

Ecological site R041XB209AZ Loamy Swale 8-12" 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.

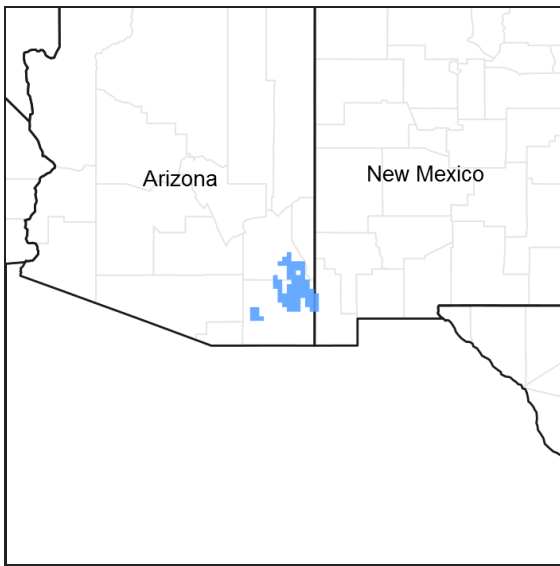


Figure 1. Mapped extent

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): 041X–Madrean Archipelago

AZ 41.2 – Chihuahuan – Sonoran Desert Shrubs

Elevations range from 2600 to 4000 feet and precipitation ranges from 8 to 12 inches per year. Vegetation includes mesquite, palo verde, catclaw acacia, soap tree yucca, creosote bush, whitethorn, staghorn cholla, desert saltbush, Mormon tea, burroweed, snakeweed, tobosa, black grama, threeawns, bush muhly, dropseed, and burrograss. The soil temperature regime is thermic 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.

Associated sites

| | |
|-------------|---------------------------------|
| R041XB207AZ | Limy Slopes 8-12" p.z. |
| R041XB208AZ | Limy Upland 8-12" p.z. |
| R041XB213AZ | Sandy Wash 8-12" p.z. |
| R041XB216AZ | Clayey Slopes 8-12" p.z. |

Similar sites

| | |
|-------------|--------------------------|
| R041XC302AZ | Clayey Swale 12-16" p.z. |
| R041XA114AZ | Loamy Bottom 16-20" p.z. |

Table 1. Dominant plant species

| | |
|------------|--|
| Tree | (1) <i>Prosopis glandulosa</i> var. <i>torreyana</i> |
| Shrub | Not specified |
| Herbaceous | (1) <i>sporobolus wrightii</i> |

Physiographic features

This site occurs in the lowest elevations of the Madrean Basin and Range province in southeastern Arizona. It occurs on floodplains and low stream terraces of first and second order tributaries of major stream systems. It benefits on a regular basis from extra moisture received as over-bank flooding. It lacks any water table within the reach of mesquite roots.

Table 2. Representative physiographic features

| | |
|--------------------|---|
| Landforms | (1) Flood plain (2) Stream terrace |
| Flooding duration | Very brief (4 to 48 hours) to brief (2 to 7 days) |
| Flooding frequency | Occasional to frequent |
| Ponding duration | Very brief (4 to 48 hours) |
| Ponding frequency | None to rare |
| Elevation | 792–1,219 m |
| Slope | 0–3% |
| Aspect | Aspect is not a significant factor |

Climatic features

Precipitation ranges from 8-12 inches annually. More than half falls during Jul-Sep in brief, but often heavy, thunderstorms. The rest of the moisture comes as light rain or snow that falls slowly for a day or more, but rarely lasts more than a day. May and June are normally the driest months. Humidity is generally very low.

Temperatures are mild throughout most of the year. Freezing temperatures are common at night Dec-Feb; brief 0 F may be observed some nights. During June, July & August, some days may exceed 100 F.

In years of average or greater winter precipitation, annual grasses and forbs occur abundantly in the interspaces.

Table 3. Representative climatic features

| | |
|-------------------------------|----------|
| Frost-free period (average) | 240 days |
| Freeze-free period (average) | 0 days |
| Precipitation total (average) | 0 mm |

Influencing water features

There are no water features associated with this site.

Soil features

These are young soils on loamy to clayey alluvium of mixed origin. They are deep and moderately dark colored. Plant-soil moisture relationships are excellent.

