

Ecological site R040XC318AZ
Sandy Wash 3"-7" p.z.

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General information

Provisional. A provisional ecological site description has undergone quality control and quality assurance review. It contains a working state and transition model and enough information to identify the ecological site.



Figure 1. Mapped extent

Areas shown in blue indicate the maximum mapped extent of this ecological site. Other ecological sites likely occur within the highlighted areas. It is also possible for this ecological site to occur outside of highlighted areas if detailed soil survey has not been completed or recently updated.

MLRA notes

Major Land Resource Area (MLRA): 040X–Sonoran Basin and Range

AZ 40.3 – Colorado Sonoran Desert

Elevations range from 300 to 1200 feet and precipitation averages 3 to 7 inches per year. Vegetation includes creosotebush, white bursage, brittlebush, Mormon tea, teddybear cholla, elephant tree, smoke tree, ocotillo, and big galleta. The soil temperature regime is hyperthermic and the soil moisture regime is typic aridic. This unit occurs within the Basin and Range Physiographic Province and is characterized by numerous mountain ranges that rise abruptly from broad, plain-like valleys and basins. Igneous and metamorphic rock classes dominate the mountain ranges and sediments filling the basins represent combinations of fluvial, lacustrine, colluvial and alluvial deposits.

Table 1. Dominant plant species

Tree	(1) <i>Parkinsonia microphylla</i> (2) <i>Parkinsonia florida</i>
Shrub	(1) <i>Acacia greggii</i> (2) <i>Olneya tesota</i>
Herbaceous	(1) <i>Pleuraphis rigida</i> (2) <i>Muhlenbergia porteri</i>

Physiographic features

This site occurs in a bottom position. It benefits significantly from run-in moisture from adjacent areas. The soils may suffer from excessive loss from runoff. It occurs as floodplains, low terraces, alluvial fans and drainageways.

Table 2. Representative physiographic features

Landforms	(1) Flood plain (2) Terrace (3) Alluvial fan
Elevation	23–305 m
Slope	0–5%

Climatic features

Precipitation in this common resource area ranges from 3-7 inches yearly. Despite historical averages in rainfall amounts, as one moves from east to west in this resource area rains become more unpredictable and variable with Coefficients of Variation of annual rainfall equal to 44% at Gila Bend and 65% at Mohawk. Winter-Summer rainfall ratios are 40-60%. Summer rains fall July-September, originate in the Gulf of Mexico and are convective, usually brief intense thunderstorms. Summer thunderstorms usually form over the mountains in the afternoon and spread to the valleys and plains in the evening. The intensity of this precipitation is moderate to heavy, but rarely lasts more than half an hour. Many times these storms produce little more than gusty winds and light showers. Cool season moisture tends to be frontal, originate in the Pacific and Gulf of California and falls in widespread storms with long duration and low intensity. Snow is very rare and falls normally only in the higher mountains.

Mean temperatures for the hottest month (Jul) is 93 F; the coldest month (Jan) is 53 F. Extreme temperatures of 125 F and 10 F have been recorded. Long periods with little or no effective moisture occur frequently.

The winter-spring precipitation is the most dependable on the site. Perennial grasses, though classed as warm season growers, grow actively year-round when moisture is available. Shrubs and trees generally respond to seasonal moisture. The two rainy periods bring about their respective production of either winter or summer annual grasses and forbs.

Table 3. Representative climatic features

Frost-free period (average)	363 days
Freeze-free period (average)	0 days
Precipitation total (average)	178 mm

Influencing water features

Soil features

Soils that are grouped together in this range site are deep to bedrock or other plant root restricting layers. The surface soil depth ranges from 6-8 inches with textures ranging from very gravelly loamy sand, loamy sand to silt loam. The underlying layers have a rapid permeability and hold all moisture the climate supplies. Soluble salt accumulations are low and pH ranges from 7.9-8.4. With good vegetative cover, infiltration rates are high. Stability against erosion processes is poor. Plant-soil moisture relationships are poor. Coarse fragments may be found throughout the soil In the Carrizo, it ranges from 35-85% coarse fragment. In the Lagunita, it ranges from 0-15% coarse fragments.

