale Hills Range Site

GRASSES	55-65%
Indian Ricegrass }	
Needleandthread }	15-20
New Mexico Feathergrass }	
Galleta }	
Blue Grama }	15-20
Alkali sacaton }	10-15
Muttongrass }	
Prairie Junegrass }	3-8
Littleseed Ricegrass }	
Western Wheatgrass }	
Bottlebrush Squirreltail }	3-7
Sand Dropseed }	
Wheatgrass }	
Others* }	3-7
Woody	20-30%
Juniper Species }	
Pinon }	
Mountain Mohogany }	5-15
Antelope Bitter Bush }	5-10
Cliff Rose }	
Rabbitbrush }	3-7
Big Sagebrush }	
Fourwing Saltbrush }	
Winterfat }	3-7
Others* }	0-3
Forbs	3-8%
Wildbuckwheats }	1-3
Indian Paintbrush }	
Locoweed }	
Others* }	1-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sandhill Muhly, Sixweeks Fescue, Mat Muhly, Bromegrasses, Russian Thistle, Kochia, Fleabanes, Cholla Cactus, Yucca spp., and Black Greasewood.

**ND-1
Cobbly Hills Range**

This site is a grassland site with only a few scattered trees and shrubs, usually on the north and east exposures. This site is dissected by drainages which usually are supporting many trees. Forbs are common on the site, but are most noticeable when in bloom.

Cobbly Hills Range Site

GRASSES		80-90%
Needleandthread	}	
New Mexico Feathergrass	}	20-30
Galleta		10-15
Blue Grama		10-15
Indian Ricegrass		5-8
Muttongrass	}	
Prairie Junegrass	}	5-8
Black Grama		0-5
Sideoats Grama		3-5
Cheatgrass*	}	
Others	}	3-5
Woody		1-5%
Big Sagebrush	}	
Fourwing Saltbrush	}	
Rabbitbrush	}	1-3
Oneseed Juniper	}	
Utah Juniper	}	
Pinon	}	0-2
Forbs		3-7%
Indian Paintbrush	}	
Globemallows	}	
Others	}	3-7

*Introduced but nationalized.

**HP-1
Swales Range**

This site is a mixed mild grass plant community with an occasional shrub. Warm season mid and short grasses dominate this site; however, cool-season grasses and forbs are an important component and can make up to 30 to 35 percent of the plant community. Woody species are a minor component of the plant community. This site occurs in the narrow elongated drainages that transport surface runoff from the adjacent uplands sites to the bottomland. This site receives additional water, therefore the plant community produces greater amounts than the adjoining sites.

Swales Range Site

GRASSES		80-85%
Western Wheatgrass		20-25
Blue Grama		20-25
Vine Mesquite		20-25
Sideoats Grama		5-10
Galleta		5-8
Alkali Sacation		3-5
Buffalograss		3-5
Little Bluestem		3-5
Switchgrass		3-5
Other Grasses		3-5
Shrubs		0-5
Woody		1-5%
Fringed Sagewort	}	
Winterfat	}	
Fourwing Saltbrush	}	
Other Shrubs	}	0-5
Forbs		5-10%
Prairie Coneflower	}	
Prairie Clover	}	
Annual Sunflower	}	1-5
Other annual forbs		3-5
Other perennial forbs		3-5

Other grasses that could appear on this site include: Bottlebrush, Squirreltail, Mat Muhly, Creeping Muhly, Threeawns, Inland Saltgrass, Sand Dropseed, and Ring Muhly.

Other shrubs include: Skunkbush Sumac, Broom Snakeweed, and Groundsel.

Other forbs include: Western Ragweed, New Mexico Thistle, Astragalus spp., Buckwheat, Scurfpea, Feted Marigold, Globemallow.

**HP-1
Meadow Range**

This site is a mixed grassland site dominated by warm season, tall and mid grasses. Cool season grasses make up an important component of the plant community. Forbs and woody species make up only a minor component.

Meadow Range Site

GRASSES	90%
Western Wheatgrass } Blue Grama } Switchgrass } Little Bluestem } Indiangrass } Big Bluestem } Vine Mesquite } Galleta } Sedges } Inland Saltgrass } Alkali sacaton } Other spp. }	10-15 5-10 3-5
Woody	5%
Fringed Sagewort } Fourwing Saltbrush } Other Woody spp. }	0-5
Forbs	5%
Other annual } Perennial forbs }	0-5

Other grasses that could appear on this site include: Silver Bluestem, Sideoats Grama, Buffalograss, Mat Muhly, Canadian Wildrye, Spike Dropseed, and Sand Dropseed.

Other shrubs include: Broom Snakeweed, Willows, Wildrose, and Skunkbush Sumac.

Other forbs include: Sweetclover, Common Fireweed, Western Ragweed, and Wild Buckwheat.

**HP-1
Gravelly Range**

This site is a grassland site dominated by warm-season short and mid grasses dotted with half shrubs. Woody species, forbs and cool season grasses make up an important component of the plant community and are evenly distributed.

Gravelly Range Site

GRASSES		70-75%
Hairy Grama	}	
Blue Grama	}	
Little Bluestem	}	
Sideoats Grama	}	15-20
Wolftail		3-5
New Mexico Feathergrass	}	
Needleandthread	}	10-15
Threeawns		3-5
Other grasses		3-5
Woody		10-15%
Yucca		3-5
Gambel Oak		3-5
Bigelow Sagebrush	}	
Fringed Sagewort	}	
Other	}	3-5
Forbs		10-15%
Prairie Coneflower	}	
Buckwheat	}	
Other Perennials	}	
Other Forbs	}	3-5

Other grasses that could appear on this site include: Silver Bluestem, Big Bluestem, Bottlebrush Squirreltail, Spike Muhly, Ring Muhly, Sand Dropseed, and Sedges.

Other shrubs include: Skunkbush Sumac, Winterfat, and Broom Snakeweed.

Other forbs include: Globemallow, Stickleleaf, and Locoweed.

**HP-1
Deep Sand Range**

This site is a grassland site dominated by warm-season mid and tall grasses with scattered woody species. Cool-seasoned grasses and forbs make up an important component of the plant community.

Deep Sand Range Site

GRASSES	75-80%
Sand Bluestem	10-15
Little Bluestem	10-15
Sand Dropseed	}
Spike Dropseed	}
New Mexico Feathergrass	}
Needleandthread	}
Indian Ricegrass	3-5
Hairy Grama	5-10
Switchgrass	}
Giant Sandreed	}
Indiangrass	}
Threeawns spp.	3-5
Other grasses	3-5
<hr/>	
Woody	5-10%
Sand Sagebrush	8-10
Other Shrubs	3-5
<hr/>	
Forbs	5-10%
Sunflower	}
Buckwheat	}
Other Forbs	3-5

Other grasses that could appear on this site include: Fall Witchgrass Hall's Panicum, Hooded Windmillgrass, Sideoats Grama, and Red Lovegrass.

Other shrubs include: Yucca, Broom Snakeweed, and Skunkbush Sumac.

Other forbs include: Globemallows, Scrufpea, Scarlet Gaura, and Dalea spp.

**HP-1
High Lime Range**

This site is a grassland site dominated by warm-season mid and tall grasses with scattered woody species. Cool-seasoned grasses and forbs make up an important component of the plant community.

High Lime Range Site

GRASSES	75-80%
Blue Grama	15-20
Sideoats Grama	15-20
Sand Dropseed	10-15
Little Bluestem	5-10
Alkali Sacaton	5-10
Western Wheatgrass	5-10
Galleta	5-10
Hairy Grama	3-5
Bottlebrush Squirreltail	3-5
New Mexico Feathergrass	3-5
Other grasses	0-5
<hr/>	
Woody	3-5%
Winterfat	}
Fourwing Saltbrush	}
Other Shrubs	} 3-5
<hr/>	
Forbs	3-5%
Silverleaf Nightshade	}
Other Annual and Perennial Forbs	} 0-5

Other grasses that could appear on this site include: Indian Ricegrass, Ring Muhly, Mat Muhly, Threawns, Silver Bluestem, Cane Bluestem, Inland Saltgrass, and Vine Mesquite.

Other shrubs include: Small Soapweed Yucca, Fringed Sagewort, Bigelow Sagewort.

Other forbs include: Dotted Gayfeather, Healthaster, Globemallow.

**HP-1
Loamy Range**

This site is a grassland dominated by warm-season short and mid-grasses with only occasional shrub or half-shrub. Cool-seasoned grasses and forbs make up an important minor component of the plant community.

Loamy Range Site

GRASSES		20-85%
Blue Grama		35-40
Buffalograss		5-10
Sideoats Grama		5-10
Vine Mesquite		3-5
Western Wheatgrass		5-10
Galleta		3-5
Silver Bluestem		3-5
Sand Dropseed		3-5
Bottlebrush Squirreltail		2-4
Threeawn spp.		2-4
Sand Muhly		0-2
Ring Muhly		0-2
Switchgrass		0-3
Other grasses		5-10
Woody		3-5%
Fringed Sagewort	}	
Groundsel	}	
Broom Snakeweed	}	
Other Shrubs	}	3-5
Forbs		3-5%
Sunflower	}	
Scurfpea	}	
Plains Zinnia	}	3-5
Other Annual and Perennial Forbs		3-5

Other grasses that could appear on this site include: Bottlebrush Squirreltail, Threeawn, Sand Muhly, Ring Muhly, and Switchgrass.

Other shrubs include: Winterfat, Yucca, and Gumweed.

Other forbs include: Dalea spp., Prairie Coneflower, Sensitive Briar, Prairie Clover, Dotted Gayfeather, Woolly Indianwheat, and Western Ragweed.

**HP-1
High Lime Range**

This site is a grassland site dominated by warm-season mid and tall grasses with scattered woody species. Cool-seasoned grasses and forbs make up an important component of the plant community.

High Lime Range Site

GRASSES	75-80%
Blue Grama	15-20
Sideoats Grama	15-20
Sand Dropseed	10-15
Little Bluestem	5-10
Alkali Sacaton	5-10
Western Wheatgrass	5-10
Galleta	5-10
Hairy Grama	3-5
Bottlebrush Squirreltail	3-5
New Mexico Feathergrass	3-5
Other grasses	0-5
<hr/>	
Woody	3-5%
Winterfat	}
Fourwing Saltbrush	}
Other Shrubs	} 3-5
<hr/>	
Forbs	3-5%
Silverleaf Nightshade	}
Other Annual and Other Forbs	} 0-5

Other grasses that could appear on this site include: Indian Ricegrass, Ring Muhly, Mat Muhly, Threeawns, Silver Bluestem, Cane Bluestem, Inland Saltgrass, and Vine Mesquite.

Other shrubs include: Small Soapweed Yucca, Fringed Sagewort, Bigelow Sagewort.

Other forbs include: Dotted Gayfeather, Healthaster, Globemallow.

**HP-1
Clay Loam Range**

This site is a grassland site dominated by warm-season short and mid-grasses. Cool-seasoned grasses make up an important component of the plant community. Annual and perennial forbs are a minor component. Very few woody plants are indigenous to this site.

Clay Loam Range Site

GRASSES		85-90%
Blue Grama		25-30
Galleta		15-20
Western Wheatgrass		15-20
Vine Mesquite		10-15
Buffalograss		5-10
Sideoats Grama		2-4
Mat Muhly		2-4
Other grasses		0-5
Woody		0-5%
Fourwing Saltbrush	}	
Broom Snakeweed	}	
Other Shrubs	}	0-5
Forbs		0-5%
Scurfpea	}	
Prairie Clover	}	
Western Ragweed	}	
Other Annual Forbs	}	
Other Perennial Forbs	}	0-5

Other grasses that could appear on this site include: Silver Bluestem, Threeawns, Ring Muhly, Bottlebrush Squirreltail.

Other shrubs include: Cholla Cactus, Prickly Pear Cactus, and Wolfberry.

Other forbs include: Coneflower, and Dotted Gayfeather.

HP-1
Very Shallow Range

This site is a grassland site dominated by warm-season short and mid-grasses with forbs and cool season grasses occupying an important component of the plant community. Shrubs and half-shrubs occupy a minor component.

Very Shallow Range Site

GRASSES	75-80%
Sideoats Grama	17-20
Little Bluestem	17-20
Blue Grama	17-20
New Mexico Feathergrass }	
Threadandneedle }	10-15
Hairy Grama	3-5
Sand Dropseed	3-5
Threeawn spp. }	
Wolftail }	
Silver Bluestem }	3-5
Other grasses	3-5
Woody	5-10%
Winterfat }	
Fringed Sagewort }	
Bigelow Sagebrush }	
Skunkbush Sumac }	3-5
Other Shrubs	3-5
Forbs	10-15%
Buckwheat }	
Annual Sunflower }	
Dotted Gayfeather }	
Prairie Coneflower }	
Sensitive Briar }	3-5
Other Forbs	3-5

Other grasses that could appear on this site include: Bottlebrush Squirreltail, Hairy Tridens, and Rough Tridens.

Other shrubs include: Broom Snakeweed, Threadleaf Groundsel, and Small Soapweed.

Other forbs include: Scarlet Gaura, Prairie Clover, Dalea spp., and Globemallow.

**HP-1
Sandy Plains Range**

This site is a grassland site dominated by warm-season, mid-grasses. Tall grasses, cool-seasoned grasses and forbs make up an important component of the plant community. Woody plants make up a minor component.

Sandy Plains Range Site

GRASSES	70-75%
Sand Bluestem	15-20
Little Bluestem	15-20
New Mexico Feathergrass }	
Needleandthread }	15-20
Sideoats Grama	10-15
Blue Grama }	
Hairy Grama }	5-10
Indian Grass }	
Switchgrass }	5-10
Indian Ricegrass	5-10
Giant Dropseed }	
Spike Dropseed }	
Sand Dropseed }	3-5
Other grasses	3-5
<hr/>	
Woody	6-15%
Sand Sagebrush	5-10
Yucca }	
Skunkbush Sumac }	3-15
<hr/>	
Forbs	5-10%
Buckwheat }	
Sunflower }	
Globemallow }	
Stickleaf }	3-5
Other Forbs	3-5

Other grasses that could appear on this site include: Red Lovegrass, Sand Muhly, Threawns, Tumble Lovegrass, Paspalum, Dryland Sedge, Hooded Windmill Grass, and Silver Bluestem.

Other shrubs include: Threadleaf Groundsel, and Broom Snakewood.

Other forbs include: Silky Prairieclover, Scurfpea, Western Ragweed, Gilia, Silverleaf Nightshade, Prickly Poppy, and Bladderpod.

**HP-1
Sandy Loam Range**

This site is a grassland site dominated by warm-season, short and mid-grasses. Cool-seasoned grasses and forbs make up an important component of the plant community. Woody species are a minor component.

Sandy Loam Range Site

GRASSES	80-85%
Blue Grama }	
Hairy Grama }	20-25
Sideoats Grama	15-20
Little Bluestem	10-15
New Mexico Feathergrass }	
Needleandthread }	10-15
Sand Dropseed	5-10
Red Lovegrass }	
Tumble Lovegrass }	5-10
Galleta	3-5
Threeawn	3-5
Other grasses	3-5
<hr/>	
Woody	3-5%
Sand Sagebrush }	
Small Soapweed }	
Winterfat }	
Broom Snakeweed }	
Groundsel }	3-5
<hr/>	
Forbs	3-5%
Sunflower }	
Buckwheat }	
Globemallow }	
Sensitive Briar }	3-5

Other grasses that could appear on this site include: Sand muhly, Buffalograss, Silver Bluestem, Sand Bluestem, Switchgrass, Sand Paspalum, and Indiangrass.

Other forbs include: Scurfpea, Prairie Clover, Western Ragweed, New Mexico Thistle, Woolly Indianwheat, and Whorled-Leaf Milkweed.

HP-1
Shallow Sandstone Range

This site is a site that is dominated by grasses. Small trees and shrubs are associated with the very shallow soils near the bare ledges or rock outcrops. Mid-grasses such as sideoats grama and little bluestem are dominant with scattered junipers or shrubs. Several species of perennial and annual forbs are evenly distributed.

Shallow Sandstone Range Site

GRASSES and GRASSLIKE	75-80%
Sideoats Grama	25-30
Little Bluestem	20-25
Blue Grama }	
Hairy Grama }	20-25
Needleandthread }	
New Mexico Feathergrass }	5-10
Big Bluestem	5-10
Silver Bluestem }	
Pinyon Ricegrass }	3-5
Wolftail	3-5
Bottlebrush Squirreltail	1-5
Other Grasses	3-5
Woody	10-15%
Cudweed Sagewort }	
Fringed Sagebrush }	2-5
Oak Brush	2-5
Skunkbush Sumac }	
Mountain Mahogany }	2-5
Juniper }	
Pinyon }	2-5
Other Shrubs	2-5
Forbs	1-5%
Wild Buckwheat	2-5
Aster	2-5
Other Perennial Forbs	2-5
Other Annual Forbs	2-5

Other grasses which could appear on this site would include: Slender Tridens, Threeawns, and Ring Muhly.

Other woodys would include: Broom Snakeweed, Winterfat, and Cholla.

Other forbs would include: Locoweed, Globemallow, Dalea, Silverleaf Nightshade, Peavine, Paintbrush spp., Gilia, Rayless Goldenrod, and Prairie Coneflower.

**HP-1
Sandstone Breaks Range**

This site is a site that is dominated by grasses, but has the appearance of being dominated by woody species. Warm season, mid-grasses dominate the annual grass production. Pinyon pine, oneseed juniper, oak, and mountain mahogany are the main woody species.

Sandstone Breaks Range Site

GRASSES and GRASSLIKE		60-65%
Little Bluestem		20-25
Sideoats Grama		20-25
Blue Grama	}	
Hairy Grama	}	15-20
Wolftail		3-5
Spike Muhly	}	
Deergrass	}	3-5
Pinyon Ricegrass		3-5
Switchgrass	}	
New Mexico Feathergrass	}	3-5
Other Grasses		3-5
Woody		20-25%
Pinyon	}	
Juniper	}	10-15
Oak		5-10
Mountain Mahogany		3-5
Fringed Sagebrush	}	
Skunkbush Sumac	}	
Cliffrose	}	1-5
Other Shrubs		1-5
Forbs		5-10%
Wavyleaf Buckwheat	}	
Wild Buckwheat	}	3-5
Other Annual Forbs		3-5
Other Perennial Forbs		3-5

Other grasses which could appear on this site would include: Threeawns, Galleta, Ring Muhly, and Bottlebrush Squirreltail.

Other woodys would include: Broom Snakeweed, Cholla Cactus, and Plains Pricklypear.

Other forbs would include: Fatted Marigold, and Aster.

**HP-1
Salt Flats Range**

This site is a grassland site that is characterized by warm season mid-grasses with an occasional shrub. Shrubs and half shrubs are sparsely scattered throughout the site. Cool season species make up a minor component of the plant community. Vegetation that is tolerant to saline or alkaline factors dominate this site.

Salt Flats Range Site

GRASSES and GRASSLIKE	80-85%
Alkali Sacaton	20-25
Western Wheatgrass	10-15
Blue Grama	10-15
Inland Saltgrass	5-10
Vine Mesquite	5-10
Alkali Muhly }	
Mat Muhly }	3-5
Galleta	3-5
Switchgrass	3-5
Other Grasses	3-5
Woody	5-10%
Fourwing Saltbrush	5-10
Winterfat	3-5
Other Shrubs	3-5
Forbs	3-5%
Wild Buckwheat	3-5
Globemallow	3-5
Other Annual and Perennial Forbs	3-5

Other grasses which would appear on this site would include: Bottlebrush Squirreltail, Plains Bristlegrass, Nuttail Alkaligrass, Threawn, Dropseed, Windmill Grass, Silver Bluestem, Creeping Muhly, and Sedges.

Other woodys would include: Rabbitbrush, Greasewood, and Fringed Sage.

HP-2
Saline Range

This site is a grassland site that is dominated by warm season mid-grasses with an occasional shrub. Vegetation on this site is tolerant to saline or alkaline soil conditions. Forbs, shrubs, and cool-season grasses make up a minor portion of the plant community.

Saline Range Site

GRASSES and GRASSLIKE	85%
Alkali Sacaton	30-35
Galleta }	
Tobosa }	10-13
Blue Grama	8-10
Inland Saltgrass	8-10
Vine Mesquite	8-10
Switchgrass	3-5
Western Wheatgrass	3-5
Silver Bluestem	3-5
Alkali Muhly }	
Mat Muhly }	1-3
Bottlebrush Squirreltail	0-2
Windmillgrass	0-2
Threeawn spp. }	
Buffalograss }	0-2
<hr/>	
Woody	5%
Fourwing Saltbrush	3-5
Broom Snakeweed	0-3
<hr/>	
Forbs	10%
New Mexico Thistle	0-2
Dotted Gayfeather	0-2
Buckwheat }	
Locoweed }	0-2
Other Perennial Forbs	2-4
Other Annual Forbs	2-4

**HP-3
Shallow Sandy Range**

This site is a grassland site. It is composed largely of mid and short grasses with lesser amounts of perennial forbs and a few scattered shrubs and half-shrubs. Annual forbs fluctuate considerably from year to year with annual and seasonal variation in amount and distribution of rainfall.

Shallow Sandy Range Site

GRASSES	75-90%
Black Grama	30-35
Sideoats Grama	20-25
Blue Grama	}
Hairy Grama	}
Plains Bristlegrass	10-15
Threeawns	5
Slim Tridens	}
Sand Dropseed	}
Hooded Windmillgrass	}
New Mexico Feathergrass	3-5
Flatsedge	}
Buffalograss	1-2
Creeping Muhly	}
Other annual grasses	1-3
	1-5
Woody	1-5%
Tesajo Cactus	}
Englemann Pricklypear	}
Plains Pricklypear	}
Small Soapweed	}
Feather Dalea	1-3
Common Javelinabush	}
Range Ratany	}
Wright Eriogonum	}
Broom Snakeweed	}
Mormon Tea	}
	1-3
Forbs	3-5%
Dotted Gayfeather	}
Indian Feather	}
Globemallow	}
Verbena	}

Senna	}		3-5
Hoffmanseggia	}		
Fleabane	}		
Croton	}		
Cutleaf Haplopappus	}		2-5
Lemon Scurfpea	}		
Plains Blackfoot	}		
Paperflower	}		
Wooly Dalea	}		2-5
Texas Filaree	}		
Other Annual Forbs	}		3-5

**HP-3
Loamy Sand Range**

This site is a grassland site that is dominated by mid and tall grasses, such as sand bluestem, yellow Indiangrass, and little bluestem. Only scattered plants of the larger shrubs, such as sand sagebrush, southwest rabbitbrush and small soapweed, are evident upon an initial distant view from a horizontal perspective. Closer examination will reveal a suppressed minority under story of shinnery oak and a stratified plant community of mid and tall grasses, shrubs, short-grasses and annual and perennial forbs which completely occupies and utilizes all moist layers of the soil profile. The annual grasses and forbs population fluctuates considerably from year to year with variation in total amount and seasonable distribution of rainfall. The perennial grass, forb, and shrub components are somewhat less dynamic and vary with longer term moisture cycles.

Loamy Sand Range Site

GRASSES	50-70%
Sand Bluestem	25-30
Giant Sandreed	1-5
Indiangrass }	
Giant Dropseed }	1-3
Little Bluestem	3-5
Sideoats Grama	1-3
New Mexico Feathergrass }	
Needleandthread }	1-3
Sand Paspalum }	
Fall Witchgrass }	1-3
Black Grama }	
Hairy Grama }	
Halls panicum }	1-5
Threeawns }	
Red Lovegrass }	
Tumble Lovegrass }	
Sand Dropseed }	
Spike Dropseed }	5-10
Flatsedge }	
Field Sandbur }	
False Buffalograss }	
Tumblegrass }	
Other annual grasses }	1-3
Woody	10-25%
Sand Plum	1-3
Southwest Rabbitbrush	1-2

Small Soapweed	1-5
Shinnery Oak	5-10
Sand Sagebrush	1-3
Broom Snakeweed	1-2

Forbs	20-35%
Dotted Gayfeather	}
Germander	}
Prairie Dogbane	}
Upright Prairie Coneflower	}
Lemon Beebalm	}
Globemallow	}
Gilia Penstemon	}
Spectaclepod	}
Silky Prairie Clover	}
Snow-on-the-Mountain	}
Lemon Scurfpea	}
Birdbill Dayflower	}
Lanceleaf Sage	}
Smooth Four-o'clock	} 10-15
Plains Blackfoot	}
Stickleaf	}
Croton	}
Peppergrass Mustard	}
Paperflower	}
Linum	}
Hopitea Greenthread	}
Houstonia	}
Groundcherry	} 2-5
Fleabane	}
Southern Jointweed	}
Sand Verbena	}
Western Ragweed	}
Queensdelight	}
Milky Spurge	}
Phlox Heliotiophe	}
Halfshrub Sundrop	}
Wooly Dalea	}
Bush Morningglory	}
Wooly Gaura	}
Cocklebur	}
Bipinnate thistle	} 3-5
Annual Wild Buckwheat	}
Annual Sunflower	}
Other Annual Forbs	} 5-10

**HP-3
Loamy Range**

This site is a mix of short and mid-grass prairie. Shrubs and half shrubs are generally scarce, inconspicuous and widely scattered. Dominant in composition are grasses such as the gramas, little bluestem, and buffalograss. A variety of perennial forbs is also present. Response to dynamic climatic flux is exhibited by the annual grass and forbs components. The perennial grass and forb components remain fairly constant in relation to each other, with the total production of both increasing or decreasing in a parallel manner during wet or dry cycle or seasons. The woody component is relatively constant excluding man-made disturbances or fire. Taller, deeper rooted vegetation is limited more by wetted soil depth, since the precipitation on this site is not commensurate with the total soil depth or the ability of the site, the lower, concave or depressed, runoff-receiving positions in the landscape producing one and one-half to twice as much herbage weight as the higher, convex, runoff-yielding positions on the landscape.

Loamy Range Site

GRASSES	80-85%
Sideoats Grama	20
Blue Grama }	
Hairy Grama }	30
Buffalograss	5
Black Grama	5
Indiangrass }	
Little Bluestem }	3-5
Silver Bluestem }	
Arizona Cottontop }	
Plains Bristlegrass }	3-5
Vine Mesquite }	
Creeping Muhly }	
Tobosa }	
Alkali Sacaton }	3-5
Wolftail }	
Halls panicum }	
Sand Dropseed }	5
Threeawns }	
Slim Tridens }	
Ring Muhly }	5
Sixweeks Grama }	
Other annual grasses }	1-3
<hr/>	
Woody	2-5%
Small Soapweed }	
Winterfat }	

Englemann Pricklypear	}	
Plains Pricklypear	}	1-3
Pale Wolfberry	}	
Broom Snakeweed	}	
Devilshead Hedge-Hog Cactus	}	
Walkingstick Cholla	}	
Wright Eriogonum	}	1-2

Forbs **10-15%**

Globemallow	}	
Verbena	}	
Senna	}	
Rocky Mountain Zinnia	}	
Lemon Scurfpea	}	
Dotted Gayfeather	}	5
Upright Prairie Coneflower	}	
American Vetch	}	
Lyreleaf Greeneye	}	
Wavyleaf Thistle	}	
Hopitea Green Thread	}	
Indian Rushpea	}	
Indian Blanket	}	
Bladderpod	}	
Fleabane	}	2-3
Curlycup Gumweed	}	
Broadleaf Milkweed	}	
Prickly Poppy	}	
Coyote Melon	}	
Buffalobur	}	
Silverleaf Nightshade	}	
Locoweed	}	
Cutleaf Haplopappus	}	
Tansymustard	}	
Peavine	}	
Pingue	}	
Wooly Groundsel	}	
Threadleaf Groundsel	}	2-3
Annual Sunflower	}	
Stickleaf	}	
Texas Filaree	}	
Other Annual Forbs	}	1-5

HP-3
Saline Range

This site is a grassland site that is dominated by warm season mid-grasses with an occasional shrub. Vegetation on this site is tolerant to saline or alkaline soil conditions. Forbs, shrubs, and cool-season grasses make up a minor portion of the plant community.

Saline Range Site

GRASSES and GRASSLIKE	85%
Alkali Sacaton	30-35
Galleta }	
Tobosa }	10-13
Blue Grama	8-10
Inland Saltgrass	8-10
Vine Mesquite	8-10
Switchgrass	3-5
Western Wheatgrass	3-5
Silver Bluestem	3-5
Alkali Muhly }	
Mat Muhly }	1-3
Bottlebrush Squirreltail	0-2
Windmillgrass	0-2
Threeawn spp. }	
Buffalograss }	0-2
<hr/>	
Woody	5%
Fourwing Saltbrush	3-5
Broom Snakeweed	0-3
<hr/>	
Forbs	10%
New Mexico Thistle	0-2
Dotted Gayfeather	0-2
Buckwheat }	
Locoweed }	0-2
Other Perennial Forbs	2-4
Other Annual Forbs	2-4

HP-3
Very Shallow Range

This site is a short grass plains grassland. It is composed largely of short and mid grasses such as the gramas and buffalograss with lesser amounts of perennial forbs and a few scattered shrubs and half-shrubs. Response to dynamic climate flux is exhibited by the annual grass and annual forbs components which fluctuate somewhat from year to year with annual and seasonal variation in amount and distribution of rainfall.

Very Shallow Range Site

GRASSES	75-80%
Sideoats Grama	25
Black Grama	20
Blue Grama }	
Hairy Grama }	15
Buffalograss	3-5
Sand Dropseed }	
Wolftail }	3-5
Threeawns	1-3
Little Bluestem }	
Arizona Cottontop }	1-2
New Mexico Feathergrass }	
Bottlebrush Squirreltail }	1-2
Ring Muhly }	
Fluffgrass }	1-2
Other annual grasses	1-5
Woody	5-10%
Mormon Tea }	
Small Soapweed }	
Winterfat }	3-5
Feather Dalea }	
Wright Eriogonum }	1-2
Englemann Pricklypear }	
Plains Pricklypear }	
Broom Snakeweed }	1-3
Forbs	10-15%
Croton }	
Senna }	
Globemallow }	5-7
Fleabane }	
Hoffsmansseggia }	

Indian Blanket	}	
Plains Blackfoot	}	
Paperflower	}	
Cutleaf Haplopappus	}	
Wooly Groundsel	}	3-5
Other Annual Forbs		1-3

**HP-3
Sandy Range**

This site is a mix of short and mid-grass prairie. It is dominated by grasses such as the grammas, little bluestems, dropseeds, and plains bristlegrass with lesser amounts of forbs and shrubs evenly distributed. The perennial grass and perennial forb components remain fairly constant in relation to each other, with the total production of both increasing or decreasing in a parallel manner during wet or dry years and cycles. The woody component is relatively constant excluding fire or man-induced disturbances. Response to dynamic climatic flux is inhibited by the annual grass and annual forb components to fluctuate somewhat from year to year with annual and seasonal variation in amount and distribution of rainfall.

Sandy Range Site

GRASSES	75-85%
Sideoats Grama	20-25
Little Bluestem }	
Silver Bluestem }	5-10
Plains Bristlegrass }	
Sand Paspalum }	3-5
New Mexico Feathergrass	1-3
Blue Grama	10-15
Black Grama	3-5
Hairy Grama }	
Buffalograss }	
Fall Witchgrass }	3-5
Red Lovegrass }	
Sand Dropseed }	3-5
Threeawns }	
Sand Muhly }	2-3
Tumble Windmillgrass }	
Tumble Lovegrass }	2-3
Field Sandbur }	
Other annual grasses }	1-5
<hr/>	
Woody	5-10%
Small Soapweed }	
Winterfat }	
Mormon Tea }	3-5
Plains Pricklypear }	
Englemann Pricklypear }	
Pale Wolfberry }	1-2
Feather Dalea }	
Southwest Rabbitbrush }	

Broom Snakeweed } 1-3

Forbs **10-15%**

Dotted Gayfeather }
Indian Blanket }
Silky Prairieclover }
Globemallow }
Penstemon }
Upright Prairie Coneflower }
Birdbill Dayflower }
Verbena }
Germander }
Indian Rushpea }
Lanceleaf Sage }
Plains Blackfoot }
Lemon Scurfpea } 3-5
Hopitea Greenthread }
Fleabane }
Paperflower }
Prickly Poppy }
Buffalobur }
Wooly Dalea }
Stickleaf }
Wavyleaf Thistle }
Western Ragweed } 5
Annual Sunflower }
Other Annual Forbs } 1-5

**HP-3
Sandy Plains Range**

This site is a mix of mid and tall grass grassland, dominated by little bluestem, Indian ricegrass, sideoats grama, sand bluestem, and plains lovegrass. Small soapweed is evenly distributed throughout. Minor amounts of sand sagebrush, shinnery oak, and southwest rabbitbrush are also present. An under story of short grasses and a variety of perennial forbs completes the well-stratified plant community which fully utilized the soil profile. During years of good winter precipitation, followed by abundant spring and summer rainfall, annual forbs, such as annual wild buckwheat and sunflower, may thrive to the point of achieving aspect dominance. Perennial grass and forb and shrub components remain fairly constant in proportion to each other and fluctuate less drastically over longer term moisture cycles.

Sandy Plains Range Site

GRASSES		65-85%
Little Bluestem		25-30
Sand Bluestem	}	
Indiangrass	}	7-10
Sideoats Grama		10-15
Plains Lovegrass		7-10
Blue Grama	}	
Sand Paspalum	}	2-3
Hairy Grama	}	
Halls Panicum	}	
Red Lovegrass	}	
Fall Witchgrass	}	7-10
Threeawns	}	
Sand Dropseed	}	
Spike Dropseed	}	
Mesa Dropseed	}	3-5
Other Annual Grasses		1-5
Woody		10-15%
Small Soapweed		5-7
Southwest Rabbitbrush		1-2
Sand Sagebrush	}	
Shinnery Oak	}	3-5
Broom Snakeweed		1
Forbs		5-20%
Globemallow	}	
Dotted Gayfeather	}	

Upright Prairie Coneflower	}	
Lemon Beebalm	}	
Penstemon	}	
Lemon Scurfpea	}	
Prairie Dogbane	}	
Hopitea Greenthread	}	2-7
Birdbill Dayflower	}	
Plains Blackfoot	}	
Peppergrass Mustard	}	
Paperflower	}	
Wooly Dalea	}	1-5
Queensdelight	}	
Southern Jointweed	}	
Western Ragweed	}	
Wooly Gaura	}	1-3
Annual Sunflower	}	
Annual Wild Buckwheat	}	
Other Annual Forbs	}	1-5

**HP-3
Sandhills Range**

This site is a tall grass prairie dominated by sand bluestem, giant sandreed, indiangrass, and little bluestem. Scattered shrubs such as small soapweed, southwest rabbitbrush, sand plum, skunkush sumac, and sand sagebrush are inconspicuous. An under story of mid and short grasses, perennial and annual forbs are also present, fully occupying the wetted soil profile. Forb populations fluctuate widely from year to year with amount and seasonal distribution of rainfall. Tall grass and shrub populations are more constant and vary with longer term moisture cycles. In general, the north and east slopes are cooler and more moist, sometimes having a few cool-season grasses and an overall denser ground cover. The south and west slopes are warmer and drier.

Sandhills Range Site

GRASSES	75-90%
Sand Bluestem	25-30
Little Bluestem	20-25
Giant Sandreed	10-15
Indiangrass	1-2
Giant Dropseed	1-2
New Mexico Feathergrass }	
Needleandthread }	
Sand Paspalum }	3-5
Halls Paspalum }	
Fall Witchgrass }	
Hairy Grama }	
Red Lovegrass }	
Sand Dropseed }	5
Threeawns spp. }	
Tumblegrass }	
Tumble Lovegrass }	
Gummy Lovegrass }	
Field Sandbur }	
Other Annual Grasses }	5
Flatsedge	1
<hr/>	
Woody	1-5%
Sand Plum }	
Southwest Rabbitbrush }	
Skunkbush Sumac }	3-5
Small Soapweed }	
Sand Sagebrush }	
Shinnery Oak }	2-5

Forbs	5-20%
Dotted Gayfeather	}
Wooly Dalea	}
Silky Prairieclover	}
Indian Blanket	}
Prairie Dogbane	}
Lemon Scurfpea	}
Germander	}
Gilia Penstemon	}
Lemon Beebalm	}
Upright Prairie Coneflower	} 2-5
Plains Blackfoot	}
Paperflower	}
Smooth Four-o'clock	}
Ground Cherry	}
Hopitea Greenthread	}
Lanceleaf Sage	}
Hairy Goldaster	} 1-5
Wooly Gaura	}
Phlox Heliotrophe	}
Croton	}
Queensdelight	}
Southern Jointweed	}
Bipinnate Thistle	}
Western Ragweed	} 1-5
Annual Sunflower	}
Annual Wild buckwheat	}
Cocklebur	}
Cycloloma	}
Coriospermum	} 1-5

**HP-3
Draw Range**

This site is a lush, dense vegetation consisting of a mixture of mid and short grasses, forbs, and shrubs. Grasses are the most abundant component, followed by forbs. Although shrubs are the minor component, fourwing saltbrush, sand sagebrush, and small soapweed are quite visible. The relative ratio of components to each other is fairly constant with production from components varying in a parallel manner with moisture cycles excluding man-made disturbances and fire.

Draw Range Site

GRASSES		60-80%
Sideoats Grama		15-20
Vine Mesquite	}	
Western Wheatgrass	}	10-15
Blue Grama	}	
Halls Paspalum	}	7-10
White Tridens	}	
Arizona Cottontop	}	
Silver Bluestem	}	7-10
Buffalograss	}	
Creeping Muhly	}	3-5
Switchgrass	}	
Tobosa	}	
Plains Bristlegrass	}	
Sand Dropseed	}	
Little Bluestem	}	
Alkali Sacaton	}	15-20
Woody		1-5%
Sand Sagebrush	}	
Small Soapweed	}	
Fourwing Saltbrush	}	1-5
Forbs		5-20%
Globemallow	}	
Coneflower	}	
Upright Prairie Coneflower	}	
Scarlet Gaura	}	
Clammyweed	}	7-10
Ironweed	}	
Lemonweed	}	
Curlycup Gumweed	}	

Western Ragweed	}	
Hoarhound	}	3-5
Wavyleaf Thistle	}	
Silverleaf Nightshade	}	
Jimsonweed	}	
Buffalobur	}	
Cocklebur	}	3-5
Annual Sunflower	}	
Other Annual Forbs	}	2-5

**HP-3
High Lime Range**

This site is an aspect of a mixed short and mid-grass prairie. It is dominated by grasses such as the grammas, alkali sacaton, and buffalograss with small soapweed even distributed and scattered plants of fourwing saltbrush being noticeable. A few perennial forbs are present, and annual forb populations fluctuate considerably from year to year with amount and seasonal distribution of rainfall.

High Lime Range Site

GRASSES	75-85%
Black Grama }	
Sideoats Grama }	
Blue Grama }	50-55
Alkali Sacaton }	
Vine Mesquite }	
Buffalograss }	
Plains Bristlegrass }	
Little Bluestem }	10-15
Hairy Grama }	
Sand Dropseed }	
Tobosa }	7-10
Threeawns spp. }	
Ring Muhly }	1-2
Other Annual Grasses }	1-5
<hr/>	
Woody	7-10%
Small Soapweed	2-3
Winterfat	2
Fourwing Saltbrush	1
Mormon Tea	1
Broom Snakeweed	1-3
<hr/>	
Forbs	7-15%
Paperflower }	
Plains Blackfoot }	
Lemon Scurfpea }	
Indian Blanket }	
Scarlet Globemallow }	
Verbena }	
Penstemon }	
Dotted Gayfeather }	
Upright Prairie Coneflower }	5-7

Croton	}	
Western Ragweed	}	
Wavyleaf Thistle	}	
Lyreleaf Greeneye	}	
Trailing Fleabane	}	
Silverleaf Nightshade	}	
Threadleaf Groundsel	}	
Bladderpod	}	1-3
Texas Filaree	}	
Other Annual Forbs	}	1-5

**SD-1
Bottomland Range**

This site is an aspect of mid to tall grassland site with scattered shrubs. It may often appear as a monoculture site of giant sacaton and scattered fourwing saltbrush. Forbs are a minor component on this site. Trees may be scattered along the main stream channel.

Bottomland Range Site

GRASSES	80-95%
Giant Sacaton	45-55
Alkali Sacaton	15-20
Vine Mesquite	3-7
Galleta }	
Tobosa }	2-5
Blue Grama	2-5
Western Wheatgrass	0-7
Burrograss }	
Mat Muhly }	
Others }	3-7
Woody	5-15%
Fourwing Saltbrush }	
Shadscale }	5-12
Rubber Rabbitbrush }	
Apacheplume }	
Others }	0-5
Forbs	2-5%
Milkweed }	
Silverleaf Nightshade }	
Russian Thistle }	
Thistle }	
Others }	2-5

Other grasses that could appear on this site include: Cane Bluestem, Sideoats Grama, Feather Fingergrass, Skunkbush Sumac, Littleleaf Sumac, Kochia, Locoweed, and Globemallow.

Other woody plants include: Saltcedar, and Screwbean Mesquite.

**SD-1
Limestone Hills Range**

This site is a mixed grass-shrub complex on all exposures. Scattered juniper and pinon are common on the north and east slopes, giving a savannah aspect. Mid-grasses common to this site, such as curlyleaf muhly, and New Mexico feathergrass, influence the visual aspect of this site.

Limestone Hills Range Site

GRASSES	70-80%
Black Grama }	
Bush Muhly }	15-25
Sideoats Grama	5-15
Curlyleaf Muhly }	
Plains Lovegrass }	3-5
New Mexico Feathergrass }	
Needleandthread }	5-15
Blue Grama }	
Galleta }	
Hairy Grama }	
Slim Tridens }	
Indian Ricegrass }	10-12
Others	1-5
Woody	15-20%
Winterfat }	
Fourwing Saltbrush }	3-7
Mariola }	
Dalea spp. }	1-5
Sacahuista }	
Skunkbush Sumac }	
Littleleaf Sumac }	
Yucca spp. }	1-3
Oneseed Juniper }	
Pinyon }	0-3
Others	0-3
Forbs	3-7%
Wildbuckwheat }	
Bladderpod }	
Pickleleaf Dogweed }	
Cryptantha }	

Indian Paintbrush	}	
Plains Blackfoot	}	
Stemmy Hymenoxys	}	
Gilia	}	
Others	}	3-7

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Alkali Sacaton, Threeawns spp., Wolftail, Indian Ricegrass, New Mexico Muhly, Prairie Junegrass, Apacheplume, Shrub Live Oak, Broom Snakeweed, Rabbitbrush spp., Cactus spp., Leatherweed Croton, Globemallow, Plains Wallflower, and Zinnia.

**SD-1
Clayey Range**

This site is a grassland site that is strongly dominated by alkali sacaton. Shrubs are scattered about the site and a few oneseed juniper and pinyon trees are not uncommon. Forbs are a minor component on this site.

Clayey Range Site

GRASSES	80-90%
Alkali Sacaton	45-55
Galleta }	
Tobosa }	10-15
Blue Grama	5-10
Bottlebrush Squirreltail	5-8
Black Grama }	
Bush Muhly }	5-8
Indian Ricegrass }	
Dropseeds }	3-5
Vine Mesquite	1-5
Sideoats Grama	0-5
Others	2-5
Woody	5-15%
Fourwing Saltbrush }	
Shadscale }	5-10
Winterfat	1-3
Rubber Rabbitbrush }	
Skunkbush Sumac }	
Oneseed Juniper }	
Pinyon }	
Others }	0-3
Forbs	3-5%
Wildbuckwheat }	
Globemallow }	
Wooly Indian Wheat }	
Leatherweed Croton }	
Russian Thistle }	
Others }	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Cane Bluestem, Giant Dropseed, Ring Muhly, Burrograss, Broom Snakeweed, Yucca, Cactus spp., Russian Thistle, Milkweed, Silverleaf Nightshade, and Globemallow.

**SD-1
Swale Range**

This site is a grassland site with scattered shrubs throughout it. Trees are not commonly found on this site. Forbs are an important component on this site.