Soils mapped on this site include: SSA-662 Safford area MU's Ac & Ag Agua, AhA Anthony, GgA Gila and Pm Pima; SSA-664 San Simon area MU's 1 & 24 Gila, 24 Glendale, 33 & 34 Pima and 34 Grabe; SSA-666 Cochise county Northwest part MU 42 Glendale; SSA-671 Cochise county Douglas-Tombstone part MU's 36 Ugyp and 111 Ugyp stream terraces.

Table 4. Representative soil features

| | |
|--|--|
| Surface texture | (1) Fine sandy loam (2) Silt loam (3) Loam |
| Family particle size | (1) Loamy |
| Drainage class | Well drained |
| Permeability class | Moderately slow to slow |
| Soil depth | 152 cm |
| Surface fragment cover <=3" | 0–10% |
| Surface fragment cover >3" | 0–1% |
| Available water capacity (0-101.6cm) | 14.73–27.43 cm |
| Calcium carbonate equivalent (0-101.6cm) | 0–10% |
| Electrical conductivity (0-101.6cm) | 0–4 mmhos/cm |
| Sodium adsorption ratio (0-101.6cm) | 0–6 |
| Soil reaction (1:1 water) (0-101.6cm) | 7–8.2 |
| Subsurface fragment volume <=3" (Depth not specified) | 0–5% |
| Subsurface fragment volume >3" (Depth not specified) | 0–1% |

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.

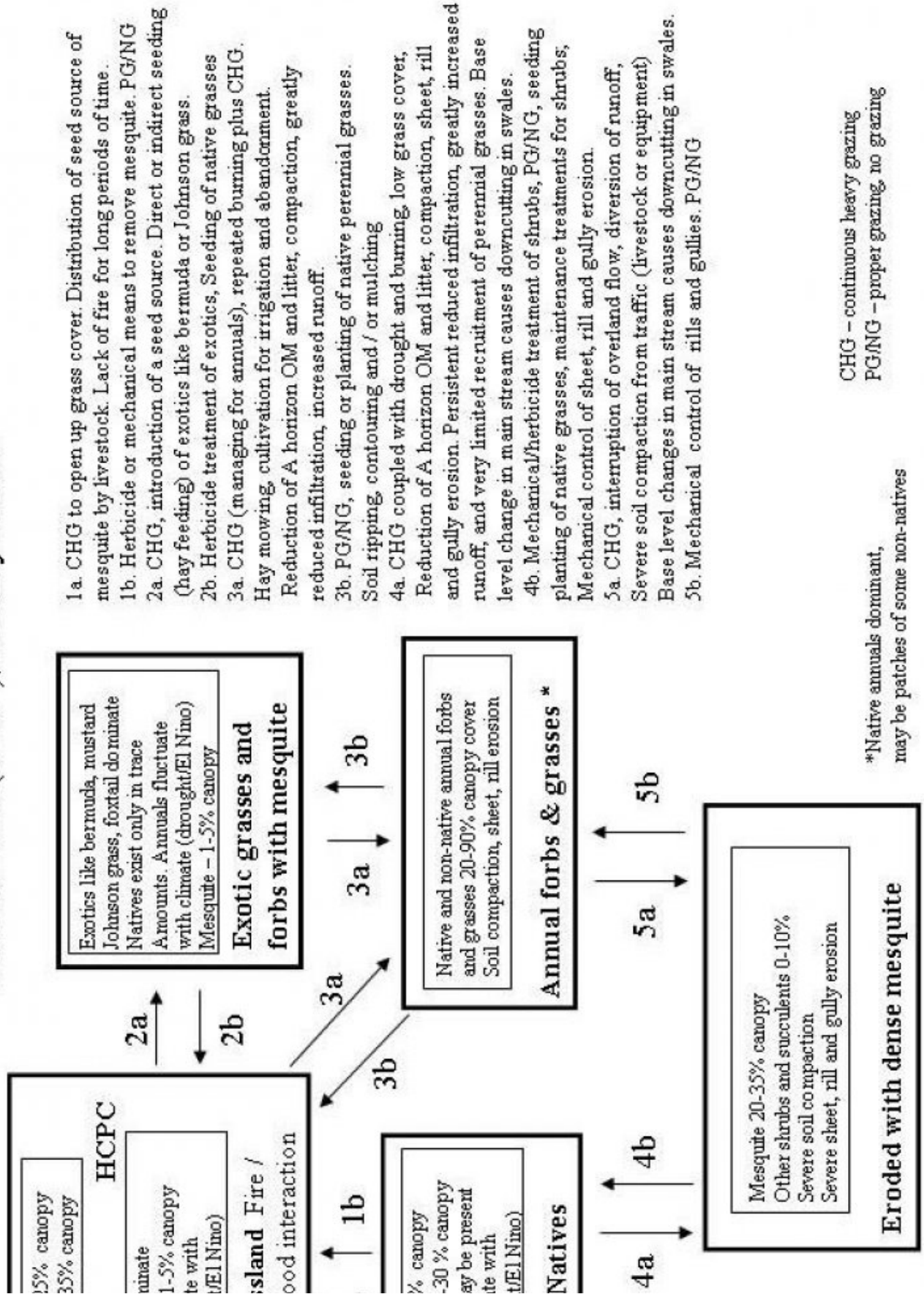
Production data provided in this site description is standardized to air dry weight at the end of the summer growing season. The plant communities described in this site description are based on near normal rainfall years.