Soils mapped on this site include: in SSA-627 Southern Mohave county MU's Carrizo family-19 & 20, Carrizo-21; SSA-645 Aguila-Carefree area MU's Brios-11, Carrizo-4 & 11; SSA-649 Yuma-Wellton area MU's Carrizo-3, Lagunita-16 & 18, Torrifluents-30; SSA-653 Gila Bend-Ajo area MU's Carrizo-67, Vint vfsl-63, Why Grfsl-66 & Why-67; SSA-656 Colorado River Indian Reservation area MU's Carrizo-5 & 17.

Table 4. Representative soil features

Surface texture	(1) Loamy sand (2) Sand (3) Sandy loam
Family particle size	(1) Sandy
Drainage class	Well drained to somewhat excessively drained
Permeability class	Moderately rapid to very rapid
Soil depth	152 cm
Surface fragment cover <=3"	5–45%
Surface fragment cover >3"	0–10%
Available water capacity (0-101.6cm)	4.57–18.29 cm
Calcium carbonate equivalent (0-101.6cm)	0–10%
Electrical conductivity (0-101.6cm)	0–1 mmhos/cm
Sodium adsorption ratio (0-101.6cm)	0
Soil reaction (1:1 water) (0-101.6cm)	7.4–8.4
Subsurface fragment volume <=3" (Depth not specified)	5–45%
Subsurface fragment volume >3" (Depth not specified)	0–10%

Ecological dynamics

The plant communities found on an ecological site are naturally variable. Composition and production will vary with yearly conditions, location, aspect, and the natural variability of the soils. The Historical Climax Plant Community represents the natural potential plant communities found on relict or relatively undisturbed sites. Other plant communities described here represent plant communities that are known to occur when the site is disturbed by factors such as fire, grazing, or drought.

Production data provided in this site description is standardized to air dry weight at the end of the summer growing season. The plant communities described in this site description are based on near normal rainfall years.

NRCS uses a Similarity Index to compare existing plant communities to the plant communities described here. Similarity index is determined by comparing the production and composition of a plant community to the production and composition of a plant community described in this site description. To determine Similarity index, compare the production (air dry weight) of each species to that shown in the plant community description. For each species, count no more than the maximum amount shown for the species, and for each group, count no more than the maximum amount shown for each group. Divide the resulting total by the total normal year production shown in the plant community description. If the rainfall has been significantly above or below normal, use the total production shown for above or below normal years. If field data is not collected at the end of the summer growing season, then the field data must be corrected to the end of the year production before comparing it to the site description. The growth curve can be used as a guide for estimating production at the end of the summer growing season.

State and transition model



State 1 Historic Climax Plant Community

Community 1.1 Historic Climax Plant Community

The plant community is a mixture of perennial grasses and forbs, desert trees and shrubs, and annual grasses and forbs. The active washy areas in the site have little vegetation except burrobush and annual grasses and forbs. Continuous grazing use and the absence of natural fires have led to woody plant invasion. These areas are extremely sensitive and when plant cover has been reduced, the extra water concentrated on the site causes accelerated erosion and channel cutting. As a result, less and less of the original overflow areas still get flooded.

Table 5. Annual production by plant type

Plant Type	Low (Kg/Hectare)	Representative Value (Kg/Hectare)	High (Kg/Hectare)
Grass/Grasslike	583	771	958
Shrub/Vine	314	415	516
Forb	157	235	314
Tree	11	50	90
Total	1065	1471	1878

Figure 5. Plant community growth curve (percent production by month). AZ4041, 40.3 3-7" p.z. all sites. Most growth occurs in the winter to early spring, plants are dormant May through October..