Swale Range Site

GRASSES	85-90%
Vine Mesquite	15-25
Tobosa }	
Galleta }	15-25
Alkali Sacaton }	
Giant Sacaton }	15-25
Blue Grama	7-12
Bottlebrush Squirreltail	5-8
Burrograss	1-3
Others	3-7
Woody	1-5%
Fourwing Saltbrush }	
Winterfat }	1-3
Littleleaf Sumac }	
Skunkbush Sumac }	
Apacheplume }	
Rubber Rabbitbrush }	
Others }	0-3
Forbs	1-5%
Broadleaf Milkweed }	
Russian Thistle }	
Silverleaf Nightshade }	
Leatherweed Croton }	
Scarlet Globemallow }	
Kochia }	
Threadleaf Groundsel }	
Others }	5-10

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Western Wheatgrass, Mat Muhly, Cane Bluestem, Sideoats

Gramma, Black Gramma, Indian Ricegrass, Broom Snakeweed, Yucca, Whorled Milkweed, Thistles, Verbena, and Spurge.

**SD-1
Hills Range**

This site is a variable depending on edaphic and physiographic features. Generally, this site is a mixed grassland-shrub complex with scattered trees, especially on north and east exposures.

Hills Range Site

GRASSES	65-80%
Black Grama	20-30
Sideoats Grama	5-15
Blue Grama	}
Hairy Grama	}
Galleta	} 5-15
Bush Muhly	}
New Mexico Muhly	} 3-7
New Mexico Feathergrass*	}
Needleandthread*	}
Bottlebrush Squirreltail*	} 1-5
Others	3-8
Woody	5-20%
Skunkbush Sumac	}
Littleleaf Sumac	}
Apacheplume	} 3-5
Sacahuista	}
Yucca spp.	}
Shrub Liveoak*	} 3-5
Fourwing Saltbrush	}
Shadscale	}
Winterfat	} 1-5
Oneseed Juniper	}
Pinyon	} 0-3
Others	1-5
Forbs	3-10%
Globemallow	}
Wildbuckwheat	}
Indian Paintbrush	}
Evening Primrose	}
Gilia	}
Bladderpod	}
Plains Blackfoot	}

Others

}

3-10

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Indian Ricegrass, Wolftail, Burrograss, Sand Dropseed, Spike Dropseed, Threeawn spp., Prairie Junegrass, Plains Lovegrass, Mariola, Dalea spp., Cactus spp., Mountain Mahogany*, Algerita*, Locoweed, Russian Thistle, and Woolly Indian-Wheat.

*More prevalent on cooler exposures.

**SD-1
Gyp Upland**

This site is a mixed grassland-shrub site with occasional shrubs, one seed juniper trees are scattered throughout the site. Forbs, such as coldenica and cryptantha species, are an important part of the site.

Gyp Upland Site

GRASSES	70-80%
Alkali Sacaton	25-35
Black Grama }	
Bush Muhly }	10-20
Gyp Grama }	
Blue Grama }	5-10
Galleta	5-10
Gyp Dropseed }	
Sand Dropseed }	
Spike Dropseed }	3-7
<hr/>	
Woody	5-15%
Fourwing Saltbrush	3-7
Mormon Tea	1-3
Winterfat	1-3
Bigelow Sagebrush }	
Mariola }	1-3
Gray Coldenia	1-3
Yucca Species }	
Others }	1-5
<hr/>	
Forbs	5-10%
Hairy Colderia }	
Yellow Mentzelia }	
Wild Buckwheats }	
Crytantha Species }	
Others* }	5-10

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Threeawns spp., Needleandthread, New Mexico Feathergrass, Ring Muhly, Mat Muhly, Sandhill Muhly, Burrograss, Fluffgrass, Tridens Species, Cliff Fendlerbrush, Cacti, Rabbitbrush, Broom Dalea, Sand Sagebrush,

Wolfberry, Threadleaf Groundsel, Globemallows, Trailing Four-O'Clock, Bladderpod,
and Pickleleaf Dogweed.

**SD-1
Deep Sand Range**

This site is a site that is dominantly a grassland site, with an appreciable amount of shrubs. The grasslands consist of a mixture of short, mid, and tall grasses. Annual grasses and forbs occur in relatively large amounts in years of above average growing conditions. When the plant community deteriorates, there is a marked increase of woody and succulent plants. Mesquite and juniper may invade the site. In severe deterioration of the vegetation, there will be active soil erosion resulting in denuded sand dunes.

Deep Sand Range Site

GRASSES	60%
Black Grama	15-20
Bush Muhly	12-15
Galleta	5-8
Sand Dropseed }	
Mesa Dropseed }	10-15
Spike Dropseed	3-5
Indian Ricegrass	20-25
Little Bluestem }	
Sideoats Grama }	10-15
Giant Dropseed }	
Sand Bluestem }	10-15
Sandhill Muhly	3-5
New Mexico Feathergrass }	
Needleandthread }	5-10
Woody	25%
Yucca	2-5
Pricklypear Cacti	2-5
Cholla	1-5
Sand Sagebrush	5-10
Mormon-Tea	1-3
Fourwing Saltbrush	2-5
Broom Dalea }	
Bush Mint }	1-3
Broom Snakeweed	2-5
Rubber Rabbitbrush }	
Broom Baccharis }	2-5
Forbs	2-5%
Buckwheat	2-5
Tumbleweed }	

Fiddleneck	}	
Kochia	}	3-5
Fleabane	}	
Desertsenna	}	
Verbena	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Tansymustard, Stickleleaf, Sixweeks Grama, Sand Muhly, Blue Grama, Globemallow, Foxtail Barely, Bottlebrush Squirreltail, Silverleaf Nightshade, Locoweed, Wooly Groundsel, Tumblegrass, Indian Paintbrush, and Threeawns spp.

**SD-1
Malpais Range**

This site is an aspect that is dominantly grassland, characterized by short and mid-grasses. Perennial shrubs, half shrubs, and forbs are a minor component of the plant community. Annual forbs are present in relatively large amounts, during spring and summer and in years of above average plant growing conditions. When the plant community deteriorates, there is marked increase in amounts of half shrubs and cacti.

Malpais Range Site

GRASSES	80%
Alkali Sacaton	10-15
Blue Grama	5-10
Bush Muhly	10-15
Indian Ricegrass	5-10
Sideoats Grama	10-15
New Mexico Muhly	2-5
Silver Bluestem	3-5
Tobosa	20-25
Hairy Tridens	3-5
Bottlebrush Squirreltail	5-10
Sand Dropseed	}
Mesa Dropseed	}
Spike Dropseed	} 5-10
Purple Threeawn	2-5
Black Grama	10-15
Woody	5-15%
Winterfat	1-3
Broom Snakeweed	2-5
Plains Pricklypear	}
Cholla	}
Christmastree Cacti	} 1-3
Soaptree Yucca	1-3
Pale Wolfberry	1-3
Fourwing Saltbrush	1-3
Forbs	15%
Western Ragweed	1-3
Tansymustard	1-3
Kochia	1-3
Buckwheat	2-5
Sunflowers	1-3

Tumbleweed

2-4

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Feather Fingergrass, Globemallow, Larkspur, Locoweed, Curlycup Gumweed, Desert Zinnia, Yerba-de-pasmo, Annual Brome, Groundsel, Sixweeks Fescue, Sixweeks Grama, and Pricklypoppy.

SD-1
Mesa Breaks Range

This site is a diverse plant community due to wide range in edaphic and physiographic features. Typically, the potential plant community is a shrub-grassland complex; scattered trees occur on north and east exposure.

Mesa Breaks Range Site

GRASSES	65-85%
Black Grama	15-25
Sideoats Grama	5-15
Blue Grama }	
Galleta }	5-15
Bush Muhly }	
Curlyleaf Muhly }	
New Mexico Muhly }	3-5
New Mexico Feathergrass }	
Needleandthread }	3-5
Gyp Dropseed }	
Hairy Grama }	
Indian Ricegrass }	
Alkali Sacaton }	
Tridens spp. }	
Others }	10-15
Woody	10-20%
Fourwing Saltbrush }	
Shadscale }	
Skunkbush Sumac }	
Shrub Liveoak }	3-7
Mariola }	
Dalea spp. }	
Mormon Tea }	
Bigelow Sagebrush* }	3-5
Sacahuista }	
Yucca spp. }	
Cactus spp. }	
Others }	3-5
Forbs	5-15%
Bladderpod }	
Desert Baileya }	
Pickleleaf Dogweed }	

Wildbuckwheat	}	
Hairy Coldenia*	}	
Gray Coldenia*	}	
Others	}	5-15

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Plains Lovegrass, Sandhill Muhly, Threeawn spp., Bottlebrush Squirreltail, Cane Bluestem, Vine Mesquite, Creosotebush, Pale Wolfberry, Algerita, Rabbitbrush spp., Broom Snakeweed, Globemallow, Cryptantha, Fleabane, and Arid Mustard.

*These species are an generally an indicator of, and most abundant on, gypsiferous soils within the site.

**SD-1
Gravelly Sand Range**

This site is a site that is dominantly grassland, characterized by short and mid-grasses. Perennial shrubs, half shrubs, and forbs are present in appreciable amounts. Annual forbs and grasses occur in relatively large amounts in years of above average growing conditions. When the plant community deteriorates, there is a marked increase in shrubs, half shrubs, and cacti. Mesquite often invades this site.

Gravelly Sand Range Site

GRASSES and GRASSLIKE	75%
Black Grama	30-40
Bush Muhly	10-15
Blue Grama	5-10
New Mexico Feathergrass }	
Needleandthread }	15-20
Bottlebrush Squirreltail	5-10
Sideoats Grama	5-10
Galleta	10-15
Threeawns spp.	2-8
Hairy Tridens	5-10
Rough Tridens	5-10
Sand Dropseed	2-8
Silver Bluestem	5-10
Indian Ricegrass	5-10
Woody	15%
Wolfberry }	
Yerba-de-pasmo }	2-5
Broom Snakeweed	2-5
Winterfat	3-8
Range Ratany	2-5
Cholla }	
Plains Pricklepear }	1-3
Forbs	10%
Fiddleneck	0-2
Stickleaf	0-2
Groundsel	0-2
Buckwheat	0-3
Kochia	0-2
Locoweed	0-3
White Horsenettle	0-2

Fleabane

1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Fluffgrass, Ring Muhly, Desertsenna, Globemallow, Pricklypoppy, and Sixweeks Grama.

A micro-site within this site may have creosotebush as 10% of the total composition.

SD-1
Salty Bottomland Range

This site is a shrub-grass mixture characterized by fourwing saltbrush and greasewood. Tall, mid-grasses, and short-grasses are present. Mid- and short-grasses are dominant. Annual and perennial forbs are always present in varying amounts. When the plant community deteriorates, there is a definite increase in amounts of shrubs and short-grasses.

Salty Bottomland Range Site

GRASSES and GRASSLIKE	65%
Giant Sacaton	15-20
Alkali Sacaton	30-40
Vine Mesquite	5-10
Inland Saltgrass	15-20
Tobosa	5-10
Burrograss	2-5
Mat Muhly	2-5
Sedges	2-5
Woody	25%
Fourwing Saltbrush	10-20
Shadscale	5-10
Greasewood	5-15
Rubber Rabbitbrush	3-5
Forbs	10%
Iodinebush	2-5
Tumbleweed	3-5
Western Ragweed	3-5
Kochia	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Blue Grama, Sedges, Foxtail, Tansymustard, Dropseeds (Sand, Spike, and Giant), and Feather Fingergrass.

**SD-1
Loamy Range**

This site is a site that is dominantly a grassland site that is characterized by short grasses. Perennial shrubs, half shrubs, and forbs are a minor component of the plant community. Annual forbs are present in relatively large amounts during spring and summer in years of above average plant growing conditions. When the plant community deteriorates, there is a marked increase in amounts of half shrubs, forbs, and cacti.

Loamy Range Site

GRASSES and GRASSLIKE	80%
Black Grama	30-40
Bush Muhly	10-20
Galleta	10-20
Bottlebrush Squirreltail	2-10
Threeawns spp.	2-10
Indian Ricegrass	5-10
Blue Grama	5-10
Sand Dropseed }	
Spike Dropseed }	
Mesa Dropseed }	1-5
Silver Bluestem	1-5
Woody	5%
Fourwing Saltbrush	0-5
Winterfat	2-5
Mormon Tea	1-3
Broom Snakeweed	2-5
Plains Pricklypear }	
Cholla }	2-3
Forbs	15%
Buckwheat	1-5
Russian Thistle	1-3
Western Ragweed	1-3
Kochia	1-5
Tansymustard	1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Fluffgrass, Ring Muhly, Fiddleneck, Verbena, Fleabane, Desertsenna, Woolly Groundsel, Locoweed, Mentzelia, Globemallow, Pricklypoppy, Wolfberry, Hoffmanseggia, Broom Baccharis, Yerba-de-pasmo, and Sixweeks Grama.

**SD-1
Sandy Range**

This site is a site that is dominantly a grassland site that is characterized by short grasses. Perennial shrubs, half shrubs, and forbs are a minor component of the plant community. Annual forbs are present in appreciable amounts, during spring and summer in years of above average plant growing conditions.

Sandy Range Site

GRASSES and GRASSLIKE	70%
Black Grama	40-60
Sand Dropseed }	
Spike Dropseed }	
Mesa Dropseed }	5-15
Indian Ricegrass	10-20
Galleta	5-15
Threeawns spp.	5-10
New Mexico Feathergrass }	
Needleandthread }	5-10
Blue Grama	5-10
Sand Muhly	3-5
Bush Muhly	5-10
Ring Muhly	3-5
Woody	10%
Sand Sagebrush	1-10
Winterfat	1-5
Mormon Tea	1-5
Broom Snakeweed	2-5
Cholla Cacti }	
Pricklypear Cacti }	2-5
Fourwing Saltbrush	1-5
Yucca	1-5
Forbs	20%
Buckwheat	1-3
Tansymustard	1-3
Tumbleweed	1-5
Fiddleneck	1-2
Western Ragweed	1-3
Verbena	1-2
Fleabane	1-3

Desert Senna	1-3
Kochia	1-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Indian Paintbrush, Foxtail Barley, Tumblegrass, Bottlebrush Squirreltail, Stickleleaf, Silverleaf Nightshade, Woolly Groundsel, Fluffgrass, Sixweeks Grama, and Globemallow.

**SD-2
Gravelly Range**

This site is a soil limiting, mixed shrub-grassland ecosystem dominated by short and occasionally mid-grasses and drought-tolerant desert shrub such as creosotebush and tarbush. The vegetation occurs naturally in thin stands with somewhat depressed “micro-sites” supporting a greater abundance of mid-grasses. Where exposure is a factor, north slopes tend to be more grassy, while south slopes are characterized more by shrubs.

Gravelly Range Site

GRASSES and GRASSLIKE	50-65%
Bush Muhly }	
Black Grama }	15-20
Cane Bluestem }	
Plains Bristlegrass }	
Arizona Cottontop }	5-10
Perennial Threeawns	1-5
Burrograss	1-3
Slim Tridens }	
Spike Pappusgrass }	1-5
Fluffgrass }	
Sand Dropseed }	
Annual Grasses }	1-5
Woody	30-35%
Creosote Bush	15-20
Mariola	3-5
Range Ratany }	
Yerba-de-pasmo }	1-3
Allthorn }	
Tarbush }	
Littleleaf Sumac }	1-5
Whitethorn }	
Cacti }	1-2
Broom Snakeweed	1-2
Condalia spp. }	
Longleaf Ephedra }	1-3
Winterfat	1-5
Forbs	5-10%
Wild Buckwheat }	
Croton }	
Globemallow }	

Desert Holly	}	
Wooly Paperflower	}	5-10
Other Annuals	}	
Other Perennials	}	1-5

**SD-2
Deep Sand Range**

This site is a grassland ecosystem, dominated by short and mid-grasses mixed with shrubs and half shrubs. It is characterized by short lived perennials such as dropseed, which fluctuate greatly with good and bad years. Forb composition also fluctuates substantially with very high concentration of annuals such as tansymustard, occurring when moisture conditions are right.

Deep Sand Range Site

GRASSES and GRASSLIKE		65-75%
Mesa Dropseed	}	
Sand Dropseed	}	
Spike Dropseed	}	20-25
Giant Dropseed		30-35
Black Grama		5-10
Bush Muhly		1-5
Plains Bristlegrass		1-5
Threeawns	}	
Fluffgrass	}	1-3
Annual Grasses		1-3
Woody		15-20%
Sand Sagebrush	}	
Yucca	}	
Broom Dalea	}	5-10
Fourwing Saltbrush	}	
Littleleaf Sumac	}	1-5
Broom Snakeweed		1-5
Cacti	}	
Longleaf Ephedra	}	1-5
Forbs		10-15%
Desert Holly	}	
Wooly Indian-Wheat	}	1-3
Bladderpod	}	
Euphorbia spp.	}	
Filaree	}	
Spectacle Pod	}	
Wild Buckwheat	}	
Tansymustard	}	1-3
Blanketflower	}	
Globemallow	}	

Wooly Paperflower	}	3-5
Other Annuals	}	
Other Perennials	}	1-5

**SD-2
Loamy Range**

This site is a grassland aspect that is characterized by short and mid-grasses. Black grama is the dominant species. Bush muhly, tobosa, burrograss, threeawns, and sand dropseed also occur in significant amounts. Forbs include globemallow, desert baileya, croton and desert holly. Soap tree yucca, longleaf ephedra, and fourwing saltbrush are the principle shrubs.

Loamy Range Site

GRASSES and GRASSLIKE		75-85%
Black Grama		20-30
Bush Muhly		5-10
Blue Grama		0-5
Burrograss	}	
Threeawns spp.	}	3-8
Ring Muhly	}	
Fluffgrass	}	1-5
Sand Dropseed	}	
Mesa Dropseed	}	5-10
Tubosa		10-15
Alkali Sacaton		5-10
Cane Bluestem	}	
Plains Bristlegrass	}	
Arizona Cottontop	}	1-5
Annual Grasses		1-3
Woody		5-15%
Soap tree Yucca	}	
Longleaf Ephedra	}	1-10
Fourwing Saltbrush	}	
Broom Snakeweed	}	
Cacti	}	1-3
Forbs		5-10%
Globemallow	}	
Desert Baileya	}	
Croton	}	
Annual Buckwheat	}	
Desert Holly	}	
Filaree	}	1-5
Woolly Indian-Wheat	}	
Rayless Goldenrod	}	

Scorpion Weed	}		1-3
Russian Thistle		}	
Threadleaf Groundsel		}	
Astragalus spp.			1-3
Other Annuals	}		
Other Perennials	}		1-5

SD-2
Shallow Sandy Range

This site is an open grassland ecosystem dominated by black grama. Dropseeds, threeawns, perennials and annual forbs, scattered shrubs and half shrubs are associated on this site.

Shallow Sandy Range Site

GRASSES and GRASSLIKE	75-80%
Black Grama	40-50
Bush Muhly	1-5
Mesa Dropseed	}
Sand Dropseed	}
Tobosa	10-15
Threawns spp.	1-5
Fluffgrass	3-5
Plains Bristlegrass	1-3
Blue Grama	1-3
Annual Grasses	0-5
	1-3
Woody	10-15%
Broom Snakeweed	1-3
Fourwing Saltbrush	1-3
Soaptree Yucca	}
Longleaf Ephedra	}
Winterfat	1-5
	3-8
Forbs	5-10%
Desert Bailey	}
Wooly Paperflower	}
Croton	}
Filaree	}
Desert Holly	}
Wild Buckwheat	}
Russian Thistle	}
Horsetail Milkweed	5-10
Locoweed	}
Threadleaf Groundsel	}
Other Annuals	1-3
Other Perennials	}
	1-5

**SD-2
Sandy Range**

This site is a grassland aspect, which is characterized by short and mid-grasses. Black grama is the dominant species. Appreciable amounts of the dropseeds, threeawns, and bush muhly also occur. Soap tree yucca and longleaf ephedra are the principal shrub species. Broom snakeweed comes and goes with good and bad years and as the plant community deteriorates from its potential. Mesquite invades readily.

Sandy Range Site

GRASSES and GRASSLIKE		70-75%
Black Grama		5-10
Mesa Dropseed	}	
Sand Dropseed	}	
Spike Dropseed	}	20-25
Bush Muhly		1-5
Plains Bristlegrass		1-5
Arizona Cottontop		
Cane Bluestem		
Tobosa		
Threeawns	}	
Fluffgrass	}	1-3
Annual Grasses		1-3
Blue Grama		
Woody		10-15%
Soap tree Yucca	}	
Longleaf Ephedra	}	5-10
Sand Sagebrush	}	
Fourwing Saltbrush	}	
Winterfat	}	
Broom Dalea	}	1-5
Cacti		1-3
Broom Snakeweed		1-3
Forbs		10-15%
Croton	}	
Wild Buckwheat	}	
Globemallow	}	
Euphorbia spp.	}	3-5
Spectacle Pod	}	
Desert Bailey	}	
Filaree	}	3-5
Threadleaf Groundsel	}	

Desert Holly	}	
Astragalus spp.	}	
Horsenettle	}	
Russian Thistle	}	
Lambquarters	}	
Tansymustard	}	1-3
Other Annuals	}	
Other Perennials	}	1-5

**SD-2
Draw Range**

This site is a grassy swale dominated by mid grasses, rhizomatous and stoloniferous short grasses, and some tall grasses. It may, in some instances, have a component of shrubs and trees (such as desert willow) that are both dominant in stature and natural to the site, where occasional deeper soil wetting occurs. Substantial amounts of woody species beyond an “aspect” sort of dominance usually represents an abnormal increase or an invasion of these plants, however. Both numbers and kinds of forbs are quite variable and are dependent upon moisture and temperature conditions at any given time. Mesquite may be considered to have become naturalized to the site in minor amounts.

Draw Range Site

GRASSES and GRASSLIKE	80-90%
Tobosa	50-60
Vine Mesquite	}
Alkali Sacaton	}
Cane Bluestem	}
Arizona Cottontop	}
Sideoats Grama	}
Borrograss	}
Mat Muhly	}
Plains Bristlegrass	}
Feather Fingergrass	}
Threeawns spp.	}
Others	1-5
	1-3
Woody	5-10%
Littleleaf Sumac	}
Desert Willow	}
Condalia spp.	}
Catclaw Mimosa	}
Whitethorn	}
Allthorn	}
Mesquite	}
Fourwing Saltbrush	}
Broom Snakeweed	}
	3-8
	1-3
Forbs	5-10%
Globemallow	}
Verbena	}
Scorpionweed	}

Desert Holly	}	
Wooly Indian-Wheat	}	1-3
Others		3-8

**SD-2
Bottomland Range**

This site is a tall grass ecosystem dominated by giant sacaton. Tobosa, vine mesquite, alkali sacaton, and cane bluestem are associated species, with burrograss, mat muhly, and feather fingergrass typically present in lesser amounts. Forbs and shrubs occur in minor amounts when the site is at its potential.

Bottomland Range Site

GRASSES and GRASSLIKE		85-95%
Giant Sacaton	}	
Alkali Sacaton	}	70-80
Tobosa		1-5
Vine Mesquite		3-5
Borrograss	}	
Threeawns spp.	}	
Feather Fingergrass	}	
Mat Muhly	}	
Other Annuals	}	3-5
Cane Bluestem	}	
Sideoats Grama	}	
Arizona Cottontop	}	
Plains Lovegrass	}	3-5
Woody		1-5%
Soaptree Yucca	}	
Longleaf Ephedra	}	
Fourwing Saltbrush	}	
Broom Snakeweed	}	
Allthorn	}	
Littleleaf Sumac	}	1-5
Forbs		5-10%
Desert Holly	}	
Astragalus spp.	}	
Croton	}	
Russian Thistle	}	
Wild Buckwheat	}	
Bladderpod	}	1-5
Others		1-5

**SD-2
Limy Range**

This site is a grassland aspect, with some shrubs and half shrubs and characteristically fluctuating stand of forbs. The dominant plants are short, drought-tolerant, stoloniferous or bunch grasses. Forbs, though comprising a comparable share of the plant community with shrubs and half shrubs, are the least noticeable component of the potential plant community throughout most of the year.

Limy Range Site

GRASSES and GRASSLIKE		65-75%
Black Grama		30-40
Bush Muhly		5-10
Sand Dropseed		3-8
Plains Bristlegrass	}	
Cane Bluestem	}	
Arizona Cottontop	}	1-5
Tobosa		1-5
Threeawns spp.	}	
Borrograss	}	5-10
Fluffgrass		1-5
Annual Grasses		1-3
Other Perennials		1-3
Woody		13-18%
Creosotebush	}	
American Tarbush	}	1-5
Allthorn		1-3
Mariola	}	
Range Ratany	}	1-3
Soaptree Yucca		1-3
Fourwing Saltbrush		1-3
Broom Snakeweed	}	
Ephedra	}	1-3
Winterfat		1-3
Forbs		10-15%
Paperflower	}	
Desert Holly	}	
Wild Buckwheat	}	
Spectaclepod	}	
Russian Thistle	}	
Croton	}	3-5

Other Annuals	}	
Other Perennials	}	5-10

**SD-2
Limestone Hills Range**

This site is a mixed grassland and shrubs with a showy amount of mid-grasses to be seen along with sometimes surprisingly productive short grasses due to favorable moisture and temperature conditions, especially on north facing slopes. Forbs are a minor component of the potential plant community, although shrubs and half shrubs occur in significant amounts to both livestock and wildlife. Shrubs and cacti are usually more prevalent on south facing slopes.

Limestone Hills Range Site

GRASSES and GRASSLIKE	70-80%
Black Grama	30-35
Bush Muhly }	
Curlyleaf Muhly }	15-20
Blue Grama }	
Sideoats Grama }	5-10
Plains Bristlegrass }	
Plains Lovegrass }	
Green Sprangeltop }	
Cane Bluestem }	5-10
Arizona Cottontop }	
Tanglehead }	
New Mexico Feathergrass }	1-5
Threeawns spp. }	
Rough Tridens }	
Slender Tridens }	
Tobosa }	
Fluffgrass }	1-5
Other Perennials }	
Annuals }	1-3
<hr/>	
Woody	15-20%
Ocotillo }	
Sacahuista }	3-8
Feather Dalea }	
Wright Lippia }	
Apacheplume }	
Littleleaf Sumac }	1-5
Agave }	
Sotol }	
Yucca }	1-5
Mariola }	
Range Ratany }	1-5

Broom Snakeweed	1-3
Other Cacti	1-3

Forbs	5-10%
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Wild Buckwheat	}	
Wooly Indian-Wheat	}	
Blanket Flower	}	1-5
Other Annuals	}	
Other Perennials	}	5-10

**SD-2
Clayey Range**

This site is a grassland aspect, dominated by mid-grasses and short grasses that can take advantage of soils with high water holding capabilities. Shrubs, half-shrubs, and cacti are sparsely scattered. Forbs are a minor component of the potential plant community.

Clayey Range Site

GRASSES and GRASSLIKE	80-90%
Tobosa	35-40
Black Grama	10-15
Alkali Sacaton	5-15
Borrograss	5-10
Vine Mesquite	0-5
Threeawns spp.	1-5
Mat Muhly	1-5
Cane Bluestem	1-3
Sideoats Grama	0-3
Others	1-3
Woody	5-10%
Cacti	1-3
Broom Snakeweed	1-3
Fourwing Saltbrush	}
Allthorn	}
Condalia spp.	1-5
Other native shrubs and half-shrubs	1-3
Forbs	5-10%
Desert Holly	}
Croton	}
Russian Thistle	}
Bladderpod	}
Astragalus	5-8
Other	1-5

**SD-2
Gyp Upland Range**

This site is a patchy, short grass grassland with patches of bare or lichen covered soil surface exposed between patches of vegetation. The potential plant community is dominated by short and mid-grasses and forbs, with half shrubs and shrubs sparsely and evenly distributed. Vegetative ground cover is sparse. Vegetation varies considerably with soil depth and amount of gypsum outcrop. Where there is little or no soil depth only rough coldenia may be present.

Gym Upland Range Site

GRASSES and GRASSLIKE	60-80%
Alkali Sacaton	15-20
Black Grama }	
Gyp Grama }	30-35
Plains Bristlegrass }	
Bush Muhly }	
Bristle Panicum }	3-5
Gyp Dropseed }	
Sand Dropseed }	
Blue Grama }	5-10
Threeawns spp. }	
Ear Muhly }	
Burrograss }	
Fluffgrass }	5-10
Woody	5-15%
Fourwing Saltbrush }	
Mormon tea }	
Littleleaf Sumac }	3-7
Spiny Allthorn }	
Knifeleaf Condalia }	
Common Javelinabush }	1-3
Creosotebush }	
Tesajo Cactus }	1-3
Soaptree Yucca }	
Small Soapweed }	
Redjoint Pricklypear }	1-3
Forbs	10-25%
Coldenia	5-10
Nama }	
Leatherweed Croton }	

Paperflower	}	
Threadleaf Groundsel	}	
Hopitea Greenthread	}	1-5
Penstemon	}	
Wooly Gaura	}	
Trailing Four O'Clock	}	
Scorpionweed	}	
Skunk Daisy	}	
Milkwort	}	
Halfshrub Sundrop	}	3-5
Coreopsis	}	
Stickleaf	}	
Gyp Buckwheat	}	
Devils Claw	}	
Other Annual Forbs	}	1-5

**SD-2
Gyp Hills Range**

This site is a that of a rough, broken badlands, sparsely vegetated and highly dissected. There is more of the surface area compromised of bare ground and rock than that which is vegetated. The map delineations of this site are in actuality a complex of bare ground, rock outcrop, a few deep soil pockets in cracks and fissures of the bed rock, and areas of very shallow soils. The vegetation on the very shallow soil areas is dominated by rhizomatous and stoloniferous short grasses and forbs. Shrubs and half shrubs are apparent and rather unevenly distributed. The potential plant community varies somewhat with depth of soil, exposure, and slope. Large bare areas with only surface lichens are common. Where there is little or no soil over the gypsum material, only rough coldenia may be present.

Gym Hills Range Site

GRASSES and GRASSLIKE		30-50%
Gyp Grama	}	
Black Grama	}	20-30
Gyp Dropseed	}	
Bristle Panicum	}	10-15
Threeawns spp.	}	
Fluffgrass	}	1-5
Woody		15-25%
Littleleaf Sumac	}	
Fourwing Saltbrush	}	5-10
Spiny Allthorn	}	
Knifefleaf Condalia	}	5-7
Soaptree Yucca	}	
Algerita	}	
Creosotebush	}	3-5
Prickleleaf Dogweed	}	
Cactus	}	1-3
Forbs		30-50%
Coldenia		15-25
Nama	}	
Flax	}	
Stickleaf	}	
Scorpionweed	}	
Threadleaf Groundsel	}	5-10
Penstemon	}	
Wooly Gaura	}	

Paperflower	}	
Devils Claw	}	
Halfshrub Sundrop	}	5-10
Gyp Buckwheat	}	
Other Annual Forbs	}	1-5

SD-2
Salt Meadow Range

This site is a wet, grassy meadow. This site is characterized by plants tolerant to saline or alkaline and to wet soil conditions. Alkali sacaton, inland saltgrass, salt cedar, and such native shrubs as screwbean mesquite (Tornillo), arrowweed, and seepwillow are the dominant plant species. Seepweed and various rushes and sedges may also be common. Because of high water table conditions, production on this site is affected by normal fluctuations in rainfall from year to year than are other sites.

Salt Meadow Range Site

GRASSES and GRASSLIKE	60-70%
Alkali Sacaton }	
Giant Sacaton }	30-40
Inland Saltgrass	10-15
Sedges }	
Rushes }	5-10
Vine Mesquite	1-5
Common Reed	1-3
Tobosa	1-3
Others	1-5
Woody	20-25%
*Salt Cedar	5-10
Screwbean Mesquite }	
Pickleweed }	
Seepwillow }	
Iodinebush }	8-12
Salix spp. }	
Arrowweed }	1-5
Cottonwood Seedlings	0-3
Forbs	10-15%
Seepweed	3-8
Others	5-10

*Introduced plant, appearing to have become naturalized on this site.

SD-2
Salty Bottomland Range

This site is a grassland site having noticeable shrubs evenly distributed. This site is characterized by salt-tolerant grasses and shrubs such as alkali sacaton, and fourwing saltbrush. Additional species representative of the site at its potential may include vine mesquite, tobosa, burrograss, and inland saltgrass. Other Atriplex species, seepweed, and iodinebush may also be present in significant amounts.

Salty Bottomland Range Site

GRASSES and GRASSLIKE		75-85%
Alkali Sacaton		35-40
Giant Sacaton		5-10
Tobosa		5-10
Vine Mesquite		5-10
Mat Muhly	}	
Inland Saltgrass	}	
Burrograss	}	5-10
Others		5-10
Woody		10-15%
Fourwing Saltbrush	}	
Other Atriplex species	}	3-8
Iodinebush		3-5
Winterfat		0-3
Sueda	}	
Iva	}	1-5
Others		0-1
Forbs		5-10%
Desert Holly	}	
Russian Thistle	}	
Threadleaf Groundsel	}	
Seepweed	}	3-8
Other Annuals		1-3
Other Perennials		1-5

**SD-2
Salt Flats Range**

This site is a grassland site that is dotted with shrubs and half shrubs. Alkali sacaton, various Atriplex species, and vine mesquite characterize this site. Where soils are strongly or very strongly saline or alkali-affected, iodine bush, seepweed, inland saltgrass, and small Atriplex species are more noticeable.

Salt Flats Range Site

GRASSES and GRASSLIKE	60-70%
Alkali Sacaton	35-45
Vine Mesquite	3-8
Black Grama	1-5
Plains Bristlegrass }	
Cane Bluestem }	
Giant Sacaton }	
Dropseed }	3-8
Inland Saltgrass	1-5
Threeawns spp. }	
Burrograss }	
Fluffgrass }	
Tobosa }	3-8
Other Grasses	1-3
Woody	20-25%
Fourwing Saltbrush	3-8
Other Atriplex species }	
Iodinebush }	8-12
Allthorn	1-3
Broom Snakeweed	1-3
Baccharis spp. }	
Mormon Tea }	1-3
Forbs	5-15%
Rayless Goldenrod }	
Desert Holly }	
Haplopappus spp. }	
Coldenia }	
Seepweed }	3-8
Other Annuals	1-5
Other Perennials	1-5

SD-2
Gravelly Sand Range

This site is a site that is dominated by drought-tolerant grasses and shrubs. Ground cover is sparse and litter accumulates slowly, relative even to other semi-arid sites.

Gravelly Sand Range Site

GRASSES and GRASSLIKE	60-65%
Mesa Dropseed	}
Sand Dropseed	} 20-25
Black Grama	10-15
Bush Muhly	10-15
Fluffgrass	5-10
Threeawns spp.	1-5
Plains Bristlegrass	0-3
Six Weeks Grama	1-5
Other native perennials and annuals	1-3
<hr/>	
Woody	15-25%
Creosotebush	10-15
Longleaf Ephedra	1-3
Yucca	1-5
Fourwing Saltbrush	1-5
Mariola	1-3
Broom Snakeweed	1-3
Apacheplume	1-5
Range Ratany	1-3
Broom Dalea	1-5
<hr/>	
Forbs	15-20%
Tansymustard	}
Russian Thistle	}
Desert Holly	}
Wooly Paperflower	}
Croton	}
Scorpion Weed	} 5-10
Other Annuals	}
Other Perennials	} 5-10

**SD-2
Hills Range**

This site is a complex of plant communities primarily dictated by the direction of the slope and depth of soil. North facing slopes are mixed grasslands and shrubs with good production of mid and short grasses. South slopes have lower overall production, and are more typically characterized by shrubs.

Hills Range Site

GRASSES and GRASSLIKE		65-75%
Black Grama		25-30
Bush Muhly		10-15
Blue Grama	}	
Sideoats Grama	}	10-15
Threeawns spp.		1-3
Tobosa		1-5
New Mexico Feathergrass		1-3
Arizona Cottontop	}	
Green Sprangletop	}	
Plains Lovegrass	}	
Cane Bluestem	}	
Tanglehead	}	5-10
Halls Panicum	}	
Tridens spp.	}	1-3
Others		1-5
Woody		20-25%
Yucca	}	
Sotol	}	
Agave	}	
Ocotillo	}	8-12
Sacahuista		1-3
Fourwing Saltbrush		1-3
Littleleaf Sumac	}	
Shrub Liveoak	}	1-5
Juniper		0-3
Feather Dalea		1-3
Broom Snakeweed		1-3
Forbs		5-10%
Woolly Indian-Wheat	}	
Globemallow	}	
Wild Buckwheat	}	1-5

Others

3-8

**SD-2
Gravelly Loam Range**

This site is a that of a grassland aspect, characterized by short and mid-grasses and dominated by black grama. Yucca, stool, and agave are highly noticeable components of the landscape. Forbs are least noticeable, except when such plants as desert bailey are in flower.

Gravelly Loam Range Site

GRASSES and GRASSLIKE	75-85%
Black Grama	30-35
Bush Muhly	10-15
Sideoats Grama }	
Blue Grama }	1-5
Arizona Cottontop }	
Cane Bluestem }	10-15
Plains Bristlegrass	3-5
Threeawns spp.	5-10
Tobosa	5-10
Others	1-3
Woody	10-15%
Winterfat	1-5
Yucca }	
Sotol }	
Agave }	
Ocotillo }	1-5
Sacahuista	0-3
Creosotebush }	
Whitethorn }	
Catclaw Mimosa }	
Broom Snakeweed }	1-3
Cacti	1-3
Feather Dalea	1-3
Forbs	5-10%
Wild Buckwheat }	
Desert Holly }	
Desert Baileya }	
Wooly Paperflower }	
Stickleaf }	
Wooly Indian-Wheat }	3-8
Others	1-5

SD-2
Shallow Range

This site is a site that is characterized by short and mid-grasses. The aspect of this site is a grassland with a good scattering of shrubs. The forb composition fluctuates widely from year to year and from season to season.

Shallow Range Site

GRASSES and GRASSLIKE	60-70%
Black Grama	20-30
Sideoats Grama	15-20
Blue Grama }	
Hairy Grama }	15-20
Bush Muhly	5-10
Cane Bluestem	3-5
Sand Dropseed	5-10
Hairy Tridens	3-5
Ear Muhly	1-3
New Mexico Feathergrass	1-3
Fluffgrass	1-3
Other Grasses	3-5
Woody	20-30%
Littleleaf Sumac	1-3
Creosotebush	1-3
Range Ratany	1-3
Common Javelinabush	1-3
American Tarbush	1-3
Spiny Allthorn	1-3
Mesquite	2-5
Catclaw Mimosa	1-3
Cactus	1-3
Mariola	2-5
Broom Snakeweed	1-3
Other Shrubs	3-5
Forbs	5-10%
Stemless Actinea	2-5
Wooly Groundsel	1-3
Globemallow	1-3
Bladderpod	1-3
Senna	1-3
Other Forbs	2-5

Other grasses that could appear on this site would include: Vine Mesquite, Silver Bluestem, Burrograss, Spike Dropseed, Threeawns, Tobosa, Muhlys, Arizona Cottontop, and Plains Bristlegrass.

Other woody plants include: Condalia, Tesajo Cactus, Apacheplume, Wolfberry, Cactus, Ephedra spp., Yucca, Winterfat, and Fourwing Saltbrush.

Other forbs include: Desert Zinnia, Wooly Paperflower, Prickleaf Dogweed, Verbena, Deerstongue, Croton, and Wright's Buckwheat.

**SD-2
Malpais Range**

This site is a site that is dominated by grasses, such as black grama, sideoats grama, bush muhly, and blue grama. Although varied mixtures of shrubs and half-shrubs may be present (such as apacheplume, condalia, littleleaf sumac, fourwing saltbrush, and winterfat), these are mainly noticeable as visual aspect species and do not make up an appreciable percentage of the composition by air-dry weight.

Malpais Range Site

GRASSES and GRASSLIKE	70-80%
Black Grama	20-25
Sideoats Grama	10-15
Bush Muhly	5-10
Blue Grama	5-10
Vine Mesquite	0-3
Curly Mesquite }	
Tobosa }	3-8
Plains Lovegrass }	
Green Sprangletop }	
Cane Bluestem }	
Arizona Cottontop }	
Tanglehead }	10-15
Threeawns spp. }	
Tridens spp. }	
Plains Bristlegrass }	3-8
Halls Panicum	3-8
Others	0-3
Woody	15-20%
Fourwing Saltbrush	3-5
Apacheplume }	
Condalia spp. }	
Littleleaf Sumac }	3-5
Yucca }	
Sotol }	
Agave }	1-5
Cacti	0-1
Winterfat	0-3
Broom Snakeweed }	
Others }	1-3
Forbs	3-8%

Annuals	1-5
Perennials	1-3

**SD-3
Gravelly Range**

This site is a site that is dominated by bunch and stoloniferous short and mid-grasses, which are drought tolerant. Shrubs and half shrubs are scattered and evenly distributed. Forb production varies constantly from year to year and season to season.

Gravelly Range Site

GRASSES and GRASSLIKE	65-75%
Black Grama	25-35
Bush Muhly	5-10
Sideoats Grama	5-10
Arizona Cottontop	}
Cane Bluestem	}
Blue Grama	5-10
Plains Bristlegrass	2-5
Threeawns spp.	2-5
Tobosa	2-5
Sand Dropseed	5-10
Ear Muhly	2-5
Tridens spp.	2-5
Other Grasses	5-10
Woody	15-20%
Littleleaf Sumac	1-3
Catclaw Mimosa	1-3
Creosotebush	2-5
Ephedra spp.	1-3
American Tarbrush	1-2
Winterfat	3-5
Fourwing Saltbrush	3-5
Yucca spp.	1-3
Cactus	2-5
Sacahuista	2-5
Other Shrubs	2-5
Forbs	5-10%
Leatherweed Croton	1-3
Wooly Groundsel	1-3
Wrights Buckwheat	2-5
Globemallow	1-3
Other Forbs	2-5

Other grasses that could appear on this site would include: Hairy Grama, Spike Dropseed, Burrograss, Fluffgrass, Vine-Mesquite, New Mexico Feathergrass, Silver Bluestem, and Ring Muhly.

Other woody plants include: Common Javalinabush, Spiny Allthorn, Condalia, Range Ratany, Broom Snakeweed, Mariola, Tesajo Cactus, Desert Willow, Apacheplume, and Wolfberry.

Other forbs include: Bladderpod, Senna, Desert Zinnia, Wooly Paperflower, Prickleaf Dogweed, Stemless Actinea, Verbena, and Deerstongue.

SD-3
Shallow Sandy Range

This site is a grassland site that is sparsely dotted with shrubs. Black grama is the dominant plant, both in aspect and composition. Some mid-grasses and perennial forbs occur. Forb production fluctuates widely from year to year and season to season.

Shallow Sandy Range Site

GRASSES and GRASSLIKE		75-85%
Black Grama		50-60
Bush Muhly		5-10
Blue Grama		5-10
Sideoats Grama		3-5
Mesa Dropseed	}	
Spike Dropseed	}	
Sand Dropseed	}	5-10
Threeawns spp.		2-5
Plains Bristlegrass	}	
Arizona Cottontop	}	5-10
Hooded Windmillgrass	}	
Field Sandbur	}	5-10
Other Grasses		3-5
Woody		5-10%
Common Javelinabush		1-3
Yucca spp.		1-3
Ephedra spp.	}	
Range Ratany	}	1-3
Feather Dalea		1-3
Broom Snakeweed		1-3
Other Shrubs		3-5
Forbs		10-15%
Leatherweed Croton	}	
Cutleaf Haplopappus	}	2-5
Wooly Groundsel	}	
Threadleaf Groundsel	}	2-5
Half-Shrub Sundrop		1-3
Other Forbs		1-3

Other grasses that could appear on this site would include: Six Weeks Grama, Fluffgrass, False-Buffalograss, Hairy Grama, Little Bluestem, Bristle Panicum, Cane Bluestem, Indian Ricegrass, Tridens spp., and Red Lovegrass.

Other woody plants include: Prickelypear, Cholla, Fourwing Saltbrush, Catclaw Mimosa, Winterfat, American Tarbrush, and Mesquite.

Other forbs include: Globemallow, Verbena, Desert Holly, Senna, Plains Blackfoot, Trailing Fleabane, Fiddleneck, Deerstongue, Woolly Indianwheat, and Locoweed.