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

MLRA 41-2 (8-12''), Loamy Swale



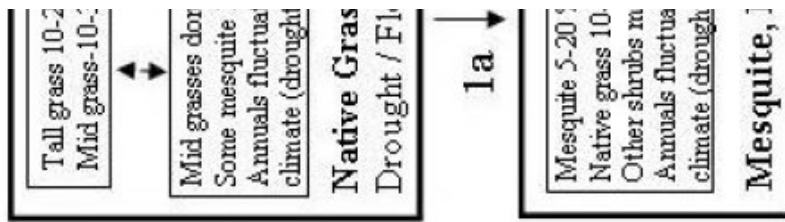


Figure 4. State and Transition, Loamy Swales 8-12" p.z.

State 1 Historic Climax Plant Community

Community 1.1 Historic Climax Plant Community

The historic native state includes the native plant communities that occur on the site, including the historic climax plant community. This state includes other plant communities that naturally occupy the site following fire, drought, flooding, herbivores, and other natural disturbances. The historic plant community represents the natural climax community that eventually re-occupies the site with proper management. The potential plant community is dominated by western honey mesquite and giant sacaton and other grasses. Periodic flooding accounts for very productive stands of trees and grass. Naturally occurring fires, June thru August, were an important factor in maintaining the plant community on this site. Mesquite can increase to dominate the native plant community in the absence of high intensity fires. Sediment accumulation around the stem bases of established mesquite can occur with flooding. Even repeated fires will not remove established mesquite if their bud zones are buried by sediment.

Table 5. Annual production by plant type

| Plant Type | Low (Kg/Hectare) | Representative Value (Kg/Hectare) | High (Kg/Hectare) |
|-----------------|---------------------|--------------------------------------|----------------------|
| Grass/Grasslike | 600 | 1681 | 2354 |
| Tree | 224 | 448 | 673 |
| Forb | 22 | 112 | 392 |
| Shrub/Vine | 1 | 22 | 56 |
| Total | 847 | 2263 | 3475 |

Table 6. Soil surface cover

| | |
|-----------------------------------|--------|
| Tree basal cover | 1% |
| Shrub/vine/liana basal cover | 0-1% |
| Grass/grasslike basal cover | 10-15% |
| Forb basal cover | 0-2% |
| Non-vascular plants | 0% |
| Biological crusts | 1-20% |
| Litter | 10-50% |
| Surface fragments >0.25" and <=3" | 0-5% |
| Surface fragments >3" | 0-1% |
| Bedrock | 0% |
| Water | 0% |
| Bare ground | 10-80% |

Table 7. Canopy structure (% cover)

| Height Above Ground (M) | Tree | Shrub/Vine | Grass/ Grasslike | Forb |
|-------------------------|-------|------------|---------------------|-------|
| <0.15 | – | – | 1-5% | 1-10% |
| >0.15 <= 0.3 | – | 0-1% | 1-5% | 1-10% |
| >0.3 <= 0.6 | – | 0-1% | 5-10% | 1-10% |
| >0.6 <= 1.4 | – | 1-2% | 15-25% | 0-5% |
| >1.4 <= 4 | 5-10% | 1-2% | 0-5% | 0-1% |
| >4 <= 12 | 5-10% | – | – | – |
| >12 <= 24 | – | – | – | – |
| >24 <= 37 | – | – | – | – |
| >37 | – | – | – | – |

State 2 Annuals

Community 2.1 Annuals

Some areas of this state have been created by cultivation for irrigated farming and subsequent abandonment. Former cultivated areas usually have been altered by the diversion of floodwaters with dikes or drainage ditches. In other areas mesquite has been cleared or harvested and annual species dominate. Native and non-native annual forbs and grasses dominate the plant community with minor amounts of other native and non-native perennial grasses.