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
5	20	40	25	0	0	0	0	0	0	5	5

Additional community tables

Table 6. Community 1.1 plant community composition

Group	Common Name	Symbol	Scientific Name	Annual Production (Kg/Hectare)	Foliar Cover (%)
Grass/Grasslike					
0	Dominant Perennial Grasses			392–560	
	big galleta	PLRI3	<i>Pleuraphis rigida</i>	235–314	–
	bush muhly	MUPO2	<i>Muhlenbergia porteri</i>	157–235	–
	Arizona cottontop	DICA8	<i>Digitaria californica</i>	16–78	–
1	Threeawn Group			157–235	
	blue threeawn	ARPUN	<i>Aristida purpurea</i> var. <i>nealleyi</i>	17–24	–
	Parish's threeawn	ARPUP5	<i>Aristida purpurea</i> var. <i>parishii</i>	17–24	–
	Wright's threeawn	ARPUW	<i>Aristida purpurea</i> var. <i>wrightii</i>	17–24	–
	spidergrass	ARTE3	<i>Aristida ternipes</i>	17–24	–
	spidergrass	ARTEG	<i>Aristida ternipes</i> var. <i>gentilis</i>	17–24	–
	Santa Rita threeawn	ARCAG	<i>Aristida californica</i> var. <i>glabrata</i>	17–24	–
	poverty threeawn	ARDI5	<i>Aristida divaricata</i>	17–24	–
	purple threeawn	ARPU9	<i>Aristida purpurea</i>	17–24	–
	Fendler's threeawn	ARPUF	<i>Aristida purpurea</i> var. <i>fendleriana</i>	17–24	–
2	Misc. Perennial Grasses			17–84	
	spike dropseed	SPCO4	<i>Sporobolus contractus</i>	4–22	–
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	4–22	–
	mesa dropseed	SPFL2	<i>Sporobolus flexuosus</i>	4–22	–
	slim tridens	TRMU	<i>Tridens muticus</i>	4–22	–
3	Annual Grasses			17–78	
	sixweeks threeawn	ARAD	<i>Aristida adscensionis</i>	0–16	–
	needle grama	BOAR	<i>Bouteloua aristoides</i>	0–16	–
	sixweeks grama	BOBA2	<i>Bouteloua barbata</i>	0–16	–
	Arizona brome	BRAR4	<i>Bromus arizonicus</i>	0–16	–
	low woollygrass	DAPU7	<i>Dasyochloa pulchella</i>	6–16	–
	Devils Canyon muhly	MUAP	<i>Muhlenbergia appressa</i>	0–16	–
	littleseed muhly	MUMI	<i>Muhlenbergia microsperma</i>	0–16	–
	Bigelow's bluegrass	POBI	<i>Poa bigelovii</i>	6–16	–
	sixweeks fescue	VUOC	<i>Vulpia octoflora</i>	6–16	–
Forb					
4	Misc. Forbs			78–157	
	Santa Rita threeawn	ARCAG	<i>Aristida californica</i> var. <i>glabrata</i>	16–24	–
	poverty threeawn	ARDI5	<i>Aristida divaricata</i>	16–24	–
	purple threeawn	ARPU9	<i>Aristida purpurea</i>	16–24	–
	Fendler's threeawn	ARPUF	<i>Aristida purpurea</i> var. <i>fendleriana</i>	16–24	–
	blue threeawn	ARPI IN	<i>Aristida purpurea</i> var. <i>nealleyi</i>	16–24	–

	State threeawn	ARPUP5	<i>Aristida purpurea</i> var. <i>parishii</i>	16–24	–
	Parish's threeawn	ARPUP5	<i>Aristida purpurea</i> var. <i>parishii</i>	16–24	–
	spidergrass	ARTE3	<i>Aristida ternipes</i>	16–24	–
	spidergrass	ARTEG	<i>Aristida ternipes</i> var. <i>gentilis</i>	16–24	–
	sixweeks fescue	VUOC	<i>Vulpia octoflora</i>	0–17	–
	needle grama	BOAR	<i>Bouteloua aristoides</i>	0–11	–
	Arizona brome	BRAR4	<i>Bromus arizonicus</i>	0–11	–
	Devils Canyon muhly	MUAP	<i>Muhlenbergia appressa</i>	0–11	–
	littleseed muhly	MUMI	<i>Muhlenbergia microsperma</i>	0–11	–
	Bigelow's bluegrass	POBI	<i>Poa bigelovii</i>	0–11	–
	spike dropseed	SPCO4	<i>Sporobolus contractus</i>	0–11	–
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	0–11	–
	mesa dropseed	SPFL2	<i>Sporobolus flexuosus</i>	0–11	–
	sixweeks threeawn	ARAD	<i>Aristida adscensionis</i>	0–11	–
	pelotazo	ABIN	<i>Abutilon incanum</i>	1–8	–
	Indian mallow	ABUTI	<i>Abutilon</i>	2–8	–
	brownfoot	ACWR5	<i>Acourtia wrightii</i>	1–8	–
	trailing windmills	ALIN	<i>Allionia incarnata</i>	1–8	–
	weakleaf bur ragweed	AMCO3	<i>Ambrosia confertiflora</i>	1–8	–
	carelessweed	AMPA	<i>Amaranthus palmeri</i>	1–8	–
	smallflowered milkvetch	ASNU4	<i>Astragalus nuttallianus</i>	1–8	–
	milkvetch	ASTRA	<i>Astragalus</i>	2–8	–
	desert marigold	BAMU	<i>Baileya multiradiata</i>	1–8	–
	fleabane	ERIGE2	<i>Erigeron</i>	2–8	–
	pink velvetmallow	HOAL	<i>Horsfordia alata</i>	1–8	–
	Arizona poppy	KAGR	<i>Kallstroemia grandiflora</i>	1–8	–
	Coulter's lupine	LUSP2	<i>Lupinus sparsiflorus</i>	1–8	–
	wishbone-bush	MILAV	<i>Mirabilis laevis</i> var. <i>villosa</i>	1–8	–
	monkeyflower	MIMUL	<i>Mimulus</i>	2–8	–
	Bostock's minerslettuce	MOBO	<i>Montia bostockii</i>	1–8	–
	bristly nama	NAHI	<i>Nama hispidum</i>	1–8	–
	desert tobacco	NIOBO	<i>Nicotiana obtusifolia</i> var. <i>obtusifolia</i>	1–8	–
	evening primrose	OENOT	<i>Oenothera</i>	2–8	–
	lineleaf whitepuff	OLLI	<i>Oligomeris linifolia</i>	1–8	–
	combseed	PECTO	<i>Pectocarya</i>	2–8	–
	Emory's rockdaisy	PEEM	<i>Perityle emoryi</i>	1–8	–
	manybristle chinchweed	PEPA2	<i>Pectis papposa</i>	1–8	–
	desert Indianwheat	PLOV	<i>Plantago ovata</i>	1–8	–
	New Mexico plumeseed	RANE	<i>Rafinesquia neomexicana</i>	1–8	–
	sleepy silene	SIAN2	<i>Silene antirrhina</i>	1–8	–
	desert globemallow	SPAM2	<i>Sphaeralcea ambigua</i>	1–8	–
	Coulter's globemallow	SPCO2	<i>Sphaeralcea coulteri</i>	1–8	–

	globemallow	SPHAE	<i>Sphaeralcea</i>	2–8	–
	woolly tidestromia	TILA2	<i>Tidestromia lanuginosa</i>	1–8	–
5	More Forbs			78–157	
	Texas fluffgrass	TRTE2	<i>Tridens texanus</i>	8–16	–
	western tansymustard	DEPI	<i>Descurainia pinnata</i>	2–11	–
	bluedicks	DICA14	<i>Dichelostemma capitatum</i>	1–8	–
	touristplant	DIWI2	<i>Dimorphocarpa wislizeni</i>	1–8	–
	fetid marigold	DYPA	<i>Dyssodia papposa</i>	1–8	–
	whisperingbells	EMPE	<i>Emmenanthe penduliflora</i>	1–8	–
	miniature woollystar	ERDI2	<i>Eriastrum diffusum</i>	1–8	–
	desert trumpet	ERIN4	<i>Eriogonum inflatum</i>	1–8	–
	buckwheat	ERIOG	<i>Eriogonum</i>	2–8	–
	desert poppy	ESGL	<i>Eschscholzia glyptosperma</i>	1–8	–
	pygmy poppy	ESMI	<i>Eschscholzia minutiflora</i>	1–8	–
	hideseed	EUCRY	<i>Eucrypta</i>	2–8	–
	spurge	EUPHO	<i>Euphorbia</i>	2–8	–
	hairy desertsunflower	GECA2	<i>Geraea canescens</i>	1–8	–
	gilia	GILIA	<i>Gilia</i>	2–8	–
	Gordon's bladderpod	LEGO	<i>Lesquerella gordonii</i>	1–8	–
	shaggyfruit pepperweed	LELA	<i>Lepidium lasiocarpum</i>	1–8	–
	trefoil	LOTUS	<i>Lotus</i>	2–8	–
	Gila manroot	MAGI	<i>Marah gilensis</i>	1–8	–
	Parry's false prairie- clover	MAPA7	<i>Marina parryi</i>	1–8	–
	blazingstar	MENTZ	<i>Mentzelia</i>	2–8	–
	Florida pellitory	PAFL3	<i>Parietaria floridana</i>	1–8	–
	phacelia	PHACE	<i>Phacelia</i>	2–8	–
	doubleclaw	PRPA2	<i>Proboscidea parviflora</i>	1–8	–
	canaigre dock	RUHY	<i>Rumex hymenosepalus</i>	1–8	–
	woollyhead neststraw	STMI2	<i>Stylocline micropoides</i>	1–8	–
	brownplume wirelettuce	STPA4	<i>Stephanomeria pauciflora</i>	1–8	–
	desert sand verbena	ABVI	<i>Abronia villosa</i>	1–8	–
	common fiddleneck	AMMEI2	<i>Amsinckia menziesii</i> var. <i>intermedia</i>	1–8	–
	narrowleaf silverbush	ARLA12	<i>Argythamnia lanceolata</i>	1–8	–
	New Mexico silverbush	ARNE2	<i>Argythamnia neomexicana</i>	1–8	–
	whitestem milkweed	ASAL	<i>Asclepias albicans</i>	1–8	–
	milkweed	ASCLE	<i>Asclepias</i>	2–8	–
	rush milkweed	ASSU	<i>Asclepias subulata</i>	1–8	–
	spiderling	BOERH2	<i>Boerhavia</i>	2–8	–
	hoary bowlesia	BOIN3	<i>Bowlesia incana</i>	1–8	–
	exserted Indian paintbrush	CAEXE	<i>Castilleja exserta</i> ssp. <i>exserta</i>	1–8	–
	goosefoot	CHENO	<i>Chenopodium</i>	2–8	–
	New Mexico thistle	CHNE	<i>Chrysanthemum occidentale</i>	4–8	–

	new mexican thistle	CINE	<i>Cirsium neomexicanum</i>	1–8	–
	sand pygmyweed	CRCOC	<i>Crassula connata</i> var. <i>connata</i>	1–8	–
	cryptantha	CRYPT	<i>Cryptantha</i>	2–8	–
	fingerleaf gourd	CUDI	<i>Cucurbita digitata</i>	1–8	–
	Missouri gourd	CUFO	<i>Cucurbita foetidissima</i>	1–8	–
	desert thorn-apple	DADI2	<i>Datura discolor</i>	1–8	–
	hairy prairie clover	DAMO	<i>Dalea mollis</i>	1–8	–
	sacred thorn-apple	DAWR2	<i>Datura wrightii</i>	1–8	–
Shrub/Vine					
6	Dominant Shrubs			224–280	
	whitethorn acacia	ACCO2	<i>Acacia constricta</i>	56–95	–
	catclaw acacia	ACGR	<i>Acacia greggii</i>	56–95	–
	desert-thorn	LYCIU	<i>Lycium</i>	56–95	–
	desert ironwood	OLTE	<i>Olneya tesota</i>	56–95	–
	sixweeks threeawn	ARAD	<i>Aristida adscensionis</i>	1–8	–
	needle grama	BOAR	<i>Bouteloua aristidoides</i>	1–8	–
	Arizona brome	BRAR4	<i>Bromus arizonicus</i>	1–8	–
	Devils Canyon muhly	MUAP	<i>Muhlenbergia appressa</i>	1–8	–
	littleseed muhly	MUMI	<i>Muhlenbergia microsperma</i>	1–8	–
	Bigelow's bluegrass	POBI	<i>Poa bigelovii</i>	1–8	–
	scarlet globemallow	SPCO	<i>Sphaeralcea coccinea</i>	1–8	–
	sand dropseed	SPCR	<i>Sporobolus cryptandrus</i>	1–8	–
	mesa dropseed	SPFL2	<i>Sporobolus flexuosus</i>	1–8	–
	sixweeks fescue	VUOC	<i>Vulpia octoflora</i>	1–8	–
7	Misc. Shrubs			78–157	
	burrobush	AMDU2	<i>Ambrosia dumosa</i>	4–11	–
	Drummond's clematis	CLDR	<i>Clematis drummondii</i>	4–11	–
	creosote bush	LATRT	<i>Larrea tridentata</i> var. <i>tridentata</i>	4–11	–
	jojoba	SICH	<i>Simmondsia chinensis</i>	2–6	–
	Hall's shrubby-spurge	TEHA	<i>Tetracoccus hallii</i>	2–6	–
	honey mesquite	PRGL2	<i>Prosopis glandulosa</i>	2–6	–
	screwbean mesquite	PRPU	<i>Prosopis pubescens</i>	2–6	–
	whitestem paperflower	PSCO2	<i>Psilostrophe cooperi</i>	2–6	–
	smoketree	PSSP3	<i>Psoralea spinosa</i>	2–6	–
	Mexican bladdersage	SAME	<i>Salazaria mexicana</i>	2–6	–
	bitter snakewood	COGL	<i>Condalia globosa</i>	2–6	–
	brittlebush	ENFA	<i>Encelia farinosa</i>	2–6	–
	San Felipe dogweed	ADPO	<i>Adenophyllum porophylloides</i>	2–6	–
	ambrosia leaf bur ragweed	AMAM2	<i>Ambrosia ambrosioides</i>	2–6	–
	triangle bur ragweed	AMDE4	<i>Ambrosia deltoidea</i>	2–6	–
	fringed twinevine	FUCYC	<i>Funastrum cynanchoides</i> ssp. <i>cynanchoides</i>	2–6	–
	desert lavender	HYEM	<i>Hyptis emoryi</i>	2–6	–
	singlewhorl burrobush	HYMO	<i>Hymenoclea monogyra</i>	2–6	–

	burrobrush	HYS A	<i>Hymenoclea salsola</i>	2–6	–
	slender janusia	JAGR	<i>Janusia gracilis</i>	2–6	–
	beloperone	JUCA8	<i>Justicia californica</i>	2–6	–
	crown of thorns	KOSP	<i>Koeberlinia spinosa</i>	2–6	–
	narrowleaf silverbush	ARLA12	<i>Argythamnia lanceolata</i>	2–6	–
	fourwing saltbush	ATCA2	<i>Atriplex canescens</i>	0–6	–
	big saltbush	ATLE	<i>Atriplex lentiformis</i>	2–6	–
	cattle saltbush	ATPO	<i>Atriplex polycarpa</i>	1–6	–
	shortleaf baccharis	BABR	<i>Baccharis brachyphylla</i>	2–6	–
	desertbroom	BASA2	<i>Baccharis sarothroides</i>	2–6	–
	sweetbush	BEJU	<i>Bebbia juncea</i>	2–6	–
	Coulter's brickellbush	BRCO	<i>Brickellia coulteri</i>	2–6	–
	crucifixion thorn	CAEM4	<i>Castela emoryi</i>	2–6	–
	American threefold	TRCA8	<i>Trixis californica</i>	2–6	–
	toothleaf goldeneye	VIDE3	<i>Viguiera dentata</i>	2–6	–
	lotebush	ZIOBO	<i>Ziziphus obtusifolia</i> var. <i>obtusifolia</i>	2–6	–
	white ratany	KRGR	<i>Krameria grayi</i>	0–4	–
	button brittlebush	ENFR	<i>Encelia frutescens</i>	0–4	–
	longleaf jointfir	EPTR	<i>Ephedra trifurca</i>	0–4	–
	Coulter's lyreped	LYCO4	<i>Lyrocarpa coulteri</i>	0–4	–
	Douglas' ragwort	SEFLD	<i>Senecio flaccidus</i> var. <i>douglasii</i>	0–3	–
	Hartweg's twinevine	FUCYH	<i>Funastrum cynanchoides</i> ssp. <i>heterophyllum</i>	0–3	–
8	Succulents			16–78	
	saguaro	CAGI10	<i>Carnegiea gigantea</i>	2–11	–
	Arizona pencil cholla	CYAR14	<i>Cylindropuntia arbuscula</i>	2–11	–
	teddybear cholla	CYBI9	<i>Cylindropuntia bigelovii</i>	2–11	–
	Wiggins' cholla	CYEC3	<i>Cylindropuntia echinocarpa</i>	2–11	–
	Christmas cactus	CYLE8	<i>Cylindropuntia leptocaulis</i>	2–11	–
	branched pencil cholla	CYRA9	<i>Cylindropuntia ramosissima</i>	2–11	–
	ocotillo	FOSP2	<i>Fouquieria splendens</i>	2–11	–
Tree					
9	Trees			11–90	
	blue paloverde	PAFL6	<i>Parkinsonia florida</i>	6–45	–
	yellow paloverde	PAMI5	<i>Parkinsonia microphylla</i>	6–45	–

Animal community

This site produces forage for year-round use and is easily traversed by stocker cattle, cows and calves. Because of water availability and ease of access, these sites are often overused. Where this site occurs as inclusions in larger areas of less productive sites (ile., limy uplands), these areas produce nearly all the forage and the entire area should be managed. Fencing, in managable units, of this site can be important in providing grazing control.

The variation in vegetation, coupled with forage production year-round and intermittent availability of water, this site is suitable habitat for a wide diversity of wildlife. Ogetn this site is the only one with suitable cover requirements for large desert mammals occuring in vast areas of upland sites with little or no cover. This site is also host to a variety

of smaller animals, as well as birds and reptiles.

Recreational uses

This site is found throughout the alluvial fans and plains as sandy, tree-lined and gently sloping drainageways. The active washy areas of this site support little vegetation except for annual grasses and forbs and borrobush. Less active areas have an understory of desert trees with a diverse understory of forbs, grasses and shrubs. Very few days in the fall, winter or spring are too uncomfortable to enjoy outdoor activities. The afternoon heat of Jun-Aug restricts activities. This site is suitable for horseback riding, wildlife observation, hunting, hiking, picnicking and photography.

Type locality

Location 1: La Paz County, AZ	
Township/Range/Section	T1N R12W S2
General legal description	Eagle Tail Ranch

Contributors

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Rangeland health reference sheet

Interpreting Indicators of Rangeland Health is a qualitative assessment protocol used to determine ecosystem condition based on benchmark characteristics described in the Reference Sheet. A suite of 17 (or more) indicators are typically considered in an assessment. The ecological site(s) representative of an assessment location must be known prior to applying the protocol and must be verified based on soils and climate. Current plant community cannot be used to identify the ecological site.

Author(s)/participant(s)	Dave Womack, Byron Lambeth, Dan Robinett, Emilio Carrillo
Contact for lead author	NRCS Tucson Area Office
Date	03/02/2005
Approved by	S. Cassady
Approval date	
Composition (Indicators 10 and 12) based on	Annual Production

Indicators

1. **Number and extent of rills:** None.

2. **Presence of water flow patterns:** Highly variable, function of upland overland flow input.

3. **Number and height of erosional pedestals or terracettes:** No accumulated or erosional pedestals on most perennial plants.

4. **Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not**

bare ground): 15-40%

5. **Number of gullies and erosion associated with gullies:** None.
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6. **Extent of wind scoured, blowouts and/or depositional areas:** None.
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7. **Amount of litter movement (describe size and distance expected to travel):** Highly variable, function of upland overland flow input.
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8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):** No slake test done. Expect ratings of 1-3 across site.
-
9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):** Weak Platy; color is 7.5-10YR6/4 dry, 7.5-10YR5/4 moist; thickness to 3 inches.
-
10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:** Canopy 60-70%; 10-30% perennial grass, 40% shrubs, 10% subshrubs, 10% perennial forbs, 5-10% trees. Cover is well dispersed throughout site.
-
11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):** None.
-
12. **Functional/Structural Groups (list in order of descending dominance by above-ground annual-production or live foliar cover using symbols: >>, >, = to indicate much greater than, greater than, and equal to):**
- Dominant: perennial grass = trees > shrubs > sub shrubs > perennial forbs (note: this after several years of regional drought. Annual forbs and grasses may be greater than trees in El Nino years.)
- Sub-dominant:
- Other:
- Additional:
-
13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):** 20-30% canopy mortality of trees and shrubs; 90-100% mortality of perennial grasses.
-
14. **Average percent litter cover (%) and depth (in):**
-

15. **Expected annual annual-production (this is TOTAL above-ground annual-production, not just forage annual-production):** 950 lbs/ac unfavorable precipitation; 1313 lbs/ac normal precipitation; 1675 lbs/ac favorable precipitation.
-

16. **Potential invasive (including noxious) species (native and non-native).** List species which BOTH characterize degraded states and have the potential to become a dominant or co-dominant species on the ecological site if their future establishment and growth is not actively controlled by management interventions. Species that become dominant for only one to several years (e.g., short-term response to drought or wildfire) are not invasive plants. Note that unlike other indicators, we are describing what is NOT expected in the reference state for the ecological site: Sahara mustard.
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17. **Perennial plant reproductive capability:** Not impaired for shrubs and trees; drought impaired for perennial grasses and forbs.
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