**SD-3
Loamy Sand Range**

This site is a site of grassland aspect. It is dominated by mid-grasses where shrubs are sparse and evenly dispersed. The under story is made up of short grasses and an abundant variety of annual and perennial forbs. The annual grass and forb population fluctuates considerably from year to year with annual and seasonal variation in amount of moisture and seasonal distribution of moisture. The perennial grass and forb population, although it fluctuates, does not fluctuate as much as the annuals.

Loamy Sand Range Site

GRASSES and GRASSLIKE	65-70%
Little Bluestem	5-10
Sand Bluestem	3-5
Silver Bluestem }	
Cane Bluestem }	3-5
Black Grama }	
Bush Muhly }	10-15
Plains Bristlegrass }	
Signal Grass }	
Sand Paspalum }	10-15
Sand Dropseed }	
Spike Dropseed }	
Mesa Dropseed }	10-15
Fall Witchgrass }	
Hooded Windmillgrass }	
Arizona Cottontop }	5-10
Giant Dropseed }	
New Mexico Feathergrass }	3-5
Other Grasses	3-5
<hr/>	
Woody	12-18%
Sand Sagebrush }	
Shinnery Oak }	5-10
Fourwing Saltbrush }	
Feather Dalea }	3-5
Ephedra spp. }	
Range Ratany }	3-5
Other Shrubs	3-5
<hr/>	
Forbs	10-20%
Leatherweed Croton }	
Globemallow }	

Indian Blanket	}	5-10
Wooly Groundsel		1-3
Wooly Indianwheat	}	
Deerstongue	}	
Spectaclepod Mustard	}	5-10
Other Forbs		3-5

Other grasses that could appear on this site would include: Threeawns, Flat Sedge, Tumble Lovegrass, Six Weeks Grama, and Burrograss.

Other woody plants include: Yucca, Pricklypear, Tesajo Cactus, Javelinabush and Mesquite.

Other forbs include: Wooly Gaura, Plains Blackfoot, Half-Shrub Sundrop, Wooly Dalea, Phlox Heliotrophe, Smooth Four O’Clock, Devils Claw, Palefoxia, Stickleaf Buckwheat, and Bladderpod.

**SD-3
Sandy Range**

This site is a grassland site aspect. It is dominated by mid- and short grasses where shrubs are sparse and evenly dispersed. There is an abundant variety of perennial forbs. Ephemeral forbs are characteristic components and, at times, are the aspect dominantes. The production of animals fluctuates widely from year to year with annual seasonal variations in amount and distribution of vegetation.

Sandy Range Site

GRASSES and GRASSLIKE	70-80%
Black Grama	35-40
Blue Grama	5-10
Bush Muhly	3-5
Sand Dropseed }	
Spike Dropseed }	
Mesa Dropseed }	10-15
Threeawns spp.	3-5
Plains Bristlegrass	3-5
Arizona Cottontop	3-5
Silver Bluestem }	
Little Bluestem }	5-8
Vine Mesquite	1-3
Tobosa	1-3
Other Grasses	3-5
Woody	5-10%
Yucca	1-5
Catclaw Mimosa	1-3
Fourwing Saltbrush	1-3
Ephedra spp.	1-3
Javelinabush	1-3
Broom Snakeweed }	
Sand Sagebrush }	1-3
Other Shrubs	1-3
Forbs	10-20%
Croton }	
Globemallow }	3-7
Wooly Groundsel }	
Curlycup Gumweed }	3-5
Stickleaf	1-3
Arizona Filaree }	

Texas Filaree	}	3-5
Other Forbs		1-3

Other grasses that could appear on this site would include: Fall Witchgrass, Slim Tridens, Alamejita Signalgrass, Indian Ricegrass, and Fluffgrass.

Other woody plants include: Pale Wolfberry, Lotewood Condalia, Tarbrush, Apacheplume, and Mesquite.

Other forbs include: Plains Tickseed, Plains Blackfoot, Scorpionweed, Nama, Wooly Gaura, Wooly Dalea, Spectaclepod Mustard, Bladderpod Mustard, Menodora, Cutleaf Haplopapris, Prickly Lettuce, Lambsquarter, Wooly Indianwheat, and Wild Buckwheat.

**SD-3
Deep Sand Range**

This site is a grassland site aspect. It is dominated by mid- and tall grasses which shrubs and half shrubs scattered and evenly dispersed. A variety of perennial and annual forbs occur and fluctuate considerably from year to year with annual and seasonal variation in amount and distribution of rainfall.

Deep Sand Range Site

GRASSES and GRASSLIKE	60-70%
Giant Dropseed }	
Mesa Dropseed }	
Spike Dropseed }	
Sand Dropseed }	35-45
Little Bluestem }	
Sand Bluestem }	5-8
Threeawns spp.	3-7
Sand Paspalum	1-3
Black Grama	1-3
Field Sandbur	1-3
Mustard Panicum	1-3
Plains Bristlegrass	1-5
Other Annual Grasses	1-5
Woody	15-20%
Shinnery Oak	5-10
Sand Sagebrush	1-3
Yucca	5-10
Plains Rabbitbrush	1-3
Other Shrubs	1-3
Forbs	10-20%
Croton }	
Blanketflower }	3-7
Halfshrub Sundrop }	
Penstemon }	
Aster }	3-7
Spectaclepod Mustard }	
Hymenopappus }	
Sunflower }	
Wild Buckwheat }	
Threadleaf Groundsel }	3-7
Other Forbs	1-3

Other grasses that could appear on this site would include: Flatsedge, Almejita Signalgrass, Big Bluestem, Indiangrass, Fall Witchgrass, Hairy Grama, and Red Lovegrass.

Other woody plants include: Fourwing Saltbrush, Mesquite, Ephedra, and Broom Snakeweed.

Other forbs include: Woolly and Scarlet Gaura, Woolly Dalea, Phlox Heliotrope, Palefoxia, Scorpionweed, Deerstongue, Fleabane, Nama, Hoffmanseggia, Lemon Beebalm, and Stickleaf.

**SD-3
Loamy Range**

This site is a grassland site aspect. It is dominated by drought tolerant short and mid-grasses with shrubs and half shrubs sparse and evenly distributed. There is an abundant variety of perennial forbs. Forb production varies widely from season to season and year to year.

Loamy Range Site

GRASSES and GRASSLIKE	85-95%
Tobosa	30-35
Burrograss	1-5
Black Grama }	
Blue Grama }	25-30
Sideoats Grama	3-5
Bush Muhly }	
Plains Bristlegrass }	5-10
Arizona Cottontop	1-5
Threeawns spp. }	
Sand Dropseed }	
Muhly spp. }	5-10
Other Grasses	3-5
Woody	3-5%
Fourwing Saltbrush }	
Ephedra spp. }	
Winterfat }	1-3
Broom Snakeweed }	
Javelinabush }	1-3
Other Shrubs	1-3
Forbs	5-10%
Globemallow }	
Verbena }	
Threadleaf Groundsel }	1-5
Wooly Groundsel }	
Croton }	1-3
Cutleaf Haplopappus }	
Wooly Paperflower }	1-3
Texas Filaree }	
Arizona Filaree }	1-3
Other Forbs	1-3

Other grasses that could appear on this site would include: Silver Bluestem, Cane Bluestem, Alkali Sacaton, Vine Mesquite, Hall's Panicum, Hairy Grama, Mesa Dropseed, Spike Dropseed, and Fluffgrass.

Other woody plants include: Yucca, Mesquite, Tarbush, Cholla, and Creosote Bush.

Other forbs include: Desert Holly, Scorpionweed, Bladderpod, Flax, Nama, Fleabane, Indianwheat, Indianblanket, Groundcherry, Deerstongue, and Rayless Goldenrod.

SD-3
Draw Range

This site is that of an elongated concave savannah with trees and shrubs being dominant in aspect. However, tall bunch grasses, mid-grasses, rhizomatous and stoloniferous short grasses have the greatest annual production. There is also an abundant variety of forbs in the under story. Vegetation on the site varies dynamically with the parent material and origin of the mixed alluvial soils and also with soil depth and the amount of cobble or gravel. Under natural conditions, in most areas, this site is in continual cyclic flux from tree and shrub dominance to a successional stage of grasses and forbs. This change is brought about due to fire and floods.

Draw Range Site

GRASSES and GRASSLIKE	50-75%
Cane Bluestem }	
Silver Bluestem }	10-15
Arizona Cottontop }	
Twoflower Trichloris }	10-15
Alkali Sacaton	3-5
Vine Mesquite }	
Sideoats Grama }	10-15
Plains Bristlegrass }	
Blue Grama }	5-10
Hooded Wildmillgrass	3-5
Bush Muhly	3-5
Sprankletop	5-10
Other Grasses	0-5
Woody	15-25%
Fourwing Saltbrush }	
Tornillo }	
Mesquite }	
Catclaw Mimosa }	
Viscid Acacia }	10-15
Knifefleaf Condalia }	
Apacheplume }	3-5
Desertwillow }	
New Mexico Walnut }	
Virginsbower }	5-8
Other Shrubs	0-5
Forbs	5-10%
Globemallow }	

Indian Blanket	}	0-3
Sensitive Briar	}	
Wild Rabbit Tobacco	}	0-3
Sunflower	}	
Texas Filaree	}	
Arizona Filaree	}	5-8
Other Annual Forbs		0-3

Other grasses that could appear on this site would include: White Tridens, Giant Sacaton, Tobosa, Slim Tridens, Black Grama, Burrograss, Mat Muhly, Buffalograss, Western Wheatgrass, Indiangrass, Indian Ricegrass, and Wolf tail.

Other woody plants include: Brickelbush, Tarbush, Littleleaf Sumac, Creosote Bush, Cottonwood, Pale Wolfberry, and Juniper.

Other forbs include: Verbena, Half-Shrub Sundrop, Scorpionweed, Desert Holly, Mexican Sagewort, Fleabane, Aster, Mustard, Woolly Indianwheat, Jimsonweed and Buffalobur.

**SD-3
Bottomland Range**

This site is a tall grass aspect composed largely of giant sacaton. Mesquite and fourwing saltbrush are sparse and widely scattered. Minor amounts of annual and perennial forbs are also present.

Bottomland Range Site

GRASSES and GRASSLIKE		80-90%
Giant Sacaton		65-70
Tobosa	}	
Alkali Sacaton	}	7-10
Vine Mesquite	}	
Plains Bristlegrass	}	7-10
White Tridens	}	
Cane Bluestem	}	
Twoflower Trichloris	}	3-5
Other Grasses		3-5
Woody		5-10%
Fourwing Saltbrush		3-5
Mesquite		1-3
Littleleaf Sumac	}	
Apacheplume	}	
American Tarbush	}	1-3
Other Shrubs		1-3
Forbs		5-10%
Peppergrass Mustard	}	
Globemallow	}	
Coyote Melon	}	
Annual Sunflower	}	2-5
Other Forbs		2-5

Other grasses that could appear on this site would include: Burrograss, Sideoats Grama, Blue Grama, Sprangletop, Threeawns, Ring Muhly, Ear Muhly, Silver Bluestem, and Fluffgrass.

Other woody plants include: Catclaw, Desertwillow, Javalinabush, Creosote Bush and New Mexico Walnut.

Other forbs include: Threadleaf Groundsel, Woolly Groundsel, Woolly Paperflower, Desert Holly, Filaree, and Rayless Goldenrod.

**SD-3
Limestone Hill Range**

This site is an aspect of grassland, shrub, and half shrub mixture. Mid- and short grasses are the dominant component followed by half shrubs and shrubs which are evenly distributed. Forbs are the minor component. However, during years of abundant rainfall, they are important. Mid-grasses and shrubs are most prevalent on the north and east slopes, while short grasses and half shrubs are dominant on south and west slopes.

Limestone Hill Range Site

GRASSES and GRASSLIKE	45-60%
Black Grama }	
Curlyleaf Muhly }	25-40
Sideoats Grama }	
Plains Sideoats }	15-30
Blue Grama }	
Hairy Grama }	5-10
Green Sprangletop }	
Plains Bristlegrass }	5-10
Tridens spp.	5-10
Threeawns spp.	5-7
Wolftail	3-5
Other Grasses	3-5
Woody	30-40%
Lechuguilla }	
Parry Agave }	
Yucca spp. }	5-10
Catclaw Mimosa	3-5
Sotol }	
Sacahuista }	5-10
Brickellbush	2-5
Littleleaf Sumac	2-5
Broom Snakeweed	2-5
Yerba-de-pasmo	2-5
Other Shrubs	2-5
Forbs	5-15%
Wild Buckwheat	2-5
Globemallow }	
Wooly Groundsel }	3-5
Fetid Marigold }	

Cutleaf Haplopappus	}	3-5
Other Forbs		2-5

Other grasses that could appear on this site would include: Sand Dropseed, Fluffgrass, Bush Muhly, Ear Muhly, Mat Muhly, Ring Muhly, Metcalf Muhly, Hall's Panicum, Burrograss, and Alkali Sacaton.

Other woody plants include: Spiny Allthorn, Ocotillo, Mariola, Apacheplume, Texas Silverleaf, Cacti spp., Feather Dalea, Creosote Bush, and Juniper.

Other forbs include: Prickleleaf Dogwood, Blanket Flower, Desert Zinnia, Desert Bailey, Fleabane, Loco, Senna, and Desert Holly.

**SD-3
Sandhills Range**

This site is a mixture of grasses, shrubs, and forbs. Tall grasses dominate the aspect. During years of abundant spring moisture, tall growing forbs occasionally reach aspect dominance. The forb component fluctuates widely from year to year and season to season.

Sandhills Range Site

GRASSES and GRASSLIKE	55-65%
Harvard Panicum }	
Sand Bluestem }	
Giant Dropseed }	20-30
Mesa Dropseed }	
Spike Dropseed }	
Sand Dropseed }	15-20
Plains Bristlegrass }	
Sand Paspalum }	5-10
Threeawns spp. }	
Flatsedge }	
Field Sandbur }	3-5
Other Grasses	3-5
Woody	15-25%
Shinnery Oak	5-10
Small Soapweed	5-10
Sand Sagebrush	3-5
Fourwing Saltbrush	2-5
Rabbitbrush	2-5
Other Shrubs	2-5
Forbs	10-30%
Woody Dalea	2-5
Phlox Heliotrope	3-5
Half-Shrub Sundrop	****
Penstemon	****
Lemon Beebalm	2-5
Spectaclepod Mustard	2-5
Hymenopappus }	
Stickleaf }	
Threadleaf Groundsel }	3-5
Annual Sunflower	2-5

Annual Wild Buckwheat	2-5
Other Forbs	2-5

Other grasses that could appear on this site would include: Big Bluestem, Little Bluestem, Black Grama, Blue Grama, Hairy Grama, Sideoats Grama, Almejita Signalgrass, Fall Witchgrass, Hall's Panicum, Indian Ricegrass, Red Lovegrass, and Indiangrass.

Other woody plants include: Winterfat, Epheda spp., Littleleaf Sumac, Mesquite, and Broom Snakeweed.

Other forbs include: Leatherweed Croton, Woolly Gaura, Scarlet Gaura, Blanket Flower, Aster, Palefoxia, Scorpionweed, Deerstongue, Fleabane, and Hoffmanseggia.

****Numbers not available at this time.

SD-3
Shallow Range

This site is a site that is characterized by short and mid-grasses. The aspect of this site is a grassland with a good scattering of shrubs. The forb composition fluctuates widely from year to year and from season to season.

Shallow Range Site

GRASSES and GRASSLIKE	60-70%
Black Grama	20-30
Sideoats Grama	15-20
Blue Grama }	
Hairy Grama }	15-20
Bush Muhly	5-10
Cane Bluestem	3-5
Sand Dropseed	5-10
Hairy Tridens	3-5
Ear Muhly	1-3
New Mexico Feathergrass	1-3
Fluffgrass	1-3
Other Grasses	3-5
Woody	20-30%
Littleleaf Sumac	1-3
Creosotebush	1-3
Range Ratany	1-3
Common Javelinabush	1-3
American Tarbush	1-3
Spiny Allthorn	1-3
Mesquite	2-5
Catclaw Mimosa	1-3
Cactus	1-3
Mariola	2-5
Broom Snakeweed	1-3
Other Shrubs	3-5
Forbs	5-10%
Stemless Actinea	2-5
Wooly Groundsel	1-3
Globemallow	1-3
Bladderpod	1-3
Senna	1-3
Other Forbs	2-5

Other grasses that could appear on this site would include: Vine Mesquite, Silver Bluestem, Burrograss, Spike Dropseed, Threeawns, Tobosa, Muhlys, Arizona Cottontop, and Plains Bristlegrass.

Other woody plants include: Condalia, Tesajo Cactus, Apacheplume, Wolfberry, Cactus, Ephedra spp., Yucca, Winterfat, and Fourwing Saltbrush.

Other forbs include: Desert Zinnia, Woolly Paperflower, Prickleaf Dogweed, Verbena, Deerstongue, Croton, and Wright's Buckwheat.

SD-3
Limy Range

This site is a grassland aspect with shrubs and half shrubs noticeable and evenly scattered. It is dominated by drought-tolerant mid- and short grasses. Perennial forbs are present in a variety, but less noticeable. Annual forb populations fluctuate widely from year to year and season to season.

Limy Range Site

GRASSES and GRASSLIKE	65-80%
Black Grama	10-15
Bush Muhly	5-10
Blue Grama }	
Hairy Grama }	10-20
Plains Bristlegrass }	
Sand Dropseed }	10-15
Fluffgrass }	
Ring Muhly }	3-5
Threeawns spp. }	
Burrograss }	3-5
Vine Mesquite }	
Arizona Cottontop }	3-5
Other Grasses	3-5
Woody	10-15%
Yucca	5-10
Winterfat }	
Ephedra spp. }	5-10
Fourwing Saltbrush	2-5
Creosotebush }	
American Tarbush }	
Broom Snakeweed }	3-5
Other Shrubs	2-5
Forbs	5-10%
Threadleaf Groundsel }	
Wooly Groundsel }	3-5
Leatherweed Croton	2-5
Bladderpod	2-5
Other Forbs	2-5

Other grasses that could appear on this site would include: Ear Muhly, Mat Muhly, Sideoats Grama, Mesa Dropseed, Alkali Sacaton, Hall's Panicum, and Cane Bluestem.

Other woody plants include: Javelinabush, Mesquite, and Cholla.

Other forbs include: Woolly Paperflower, Hoffmanseggia, Globemallow, Filaree, Cutleaf Haplopappus, Desert Holly, Indianwheat, and Deerstongue.

**SD-3
Gyp Upland Range**

This site is a patchy, short grass grassland with patches of bare or lichen covered soil surface exposed between patches of vegetation. The potential plant community is dominated by short and mid-grasses and forbs, with half shrubs and shrubs sparsely and evenly distributed. Vegetative ground cover is sparse. Vegetation varies considerably with soil depth and amount of gypsum outcrop. Where there is little or no soil depth only rough coldenia may be present.

Gym Upland Range Site

GRASSES and GRASSLIKE	60-80%
Alkali Sacaton	15-20
Black Grama }	
Gyp Grama }	30-35
Plains Bristlegrass }	
Bush Muhly }	
Bristle Panicum }	3-5
Gyp Dropseed }	
Sand Dropseed }	
Blue Grama }	5-10
Threeawns spp. }	
Ear Muhly }	
Burrograss }	
Fluffgrass }	5-10
Woody	5-15%
Fourwing Saltbrush }	
Mormon tea }	
Littleleaf Sumac }	3-7
Spiny Allthorn }	
Knifeleaf Condalia }	
Common Javelinabush }	1-3
Creosotebush }	
Tesajo Cactus }	1-3
Soaptree Yucca }	
Small Soapweed }	
Redjoint Pricklypear }	1-3
Forbs	10-25%
Coldenia	5-10
Nama }	
Leatherweed Croton }	

Paperflower	}	
Threadleaf Groundsel	}	
Hopitea Greenthread	}	1-5
Penstemon	}	
Wooly Gaura	}	
Trailing Four O'Clock	}	
Scorpionweed	}	
Skunk Daisy	}	
Milkwort	}	
Halfshrub Sundrop	}	3-5
Coreopsis	}	
Stickleaf	}	
Gyp Buckwheat	}	
Devils Claw	}	
Other Annual Forbs	}	1-5

**SD-3
Gyp Hills Range**

This site is a that of a rough, broken badlands, sparsely vegetated and highly dissected. There is more of the surface area compromised of bare ground and rock than that which is vegetated. The map delineations of this site are in actuality a complex of bare ground, rock outcrop, a few deep soil pockets in cracks and fissures of the bed rock, and areas of very shallow soils. The vegetation on the very shallow soil areas is dominated by rhizomatous and stoloniferous short grasses and forbs. Shrubs and half shrubs are apparent and rather unevenly distributed. The potential plant community varies somewhat with depth of soil, exposure, and slope. Large bare areas with only surface lichens are common. Where there is little or no soil over the gypsum material, only rough coldenia may be present.

Gym Hills Range Site

GRASSES and GRASSLIKE		30-50%
Gyp Grama	}	
Black Grama	}	20-30
Gyp Dropseed	}	
Bristle Panicum	}	10-15
Threeawns spp.	}	
Fluffgrass	}	1-5
Woody		15-25%
Littleleaf Sumac	}	
Fourwing Saltbrush	}	5-10
Spiny Allthorn	}	
Knifefleaf Condalia	}	5-7
Soaptree Yucca	}	
Algerita	}	
Creosotebush	}	3-5
Prickleleaf Dogweed	}	
Cactus	}	1-3
Forbs		30-50%
Coldenia		15-25
Nama	}	
Flax	}	
Stickleaf	}	
Scorpionweed	}	
Threadleaf Groundsel	}	5-10
Penstemon	}	
Wooly Gaura	}	

Paperflower	}	
Devils Claw	}	
Halfshrub Sundrop	}	5-10
Gyp Buckwheat	}	
Other Annual Forbs	}	1-5

SD-3
Salt Meadow Range

This site is a wet, grassy meadow. This site is characterized by plants tolerant to saline or alkaline and to wet soil conditions. Alkali sacaton, inland saltgrass, salt cedar, and such native shrubs as screwbean mesquite (Tornillo), arrowweed, and seepwillow are the dominant plant species. Seepweed and various rushes and sedges may also be common. Because of high water table conditions, production on this site is affected by normal fluctuations in rainfall from year to year than are other sites.

Salt Meadow Range Site

GRASSES and GRASSLIKE	60-70%
Alkali Sacaton }	
Giant Sacaton }	30-40
Inland Saltgrass	10-15
Sedges }	
Rushes }	5-10
Vine Mesquite	1-5
Common Reed	1-3
Tobosa	1-3
Others	1-5
Woody	20-25%
*Salt Cedar	5-10
Screwbean Mesquite }	
Pickleweed }	
Seepwillow }	
Iodinebush }	8-12
Salix spp. }	
Arrowweed }	1-5
Cottonwood Seedlings	0-3
Forbs	10-15%
Seepweed	3-8
Others	5-10

*Introduced plant, appearing to have become naturalized on this site.

SD-3
Salty Bottomland Range

This site is a grassland site having noticeable shrubs evenly distributed. This site is characterized by salt-tolerant grasses and shrubs such as alkali sacaton, and fourwing saltbrush. Additional species representative of the site at its potential may include vine mesquite, tobosa, burrograss, and inland saltgrass. Other Atriplex species, seepweed, and iodinebush may also be present in significant amounts.

Salty Bottomland Range Site

GRASSES and GRASSLIKE		75-85%
Alkali Sacaton		35-40
Giant Sacaton		5-10
Tobosa		5-10
Vine Mesquite		5-10
Mat Muhly	}	
Inland Saltgrass	}	
Burrograss	}	5-10
Others		5-10
Woody		10-15%
Fourwing Saltbrush	}	
Other Atriplex species	}	3-8
Iodinebush		3-5
Winterfat		0-3
Sueda	}	
Iva	}	1-5
Others		0-1
Forbs		5-10%
Desert Holly	}	
Russian Thistle	}	
Threadleaf Groundsel	}	
Seepweed	}	3-8
Other Annuals		1-3
Other Perennials		1-5

**SD-3
Salt Flats Range**

This site is a grassland site that is dotted with shrubs and half shrubs. Alkali sacaton, various Atriplex species, and vine mesquite characterize this site. Where soils are strongly or very strongly saline or alkali-affected, iodine bush, seepweed, inland saltgrass, and small Atriplex species are more noticeable.

Salt Flats Range Site

GRASSES and GRASSLIKE	60-70%
Alkali Sacaton	35-45
Vine Mesquite	3-8
Black Grama	1-5
Plains Bristlegrass }	
Cane Bluestem }	
Giant Sacaton }	
Dropseed }	3-8
Inland Saltgrass	1-5
Threeawns spp. }	
Burrograss }	
Fluffgrass }	
Tobosa }	3-8
Other Grasses	1-3
Woody	20-25%
Fourwing Saltbrush	3-8
Other Atriplex species }	
Iodinebush }	8-12
Allthorn	1-3
Broom Snakeweed	1-3
Baccharis spp. }	
Mormon Tea }	1-3
Forbs	5-15%
Rayless Goldenrod }	
Desert Holly }	
Haplopappus spp. }	
Coldenia }	
Seepweed }	3-8
Other Annuals	1-5
Other Perennials	1-5

AN-1
Wet, Frigid Range

This site is a site that is dominated by cool season grasses, with a sparse over story of shrubs. Western wheatgrass, tufted hairgrass, sedges, rushes, and bluegrasses are predominant. Sedges and rushes are most conspicuous in areas where there is surface water. Major forbs include clovers, iris, and western yarrow. The very sparse shrub and half shrub layer consists of willows and shrubby cinquefoil. Wildrose and water hemlock may be present.

Wet, Frigid Range Site

GRASSES and GRASSLIKE	80-90%
Tufted Hairgrass	5-15
Spike Muhly	3-5
Oatgrass spp.	3-5
Western Wheatgrass } Slender Wheatgrass }	5-20
Sedge spp.	10-15
Rush spp.	5-10
Bluegrass spp.	5-10
Arizona Fescue	0-2
Mountain Muhly	0-2
Other Grasses*	5-10
Woody	1-5%
Willow spp.	1-5
Shrubby Cinquefoil } Wildrose }	1-5
Other Shrubs	1-3
Forbs	5-10%
Other Annuals	7-10
Other Perennials	1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Alpine Timothy, Sheep Fescue, Prairie Junegrass, Red Fescue Muttongrass, Bluejoint Reedgrass, Muhly spp., Meadow Barley, False Hellebore, Thistle, and Water Hemlock. Redtop, Timothy, and Kentucky Bluegrass may have become naturalized to the site.

AN-1
Mountain Grassland Range

This site is a grassland site dominated by cool-season grasses. Scattered pinyon, juniper, oaks, and ponderosa pine occur on the site. Grasses make up the majority of the vegetation. A variety of forbs are conspicuous when in bloom. Small amounts of shrubs are widely scattered throughout the site. Tree canopy does not exceed 10 percent and average 5 percent or less.

Mountain Grassland Range Site

GRASSES and GRASSLIKE	80-90%
New Mexico Muhly }	
Mountain Muhly }	15-25
Arizona Fescue	15-25
Muttongrass	5-15
Spike Muhly	3-8
Prairie Junegrass	5-10
Bottlebrush Squirreltail	1-5
Little Bluestem }	
Sideoats Grama }	
Big Bluestem }	5-15
Wolftail }	
Stipa spp. }	
Blue Grama }	3-8
Others*	3-8
Woody	3-12%
Oaks }	
Skunkbush Sumac }	
Broom Snakeweed }	
Wax Current }	
Winterfat }	1-5
Pinyon Pine }	
Ponderosa Pine }	
Juniper }	3-8
Others	1-3
Forbs	5-10%
Annuals	3-8
Perennials	1-5

*Other grass species may include: Pine Dropseed, Threeawns, Muhlenbergia spp., Western Wheatgrass, and Bromes.

*Other shrubs and forbs species may include: Pingue, Sageworts, and Gray Horsebrush.

**AN-2
Meadow Range**

This site is a highly productive range site dominated by cool-season bunch grasses, sedges, and rushes. Forbs constitute approximately 10 percent of the plant community, while shrubs and half shrubs make up 5 percent or less. Because this site is sub-irrigated, normal fluctuations in plant production true of drier sites. Sedges and rushes are most conspicuous in areas where the water table rises to the surface, and in these areas may dominate almost entirely. The site is often found surrounded by pine forests.

Meadow Range Site

GRASSES and GRASSLIKE	80-90%
Tufted Hairgrass	5-15
Mountain Brome	10-15
Spike Muhly	3-5
Oatgrass spp.	3-5
Western Wheatgrass	}
Slender Wheatgrass	}
Sedge spp.	5-10
Rush spp.	10-15
Muttongrass	5-10
Arizona Fescue	5-10
Pullup Muhly	0-2
Other Grasses*	1-5
	5-10
Woody	1-5%
Shrubby Cinquefoil	}
Wildrose	}
Willow spp.	1-5
Other Shrubs	1-5
	1-3
Forbs	5-10%
Clover spp.	1-5
Iris spp.	}
Thistle spp.	}
Sunflower spp.	}
Western Yarrow	}
Other Forbs*	5-10
	1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Alpine Timothy, Blue Grama, Redtop, Muhly spp., Sheep Fescue, Meadow Barley, and various half-shrubs. Timothy and Kentucky Bluegrass may have become naturalized to this site.

AN-2
Pine Grassland Range

This site is a savannah-like grassland typically over storied by a thin stand of ponderosa pine. Occasionally, alligator juniper and oak also occur. Cool season grasses such as Arizona fescue dominate the herbaceous community with a variety of forbs such as green sagewort, western wallflower, and Fremont goosefoot scattered uniformly. Tree canopy ranges from 5 to 20 percent and averages about 10 percent.

Pine Grassland Range Site

GRASSES and GRASSLIKE	75-85%
Arizona Fescue	15-25
Mountain Muhly	}
New Mexico Muhly	
Blue Grama	10-15
Prairie Junegrass	}
Muttongrass	
Western Wheatgrass	}
Brome spp	
Little Bluestem	3-5
Pinyon Ricegrass	}
Pine Dropseed	
Bottlebrush Squirreltail	3-5
Wolftail	1-3
Others	3-5
Woody	15-20%
Ponderosa Pine	5-15
Skunkbush Sumac	1-3
Oaks	1-3
Juniper	1-3
Others	1-3
Forbs	1-5%
Perennials	1-3
Annuals	1-3

Other woody plant may include: Fringed Sagewort and Pinque. Other grasses may include: Threeawns, Sheep Fescue, Sideoats Grama, and Muhlenbergia spp. Kentucky Bluegrass may become naturalized to this site.

AN-2
Mountain Malpais Range

This site is an open grassland site that is typically all but free of tress and large shrubs, although on steeper, north facing slopes scattered juniper, oaks, and ponderosa pine may occur. Forbs may include wild buckwheat, trailing fleabane, and Indian paintbrush. Tree canopy normally does not exceed 10 percent, even on the north slopes, and average 5 percent or less.

Mountain Malpais Range Site

GRASSES and GRASSLIKE		80-90%
New Mexico Muhly	}	
Mountain Muhly	}	15-25
Arizona Fescue		15-25
Muttongrass		5-15
Spike Muhly		3-8
Prairie Junegrass		5-10
Bottlebrush Squirreltail		1-5
Little Bluestem	}	
Sideoats Grama	}	
Big Bluestem	}	5-15
Wolftail	}	
Needlegrass spp.	}	
Blue Grama	}	3-8
Others*		3-8
Woody		3-12%
Oaks	}	
Skunkbush Sumac	}	
Wax Current	}	
Apacheplume	}	
Winterfat	}	1-5
Pinyon Pine	}	
Ponderosa Pine	}	
Juniper	}	3-8
Others*		1-3
Forbs		5-10%
Perennials		3-8
Annuals		1-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Pine Dropseed, Threeawns, Muhlenbergia spp., Western Wheatgrass, Bromes, Broom Snakeweed, and Fringed Sagewort.

AN-2
Stony Loam Range

This site is a grassland site with few if any trees. Cool-season grasses predominate. Shrubs are sparse and normally restricted to north facing slopes and higher elevations. Forbs such as trailing fleabane, wild buckwheat, globemallow, sageworts, and Indian paintbrush are noticeable but do not make up a substantial proportion of the potential plant community.

Stony Loam Range Site

GRASSES and GRASSLIKE	75-85%
Arizona Fescue	20-30
Blue Grama	5-15
Muttongrass }	
Prairie Junegrass }	15-20
New Mexico Muhly }	
Mountain Muhly }	
Longtongue Muhly }	10-15
Spike Muhly	1-5
Bottlebrush Squirreltail }	
Western Wheatgrass }	5-10
Big Bluestem }	
Little Bluestem }	3-8
Others*	3-5
<hr/>	
Woody	8-12%
Skunkbush Sumac	3-5
Rabbitbrush	1-3
Others*	1-5
<hr/>	
Forbs	5-10%
Perennials	3-8
Annuals	1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Needlegrass spp., Wolftail, Threeawns, Pine Dropseed, Muhlenbergia spp., Broom Snakeweed, Pinyon, Juniper, Apacheplume, Fringed Sagewort, and Oak spp.

**AN-2
Mountain Upland Range**

This site is an open grassland characterized by mid and short grasses. Shrubs and half shrubs are few. Forbs include rock mountain beebalm, aster, rocky mountain zinnia, wild buckwheat, trailing fleabane, and carruth sagewort. Blue grama, muttongrass, Arizona fescue, prairie junegrass, and bottlebrush squirreltail are characteristic of the natural potential vegetation. Western wheatgrass is found largely on the finer textured soils and in slight depressions. Spike muhly is found evenly distributed but in lesser amounts than most other species characterizing this site. Broom snakeweed comes and goes cyclically. Scattered plants of rabbitbrush are common.

Mountain Upland Range Site

GRASSES and GRASSLIKE		80-90%
Blue Grama		10-15
Arizona Fescue	}	
Muttongrass	}	15-25
Prairie Junegrass		3-5
Western Wheatgrass		10-15
Spike Muhly		5-10
Mountain Muhly		1-5
Bottlebrush Squirreltail		5-15
Others		5-10
Woody		3-8%
Rabbitbrush	}	
Carruth Sagewort	}	
Fringed Sagewort	}	1-5
Others		1-3
Forbs		5-10%
Perennials		3-8
Annuals		1-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Threeawns, Wolf tail, Broom Snakeweed, Green Sagewort, Pinque, and Winterfat.

Kentucky Bluegrass may have become naturalized to this site.

AN-2
Shallow Hills Range

This site is an expression of several closely interrelated, and difficult-to-separate plant communities. Factors such as exposure, intermixed pockets of deeper soils, exposed bedrock, and ledges contribute to this association of plants. Generally all exposures are open and are dominated by perennial grasses. Cool-seasoned species are more prevalent on north and east facing slopes, while blue grama, little bluestem, and sideoats grama are more frequently encountered on south and west facing slopes. Large shrubs and trees are few and scattered, and where recurring usually occupy north facing slopes. Half shrubs occur thinly across the site. Forbs include wild buckwheats, trailing fleabane, lupines, sageworts, and Indian paintbrush.

Shallow Hills Range Site

GRASSES and GRASSLIKE		70-80%
Blue Grama		15-20
Mountain Muhly		10-15
Arizona Fescue	}	
Muttongrass	}	20-30
Prairie Junegrass		3-8
Spike Muhly	}	
Western Wheatgrass	}	1-5
Sideoats Grama	}	
Little Bluestem	}	5-10
Others		1-5
Woody		5-10%
Skunkbush Sumac		1-3
Fringed Sagewort		1-3
Juniper		0-1
Others		3-5
Forbs		8-12%
Perennials		3-8
Annuals		1-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Bottlebrush Squirreltail, Wolftail, Threeawns, Muhly species, Big Bluestem, Broom Snakeweed, Green Sagewort, Oaks, and Winterfat.

AN-2
Mountain Breaks Range

This site is a mixed grass-shrub community, with some trees. Cool-seasoned grasses predominate slightly, although warm-season species such as deergrass, bullgrass, blue grama, and little bluestem are highly noticeable. Pinyon and juniper are common, as are occasional ponderosa pine. Exposure is definitely a factor, with tree and shrub species occurring more frequently on the cooler, more moist slopes.

Mountain Breaks Range Site

GRASSES and GRASSLIKE		70-80%
Blue Grama		15-20
Muttongrass	}	
Prairie Junegrass	}	10-20
Pinyon Ricegrass	}	
Pine Dropseed	}	3-8
Mountain Muhly	}	
Plains Lovegrass	}	
Needlegrass spp.	}	5-15
Bottlebrush Squirreltail		3-5
Arizona Fescue		5-10
Deergrass	}	
Bullgrass	}	5-15
Little Bluestem	}	
Brome spp.	}	
Big Bluestem	}	
Sideoats Grama	}	3-8
Others		3-5
Woody		15-25%
Pinyon	}	
Juniper	}	5-15
Skunkbush Sumac	}	
Mountain Mahogany	}	
Wax Current	}	
Oaks	}	5-10
Others		1-5
Forbs		3-8%
Perennials		1-3
Annuals		1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Woltail, Threeawns, Spike Muhly, Ponderosa Pine, Fringed Sagewort, Winterfat, Ocean-spray or Rock Spirea, Southwestern Chokecherry, Manzanita, and rarely Apacheplume.

**AN-2
Mountain Swale Range**

This site is a potential productive grassland with few shrubs and half shrubs and no trees. Western wheatgrass may either dominate the site or co-dominate with slender wheatgrass. Forbs are relatively minor in proportion to grasses, but include crested pricklypoppy, Rocky Mountain beeplant, green sagewort, milkweeds, thistles, asters, and Mexican crownbeard.

Mountain Swale Range Site

GRASSES and GRASSLIKE	70-80%
Western Wheatgrass }	
Slender Wheatgrass }	35-50
Spike Muhly	10-15
Bottlebrush Squirreltail	3-8
Tufted Hairgrass	5-10
Silver Bluestem	1-5
Blue Grama	5-10
Others	3-8
Woody	15-25%
Skunkbush Sumac }	
Apacheplume }	
Fringed Sagewort }	1-5
Others	1-3
Forbs	5-10%
Perennials	3-8
Annuals	1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Threeawns, Wolftail, Mat Muhly, Creeping Muhly, Cane Bluestem, Broom Snakeweed, Carruth Sagewort, Winterfat, Arizona Fescue, Muttongrass, and Bromes.

Kentucky Bluegrass and Redtop may have become naturalized to the site.

AN-2
Shallow Savannah Range

This site is a grassland mixed with shrubs and over storied by very thin or scattered stands of ponderosa pine, pinyon pine, and alligator juniper. Shrubs are typically mountain mahogany, skunkbush sumac, and oaks. Forbs include Freemont's goosefoot, wild buckwheat, green sagewort, and trailing fleabane. Tree canopy generally does not exceed 15 percent and average about eight percent.

Shallow Savannah Range Site

GRASSES and GRASSLIKE	70-80%
Mountain Muhly }	
New Mexico Muhly }	10-20
Muttongrass }	
Arizona Fescue }	10-15
Blue Grama }	5-15
Bottlebrush Squirreltail }	
Prairie Junegrass }	3-8
Pinyon Ricegrass }	
Pine Dropseed }	
Sideoats Grama }	5-10
Little Bluestem }	5-10
Spike Muhly }	3-5
Others }	5-10
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Woody	15-20%
Ponderosa Pine }	3-8
Pinyon Pine }	
Alligator Juniper }	5-10
Oaks }	
Mountain Mahogany }	
Skunkbush Sumac }	5-10
Others }	1-3
<hr/>	
Forbs	5-8%
Perennials }	3-5
Annuals }	1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Wolftail, Silver Bluestem, Sheep Fescue, Threeawns, Muhly

spp., Western Wheatgrass, Hairy Grama, Needlegrass spp., Fringed Sagewort, Ocean Spray or Rock Spirea, Manzanita, Apacheplume, and Algerita.

**AN-3
Mountain Meadow Range**

This site is a site that is characterized by short and mid-grasses, cool season perennial grasses. Woody vegetation is very sparse and of little importance. Forbs make up a small but important component of this site.

Mountain Meadow Range Site

GRASSES and GRASSLIKE	80-90%
Tufted Hairgrass	15-20
Prairie Junegrass	5-10
Red Fescue	10-25
Mountain Brome	10-25
Subalpine Needlegrass	10-25
Bluejoint Reedgrass	3-5
Meadow Barley	3-5
Redtop	10-15
Pullup Muhly	T-5
Slender Wheatgrass	}
Western Wheatgrass	
Sedges	5-15
Rushes	5-10
Other grasses	3-10
Woody	5-10%
Silver Sagebrush	T-5
Shrubby Cinquefoil	T-5
Wild Rose	T-5
Other Shrubs	T-5
Forbs	5-8%
Aster	5
Clover	10
Pussytoes	T-3
Water Hemlock	T-5
Iris	T-3
Other Forbs	T-5

Other grasses that could appear on this site may include: Nebraska Sedge, Oatgrass, Spike Muhly, Blue Grama, Baltic Rush, Timothy, Kentucky Bluegrass, Arizona Fescue, Muttongrass, Bullrush, Shortawned Foxtail, and Bog Bluegrass.

Other woody plants include: Ponderosa Pine and Pinyon.

Other forbs include: Bluebells, Dandelion, Waterleaf, Yarrow, Viola, Groundsel, Knotweed, Sheep Sorrel, Skunk Cabbage, Geranim, and Poison Hemlock.

**AN-3
Mountain Valley Range**

This site is an open stand of cool season perennial mid grasses with scattered shrubs and trees. Forbs are varied and make up a minor but important component of this site.

Mountain Valley Range Site

GRASSES and GRASSLIKE	70-80%
Blue Grama	10-15
Western Wheatgrass	25-35
Prairie Junegrass	5-10
Arizona Fescue	20-25
Big Bluestem	10-20
Little Bluestem	10-20
Mountain Brome	10-20
Mountain Muhly	15-25
Pine Dropseed	5-10
Sideoats Grama	15-20
Tufted Hairgrass	5-10
Bottlebrush Squirreltail	10-15
Wolftail	3-5
Subalpine Needlegrass	}
Letterman Needlegrass	}
Sleepygrass	} 10-15
Other grasses	5-10
Woody	15-25%
Broom Snakeweed	3-5
Carruth Sagewort	5-10
Juniper	}
Pinyon	}
Ponderosa Pine	} 0-10
Shrubby Cinquefoil	0-3
Other Woody	0-5
Forbs	5-10%
Mullein	3-5
Wild Buckwheat	3-5
Penstemon	3-5
Other Forbs	3-5

Other grasses that could appear on this site may include: New Mexico Bluegrass, Spike Muhly, Thurber Fescue, Indiangrass, Rushes, Redtop, Deergrass, Bullgrass, Mundula Muhly, Bulb Panic, Green Bristlegrass, Muttongrass, Pullup Muhly, Curly Mesquite, Threeawn, Creeping Muhly, Sedges, Timothy, and Kentucky Bluegrass.

Other woody plants include: Fringed Sagebrush, Snowberry, Ceanothus, Cliffrose, Manzanita, Sacahuista, Oak, Yucca, Sumac, and Rubber Rabbitbrush,

Other forbs include: Geranium, Vetch, Iris, Aster, and Wild Lettuce.

**AN-3
Loamy Range**

This site is a site with a Savannah aspect; pinyon and alligator bark juniper are the dominant trees. The under story is made up of cool season perennial mid-grasses and forbs. Forb production varies greatly from year to year.

Loamy Range Site

GRASSES and GRASSLIKE	80-90%
Big Squirreltail	}
Bottlebrush Squirreltail	} 10-20
Prairie Junegrass	5-10
Blue Grama	10-15
Mat Muhly	3-5
Western Wheatgrass	15-20
Mountain Muhly	}
Spike Muhly	} 5-15
Arizona Fescue	3-5
Pine Dropseed	3-5
Sideoats Grama	3-5
Other grasses	5-10
Woody	5-10%
Alligator Bark	}
Juniper	}
Pinyon	} 1-5
Oak	3-5
Carruth Sagewort	3-5
Sumac	}
Algerita	} 3-5
Other Woody	3-5
Forbs	5-10%
Indian Paintbrush	}
Penstemon	}
Other Forbs	} 5-10

Other grasses that could appear on this site may include: Pringles Needlegrass, Letterman Needlegrass, Sleepygrass, Pinyon Ricegrass, Littleseed Ricegrass, New Mexico Muhly, Longtongue Bluegrass, Intermediate Wheatgrass, Threawn, and Wolfail.