State 3 Mesquite, eroded

Community 3.1 Mesquite, eroded



Figure 6. Loamy Swale 8-12" pz. eroded

The down-cutting of major stream systems and subsequent "valley side" gullying have left many areas of this state in and along second order tributaries. The site no longer benefits from flooding. The plant community is dominated by mature mesquite trees with little or no perennial under-story. This state is not recognized as a mesquite woodland site. Usually canopy cover is less than 30% and groundwater is too deep for mesquite roots to reach it and allow the formation of bosques. Maximum height of mesquite on this site (in this state) is about 20 feet.

State 4

Exotic grasses and forbs

Community 4.1

Exotic grasses and forbs

This state exists where non-native grasses and forbs dominate the under-story with mesquite canopy. Grasses include bermuda, Johnson grass, red brome, foxtail barley and barnyard grass. Forbs include London rocket, filaree, purslane, tumbleweed and cheeseweed. These species may affect the native flora of grasses and forbs negatively by reducing the seed bank of annuals and direct competition with perennials.

State 5

Mesquite, natives

Community 5.1

Mesquite, natives



Figure 7. Loamy Swale 8-12" pz. mesquite

This state occurs where mesquite has increased in canopy cover and density to dominate the site. Mesquite canopy ranges from 5 to 20%. Native perennial and annual grasses and forbs dominate the under-story.

Additional community tables

Table 8. Community 1.1 plant community composition

| Group | Common Name | Symbol | Scientific Name | Annual Production (Kg/Hectare) | Foliar Cover (%) |
|------------------------|--|--------|--|--------------------------------|------------------|
| Grass/Grasslike | | | | | |
| 1 | Dominant perennial grasses | | | 560–2018 | |
| | big sacaton | SPWR2 | <i>Sporobolus wrightii</i> | 224–1121 | – |
| | sideoats grama | BOCU | <i>Bouteloua curtipendula</i> | 112–448 | – |
| | bush muhly | MUPO2 | <i>Muhlenbergia porteri</i> | 112–336 | – |
| | vine mesquite | PAOB | <i>Panicum obtusum</i> | 112–336 | – |
| | alkali sacaton | SPAI | <i>Sporobolus airoides</i> | 0–168 | – |
| | whiplash pappusgrass | PAVA2 | <i>Pappophorum vaginatum</i> | 28–112 | – |
| | tobosagrass | PLMU3 | <i>Pleuraphis mutica</i> | 0–56 | – |
| 2 | miscellaneous perennial grasses | | | 28–168 | |
| | cane bluestem | BOBA3 | <i>Bothriochloa barbinodis</i> | 11–56 | – |
| | spidergrass | ARTE3 | <i>Aristida ternipes</i> | 11–34 | – |
| | Arizona cottontop | DICA8 | <i>Digitaria californica</i> | 0–28 | – |
| | squirreltail | ELELE | <i>Elymus elymoides ssp. elymoides</i> | 0–28 | – |