Other woody plants include: Ponderosa Pine, Current, Fringed Sagebrush, Rubber Rabbitbrush, Broom Snakeweed, Green Sagewort, Pinque, and Winterfat.

Other forbs include: Wild Buckwheat, Trailing Fleabane, Aster, and Rocky Mountain Zinnia.

**AN-3
Mountain Grassland Range**

This site is a grassland site that is characterized by cool seasoned perennial mid-grasses. Woody species and forbs occupy a major role on this site.

Mountain Grassland Range Site

GRASSES and GRASSLIKE	55-80%
Big Bluestem	10-15
Prairie Junegrass	20-25
Little Bluestem	10-15
Mountain Muhly	20-25
Pine Dropseed	10-25
Blue Grama	5-10
Spike Muhly	5-10
Arizona Fescue	5-10
Mountain Brome	5-10
Sideoats Grama	15-20
Western Wheatgrass	10-15
Other Grasses	5-10
Woody	15-30%
Oak spp.	5-10
Juniper }	
Pinyon }	
Ponderosa Pine }	15
Mountain Mahogany	5
Other Woody	5
Forbs	5-15%
Iris	T-5
Yarrow	T-5
Peavine	5
Vetch	5
Other Forbs	5

Other grasses that could appear on this site may include: Kentucky Bluegrass, Muttongrass, Sedges, Redtop, New Mexico Feathergrass, Letterman Needlegrass, Canadian Wildrye, Sleepygrass, Big Squirreltail, Timothy, Slender Wheatgrass, Wolf tail, Creeping Muhly, Orchardgrass, Nodding Brome, and Indiangrass.

Other woody plants include: Rubber Rabbitbrush, Broom Snakeweed, Pinque, Snowberry, Fringed Sagebrush, Cliffrose, Skunkbush Sumac, Fourwing Saltbrush, New Mexico Locust, Mountain Ash, and Rose.

Other forbs include: Lupine, Locoweed, Trailing Fleabane, Aster, Goldenrod, and Geranium.

**WP-1
Clayey Range**

This site is a grassland site with fourwing saltbrush and big sagebrush forming a shrub savannah aspect. Pinyon and juniper trees, if any, are scattered. Forbs are conspicuous through the site when in bloom.

Clayey Range Site

GRASSES and GRASSLIKE	75-80%
Western Wheatgrass	20-30
Alkali Sacaton	15-25
Bottlebrush Squirreltail	5-10
Muttongrass }	
Prairie Junegrass }	5-8
Galleta	5-7
Spike Muhly	3-5
Blue Grama	3-5
Indian Ricegrass }	
Others }	3-5
<hr/>	
Woody	5-15%
Fourwing Saltbrush }	
Shadscale }	5-8
Big Sagebrush }	
Low Sagebrush }	5-8
Winterfat }	
Rabbitbrush }	
Spineless Horsebrush }	
Others }	3-5
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Forbs	5-8%
Green Sagewort }	
Trailing Fleabane }	
Globemallow }	
Wild Buckwheat }	
Thistles }	
Others }	5-8

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Silver Bluestem, Ring Muhly, Mat Muhly, Sixweeks

Fescue, Cheatgrass, Threeawns, Russian Thistle, Locoweed, Apacheplume, Cholla
Cactus, Black Greasewood, and Juniper-Pinyon.

**WP-1
Gravelly Fan Range**

This site is a mixed grassland shrub complex having an over story of scattered oneseed juniper and pinyon. Mountain big sagebrush and cool season grasses dominate but warm season grasses and forbs do occur in lesser amounts.

Gravelly Fan Range Site

GRASSES and GRASSLIKE	55-65%
Western Wheatgrass	20-30
Indian Ricegrass	15-20
Sideoats Grama	8-12
Prairie Junegrass }	
Blue Grama }	5-8
Bottlebrush Squirreltail	
Little Bluestem	4-7
Others	
Woody	20-25%
Mountain Big Sagebrush	10-15
Fourwing Saltbrush	3-5
Gooseberry	T-1
Oneseed Juniper }	
Pinyon }	4-6
Yucca	T-2
Indian Paintbrush	5-7
Apacheplume	1-3
Forbs	10-15%
Asters }	
Eriogonum }	
Astragalus }	
Prickly Pear }	5-7
Scarlet Globemallow	2-3
Other perennial forbs	2-5

Other species include: Dropseeds, Threeawns, and Broom Snakeweed.

**WP-1
Gravelly Slopes Range**

This site is a mixed grassland shrub complex. When a part of a potential plant community, the pinyon juniper is more abundant on north and east facing slopes with a canopy ranging from three to ten percent.

Gravelly Slopes Range Site

GRASSES and GRASSLIKE	55-65%
Needleandthread }	
New Mexico Feathergrass }	10-20
Indian Ricegrass	10-15
Western Wheatgrass	5-15
Black Grama 1/ Galleta }	0-15
Blue Grama }	5-12
Sideoats Grama 2/	3-10
Muttongrass Junegrass	3-7
Bottlebrush Squirreltail	3-5
Mountain Muhly	1-5
Little Bluestem	0-5
Others	10-12
Woody	15-25%
Big Sagebrush	5-15
Fourwing Saltbrush }	
Winterfat }	3-7
Scrub Oak }	
Cliff Fendlerbush }	
Cliff Rose }	
Antelope Bitterbrush }	0-5
Oneseed Juniper }	
Pinyon }	3-7
Mountain Mahogany }	
Skunkbush Sumac }	1-3
Others	0-3
Forbs	10-12%
Wild Buckwheat }	
Locoweed }	
Indian Paintbrush }	
Aster }	5-7
Others	3-5

1/ Usually restricted to south exposures.

2/ Usually most common on north exposures.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sand Dropseeds, Pine Dropseed, Muhly spp., Woolly Indianwheat, Yucca spp., Pingue, Rabbitbrush, Broom Snakeweed, and Threadleaf Groundsel.

**WP-1
Limy Range**

This site is a site where winterfat dominates the community with perennial grasses well distributed throughout the site. Other shrubs, such as fourwing saltbrush, are scattered throughout this site. Annual grasses and forbs are in relative abundance in spring months but generally are a minor component on this site.

Limy Range Site

GRASSES and GRASSLIKE	45-50%
Western Wheatgrass 1/ }	
Indian Ricegrass 1/ }	20-25
Needleandthread }	
New Mexico Feathergrass }	5-8
Bottlebrush Squirreltail	5-8
Blue Grama }	
Galleta }	3-7
Sand Dropseed }	
Others* }	3-5
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Woody	35-45%
Winterfat	25-35
Fourwing Saltbrush	3-5
Rabbitbrush }	
Broom Snakeweed }	3-5
Yucca }	
Others }	1-5
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Forbs	3-7%
Fringed Sagewort }	
Wild Buckwheat }	
Wooly Indianwheat }	
Others }	3-7

1/ On very moist sites and sites with finer textured soils, western wheatgrass would be the dominant perennial grass. On drier sites and sites with coarser-textured soils, Indian ricegrass would be the dominant perennial grass.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Threeawns, Muttongrass, Prairie Junegrass, Spike Muhly,

Ring Muhly, Sideoats Grama, Sixweeks Fescue, False Buffalograss, Threadleaf Groundsel, Globemallow, Aster, and Cactus species.

**WP-1
Loamy Range**

This site is a grassland site with scattered shrubs throughout the site. Forbs are conspicuous when in bloom but otherwise a minor component.

Loamy Range Site

GRASSES and GRASSLIKE	70-75%
Western Wheatgrass	20-30
Indian Ricegrass }	
Needleandthread }	
New Mexico Feathergrass }	10-15
Galleta	5-10
Blue Grama	5-10
Alkali Sacaton }	
Spike Muhly }	3-10
Muttongrass }	
Prairie Junegrass }	3-7
Bottlebrush Squirreltail	3-7
Others*	1-5
Woody	15-20%
Big Sagebrush	5-10
Fourwing Saltbrush }	
Winterfat }	5-10
Rabbitbrush }	
Spineless Horsebrush }	
Others }	1-5
Forbs	5-10%
Fringed Sagewort }	
Locoweed }	
Indian Paintbrush }	
Alfileria }	
Wild Buckwheat }	
Others }	5-10

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sideoats Grama, Sand Dropseed, Pine Dropseed, Mat Muhly, Cheatgrass, Pingue, Woolly Indianwheat, Globemallow, Prairie Conflower,

Oneseed Juniper, Pinyon, Pale Wolfberry, Broom Snakeweed, Yucca species, Cholla Cactus, and Antelope Bitterbrush.

**WP-1
Malpais Range**

This site is a grassland shrub mixture characterized dominantly by mid grasses and shrubs. Perennial forbs are a minor component of the potential plant community. Big sagebrush will occur in higher concentrations on the upper slopes of this site often as an under story to invading trees. Annual forbs and grasses occur in abundance during the spring months in years of above average growing condition.

Malpais Range Site

GRASSES and GRASSLIKE	65-75%
Blue Grama	5-10
Sideoats Grama	5-10
Bottlebrush Squirreltail	5-8
Western Wheatgrass	15-20
Needleandthread	}
New Mexico Feathergrass	}
Muttongrass	}
Prairie Junegrass	}
Little Bluestem	0-5
Galleta	10-15
Black Grama*	0-7
Indian Ricegrass	3-5
Others	5-8
<hr/>	
Woody	15-25%
Big Sagebrush	10-20
Oneseed Juniper	0-3
Winterfat	}
Fourwing Saltbrush	}
<hr/>	
Forbs	10-15%
Broom Snakeweed	}
Pingue	}
Goldenweed	}
Annual and Perennial Forbs	3-5

*Black Grama is restricted to the HV-2 sub resource area.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Muhlies, Wolftail, Threeawns spp., Rubber Rabbitbrush, Sunflower, Foxtail Barley, Woolly Indianwheat, Silverleaf Nightshade, Annual Bromes, Daisies, Rocky Mountain Beeplant, Threadleaf Groundsel, Locoweed, Penstemons, Asters, Giliac, and Globemallows.

**WP-1
Meadows Range**

This site is a grassland characterized dominantly by short and mid grasses. Some trees and shrubs are scattered on this site, usually on the fringes where the water table is lower. Sedges and rushes are conspicuous. Annual and perennial forbs are present in small amounts.

Meadows Range Site

GRASSES and GRASSLIKE		80-90%
Western Wheatgrass		20-40
Mountain Brome		5-10
Muttongrass		5-10
Slender Wheatgrass		5-10
Sedges and Rushes		10-20
Others		3-5
Sand Reedgrass*		10-30
Woody		3-5%
Willow	}	
Others	}	0-5
Forbs		5-10%
Clovers		3-5
Western Yarrow	}	
Gentian	}	
Wild Licorice	}	
Goldenpea	}	
Silver Cinquiefoil	}	3-5

*Seeps and springs.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Water Hemlock, Tufted Hairgrass, Red Fescue, Barnyard Grass, Dandelion, Asters, Balsamroot, Mat Muhly, Canaigre, Iris, and Geranium.

**WP-1
Salt Meadow Range**

This site is a bottomland site that is a grassland plant community characterized by inland saltgrass and alkali sacaton. Fourwing saltbrush, the dominant shrub, makes up less than 5% of the vegetation. Forbs, such as seepweed and iodinebush, are present in small amounts. When the plant community deteriorates it is dominated by inland saltgrass, seepweed, iodinebush, saltcedar, and large interspaces of bare crusted ground.

Salt Meadow Range Site

GRASSES and GRASSLIKE		90%
Inland Saltgrass		30-35
Alkali Sacaton		15-20
Saltsedge		5-10
Foxtail Barley		3-5
Mat Muhly		3-5
Western Wheatgrass		5-10
Nuttall Alkaligrass		5-10
Alkali Cordgrass		15-20
Woody		5%
Fourwing Saltbrush	}	
Pale Wolfberry	}	3-5
Forbs		5%
Iodinebush	}	
Seepweed	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Kochia, Saltcedar, Lanceleaf, Goldenweed, Russian Thistle, and Wedgegrass.

**WP-1
Salty Bottomland Range**

This site is a shrub-grass mixture characterized by mid-grasses, alkali sacaton, and western wheatgrass. The characteristic shrubs are black greasewood and fourwing saltbrush. Perennial forbs are a minor component of the plant community. Annual forbs and grasses occur in relative abundance during the spring in years which have above average growing conditions. When the potential plant community deteriorates, there is a marked increase in relative abundance of shrubs, cacti, perennial and annual forbs. In severe vegetative deterioration, the site will consist dominantly of shrubs, but can also be dominated by greasewood, sagebrush, annual forbs and annual grasses, with lesser amounts of perennial grasses and large areas of unprotected soils.

Salty Bottomland Range Site

GRASSES and GRASSLIKE		65%
Alkali Sacaton		30-35
Indian Ricegrass		5-10
Western Wheatgrass		20-25
Bottlebrush Squirreltail		10-15
Galleta		10-15
Blue Grama		5-10
Inland Saltgrass	}	
Mat Muhly	}	5-10
Woody		25%
Black Greasewood		3-5
Shadscale		3-5
Big Sagebrush		3-5
Fourwing Saltbrush		5-10
Winterfat		3-5
Bud Sagebrush		1-3
Forbs		10%
Iodinebush	}	
Goldenweed	}	3-5
Western Ragweed	}	
Groundsel	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Broom Snakeweed, Annual Bromes, Foxtail Barley,

Threeawns, Russian Thistle, Western Ragweed, Rocky Mountain Beeplant, Threadleaf Groundsel, Cheatgrass, and Sand Dropseed.

**WP-1
Sandy Range**

This site is a mixed shrub-grass aspect. Fourwing saltbrush and winterfat are the dominant shrubs with big sagebrush and rabbitbrush occurring in lesser amounts. Few, if any, trees occur on this site. Forbs are a minor component except during spring emergency.

Sandy Range Site

GRASSES and GRASSLIKE		70-80%
Indian Ricegrass	}	
Needleandthread	}	
New Mexico Feathergrass	}	15-20
Western Wheatgrass		10-15
Spike Dropseed	}	
Sand Dropseed	}	5-10
Galleta		5-10
Blue Grama		3-5
Muttongrass	}	
Prairie Junegrass	}	3-5
Woody		15-25%
Fourwing Saltbrush	}	
Winterfat	}	5-15
Big Sagebrush	}	
Rabbitbrush	}	
Spineless Horsebrush	}	
Sand Sagebrush	}	3-10
Juniper	}	
Others	}	0-3
Forbs		3-5%
Animal Buckwheat	}	
Alfileria	}	
Wooly Indianwheat	}	
Fringed Sagewort	}	
Locoweed	}	
Others	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Ring Muhly, Sandhill Muhly, Switchgrass, Little Bluestem, Sand Bluestem, Wolftail, Spike Muhly, Mormon-Tea, Broom Snakeweed, and Yucca.

**WP-1
Sand Plains Range**

This site is a site that is characterized by a shrub-grass mixture with scattered juniper and pinyon trees. Forbs are most prominent in spring and summer months of adequate soil mixture.

Sand Plains Range Site

GRASSES and GRASSLIKE	60-70%
Indian Ricegrass	20-25
Giant Dropseed	5-10
Sand Dropseed }	
Spike Dropseed }	5-10
Sand Bluestem }	
Switchgrass }	
Little Bluestem }	5-10
Galleta }	
Blue Grama }	5-10
Bottlebrush Squirreltail	5-10
Needleandthread }	
New Mexico Feathergrass }	5-10
Alkali Sacaton	5-15
Western Wheatgrass }	10-15
Muttongrass }	
Others }	3-6
Woody	20-30%
Fourwing Saltbrush	5-10
Sand Sagebrush }	
Big Sagebrush }	5-10
Mormon Tea }	
Yucca }	1-3
Rabbitbrush }	
Horsebrush }	1-3
Oneseed Juniper }	
Pinyon }	5-15
Forbs	10%
Annual Buckwheat }	
Sand Verbena }	
Mariposa Lilly }	
Lupine }	

Globemallow	}	
Others	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sandhill Muhly, Littleseed Ricegrass, Broom Dalea, Cholla Cactus, Russian Thistle, Kochia, Western Ragweed, Lambsquarter, and Threadleaf Groundsel.

WP-1
Shallow Gravelly Range

This site is a grassland site with scattered shrubs and forbs. Occasionally junipers are uncommon.

Shallow Gravelly Range Site

GRASSES and GRASSLIKE		65-75%
Needleandthread	}	
New Mexico Feathergrass	}	20-25
Sideoats Grama		5-15
Galleta		3-7
Indian Ricegrass		3-7
Black Grama*		0-5
Bottlebrush Squirreltail		3-7
Western Wheatgrass		3-7
Blue Grama		3-5
Others		3-7
Woody		10-15%
Mountain Big Sagebrush		4-8
Fourwing Saltbrush		3-7
Winterfat		1-5
Gray Horsebrush	}	
Rabbitbrush	}	
Broom Snakeweed	}	1-3
Others		0-3
Forbs		10-15%
Wild Buckwheat		1-3
Locoweed	}	
Indian Paintbrush	}	
Phlox spp.,	}	10-12
Others		

*Black grama is restricted to the HV-2 sub-resource area.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sand Dropseed, Muhy spp., Wolftail, Aster, Penstemon, Cactus, Yucca, and Oneseed Juniper.

**WP-1
Shallow Loam Range**

This site is a shrub-grassland site that is characterized by black sagebrush and western wheatgrass with other grasses and shrubs scattered around.

Shallow Loam Range Site

GRASSES and GRASSLIKE	75-85%
Western Wheatgrass	30-35
Blue Grama	3-8
Sideoats Grama	5-10
Prairie Junegrass	}
Bottlebrush Squirreltail	}
Arizona Fescue	8-12
Needleandthread	2-6
Others	2-6
Woody	5-15%
Black Sagebrush	15-20
Green Rabbitbrush	1-2
Gooseberry	2-5
Shrubs, half shrubs, vines and trees	3-6
Forbs	5-15%
Aster	}
Eriogonum	}
Penstemon	}
Gilia	3-6
Indian Paintbrush	}
Scarlet Globemallow	2-5
Pingue	2-4
Others	1-3
	3-6

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Muttongrass, Threeawns, Fleabane, Fourwing Saltbrush, and Winterfat.

WP-1
Shallow Savannah Range

This site is a shrub-grassland mixture having savannah-type over story of juniper and pinyon. Forbs are a relatively minor component on the site except during spring emergence.

Shallow Savannah Range Site

GRASSES and GRASSLIKE	65-75%
Needleandthread }	
New Mexico Feathergrass }	10-15
Blue Grama }	
Galleta }	10-15
Indian Ricegrass	5-10
Western Wheatgrass	5-10
Muttongrass }	
Prairie Junegrass }	3-8
Little Bluestem }	
Sideoats Grama }	3-5
Alkali Sacaton	3-5
Bottlebrush Squirreltail	3-5
Wolftail }	
Dropseeds }	
Pinyon Ricegrass }	3-5
Others	3-7
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Woody	15-25%
Fourwing Saltbrush }	
Winterfat }	5-10
Big Sagebrush }	
Bigelow Sagebrush }	3-5
Rabbitbrush }	
Spineless Horsebrush }	1-3
Cliffrose }	
Antelope Bitterbrush }	
Mountain Mahogany }	1-3
Oneseed Juniper }	
Rocky Mountain Juniper }	
Pinyon }	5-15
Others	1-3
<hr/>	
Forbs	3-5%
Wild Buckwheat }	

Fringed Sagewort	}	
Indian Paintbrush	}	
Fleabane	}	
Others	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Letterman Needlegrass, Littleseed Ricegrass, Spike Muhly, Hairy Muhly, New Mexico Muhly, Mountain Muhly, Threeawns, Longleaf Ephedra, Cholla, Soapweed Yucca, Skunkbush Sumac, Sand Sagebrush, Oak Species, Broom Snakeweed, Threadleaf Groundsel, Pingue, Locoweed, Globemallow, and Ragweed.

**WP-1
(Basalt) Breaks Range**

This site is a mixture of grasses, forbs, and shrubs. Scrubby oneseed juniper and/or pinyon do occur on cooler exposures, but they make up a minor part of the plant community.

(Basalt) Breaks Range Site

GRASSES and GRASSLIKE	45-60%
Black Grama 1/	5-20
Sideoats Grama	5-10
Needleandthread }	
New Mexico Feathergrass }	
Western Wheatgrass }	
Indian Ricegrass }	5-10
Prairie Junegrass 2/ }	
Muttongrass 2/ }	3-10
Galleta }	
Blue Grama }	
Hairy Grama }	3-8
Little Bluestem }	
Cane Bluestem }	3-5
Pine Dropseed }	
Mountain Muhly }	
Spike Muhly }	
New Mexico Muhly }	3-5
Wolftail }	
Other }	3-5
Woody	25-40%
Mountain Big Sagebrush	5-15
Fourwing Saltbrush }	
Winterfat }	3-7
Skunkbush Sumac }	
Currant spp. }	
Oak spp. }	3-7
New Mexico Olive }	
Apacheplume }	
Mountain Mahogany }	1-5
Pinyon }	
Juniper }	1-7
Others	

Forbs	5-15%
Indian Paintbrush	}
Wild Buckwheat	
Fleabane	
Asters	
Others	
	5-15

1/ On south and west exposures, black grama may be the dominant grass species, but on cooler exposures it is a minor component.

2/ At higher elevation and on northern exposures, these species are abundant components of the herbaceous community.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Bottlebrush Squirreltail, Plains Bristlegrass, Dropseeds, Threeawns, Brome spp., Arizona Fescue, Letterman Needlegrass, Phlox, Penstemon, Locoweed, Pingue, Rabbitbrush, Yucca spp., and Broom Snakeweed.

WP-1
Loamy Savannah Range

This site is a grassland site with a fairly evenly-spaced stand of pinyon and/or juniper. The tree over story is at equilibrium with the herbaceous under story at climax. Over story canopy ranges from 10 to 25 percent in the plant community. Shrubs are common on this site. Forbs are a minor component.

Loamy Savannah Range Site

GRASSES and GRASSLIKE	65-75%
Western Wheatgrass	10-20
Galleta }	
Blue Grama }	7-12
Prairie Junegrass }	
Muttongrass }	5-10
Spike Muhly }	
Alkali Sacaton }	3-7
Indian Ricegrass }	
New Mexico Feathergrass }	
Needleandthread }	3-7
Bottlebrush Squirreltail	3-5
Pinyon Ricegrass }	
Littleseed Ricegrass }	
Pine Dropseed }	5-10
Arizona Fescue }	
Mountain Muhly }	0-5
Others*	
Woody	15-25%
Pinyon }	
Oneseed Juniper }	
Rocky Mountain Juniper }	3-8
Winterfat }	
Fourwing Saltbrush }	3-8
Big Sagebrush }	
Low Sagebrush }	3-8
Rabbitbrush }	
Spineless Horsebrush }	1-3
Others*	1-3
Forbs	3-5%
Fringed Sagewort }	
Wild Buckwheat }	

Fleabane	}	
Perennials	}	1-3
Annuals		1-2

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Wolftail, Hairy Grama, Sideoats Grama, Dropseeds, Mat Muhly, Ring Muhly, New Mexico Muhly, Alfileria, Indian Paintbrush, Threadleaf Groundsel, Fringed Sagewort, Pingue, Skunkbush Sumac, Yucca spp., Oak spp., and Ponderosa Pine.

**WP-1
Swale Range**

This site is a grassland site with scattered shrubs. Western wheatgrass is the dominant grass on the site with basin big sagebrush and fourwing saltbrush providing a shrub savannah aspect. Forbs are a minor component on the site.

Swale Range Site

GRASSES and GRASSLIKE	80-90%
Western Wheatgrass	30-40
Spike Muhly	5-15
Alkali Sacaton	5-15
Bottlebrush Squirreltail	5-10
Blue Grama }	
Galleta }	3-7
Muttongrass }	
Prairie Junegrass }	3-7
Others	5-7
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Woody	5-15%
Fourwing Saltbrush	3-5
Basin Big Sagebrush	3-5
Rubber Rabbitbrush }	
Others }	3-5
<hr/>	
Forbs	3-5%
Rocky Mountain Beeplant }	
Green Sagewort }	
Louisiana Sagewort }	
Thistle }	
Others }	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sand Dropseed, Mat Muhly, Silver Bluestem, Slender Wheatgrass, Sedges, Tansymustard, Western Ragweed, Fleabane, Globemallow, Skunkbush Sumac, Apacheplume, Winterfat, Green Rabbitbrush, Spineless Horsebrush, and Broom Snakeweed.

WP-1
Stony Loam Range

This site is a grassland-shrub site predominantly characterized by perennial, cool-season grasses, and shrubs. Very few, if any, trees grow on this site.

Stony Loam Range Site

GRASSES and GRASSLIKE	55-65%
Western Wheatgrass }	
Spike Muhly }	25-45
Blue Grama	5-10
Galleta	5-10
Needleandthread }	
New Mexico Feathergrass }	5-15
Bottlebrush Squirreltail	3-8
Indian Ricegrass	0-5
Sideoats Grama }	
Little Bluestem }	0-5
Others	
Woody	15-25%
Mountain Big Sagebrush	10-20
Rubber Rabbitbrush }	
Broom Snakeweed }	1-3
Fourwing Saltbrush }	
Winterfat }	3-5
Oneseed Juniper }	
Pinyon }	0-3
Others }	3-5
Forbs	5-10%
Locoweed }	
Wild Buckwheat }	
Globemallow }	
Other Perennials }	3-8
Other Annuals	1-3

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Prairie Junegrass, Muttongrass, Muhly spp., Sideoats

Grass, Wolf tail, Little Bluestem, Penstemon, Phlox spp., Aster, Fleabane, Yucca spp.,
Pine, and Cactus spp.

**WP-2
Sandy Plains Range**

This site is a site that is characterized by a shrub-grass mixture with five percent or less of pinyon pine and juniper trees. Mid-grasses are dominant. Annual forbs occur in relative abundance during spring and summer months in years of above average growing conditions. When the potential plant community deteriorates, there is a marked increase in shrubs, half shrubs, trees and cacti. Large interspaces between plants occur, and there is a decrease in desirable grasses. With continued plant deterioration and accompanying wind erosion, dunes will become active and the vegetation will consist primarily of sandhill muhly, forbs, and a few shrubs.

Sandy Plains Range Site

GRASSES and GRASSLIKE		70%
Indian Ricegrass		20-25
Blue Grama		10-15
Spike Dropseed	}	
Sand Dropseed	}	
Mesa Dropseed	}	10-15
Giant Dropseed		5-10
Bottlebrush Squirreltail		5-10
Needleandthread	}	
New Mexico Feathergrass	}	5-10
Little Bluestem	}	
Sand Bluestem	}	5-10
Sandhill Muhly		3-5
Woody		20%
Sand Sagebrush	}	
Fourwing Saltbrush	}	5-10
Small Soapweed	}	
Spineless Horsebrush	}	
Broom Snakeweed	}	3-5
Pinyon Pine		3-5
Juniper		3-5
Forbs		10%
Fiddleneck	}	
Rocky Mountain Beeplant	}	
Threadleaf Groundsel	}	
White Phlox	}	
Spiderwart	}	
Mariposa Lilly	}	

Deathcamas	}	
Sand Verbena	}	
Larkspur	}	
Lupine	}	5-10

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Dune Broom, Rubber Rabbitbrush, Threeawns spp., Big Sagebrush, Plains Prickly pear, Cholla, Pale Wolfberry, Wild Onion, Annual Bromes, Purslane, Bull Thistle, Russian Thistle, Fremont Barberry, Ring Muhly, Tansymustard, Blueflowered Lettuce, Mormon-Tea, Salsify, and Galleta.

**WP-2
Loamy Plains Range**

This site is a grassland site, with lesser amounts of shrubs, half shrubs, cacti, perennial forbs, and annual forbs. Big sagebrush will occur in higher concentrations on the upper slopes, oftentimes as an under story shrubs with invading juniper trees. Annual forbs occur in relative abundance during spring and summer months in years of above average growing conditions. When the potential plant community deteriorates there is a marked increase in amounts of shrubs, half shrubs, and forbs, with big sagebrush often dominating the site.

Loamy Plains Range Site

GRASSES and GRASSLIKE	65%
Blue Grama	10-15
Western Wheatgrass	15-20
Spike Muhly	3-5
Bottlebrush Squirreltail	5-10
Indian Ricegrass	5-10
Galleta	10-15
Sand Dropseed }	
Spike Dropseed }	3-5
Alkali Sacaton	10-15
New Mexico Feathergrass }	
Needleandthread }	3-5
Wolftail	3-5
Woody	20%
Big Sagebrush	5-10
Fourwing Saltbrush }	
Winterfat }	3-5
Rabbitbrush }	
Broom Snakeweed }	
Spineless Horsebrush }	
Pale Wolfberry }	3-5
Forbs	15%
Sunflowers }	
Rocky Mountain Beeplant }	
Threadleaf Groundsel }	
Locoweed }	
Scarlet Globemallow }	
Buckwheat }	
Indian Paintbrush }	

Whorled Milkweed	}	
Kochia	}	
Salsify	}	
Yellow Bell	}	
Prairie Coneflower	}	10-15

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Gilia, Bigelow Sagebrush, Threeawns spp., Annual Bromes, Russian Thistle, Prickly Poppy, Wild Onion, Pingue, Sixweeks Grama, Sixweeks Fescue, and Tansymustard.

**WP-2
Clay Valley Range**

This site is a grassland site, with 25 percent or less of shrubs, half shrubs, perennial forbs, and annual forbs. Annual forbs occur in relative abundance during spring and summer months in years of above average growing conditions. When the potential plant community deteriorates, there is a marked increase in the size of the interspaces between plants, an increase in prickly pear and cholla, and a decrease in production and presence of western wheatgrass, bottlebrush squirreltail, and spike muhly. This site may become severely eroded with deep, vertical walled gullies.

Clay Valley Range Site

GRASSES and GRASSLIKE	75%
Alkali Sacaton	25-30
Western Wheatgrass	15-20
Blue Grama	3-5
Bottlebrush Squirreltail	5-10
Indian Ricegrass	5-10
Spike Muhly	}
Cane Bluestem	
Galleta	5-10
Mat Muhly	3-5
Woody	10%
Fourwing Saltbrush	}
Winterfat	
Big Sagebrush	5-10
Forbs	15%
Scarlet Globemallow	}
Rocky Mountain Beeplant	
Threadleaf Groundsel	
Kochia	
Tansymustard	
Sunflower	
Salsify	10-15

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Purple Nightshade, Tumble Windmillgrass, Ring Muhly, Rubber Rabbitbrush, Plains Prickle pear, Cholla, Threeawns, Annual Bromes, Russian

Thistle, Cow-weed, Pale Wolfberry, Broom Snakeweed, Western Ragweed, and Woolly Indian Wheat.

WP-2
Shallow Hills Range

This site is a sparse stand of pinyon pines and juniper trees with under story grasses, shrubs, and forbs. Annual forbs are relatively abundant during spring and summer months in years of above average growing conditions. When the natural plant community deteriorates, there is a marked increase in amounts of pinyon pine and juniper trees. They may completely dominate this site. There will also be an increase in shrubs, particularly big sagebrush, and a marked decrease in relative abundance of palatable grasses. Cholla, prickly pear, big sagebrush, and broom snakeweed may dominate the under story vegetation in severe deterioration of the natural plant community.

Shallow Hills Range Site

GRASSES and GRASSLIKE		60%
Indian Ricegrass		5-10
Wolftail		3-5
Needleandthread	}	
New Mexico Feathergrass	}	5-10
Alkali Sacaton		3-5
Western Wheatgrass		10-15
Blue Grama		5-10
Prairie Junegrass		1-3
Muttongrass		5-10
Galleta		3-5
Sand Dropseed		3-5
Little Bluestem		3-5
Woody		25%
Big Sagebrush	}	
Bigelow Sagebrush	}	
Fringed Sagewort	}	5-10
Green Rabbitbrush		3-5
Rubber Rabbitbrush	}	
Fourwing Saltbrush	}	5-10
Skunkbush Sumac	}	
Mountain Mahogany	}	
Cliffrose	}	5-10
Pinyon Pine	}	
Juniper	}	10-15
Forbs		15%
Giant Mullein	}	
Whorled Milkweed	}	

Fiddleneck	}	
Scarlet Gilia	}	
Prairie Coneflower	}	
Yarrow	}	
Scarlet Globemallow	}	
Pingue	}	
Indian Paintbrush	}	10-15

Other species which usually grow on this site in varying amounts, depending on cuurent growing conditions, include: Spanish Dagger, Gooseberry Current, Broom Snakeweed, Palmer Penstemon, Yellow Wall-Flower, Oakbrush, Utah Serviceberry, Larkspur, Lupine, Prickly pear Cacti, Cholla Cacti, Russian Thistle, Threeawns spp., Annual Bromes, Pale Wolfberry, Bull Thistle, and Wooly Indianwheat.

WP-2
Sandy Slopes Range

This site is a grass-shrub mixture with a few scattered pinyon pine and juniper trees. Annual forbs occur in relative abundance during spring and summer months in years of above average growing conditions. When the potential plant community deteriorates, there is a marked increase in amounts of shrubs, half shrubs, and trees. In drastic deterioration, the site may be dominated by big sagebrush, pinyon pine, juniper, forbs, and cacti, with small amount of desirable grasses.

Sandy Slopes Range Site

GRASSES and GRASSLIKE		65%
Sand Dropseed	}	
Mesa Dropseed	}	
Spike Dropseed	}	5-10
Western Wheatgrass		10-15
Blue Grama		10-15
Indian Ricegrass		10-15
Needleandthread	}	
New Mexico Feathergrass	}	5-10
Alkali Sacaton		5-10
Little Bluestem		3-5
Galleta		5-10
Bottlebrush Squirreltail		5-10
Threeawns spp.		3-5
Woody		25%
Pinyon Pine	}	
Juniper	}	3-5
Fourwing Saltbrush	}	
Winterfat	}	5-10
Big Sagebrush	}	
Bigelow Sagebrush	}	
Fringed Sagewort	}	
Sand Sagebrush	}	5-10
Forbs		10-20%
Larkspur	}	
Purple Nightshade	}	
Scarlet Gilia	}	
Salisfy	}	
Lupine	}	

Locoweed	}	
Pingue	}	
Curly Dock	}	
Indian Paintbrush	}	
Mariposa Lilly	}	
Sand Verbena	}	5-10

Other species which usually grow on this site in varying amounts, depending on cuurent growing conditions, include: Wild Pea, Yellow Bell, Evening Primrose, Wooly Indianwheat, Yucca, Purslane, Tumble Windmillgrass, Ring Muhly, Annual Bromes, Russian Thistle, Sunflowers, Threadleaf Groundsel, Rocky Mountain Beeplant, Penstemon, Nodding Onion, Scarlet Globemallow, Goldenweed, Fiddleneck, Lambsquarter, Rubber Rabbitbrush, Spineless Horsebrush, and Broom Snakeweed.

**WP-2
Floodplain Range**

This site is a site that is dominated by western wheatgrass and alkali sacaton with lesser amounts of annual and perennial forbs. Only a very small amount of shrubs are present. When the plant community deteriorates, annual forbs and grasses become quite common. This site may be completely destroyed by water erosion and may form deep, vertical-walled gullies and drain the flood waters from the site.

Floodplain Range Site

GRASSES and GRASSLIKE	90%
Alkali Sacaton	35-40
Western Wheatgrass	35-40
Blue Grama	5-10
Bottlebrush Squirreltail	T-5
Mat Muhly	5-10
Alkali Muhly	T-5
Spike Muhly	5-10
Galleta	5-10
Muttongrass	5-10
Woody	5%
Fourwing Saltbrush	1-5
Forbs	5%
Plaintain	}
Sunflower	}
Wild Pea	}
Clover	} 1-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Foxtail Barley, Bull Thistle, Pear Cactus, Tansymustard, Salsify, Broom Snakeweed, Annual Bromes, Threadleaf Groundsel, Curly Dock, Purslane, Western Ragweed, and Rubber Rabbitbrush.

**WP-2
Meadow Range**

This site is a grassland site that is characterized by short and mid-grasses. Sedges and rushes are conspicuous. Shrubs are present only in small amounts. Some perennial and annual forbs are indigenous to this site. The plant community will change with adverse conditions. There will be a marked increase in amounts of sedges, rushes, forbs, and tamarisk. Sedges and Kentucky bluegrass often dominate the site.

Meadow Range Site

GRASSES and GRASSLIKE		85%
Western Wheatgrass		35-40
Canadian Wildrye	}	
Foxtail Barley	}	5-10
Alkali Sacaton		5-10
Mat Muhly	}	
Alkali Muhly	}	10-15
Sedges		10-15
Rushes		5-10
Cattail		5-10
Inland Saltgrass		5-10
Barnyardgrass		T-5
Bluegrass		5-10
Woody		5%
Tamarisk		1-5
Forbs		10%
Buckhorn Plantain	}	
Cocklebur	}	
Western Yarrow	}	
Clover	}	
Whorled Milkweed	}	
Sunflower	}	
Iris	}	5-10

**WP-2
Savannah Range**

This site is a site that is characterized by scattered large tree-type pinyon and/or juniper with open grass stands in between. Under story grasses are dominantly blue grama, western wheatgrass, Indian ricegrass, and sand dropseed. Pinyon ricegrass and pine dropseed may also be found, usually beneath the trees and at higher elevation ranges of the site. Winterfat and some forbs may occur in significant amounts. Broom snakeweed is the most common in certain good rainfall years and when the under story plant community deteriorates from its potential. Reproduction of pinyon pine and juniper is normally very slow and, historically, may have been controlled by natural fire. Tree canopy of the natural potential plant community averages are approximately 25 percent.

Savannah Range Site

GRASSES and GRASSLIKE	60-70%
Blue Grama	15-20
Western Wheatgrass	10-15
Indian Ricegrass	5-10
Sand Dropseed	5-10
Muttongrass }	
Pinyon Ricegrass }	1-3
Pine Dropseed }	
Needleandthread }	
Bottlebrush Squirreltail }	
Prairie Junegrass }	
Green Needlegrass }	
New Mexico Feathergrass }	5-10
Ring Muhly }	
Threeawn }	3-5
Sand Muhly	1-3
Spike Muhly }	
Wolftail }	3-5
Galleta }	3-5
Woody	20-30%
Winterfat	1-3
Bigelow Sagebrush	1-3
Broom Snakeweed	1-3
Rabbitbrush }	
Spineless Horsebrush }	
Sand Sagebrush }	3-5
Pinyon Pine }	
Juniper }	10-20
Fourwing Saltbrush	3-5

Forbs	5-10%
Perennials	3-8
Annuals	1-5

In exceptional cases, a few more or less even-aged ponderosa pine may occur on this site naturally. Reproduction of this species is ordinarily even less evident than that of pinyon or juniper, and no more than one or two percent of the under story is likely to be made up of pine seedlings, even in the absence of livestock grazing.

**WP-2
Basalt Hills Range**

This site is a site that is dominated by perennial grasses, such as black grama, sideoats grama, blue grama, green sprangletop, and New Mexico feathergrass. This site is typically open and virtually free of trees. Shurbs and half shrubs may include apacheplume, wintefat, bigelow sagebrush, yerba-de-pasmo, skunkbush sumac, juniper, and shrub live oak. Species of buckwheat are frequently the dominant forbs.

Basalt Hills Range Site

GRASSES and GRASSLIKE	75-85%
Black Grama	25-30
Blue Grama	5-10
Sideoats Grama	15-20
Western Wheatgrass	}
Stipa spp.	}
Little Bluestem	}
Bottlebrush Squirreltail	} 10-15
Cane Bluestem	}
Green Sprangletop	}
Plains Lovegrass	} 3-8
Vine Mesquite	1-3
Tobosa	}
Galleta	} 1-5
Hall's Panicum	}
Curly Mesquite	} 1-5
Threeawn	}
Hairy Grama	} 1-3
Others	0-3
Woody	5-10%
Apacheplume	}
Wolfberry	}
Skunkbush Sumac	} 1-3
Yerba-de-pasmo	}
Feather Dalea	}
Bigelow Sage	}
Winterfat	} 1-5
Wright Silktassel	}
Hairy Mountain Mahogany	} 0-1
Pinyon	}
Juniper	}
Other Species	} 1-3

Forbs	10-15%
Wright Buckwheat	}
Indian Paintbrush	}
Annual Buckwheat	1-5
Other Annuals	3-5
Other Perennials	3-8

**WP-2
Loamy Range**

This site is a grassland site that is characterized by a mixture of warm and cool seasoned grasses. Dominants are blue grama and western wheatgrass. Also characteristic are such species as bottlebrush squirreltail, spike muhly, sand dropseed, needleandthread, and New Mexico feathergrass. Shrubs and half shrubs include fourwing saltbrush, and winterfat. Typical forbs are Wright buckwheat, Rocky Mountain beeplant, and species of astragalus.

Loamy Range Site

GRASSES and GRASSLIKE	75-85%
Blue Grama	20-25
Western Wheatgrass	10-20
Spike Muhly	8-12
Bottlebrush Squirreltail	5-10
New Mexico Feathergrass }	
Needleandthread }	5-10
Galleta	1-5
Sideoats Grama	1-5
Wolftail }	
Sand Dropseed }	1-5
Ring Muhly }	
False Buffalograss }	
Threeawns spp. }	1-5
Black Grama	1-3
Alkali Sacaton	1-5
Woody	10-15%
Fourwing Saltbrush	1-5
Winterfat	1-5
Bigelow Sagebrush }	
Fringed Sagewort }	1-5
Broom Snakeweed }	1-3
Spineless Horsebrush }	
Rabbitbrush }	1-3
Wolfberry }	
Apacheplume }	1-3
Forbs	5-10%
Perennials	1-8
Annuals	1-5

WP-2
Sandy Range

This site is a grassland site that is characterized by a mixture of warm and cool seasoned grasses, shrubs, half-shrubs, and forbs. Blue grama and western wheatgrass are co-dominants, with Indian ricegrass and dropseed closely associated. Principal shrubs and half shrubs include fourwing saltbrush, winterfat, and sand sagebrush. Rocky Mountain beeplant is often the most noticeable forb. Broom snakeweed is most common in certain wet years and when the plant community deteriorates from its potential.

Sandy Range Site

GRASSES and GRASSLIKE	75-85%
Western Wheatgrass	15-20
Blue Grama	25-30
Indian Ricegrass	5-10
Needleandthread	}
Bottlebrush Squirreltail	}
New Mexico Feathergrass	5-10
Sand Dropseed	}
Spike Dropseed	10-15
Galleta	1-5
Ring Muhly	}
Sandhill Muhly	3-5
False Buffalograss	}
Threeawns spp.	1-5
Black Grama	1-5
Spike Muhly	1-3
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Woody	10-15%
Fourwing Saltbrush	}
Winterfat	5-10
Bigelow Sagebrush	1-5
Broom Snakeweed	}
Rabbitbrush	}
Sand Sagebrush	}
Spineless Horsebrush	1-3
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Forbs	5-10%
Perennials	3-8
Annuals	1-5

**WP-2
Gravelly Range**

This site is a mixture of warm and cool season grasses such as blue grama, sideoats grama, spike muhly, New Mexico feathergrass, western wheatgrass, and bottlebrush squirreltail. Shrubs and half shrubs include winterfat, small soapweed, apacheplume, and rabbitbrush. Pinyon pine or juniper may occur but are significant only as visual aspect species when they do. Forbs are a minor component of the potential plant community on this site.

Gravelly Range Site

GRASSES and GRASSLIKE	85-95%
Blue Grama	30-35
Sideoats Grama	1-5
Hairy Grama	1-3
Little Bluestem	5-10
Wolftail }	
Spike Muhly }	5-10
New Mexico Feathergrass }	
Needleandthread }	5-10
Western Wheatgrass	5-10
Bottlebrush Squirreltail }	
Indian Ricegrass }	5-10
Sand Dropseed }	
Galleta }	1-5
Ring Muhly }	
Threeawns spp. }	1-5
Black Grama	5-15
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Woody	5-10%
Winterfat	1-5
Small Soapweed	1-3
Pinyon }	
Juniper }	0-3
Apacheplume }	
Wolfberry }	
Fourwing Saltbrush }	
Broom Snakeweed }	1-3
Spineless Horsebrush }	
Rabbitbrush }	
Bigelow Sagebrush }	
Fringed Sagebrush }	1-3
Others	1-3

Forbs	1-5%
Perennials	1-5
Annuals	1-2

**WP-2
Deep Sand Range**

This site is a predominantly grassland site, characterized by both warm and cold season grasses, low growing shrubs and half shrubs, and a variety of forbs. Natural co-dominants are Indian ricegrass, blue grama, and spike dropseed. Shrubs and half shrubs include sand sagebrush, and scattered rabbitbrush. Forbs may include wild buckwheat and stickleaf mentzelia.

Deep Sand Range Site

GRASSES and GRASSLIKE		75-85%
Blue Grama		20-25
Indian Ricegrass		20-25
Spike Dropseed	}	
Sand Dropseed	}	15-20
Ring Muhly	}	
Sandhill Muhly	}	
Galleta	}	1-3
Western Wheatgrass	}	
Bottlebrush Squirreltail	}	
New Mexico Feathergrass	}	
Needleandthread	}	5-15
Black Grama	}	
Sideoats Grama	}	1-3
Threeawns spp.		1-3
Woody		5-10%
Sand Sagebrush	}	
Fourwing Saltbrush	}	
Small Soapweed	}	1-5
Rabbitbrush	}	
Broom Snakeweed	}	1-3
Others		1-3
Forbs		5-15%
Perennials		1-10
Annuals		1-5

**WP-2
Swallow Range**

This site is a grassland site that is characterized by a mixture of both warm and cold season grasses. Dominants are likely to include blue grama, New Mexico feathergrass, and sideoats grama. Also characteristic are such species as needleandthread, little bluestem, galleta, bottlebrush squirreltail, sand dropseed, and spike muhly. Shrubs and half shrubs may include juniper, bigelow sagebrush, and winterfat. Substantial populations of forbs are not characteristic of the natural plant community.

Swallow Range Site

GRASSES and GRASSLIKE	80-90%
Blue Grama	15-20
New Mexico Feathergrass }	
Needleandthread }	10-20
Sideoats Grama	10-15
Hairy Grama	1-3
Little Bluestem	5-10
Wolftail }	
Spike Muhly }	5-10
Bottlebrush Squirreltail }	
Western Wheatgrass }	
Indian Ricegrass }	5-10
Galleta	1-5
Sand Dropseed	1-5
Black Grama	1-3
Ring Muhly }	
Threeawns spp. }	1-5
Woody	5-10%
Pinyon }	
Juniper }	1-5
Oakbrush }	
Skunkbush Sumac }	
Wolfberry }	1-3
Bigelow Sagebrush }	
Winterfat }	
Broom Snakeweed }	1-5
Forbs	3-8%
Perennials	1-5
Annuals	1-3

**WP-2
Cinder Range**

This site is an open site characterized by perennial bunchgrasses, scattered shrubs, and half shrubs. Blue grama, sideoats grama, and galleta are significant warm season species, while New Mexico feathergrass, western wheatgrass, and bottlebrush squirreltail are the most frequently encountered cool season species. Widely scattered patches of wolfberry, apacheplume, or fourwing saltbrush are common. Various species of forbs occur and are evenly distributed.

Cinder Range Site

GRASSES and GRASSLIKE	80-90%
Blue Grama	30-35
Sideoats Grama	10-15
New Mexico Feathergrass }	
Needleandthread }	
Western Wheatgrass }	10-15
Galleta	5-10
Bottlebrush Squirreltail }	
Indian Ricegrass }	5-10
Spike Muhly }	5-10
Wolftail }	5-15
Threeawns spp. }	
Ring Muhly }	
Sand Dropseed }	1-5
Black Grama }	
Hairy Grama }	0-3
Woody	5-10%
Apacheplume }	
Winterfat }	
Fourwing Saltbrush }	1-5
Winterfat	1-3
Broom Snakeweed }	
Spineless Horsebrush }	
Rabbitbrush }	
Bigelow Sagebrush }	
Fringed Sagewort }	1-3
Pinyon }	
Juniper }	0-3
Forbs	5-10%
Perennials	1-7

**WP-2
Bottomland Range**

This site is a high producing grassland site dominated by such species as alkali sacaton, vine mesquite, western wheatgrass, and blue grama. Lesser amounts of spike muhly, bottlebrush squirreltail, and galleta are also common. Fourwing saltbrush and rabbitbrush are the most common shrubs or half shrubs. Forbs are a minor but are evenly distributed over the site.

Bottomland Range Site

GRASSES and GRASSLIKE	85-95%
Alkali Sacaton	30-40
Western Wheatgrass	20-30
Vine Mesquite	1-5
Blue Grama }	
Spike Muhly }	
Galleta }	10-15
Bottlebrush Squirreltail	1-5
Mat Muhly }	
Creeping Muhly }	
Ring Muhly }	
Threeawns spp. }	
Dropseed }	1-5
Giant Sacaton	1-3
Others	1-3
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Woody	5-15%
Fourwing Saltbrush	3-10
Rabbitbrush }	
Broom Snakeweed }	1-5
Spineless Horsebrush }	
Fringed Sagewort }	
Bigelow Sagebrush }	1-3
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Forbs	1-5%
Perennials	1-5
Annuals	1-3

**WP-2
Clayey Bottomland Range**

This site is a site that is typically dominated by western wheatgrass. Vine mesquite, blue grama, galleta, and spike muhly occur in lesser amounts but are common and important components of the potential plant community. Alkali sacaton and giant sacaton are found but on a less consistent level of occurrence than most of the other species characteristic of the site. Shrubs include fourwing saltbrush, rabbitbrush, and sometimes winterfat. Forbs occur in minor but evenly distributed amounts across the site.

Clayey Bottomland Range Site

GRASSES and GRASSLIKE	80-90%
Western Wheatgrass	35-45
Vine Mesquite	10-15
Blue Grama	5-10
Galleta	}
Spike Muhly	}
Alkali Sacaton	10-15
Bottlebrush Squirreltail	5-10
Mat Muhly	1-3
Creeping Muhly	}
Threeawns spp.	}
	1-5
Woody	5-15%
Fourwing Saltbrush	3-10
Winterfat	1-3
Rabbitbrush	}
Broom Snakeweed	}
Bigelow Sagebrush	}
	1-5
Forbs	3-8%
Perennials	1-5
Annuals	1-3

**WP-2
Swale Range**

This site is a site that is characterized by such grasses as western wheatgrass, alkali sacaton, blue grama, and galleta. Shrubs and half shrubs include fourwing saltbrush, rabbitbrush, and winterfat. Forbs are a naturally variable in kind and amount and make up what is a relatively broad fluctuation in their percentage of the natural plant community. They are evenly distributed, however, and will at times enjoy a significant “aspect” influence.

Swale Range Site

GRASSES and GRASSLIKE	75-85%
Western Wheatgrass	35-55
Alkali Sacaton	5-15
Blue Grama }	
Spike Muhly }	
Galleta }	10-15
Bottlebrush Squirreltail	3-5
Sideoats Grama }	
Little Bluestem }	
Wolftail }	
Vine Mesquite }	
Cane Bluestem }	5-10
Ring Muhly }	
Threeawns spp. }	
Sand Dropseed }	
False Buffalograss }	
Mat Muhly }	1-5
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Woody	5-15%
Fourwing Saltbrush }	
Winterfat }	5-10
Wolfberry }	
Rabbitbrush }	
Broom Snakeweed }	
Bigelow Sagebrush }	
Apacheplume }	1-5
Others	1-3
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Forbs	5-15%
Perennials	1-10
Annuals	1-5

WP-2
Salty Bottomland Range

This site is a shrub-grass mixture characterized by mid-grasses, alkali sacaton, and western wheatgrass. The characteristic shrubs are black greasewood and fourwing saltbrush. Perennial forbs are a minor component of the plant community. Annual forbs and grasses occur in relative abundance during the spring in years which have above average growing conditions. When the potential plant community deteriorates, there is a marked increase in relative abundance of shrubs, cacti, perennial and annual forbs. In severe vegetative deterioration, the site will consist dominantly of shrubs, but can also be dominated by greasewood, sagebrush, annual forbs and annual grasses, with lesser amounts of perennial grasses and large areas of unprotected soils.

Salty Bottomland Range Site

GRASSES and GRASSLIKE		65%
Alkali Sacaton		30-35
Indian Ricegrass		5-10
Western Wheatgrass		20-25
Bottlebrush Squirreltail		10-15
Galleta		10-15
Blue Grama		5-10
Inland Saltgrass	}	
Mat Muhly	}	5-10
Woody		25%
Black Greasewood		3-5
Shadscale		3-5
Big Sagebrush		3-5
Fourwing Saltbrush		5-10
Winterfat		3-5
Bud Sagebrush		1-3
Forbs		10%
Iodinebush	}	
Goldenweed	}	3-5
Western Ragweed	}	
Groundsel	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Broom Snakeweed, Annual Bromes, Foxtail Barley, Threawns, Russian Thistle, Western Ragweed, Rocky Mountain Beeplant, Threadleaf

Groundsel, Cheatgrass, and Sand Dropseed.

WP-2
Shallow Sandstone Range

This site is a site that is characterized by relatively moderate production and is dominated by blue grama and sideoats grama. Common, but occurring in lesser amounts, are little bluestem, Indian ricegrass, New Mexico feathergrass, galleta, and sometimes needleandthread. Other characteristic species include sand dropseed, spike dropseed, threeawns, winterfat, bigelow sagebrush, pinyon, and juniper.

Shallow Sandstone Range Site

GRASSES and GRASSLIKE	75-85%
Sideoats Grama	25-30
Blue Grama	10-15
Little Bluestem	5-15
New Mexico Feathergrass }	
Bottlebrush Squirreltail }	
Needleandthread }	
Muttongrass }	
Indian Ricegrass }	10-20
Western Wheatgrass }	
Galleta }	
Sand Dropseed }	
Spike Dropseed }	
Wolftail }	
Alkali Sacaton }	1-5
Black Grama	1-3
Hairy Grama }	
Threeawns }	
Sandhill Muhly }	1-5
Woody	10-15%
Pinyon Pine }	
Juniper }	1-5
Rabbitbrush }	
Fourwing Saltbrush }	
Bigelow Sagebrush }	
Sand Sagebrush }	
Mountain Mahogany }	
Winterfat }	5-10
Broom Snakeweed	1-3
Forbs	5-10%
Perennials	3-8

Annuals

1-5

**WP-2
Sandstone Hills Range**

This site is a site that is characterized by a mixture of short and mid-grasses, shrubs, and scattered trees. Sideoats grama, blue grama, little bluestem, Indian ricegrass, New Mexico feathergrass, galleta, and occasionally black grama are common grasses. Pinyon pine and species of juniper characterizes the tree aspect of the site, while shrubs and half shrubs as skunkbush sumac, oakbrush, mountain mahogany, and winterfat are common shrub and half shrub species. Bigelow sagebrush, spineless horsebrush, and broom snakeweed are encountered in small amounts.

Sandstone Hills Range Site

GRASSES and GRASSLIKE	70-80%
Sideoats Grama	20-30
Blue Grama	10-15
Little Bluestem	5-15
Mountain Muhly	}
Pine Dropseed	}
Indian Ricegrass	}
Arizona Fescue	}
Sheep Fescue	} 5-10
New Mexico Feathergrass	}
Western Wheatgrass	}
Needleandthread	}
Muttongrass	}
Prairie Junegrass	}
Bottlebrush Squirreltail	} 10-15
Spike Muhly	}
Galleta	} 1-5
Sand Dropseed	}
Wolftail	}
Hairy Grama	}
Threeawns	} 1-3
Black Grama	1-5
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Woody	15-25%
Pinyon Pine	}
Juniper	} 5-10
Skunkbush Sumac	}
Oakbrush	}
Mountain Mahogany	} 1-5
Bigelow Sagebrush	}
Winterfat	} 1-5
Broom Snakeweed	}

Spineless Horsebrush	}	
Rabbitbrush	}	1-3

Forbs		5-10%
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Perennials		3-8
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Annuals		1-3
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**WP-2
Limestone Hills Range**

This site is a site that is characterized by a mixed grassland, shrubs, half-shrubs aspect with only occasional tree-type junipers and pinyon pines being present. Mid and short grasses dominate, with shrubs and half shrubs following. Forbs are a minor component, but a variety does occur, and they are evenly distributed over the site. Cool-seasoned grasses and shrubs are more prevalent on north and east facing slopes, while warm seasoned short grasses and half shrubs prevail on south and west facing slopes. This potential plant community is relatively high producing and affords good forage and browse for both livestock and wildlife.

Limestone Hills Range Site

GRASSES and GRASSLIKE		70-80%
New Mexico Feathergrass		20-30
Black Grama		10-20
Blue Grama		5-10
Sideoats Grama	}	
Little Bluestem	}	5-15
Mountain Muhly	}	
Curlyleaf Muhly	}	
Pinyon Ricegrass	}	
Spike Muhly	}	
Wolftail	}	
Western Wheatgrass	}	
Prairie Junegrass	}	10-15
Threeawns	}	
Galleta	}	
Slim Tridens	}	1-5
Others		1-3
Woody		15-20%
Juniper		3-8
Winterfat		3-8
Mountain Mahogany	}	
Oakbrush	}	
Buckbrush Ceanothus	}	
Skunkbush Sumac	}	1-5
Broom Snakeweed		1-3
Pinyon Pine	}	
Others	}	1-3
Forbs		5-10%

Perennials	3-8
Annuals	1-3

At higher elevations (usually above 6,500 feet), black grama is not often found in amounts exceeding 10 percent even in the potential plant community. In these instances, the mountain or curlyleaf muhly and western wheatgrass grouping may occur in amounts up to 20 percent, New Mexico feathergrass may go as high as 35 percent and blue grama may reach 15 percent.

**WP-2
Hills Range**

This site is a site that is characterized by a mixed shrub-grassland aspect with scattered tree-type junipers and pinyon pines being present. The shrub and tree component is more visually prevalent on the cooler, north- and east facing slopes, while low growing shrubs and grasses prevail on south and west facing slopes. Dominant grasses include sideoats grama, blue grama, species of Muhlenbergia, and sometimes black grama (south facing slopes). Cool season species, such as New Mexico feathergrass, and needleandthread, are most common on north facing slopes. Green sprangletop, little bluestem, and bullgrass are typical aspect grasses on this site. Shrubs include skunkbush sumac, mountain mahogany, and species of oak.

Hills Range Site

GRASSES and GRASSLIKE	70-80%
Blue Grama	15-20
Mountain Muhly }	
Little Bluestem }	
Bullgrass }	
New Mexico Feathergrass }	
Needleandthread }	20-25
Black Grama	0-5
Bottlebrush Squirreltail }	
Pine Dropseed }	
Arizona Fescue }	
Sheep Fescue }	
Western Wheatgrass }	10-15
Sideoats Grama	5-10
Wolftail }	
Galleta }	
Spike Muhly }	
Sand Dropseed }	
Threeawns }	1-5
Green Sprangletop }	
Prairie Junegrass }	1-5
Woody	15-25%
Pinyon Pine }	
Juniper }	5-15
Mountain Mahogany }	
Skunkbush Sumac }	
Oakbrush }	
Buckbrush Ceanothus }	
Antelope Bitterbrush }	

Cliffrose	}	1-10
Apacheplume	}	
Broom Snakeweed	}	
Winterfat	}	1-3

Forbs **1-5%**

Perennials	3-5
Annuals	1-3

**WP-2
Saltflat Range**

This site is a grassland site that is mixed with scattered shrubs such as fourwing saltbrush, shadscale, and greasewood. Alkali sacaton is both the composition dominant and the aspect dominant for the site. Forbs are a variable and minor component of the plant community.

Saltflat Range Site

GRASSES and GRASSLIKE		80-90%
Alkali Sacaton		45-55
Blue Grama	}	
Vine Mesquite	}	
Spike Muhly	}	
Galleta	}	15-20
Western Wheatgrass		5-10
Inland Saltgrass	}	
Mat Muhly	}	5-10
Threeawns spp.		1-5
Woody		10-20%
Fourwing Saltbrush		5-15
Shadscale	}	
Greasewood	}	
Rabbitbrush	}	
Broom Snakeweed	}	1-10
Forbs		1-5%
Perennials		1-5
Annuals		1-3

**WP-2
Savannah Range**

This site is a site that is characterized by scattered large tree type pinyon and/or juniper with open grass stands in between. Under story grasses are dominantly blue grama, western wheatgrass, Indian ricegrass, and sand dropseed. Pinyon ricegrass and pine dropseed may also be found, usually beneath the trees and at the higher elevation ranges of the site. Winterfat and some forbs may occur in significant amounts. Broom snakeweed is most common in certain good rainfall years and when the under story plant community deteriorates from its potential. Reproduction of pinyon pine and juniper is normally very slow and, historically, may have been controlled by natural fire. Tree canopy of the natural potential plant community averages approximately 25 percent.

Savannah Range Site

GRASSES and GRASSLIKE	60-70%
Blue Grama	15-20
Western Wheatgrass	10-15
Indian Ricegrass	5-10
Sand Dropseed	5-10
Muttongrass }	
Pinyon Ricegrass }	1-3
Pine Dropseed }	
Needleandthread }	
Bottlebrush Squirreltail }	
Prairie Junegrass }	
Green Needlegrass }	
New Mexico Feathergrass }	5-10
Ring Muhly }	
Threeawn }	3-5
Sand Muhly	1-3
Spike Muhly }	
Wolftail }	3-5
Galleta	3-5
Woody	20-30%
Winterfat	1-3
Bigelow Sagebrush	1-3
Broom Snakeweed	1-3
Rabbitbrush }	
Spineless Horsebrush }	
Sand Sagebrush }	3-5
Pinyon Pine }	
Juniper }	10-20
Fourwing Saltbrush	3-5

Forbs	5-10%
Perennials	3-8
Annuals	1-5

**WP-2
Clayey Range**

This site is a site that is dominated by alkali sacaton. Western wheatgrass, galleta, and blue grama occur in lesser amounts but are common and important components of the potential plant community. Giant sacaton is scattered throughout the site. Shrubs include fourwing saltbrush, rabbitbrush, and winterfat. Forbs occur in relative abundance in years of above average precipitation and annual forbs make up a significant percentage of the available forage.

Clayey Range Site

GRASSES and GRASSLIKE	70-80%
Alkali Sacaton }	
Giant Sacaton }	20-25
Western Wheatgrass	20
Galleta	20-30
Blue Grama	5-20
Vine Mesquite	0-5
Bottlebrush Squirreltail }	
Indian Ricegrass }	5-10
Spike Muhly	3-5
Mat Muhly	1-5
Dropseed spp	1-5
Others	1-5
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Woody	5-15%
Fourwing Saltbrush }	
Winterfat }	5-10
Broom Snakeweed }	
Rabbitbrush }	1-5
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Forbs	5-10%
Perennials	1-8
Annuals	1-5

**WP-2
Salt Meadow Range**

This site is a bottomland site that is a grassland plant community characterized by inland saltgrass and alkali sacaton. Fourwing saltbrush, the dominant shrub, makes up less than 5% of the vegetation. Forbs, such as seepweed and iodinebush, are present in small amounts. When the plant community deteriorates it is dominated by inland saltgrass, seepweed, iodinebush, saltcedar, and large interspaces of bare crusted ground.

Salt Meadow Range Site

GRASSES and GRASSLIKE		90%
Inland Saltgrass		30-35
Alkali Sacaton		15-20
Saltsedge		5-10
Foxtail Barley		3-5
Mat Muhly		3-5
Western Wheatgrass		5-10
Nuttall Alkaligrass		5-10
Alkali Cordgrass		15-20
Woody		5%
Fourwing Saltbrush	}	
Pale Wolfberry	}	3-5
Forbs		5%
Iodinebush	}	
Seepweed	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Kochia, Saltcedar, Lanceleaf, Goldenweed, Russian Thistle, and Wedgegrass.

**WP-2
Limy Range**

This site is a grassland site that is characterized by a mixture of warm and cool seasoned grasses. Woody species occupy an important, although minor portion of the plant community. Forbs are a minor component of this site. During years of abundant spring and fall moisture a large variety of forbs occur throughout the site. The calcium content of the soils has a direct effect on the kinds as well as the amount of vegetation produced.

Limy Range Site

GRASSES and GRASSLIKE	75-85%
Thickspike wheatgrass }	
Western Wheatgrass }	10-20
Blue Grama }	
Hairy Grama }	10-15
New Mexico Feathergrass }	
Needleandthread }	10-20
Galleta	5-10
Alkali Sacaton	3-5
Indian Ricegrass	3-5
Bottlebrush Squirreltail	3-5
Sand Dropseed }	
Spike Dropseed }	
Wolftail }	3-5
Sideoats Grama	10-15
Black Grama	5-10
Woody	10-15%
Winterfat	5-10
Fourwing Saltbrush	1-5
Ephedra spp.	1-3
Bigelow Sagebrush	1-5
Rabbitbrush }	
Spineless Horsebrush }	
Broom Snakeweed }	1-3
Pinyon }	
Juniper }	1-3
Other Shrubs	3-5
Forbs	5-10%
Perennials	1-8
Annuals	1-5

At higher elevations (usually above 6,800 feet), black grama is often not found exceeding five percent even in the potential plant community. In these instances western and thick spike wheatgrass may occur in amounts up to 30 percent and blue grama may reach 20 percent. Pinyon and juniper may increase to 10 percent.

Other grasses that could occur on this site include: Ring Muhly, Mat Muhly, Cane Bluestem, *Tridens* spp., and Spike Muhly.

Other shrubs include *Cacti* spp., *Yucca* spp., Sandsage, and *Sacahuista*.

**WP-2
Shale Hills Range**

This site is a grassland site that is dominated by alkali sacaton. Shrubs are scattered and a few oneseed juniper are found. Forbs are a minor component.

Shale Hills Range Site

GRASSES and GRASSLIKE		80-90%
Alkali Sacaton		30-50
Galleta		20-30
Blue Grama		1-5
*Black Grama		0-10
Sideoats Grama		1-5
Cane Bluestem	}	
Silver Bluestem	}	1-5
Others		0-5
Woody		1-10%
Oneseed Juniper	}	
Pinyon	}	0-5
Sacahuista		0-3
Fourwing Saltbrush		0-4
Broom Snakeweed	}	1-3
Other Shrubs		1-3
Forbs		1-5%
Perennials		1-3
Annuals		1-3

* At higher elevations (usually above 6,500 feet), and north facing slopes, black grama is not often found in amounts exceeding 5 percent even in the potential plant community. In these instances alkali sacaton may go as high as 60 percent, galleta 40 percent, and blue grama may reach 20 percent.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Annual Fescue, Wolftail, Cholla, Yucca spp., Dropseed, Stipa spp., Annual Chenopodes.

**WP-2
Gyp Hills Range**

This site is a grassland-shrub aspect with a scattering of oneseed juniper. Forbs are scattered and make up an important part of the potential natural plant community.

Gyp Hills Range Site

GRASSES and GRASSLIKE		70-80%
Gyp Dropseed		10-20
Alkali Sacaton		10-15
Galleta		5-10
Black Grama	}	
Bush Muhly	}	
Sideoats Grama	}	
Needlegrasses	}	5-10
Blue Grama	}	
Hairy Grama	}	1-5
Other Grasses		5-7
Woody		15-20%
Coldenia		5-10
Algerita		3-5
Banana Yucca		1-3
Bigelow Sage		1-5
Mormon Tea		3-5
Oneseed Juniper		1-5
Other Shrubs		1-3
Fourwing Saltbrush	}	
Winterfat	}	5-7
Others		1-3
Forbs		3-5%
Globemallow		1-3
Dyssodia		1-3
Threadleaf Groundsel		1-3
Others		1-3

Other grasses which could appear in this site would include: Threeawns, Ring Muhly, Curlyleaf Muhly, Tridens species and Sand Dropseed.

Other woodys would include: Opuntia, Skunkbush Sumac, Pale Wolfberry, and Pinyon.

Other forbs include: Penstemon, Bladderpod, Annual Sunflower, and Buckwheat.

**WP-2
Foot Hills Range**

This site is a mixed shrub-grassland site with scattered oneseed juniper and some pinyon trees. The tree component is more prevalent on the cooler, north facing slopes, while shrubs and grasses prevail on south and west facing slopes. Dominant grasses on the north facing slopes are blue grama, galleta, New Mexico feathergrass and bottlebrush squirreltail. On the south facing slopes black grama, little bluestem, sideoats grama, and blue grama are dominant.

Foot Hills Range Site

GRASSES and GRASSLIKE	65-80%
Blue Grama* }	
Hairy Grama* }	20-30
Galleta	5-10
Sideoats Grama	10-20
New Mexico Feathergrass* }	
Needleandthread }	5-10
Black Grama	5-20
New Mexico Muhly* }	
Bottlebrush Squirreltail* }	1-5
Wolftail }	
Threeawns }	
Sand Dropseed }	1-5
Little Bluestem	5-10
Others	3-8
Woody	15-30%
Oneseed Juniper }	
Pinyon }	5-10
Saccahuista	0-20
Yucca spp.	1-5
Fourwing Saltbrush }	
Winterfat }	1-5
Oakbrush }	
Skunkbush Sumac }	
Broom Snakeweed }	1-5
Other Shrubs	0-5
Forbs	1-5%
Perennials	3-5
Annuals	1-3

* More prevalent on cooler surfaces.

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Indian Ricegrass, Spike Dropseed, Prairie Junegrass, Cactus spp., and Western Wheatgrass.

**WP-2
Malpais Range**

This site is a site that is dominated by perennial grasses, characterized by species as blue grama, sideoats grama, little bluestem, western wheatgrass, spike muhly, and species of stipa. Shrubs and half shrubs may include shrub live oak, skunkbush sumac, and winterfat. Wright buckwheat may be the most common native forb.

Malpais Range Site

GRASSES and GRASSLIKE	75-85%
Blue Grama	20-25
Sideoats Grama	10-15
Western Wheatgrass	}
Alkali Sacaton	}
Spike Muhly	} 10-15
Black Grama	1-5
New Mexico Feathergrass	}
Needleandthread	} 5-15
Little Bluestem	}
Cane Bluestem	} 1-5
Galleta	}
Tobosa	} 1-5
Curly Mesquite	}
Dropseeds	} 3-5
Threeawns spp.	1-3
Bottlebrush Squirreltail	1-3
Wolftail	1-3
Woody	5-15%
Shrub Live Oak	1-3
Pinyon	}
Juniper	} 1-6
Rubber Rabbitbrush	}
Apacheplume	} 1-3
Winterfat	3-8
Skunkbush Sumac	1-3
Broom Snakeweed	0-1
Forbs	1-5%
Wright Buckwheats	}
Annual Buckwheats	} 1-5
Other Annuals	1-5
Other Perennials	1-3

**WP-3
Malpais Range**

This site is a site that is dominated by perennial grasses, characterized by species as blue grama, sideoats grama, little bluestem, western wheatgrass, spike muhly, and species of stipa. Shrubs and half shrubs may include shrub live oak, skunkbush sumac, and winterfat. Wright buckwheat may be the most common native forb.

Malpais Range Site

GRASSES and GRASSLIKE	75-85%
Blue Grama	20-25
Sideoats Grama	10-15
Western Wheatgrass	}
Alkali Sacaton	}
Spike Muhly	} 10-15
Black Grama	1-5
New Mexico Feathergrass	}
Needleandthread	} 5-15
Little Bluestem	}
Cane Bluestem	} 1-5
Galleta	}
Tobosa	} 1-5
Curly Mesquite	}
Dropseeds	} 3-5
Threeawns spp.	1-3
Bottlebrush Squirreltail	1-3
Wolftail	1-3
Woody	5-15%
Shrub Live Oak	1-3
Pinyon	}
Juniper	} 1-6
Rubber Rabbitbrush	}
Apacheplume	} 1-3
Winterfat	3-8
Skunkbush Sumac	1-3
Broom Snakeweed	0-1
Forbs	1-5%
Wright Buckwheats	}
Annual Buckwheats	} 1-5
Other Annuals	1-5
Other Perennials	1-3

**WP-3
Shallow Range**

This site is a site that is typified by a grassland ecosystem dominated by short and mid grasses, forbs, and low growing half shrubs such as winterfat. Soaptree yucca lends importance only as an “aspect” dominant, and broom snakeweed comes and goes cyclically and as range conditions deteriorates.

Shallow Range Site

GRASSES and GRASSLIKE		70-80%
Black Grama		25-35
Sideoats Grama		10-15
New Mexico Feathergrass	}	
Bottlebrush Squirreltail	}	5-10
Blue Grama	}	
Hairy Grama	}	5-10
Tobosa		0-3
Sand Dropseed		5-10
Threeawns spp.		3-8
Ring Muhly	}	
Fluffgrass	}	
Sand Muhly	}	
Annuals	}	1-5
Hall's Panicum	}	
Plains Bristlegrass	}	1-3
Woody		15-20%
Winterfat		10-15
Yucca		0-3
Broom Snakeweed		1-3
Mormon-Tea		0-1
Forbs		5-10%
Wild Buckwheat	}	
Croton	}	
Paperflower	}	
Locoweed	}	
Desert Senna	}	
Happlopappus spp.	}	1-5
Other Annuals		1-3
Other Perennials		1-5

**WP-3
Gravelly Range**

This site is a grassland site typified by both warm and cool season grasses, black grama and New Mexico feathergrass being both composition and “aspect” dominants. Sideoats grama, soaptree yucca, sacahuista, and occasionally half-shrubs such as feather dalea or mariola may also be “aspect” species, but only sideoats grama among them occurs significantly as a composition component of the potential plant community.

Gravelly Range Site

GRASSES and GRASSLIKE	80-90%
Black Grama	30-35
New Mexico Feathergrass	10-20
Sideoats Grama	10-15
Blue Grama	}
Hairy Grama	}
Plains Bristlegrass	}
Hall's Panicum	}
Wolf tail	}
Sand Dropseed	}
Threeawns spp.	}
Ring Muhly	}
Tobosa	}
Cane Bluestem	}
Green Sprangletop	}
Plains Lovegrass	}
Bottlebrush Squirreltail	}
Others	1-3
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Woody	5-10%
Soaptree Yucca	1-3
Sacahuista	1-5
Feather Dalea	}
Winterfat	}
Mariola	}
Mormon-Tea	}
Apacheplume	}
Broom Snakeweed	}
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Forbs	5-10%
Wild Buckwheat	}
Threadleaf Groundsel	}
Lemon Verbena	}

Goldenweed	}	
Desert Senna	}	
Locoweed	}	1-5
Other Annuals		1-3
Other Perennials		1-3

**WP-3
Gyp Hills Range**

This site is a grassland-shrub aspect with a scattering of oneseed juniper. Forbs are scattered and make up an important part of the potential natural plant community.

Gyp Hills Range Site

GRASSES and GRASSLIKE		70-80%
Gyp Dropseed		10-20
Alkali Sacaton		10-15
Galleta		5-10
Black Grama	}	
Bush Muhly	}	
Sideoats Grama	}	
Needlegrasses	}	5-10
Blue Grama	}	
Hairy Grama	}	1-5
Other Grasses		5-7
Woody		15-20%
Coldenia		5-10
Algerita		3-5
Banana Yucca		1-3
Bigelow Sage		1-5
Mormon Tea		3-5
Oneseed Juniper		1-5
Other Shrubs		1-3
Fourwing Saltbrush	}	
Winterfat	}	5-7
Others		1-3
Forbs		3-5%
Globemallow		1-3
Dyssodia		1-3
Threadleaf Groundsel		1-3
Others		1-3

Other grasses which could appear in this site would include: Threeawns, Ring Muhly, Curlyleaf Muhly, Tridens species and Sand Dropseed.

Other woodys would include: Opuntia, Skunkbush Sumac, Pale Wolfberry, and Pinyon.

Other forbs include: Penstemon, Bladderpod, Annual Sunflower, and Buckwheat.

**WP-3
Hills Range**

This site is a site that is actually occurring as a complex of plant communities primarily dictated by exposure and to some extent soil textures and depths. North-facing slopes tend to have more shrubs or trees such as juniper, hairy mountain muhly, and oak brush, while south facing slopes are usually more open. Sideoats grama is the primary dominant on this site, although a wide variety of productive perennial grasses should be considered characteristic.

Hills Range Site

GRASSES and GRASSLIKE	65-75%
Sideoats Grama	20-30
Blue Grama	5-15
Hairy Grama	1-3
Black Grama	5-15
Little Bluestem	}
Cane Bluestem	}
Plains Lovegrass	}
Green Sprangletop	} 5-10
Mountain Muhly	}
Bullgrass	}
Spike Muhly	} 5-10
Wolftail	}
Junegrass	} 1-3
Threeawns spp.	1-3
Bottlebrush Squirreltail	}
New Mexico Feathergrass	} 5-10
Others	3-5
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Woody	15-25%
Shrub Live Oak	}
Sacahuista	} 3-8
Skunkbush Sumac	}
Hairy Mountain Mahogany	}
Wright Silktassel	} 5-8
Apacheplume	}
Feather Dalea	}
Rubber Rabbitbrush	}
Broom Snakeweed	} 1-5
Juniper	5-8
Others	1-3

Forbs		5-10%
Wild Buckwheat	}	
Wooly Indianwheat	}	
Threadleaf Groundsel	}	3-5
Other Annuals		1-3
Other Perennials		1-5

**WP-3
Loamy Range**

This site is a grassland site characterized by short and mid-grasses. Blue grama is the dominant species. Also characteristic are sideoats grama, tobosa, and threeawns. Cool-seasoned species include bottlebrush squirreltail and New Mexico feathergrass. Soaptree yucca and longleaf ephedra are noticeable “aspect” species, as is cane bluestem, which tends to occur in colonies. Forbs such as desert bailey, globemallow, and Wright buckwheat are also common to the site.

Loamy Range Site

GRASSES and GRASSLIKE	80-90%
Blue Grama	25-30
Black Grama	5-10
Sideoats Grama	10-15
Plains Bristlegrass } Hall’s Panicum }	1-3
Arizona Cottontop } Cane Bluestem }	
Vine Mesquite }	5-10
Bottlebrush Squirreltail	5-15
Bush Muhly	1-5
Tobosa } Galleta }	3-8
Threeawns spp. } Fluffgrass }	
Sand Muhly } Ring Muhly }	
Sand Dropseed }	5-10
Other grasses	1-3
<hr/>	
Woody	5-10%
Soaptree Yucca	1-5
Longleaf Ephedra } Winterfat }	
Condalia } Wolfberry }	1-5
Cacti } Broom Snakeweed }	1-3
<hr/>	
Forbs	5-10%
Desert Baileya } Wright Buckwheat }	

Paperflower	}	
Globemallow	}	
Threadleaf Groundsel	}	
Filaree	}	1-5
Others		3-8

**WP-3
Breaks Range**

This site is a mixed grassland-shrubs site characterized by composition dominants such as black grama, sideoats grama, and blue grama, and “aspect” species such as juniper, sacahuista, little bluestem, shrub live oak, and occasionally mountain mahogany or yucca. Wright buckwheat is a common forb.

Breaks Range Site

GRASSES and GRASSLIKE		75-80%
Black Grama		25-30
Sideoats Grama		10-15
Blue Grama		10-15
New Mexico Feathergrass		5-15
Cane Bluestem	}	
Little Bluestem	}	
Vine Mesquite	}	1-5
Hall's Panicum	}	
Hairy Grama	}	
Sand Dropseed	}	1-5
Threeawns spp.		1-5
Others		1-5
Woody		15-20%
Oakbrush	}	
Sacahuista	}	10-15
Desert Ceanothus	}	
Feather Dalea	}	
Yerba-de-pasmo	}	
Apacheplume	}	0-3
Hairy Mountain Mahogany	}	
Cacti	}	
Yucca	}	
Broom Snakeweed	}	
Wolfberry	}	
Others	}	1-3
Oneseed Juniper		1-3
Forbs		5-10%
Wild Buckwheat		1-5
Other Annuals		1-3
Other Perennials		1-5

**WP-3
Bottomland Range**

This site is a site that is strongly dominated by giant sacaton. Alkali sacaton, tobosa, vine-mesquite, scattered shrubs such as fourwing saltbrush, apacheplume, and occasionally yucca on the more medium textured soils, also occur. Forbs and shrubs occur as minor components of the plant community when the site is at its potential.

Bottomland Range Site

GRASSES and GRASSLIKE	80-90%
Giant Sacaton	50-60
Alkali Sacaton }	
Western Wheatgrass* }	
Vine Mesquite }	10-15
Tobosa }	
Galleta }	5-10
Burrograss }	
Threeawns spp. }	
Creeping Muhly }	
Mat Muhly }	1-5
Cane Bluestem }	
Sideoats Grama }	
Plains Lovegrass }	1-5
Fluffgrass }	
Ring Muhly }	0-3
Others	1-3
<hr/>	
Woody	5-10%
Apacheplume }	
Fourwing Saltbrush }	
Yucca }	
Arrowweed }	
Longleaf Ephedra }	
Condalia }	3-8
Broom Snakeweed	1-3
<hr/>	
Forbs	5-10%
Annuals	3-5
Perennials	1-5

*May be found at certain higher elevations and in the northern portions of the site's range of occurrence.

**WP-3
Clayey Range**

This site is a grassland site that is characterized by short and mid grasses. Blue grama and sideoats grama are the dominant grasses. Such species such as black grama, alkali sacaton, tobosa, bottlebrush squirreltail are also characteristic although alkali sacaton may not be present in all cases. Fourwing saltbrush, winterfat, and yucca are common woody species, with broom snakeweed coming and going cyclically and as range conditions deteriorates. Forbs such as perennial buckwheats and globemallow also occur commonly on the site but not often in substantial amounts.

Clayey Range Site

GRASSES and GRASSLIKE	80-90%
Blue Grama	30-40
Sideoats Grama	10-15
Alkali Sacaton }	
Tobosa }	
Galleta }	15-20
Black Grama	1-5
Vine Mesquite	1-5
Bottlebrush Squirreltail	3-5
Arizona Cottontop }	
Plains Lovegrass }	
Plains Bristlegrass }	
Cane Bluestem }	1-5
Fluffgrass }	
Mat Muhly }	
Creeping Muhly }	
Curly Mesquite }	1-3
Threeawns spp. }	
Burrograss }	3-8
Others	1-3
<hr/>	
Woody	5-10%
Fourwing Saltbrush	1-3
Longleaf Ephedra }	
Yucca }	
Wolfberry }	1-3
Winterfat	1-3
Broom Snakeweed	1-3
<hr/>	
Forbs	5-10%
Wild Buckwheat }	

Globemallow	}	
Croton	}	1-3
Other Annuals		1-3
Other Perennials		1-5

NOTE: Where site occurs in depressed areas or shallow swale positions, additional overflow may cause the site to support as much as 15 percent Western Wheatgrass, 20 percent tobosa or galleta, and 10 percent vine-mesquite. Under these conditions, blue grama normally will not exceed 20 percent.

**WP-3
Basalt Hills Range**

This site is a site that is dominated by perennial grasses, such as black grama, sideoats grama, blue grama, green sprangletop, and New Mexico feathergrass. This site is typically open and virtually free of trees. Shrubs and half shrubs may include apacheplume, wintefat, bigelow sagebrush, yerba-de-pasmo, skunkbush sumac, juniper, and shrub live oak. Species of buckwheat are frequently the dominant forbs.

Basalt Hills Range Site

GRASSES and GRASSLIKE	75-85%
Black Grama	25-30
Blue Grama	5-10
Sideoats Grama	15-20
Western Wheatgrass	}
Stipa spp.	}
Little Bluestem	}
Bottlebrush Squirreltail	} 10-15
Cane Bluestem	}
Green Sprangletop	}
Plains Lovegrass	} 3-8
Vine Mesquite	1-3
Tobosa	}
Galleta	} 1-5
Hall's Panicum	}
Curly Mesquite	} 1-5
Threeawn	}
Hairy Grama	} 1-3
Others	0-3
Woody	5-10%
Apacheplume	}
Wolfberry	}
Skunkbush Sumac	} 1-3
Yerba-de-pasmo	}
Feather Dalea	}
Bigelow Sage	}
Winterfat	} 1-5
Wright Silktassel	}
Hairy Mountain Mahogany	} 0-1
Pinyon	}
Juniper	}
Other Species	} 1-3

Forbs		10-15%
Wright Buckwheat	}	
Indian Paintbrush	}	
Annual Buckwheat	}	1-5
Other Annuals		3-5
Other Perennials		3-8

**WP-3
Sandy Range**

This site is a grassland that is characterized by short and mid-grasses. Black grama and blue grama are co-dominant, with lesser amounts of sand dropseed, threeawns, sideoats grama, tobosa, and spike dropseed typically present. Soap tree yucca, mormon tea, and occasionally sacahuista are the principle woody or shrub like species. Annual buckwheats, filaree, globemallow, and desert bailey are common in minor amounts. Broom snakeweed is most common in certain wet years and as the plant community deteriorates from its potential.

Sandy Range Site

GRASSES and GRASSLIKE		75-85%
Black Grama		30-35
Blue Grama		15-20
Sideoats Grama		1-5
Hairy Grama		1-3
Sand Dropseed	}	
Spike Dropseed	}	5-10
Threeawn	}	
Ring Muhly	}	3-8
Tobosa		1-5
Bush Muhly		1-5
Wolftail		1-3
Arizona Cottontop	}	
Plains Bristlegrass	}	
Cane Bluestem	}	1-5
Fluffgrass	}	
Annual Grasses	}	1-3
Woody		10-15%
Soap tree Yucca		1-5
Mormon-Tea	}	
Sacahuista	}	1-3
Broom Snakeweed	}	
Sand Sagebrush	}	1-5
Fourwing Saltbrush	}	
Winterfat	}	1-5
Cholla Cactus		1-3
Forbs		5-10%
Wild Buckwheat	}	
Globemallow	}	

Desert Bailey	}	
Filaree	}	
Croton	}	1-5
Locoweed	}	
Russian Thistle	}	
Tansymustard	}	
Threadleaf Groundsel	}	1-3
Others		1-5

**CP-1
Loamy Upland Range**

This site is a grassland site that is characterized by short and mid-grasses. Blue grama is the dominant warm season species. Western wheatgrass is the dominant cool season species.

Loamy Upland Range Site

GRASSES and GRASSLIKE	75-80%
Blue Grama	35-40
Western Wheatgrass	20-25
Bottlebrush Squirreltail	10-15
Galleta	5-10
Sideoats Grama	5-10
Threeawn spp.	3-5
Ring Muhly	3-5
Buffalograss	3-5
Wolftail	3-5
Sand Dropseed	3-5
Other Grasses	3-5
Woody	5-10%
Winterfat	3-5
Fringed Sagewort	3-5
Other Shrubs	3-5
Forbs	5-10%
Scarlett Globemallow	}
Dotted Gayfeather	}
Prairie Coneflower	}
Western Ragweed	}
Prairie Clover	}
Scurfpea	}
Locoweed	}
Other Annual Forbs	}
Other Perennials Forbs	} 1-5

Other woodys would include: Broom Snakeweed, Plains Pricklypear, Ball Cactus, Yucca, Cholla, and Threadleaf Groundsel.

Other forbs would include: Curlycup Gumweed, Bullthistle, Sophora, Wild Buckwheat, and Whorled Milkweed.

**CP-1
Clayey Upland Range**

This site is a grassland site that is dotted with occasional shrubs. Mid-grasses are dominant with short grasses which can take advantage of the soils with high water holding capacities. Shrubs and half shrubs are sparsely scattered. Few woody plants are indigenous to this site. Forbs are a minor component of the potential plant community.