| | | | | | |
|-------------|------------------------|--------|---|--------|---|
| | green sprangletop | LEDU | <i>Leptochloa dubia</i> | 0–28 | – |
| | plains bristlegrass | SEVU2 | <i>Setaria vulpiseta</i> | 6–28 | – |
| | creeping muhly | MURE | <i>Muhlenbergia repens</i> | 0–17 | – |
| | spidergrass | ARTEG | <i>Aristida ternipes</i> var. <i>gentilis</i> | 0–17 | – |
| | flatsedge | CYPER | <i>Cyperus</i> | 0–17 | – |
| | Parish's threeawn | ARPUP5 | <i>Aristida purpurea</i> var. <i>parishii</i> | 0–17 | – |
| | purple threeawn | ARPU9 | <i>Aristida purpurea</i> | 0–11 | – |
| | tanglehead | HECO10 | <i>Heteropogon contortus</i> | 0–11 | – |
| | spike dropseed | SPCO4 | <i>Sporobolus contractus</i> | 0–11 | – |
| | sand dropseed | SPCR | <i>Sporobolus cryptandrus</i> | 0–6 | – |
| | burrograss | SCBR2 | <i>Scleropogon brevifolius</i> | 0–6 | – |
| 3 | Annual grasses | | | 11–168 | |
| | feather fingergrass | CHVI4 | <i>Chloris virgata</i> | 0–56 | – |
| | mucronate sprangletop | LEPAB | <i>Leptochloa panicea</i> ssp. <i>brachiata</i> | 0–28 | – |
| | Mexican panicgrass | PAHI5 | <i>Panicum hirticaule</i> | 0–28 | – |
| | Arizona signalgrass | URAR | <i>Urochloa arizonica</i> | 0–28 | – |
| | sixweeks fescue | VUOC | <i>Vulpia octoflora</i> | 0–28 | – |
| | needle grama | BOAR | <i>Bouteloua aristidoides</i> | 0–22 | – |
| | tapertip cupgrass | ERACA | <i>Eriochloa acuminata</i> var. <i>acuminata</i> | 0–17 | – |
| | Mexican sprangletop | LEFUU | <i>Leptochloa fusca</i> ssp. <i>uninervia</i> | 0–11 | – |
| | sixweeks grama | BOBA2 | <i>Bouteloua barbata</i> | 0–6 | – |
| | Arizona brome | BRAR4 | <i>Bromus arizonicus</i> | 0–6 | – |
| | Bigelow's bluegrass | POBI | <i>Poa bigelovii</i> | 0–6 | – |
| | sticky sprangletop | LEVI5 | <i>Leptochloa viscida</i> | 0–6 | – |
| | delicate muhly | MUFR | <i>Muhlenbergia fragilis</i> | 0–6 | – |
| | littleseed muhly | MUMI | <i>Muhlenbergia microsperma</i> | 0–6 | – |
| | witchgrass | PACA6 | <i>Panicum capillare</i> | 0–6 | – |
| | Mexican lovegrass | ERME | <i>Eragrostis mexicana</i> | 0–6 | – |
| | desert lovegrass | ERPEM | <i>Eragrostis pectinacea</i> var. <i>miserrima</i> | 0–6 | – |
| | tufted lovegrass | ERPEP2 | <i>Eragrostis pectinacea</i> var. <i>pectinacea</i> | 0–6 | – |
| | sixweeks threeawn | ARAD | <i>Aristida adscensionis</i> | 0–6 | – |
| | prairie threeawn | AROL | <i>Aristida oligantha</i> | 0–6 | – |
| Forb | | | | | |
| 4 | Perennial forbs | | | 11–56 | |
| | Missouri gourd | CUFO | <i>Cucurbita foetidissima</i> | 0–56 | – |
| | coyote gourd | CUPA | <i>Cucurbita palmata</i> | 0–28 | – |
| | weakleaf bur ragweed | AMCO3 | <i>Ambrosia confertiflora</i> | 1–28 | – |
| | fingerleaf gourd | CUDI | <i>Cucurbita digitata</i> | 0–28 | – |
| | scarlet spiderling | BOCO | <i>Boerhavia coccinea</i> | 0–17 | – |
| | spreading fleabane | ERDI4 | <i>Erigeron divergens</i> | 0–11 | – |
| | canaigre dock | RUHY | <i>Rumex hymenosepalus</i> | 0–11 | – |
| | Indian rushpea | HOGL2 | <i>Hoffmannseggia glauca</i> | 0–11 | – |
| | desert globemallow | SPAM2 | <i>Sphaeralcea ambigua</i> | 0–11 | – |
| | snear globemallow | SPHA | <i>Sphaeralcea hastulata</i> | 0–11 | – |