Clayey Upland Range Site

GRASSES and GRASSLIKE	80-85%
Blue Grama	25-30
Western Wheatgrass	20-25
Alkali Sacaton	20-25
Galleta	10-15
Vine Mesquite	5-10
Sideoats Grama	1-5
Buffalograss	1-5
Creeping Muhly }	
Ring Muhly }	1-5
<hr/>	
Woody	5-10%
Fourwing Saltbrush }	
Wolfberry }	2-5
Winterfat	1-3
<hr/>	
Forbs	1-5%
Ragweed	1-3
Other Perennial Forbs	1-3
Other Annual Forbs	1-3

Other grasses which could appear on this site would include: Plains Muhly, Threawn, and Bottlebrush Squirreltail.

Other woodys would include: Broom Snakeweed, Fringed Sagebrush, Cholla and Plains Pricklypear.

Other forbs would include: Gumweed, and Wright Eriogonum.

**CP-1
Shallow Upland Range**

This site is a grassland site that is dominated by mid-grasses of sideoats grama, blue grama, and little bluestem, with a minor amount of perennial and annual forbs. Shrub species also make up a minor portion of the plant community. One-seeded juniper are widely scattered on some sites.

Shallow Upland Range Site

GRASSES and GRASSLIKE		75-80%
Sideoats Grama		15-20
Blue Grama	}	
Hairy Grama	}	15-20
Little Bluestem		15-20
Needleandthread	}	
New Mexico Feathergrass	}	10-15
Threeawns		1-5
Wolftail		1-5
Western Wheatgrass	}	
Bottlebrush Squirreltail	}	1-5
Others		1-5
Woody		5-10%
Fringed Sagewort		1-5
Bigelow Sagebrush	}	
Winterfat	}	2-3
Skunkbush Sumac		2-5
Other Shrubs		1-5
Forbs		1-5%
Wild Buckwheat		1-5
Globemallow		1-5
Other Annual Forbs		2-5
Other Perennial Forbs		2-5

Other grasses which could appear on this site would include: Ring Muhly, Big Bluestem, Indian Ricegrass, and Galleta.

Other woodys would include: Broom Snakeweed, Yucca, Cudweed Sagewort, and Juniper.

Other forbs would include: Hairy Goldaster, Nailwort, Locoweed, Dalea, and Silverleaf Nightshade.

**CP-1
Bottomland Range**

This site is a site that is dominated by grasses. Mid-grasses such as western wheatgrass, alkali sacaton, and sideoats grama are dominant with a variety of short grasses. Forbs and shrubs are only a minor portion of the plant community. The site occurs in elongated drainages that transport surface runoff from adjoining upland sites and swales. Because of the extra water received by this site, the grass is denser, stands higher, and is one of the most productive sites in the resource area.

Bottomland Range Site

GRASSES and GRASSLIKE	85-90%
Alkali Sacaton	25-30
Western Wheatgrass	20-25
Vine Mesquite	20-25
Blue Grama	15-20
Galleta	10-15
Sideoats Grama	10-15
Silver Bluestem	1-5
Cane Bluestem	1-5
Saltgrass	1-5
Canada Wildrye	1-5
Other Grasses	1-5
<hr/>	
Woody	1-5%
Fourwing Saltbrush	}
Apacheplume	}
Other Shrubs	1-5
<hr/>	
Forbs	5-10%
Globemallow	1-5
Western Ragweed	}
Prairie Coneflower	}
Other Perennial Forbs	1-5
Other Annual Forbs	1-5

Other grasses which could appear on this site would include: Mat Muhly, Sand Muhly, Halls Panicum, and Threeawns.

Other woodys would include: Plains Pricklepear.

Other forbs would include: Verbena, Thistle spp., Silverleaf Nightshade, and Prairie Clover.

CP-1
Shallow Sandstone Range

This site is a site that is dominated by grasses. Small trees and shrubs are associated with the very shallow soils near the bare ledges or rock outcrops. Mid-grasses such as sideoats grama and little bluestem are dominant with scattered junipers or shrubs. Several species of perennial and annual forbs are evenly distributed.

Shallow Sandstone Range Site

GRASSES and GRASSLIKE	75-80%
Sideoats Grama	25-30
Little Bluestem	20-25
Blue Grama }	
Hairy Grama }	20-25
Needleandthread }	
New Mexico Feathergrass }	5-10
Big Bluestem	5-10
Silver Bluestem }	
Pinyon Ricegrass }	3-5
Wolftail	3-5
Bottlebrush Squirreltail	1-5
Other Grasses	3-5
Woody	10-15%
Cudweed Sagewort }	
Fringed Sagebrush }	2-5
Oak Brush	2-5
Skunkbush Sumac }	
Mountain Mahogany }	2-5
Juniper }	
Pinyon }	2-5
Other Shrubs	2-5
Forbs	1-5%
Wild Buckwheat	2-5
Aster	2-5
Other Perennial Forbs	2-5
Other Annual Forbs	2-5

Other grasses which could appear on this site would include: Slender Tridens, Threeawns, and Ring Muhly.

Other woodys would include: Broom Snakeweed, Winterfat, and Cholla.

Other forbs would include: Locoweed, Globemallow, Dalea, Silverleaf Nightshade, Peavine, Paintbrush spp., Gilia, Rayless Goldenrod, and Prairie Coneflower.

**CP-1
Malpais Upland Range**

This site is a site that is dominated by grasses. Small trees and shrubs are associated with the very shallow soils near the bare ledges or rock outcrops. Mid-grasses such as sideoats grama and little bluestem are dominant with scattered junipers or shrubs. Several species of perennial and annual forbs are evenly distributed.

Malpais Upland Range Site

GRASSES and GRASSLIKE	80%
Little Bluestem	20-25
Blue Grama	20-25
Western Wheatgrass	10-15
Big Bluestem	10-15
Sideoats Grama	10-15
Hairy Grama	3-5
Threeawns	3-5
Indiangrass	3-5
Needleandthread	}
New Mexico Feathergrass	}
Other Grasses	3-5
Woody	10%
Mountain Mahogany	3-5
Fringed Sagebrush	3-5
Skunkbush Sumac	}
Yucca	}
Other Shrubs	3-5
Forbs	10%
Prairie Clover	2-5
Globemallow	2-5
Other Annual Forbs	2-5
Other Perennial Forbs	2-5

Other grasses which could appear on this site would include: Switchgrass, Galleta, Silver Bluestem, Spike Muhly, Ring Muhly, Wolftail, Bottlebrush Squirreltail, and Plains Bristlegrass.

Other woodys would include: Currant, Juniper, Winterfat, Oak, and Apacheplume.

Other forbs would include: Wild Buckwheat, Wright Eriogonum, Wild Onion, Sunflower, and Pepperweed.

**CP-1
Sandstone Breaks Range**

This site is a site that is dominated by grasses, but have the appearance of being dominated by woody species. Warm season mid-grasses dominate the annual grass production. Pinyon pine, oneseed juniper, oak, and mountain mahogany are the main woody species.

Sandstone Breaks Range Site

GRASSES and GRASSLIKE		60-65%
Little Bluestem		20-25
Sideoats Grama		20-25
Blue Grama	}	
Hairy Grama	}	15-20
Wolftail		3-5
Spike Muhly	}	
Deergrass	}	3-5
Pinyon Ricegrass		3-5
Switchgrass	}	
New Mexico Feathergrass	}	3-5
Other Grasses		3-5
Woody		20-25%
Pinyon	}	
Juniper	}	10-15
Oak		5-10
Mountain Mahogany		3-5
Fringed Sagebrush	}	
Skunkbush Sumac	}	
Cliffrose	}	1-5
Other Shrubs		1-5
Forbs		5-10%
Wavyleaf Buckwheat	}	
Wild Buckwheat	}	3-5
Other Annual Forbs		3-5
Other Perennial Forbs		3-5

Other grasses which could appear on this site would include: Threeawns, Galleta, Ring Muhly, and Bottlebrush Squirreltail.

Other woodys would include: Broom Snakeweed, Cholla Cactus, and Plains Pricklypear.

Other forbs would include: Fatted Marigold, and Aster.

**CP-1
Shale Hills Range**

This site is a site that is predominantly grasses in a vegetative production but has the appearance of being dominated by woody species. Grass species are dominated by warm season mid-grasses. Woody species make up about 35 percent of the vegetation. Juniper, mountain mahogany, and oak are the major woody species. Forbs make up 10 percent of the vegetation.

Shale Hills Range Site

GRASSES and GRASSLIKE		55-65%
Blue Grama		15-20
Sideoats Grama		10-15
Little Bluestem		10-15
Galleta		5-10
Western Wheatgrass		5-10
Threeawn		3-5
New Mexico Feathergrass	}	3-5
Needleandthread	}	
Other Grasses		3-5
Woody		25-30%
Pinyon	}	5-10
Juniper	}	
Mountain Mahogany		3-5
Fringed Sagebrush		3-5
Apacheplume	}	3-5
Fourwing Saltbrush	}	
Oak		5-10
Broom Snakeweed		3-5
Other Shrubs and Trees		5-10
Forbs		5-10%
Wild Buckwheat		3-5
Other Annual Forbs		3-5
Other Perennial Forbs		3-5

Other grasses which could appear on this site would include: Vine Mesquite, Prairie Junegrass, and Big Bluestem.

Other woodys would include: Winterfat, Skunkbush, and Bigelow Sagebrush.

Other forbs would include: Asters.

**CP-1
Malpais Breaks Range**

This site is a site that is predominantly grasses. However, this appearance of this site is that of being dominated by woody species. This is essentially apparent on the north and east facing slopes having mottles or large patches of oak, mountain mahogany, skunkbush, juniper, and other shrubs, which make up approximately 20-25 percent of the composition. Annual and perennial forbs are evenly distributed and make up approximately 15 percent of the plant community.

Malpais Breaks Range Site

GRASSES and GRASSLIKE	55-65%
Little Bluestem	15-20
Blue Grama	15-20
Western Wheatgrass	5-10
Sideoats Grama	5-10
Big Bluestem	5-10
Hairy Grama	3-5
Needleandthread	}
New Mexico Feathergrass	}
Indian Ricegrass	}
Witchgrass	}
Other Grasses	3-5
Woody	20-25%
Oak	10-15
Mountain Mahogany	8-10
Skunkbush Sumac	3-5
Juniper	3-5
Other Shrubs	3-5
Forbs	10-15%
Prairie Clover	3-5
Globemallow	3-5
Wild Buckwheat	}
Wavy Buckwheat	}
Prairie Coneflower	}
Other Annual Forbs	3-5
Other Perennial Forbs	3-5

Other grasses which could appear on this site would include: Galleta, Wolftail, Spike Muhly, Ring Muhly, Squirreltail, and Threeawns.

Other woodys would include: Sagebrush, Currant, Yucca, Senecio, Broom Snakeweed, Winterfat, and Ponderosa Pine.

Other forbs would include: Fatted Marigold, Asters, and Silverleaf Nightshade.

**CP-1
Cinder Range**

This site is a site that produces vegetation dominated by warm season grasses with a variety of shrubs, forbs, and cool season grasses. This site occurs as the lower portions of volcanic cones and the adjacent fans. The surface cinder acts so much like a mulch to retain surface moisture. The cinder also heats the soil. During years of favorable winter moisture, this site is the first to green-up in early spring or late winter.

Cinder Range Site

GRASSES and GRASSLIKE	70-75%
Little Bluestem	15-20
Hairy Grama }	
Blue Grama }	15-20
Sideoats Grama	10-15
Big Bluestem	5-10
Arizona Fescue	5-10
Mountain Muhly	5-10
Wolftail	3-5
Other Grasses	3-5
Woody	10-15%
Oak	5-10
Mountain Mahogany	3-5
Juniper }	
Pinyon }	3-5
Other Shrubs	3-5
Forbs	5-10%
Hairy Goldaster	2-5
Globemallow	2-5
Other Annual and Perennial Forbs	2-5

Other grasses which could appear on this site would include: Threeawns spp., Green Needlegrass, Indian Ricegrass, and Prairie Junegrass.

Other woody would include: Yucca, Skunkbush Sumac, and Chokecherry.

Other forbs would include: Western Ragweed, Prairie Coneflower, Dotted Gayflower, Prairie Clover, Whorled Milkweed, Indian Paintbrush, and Lupines.

**CP-1
Salt Meadow Range**

This site is a site where grasslands are mixed with shrubs. Vegetation is tolerant to saline or alkaline factors which dominate this site. Grasses such as alkali sacaton, saltgrass, western wheatgrass, and vine mesquite dominate the site, with shrubs and forbs making up an important portion of the plant community. Salt tolerant forbs are an important part of the vegetative community.

Salt Meadow Range Site

GRASSES and GRASSLIKE	70-75%
Alkali Sacaton	30-35
Saltgrass	10-15
Western Wheatgrass	10-15
Vine Mesquite	5-10
Mat Muhly	3-5
Alkali Muhly	3-5
Meadow Barley	3-5
Blue Grama	3-5
Galleta	3-5
Saltsedge	3-5
Woody	10-15%
Fourwing Saltbrush	5-10
Seepweed	3-5
Other Shrubs	0-5
Forbs	5-10%
Annual Saltbrush spp.	3-5
Other Perennial Forbs	3-5
Other Annual Forbs	3-5

Other woodys would include: Black Greasewood.

Other forbs would include: Tumbling saltbrush, and Rocky Mountain Glasswort.

**CP-1
Hills Range**

This site is a grassland site with an aspect of dominance of pinyon-juniper with an understory of grasses, forbs, and browse. Approximately 50 percent of the total vegetative production is made up of grasses. Grass species are dominated by warm season mid-grasses. Woody species make up approximately 35 percent of the vegetative production. A variety of perennial and annual forbs make up approximately 10 percent of the vegetative production. North and east facing slopes typically produce a denser vegetative cover and produce more vegetative growth than the south or west facing slopes.

Hills Range Site

GRASSES and GRASSLIKE	50-55%
Blue Grama	}
Hairy Grama	
Little Bluestem	15-20
Mountain Muhly	10-15
Sideoats Grama	3-5
Big Bluestem	5-10
Wolftail	2-5
Galleta	2-5
Other Grasses	2-5
Woody	30-35%
Juniper	10-15
Pinyon	5-10
Oak	10-15
Mountain Mahogany	5-7
Skunkbush Sumac	2-5
Other Shrubs	3-5
Forbs	5-10%
Wild Buckwheat	3-2
Other Annual and Perennial Forbs	5-10

Other grasses which would appear on this site would include: Pinyon, Ricegrass, Western Wheatgrass, Vine-Mesquite, Threeawn, Ring Muhly, Mat Muhly, and Bottlebrush Squirreltail.

Other woodys would include: Winterfat, Bigelow Sagebrush, Apacheplume, and Broom Snakeweed.

Other forbs would include: Hairy Goldaster.

**CP-1
Shallow Shale Range**

This site is a grassland site that is dominated by mid-grasses, with scattered woody species making up an important part of the plant community. Perennial and annual forbs are evenly distributed and make up a minor part of the plant community. Blue grama, alkali sacaton, and western wheatgrass are the most abundant species.

Shallow Shale Range Site

GRASSES and GRASSLIKE	70-75%
Blue Grama	20-25
Alkali Sacaton	15-20
Western Wheatgrass	15-20
Vine Mesquite	5-10
Galleta	5-10
Sideoats Grama	5-10
Buffalograss	3-5
Plains Muhly	3-5
Spike Muhly	3-5
Threeawn	3-5
Ring Muhly	3-5
Other Grasses	3-5
Woody	30-35%
Fourwing Saltbrush	5-10
Winterfat	3-5
Oak	2-5
Other Shrubs	3-5
Forbs	5-10%
Western Ragweed	3-5
Globemallow	3-5
Other Annual and Perennial Forbs	3-5

Other grasses which would appear on this site would include: Mat Muhly, and Bottlebrush Squirreltail.

Other woodys would include: Cholla, Plains PRicklypear, Juniper, Wolfberry, Yucca, and Fringed Sagewort.

Other forbs would include: Wright Eriogonum, Locoweed, and Wild Buckwheat.

**CP-1
Salt Flats Range**

This site is a grassland site that is characterized by warm season mid-grasses with an occasional shrub. Shrubs and half shrubs are sparsely scattered throughout the site. Cool season species make up a minor component of the plant community. Vegetation that is tolerant to saline or alkaline factors dominate this site.

Salt Flats Range Site

GRASSES and GRASSLIKE	80-85%
Alkali Sacaton	20-25
Western Wheatgrass	10-15
Blue Grama	10-15
Inland Saltgrass	5-10
Vine Mesquite	5-10
Alkali Muhly }	
Mat Muhly }	3-5
Galleta	3-5
Switchgrass	3-5
Other Grasses	3-5
Woody	5-10%
Fourwing Saltbrush	5-10
Winterfat	3-5
Other Shrubs	3-5
Forbs	3-5%
Wild Buckwheat	3-5
Globemallow	3-5
Other Annual and Perennial Forbs	3-5

Other grasses which would appear on this site would include: Bottlebrush Squirreltail, Plains Bristlegrass, Nuttail Alkaligrass, Threawn, Dropseed, Windmill Grass, Silver Bluestem, Creeping Muhly, and Sedges.

Other woodys would include: Rabbitbrush, Greasewood, and Fringed Sage.

**CP-1
Swales Range**

This site is a mixed mild grass plant community with an occasional shrub. Warm season mid and short grasses dominate this site; however, cool-season grasses and forbs are an important component and can make up to 30 to 35 percent of the plant community. Woody species are a minor component of the plant community. This site occurs in the narrow elongated drainages that transport surface runoff from the adjacent uplands sites to the bottomland. This site receives additional water, therefore the plant community produces greater amounts than the adjoining sites.

Swales Range Site

GRASSES		80-85%
Western Wheatgrass		20-25
Blue Grama		20-25
Vine Mesquite		20-25
Sideoats Grama		5-10
Galleta		5-8
Alkali Sacaton		3-5
Buffalograss		3-5
Little Bluestem		3-5
Switchgrass		3-5
Other Grasses		3-5
Shrubs		0-5
Woody		1-5%
Fringed Sagewort	}	
Winterfat	}	
Fourwing Saltbrush	}	
Other Shrubs	}	0-5
Forbs		5-10%
Prairie Coneflower	}	
Prairie Clover	}	
Annual Sunflower	}	1-5
Other annual forbs		3-5
Other perennial forbs		3-5

Other grasses that could appear on this site include: Bottlebrush, Squirreltail, Mat Muhly, Creeping Muhly, Threeawns, Inland Saltgrass, Sand Dropseed, and Ring Muhly.

Other shrubs include: Skunkbush Sumac, Broom Snakeweed, and Groundsel.

Other forbs include: Western Ragweed, New Mexico Thistle, Astragalus spp., Buckwheat, Scurfpea, Feted Marigold, Globemallow.

**CP-1
Gravelly Range**

This site is a grassland site dominated by warm-season short and mid grasses dotted with half shrubs. Woody species, forbs and cool season grasses make up an important component of the plant community and are evenly distributed.

Gravelly Range Site

GRASSES		70-75%
Hairy Grama	}	
Blue Grama	}	
Little Bluestem	}	
Sideoats Grama	}	15-20
Wolftail		3-5
New Mexico Feathergrass	}	
Needleandthread	}	10-15
Threeawns		3-5
Other grasses		3-5
Woody		10-15%
Yucca		3-5
Gambel Oak		3-5
Bigelow Sagebrush	}	
Fringed Sagewort	}	
Other	}	3-5
Forbs		10-15%
Prairie Coneflower	}	
Buckwheat	}	
Other Perennials	}	
Other Forbs	}	3-5

Other grasses that could appear on this site include: Silver Bluestem, Big Bluestem, Bottlebrush Squirreltail, Spike Muhly, Ring Muhly, Sand Dropseed, and Sedges.

Other shrubs include: Skunkbush Sumac, Winterfat, and Broom Snakeweed.

Other forbs include: Globemallow, Stickleleaf, and Locoweed.

**CP-1
High Lime Range**

This site is a grassland site dominated by warm-season mid and tall grasses with scattered woody species. Cool-seasoned grasses and forbs make up an important component of the plant community.

High Lime Range Site

GRASSES	75-80%
Blue Grama	15-20
Sideoats Grama	15-20
Sand Dropseed	10-15
Little Bluestem	5-10
Alkali Sacaton	5-10
Western Wheatgrass	5-10
Galleta	5-10
Hairy Grama	3-5
Bottlebrush Squirreltail	3-5
New Mexico Feathergrass	3-5
Other grasses	0-5
<hr/>	
Woody	3-5%
Winterfat	}
Fourwing Saltbrush	}
Other Shrubs	} 3-5
<hr/>	
Forbs	3-5%
Silverleaf Nightshade	}
Other Annual and Other Forbs	} 0-5

Other grasses that could appear on this site include: Indian Ricegrass, Ring Muhly, Mat Muhly, Threawns, Silver Bluestem, Cane Bluestem, Inland Saltgrass, and Vine Mesquite.

Other shrubs include: Small Soapweed Yucca, Fringed Sagewort, Bigelow Sagewort.

Other forbs include: Dotted Gayfeather, Healthaster, Globemallow.

**CP-1
Sandy Plains Range**

This site is a grassland site dominated by warm-season, mid-grasses. Tall grasses, cool-seasoned grasses and forbs make up an important component of the plant community. Woody plants make up a minor component.

Sandy Plains Range Site

GRASSES		70-75%
Sand Bluestem		15-20
Little Bluestem		15-20
New Mexico Feathergrass	}	
Needleandthread	}	15-20
Sideoats Grama		10-15
Blue Grama	}	
Hairy Grama	}	5-10
Indian Grass	}	
Switchgrass	}	5-10
Indian Ricegrass		5-10
Giant Dropseed	}	
Spike Dropseed	}	
Sand Dropseed	}	3-5
Other grasses		3-5
Woody		6-15%
Sand Sagebrush		5-10
Yucca	}	
Skunkbush Sumac	}	3-15
Forbs		5-10%
Buckwheat	}	
Sunflower	}	
Globemallow	}	
Stickleaf	}	3-5
Other Forbs		3-5

Other grasses that could appear on this site include: Red Lovegrass, Sand Muhly, Threawns, Tumble Lovegrass, Paspalum, Dryland Sedge, Hooded Windmill Grass, and Silver Bluestem.

Other shrubs include: Threadleaf Groundsel, and Broom Snakewood.

Other forbs include: Silky Prairieclover, Scurfpea, Western Ragweed, Gilia, Silverleaf Nightshade, Prickly Poppy, and Bladderpod.

CP-1
Sandstone Savannah Range

This site is a grassland site that is characterized by warm season mid-grasses with an occasional shrub. Shrubs and half shrubs are sparsely scattered throughout the site. Cool season species make up a minor component of the plant community. Vegetation that is tolerant to saline or alkaline factors dominate this site.

Sandstone Savannah Range Site

GRASSES and GRASSLIKE	70-80%
Little Bluestem	15-20
Sideoats Grama	15-20
Blue Grama }	
Hairy Grama }	
Needleandthread }	15-20
New Mexico Feathergrass	5-10
Big Bluestem	3-5
Indiangrass	3-5
Bottlebrush Squirreltail	3-5
Pinyon Ricegrass }	
Green Needlegrass }	2-5
Western Wheatgrass	3-5
Wolftail	3-5
Sand Dropseed	3-5
Mountain Muhly }	
Plains Muhly }	3-5
Other Grasses	3-5
Woody	20-30%
Pinyon	10-20
Juniper	10-20
Skunkbush Sumac	3-5
Fringed Sagewort	3-5
Bigelow Sagewort	3-5
Oak spp.	3-5
Winterfat	3-5
Mountain Mahogany	3-5
Other Woody Species	3-5
Forbs	5-10%
Wild Buckwheat	3-5
Scarlet Globemallow	3-5
Astragalus spp.	3-5

Other grasses which would appear on this site would include: Spike Muhly, Silver Bluestem, Metcalfe Muhly, Ring Muhly, Threeawns, Alkali Sacaton, Pine Dropseed, Junegrass, Dryland Sedges, Indian Ricegrass, and Galleta.

Other woodys would include: Rabbitbrush, Fourwing Saltbrush, Sand Sagebrush, Threadleaf Groundsel, Broom Snakeweed, Yucca spp., Sacahuista, and Ponderosa Pine.

Other forbs would include: Penstemon spp., Loco, Red Stem Milkvetch, Indian Paintbrush, Fetid Marigold, Sand Verbena, Woolly Indianwheat, and Tansymustard.

CP-2
Shallow Sandstone Range

This site is a site that is dominated by short and mid-grasses. Juniper and shrubs are associated with the very shallow soils near the bare ledges of rock outcrops. Grasses occupy approximately 70 percent of the total annual herbage production with shrubs and perennial and annual forbs evenly distributed.

Shallow Sandstone Range Site

GRASSES and GRASSLIKE	70%
Blue Grama	15-17
Sideoats Grama	15-17
Little Bluestem	7-9
New Mexico Feathergrass	7-9
Black Grama	7-8
Hairy Grama	3-5
Wolftail	3-5
Sand Bluestem	2-3
Threeawn spp.	2-3
Silver Bluestem	}
Bottlebrush Squirreltail	}
Rough Tridens	} 0-3
Sand Dropseed	0-2
Galleta	0-2
Woody	15%
Juniper	3-5
Winterfat	2-4
Pinyon	1-3
Yucca	1-3
Skunkbush Sumac	1-3
Sacahuista	1-3
Catclaw Acacia	0-2
Snakeweed	0-2
Sagebrush	0-2
Forbs	15%
Peavine	1-3
Bladderpod	0-2
Paintbrush	0-2
Globemallow	0-2
Astragulus spp.	0-2
Other Annual Forbs	4-6

Other Perennial Forbs

4-6

**CP-2
Loamy Range**

This site is a site that is dominated by warm season short and mid-grasses. Forbs are a minor component of this plant community. Few woody species are found in the potential plant community.

Loamy Range Site

GRASSES and GRASSLIKE	80%
Blue Grama	32-35
Galleta }	
Tobosa }	10-12
Black Grama	8-12
Sideoats Grama	8-12
Sand Dropseed	4-7
Ring Muhly	2-4
Threeawn spp.	3-6
Vine Mesquite	2-5
Alkali Sacaton	5-8
Silver Bluestem	2-5
Western Wheatgrass*	0-3
Bottlebrush Squirreltail	0-3
Buffalograss	0-3
Arizona Cottontop	1-4
Fluffgrass	0-1
Little Bluestem	2-5
Woody	5%
Broom Snakeweed	1-3
Yucca	1-3
Winterfat	1-3
Prinkly Pear	0-1
Mesquite**	0-3
Forbs	15%
Globemallow	1-3
Annual Sunflower	1-3
Astragulas spp.	0-1
Other Annual Forbs	3-6
Other Perennial Forbs	3-6

* In the high range of the precipitation.

** In areas where mesquite has invaded, the potential plant community should include this species.

**CP-2
Clayey Range**

This site is a warm season grassland, dotted with an occasional shrub. Mid-grasses and short grasses are evenly distributed. Shrubs and half shrubs are sparsely scattered. Perennial and annual forbs make a minor component of the plant community.

Clayey Range Site

GRASSES and GRASSLIKE	80%
Blue Grama	28-30
Alkali Sacaton	18-20
Tobosa }	
Galleta }	18-20
Sideoats Grama	5-7
Black Grama	5-7
Buffalograss	3-5
Ring Muhly	1-3
Mat Muhly }	
Creeping Muhly }	2-4
Burrograss	1-3
Vine Mesquite	2-4
Western Wheatgrass	0-3
Woody	10%
Fourwing Saltbrush	2-4
Cholla Cactus	0-3
Broom Snakeweed	1-3
Winterfat	1-3
Prinkly Pear	1-3
Forbs	10%
Silverleaf Nightshade }	
Globemallow }	
Verbina }	
Bitterweed }	
New Mexico Thistle }	
Other Perennial Forbs }	3-5
Other Annual Forbs	2-4

**CP-2
Sandy Loam Range**

This site is a grassland site with a mixture of warm season short and mid grasses dotted with an occasional half shrub. Perennial and annual forbs make approximately 15 percent of the plant community. Half shrubs make up a minor portion of the plant community.

Sandy Loam Range Site

GRASSES and GRASSLIKE	80%
Little Bluestem	10-13
Sideoats Grama	1-17
Blue Grama }	
Hairy Grama }	
Black Grama }	15-17
Plains Bristlegrass	5-7
Sand Dropseed	3-5
Red Lovegrass	3-5
Fall Witchgrass	0-2
Sand Muhly	0-2
New Mexico Feathergrass	3-5
Threeawn spp.	3-5
Arizona Cottontop	2-4
Woody	5%
Yucca	3-5
Broom Snakeweed	1-3
Winterfat	0-2
Mormon-Tea	0-2
Sand Sagebrush }	
Prinkly Pear }	
Wooly Groundsel }	0-2
Mesquite*	0-2
Forbs	15%
Globemallow	2-4
Indian Rushpea	1-3
Croton	1-3
Annual Buckwheat }	
Stickleaf }	
Dalea }	1-3
Other Perennial Forbs	3-5
Other Annual Forbs	3-5

*In areas where mesquite has invaded, the potential plant community should include this species.

**CP-2
Sandy Plains Range**

This site is a warm season grassland, dominated by mid and tall grasses mixed with shrubs and a variety of forbs. The forb composition fluctuates from year to year depending upon moisture conditions.

Sandy Plains Range Site

GRASSES and GRASSLIKE	68%
Sand Bluestem	10-12
Little Bluestem	15-20
Sand Paspalum	}
Red Lovegrass	}
Plains Bristlegrass	3-5
Hairy Grama	3-5
Threawn spp.	3-5
Fall Witchgrass	3-5
Sand Dropseed	7-10
New Mexico Feathergrass	6-8
Black Grama	3-5
Indiangrass	3-5
Spike Dropseed	3-5
Sideoats Grama	3-5
Other Annual Grasses	0-2
Field Sandbur	0-1
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Woody	17%
Shinnery Oak	0-12
Small Soapweed	3-5
Mormon-Tea	0-2
Broom Snakeweed	1-2
Sand Sagebrush	5-7
Plains Rabbitbush	1-3
Pricklypear	0-1
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Forbs	15%
Queensdelight	1-3
Globemallow	}
Annual Buckwheat	}
Annual Sunflower	}
Western Ragweed	1-3
Stickleaf	}
Wooly Gaura	}

Annual Mustards	}	
Dalea	}	
Milky Spurge	}	0-2
Other Annual Forbs		2-4
Other Perennial Forbs		2-4

**CP-2
Bottomland Range**

This site is a grassland site that is dominated by warm season tall and mid-grasses. Cool season grasses, forbs and woody species make up a minor portion of the plant community.

Bottomland Range Site

GRASSES and GRASSLIKE	90%
Giant Sacaton	20-25
Alkali Sacaton	20-25
Vine Mesquite	15-18
Blue Grama	5-8
Galleta }	
Tobosa }	5-8
Arizona Cottontop	5-8
Sideoats Grama	5-8
Western Wheatgrass*	4-7
Cane Bluestem }	
Silver Bluestem }	0-2
Inland Saltgrass	0-2
Mat Muhly }	
Creeping Muhly }	
Alkali Muhly }	0-2
Buffalograss }	
Threeawn spp. }	
Ring Muhly }	0-2
Woody	4%
Fourwing Saltbrush	2-4
Pricklypear	0-1
Mesquite**	0-2
Seepwillow Baccharis	0-2
Cholla Cactus	0-1
Broom Snakeweed	0-1
Apacheplume	0-1
Forbs	6%
Globemallow	1-3
Ragweed	0-2
New Mexico Thistle	0-2
Buffalobur	0-1
Verbena	0-1

Annual Sunflower	0-1
Other Perennial Forbs	2-4
Other Annual Forbs	2-4

* In the high range of the precipitation.

** In areas where mesquite has invaded the potential plant community should include this species.

**CP-2
Swale Range**

This site is a grassland site with an occasional shrub or half shrub. Warm season mid-grasses dominate the site with a variety of short grasses and forbs. Cool season grasses and forbs make up a minor component. This site occurs in the narrow elongated drainages that transport surface runoff from adjoining upland sites to the bottomlands. This site receives additional water, therefore the plant community is more productive than the adjoining upland sites.

Swale Range Site

GRASSES and GRASSLIKE		85%
Vine Mesquite		29-31
Blue Grama		24-26
Sideoats Grama		10-12
Alkali Sacaton		7-9
Galleta	}	
Tobosa	}	5-7
Western Wheatgrass		5-7
Bottlebrush Squirreltail		3-5
Buffalograss	}	
Cane Bluestem	}	
Arizona Cottontop	}	2-4
Threeawn spp.	}	
Mat Muhly	}	
Creeping Muhly	}	0-2
Woody		5%
Winterfat	}	
Yucca	}	
Bigelow Sagebrush	}	2-4
Broom Snakeweed	}	
Woody Groundsel	}	1-2
Forbs		10%
Annual Sunflower	}	
Prairie Coneflower	}	
Globemallow	}	2-4
Goosefoot	}	
Silverleaf Nightshade	}	
Western Ragweed	}	1-2
Other Perennial Forbs	}	
Other Annual Forbs	}	3-4

**CP-2
Saline Range**

This site is a grassland site that is dominated by warm season mid-grasses with an occasional shrub. Vegetation on this site is tolerant to saline or alkaline soil conditions. Forbs, shrubs, and cool-season grasses make up a minor portion of the plant community.

Saline Range Site

GRASSES and GRASSLIKE	85%
Alkali Sacaton	30-35
Galleta }	
Tobosa }	10-13
Blue Grama	8-10
Inland Saltgrass	8-10
Vine Mesquite	8-10
Switchgrass	3-5
Western Wheatgrass	3-5
Silver Bluestem	3-5
Alkali Muhly }	
Mat Muhly }	1-3
Bottlebrush Squirreltail	0-2
Windmillgrass	0-2
Threeawn spp. }	
Buffalograss }	0-2
<hr/>	
Woody	5%
Fourwing Saltbrush	3-5
Broom Snakeweed	0-3
<hr/>	
Forbs	10%
New Mexico Thistle	0-2
Dotted Gayfeather	0-2
Buckwheat }	
Locoweed }	0-2
Other Perennial Forbs	2-4
Other Annual Forbs	2-4

CP-2
Breaks (Northern Exposure) Range

This site is a plant community dominated by warm season grasses with a variety of shrubs, half-shrubs, and trees. Often the woody species will give an aspect dominance appearance. Cool season grasses and forbs make up a minor component.

Breaks (Northern Exposure) Range Site

GRASSES and GRASSLIKE	75%
Black Grama	14-16
Sideoats Grama	11-13
New Mexico Feathergrass	11-13
Blue Grama }	
Hairy Grama }	8-10
Little Bluestem	7-9
Galleta	2-3
Sand Dropseed }	
Threeawn spp. }	
Ring Muhly }	2-3
Hairy Tridens }	
Wolftail }	1-2
Pinyon Ricegrass }	
Bottlebrush Squirreltail }	0-2
<hr/>	
Woody	15%
Yucca	3-4
Sacahuista	3-4
Juniper	3-4
Skunkbush Sumac	2-3
Oak	2-3
Mountain Mahogany	2-3
Pinyon	1-2
Feather Dalea }	
Broom Snakeweed }	
Winterfat }	
Fringed Sagewort }	
Cholla Cactus }	
Wooly Groundsel }	
Mormon Tea }	
Javelinabush }	1-3
Mesquite*	1-2

Forbs	10%
Ironplant	}
Fleabane	}
Bladderpod	} 2-3
Other Perennial Forbs	2-4
Other Annual Forbs	2-4

*In areas where this species has invaded, it should include the potential plant community.

CP-2
Breaks (Southern Exposure) Range

This site is a plant community dominated by warm season grasses with a variety of forbs, shrubs, half-shrubs, and dotted with an occasional tree.

Breaks (Southern Exposure) Range Site

GRASSES and GRASSLIKE		75%
Black Grama		24-27
Sideoats Grama		14-16
Blue Grama	}	
Hairy Grama	}	14-16
Little Bluestem		8-10
New Mexico Feathergrass		5-7
Sand Dropseed		4-6
Threeawn spp.		1-3
Hairy Tridens		1-3
Wolftail		1-2
Silver Bluestem		0-2
Bush Muhly	}	
Halls Panicum	}	
Plains Lovegrass	}	
Green Sprangletop	}	T-2
Woody		10%
Sacahuista		0-4
Skunkbush Sumac	}	
Oak	}	3-5
Yucca		1-3
Broom Snakeweed	}	
Groundsel	}	
Mormon Tea	}	1-2
Bigelow Sagebrush		1-2
Juniper		0-2
Pricklypear Cactus	}	
Catclaw Acacia	}	
Feather Dalea	}	
Javelinabush	}	
Winterfat	}	
Agave	}	1-2
Mesquite*		0-1
Forbs		15%

Buckwheat		1-3
Annual Mustard		1-2
Paperflower		0-2
Ironplant	}	
Fleabane	}	0-2
Other Perennial Forbs		4-6
Other Annual Forbs		4-6

*In areas where this species has invaded, it should include the potential plant community.

**CP-2
Sandhills Range**

This site is a grassland site that is dominated by warm season tall and mid-grasses. Short grasses, shrubs, half-shrubs, perennial and annual forbs make up the remainder of the plant community. Forbs generally fluctuate greatly from year to year, being most abundant in years of early spring precipitation. Forbs and woody species are evenly distributed.

Sandhills Range Site

GRASSES and GRASSLIKE		75%
Sand Bluestem		16-20
Sand Dropseed	}	
Mesa Dropseed	}	
Spike Dropseed	}	10-12
Little Bluestem		8-10
Giant Sandreed		5-7
Indiangrass		4-6
Sand Paspalum	}	
Sand Lovegrass	}	3-5
Plains Bristlegrass		3-5
Hairy Grama		3-5
Threeawn spp.		2-4
Field Sandbur		0-2
Fall Witchgrass	}	
Halls Panicum	}	2-4
Other Annual Grasses		0-2
Woody		15%
Shinnery Oak		0-10
Sand Sagebrush		5-7
Plains Rabbitbrush		1-3
Small Soapweed		0-2
Broom Snakeweed	}	
Groundsel	}	
Pricklypear	}	0-3
Forbs		10%
Annual Sunflower		2-4
Annual Buckwheat		2-4
Annual Mustard		2-4
Gaura spp.		1-2
Rubberweed		1-2

Stickleaf	}	
Globemallow	}	
Perennial Ragweed	}	1-2
Other Annual Forbs		2-4
Other Perennial Forbs		2-4

CP-2
Shallow Sand Range

This site is a grassland site that is dominated by warm season short and mid-grasses, dotted with shrubs and half shrubs. Forbs and woody species make up less than 20 percent of the plant community and are evenly distributed. Cool season grasses and forbs make up a minor component of the community.

Shallow Sand Range Site

GRASSES and GRASSLIKE		80%
Blue Grama	}	
Hairy Grama	}	20-22
Black Grama		17-19
Sideoats Grama		15-17
Little Bluestem		5-7
Hairy Grama		5-7
New Mexico Feathergrass		6-8
Sand Dropseed		3-5
Threeawns spp.	}	
Sand Muhly	}	2-4
Plains Bristlegrass		1-3
Arizona Cottontop		0-2
Woody		10%
Small Soapweed		3-5
Skunkbush Sumac		0-4
Catclaw Acacia		0-2
Winterfat		1-2
Broom Snakeweed	}	
Groundsel	}	1-2
Mesquite*		0-2
Forbs		10%
Woolly Indianwheat	}	
Leather Croton	}	
Verbena	}	3-5
Globemallow	}	
Annual Buckwheat	}	
Annual Mustard	}	2-4
Locoweed		0-2
Other Annual Forbs		2-4
Other Perennial Forbs		2-4

*In areas where mesquite has invaded, the potential plant community should include this species.

**CP-2
Deep Sand Range**

This site is a grassland site that is dominated by warm season, tall and mid-grasses. Short grasses, shrubs, half shrubs, and forbs make up an important portion of the plant community. Forbs generally fluctuate greatly from year to year, being most abundant in years of early spring precipitation.

Deep Sand Range Site

GRASSES and GRASSLIKE		70%
Sand Bluestem		12-15
Little Bluestem		12-15
Sand Dropseed	}	
Mesa Dropseed	}	
Spike Dropseed	}	12-15
Hairy Grama		8-10
Threeawns spp.		5-7
Sand Paspalum	}	
Sand Lovegrass	}	
Plains Bristlegrass	}	4-6
Giant Sandreed	}	
Indiangrass	}	2-4
Fall Witchgrass	}	
Halls Panicum	}	2-4
Other Annual Grasses		0-2
Woody		20%
Shinnery Oak		0-12
Sand Sagebrush		7-9
Broom Snakeweed	}	
Groundsel	}	1-3
Small Soapweed		1-2
Plains Rabbitbrush		0-2
Forbs		10%
Annual Buckwheat		3-5
Annual Mustard		2-4
Annual Sunflower		2-4
Gaura spp.		1-2
Stickleaf	}	
Globemallow	}	
Ragweed	}	2-3

Other Annual Forbs	3-5
Other Perennial Forbs	1-3

**CP-2
Gravelly Range**

This site is a grassland site that is dominated by warm season, short and mid-grasses with scattered shrubs and half shrubs. Grasses make up approximately 75 percent of the annual vegetative production. Shrubs and forbs are evenly distributed and make up an important portion of the plant community.

Gravelly Range Site

GRASSES and GRASSLIKE		75%
Black Grama		15-18
Blue Grama		13-16
Sideoats Grama		12-15
New Mexico Feathergrass	}	
Galleta	}	
Sand Dropseed	}	5-7
Little Bluestem	}	
Rough Tridens	}	
Hairy Grama	}	
Threeawns spp	}	3-5
Plains Bristlegrass		1-3
Ring Muhly	}	
Wolftail	}	
Bottlebrush Squirreltail	}	2-3
Woody		10%
Small Soapweed		3-5
Catclaw Mimosa	}	
Feather Dalea	}	
Candle Cholla	}	
Pricklypear	}	1-3
Broom Snakeweed	}	
Winterfat	}	
Fringed Sagewort	}	1-2
Juniper	}	
Mesquite*	}	0-2
Forbs		15%
Stickleaf	}	
Globemallow	}	
Plains Zinnia	}	
Paperflower	}	

Buckwheat	}	4-6
Other Perennial Forbs		4-6
Other Annual Forbs		3-5

*On sites where this species has invaded, it should be classified as a part of the potential plant community.

**CP-2
Gyp Uplands Range**

This site is a grassland site that is dominated by warm season, short and mid-grasses. Indicator plants for this site are gyp grama, gyp dropseed, and coldenia. Shrubs and forbs make up a minor component of the plant community.

Gyp Uplands Range Site

GRASSES and GRASSLIKE		85%
Black Grama	}	
Gyp Grama	}	13-15
Blue Grama	}	
Gyp Dropseed	}	10-14
Tobosa		8-10
Alkali Sacaton		5-7
Sideoats Grama	}	
Cane Bluestem	}	3-5
Threeawns spp		3-5
Bush Muhly	}	
Plains Bristlegrass	}	
Fluffgrass	}	
Sand Dropseed	}	1-2
Woody		5%
Fourwing Saltbrush	}	
Mormon Tea	}	1-3
Javelinabush	}	
Broom Snakeweed	}	
Yucca	}	
Winterfat	}	
Pricklypear	}	1-3
Forbs		10%
Coldenia		4-6
Rayless Goldenrod	}	
Buckwheat	}	0-3
Locoweed		0-1
Other Perennial Forbs		1-3
Other Annual Forbs		2-4

**CP-2
Gyp Hills Range**

This site is a grassland site that is dominated by short and mid-grasses, dotted with shrubs and an occasional juniper. Indicator plants for this site include gyp grama, gyp dropseed, and coldenia which may make up 35 to 40 percent of the plant composition.

Gyp Hills Range Site

GRASSES and GRASSLIKE		75%
Gyp Grama		13-15
Alkali Sacaton		12-14
Gyp Dropseed		11-13
Black Grama	}	
Blue Grama	}	
Tobosa	}	
Galleta	}	7-9
Sideoats Grama	}	
Cane Bluestem	}	
Plains Bristlegrass	}	
New Mexico Feathergrass	}	3-5
Threeawn spp.	}	
Sand Dropseed	}	2-4
Bush Muhly	}	
Ring Muhly	}	1-3
Woody		10%
Fourwing Saltbrush		3-5
Mormon Tea		2-4
Winterfat		1-3
One-seeded Juniper		0-2
Broom Snakeweed	}	
Javelinabush	}	
Yucca	}	
Pricklypear Cactus	}	
Skunkbush Sumac	}	
Pinyon Pine	}	1-3
Forbs		15%
Coldenia		6-8
Rayless Goldenrod	}	
Buckwheat	}	0-3

Locoweed	0-1
Other Annual Forbs	2-4
Other Perennial Forbs	1-3

**CP-2
Limy Range**

This site is a warm season grassland, dominated by short and mid-grasses mixed with shrubs and a variety of forbs. The forb composition fluctuates from year to year depending upon moisture conditions.

Limy Range Site

GRASSES and GRASSLIKE		75%
Blue Grama	}	
Hairy Grama	}	18-20
Sideoats Grama		12-15
Black Grama		8-10
Sand Dropseed	}	
New Mexico Feathergrass	}	5-8
Tobosa	}	
Plains Bristlegrass	}	3-5
Ring Muhly	}	
Threeawn spp.	}	
Wolftail	}	3-5
Alkali Sacaton	}	
Vine Mesquite	}	
Little Bluestem	}	
Cane Bluestem	}	1-3
Woody		15%
Small Soapweed	}	
Winterfat	}	3-5
Fourwing Saltbrush	}	
Mormon Tea	}	3-5
Broom Snakeweed	}	
Wooly Groundsel	}	1-3
Forbs		10%
Globemallow	}	
Leatherweed Croton	}	
Hoffman Saggia spp.	}	1-3
Other Annual Forbs	}	
Other Perennial Forbs	}	3-5

**CP-2
Red Shale Range**

This site is a warm season grassland, dotted with an occasional shrub. Midgrasses and short grasses are evenly distributed. Shrubs and half shrubs are sparsely scattered. Perennial and annual forbs make a minor component of the plant community.

Red Shale Range Site

GRASSES and GRASSLIKE		80%
Blue Grama		20-25
Alkali Sacaton		20-25
Tobosa	}	
Galleta	}	15-20
Buffalograss		3-5
Mat Muhly	}	
Creeping Muhly	}	3-5
Vine Mesquite		3-5
Other		3-5
Woody		10%
Fourwing Saltbrush		3-5
Cholla Cactus	}	
Broom Snakeweed	}	
Pricklypear	}	
Others	}	3-5
Forbs		10%
Silverleaf Nightshade	}	
Globemallow	}	
Verbina	}	
Bitterweed	}	
New Mexico Thistle	}	3-5
Others		3-5

Other species which may occur include: Sideoats Grama, Black Grama, Ring Muhly, Burrograss, Western Wheatgrass, Cane Bluestem, Little Bluestem, and Winterfat.

**CP-3
Swale Range**

This site is a grassland site. Mid-grasses are dominant with short grasses and a variety of forbs evenly distributed. The landscape is dotted with an occasional shrub or half shrubs. This site occurs in position to receive and transport surface water from uplands to bottomlands. This extra water makes the vegetation noticeably denser, stand higher, and are heavier than the adjoining upland sites.

Swale Range Site

GRASSES and GRASSLIKE	60-80%
Western Wheatgrass	15-30
Vine Mesquite	10-20
Alkali Sacaton	10-15
Silver Bluestem	}
Cane Bluestem	}
Bottlebrush Squirreltail	7-10
Tobosa	7-10
Galleta	}
Blue Grama	10-15
Creeping Muhly	5-10
Mat Muhly	}
Switchgrass	5-10
Others	5-10
Woody	5-10%
Fourwing Saltbrush	}
Apacheplume	}
Winterfat	3-5
Walkingstick Cholla	3-5
Broom Snakeweed	1-5
Others	1-5
Forbs	15-25%
Scarlet Globemallow	}
Upright Prairie Coneflower	}
Smooth Four O'Clock	3-5
Cudweed Sagewort	3-5
Desert Holly	}
Silverleaf Nightshade	}
New Mexcio Thistle	}
Western Ragweed	}
	3-5

Others

1-5

Other grasses which could appear in this site would include: Sideoats Grama, Black Grama, Ear Muhly, Ring Muhly, Threeawns spp., Sixweeks Grama, and Wolftail.

Other woodys would include: Englemann Pricklypear, and Wolfberry.

Other forbs would include: Verbena, Senna, and Annual Sunflower.

CP-3
Shallow Limestone Range

This site is a juniper-pinyon savannah, with a rather dense under story of short and mid grasses. The under story is dominated by both cool and warm season mid grasses. Forb production fluctuates greatly from season to season and year to year. Surface rock is abundant. Tree and shrub components increase with elevation.

Shallow Limestone Range Site

GRASSES and GRASSLIKE	75-85%
Deergrass }	
New Mexico Muhly }	
Mountain Muhly }	
Curlyleaf Muhly }	
Metcalfé Muhly }	20-30
Bottlebrush Squirreltail	3-5
New Mexico Feathergrass }	
Needleandthread }	10-20
Little Bluestem	1-5
Blue Grama }	
Hairy Grama }	5-10
Sideoats Grama	5-10
Black Grama	5-10
Green Sprangletop }	
Sand Dropseed }	10-15
Other Grasses	1-5
<hr/>	
Woody	5-15%
Juniper spp. }	
Pinyon }	5-10
Wavyleaf Oak	2-5
Mountain Mahogany	2-5
Broom Snakeweed }	
Sacahuista }	2-5
Bigelow Sage	1-5
Other Shrubs	1-5
<hr/>	
Forbs	5-10%
Verbena }	
Scarlet Globemallow }	
Bladderpod }	5-10

Fedit Marigold	2-5
Others	1-3

Other grasses which could appear in this site would include: Threeawns spp., Wolf tail, Halls Panicum, Big Bluestem, Mountain Brome, Plains Lovegrass, and Carex spp.

Other woodys would include: Yucca, Winterfat, Bigelow Sagebrush, and Fourwing Saltbrush.

Other forbs would include: American Vetch, Annual Sunflower, Locoweed, and Indian Paintbrush.

**CP-3
Bottomland Range**

This site is a grassland range site. Tall and mid-grasses are dominant with occasional shrubs or half shrubs. This site occurs in a position which receives surface runoff from surrounding uplands on a regular basis. This additional runoff makes the vegetation noticeably taller and is denser than adjacent upland sites.

Bottomland Range Site

GRASSES and GRASSLIKE	65-80%
Sideoats Grama	10-15
Alkali Sacaton	15-35
Vine Mesquite	15-20
Western Wheatgrass	15-35
Blue Grama	5-10
Galleta }	
Tobosa }	5-10
Mat Muhly }	
Creeping Muhly }	5-10
Giant Sacaton	10-20
Bottlebrush Squirreltail	3-5
Cane Bluestem }	
Silver Bluestem }	5-7
Other Grasses	5-10
<hr/>	
Woody	5-10%
Fourwing Saltbrush	5-8
Walkingstick Cholla	1-5
Broom Snakeweed	1-3
Other Shrubs	1-3
<hr/>	
Forbs	15-25%
Prairie Coneflower }	
Scarlet Globemallow }	3-5
New Mexico Thistle	3-5
Desert Holly }	
Silverleaf Nightshade }	2-5
Annual Sunflowers	2-5
Prairie Sage	1-3
Others Forbs	1-3

Other grasses which could appear in this site would include: Burrograss, Ring Muhly, Threeawn, Sand Dropseed, Wolf tail, Buffalograss, Indian Ricegrass, Indiangrass, Canada Wildrye, Halls Panicum, Prairie Junegrass, Red Muhly, Plains Lovegrass, and Black Grama.

Other woodys would include: Wolfberry, Yucca, Fringed Sagewort, Apacheplume, Ephedra spp., and Winterfat.

Other forbs would include: Buffaloburr, Buffalo Gourd, Whorled Milkweed, California Bricklebush, Tansymustard, and Threadleaf Groundsel.

**CP-3
Deep Sand Range**

This site is a grassland site that is characterized by both warm and cool season perennials, tall and mid-grasses, low growing shrubs and half shrubs, and a variety of forbs. Forb production fluctuates greatly from year to year. In years of significant spring and fall moisture, forb composition and production are a very important part of the plant community.

Deep Sand Range Site

GRASSES and GRASSLIKE	75-85%
Blue Grama }	
Galleta }	10-15
Black Grama	5-10
Little Bluestem }	
Big Bluestem }	
Cane Bluestem }	
Silver Bluestem }	10-25
Indian Ricegrass	10-15
Sideoats Grama	5-10
Switchgrass }	
Indiangrass }	
Giant Sandreed }	5-10
New Mexico Feathergrass }	
Needleandthread }	3-5
Sand Dropseed }	
Mesa Dropseed }	
Spike Dropseed }	
Giant Dropseed }	10-15
Other Grasses	5-10
Woody	5-10%
Sand Sagebrush }	
Bigelow Sagebrush }	5-10
Skunkbush Sumac }	
Littleleaf Sumac }	2-5
Feather Dalea	T-3
Other Shrubs	1-3
Forbs	5-10%
Wildbuckwheat	T-3
Annual Sunflower	T-3
Croton	T-3

Other grasses which could appear in this site would include: Alkali Sacaton, Threeawn spp., Sandhill Muhly, Purple Lovegrass, Ring Muhly, Bottlebrush Squirreltail, Western Wheatgrass, Plains Bristlegrass, Green Sprangletop, and Bush Muhly.

Other woodys would include: Ephedra spp., Winterfat, Rabbitbrush, Broom Snakeweed, Fourwing Saltbrush, Yucca spp., Cacti spp., Juniper, Pinyon, Algerita, and Oak spp.

Other forbs would include: Tansymustard, Locoweed spp., Red Stem Milkvetch, Globemallow, Mariola, Sand Verbena, Goldenweed, and Threadleaf Groundsel.

**CP-3
Gyp Upland Range**

This site is a grassland-shrub aspect with a scattering of oneseed juniper. Forbs are scattered throughout and make up an important part of the potential plant community.

Gyp Upland Range Site

GRASSES and GRASSLIKE	65-75%
Black Grama	}
Bush Muhly	} 15-25
Alkali Sacaton	5-15
Galleta	}
Tobosa	} 5-10
Gyp Grama	}
Gyp Dropseed	} 10-20
Blue Grama	}
Hairy Grama	} 5-10
Sideoats Grama	}
Plains Bristlegrass	}
Cane Bluestem	} 5-10
Other Grasses	1-5
<hr/>	
Woody	10-20%
Fourwing Saltbrush	5-10
Coldenia	5-7
Mormon Tea	5-7
Bigelow Sage	1-5
Oneseed Juniper	3-5
Winterfat	5-10
Walkingstick Cholla	5-10
Other Shrubs	1-3
<hr/>	
Forbs	5-10%
Threadleaf Groundsel	1-5
Rayless Goldenrod	1-3
Bladderpod	1-3
Globemallow	1-3
Dyssodia	1-3
Other Forbs	1-3

Other grasses which could appear in this site would include: Burrograss, Ring Muhly, Threeawn, New Mexico Feathergrass, Needleandthread, Curlyleaf Muhly, Vine Mesquite, Bush Muhly, Triden, Sand Dropseed, and Mesa Dropseed.

Other woodys would include: Rubber Rabbitbrush, Wolfberry, Opuntia, Yucca, and Pinyon.

Other forbs would include: Spectaclepod, Annual Sunflower, Verbena, Wildbuckwheat, and Woolly Indian-wheat.

**CP-3
Hills Range**

This site is a grassland-shrub complex, with scattered tree-type junipers and pinyons. The shrub and tree component is more visually prevalent on the cooler north and east slopes, while low-growing shrubs and grasses usually prevail on the south and west slopes. The grasses are a mixture of mid and short grasses with a few tall grasses. The forb composition is small, but in years of abundant moisture the forb aspect can be seen.

Hills Range Site

GRASSES and GRASSLIKE	60-70%
Sideoats Grama	10-25
Black Grama	10-25
Little Bluestem	}
Silver Bluestem	}
New Mexico Feathergrass	}
Needleandthread	}
Pinyon Ricegrass	}
Littleseed Ricegrass	}
Arizona Fescue	}
Mountain Muhly	}
Spike Muhly	}
New Mexico Muhly	}
Threeawn spp.	}
Mat Muhly	}
Tridens spp.	}
Plains Lovegrass	}
Blue Grama	}
Other Grasses	}
	5-10
	5-15
	3-8
	5-10
	5-10
	2-5
Woody	10-25%
Pinyon	}
Juniper	}
Skunkbush Sumac	}
Oak spp.	}
Mountain Mahogany	}
Algerita	}
Fringed Sagewort	}
Others Shrubs	}
	5-20
	3-8
	3-8
	3-8
	3-5
	2-5
	1-5
Forbs	5-10%

Wildbuckwheat	T-3
Indian Paintbrush	T-3
Yarrow	T-3
Other Forbs	T-3

Other grasses which could appear in this site would include: Hairy Grama, Black Grama, Galleta, Scribner Needlegrass, Green Needlegrass, Sleepygrass, Pine Dropseed, Slender Wheatgrass, Western Wheatgrass, Bottlebrush Squirreltail, Indian Ricegrass, Bush Muhly, Ring Muhly, Metcalfe Muhly, Curlyleaf Muhly, Deergrass, Big Bluestem, Wolftail, and Alkali Sacaton.

Other woodys would include: Ponderosa Pine, Littleleaf Sumac, Yucca spp., Fourwing Saltbrush, Winterfat, Rubber Rabbitbrush, Broom Snakeweed, Apacheplume, Bigelow Sagebrush, Bricklebush, Yerba-de-Pasmo, Cliff Fendlerbush, Cliffrose, and Sacahuista.

Other forbs would include: Hairy Aster, Golden Pea, Penstemon, Pingue, Locoweed, Globemallow, Fleabane, Mariola, and Woolly Indianwheat.

**CP-3
Limestone Hills Range**

This site is a grassland-shrub, half shrub aspect with only tree type junipers and pinyons present. Mid and short grasses dominate the site. Forbs are a minor component of this site. However, during years of abundant spring and fall moisture, a large variety of forbs occur throughout this site. Cool season grasses and shrubs are more prevalent on the north and east slopes and at higher elevations. Warm season grasses dominate the west and south slopes and lower elevations.

Limestone Hills Range Site

GRASSES and GRASSLIKE	60-70%
Black Grama	10-25
Sideoats Grama }	
Little Bluestem }	15-20
Curlyleaf Muhly }	
Metcalfes Muhly }	
Plains Lovegrass }	15-30
New Mexico Feathergrass }	
Needleandthread }	
Scriber Needlegrass }	10-15
Blue Grama }	
Hairy Grama }	
Wolftail }	
Galleta }	10-12
Mountain Muhly }	
New Mexico Muhly }	5-10
Western Wheatgrass }	
Prairie Junegrass }	
Pinyon Ricegrass }	5-10
Other Grasses	5-10
<hr/>	
Woody	15-25%
Oak spp.	5-7
Algerita	3-5
Catclaw Mimosa }	
Skunkbush Sumac }	5-7
Juniper }	
Pinyon }	3-10
Cliffrose	3-5
Others Shrubs	3-5

Forbs	5-10%
Mariola	5-7
Indian Paintbrush	T-3
Wooly Indian-wheat	T-2
Other Forbs	1-3

Other grasses which could appear in this site would include: Cane Bluestem, Silver Bluestem, Big Bluestem, Arizona Cottontop, Green Sprangletop, Bush Muhly, Sand Dropseed, Mesa Dropseed, Threawn, Curly Mesquite, False Mesquite, Bullgrass Tridens spp., Halls Panicum, Ring Muhly, Mat Muhly, and Spike Muhly.

Other woodys would include: Yucca spp., Agave spp., Cacti spp., Sacahuista, Winterfat, Broom Snakeweed, Mountain Mahogany, Cliff Fenlerbush, and Fourwing Saltbrush.

Other forbs would include: Locoweed, Lambert Crazyweed, Globemallow, Marigold spp., and Yarrow.

CP-3
Limy Range

This site is a grassland site that is characterized by a mixture of warm and cool season, mid and short perennial grasses. Woody species occupy an important, although minor portion of the plant community. Forbs are a minor component of this site. However, during years of abundant spring and fall moisture, a large variety of forbs occur throughout this site. The calcium content of the soils has a direct effect on the kinds as well as amount of vegetation produced.

Limy Range Site

GRASSES and GRASSLIKE	80-89%
Black Grama	15-25
Sideoats Grama	10-15
New Mexico Feathergrass	}
Needleandthread	} 10-30
Western Wheatgrass	5-10
Blue Grama	}
Galleta	}
Hairy Grama	} 10-15
Little Bluestem	3-5
Indian Ricegrass	}
Pinyon Ricegrass	} 2-5
Bottlebrush Squirreltail	3-5
Sand Dropseed	}
Mesa Dropseed	} 3-5
Threeawn spp.	3-5
Other grasses	5-8
<hr/>	
Woody	15-25%
Winterfat	5-10
Fourwing Saltbrush	3-5
Ephedra spp.	T-3
Bigelow Sagebrush	T-3
Rabbitbrush	}
Broom Snakeweed	} 3-5
Others Shrubs	3-5
<hr/>	
Forbs	5-10%
Dotted Gayfeather	T-2
Silverleaf Nightshade	T-2
Wooly Indian-wheat	2-5

Threadleaf Groundsel
Other Forbs

T-2
T-3

Other grasses which could appear in this site would include: Spike Dropseed, Alkali Sacaton, Ring Muhly, Mat Muhly, Wolftail, Cane Bluestem, Silver Bluestem, Prairie Junegrass, Plains Lovegrass, Tridens spp., Inland Saltgrass, and Spike Muhly.

Other woodys would include: Cacti spp., Yucca spp., Algerita, Pinyon, Juniper, Oak spp., Sandsage, and Sacahuista.

Other forbs would include: Rocky Mountain Beeplant, Locoweed, Lambert Crazyweed, Globemallow, and Mariola.

**CP-3
Loamy Range**

This site is a mixed grassland of warm and cool season, mid and short perennial grasses. Woody species occupy a minor but more important, part of the plant community. Forbs are a minor component of this site. However, during years of abundant spring and fall moisture, a large variety of forbs occur throughout this site.

Loamy Range Site

GRASSES and GRASSLIKE	80-90%
Western Wheatgrass	15-20
Blue Grama	15-20
Galleta	10-15
Bottlebrush Squirreltail	5-7
Sideoats Grama }	
Little Bluestem }	10-15
Vine Mesquite	5-10
Black Grama	5-7
Sand Dropseed }	
Spike Dropseed }	5-8
Alkali Sacaton	3-5
Threeawn spp.	2-5
Halls Panicum }	
Switchgrass }	
Plains Lovegrass }	5-10
Other Grasses	5-10
<hr/>	
Woody	5-10%
Fourwing Saltbrush }	
Winterfat }	
Ephedra }	5-7
Pale Wolfberry }	
Apacheplume }	3-5
Broom Snakeweed }	
Rubber Rabbitbrush }	3-5
Others Shrubs	1-5
<hr/>	
Forbs	5-10%
Drummed Milkvetch }	
Red Stemmed Milkvetch }	T-2
Locoweed spp.	T-2
Wild Buckwheat	T-2
Globemallow	T-2

Threadleaf Groundsel
Other Forbs

T-2
T-2

Other grasses which could appear in this site would include: Wolftail, Cane Bluestem, Silver Bluestem, Prairie Junegrass, Pinyon Ricegrass, Indian Ricegrass, New Mexico Feathergrass, Needleandthread, Green Needlegrass, Mesa Dropseed, Spike Muhly, Metcalfe Muhly, Curlyleaf Muhly, Buffalograss, Burrograss, Ring Muhly, Mat Muhly, Sandhill Muhly, Red Muhly, Poa spp., and Carex spp.

Other woodys would include: Skunkbush Sumac, Littleleaf Sumac, Sacahuista, Yucca spp., Bigelow Sagebrush, Fringed Sagewort, Cholla, Pricklypear, Pinyon, Juniper, and Algerita.

Other forbs would include: Rocky Mountain Beeplant, Marigold Yarrow, Ragweed, Woolly Indian-Wheat, Whorled Milkweed, Tansymustard, Fiddleneck, and Indian Paintbrush.

**CP-3
Malpais Range**

This site is a site that is dominated by perennial grasses. Shrubs and half shrubs dot the landscape. During years of abundant spring and fall moisture, a large variety of forbs are scattered throughout the landscape.

Malpais Range Site

GRASSES and GRASSLIKE	80-90%
Western Wheatgrass	10-15
Blue Grama }	
Hairy Grama }	10-20
Galleta }	
Black Grama }	10-20
Sideoats Grama	10-15
Bottlebrush Squirreltail	3-5
Wolftail	3-5
Needleandthread }	
New Mexico Feathergrass }	5-7
Little Bluestem	5-7
Spike Muhly	3-5
Mountain Muhly	5-7
Arizona Fescue }	
Pine Dropseed }	5-7
Threeawn	2-5
Curly Mesquite	T-2
Other Grasses	2-5
<hr/>	
Woody	5-10%
Mountain Mahogany	2-5
Gambel Oak }	
Cliffrose }	2-5
Pinyon }	
Juniper }	5-10
Broom Snakeweed	T-3
Other Shrubs	T-3
<hr/>	
Forbs	5-10%
Wild Buckwheat	T-5
Indian Paintbrush	T-3
Wooly Indian-wheat	T-3
Other Forbs	T-2

Other grasses which could appear in this site would include: Big Bluestem, Cane Bluestem, Prairie Junegrass, Pinyon Ricegrass, Indiangrass, and Vine Mesquite.

Other woodys would include: Algerita, Sacahuista, Winterfat, Fourwing Saltbrush, Apacheplume, Rubber Rabbitbrush, Yucca, and Ephedra.

Other forbs would include: Haplopappus spp., Bloodweed, Annual Wild Buckwheat, and Locoweed spp.

**CP-3
Salt Flats Range**

This site is a grassland site mixed with scattered shrubs. Forb production is variable and can assume the aspect dominate during years of abundant moisture. However, generally forbs are a minor component of this site.

Salt Flats Range Site

GRASSES and GRASSLIKE	70-80%
Alkali Sacaton }	
Giant Sacaton }	25-35
Western Wheatgrass	15-20
Vine Mesquite	10-15
Blue Grama }	
Galleta }	10-15
Black Grama	5-10
Inland Saltgrass }	
Nuttail Alkaligrass }	7-10
Salt Sedge	1-5
Mat Muhly }	
Alkali Muhly }	
Ring Muhly }	1-5
Buffalograss }	
Burrograss }	1-3
Other Grasses	1-3
<hr/>	
Woody	15-20%
Fourwing Saltbrush }	
Shadscale }	10-12
Winterfat }	
Ephedra }	
Fringed Sagewort }	5-10
Other Shrubs	3-5
<hr/>	
Forbs	5-10%
Wild Buckwheat	T-3
Scarlet Globemallow	T-3
Threadleaf Groundsel	T-3
Other Forbs	T-3

Other grasses which could appear in this site would include: Sand Dropseed, Threeawn, Bottlebrush Squirreltail, Plains Bristlegrass, Common Reedgrass, Carex spp., Wolf tail, and Halls Panicum.

Other woodys would include: Yucca spp., Rubber Rabbitbrush, Broom Snakeweed, Bigelow Sagebrush, and Cacti spp.

Other forbs would include: Fetid Marigold, Bladderpod, Locoweed, and Annual Sunflowers.

CP-3
Sandy Range

This site is a site that is characterized by perennial grasses. There is a scattering of shrubs, half shrubs, and forbs. Woody species occupy a minor part of this plant community. Forbs are also a minor component of this site. However, during years of abundant rainfall, forb production can become quite significant, with a large variety of forbs scattered throughout the site. This site has a high potential for soil blowing if the natural vegetation cover is not maintained.

Sandy Range Site

GRASSES and GRASSLIKE		70-80%
Sand Bluestem	}	
Cane Bluestem	}	10-20
Sideoats Grama	}	
Indiangrass	}	
Big Bluestem	}	15-20
Black Grama		15-20
New Mexico Feathergrass	}	
Needleandthread	}	10-15
Blue Grama	}	
Galleta	}	10-15
Western Wheatgrass		5-10
Indian Ricegrass		5-10
Sand Dropseed	}	
Spike Dropseed	}	10-15
Other Grasses		5-10
Woody		10-15%
Ephedra	}	
Winterfat	}	
Fourwing Saltbrush	}	2-5
Skunkbush Sumac	}	
Littleleaf Sumac	}	
Oak spp.	}	5-7
Sand Sagebrush	}	
Yucca	}	5-7
Other Shrubs		2-5
Forbs		10-15%
Wild Buckwheat		2-3
Leather Croton		2-3

Locoweed spp.	2-3
Sand Verbena	2-3
Other Forbs	2-3

Other grasses which could appear in this site would include: Little Bluestem, Hairy Grama, Mesa Dropseed, Threeawn, Green Sprangletop, Metcalfe Muhly, Curlyleaf Muhly, Red Muhly, Prairie Sandreed, Alkali Sacaton, Bottlebrush Squirreltail, Sandhill Muhly, Mat Muhly, Ring Muhly, Plains Lovegrass, Purple Lovegrass, and Bush Muhly.

Other woodys would include: Rabbitbrush, Broom Snakeweed, Pinyon, Juniper, Mountain Mahogany, Algerita, Apacheplume, Bigelow Sagebrush, and Cacti spp.

Other forbs would include: Larkspur, Purple Nightshade, Salsify, Lupine, Curly Dock, Indian Paintbrush, Scarlet Globemallow, Rocky Mountain Beeplant, Threadleaf Groundsel, Woolly Indian-wheat, Tansymustard, and Russian Thistle.

**CP-3
Shallow Range**

This site is grassland site that is characterized by a mixture of warm and cool seasoned perennial grasses. There are a large number of shrubs and trees throughout this site. Forbs are scattered and may be plentiful during years of abundant rainfall.

Shallow Range Site

GRASSES and GRASSLIKE	75-85%
Sideoats Grama	15-20
Black Grama	5-15
Little Bluestem	5-10
Blue Grama }	
Galleta }	
Hairy Grama }	10-15
Needleandthread }	
New Mexico Feathergrass }	5-10
Wolftail	3-5
Western Wheatgrass	5-10
Bottlebrush Squirreltail	3-5
Threeawn	3-5
Other Grasses	7-10
Woody	5-10%
Algerita	2-5
Broom Snakeweed	T-3
Fourwing Saltbrush }	2-5
Winterfat }	
Bigelow Sagebrush }	5-10
Other Shrubs	2-5
Forbs	5-15%
Wild Buckwheat	T-2
Indian Paintbrush	T-2
Woolly Indian-Wheat	T-2
Penstemon	T-2
Other Forbs	T-2

Other grasses which could appear in this site would include: Sand Dropseed, Mesa Dropseed, Alkali Sacaton, Mountain Muhly, Curlyleaf Muhly, Silver Bluestem, Big Bluestem, Buffalograss, Tridens spp., Sand Muhly, Ring Muhly, Mat Muhly, Spike Muhly, Indian Ricegrass, and Bush Muhly.

Other woodys would include: Wolfberry, Fringed Sagewort, Yucca spp., Cacti spp., Feather Dalea, Catclaw Acacia, Skunkbush Sumac, Oak spp., Pinyon, and Juniper.

Other forbs would include: Purple Nightshade, Scarlet Globemallow, Croton spp., Threadleaf Groundsel, and Russian Thistle.

CP-3
Shallow Sand Range

This site is grassland site that is characterized by a mixture of warm season, short and mid-grasses with half shrubs and shrubs widely scattered. Woody species and forbs are a minor component of the plant community. Forbs are plentiful during years of abundant rainfall. Cool season grasses make up a minor component of the plant community.

Shallow Sand Range Site

GRASSES and GRASSLIKE		75-80%
Black Grama		20-25
Sideoats Grama		10-15
Little Bluestem		10-15
New Mexico Feathergrass	}	
Needleandthread	}	10-15
Hairy Grama	}	
Blue Grama	}	10-15
Sand Dropseed		3-5
Threeawn		3-5
Other Grasses		3-5
Woody		5-10%
Winterfat	}	
Small Soapweed	}	3-5
Oneseed Juniper	}	
Skunkbush Sumac	}	
Sacahuista	}	3-5
Other Shrubs		3-5
Forbs		5-10%
Leather Croton	}	
Wild Buckwheat	}	
Wooly Indian-Wheat	}	3-5
Other Perennial and Annual Forbs		3-5

Other grasses which could appear in this site would include: Sand Muhly, Sand Bluestem, Mesa Dropseed, Plains Bristlegrass, Red LOvegrass, Wolftail, Bush Muhly, Indian Ricegrass, and Arizona Cottontop.

Other woodys would include: Cholla Cactus, Broom Snakeweed, Sand Sagebrush, and Bigelow Sagebrush.

Other forbs would include: Scarlet Globemallow, Silverleaf Nightshade, Verbena, Annual Mustard, and Astragalus species.

**CP-3
Breaks Range**

This site is a mixed grassland shrub site characterized by short, mid-and tall grasses and an abundance of shrubs and half shrubs, especially on north and east slopes. Forbs occupy a minor component of this site; however during years of favorable moisture, the forb aspect is quite apparent.

Breaks Range Site

GRASSES and GRASSLIKE	60-75%
Sideoats Grama }	
Little Bluestem }	10-25
Blue Grama }	
Wolftail }	
Hairy Grama }	7-15
Curlyleaf Muhly }	
Mountain Muhly }	
New Mexico Muhly }	
Spike Muhly }	10-20
New Mexico Feathergrass }	
Needleandthread }	5-15
Black Grama	7-10
Plains Lovegrass	5-15
Pinyon Ricegrass }	
Littleseed Ricegrass }	
Prairie Junegrass }	5-10
Other Grasses	3-5
Woody	15-25%
Oak spp.	5-10
Mountain Mahogany	3-5
Pinyon }	
Juniper }	3-15
Skunkbush Sumac	3-10
Algerita	1-5
Prairie Sage	3-5
Other Shrubs	3-5
Forbs	5-10%
Wild Buckwheat	1-3
Indian Paintbrush	1-3
Penstemon	1-3
Pingue	1-5

Other grasses which could appear in this site would include: Cane, Silver, and Big Bluestem, Green Sprangletop, Mutton Bluegrass, Galleta, Metcalfe Mulhy, Mat Muhly, Mesa, Sand and Spike Dropseed, Alkali Sacaton, Western Wheatgrass, Indian Ricegrass, Indian Ricegrass, Bottlebrush Squirreltail, Green Needlegrass, Arizona Fescue, and Pine Dropseed.

Other woodys would include: Littleleaf Sumac, Sageworts, Winterfat, Fourwing Saltbrush, Bricklebush, Yerba-de-Pasmo, Cliff Fendlerbush, Broom Snakeweed, Cliffrose, and Sacahuista.

Other forbs would include: Locoweed, Globemallow, Fleabane, Haplopappus spp., Woolly Indian-wheat, and Mariola.

CP-3
Shallow Sandstone Range

This site is a site that is characterized by relatively moderate production and is dominated by short and mid-grasses, with a woody component that increases with elevation. Forb production fluctuates widely from year to year and from season to season. Surface rock is abundant.

Shallow Sandstone Range Site

GRASSES and GRASSLIKE	70-85%
Little Bluestem }	
Sideoats Grama }	15-30
Black Grama	10-15
Blue Grama }	
Hairy Grama }	10-20
Galleta	3-5
Needleandthread }	7-10
New Mexico Feathergrass }	
Indian Ricegrass }	
Bottlebrush Squirreltail }	7-10
Western Wheatgrass	2-5
Wolftail	2-5
Sand Dropseed }	
Spike Dropseed }	5-10
Plains Lovegrass	5-10
Other Grasses	5-10
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Woody	5-15%
Pinyon }	
Juniper }	5-10
Skunkbush Sumac	1-2
Algerita	1-2
Bigelow Sagebrush	1-2
Oak spp.	1-5
Other Shrubs	3-5
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Forbs	5-10%
Indian Paintbrush	1-2
Fetid Marigold	1-2
Scarlet Globemallow	1-2
Sand Verbena	1-2
Other Forbs	1-2

Other grasses which could appear in this site would include: Spike Muhly, Mountain Muhly, Metcalfe Muhly, Curlyleaf Muhly, Ring Muhly, Mat Muhly, Sandhill Muhly, Threeawn, Buffalograss, Burrograss, Alkali Sacaton, Pine Dropseed, Pinyon Ricegrass, and Prairie Junegrass.

Other woodys would include: Rubber Rabbitbrush, Fourwing Saltbrush, Sand Sagebrush, Winterfat, Broom Snakeweed, Yucca spp., Sacahuista, Ephedra spp., and Ponderosa Pine.

Other forbs would include: Penstemon spp., Locoweed, Red Stem Milkvetch, Threadleaf Groundsel, Woolly Indian-wheat, and Tansymustard.

**CP-3
Sandstone Hills Range**

This site is a site that is characterized by a mixed grassland, shrubs, half-shrubs, aspect with scattered tree type juniper and pinyon. Short and mid-grasses dominate this site. However, during years of abundant spring and fall moisture, a large variety of forbs occur throughout this site. Cool season species are more prevalent on the north and east slopes and at higher elevation.

Sandstone Hills Range Site

GRASSES and GRASSLIKE	60-70%
Little Bluestem }	
Sideoats Grama }	20-25
Black Grama	10-15
Blue Grama	5-10
New Mexico Feathergrass }	
Needleandthread }	5-10
Arizona Fescue }	
Pinyon Ricegrass }	2-5
Mountain Muhly }	
New Mexico Muhly }	5-10
Wolftail }	
Plains Lovegrass }	5-8
Threeawn	2-5
Bottlebrush Squirreltail	2-5
Other Grasses	3-5
Woody	15-25%
Pinyon }	
Juniper }	5-15
Skunkbush Sumac }	
Littleleaf Sumac }	5-8
Mountain Mahogany }	
Algerita }	3-5
Oak spp.	3-5
Other Shrubs	3-5
Forbs	5-10%
Indian Paintbrush	T-3
Wooly Indian-wheat	T-3
Showy Goldeneye	T-3
Other Forbs	T-3

Other grasses which could appear in this site would include: Hairy GRama, Galleta, Metcalfe Muhly, Curlyleaf Muhly, Spike Muhly, Ring Muhly, Mat Muhly, Prairie Junegrass, Western Wheatgrass, Sand Dropseed, Curly Mesquite, Tridens spp., Big Bluestem, and Arizona Cottontop.

Other woodys would include: Ephedra spp., Winterfat, Yucca spp., Fourwing SAltbrush, Sacahuista, Cacti spp., Agave spp., Broom Snakeweed, and Cliff Fendlerbush.

Other forbs would include: Locoweed, Lamberts Crazyweed, Globemallow, Marigold, Yarrow, Mariola, Penstemon spp., and Threadleaf Groundsel.

CP-3
Salty Bottomland Range

This site is a grassland-shrub mixture characterized by mid-grasses. Forbs are a minor component of this site. However, during years of abundant winter and spring moisture, forb production can be important. This site occurs in a position which receives surface runoff from surrounding uplands on a regular basis. This additional runoff makes the vegetation noticeably taller and denser than adjacent uplands.

Salty Bottomland Range Site

GRASSES and GRASSLIKE	65-75%
Alkali Sacaton }	
Giant Sacaton }	30-40
Blue Grama }	
Galleta }	5-10
Inland Saltgrass }	
Alkali Muhly }	
Mat Muhly }	10-15
Bottlebrush Squirreltail	5-8
Western Wheatgrass	5-8
Vine Mesquite	3-5
Threeawn	3-5
Other Grasses	3-5
Woody	15-20%
Fourwing Saltbrush }	
Shadscale }	5-10
Winterfat	3-5
Other Shrubs	3-5
Forbs	5-10%
Threadleaf Groundsel	T-3
Scarlet Globemallow	T-3
Western Ragweed	T-3
Other Forbs	T-3

Other grasses which could appear in this site would include: Creeping Muhly, Ring Muhly, Red Muhly, Black Grama, Sideoats Grama, Switchgrass, Burrograss, Cane and Silver Bluestem, Sand Dropseed, Wolftail, Buffalograss, Indian Ricegrass, and Canada Wildrye.

Other woodys would include: Pale Wolfberry, Fringed Sagewort, Apacheplume, Ephedra, Broom Snakeweed, and Cacti spp.

Other forbs would include: New Mexico Thistle, Desert Holly, Annual Sunflower, Buffalobur, Buffalogourd, Whorled Milkweed, California Bricklebush, and Tansymustard.

**CP-3
Gravelly Range**

This site is a site that is characterized by short and mid-grasses with scattered shrubs and half shrubs also quite prevalent. Scattered oneseed juniper and occasional pinyon are also found on this site, increasing in density with increase in elevation.

Gravelly Range Site

GRASSES and GRASSLIKE	65-80%
Black Grama	15-30
Blue Grama	}
Hairy Grama	}
Sideoats Grama	10-20
Needleandthread	10-30
New Mexico Feathergrass	}
Wolftail	15-30
Plains Lovegrass	5-10
Plains Bristlegrass	}
Bottlebrush Squirreltail	}
Western Wheatgrass	5-8
Vine Mesquite	}
Threeawn	3-5
Galleta	0-5
Other Grasses	1-5
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Woody	10-20%
Juniper	}
Pinyon	}
Apacheplume	2-5
Skunkbush Sumac	1-5
Littleleaf Sumac	}
Winterfat	}
Mormon-Tea	1-5
Yucca	5-10
Algerita	1-3
Other Shrubs	2-5
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Forbs	5-10%
Penstemon	1-3
Scarlet Globemallow	1-3
Indian Paintbrush	1-3
Threadleaf Groundsel	T-3
Other Forbs	T-2

Other grasses which could appear in this site would include: Threeawn, Pinyon, Littleseed Ricegrass, Sand Dropseed, Little Bluestem, Curlyleaf Muhly, Little Cane, Silver Bluestem, Scriber Needlegrass, and Bush Muhly.

Other woodys would include: Fourwing Saltbrush, Bigelow Sagebrush, Sagewort, Fringed Sage, Wolfberry, Sacahuista, Broom Snakeweed.

Other forbs would include: Soft Groundcherry, Woolly Indian-wheat, Fleabane.

CP-3
Shallow Plains Range

This site is grassland site that is characterized by a mixture of warm season, short, mid and tall grasses. The grassland is dotted with shrubs and half shrubs. Forbs are a minor component of the plant community but are plentiful during years of abundant rainfall. Cool season grasses make up a minor component of the plant community.

Shallow Plains Range Site

GRASSES and GRASSLIKE	75-80%
Blue Grama	}
Hairy Grama	} 10-15
Little Bluestem	10-15
Sideoats Grama	15-20
Black Grama	5-15
New Mexico Feathergrass	5-10
Sand Bluestem	10-15
Plains Bristlegrass	3-5
Sand Dropseed	}
Mesa Dropseed	} 3-5
Other Grasses	3-5
Woody	10-15%
Skunkbush Sumac	}
Catclaw Mimosa	}
Sacahuista	}
Juniper	} 5-10
Small Soapweed	3-5
Other Shrubs	3-5
Forbs	5-10%
Wooly Indian-wheat	}
Leatherweed Croton	}
Globemallow	}
Annual Wild Buckwheat	} 3-5
Other Perennial and Annual Forbs	3-5

Other grasses which could appear in this site would include: Threeawn, Bottlebrush Squirreltail, Plains Muhly, Bush Muhly, Sand Muhly, Arizona Cottontop, and Indian Ricegrass.

Other woodys would include: Broom Snakeweed, Algerita, Sand Sagebrush, Bigelow Sagebrush, Cactus species, Fourwing Saltbrush, and Winterfat.

Other forbs would include: Verbena, Annual Mustard, Purple Nightshade, Curly Dock, Tansymustard, Russian Thistle, and Astragalus spp.

CP-3
Shallow Limy Savannah Range

This site is an open stand of pinyon pine and/or juniper with grass under story. The under story grasses are characterized by both warm and cool season mid-grasses with scattered shrubs throughout this site. Half shrubs and forbs are minor part of the plant community. The open stand of pinyon and juniper at one time may have been maintained by natural fire. The over story tree canopy cover ranges from 10 to 25 percent.

Shallow Limy Savannah Range Site

GRASSES and GRASSLIKE	75-80%
Little Bluestem	15-20
Sideoats Grama	15-20
Black Grama	5-10
Blue Grama	}
Hairy Grama	} 15-20
Galleta	
Needleandthread	}
New Mexico Feathergrass	} 5-10
Big Bluestem	3-5
Bottlebrush Squirreltail	3-5
Western Wheatgrass	3-5
Wolftail	3-5
Sand Dropseed	3-5
Pinyon Ricegrass	}
Green Needlegrass	} 2-5
Other Grasses	3-5
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Woody	10-15%
Pinyon	10-20
Juniper	*****
Skunkbush Sumac	3-5
Algerita	3-5
Fringed Sagewort	3-5
Rubber Rabbitbrush	3-5
Bigelow Sagebrush	3-5
Oak spp.	3-5
Winterfat	3-5
Other Shrubs	3-5
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Forbs	5-10%
Wild Buckwheat	3-5
Scarlet Globemallow	3-5

Astragalus spp.	3-5
Other Forbs	3-5

Other grasses which could appear in this site would include: Plains Lovegrass, Spike Muhly, Mountain Muhly, Silver Bluestem, Metcalfe Muhly, Ring Muhly, Mat Muhly, Threeawns, Alkali Sacaton, Pine Dropseed, Prairie Junegrass, Dryland Sedges, and Indian Ricegrass.

Other woodys would include: Rubber Rabbitbrush, Fourwing Saltbrush, Sand Sagebrush, Threadleaf Groundsel, Broom Snakeweed, Yucca spp., Sacahuista, and Ponderosa Pine.

Other forbs would include: Penstemon spp., Locoweed, Redstem Milkvetch, Indian Paintbrush, Fetid Marigold, Sand Verbena, Woolly Indian-wheat, and Tansymustard.

CP-3
Shallow Sandy Savannah Range

This site is an open stand of pinyon pine and/or juniper with grass under story. The under story grasses are characterized by both warm and cool season, mid-grassses with scattered shrubs throughout the site. Half shrubs and forbs are a minor part of the plant community. The open stand of pinyon and juniper at one time may have been maintained by natural fire. The understory tree canopy cover ranges from 10 to 25 percent.

Shallow Sandy Savannah Range Site

GRASSES and GRASSLIKE	70-80%
Little Bluestem	15-20
Sideoats Grama	15-20
Black Grama	5-15
Blue Grama	}
Galleta	}
Bottlebrush Squirreltail	5-15
Plains Lovegrass	5-10
Prairie Junegrass	5-10
Prairie Junegrass	3-5
Wolftail	3-5
Sand Dropseed	5-10
Littleseed Ricegrass	}
Pinyon Ricegrass	}
Threeawns	5-8
Ring Muhly	3-5
Other Grasses	3-5
Woody	10-15%
Pinyon	}
Juniper	}
Skunkbush Sumac	10-25
Algerita	3-5
Oak spp.	3-5
Cholla spp.	3-5
Fringed Sagewort	3-5
Other Shrubs	3-5
Forbs	5-10%
Wild Buckwheat	3-5
Globemallow	3-5
Indian Paintbrush	3-5
Wooly Indian-wheat	3-5

Other grasses which could appear in this site would include: Hairy Grama, Needleandthread, New Mexico Feathergrass, Big Bluestem, Western Wheatgrass, Pinyon Ricegrass, Spike Muhly, Mountain Muhly, Metcalfe Muhly, Curlyleaf Muhly, Silver Bluestem, Mat Muhly, Alkali Sacaton, Pine Dropseed, Sedges, and Indian Ricegrass.

Other woodys would include: Rubber Rabbitbrush, Bigelow Sagebrush, Winterfat, Pricklypear, Fourwing Saltbrush, Sand Sagebrush, Threadleaf Groundsel, Broom Snakeweed, Yucca, Sacahuista, Ponderosa Pine, and Mountain Mahogany.

CP-3
Deep Sand Savannah Range

This site is an open stand of pinyon pine and/or juniper with grass under story. The under story grasses are characterized by both warm and cool season, mid-and tall grasses with scattered shrubs throughout the site. Half shrubs and forbs are a minor part of the plant community. The open stand of pinyon and juniper at one time may have been maintained by natural fire. The understory tree canopy cover ranges from 10 to 25 percent.

Deep Sand Savannah Range Site

GRASSES and GRASSLIKE	70-80%
Big Bluestem }	
Sand Bluestem }	10-15
Cane Bluestem }	
Little Bluestem }	10-15
Indiangrass }	
Prairie Sandreed }	5-10
Sideoats Grama }	5-10
Blue Grama }	
Galleta }	10-15
Black Grama }	5-10
Sand Dropseed }	
Spike Dropseed }	
Giant Dropseed }	10-15
New Mexico Feathergrass }	
Needleandthread }	3-5
Indian Ricegrass }	3-5
Other Grasses }	5-10
Woody	15-30%
Pinyon }	
Juniper }	10-25
Sand Sagebrush }	
Bigelow Sagebrush }	5-10
Skunkbush Sumac }	5-10
Oak spp. }	3-5
Other Shrubs }	3-5
Forbs	5-10%
Wild Buckwheat }	0-5
Sunflower }	0-5
Leatherweed Croton }	0-5

Other grasses which could appear in this site would include: Switchgrass, Mesa Dropseed, Alkali Sacaton, Threeawns, Sandhill Muhly, Purple Lovegrass, Ring Muhly, Bottlebrush Squirreltail, Western Wheatgrass, Plains Bristlegrass, Green Sprangletop, Littleseed Ricegrass, and Prairie Junegrass.

Other woodys would include: Feather Dalea, Cholla spp., Ephedra spp., Winterfat, Rubber Rabbitbrush, Broom Snakeweed, Fourwing Saltbrush, Yucca, and Algerita.

Other forbs include: Tansymustard, Locoweed, Red Stem Milkvetch, Globemallow, Mariola, Sand Verbena, Goldenweed, and Threadleaf Groundsel.

**CP-3
Gyp Hills Range**

This site is a grassland-shrub aspect with a scattering of oneseed juniper. Forbs are scattered and make up an important part of the potential natural plant community.

Gyp Hills Range Site

GRASSES and GRASSLIKE		70-80%
Gyp Dropseed		10-20
Alkali Sacaton		10-15
Galleta		5-10
Black Grama	}	
Bush Muhly	}	
Sideoats Grama	}	
Needlegrasses	}	5-10
Blue Grama	}	
Hairy Grama	}	1-5
Other Grasses		5-7
Woody		15-20%
Coldenia		5-10
Algerita		3-5
Banana Yucca		1-3
Bigelow Sage		1-5
Mormon Tea		3-5
Oneseed Juniper		1-5
Other Shrubs		1-3
Fourwing Saltbrush	}	
Winterfat	}	5-7
Others		1-3
Forbs		3-5%
Globemallow		1-3
Dyssodia		1-3
Threadleaf Groundsel		1-3
Others		1-3

Other grasses which could appear in this site would include: Threeawns, Ring Muhly, Curlyleaf Muhly, Tridens species and Sand Dropseed.

Other woodys would include: Opuntia, Skunkbush Sumac, Pale Wolfberry, and Pinyon.

Other forbs include: Penstemon, Bladderpod, Annual Sunflower, and Buckwheat.

**CP-4
Limestone Hills (Complex) Range**

This site is a grassland site that is dominated by warm season, tall and mid-grasses. Shrubs, half shrubs, and forbs make up an important percentage of this site. There is a difference in potential plant communities on the north and south slopes. This site is a complex made up of the two slopes. The north slopes typically have more cool season species and juniper-pinyon than the south slopes. The south slopes typically have more forbs and cacti, catclaw, ect., then the north slopes. This site produces a very complex plant community.

Limestone Hills (Complex) Range Site

GRASSES and GRASSLIKE	45-70%
Sideoats Grama	15-25
Blue Grama	5-15
Black Grama	10-25
Plains Lovegrass	5-10
Curlyleaf Muhly	}
Metcalfes Muhly	} 15-20
Threeawns	1-5
Dropseed spp.	}
Tridens spp.	} 1-5
Green Sprangletop	5-10
Other Grasses	1-5
Woody	25-45%
Yucca spp.	1-5
Sacahuista	1-5
Sumac spp.	2-5
Broom Snakeweed	1-5
Bigelow Sagebrush	1-5
Yerba-de-Pasmo	1-5
Other Shrubs (NS)	5-10
Mountain Mahogany	}
Catclaw Mimosa (SS)	} 5-10
Forbs	3-5%
Mariola	5-7
Marigold spp.	1-3
Yarrow	1-3
Cutleaf Haplopappus	1-3
Other Forbs	1-5

Other grasses which could appear in this site would include: Hairy Grama, Ring Muhly, Sedges, Halls Panicum, Wolf tail, Western Wheatgrass, Bottlebrush Squirreltail, Silver Bluestem, Little Bluestem, and Plains Bristlegrass. Needle grasses may occur on favored north slopes.

Other woodys would include: Cactus spp., Algerita, Dalea spp., Sotol, Juniper, Pinyon, Oak spp., Winterfat, Apacheplume, Wolfberry, Century Plant, Lechiquilla, Fourwing Saltbrush, Ceanothus, Allthorn, and Brickellbush.

Other forbs include: Pricklepear Dogweed, Groundsel spp., Globemallow, Wild Buckwheat spp., Verbena spp., Desert Holly, Wooly Indianwheat, Fiddleneck, Indian Paintbrush, Phlox spp., and Penstemon spp.

(NS) North Slope
(SS) South Slopes

**CP-4
Shallow Range**

This site is a grassland site that is dominated by short and warm season grasses. This site also provides significant amounts of shrubs and half shrubs. Forb production varies greatly from season to season and year to year and can be significant in years of high rainfall. Production and composition vary widely with elevation.

Shallow Range Site

GRASSES and GRASSLIKE	60-75%
Black Grama	20-40
Sideoats Grama	10-15
Burrograss** }	
Mat Muhly* }	3-5
Tridens spp.	5-10
Hairy Grama }	
Blue Grama }	5-10
Threeawns	5-8
Dropseed spp.	1-5
Little Bluestem* }	
Cane Bluestem* }	5-8
Curlyleaf Muhly	2-5
Plains Bristlegrass	2-5
Halls Panicum	2-5
Plains Lovegrass	2-8
Other Grasses	2-5
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Woody	15-20%
Catclaw Acacia	2-5
Yucca spp.	1-3
Broom Snakeweed	1-3
Other Shrubs	
<hr/>	
Forbs	5-10%
Wild Buckwheat spp.	1-2
Prickleleaf Dogweed	1-3
Sennas	1-3
Croton	1-3
Other Forbs	5-7

Other grasses which could appear in this site would include: Fluffgrass, Tobosa, Green Sprangletop, Bottlebrush Squirreltail, Indiangrass, Little Awn Needlegrass, Creeping Muhly, Silver Bluestem, and Wolf tail.

Other woodys would include: Catclaw Mimosa, Apacheplume, Bigelow Sagebrush, Yerba-de-pasmo, Algerita, Mountain Mahogany, Dalea spp., Creosotebush, Oak spp., Skunkbush Sumac, Cholla, Sotol, Epehdra, Winterfat, Wolfberry, Threadleaf Groundsel, Javalina Bush, Sacahuista, and Juniper.

Other forbs include: Cutleaf Haplopappus, Woolly Indianwheat, Bladderpod, Yarrow, Desert Holly, Desert Bailey, Fleabane, Verbena, Deer Tongue, and Blanket Flower.

*High elevation only

**Lower elevation only

**CP-4
Loamy Range**

This site is a grassland site that is dominated by warm season, short and mid-grasses in scattered colonies. Shrubs and half-shrubs are common but scattered. Forbs make up an important part of the community, but production fluctuates greatly from season to season and year to year. Production and composition vary widely with elevation.

Loamy Range Site

GRASSES and GRASSLIKE		70-85%
Blue Grama		5-35
Sideoats Grama		5-15
Black Grama		10-35
Tobosa		10-35
Sand Dropseed		3-5
Vine Mesquite		5-10
Western Wheatgrass*		10-15
Threeawns spp.		3-5
Burrograss**		3-5
Plains Lovegrass		5-10
Other Grasses		3-5
Woody		5-10%
Yucca spp.		3-5
Fourwing Saltbrush		3-5
Catclaw Acacia		2-5
Sumac spp.		2-5
Broom Snakeweed		2-5
Other Shrubs		1-3
Forbs		5-10%
Desert Holly		1-3
Globemallow	}	
Haplopappus spp.	}	
Croton	}	
Groundsel	}	3-5
Other Forbs		1-3

Other grasses which could appear in this site would include: Bottlebrush Squirreltail, Galleta, Alkali Sacaton, Hairy Grama, Mat Muhly, Ring Muhly, Green Sprangletop, Halls Panicum, Plains Bristlegrass, Little Bluestem, Silver Bluestem, Indinagrass, Fluffgrass, Buffalograss, Wolf tail, Tridens spp., and Needlegrasses spp.

Other woodys would include: Cholla, Juniper, Pinyon, Creosotebush, Oak spp., Broom Baccharis, Pricklypear, Apacheplume, Dalea spp., and Algerita.

Other forbs include: Winterfat, Woolly Loco, Woolly Indianwheat, Cudweed, Thistles, Annual Sunflower, Mullin, Wild Buckwheats, Nightshades, Milkweeds and Bladderpods.

*High elevation only

**Lower elevation only

**CP-4
Swale Range**

This site is a grassland aspect. There is extra water present, therefore the plant community stands out due to increased production. It is dominated by mid and tall grasses. Grass species sometimes occur in colonies. Shrubs are scattered throughout this site. Forb production varies from year to year and season to season, but is seldom a large component in this site. Production and composition vary greatly with elevation.

Swale Range Site

GRASSES and GRASSLIKE	70-85%
Blue Grama	5-35
Sideoats Grama	10-20
Tobosa**	20-30
Western Wheatgrass	10-20
Vine Mesquite	10-20
Silver Bluestem	}
Cane Bluestem	} 5-15
Alkali Sacaton	}
Giant Sacaton	} 10-15
Threeawn spp.	3-5
Dropseed spp.	3-5
Halls Panicum	5-10
Burrograss**	}
Mat Muhly	} 3-5
Other Grasses	3-5
Woody	5-10%
Fourwing Saltbrush	3-5
Catclaw Acacia	3-5
Apacheplume	5-8
Yucca spp.	3-5
Other Shrubs	3-5
Forbs	1-5%
Wild Buckwheat	1-2
Sagewort	1-3
Verbena	1-2
Other Forbs	1-3

Other grasses which could appear in this site would include: Plains Bristlegrass, Green Sprangletop, Big Bluestem, Indiangrass, Switchgrass, Canadian Wildrye, Plains Lovegrass, Bottlebrush Squirreltail, and Wolftail.

Other woodys would include: Broom Baccharis, Desert Willow, Winterfat, Tarbush, Broom Snakeweed, Sumac spp., and Juniper.

Other forbs include: Desert Holly, Blanket Flower, Threadleaf Groundsel, Cudweed, and Mullin.

**Lower elevation only

**CP-4
Draw Range**

This site is a site that is dominated by riparian type vegetation, with an under story of mid and tall perennial grasses. There is constant flooding of this site, therefore there is a potential for many annual species to occur. Forbs compose most of the annual growth. Since there is cold air drainage, cool season species are abundant. Pinyon, juniper, and ponderosa pine also occur at higher elevations. The production and composition may vary greatly with elevation.

Draw Range Site

GRASSES and GRASSLIKE	45-65%
Giant Sacaton	10-30
Sideoats Grama	10-20
Vine Mesquite	5-10
Indiangrass	5-10
Western Wheatgrass	5-10
Bottlebrush Squirreltail	2-5
Silver Bluestem	}
Cane Bluestem	}
Little Bluestem	} 5-15
Plains Bristlegrass	5-10
Blue Grama	10-25
Other Grasses	5-10
Woody	30-50%
New Mexico Walnut	5-15
Desert Willow	5-10
Fourwing Saltbrush	2-4
Desert Hackberry	1-3
Apacheplume	5-10
Catclaw Acacia	2-5
Skunkbush Sumac	}
Littleleaf Sumac	} 1-3
Broom Snakeweed	1-2
Broom Baccharis	1-4
Other Shrubs	5-10
Forbs	5-10%
Globemallow	1-4
Sagewort spp.	1-3
Annual Sunflower	1-3
Other Forbs	2-5

Other grasses which could appear in this site would include: Hairy Grama, Bullgrass, Deergrass, Carex spp., Dropseed spp., Threeawn spp., Big Bluestem, Switchgrass, Canadian Wildrye, Wolf tail, Green SPrangletop, Plains Lovegrass, Halls Panicum, New Mexico Feathergrass, Littleawn, Needlegrass, and Tridens spp.

Other woodys would include: Bricklebush, Winterfat, Oak spp., Yerba-de-pasmo, Mock Orange, Mariola, Canyon Grape, Yucca spp., Willow spp., Poison Ivy, Ephedra spp., Virginsbower, Mountain Mahogany, Algerita, and Manzanita.

Other forbs include: Desert Holly, Wild Buckwheat, Blanket Flower, Verbena, Cudweed, Mullin, Prickleaf, Dogweed, Woolly Loco, Cutleaf Haplopappus, TThreadleaf Groundsel, Woolly Indianwheat, Prickle Poppy, Whorled Milkweed, and Indian Paintbrush.

Scattered trees include: Juniper, Pinyon, and Ponderosa Pine.

**CP-4
Gravelly Range**

This site is a short grass, bare ground, shrub aspect, that is dominated by drought resistant perennial warm season, mid and short grasses. Shrubs and half shrubs are scattered and evenly distributed. Forb production varies greatly from season to season and year to year, but can vary significantly. Total production also fluctuates widely, with elevation.

Gravelly Range Site

GRASSES and GRASSLIKE		55-70%
Black Grama		20-35
Sideoats Grama		15-25
Tridens spp.		10-20
Blue Grama		5-10
Sand Dropseed	}	
Mesa Dropseed	}	
Spike Dropseed	}	10-20
New Mexico Feathergrass		2-5
Threeawn spp.		5-10
Ring Muhly	}	
Burrograss	}	5-10
Other Grasses		1-5
Woody		15-25%
Catclaw Mimosa		5-10
Yucca spp.		3-5
Broom Snakeweed		1-3
Apacheplume		1-3
Fourwing Saltbrush		1-3
Winterfat		1-3
Other Shrubs		2-5
Forbs		5-15%
Fetid Marigold		3-5
Wooly Indianwheat		3-5
Texas Croton		3-5
Prickleleaf Dogweed	}	
Wild Buckwheat	}	2-4
Other Forbs		3-5

Other grasses which could appear in this site would include: Hairy Grama, Halls Panicum, Bottlebrush Squirreltail, Plains Lovegrass, Plains Bristlegrass, Little Bluestem, Tobosa, Wolftail, and Curlyleaf Muhly.

Other woodys would include: Cactus spp., Mariola, Century Plant, Lechiguila, Yerba-de-pasmo, Algerita, Creosotebush, Mountain Mahogany, Epehdra spp., Ocotillo, Sotol, Sumac spp., Allthorn, Javelina Bush, and Sacahuista.

Other forbs include: Desert Holly, Verbena, Fleabane, Sennas, Bladderpod, Yarrow, Globemallow, Penstemon, Wooly Paperflower, and Euphorbia spp.

CP-4
Very Shallow Range

This site is a grassland site with warm season, mid and short grass aspect. There is a fair scattering of shrubs and half shrubs throughout the landscape. Trees and shrubs increase with elevation. Forb production fluctuates greatly from season to season and year to year. Surface rock and bare soil is abundant throughout the site. Production and composition may vary widely with elevation.

Very Shallow Range Site

GRASSES and GRASSLIKE	50-65%
Black Grama	20-40
Sideoats Grama	5-10
Tridens spp.	10-25
Dropseed }	
Blue Grama }	5-10
Ring Muhly }	
Burrograss }	5-10
Threeawn spp.	5-10
Curlyleaf Muhly }	
Plains Lovegrass }	10-15
Wolftail	2-5
Halls Panicum	2-5
Other Grasses	2-5
Woody	20-35%
Catclaw Mimosa	2-5
Sacahuista	2-7
Yucca spp. }	
Sotol }	
Century Plant }	2-5
Cholla	1-2
Broom Snakeweed	2-5
Other Shrubs	2-5
Forbs	10-15%
Prickleleaf Dogweed }	
Wild Buckwheat }	2-5
Croton	
Wooly Groundsel	1-5
Fetid Marigold }	
Bladderpod }	
Other Forbs }	1-3

Other grasses which could appear in this site would include: Hairy Grama, Fluffgrass, Little Bluestem, Green Sprangletop, Mat Muhly, Silver and Cane Bluestem, Tobosa, Plains Bristlegrass, Bottlebrush Squirreltail, and New Mexico Feathergrass.

Other woodys would include: Lechiguilla, Algerita, Mountain Mahogany, Dalea spp., Sumac spp., Juniper, Creosotenush, Oak spp., Bigelow Sagebrush, Fourwing Saltbrush, Yerba-de-pasmo, Ephedra spp., Range Ratany, and Javelina Bush.

Other forbs include: Fleabanes, Cutleaf Haplopappus, Woolly Indianwheat, Yarrow, Dyssodia, Globemallow, Desert Bailey, Woolly Loco, Verbena, Pricklepoppy, and Whorled Milkweed.

CP-4
Shallow Loamy Range

This site is a reflection of both shallow and deep site because of the levels of the soil depth. Black grama and blue grama are co-dominants. The site aspect is that of a grassland with abundant shrubs. Forb production varies greatly from year to year and season to season. During years of adequate rainfall, forb production can be significant. Production and composition may vary widely with elevation.

Shallow Loamy Range Site

GRASSES and GRASSLIKE	70-80%
Blue Grama	10-35
Black Grama	10-35
Sideoats Grama	5-10
Burrograss }	
Mat Muhly }	5-8
Vine Mesquite	2-5
Tobosa	10-20
Dropseed spp.	1-5
Threeawn spp.	3-8
Halls Panicum	3-8
Wolftail }	
Tridens spp. }	1-3
Other Grasses	5-10
Woody	10-15%
Algerita	2-7
Yucca spp.	2-5
Fourwing Saltbrush	2-5
Ephedra spp. }	
Cholla }	1-3
Sumac spp.	1-3
Winterfat	1-3
Catclaw Mimosa	1-3
Broom Snakeweed	1-3
Other Shrubs	1-5
Forbs	5-10%
Prickleleaf Dogweed	1-3
Wooly Groundsel	1-2
Cutleaf Haplopappus	1-2
Croton	1-3
Other Forbs	5-8

Other grasses which could appear in this site would include: Plains Bristlegrass, Littleawn Needlegrass, Plains Lovegrass, Green Sprangletop, Curlyleaf Muhly, Little Bluestem, Silver Bluestem, Bottlebrush Squirreltail, Western Wheatgrass, and New Mexico Feathergrass.

Other woodys would include: Pinyon, Juniper, Creosotebush, Bigelow Sagebrush, Yerbe-de-pasmo, Dalea spp., Apacheplume, Wolfberry, and Oak spp.

Other forbs include: Desert Holly, Threadleaf Groundsel, Globemallow, Sagewort, Woolly Loco, Woolly Indianwheat, Cudweed, and Mullin.

**RM-1
Subalpine Grassland Range**

This site is a site that is dominated by cool season grasses and has a large variety of both mid-grasses and tall grasses. Grasses make up approximately 75 percent of the composition of this site. Forbs are showy when in bloom and may make up as much as 15 percent of the annual yield. Shrubs are a minor component of the plant community and are scattered throughout the site. In some places, this site is interspersed with aspen growth.

Subalpine Grassland Range Site

GRASSES and GRASSLIKE	75%
Mountain Brome	18-20
Thurber Fescue	12-15
Moutain Muhly	12-15
Arizona Fescue	7-10
Tufted Hairgrass	7-10
Columbia Needlegrass }	
Letterman Needlegrass }	7-10
Sedge spp. }	
Nebraska Sedge }	3-5
Prairie Junegrass }	
Pine Dropseed }	
Little Bluestem }	
Western Wheatgrass }	
Muttongrass }	
Oatgrass spp. }	3-5
Bluegrass spp.	3-5
Other Grasses*	3-5
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Woody	10%
Shrubby Cinquefoil }	
Snowberry }	
Mountain Currant }	3-5
Raspberry }	
Elderberry }	
Willows spp. }	
Others* }	3-5
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Forbs	15%
Mountain Dandelion	3-5
Penstemon spp.	3-5
Monkshood	3-5

Lupine spp.	}	
Larkspur	}	3-5
Cowparsnip	}	
Aster spp.	}	
Clover spp.	}	
Geranium spp.,	}	
Iris	}	3-5
Others*	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Timothy, Slender Wheatgrass, Big Bluestem, Spike Muhly, Sheep Fescue, Nodding Brome, Pinegrass, Blue Grama, Meadow Barley, Vetch, Peavine, and Valerian.

**RM-1
Mountain Grassland Range**

This site is a grassland site that is dominated by cool season bunch grasses. Grasses make up approximately 75 percent of the composition of the plant community. A variety of forbs are conspicuous when in bloom and make up approximately 15 percent of the annual yield. Small amounts of shrubs are widely scattered throughout this site and along the fringes bordering the woodland site.

Mountain Grassland Range Site

GRASSES and GRASSLIKE		75%
Arizona Fescue		12-15
Moutain Muhly		12-15
Prairie Junegrass		8-10
Oatgrass spp.		8-10
Needlegrasses		8-10
Sideoats Grama	}	
Little Bluestem	}	8-10
Western Wheatgrass		3-5
Blue Grama		3-5
Pine Dropseed		3-5
Big Bluestem		3-5
Mountain Brome		3-5
Sedge spp.		3-5
Other Grasses*		3-5
Woody		10%
Oak spp.		3-5
Snowberry	}	
Mountain Mahogany	}	3-5
Currant	}	
Rabbitbrush	}	
Cudweed Sagewort	}	
Sagebrush spp.	}	
Other*	}	3-5
Ponderosa Pine	}	
Pinyon Pine	}	T
Forbs		15%
Western Yarrow		3-5
Iris spp.	}	
Lupine spp.	}	3-5
Penstemon spp.	}	

Buckwheat spp.	}	3-5
Others*		3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Bottlebrush Squirreltail, Wolftail, Muttongrass, Sheep Fescue, Vetch, Skunkbush Sumac, and Gooseberry.

**RM-1
Mountain Valley Range**

This site is a site that is dominated by grasses and is characterized by both warm and cool season bunch grasses. The dominant aspect is grassland although scattered ponderosa pine may occur in small amounts. Scattered clumps of oak, snowberry, and shrubs may occur on the side slopes of the site. Forbs and shrubs do not make up more than 15 percent of the annual field.

Mountain Valley Range Site

GRASSES and GRASSLIKE		85%
Moutain Muhly		20-25
Arizona Fescue		12-15
Mountain Brome		12-15
Pine Dropseed		12-15
Western Wheatgrass		7-10
Blue Grama		3-5
Little Bluestem		3-5
Tufted Hairgrass		3-5
Needleandthread		3-5
Big Bluestem	}	
Indiangrass	}	3-5
Poa spp.	}	
Prairie Junegrass	}	3-5
Sedge spp.		3-5
Other Grasses*		3-5
Woody		5%
Oak spp.	}	
Snowberry	}	
Serviceberry	}	
Fringed Sagewort	}	
Cudweed Sagewort	}	3-5
Other*		3-5
Forbs		10%
Vetch spp.	}	
Peavine spp.	}	
Clover spp.	}	
Iris spp.	}	3-5
Yarrow spp.	}	
Coneflower spp.	}	

Viola	}	3-5
Others*		3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Thurber Fescue, Oatgrass, Timothy, Threeawns, Redtop, Bottlebrush, Mountain Mahogany, Big Sagebrush, Sideoats Grama, Ponderosa Pine, Muttongrass, Spike Muhly, Lupine, Penstemon, Aster, and Rabbitbrush.

**RM-1
Mountain Loam Range**

This site is a mixed grassland characterized by both cool season and warm season, mid-grasses and bunch grasses and a minor amount of woody plants and forbs. Ponderosa pine or pinyon pine are widely scattered throughout the site. Grasses or grasslike plants make up approximately 90 percent of the total vegetation composition. Woody plants and forbs are evenly distributed and make up a minor portion of the plant community.

Mountain Loam Range Site

GRASSES and GRASSLIKE	85-90%
Moutain Muhly	13-15
Sideoats Grama	13-15
Little Bluestem	8-10
Blue Grama	8-10
Arizona Fescue	8-10
Western Wheatgrass	8-10
Spike Muhly	}
Mountain Brome	}
Oatgrass spp.	} 3-5
Pine Dropseed	3-5
Sedge spp.	3-5
Big Bluestem	}
Prairie Junegrass	}
Wolftail	} 3-5
Other Grasses*	3-5
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Woody	5%
Oak spp.	}
Mountain Mahogany	}
Ponderosa Pine	}
Pinyon Pine	} 3-5
Other*	3-5
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Forbs	5%
Peavine spp.	}
Vetch spp.	}
Iris spp.	}
Western Yarrow	} 3-5
Others*	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sand Dropseed, Galleta, Vine Mesquite, Bottlebrush Squirreltail, Threeawn, Lupine, Rubber Rabbitbrush, and Sagebrush.

**RM-1
Mountain Malpais Range**

This site is a mixed grassland site that is characterized by warm and cool season, mid-grasses and bunch grasses and make up approximately 80 percent of the composition of the plant community. Woody shrubs and half shrubs are widely scattered throughout this site and make up approximately five percent of the composition. Forbs are a minor component and make up approximately ten percent of the composition.

Mountain Malpais Range Site

GRASSES and GRASSLIKE		80%
Hairy Grama	}	
Blue Grama	}	18-20
Western Wheatgrass		12-15
Arizona Fescue		8-10
Mountain Muhly		8-10
Little Bluestem		8-10
Sideoats Grama		8-10
Columbia Needlegrass	}	
Indian Ricegrass	}	
Prairie Junegrass	}	3-5
Galleta	}	
Sand Dropseed	}	
Mat Muhly	}	
Ring Muhly	}	
Threeawn spp.	}	
Sedge spp.	}	3-5
Other Grasses*		3-5
Woody		5%
Rabbitbrush	}	
Mountain Mahogany	}	
Skunkbush Sumac	}	
Winterfat	}	
Fourwing Saltbrush	}	
Oak spp.	}	
Other*	}	3-5
Forbs		10%
Vetch spp.	}	
Pingue	}	
Clover spp.	}	
Buckwheat	}	

Globemallow	}	3-5
Others*		3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Pine Dropseed, Bottlebrush Squirreltail, Vine Mesquite, Deergrass, Bullgrass, Big Bluestem, Indiangrass, Sagebrush, Snakeweed, and Horsebrush.

**RM-1
Mountain Meadow Range**

This site is a site that is dominated by cool season bunch grasses and sedges to give it its characteristic appearance. Approximately 15 percent of the total plant compositons is made up of sedges. The perennial and annual forbs consititute less than ten percent of the plant community. Herbaceous half shrubs are present only in trace amounts. Since moisture for plant growth is supplied principally by shallow ground water and high water tables, the annual precipitation received is not as critical as the drier sites adjoining it. Sedges and rushes become conspicuous only in wetter or swampier portions of the site. Forage yield is comparable to domestic tame pastures; in top condition, this site presents the appearance of a hay field.

Mountain Meadow Range Site

GRASSES and GRASSLIKE		85%
Tufted Hairgrass		20-25
Nebraska Sedge	}	
Broom Sedge	}	
Sedge spp.	}	12-15
Mountain Brome		7-10
Western Wheatgrass		7-10
Bulrush	}	
Poverty Rush	}	
Baltic Rush	}	7-10
Red Fescue		7-10
Bluejoint Reedgrass	}	
Bog Bluegrass	}	7-10
Mountain Muhly		3-5
Marsh Muhly	}	
Spike Muhly	}	
Meadow Barley	}	
Oatgrass spp.	}	3-5
Other Grasses*		3-5
Woody		5%
Willows spp.	}	
Shrubby Cinquefoil	}	3-5
Forbs		10%
Clover spp.		3-5
Western Yarrow	}	
Iris spp.	}	
Aster spp.	}	

Geranium spp.	}	
Dandelion	}	
Vetch	}	
Others*	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Timothy, Prairie Junegrass, Subalpine Needlegrass, Shortawn Foxtail, Blue Grama, Redtop, Slender Wheatgrass, and Sheep Fescue.

**RM-1
Mountain Shale Range**

This site is a shrub dominated community; however, 65 to 75 percent of the annual production is made up of grasses and forbs. The vegetation of this site is comprised of mixture of both warm and cool season grasses, forbs, and shrubs whose relative composition percentage is dependent upon climatic and grazing factors. Grasses have a relative composition of approximately 65 percent. Shrub species are subdominant and display a percentage composition of about 25 percent; forbs make approximately 10 to 15 percent of the vegetation complex. Oakbrush is the dominant shrub on this site. Scattered, light, open stands of ponderosa pine may give this site a savannah aspect. Pinyon-juniper stands are encountered at the lower elevational limits of this site.

Mountain Shale Range Site

GRASSES and GRASSLIKE		65%
Blue Grama		12-15
Western Wheatgrass		12-15
Little Bluestem		12-15
Sideoats Grama		8-10
Alkali Sacaton		8-10
Mountain Muhly		3-5
Arizona Fescue		3-5
Galleta		3-5
Prairie Junegrass	}	
Indian Ricegrass	}	
Needleandthread	}	3-5
Dryland Sedge spp.	}	
Other Grasses*	}	3-5
Woody		25%
Oak spp.		12-15
Mountain Mahogany	}	
Sagebrush spp.	}	
Serviceberry	}	
Snowberry	}	3-5
Juniper	}	
Pinyon Pine	}	
Other Shrubs*	}	3-5
Forbs		10%
Geranium spp.	}	
Clover spp.	}	
Buckwheat spp.	}	3-5

Western Yarrow	}	
Lupine spp.	}	
Dandelion	}	
Vetch spp.	}	
Peavine spp.	}	
Others*	}	3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Wild Rye, Pine Dropseed, Mountain Brome, Muttongrass, Spike Muhly, Sleepygrass, Threeawns, Currant, Snakeweed, Cinquefoil, Groundsel, and Winterfat.

**RM-1
Mountain Brush Range**

This site is a browse-grass plant community. Woody species give this site the appearance of a shrub-plant community. However, grasses compromise approximately 50 percent of the annual yield. Cool-season mid-grasses and bunch grasses dominate the grass production. The main browse plants are gambel oak, mountain mahogany, and snowberry. Woody species occupy approximately 40 percent of the total annual production. Perennial and annual forbs occupy a minor portion of the plant community and make up approximately ten percent.

Mountain Brush Range Site

GRASSES and GRASSLIKE		50%
Mountain Muhly		8-10
Arizona Fescue		8-10
Western Wheatgrass		8-10
Prairie Junegrass	}	
Muttongrass	}	8-10
Blue Grama		3-5
Little Bluestem		3-5
Big Bluestem		3-5
Bottlebrush Squirreltail	}	
Indian Ricegrass	}	3-5
Other grasses and sedges spp.		3-5
Woody		40%
Gambel Oak		12-15
Mountain Mahogany		8-10
Snowberry	}	
Serviceberry	}	8-10
Bitterbrush	}	
Rabbitbrush	}	3-5
Sagebrush spp.		3-5
Pinyon Pine	}	
Juniper spp.	}	3-5
Other Shrubs*		3-5
Forbs		10%
Penstemon spp.	}	
Globemallow spp.	}	
Buckwheat spp.	}	
Indian Paintbrush	}	3-5
Other Perennials*		3-5

Other Annuals*

3-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Pine Dropseed, Nodding Brome, Ring Muhly, Sideoats Grama, Threeawn, Snakeweed, Cinquefoil, and Winterfat.

**RM-2
Mountain Breaks Range**

This site is a diverse site for vegetation. Grasses dominate the deeper, more productive soils while less developed soils are dominated by shrubs with a tree over story. Colonies of scrub gambel oak are scattered throughout the site. Forbs are most noticeable when in bloom.

Mountain Breaks Range Site

GRASSES and GRASSLIKE	55-65%
Arizona Fescue	10-15
Mountain Muhly }	
Columbia Needlegrass }	5-10
Needleandthread }	
Indian Ricegrass }	3-10
Western Wheatgrass }	
Spike Muhly }	3-10
Sideoats Grama }	
Little Bluestem }	
Pine Dropseed }	3-7
Prairie Junegrass }	
Muttongrass }	1-5
Blue Grama }	
Galleta }	3-5
Others	
Woody	20-30%
Gambel Oak }	
Oak spp. }	
Mountain Mahogany }	3-7
Fourwing Saltbrush }	
Winterfat }	1-7
Mountain Big Sagebrush }	
Fringed Sagewort }	
Rabbitbrush }	1-7
Snowberry }	
Currant }	
Skunkbush Sumac }	1-3
Rocky Mountain Juniper }	
Pinyon Pine }	0-3
Others	0-5

Forbs	5-10%
Deervetch	}
Indian Paintbrush	}
Wild Buckwheat	}
Fleabane	}
Penstemon	}
Sweet Pea	}
Others	5-10

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Thurber Fescue, Sheep Fescue, Bottlebrush Squirreltail, Sleepygrass, Gooseberry, Elderberry, Broom Snakeweed, Green Sagewort, Gilia, and Lupine.

**RM-2
Pine Grassland Range**

This site is a savannah-type site with cool season grass under story, overstoried predominately by ponderosa pine. Rocky Mountain juniper and gambel oak are minor components of the over story. Shrubs are a minor component on the site. Forbs, when in bloom, are usually detectable.

Pine Grassland Range Site

GRASSES and GRASSLIKE		75-85%
Arizona Fescue		15-20
Western Wheatgrass		8-12
Pine Dropseed	}	
Muttongrass	}	
Prairie Junegrass	}	8-12
Columbia Needlegrass		5-10
Mountain Muhly		3-7
Needleandthread		3-7
Thurber Fescue		3-7
Bottlebrush Squirreltail		3-5
Blue Grama	}	
Galleta	}	3-5
Carex spp.		0-3
Others		3-7
Woody		7-12%
Fourwing Saltbrush	}	
Winterfat	}	1-5
Mountain Big Sagebrush	}	
Rabbitbrush	}	1-3
Gambel Oak	}	
Rocky Mountain Juniper	}	0-3
Ponderosa Pine		0-1
Others		0-3
Forbs		3-7%
Silverleaf Cinquefoil	}	
Wild Buckwheat	}	
Fleabane	}	
Indian Paintbrush	}	
Western Yarrow	}	
Others	}	3-7

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Indian Ricegrass, Little Bluestem, Spike Muhly, Sleepygrass, Sideoats Grama, Mariposa Lily, Geranium, Thistle, Cudweed, Sagewort, Fringed Sagebrush, Alumroot, Skunkbush Sumac, Snowberry, and Serviceberry.

**RM-2
Subalpine Grassland Range**

This site is a site that is primarily a grassland site with scattered gambel oak and other shrub colonies such as, aspen groves, and occasional trees. Forbs are present throughout, but are a minor component on this site.

Subalpine Grassland Range Site

GRASSES and GRASSLIKE	80-90%
Arizona Fescue	}
Thurber Fescue	} 25-35
Sedge spp.	10-15
Mountain Muhly	5-7
Columbia Needlegrass	5-7
Muttongrass	5-7
Mountain Brome	5-7
Pine Dropseed	}
Western Wheatgrass	}
Sheep Fescue	}
Spike Muhly	} 5-7
Oatgrass spp.	}
Prairie Junegrass	}
Little Bluestem	}
Bottlebrush Squirreltail	}
Others	} 3-7
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Woody	3-8%
Gambel Oak	1-3
Skunkbush Suamc	}
Shrubby Cinquefoil	}
Currant	}
Serviceberry	}
Snowberry	} 1-3
Fringed Sagewort	}
Others	} 1-3
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Forbs	3-8%
Western Yarrow	}
Rocky Mountain Iris	}
Lupine spp.	}
Clover spp.	}
Larkspur spp.	}
Cudweed Sagewort	}

Alumroot	}	
Others	}	3-8

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Tufted Hairgrass, Letterman, Needlegrass, Sleepygrass, Slender Wheatgrass, Redtop, Alpine Timothy, Monkshood, Dandelion, Cowparsnips, Geranium, Wildrose, Quaking Aspen, Elderberry, Roseberry, Englemann Spruce, and Bristle Cone Pine.

**RM-2
Mountain Loam Range**

This site is a grassland site with only scattered shrubs and a few, if any, trees. Cool season grasses and sedges dominate. Forbs are a minor component but are usually detectable when in bloom.

Mountain Loam Range Site

GRASSES and GRASSLIKE	75-80%
Arizona Fescue	10-20
Muttongrass }	
Bluegrass spp. }	8-12
Sedge spp.	9-12
Western Wheatgrass	8-12
Columbia Needlegrass	5-8
Needleandthread	5-8
Prairie Junegrass }	
Bottlebrush Squirreltail }	5-8
Mountain Muhly }	
Spike Muhly }	
Sheep Fescue }	5-8
Thurber Fescue }	
Oatgrass spp. }	
Sleepygrass }	
Others }	5-8
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Woody	1-5%
Fringed Sagewort	1-3
Skunkbush Suamc }	
Currant }	
Oak spp. }	
Common Juniper }	
Others }	0-3
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Forbs	3-7%
Curlycup Gumweed }	
Silverleaf Cinquefoil }	
Wild Buckwheat spp. }	
Western Yarrow }	
Golden Paintbrush }	
Penstemon }	
Green Sagewort }	
Others }	3-7

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Blue Grama, Galleta, Pine Dropseed, Threeawns, Indian Paintbrush, Gilia, Pussytoes, Thistle, Rabbitbrush, Broom Snakeweed, Big Sagebrush, Winterfat, and Fourwing Saltbrush.

**RM-2
Mountain Meadows Range**

This site is a site that is characterized by mid to tall bunchgrasses and sedges which contrast strongly in appearance with the site adjacent to it. Shrubs may be scattered throughout this site but are a minor component. Soils are not particularly noticeable except when in bloom.

Mountain Meadows Range Site

GRASSES and GRASSLIKE	85-95%
Tufted Hairgrass	25-35
Nebraska Sedge }	
Sedge spp. }	10-20
Kentucky Bluegrass }	
Bluegrass spp. }	
Mountain Brome }	
Redtop }	
Alpine Timothy }	10-15
Sheep Fescue }	
Columbia Needlegrass }	5-10
Slender Wheatgrass }	
Western Wheatgrass }	
Spike Muhly }	3-7
Rushes }	
Bluejoint Reedgrass }	
Reedgrass spp. }	0-7
Oatgrass spp. }	
Canada Wildrye }	
Muttongrass }	
Others }	1-7
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Woody	3-5%
Shrubby Cinquefoil	1-3
Others	0-2
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Forbs	3-10%
Alsike Clover }	
Vetches }	
Red Clover }	
Clover spp. }	1-3
Rocky Mountain Iris }	
Coneflower spp. }	
Western Yarrow }	

Dandeloin	}	
Buttercup	}	
Others	}	2-8

Other species which usually grow on this site in varying amounts, depending on cuurent growing conditions, include: Meadow Barley, Rabbitfoot Grass, Prairie Junegrass, Spike Trisetum, Arizona Fescue, Smooth Brome, False Hellebore, Wild Parsnips, Thistle, Wild Rose, and Willow species.

RM-2
Mountain Slopes Range

This site is a shrub-grass site with an over story of scattered Rocky Mountain juniper, pinyon pine, and ponderosa pine. Gambel oak is the dominant woody species and occurs in colonies. Warm and cool season grasses provide the largest percentage of annual vegetation produced with woody species a close second. Forbs are abundant and diverse throughout the site.

Mountain Slopes Range Site

GRASSES and GRASSLIKE		75-80%
Western Wheatgrass		8-12
Needleandthread		5-10
Sideoats Grama	}	
Little Bluestem	}	5-10
Mountain Muhly		5-10
Indian Ricegrass		5-7
Blue Grama	}	
Galleta	}	5-7
Muttongrass	}	
Prairie Junegrass	}	3-5
Arizona Fescue		3-5
Pine Dropseed	}	
Wolftail	}	
Letterman Needlegrass	}	
Threadleaf Sedge	}	
Others	}	3-5
Woody		5-10%
Gambel Oak	}	
Fringed Sagewort	}	
Oak spp.	}	10-15
Mountain Big Sagebrush	}	
Low Sagebrush	}	3-5
Skunkbush Sumac	}	
Antelope Bitterbrush	}	
Creeping Mahonia	}	
Mountain Mahogany	}	3-5
Ponderosa Pine	}	
Rocky Mountain Juniper	}	0-3
Others		1-3
Forbs		5-10%

Penstemon	}	
Indian Paintbrush	}	
Gilia	}	
Fleabane	}	
Wild Buckwheat	}	
Others	}	5-10

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Bottlebrush Squirreltail, Spike Muhly, Hairy Grama, Thurber Fescue, Alkali Sacaton, Sleepygrass, Lupine, Silverleaf Cinquefoil, Western Yarrow, Broom Snakeweed, Winterfat, Fourwing Saltbrush, Currant, Pingue, Threadleaf Groundsel, and Rabbitbrush.

**RM-2
Mountain Valley Range**

This site is a site that is predominately a grassland site with only scattered shrubs and trees present on the site. Ponderosa pine may be scattered about the site in small amounts. Forbs are usually detectable, especially when in bloom. Good soil-moisture relationships result from periodic deep wetting, therefore this site may be considerably more productive and begin green-up earlier than adjacent sites.

Mountain Valley Range Site

GRASSES and GRASSLIKE		80-90%
Western Wheatgrass	}	
Spike Muhly	}	25-35
Muttongrass	}	
Prairie Junegrass	}	3-10
Sheep Fescue		3-7
Carex spp.		3-7
Blue Grama	}	
Galleta	}	3-7
Arizona Fescue	}	
Thurber Fescue	}	3-7
Bottlebrush Squirreltail		3-5
Alkali Sacaton		0-7
Kentucky Bluegrass	}	
Smooth Brome	}	
Tufted Hairgrass	}	
Others	}	3-10
Woody		3-7%
Shrubby Cinquefoil		3-5
Currant	}	
Skunkbush Sumac	}	
Winterfat	}	
Mountain Big Sagebrush	}	1-5
Forbs		3-7%
Western Yarrow	}	
Silverleaf Cinquefoil	}	
Filaree	}	
Larkspur	}	
Vetches	}	
Conflower	}	

Iris spp.	}
Green Sagewort	}
Others	}

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Sleepygrass, Mat Muhly, Canada Wildrye, Oatgrasses, Needleandthread, Thistle, Penstemon, Pussytoes, Snowberry, Serviceberry, Oak spp., Fourwing Saltbrush, and Ponderosa Pine.

**RM-2
Mountain Shale Range**

This site is a site where vegetation appears as a mixed grassland-shrub with scattered trees. Cool season grasses dominate, but alkali sacaton and spike muhly are warm season grasses common to this site. The shrub component is mostly low and big sagebrush. Rocky mountain juniper is the most common tree. Forbs are visually conspicuous on the site.

Mountain Shale Range Site

GRASSES and GRASSLIKE		60-70%
Western Wheatgrass		20-25
Alkali Sacaton		5-15
Muttongrass	}	
Prairie Junegrass	}	5-15
Spike Muhly		3-7
Blue Grama	}	
Galleta	}	3-7
Bottlebrush Squirreltail		3-5
Columbia Needlegrass		3-5
Dropseeda	}	
Sleepygrass	}	
Others	}	3-10
Woody		15-20%
Low Sagebrush	}	
Big Sagebrush	}	5-10
Fourwing SAltbrush	}	
Fringed Sagewort	}	
Winterfat	}	5-10
Rocky Mountain Juniper		0-2
Pinyon Pine	}	
Others	}	0-2
Forbs		5-10%
Wild Buckwheat	}	
Hairy Goldaster	}	1-5
Others		1-5

Other species which usually grow on this site in varying amounts, depending on current growing conditions, include: Pine Dropseed, Arizona Fescue, Kentucky Bluegrass, Threadleaf Groundsel, Black Sagebrush, Pinus, Rabbitbrush, Broom Snakeweed, Gambel Oak, Fleabane, and Penstemon.