| | | | | | |
|---|---------------------------|--------|--|--------|---|
| | brownplume wirelettuce | STPA4 | <i>Stephanomeria pauciflora</i> | 0–6 | – |
| | Louisiana vetch | VILUL2 | <i>Vicia ludoviciana ssp. ludoviciana</i> | 0–6 | – |
| | Trans-Pecos thimblehead | HYWI | <i>Hymenothrix wislizeni</i> | 0–6 | – |
| | beeblossom | GAURA | <i>Gaura</i> | 0–6 | – |
| | southwestern mock vervain | GLGO | <i>Glandularia gooddingii</i> | 0–6 | – |
| | small matweed | GUDED | <i>Guilleminea densa var. densa</i> | 0–6 | – |
| | silverleaf nightshade | SOEL | <i>Solanum elaeagnifolium</i> | 0–6 | – |
| | Missouri goldenrod | SOMI2 | <i>Solidago missouriensis</i> | 0–6 | – |
| | Wright's cudweed | PSCAC2 | <i>Pseudognaphalium canescens ssp. canescens</i> | 0–6 | – |
| | ivyleaf groundcherry | PHHE4 | <i>Physalis hederifolia</i> | 0–2 | – |
| | wild dwarf morning-glory | EVAR | <i>Evolvulus arizonicus</i> | 0–2 | – |
| | whitemouth dayflower | COER | <i>Commelina erecta</i> | 0–2 | – |
| | milkweed | ASCLE | <i>Asclepias</i> | 0–1 | – |
| 5 | Annual forbs | | | 11–336 | |
| | sedge | CAREX | <i>Carex</i> | 56–280 | – |
| | flatsedge | CYPER | <i>Cyperus</i> | 56–280 | – |
| | slimleaf sneezeweed | HELI | <i>Helenium linifolium</i> | 56–280 | – |
| | rush | JUNCU | <i>Juncus</i> | 56–280 | – |
| | carelessweed | AMPA | <i>Amaranthus palmeri</i> | 0–56 | – |
| | western tansymustard | DEPI | <i>Descurainia pinnata</i> | 0–56 | – |
| | camphorweed | HESU3 | <i>Heterotheca subaxillaris</i> | 0–56 | – |
| | ivyleaf morning-glory | IPHE | <i>Ipomoea hederacea</i> | 0–28 | – |
| | sensitive partridge pea | CHNI2 | <i>Chamaecrista nictitans</i> | 0–28 | – |
| | New Mexico thistle | CINE | <i>Cirsium neomexicanum</i> | 0–28 | – |
| | wheelscale saltbush | ATEL | <i>Atriplex elegans</i> | 0–28 | – |
| | Coulter's spiderling | BOCO2 | <i>Boerhavia coulteri</i> | 0–28 | – |
| | Wright's saltbush | ATWR | <i>Atriplex wrightii</i> | 0–17 | – |
| | horseweed | CONYZ | <i>Conyza</i> | 0–17 | – |
| | cryptantha | CRYPT | <i>Cryptantha</i> | 0–17 | – |
| | Arizona poppy | KAGR | <i>Kallstroemia grandiflora</i> | 0–17 | – |
| | crestrub morning-glory | IPCO2 | <i>Ipomoea costellata</i> | 0–17 | – |
| | redstar | IPCO3 | <i>Ipomoea coccinea</i> | 0–17 | – |
| | intermediate pepperweed | LEVIM | <i>Lepidium virginicum var. medium</i> | 0–17 | – |
| | Arizona popcornflower | PLAR | <i>Plagiobothrys arizonicus</i> | 0–17 | – |
| | Nuttall's povertyweed | MONU | <i>Monolepis nuttalliana</i> | 0–17 | – |
| | common sunflower | HEAN3 | <i>Helianthus annuus</i> | 0–11 | – |
| | longleaf false goldeneye | HELOA2 | <i>Heliomeris longifolia var. annua</i> | 0–11 | – |
| | longleaf false goldeneye | HELOL | <i>Heliomeris longifolia var. longifolia</i> | 0–6 | – |

| | | | | | |
|--|--------------------------------|--------|---|-----|---|
| | scrambled eggs | COAU2 | <i>Corydalis aurea</i> | 0-6 | - |
| | California poppy | ESCAM | <i>Eschscholzia californica ssp. mexicana</i> | 0-6 | - |
| | spurge | EUPHO | <i>Euphorbia</i> | 0-6 | - |
| | Arizona blanketflower | GAAR2 | <i>Gaillardia arizonica</i> | 0-6 | - |
| | goosefoot | CHENO | <i>Chenopodium</i> | 0-6 | - |
| | shaggyfruit pepperweed | LELA | <i>Lepidium lasiocarpum</i> | 0-6 | - |
| | warty caltrop | KAPA | <i>Kallstroemia parviflora</i> | 0-6 | - |
| | desert Indianwheat | PLOV | <i>Plantago ovata</i> | 0-6 | - |
| | purslane | PORTU | <i>Portulaca</i> | 0-6 | - |
| | desert unicorn-plant | PRAL4 | <i>Proboscidea althaeifolia</i> | 0-6 | - |
| | doubleclaw | PRPA2 | <i>Proboscidea parviflora</i> | 0-6 | - |
| | Florida pellitory | PAFL3 | <i>Parietaria floridana</i> | 0-6 | - |
| | combseed | PECTO | <i>Pectocarya</i> | 0-6 | - |
| | phacelia | PHACE | <i>Phacelia</i> | 0-6 | - |
| | phlox | PHLOX | <i>Phlox</i> | 0-6 | - |
| | foothill deervetch | LOHU2 | <i>Lotus humistratus</i> | 0-6 | - |
| | coastal bird's-foot trefoil | LOSAB | <i>Lotus salsuginosus var. brevivexillus</i> | 0-6 | - |
| | Arizona lupine | LUAR4 | <i>Lupinus arizonicus</i> | 0-6 | - |
| | Coulter's lupine | LUSP2 | <i>Lupinus sparsiflorus</i> | 0-6 | - |
| | slender goldenweed | MAGR10 | <i>Machaeranthera gracilis</i> | 0-6 | - |
| | tansyleaf tansyaster | MATA2 | <i>Machaeranthera tanacetifolia</i> | 0-6 | - |
| | whitestem blazingstar | MEAL6 | <i>Mentzelia albicaulis</i> | 0-6 | - |
| | American wild carrot | DAPU3 | <i>Daucus pusillus</i> | 0-6 | - |
| | jimsonweed | DAST | <i>Datura stramonium</i> | 0-6 | - |
| | sacred thorn-apple | DAWR2 | <i>Datura wrightii</i> | 0-6 | - |
| | miniature woollystar | ERDI2 | <i>Eriastrum diffusum</i> | 0-6 | - |
| | sorrel buckwheat | ERPO4 | <i>Eriogonum polycladon</i> | 0-6 | - |
| | hoary bowlesia | BOIN3 | <i>Bowlesia incana</i> | 0-6 | - |
| | southwestern pricklypoppy | ARPL3 | <i>Argemone pleiacantha</i> | 0-6 | - |
| | milkvetch | ASTRA | <i>Astragalus</i> | 0-6 | - |
| | golden crownbeard | VEEN | <i>Verbesina encelioides</i> | 0-6 | - |
| | rough cocklebur | XAST | <i>Xanthium strumarium</i> | 0-6 | - |
| | chia | SACO6 | <i>Salvia columbariae</i> | 0-6 | - |
| | sawtooth sage | SASU7 | <i>Salvia subincisa</i> | 0-6 | - |
| | spreading fanpetals | SIAB | <i>Sida abutifolia</i> | 0-6 | - |
| | sleepy silene | SIAN2 | <i>Silene antirrhina</i> | 0-3 | - |
| | New Mexico plumeseed | RANE | <i>Rafinesquia neomexicana</i> | 0-3 | - |
| | Goodding's bladderpod | LEGO2 | <i>Lesquerella gooddingii</i> | 0-2 | - |
| | star gilia | GIST | <i>Gilia stellata</i> | 0-2 | - |
| | fringed redmaids | CACI2 | <i>Calandrinia ciliata</i> | 0-2 | - |
| | Texas stork's bill | ERTE13 | <i>Erodium texanum</i> | 0-2 | - |

| | | | | | |
|-------------------|-----------------------------|-------|---|---------|---|
| | woolly tidestromia | IIIAZ | <i>Idestromia lanuginosa</i> | 0-2 | - |
| | green carpetweed | MOVE | <i>Mollugo verticillata</i> | 0-2 | - |
| Shrub/Vine | | | | | |
| 6 | Miscellaneous shrubs | | | 1-56 | |
| | catclaw acacia | ACGR | <i>Acacia greggii</i> | 0-11 | - |
| | fourwing saltbush | ATCA2 | <i>Atriplex canescens</i> | 0-11 | - |
| | pale desert-thorn | LYPA | <i>Lycium pallidum</i> | 0-6 | - |
| | catclaw mimosa | MIACB | <i>Mimosa aculeaticarpa var. biuncifera</i> | 0-6 | - |
| | soaptree yucca | YUEL | <i>Yucca elata</i> | 0-6 | - |
| | Drummond's clematis | CLDR | <i>Clematis drummondii</i> | 0-6 | - |
| | fringed twinevine | FUCYC | <i>Funastrum cynanchoides ssp. cynanchoides</i> | 0-6 | - |
| | broom snakeweed | GUSA2 | <i>Gutierrezia sarothrae</i> | 0-2 | - |
| | whitethorn acacia | ACCO2 | <i>Acacia constricta</i> | 0-2 | - |
| | lotebush | ZIOB | <i>Ziziphus obtusifolia</i> | 0-2 | - |
| | desertbroom | BASA2 | <i>Baccharis sarothroides</i> | 0-2 | - |
| | burroweed | ISTE2 | <i>Isocoma tenuisepta</i> | 0-2 | - |
| | singlewhorl burrobrush | HYMO | <i>Hymenoclea monogyra</i> | 0-1 | - |
| 7 | Succulents | | | 0-11 | |
| | Christmas cactus | CYLE8 | <i>Cylindropuntia leptocaulis</i> | 0-2 | - |
| | walkingstick cactus | CYSP8 | <i>Cylindropuntia spinosior</i> | 0-2 | - |
| | cactus apple | OPEN3 | <i>Opuntia engelmannii</i> | 0-2 | - |
| | tulip pricklypear | OPPH | <i>Opuntia phaeacantha</i> | 0-2 | - |
| | candy barrelcactus | FEWI | <i>Ferocactus wislizeni</i> | 0-1 | - |
| Tree | | | | | |
| 8 | Common trees | | | 224-673 | |
| | western honey mesquite | PRGLT | <i>Prosopis glandulosa var. torreyana</i> | 224-560 | - |
| | velvet mesquite | PRVE | <i>Prosopis velutina</i> | 0-112 | - |
| | catclaw acacia | ACGR | <i>Acacia greggii</i> | 0-56 | - |
| | netleaf hackberry | CELAR | <i>Celtis laevigata var. reticulata</i> | 0-11 | - |
| | desert willow | CHLI2 | <i>Chilopsis linearis</i> | 0-11 | - |
| | western soapberry | SASAD | <i>Sapindus saponaria var. drummondii</i> | 0-11 | - |

Animal community

Big sacaton begins growth in the spring about the first of April. Other perennial grass species on the site usually green up in July or August with the first summer rains. The site produces abundant forage for year-round use by all classes of livestock.

These bottoms are very important habitat for a variety of birds and small mammals. They are important areas for javalina and mule deer as well. Water developments on this site are very important for both livestock and wildlife.

Hydrological functions

These small floodplains are important in the hydrologic regime of southeastern Arizona stream systems. Intact floodplains can retain floodwaters for 1 to 2 weeks after major flooding events. Channeled or gullied bottomlands often pass the same flood in 1 or 2 days.

Recreational uses

Hunting, bird-watching, hiking, horseback riding, photography.

Wood products

Mesquite furnishes large quantities of fuel-wood and posts.

Other products

Perennial grass seed

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) | |
| Contact for lead author | |
| Date | |
| Approved by | |
| Approval date | |
| Composition (Indicators 10 and 12) based on | Annual Production |

Indicators

1. **Number and extent of rills:**

2. **Presence of water flow patterns:**

3. **Number and height of erosional pedestals or terracettes:**

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

5. **Number of gullies and erosion associated with gullies:**

6. **Extent of wind scoured, blowouts and/or depositional areas:**

7. **Amount of litter movement (describe size and distance expected to travel):**

8. **Soil surface (top few mm) resistance to erosion (stability values are averages - most sites will show a range of values):**

9. **Soil surface structure and SOM content (include type of structure and A-horizon color and thickness):**

10. **Effect of community phase composition (relative proportion of different functional groups) and spatial distribution on infiltration and runoff:**

11. **Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site):**

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:

Sub-dominant:

Other:

Additional:

13. **Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence):**

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):**

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:

17. Perennial plant reproductive capability:
