	A	B	C	D	E	F	G	H	I	J
1	**USFS R3 REGIONAL FORESTER'S SENSITIVE SPECIES: PLANTS - 2013**									
2	**Common Name**	***Scientific Name***	**FWS Status**	**Heritage Global**	**Heritage State (AZ,NM)**	**State of Occurrence**	**County**	**Forest(s)**	**Limiting Factors/Threats**	**Justifications as to why on list**
3	TUFTED SAND VERBENA	*Abronia bigelovii*		G3	S3	NM	Rio Arriba, Sandoval, Santa Fe	CAR, SFE	Mining, ORVs	Endemic to gypsum outcrops within a fairly small range. The habitat is very limited and specialized. Populations are stable, but this specialized plant has no potential to expand into other habitats. Small populations could be easily extirpated.
4	PIMA INDIAN MALLOW	*Abutilon parishii*		G2	S2	AZ	Gila, Graham, Maricopa, Pima, Pinal, Santa Cruz, Yavapai	COR, TON	Mining, recreation and trail construction, livestock trampling, very palatable to livestock and wildlife, buffelgrass invasion, drought	Plants now occur mostly in steep, rocky terrain, which may be refugial habitat free from grazing pressure. Populations are small and have few plants. Populations appear to decline in dry years. Various threats could extirpate small populations.
5	WRIGHT'S DOGWEED	*Adenophyllum wrightii var. wrightii*		G1?	SNR,S1	AZ,NM,Mex	Apache, Grant	GIL	Populations are small and fluctuate greatly from year-to-year. Some populations are in roadside swales where they could be damaged by road maintenance activities. Noxious weed invasion and/or eradication are potential threats.	This plant was thought possibly to be extinct until several small populations were recently discovered in New Mexico. It is likely extirpated from Arizona and Mexico, its other historic locations. It grows in swales and drainages in open pinyon-juniper woodlands. This habitat has historically been severely overgrazed. The response of this plant to grazing is unknown. This plant grows in a type of habitat that is often invaded by noxious weeds. Either invasion of noxious weeds or midguided noxious weed eradication attempts are management concerns. During the abnormally wet summer of 2006, numerous populations of this plant were discovered in Grant and Sierra counties, New Mexico. It is now considered to be common within its range in New Mexico. Dr. Richard Spellenberg found it at several locations in western Chihuahua in the fall of 2007 and found it to be abundant at one location there. It is no longer included on New Mexico's list of rare plants.
6	TONTO BASIN AGAVE	*Agave delamateri*		G1G2	S1	AZ	Gila, Maricopa, Yavapai	COC, PRE, TON	This plant has a small range and few individuals. Threats rangewide include urbans sprawl, reservoir expansion and associated activities, road improvements and realignments, ORV activity, and increased fire frequency due to non-native annual grasses. Plants can be infested by a snout weevil that caries a potentially fatal fungus disease.	There are indications that populations may be declining. No evidence of sexual reproduction has ever been found. There are signs of stress during the dry months of May and June. There is evidence of snout weevil damage that can transmit a fatal fungus disease. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
7	HOHOKAM AGAVE	*Agave murpheyi*		G2	S2	AZ	Gila, Maricopa, Pinal, Yavapai	TON	This plant has a small range and few individuals. Threats include land clearing, collection, reservoir expansion and associated activities, recreatioin activities, livestock grazing, and rodent predation.	This plant is know from 60 clones, these usually in association with pre-Columbian archeological features. It only reproduces asexually and thus has little dispersal potential. The small number of populations and plants with limited reproductive potential make it easy to extirpate populations. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
8	SANTA CRUZ STRIPED AGAVE	*Agave parviflora ssp. parviflora*		G3T3	S3	AZ	Pima, Santa Cruz	COR	Limited range, road maintenance, collecting	This attractive agave is locally abundant within small range. Collecting is considered to be a minor threat. It is being retained of the Sensitive Species List because the State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
9	PHILLIPS' AGAVE	*Agave phillipsiana*		G1T1?	SNR	AZ	Coconino, Yavapai	COC, PRE	Rarity, limited distribution, specialized habitat	This plant has a small range and few individuals. Threats rangewide include urban sprawl, reservoir expansion and associated activities, road improvements and realignments, ORV activity, and increased fire frequency due to non-native annual grasses.
10	TRELEASE AGAVE	*Agave schottii var. treleasei*		G5T1Q	S1	AZ	Pima	COR	Small populations, herbivore predation on flowering stalks.	This plant is known from less than 12 clones in the Santa Catalina and Ajo Mountains. It is vulnerable to extinction from any activity that might destroy clones, although known clones appear relatively secure. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
11	SACRED MOUNTAIN AGAVE	*Agave verdensis*		GNR	SNR	AZ	Yavapai	COC	Limited distribution and specialized habitat/ urban development, grazing. Threats are similar to those for A. delamateri N4.	Recently described, not rated in NatureServe, limited distribution, specialized habitat, urban development, grazing, 9 collections in Sacred Mountain area on Yavapai County, Coconino NF, threats are similar to those for A. delamateri N4.
12	PAGE SPRINGS AGAVE	*Agave yavapaiensis*		GNR	SNR	AZ	Yavapai	COC	Limited distribution and specialized habitat/ urban development, grazing.	Recently described, not rated in NatureServe, limited distribution, specialized habitat, urban development and grazing, only 3 collections in Page Springs area, Yavapai County, Coconino NF. N4.
13	GOODDING'S ONION	*Allium gooddingii*		G4	S3S4,S1	AZ,NM	Apache, Greenlee, Pima, Catron, Lincoln, San Juan	A-S, COR, GIL, LIN	Grazing, logging, any degradation of riparian habitats	This plant is very palatable and can be heavily grazed. The greatest threat is logging that will open up and dry out the moist habitat. This plant is being managed under a conservation agreement in which the Forest Service has agreed to retain this species on its Sensitive Species list. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).

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14	SAIYA	*Amoreuxia gonzalezii*		G1	S1	AZ,Mex	Pima, Santa Cruz	COR	Very rare in southern Arizona. It is very palatable to livestock and javalina will dig up the rootstock. It was used as a food plant by native Americans, as all parts of the plant are edible. The habitat is subject to invasion by buffelgrass and Lehman's lovegrass that compete with the plant and change the fire regime.	This plant is known from only two or three sites in the U.S., all on the Coronado NF. The habitat is open rocky limestone hillsides at about 4,500 ft elevation. Grazing management is a concern because plants are very palatable. Competition and habitat changes from the introduction of exotic forage grasses is also a concern and could have eliminated much potentially suitable habitat.
15	LARGE-FLOWERED BLUE STAR	*Amsonia grandiflora*		G2	S2	AZ,Mex	Pima, Santa Cruz	COR	Small number of populations, limited reproduction, private land development, natural disturbance	The entire world distribution is 15-20 populations in two mountain ranges. Plants are long-lived and reproduce from rhizomes, but few seedlings are seen. Plants are non-palatable to livestock and regenerate well after fire. With development of private land, the national forest could become the refugial location for this plant.
16	MOGOLLON DEATH CAMAS	*Anticlea mogollonensis (=Zigadenus m.)*		G3	S3	NM	Catron	GIL	extremely narrow range, fire	This plant is a very narrow endemic, known only from the Mogollon Mountains in the area of White Water Baldy and adjacent peaks. It grows in organic soils in understory of upper montane and subalpine coniferous forest, often with aspen at 8,700-10,500 ft. It occurs mostly in the Gila Wilderness where there are few threats. The effects of forest fire are unknown.
17	CHAPLINE'S COLUMBINE	*Aquilegia chaplinei (=A. chrysantha var. chaplinei)*		G4T2	S2	NM	Eddy	LIN	Drought, water diversions, recreation	This is a wetland plant that grows at seeps and springs. Habitat is very limited. It is endemic to the southern Sacramento (where is is likely extirpated) and Guadalupe mountains. Continued drought could dry up some habitats. Water diversions could effect others. There have been some impacts from recreation.
18	CHIRICAHUA ROCK CRESS	*Arabis tricornuta*		G1?	S1?	AZ	Cochise, Pima	COR	Rarity, possibly recreation	This plant is known from 9 locations, most of them in the Chiricahus Mts. It occurs near Rustler Park, Barefoot Peak, and Piney Campground that get heavy recreational use. Potential recreation impacts on this plant need to be monitored.
19	MT. DELLENBAUGH SANDWORT	*Arenaria aberrans*		G3?	SNR	AZ	Mohave, Coconino,	COC, KAI, PRE, TON	Rarity	This plant is poorly understood. It appears to grow in rocky habitats of ridges and cany on rims. It is endemic to Arizona in only four counties and is known from only 16 specimens. It was on 1999 Sensitive Species List and Barb Phillips, Botanist for three of the four Forests where it occurs, recommends its retention.
20	LEMMON MILKWEED	*Asclepias lemmonii*		G4?	S2	AZ,Mex	Cochise, Pima	COR	Fire, herbicides	This plant is found only in the Chiricahua, Huachuca, and Santa Rita mountains in Arizona, and in Mexico. It is rather uncommon where it occurs. It appears to be somewhat tolerent of disturbance and could occur where noxious weeds need control. It has been collected where fire has occurred, but its direct tollerence to fire is unknown.
21	GREENE MILKWEED	*Asclepias uncialis ssp. uncialis*		G3G4T2T3	SNR,S2	AZ,NM,CO,OK,UT	Apache, Santa Cruz, Yavapai, Colfax, Grant, San Miguel, Union	A-S, CIB, COR, GIL, PRE, SFE	Rarity, fire, herbicides	It has a broad range, but is always rare and has small populations. Reported to prefer stable climax or near climax plains grassland communities. Reported to not tolerate competition from weedy annuals. Its responses to fire and grazing are unknown, but it may not tolerate factors that cause general habitat degradation. A specimen at UNM Herbarium documents Greene milkweed from Mesita de los Ladrones, Anton Chico Grant, Santa Fe NF.
22	ZUNI MILKVETCH	*Astragalus accumbens*		G3	S3	NM	Cibola, McKinley	CIB	Rarity, ORVs, herbicides, mining	Restricted to detrital clay soils of the Chinle and Baca formations. Occurs in the same very restricted habitat as the endangered Zuni fleabane. The habitat has potential for uranium mining. The open clay hills are attractive to ORV users, but are little impacted now due to remote localities. Milkvetches, also called locoweeds, are sometimes targeted as noxious weeds because some are poisonous to livestock.
23	GUMBO MILKVETCH	*Astragalus ampullarius*		G2	S1	AZ,UT	Coconino, Mojave	KAI	Rarity	Grows in restricted habitat of clay, saline, seleniferous soils of the Chinle and Moenkopi formations. Known from only one locality on the North Kaibab Ranger District in desertscrub vegetation.
24	TALL MILKVETCH	*Astragalus altus*		G2	S2	NM	Otero	LIN	Road maintenance, noxious weeds control programs	A narrow endemic inhabiting the forests around Cloudcroft. There are now 18 known locations for this species on NFS lands; additional locations are on tribal lands. It often inhabits road cuts and other sites for some years after disturbance where it is vulnerable to road maintenance activities and noxious weeds control programs.
25	MAGUIRE'S (COPPERMINE) MILKVETCH	*Astragalus cobrensis var. maguirei*		G4T2	S2,S1?	AZ,NM	Cochise, Hidalgo	COR	Rarity, natural disturbances, recreation, grazing	Plants occur in highly vulnerable narrow shady canyons, which are areas of high impact due to grazing (plants are palatable), recreation and natural disturbance. These plants require riparian habitat.
26	MARBLE CANYON MILKVETCH	*Astragalus cremnophylax var. hevronii*		G1T1	S1	AZ	Coconino	KAI	Rarity	Presently known only from the Navajo Nation on the east rim of Marble Canyon where it is known from 6 sites with about 265 plants. Suitable unsurveyed habitat occurs on the North Kaibab Ranger District

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27	CLIFF MILKVETCH	*Astragalus cremnophylax var. myriorrhaphis*		G1T1	S1	AZ	Coconino	KAI	Rarity, recreation	This variety is endemic to the Buckskin Mountains where 13 sites and about 750 individual plants are known. It grows in crevices and depressions on rimrock benches. An informal hiking trail traverses one of the populations.
28	VILLOUS GROUNDCOVER MILKVETCH	*Astragalus humistratus var. crispulus*		G4G5T3?	SNR,SNR	AZ,NM	Apache, Catron	A-S, CIB, GIL	Rarity	This variety is endemic to a small area of eastern Arizona and western New Mexico where it is known from 10 localities. It grows on bare ground in colonies and may be vulnerable to road building and other ground disturbing activities. A brief profile on the variety is available at http://nmrareplants.unm.edu
29	HUACHUCA MILKVETCH	*Astragalus hypoxylus*		G1	S1	AZ	Cochise, Santa Cruz	COR	Rarity, grazing, recreation	This species has a limited range and small populations. Populations have large fluctuations and high mortality due to drought. Plants are subject to trampling from hikers and cattle. One population occupies a four-wheel drive road where plants are damaged by vehicles.
30	KERR'S MILKVETCH	*Astragalus kerrii*		G2	S2	NM	Lincoln	LIN	Rarity, fire, recreation	This species is confined to the eastern half of the Capitan Mts. Its natural habitat appears to be dry arroyos that get some disturbance, but it has been found on old logging roads that get some vehicle traffic. The effects of forest fire or absence of a natural fire regime on this plant have not been studied.
31	CHACO MILKVETCH	*Astragalus micromerius*		G2	S2	NM	McKinley, Rio Arriba, San Juan	CIB, SFE	Rarity, recreation, mining	This diminutive endemic is usually associated with outcrops of sandstone that are blended with Todilto gypsum or limestone. It has a fairly wide range, but is sporadically distributed in isolated populations. It occurs in the pinyon-juniper zone where some populations may be in sites attractive for ORV use. Mining for building stone is possible, but unlikely. Three specimens at UNM Herbarium document the presence of this plant on the Coyote RD, Santa Fe NF. Some suitable habitat may exist on Carson NF in the viciity of Abiquiu, but there are no confirmed localities north of the Chama R. The Carson NF should search for this plant during projects in suitable habitat on the extreme SW corner of the Forest
32	PAGOSA MILKVETCH	*Astragalus missouriensis var. humistratus*		G5T1	SNR	NM,CO	Rio Arriba	CAR	Rarity, oil and gas development, ORV activity	This milkvetch is limited to clay soils of the Mancos and Lewis formations. It is vulnerable to disturbance at its few limited localities. Region 2 has done an excellent status report (Decker, 2006) that is available online and is linked through the New Mexico Rare Plants website.
33	RIPLEY MILKVETCH	*Astragalus ripleyi*		G3	S3?	NM,CO	Rio Arriba, Taos	CAR	Vegetation management, grazing	*Astragalus ripleyi* may occasionally be impacted by brush control projects since it is often found in piñon-juniper-oak communities and with big sagebrush. It is also grazed by livestock and wildlife. This desirable forage plant somewhat resembles the poisonous *A. lonchocarpus* and could be subjected to local eradication efforts that, misguidedly, target all species of *Astragalus*.
34	RUSBY'S MILKVETCH	*Astragalus rusbyi*		G3	S3	AZ	Coconino	COC, KAI	Rarity	This species has a very limited range on the lower slopes of the San Francisco Peaks and Oak Creek Canyon. Its response to fire or an unnatural fire regime is variable, but not detrimental.
35	ONE-FLOWERED MILKVETCH	*Astragalus wittmannii*		G3	S3	NM	Colfax, Harding, Mora	CIB	Rarity, mining	This plant grows on Greenhorn limestone hills and knolls in shortgrass prairie. It is endemic to northeastern New Mexico. At least 20 locations have been recorded for this species. Limestone knoll habitats are occasionally mined for roadbase materials.
36	AYENIA	*Ayenia jaliscana (= A. truncata)*		GNR	S1	AZ,Mex	Santa Cruz	COR	Extreme rarity, grazing	Nomenclature change. The nomenclature for this species has been confused in the past leading some plants to be identified a *A. truncata* and some as *A. glabra*, which is actually a separate species. No matter how treated, it is a rare plant in Arizona, known from fewer than 5 sites in the US. It is a woody perennial that often dies back to the ground in winter and resprouts in May. Its responses to grazing and habitat disturbance have not been studied.
37	SIERRA BLANCA KITTENTAILS	*Besseya oblongifolia*		G2Q	S2	NM	Lincoln, Otero	LIN	Extreme rarity, recreation	This plant is endemic to alpine tundra on Sierra Blanca. A specimen from Taos County has been determined to be another species, which makes this plant limited to a single small area on Sierra Blanca, which is the southern-most alpine tundra in the US. Plants could be subject to trampling or other recreation-related activities such as trail building.
38	CRENULATE MOONWORT	*Botrychium crenulatum*		G3	SH	AZ; western US; western Can	Coconino	COC	Extreme rarity	This plant is known from a single very old collection on San Francisco Peaks. It is rare and sporadic throughout its broad range in the western US and Canada. Management needs are unknown.
39	BUSH-VIOLET	*Browallia eludens*		G1G2	S1	AZ,Mex	Santa Cruz	COR	Rarity, various activities occur in its habitat that need evaluation	The plant is an annual and populations fluctuate drastically with moisture conditions. Activities in its habitat include fuelwood cutting, military operations, recreation, grazing, and natural floods. The impacts from these activities need evaluation.

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40	PECOS MARIPOSA LILY	*Calochortus gunnisonii var. perpulcher*		G5T4?	S4?	NM	Mora, San Miguel	SFE	Rarity, grazing, loss of aspen stands and meadows from conifer encroachment, loss of natural fire regimes, collecting	This is a rare color form of a more common species. It is found only in the eastern part of the Pecos Wilderness. It is less abundant than Heritage Program rank would indicate. Responses to grazing and forest fire are unknown. Gardening hobbyists will occasionally take mariposa lily bulbs from their native habitats. It has not been confirmed from the Carson NF part of the Pecos Wilderness, but should be looked for.
41	CHILTEPIN	*Capsicum annuum var. glabriusculum*		G5T5	S2	AZ,TX,Mex	Pima, Santa Cruz	COR	Grazing, collecting	Chiltepin is a wild pepper that is sometimes collected for cooking. The Coronado NF has established the Chiltepin Botanical Area for conservaiton of this plant. Grazing is restricted during the plant's growing season. This plant is of agronomic interest because of its close relation to cultivated peppers and of cultural interest because of its long history of use in local cooking.
42	CHIHUAHUAN SEDGE	*Carex chihuahuensis*		G2G4	S2S3	AZ,NM,Mex	Cochise, Graham, Gila, Pima, Santa Cruz, Hidalgo	COR, TON	Grazing, trampling	This plant grows in wet meadows, cienegas, marshy areas, and canyon bottoms. Grazing can heavily impact these areas if not properly managed.
43	COCHISE SEDGE	*Carex ultra (=C.spissa var. ultra)*		G3?	S2,S3?	AZ,NM,Mex	Cochise, Coconino, Graham, Pima, Santa Cruz, Yavapai, Hidalgo	COC, COR, PRE, TON	Grazing, trampling	This plant grows in saturated soil near perennial seeps, streams, and springs. Grazing can heavily impact these areas if not properly managed.
44	KAIBAB PAINTBRUSH	*Castilleja kaibabensis*		G2	S2	AZ	Coconino	KAI	Extremely narrow range, grazing, highway maintenance	This plant grows in the driest most exposed sites of subalpine meadows. It is fairly common in its extremely narrow range of about 12 square miles. OHV use in habitat is prohibited. The habitat is grazed. Due to the extremely narrow range, this plant should have regular monitoring to determine population trends.
45	WHITE MOUNTAINS PAINTBRUSH	*Castilleja mogollonica*		G1Q	S1	AZ	Apache	A-S	Narrow range, livestock impacts, recreation	Livestock grazing and recreation are the major impacts to this species. Lee Valley, Colter, and White Mountain reservoirs have eliminated habitat and the associated recreation has degraded other habitat. This plant has been observed to decrease with grazing, this being mostly from trampling and habitat degradation rather than direct consumption of plants.
46	TRANS-PECOS INDIAN PAINTBRUSH	*Castilleja nervata*		G3Q	S1	AZ,Mex	Cochise, Graham, Santa Cruz	COR	Rarity, grazing, loss of natural fire regime	This plant grows in only a few sites in bunch grass meadows that need fire for long-term maintenance. These meadows also need careful grazing management.
47	SANTA CRUZ STAR LEAF	*Choisya mollis*		G2?	S2	AZ	Santa Cruz	COR	Low numbers and narrow distribution, fire	This rare shrub is limited to a small area of the Pajarito, Atascosa, and Tumacacori mountains. It usually grows in the shade of oaks in Madrean evergreen woodland communities. It appears to reproduce mostly from rhizomes. Population trends and responses to fire are unknown.
48	TUSAYAN RABBITBRUSH, DISTURBED RABBITBRUSH	*Chrysothamnus molestus*		G3	S3	AZ	Apache, Coconino, Navajo	COC, KAI	Grazing, loss of natural fire regimes	This shrub is sometimes heavily grazed by cattle and elk. It develops a prostate growth form in response to grazing. The combination of drought and heavy grazing can cause high plant mortality. This plant grows in openings in juniper woodlands. Habitat is lost when woodlands become more dense from absence of fire.
49	ARIZONA BUGBANE	*Cimicifuga arizonica*		G2	S2	AZ	Coconino, Gila	COC, KAI, TON	Low numbers and specialized habitat, grazing, recreation, and catastrophic flooding	This plant occurs in moist, shaded, mixed conifer canyons. It is being managed under a conservation agreement between the USFWS and Forest Service and thus was removed from candidate status. The Forest Service has agreed to retain it as sensitive. It is subject to several threats, but monitoring indicates that populations are stable. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
50	GILA THISTLE	*Cirsium gilense*		G3G5Q	S2	AZ,NM	Apache , Greenlee, Catron, Sierra	A-S, GIL	Rarity, noxious weeds control programs	This rare plant could be mistaken as a noxious weed and become the victim of eradicaiton efforts. Several biocontrols introduced to control exotic thistles also attack the native ones.
51	MOGOLLON THISTLE	*Cirsium parryi ssp. mogollonicum*		G4T1	S1	AZ	Coconino	COC	Low numbers and extremely narrow range, noxious weeds control programs	The known range of this species is less than 1 square mile. Several biocontrols introduced to control exotic thistles also attack the native ones.
52	WRIGHT'S MARSH THISTLE	*Cirsium wrightii*	C	G2	S1,S2	AZ,NM,TX, Mex	Cochise, Chaves, Guadalupe, Otero, Sierra	LIN	Rarity, limited habitat, loss of wetland habitat, noxious weeds control programs	This plant was made a USFWS Candidate species in 2010. It is is an obligate wetland species and subject to habitat loss from various causes. It is known from only seven sights, with two of these extirpated due to habitat loss. Several biocontrols introduced to control exotic thistles also attack the native ones.

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53	ARIZONA LEATHERFLOWER, CLUSTERED LEATHERFLOWER	*Clematis hirsutissima var. hirsutissima*		G4	S2,S4	AZ,NM, and Rocky Mountains States northward	Apache, Coconino, Colfax, McKinley, Otero, Rio Arriba, Socorro	CAR, CIB, COC, LIN, KAI, SFE (Sensitive only for AZ forests)	Logging, recreation, land development	This plant was formerly considered to be a narrow endemic with the name *Clematis hirsutissima* var. *arizonica.* Variety *arizonica* was placed in synonomy with variety *hirsutissima* in the Flora of North America, Vol. 3, thus the variety now has a much broader range. The plant remains rare in Arizona and has been retained by the State as an endangered plant (Highly Safeguarded under the Arizona Native Plant Law).
54	MEXICAN HEMLOCK PARSLEY	*Conioselinum mexicanum*		G2	S1	AZ,Mex	Santa Cruz	COR	Extreme rarity	This plant is known in southern Arizona from only 2 very old specimens. Extant populations need to be found to evaluate management needs.
55	SANTA CRUZ BEEHIVE CACTUS	*Corypantha recurvata*		G3	S3	AZ, Mex	Santa Cruz	COR	Limited range, grazing, collecting	It has a small range and is considered an AZ rare plant, but CNF surveys have greatly increased the known abundance to 40+ locations. It is being retained of the Sensitive Species List because the State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
56	SMOOTH BABYBONNETS	*Coursetia glabella*		G3?	S1	AZ,Mex	Cochise, Santa Cruz	COR	Rarity, grazing	This plant is known from only 9 locations in southern Arizona. Kearney and Peebles (1960) suggests it is heavily grazed, but quickly recovers. More populations are needed to adequately assess management needs.
57	WOOTON'S HAWTHORN	*Crategus wootoniana*		G3?	S3?	NM	Catron, Grant, Lincoln, Otero	GIL, LIN	Rarity, logging, fire	This rare understory tree grows in canyon bottoms in lower montane conifer forest. It could be sensitive to overstory removal. The effect of fire is unknown.
58	YELLOW LADY'S-SLIPPER	*Cypripedium parviflorum var. pubescens (=C. calceolus var. pubescens, C. pubescens)*		G5T5	S1, S2?	AZ.NM, northern and eastern US	Apache, Graham, Greenlee, Catron, Colfax, Grant, Otero, San Juan, San Miguel, Santa Fe, Taos	A-S, CAR, GIL, LIN, SFE	Recreation, collecting	This showy orchid is common in the northern and eastern US. It reaches the southwestern extent of its range in AZ and NM. It is relatively common in northern NM, but populations are small and scattered. It is rare in southwestern NM and adjacent eastern AZ. The population in Otero Co., NM, based on a very old specimen, may be extirpated. The States of Arizona and New Mexico both list this plant as endangered. It is rare in AZ (Heritage rank of S1). This plant is vulnerable to collecting and recreation (hiking trails go through some populations).
59	GENTRY INDIGO BUSH	*Dalea tentaculoides*		G1	S1	AZ,Mex	Pima, Santa Cruz	COR	Rarity, grazing, flooding	The only extant population is in Sycamore Canyon on the Sierra Vista Ranger District. The canyon is closed to grazing, but trespass cattle come up from Mexico. Plants could be destroyed by scouring floods, the severity of which is partly determined by upstream watershed conditions on the Forest. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
60	ALPINE LARKSPUR	*Delphinium alpestre*		G2G3	S2?	NM,CO	Taos	CAR	Rarity, fire, noxious weeds programs	Alpine and subalpine. Response to fire unknown but it is generally in alpine meadows where fire would not have much effect. Larkspurs are poisonous to cattle and sometimes targeted for eradication.
61	ROBUST LARKSPUR	*Delphinium robustum*		G2?	S?	NM	Colfax, Rio Arriba, Sandoval, Taos	CAR, SFE	Rarity, fire or absence of natural fire regime, noxious weeds control programs	This plant grows in canyon bottoms and aspen groves from about 7,000-11,000 ft. Its response to fire is unknown, and it could possibly benefit from more frequent fire than is presently occurring. Larkspurs are poisonous to cattle and sometimes targeted for eradication. No specimens from Rio Arriba or Sandoval counties are held at the UNM Herbarium, but Warnock (1997) in Flora of North America identifies this plant as occurring in the San Pedro and Jemez mountains, which would include the Cuba and Jemez RDs, Santa Fe NF.
62	METCALFE'S TICK-TREFOIL	*Desmodium metcalfei*		G3G4	SNR,S3?	AZ,NM	Cochise, Coconino, Grant, Sierra	COC, COR, PRE, GIL	Rarity, grazing	There are few recent collections of this rare plant. This plant is likely very palatable.
63	HEIL'S ALPINE WHITLOWGRASS	*Draba heilii*		GNR	SNR	NM	Mora, Rio Arriba	SFE	Extreme rarity, recreation	This is an alpine tundra plant known only from a small part of the Pecos Wilderness. Searches are needed to better evaluste its abundance and threats. It was named in 2009 (Al-Shehbaz. Havard Papers in Botany 14:83-86).
64	SMALL-HEADED GOLDENWEED	*Ericameria microcephala (=Haplopappus m.)*		G2	S2	NM	Rio Arriba, Taos	CAR	Narrow range and specialized habitat, recreation	This plant has a very narrow range in the vicinity of Tres Piedras. It grows on rock outcrops where it is protected from most impacts. Recreational rock climbing is a present minor threat.
65	GUADALUPE RABBITBRUSH	*Ericameria nauseosa var. texensis (=Chrysothamnus n. ssp t.)*		G5T2	S2	NM	Eddy, Otero	LIN	Rarity, oil and gas development	This plant most often occurs on cliff faces or among boulders, which offer protection from most human activities. The interest in oil and gas exploration has recently increased in the region where this plant occurs. Possible imacts from this activity have not yet been evaluated.
66	MOGOLLON FLEABANE	*Erigeron anchana*		G2	S2	AZ	Gila	TON	Narrow range, recreation, fire	This plant is a central Arizona endemic limited to the Sierra Ancha and Mazatzal mountains in Gila County. It grows in limited habitat of granite cliff faces in chaparral through pine forests. These communities can produce very hot fires. The potential effects for this plant are unknown. There are possible impacts to this plant from trail building and recreation.
67	ARID THRONE FLEABANE	*Erigeron arisolius*		G2	S2	AZ, Mex	Cochise, Pima, Santa Cruz	COR	Infrequent occurrence, grazing	This plant is found at scattered localities in extreme southeastern Arizona. It favors moist areas in grasslands and grassy openings that are favorite feeding areas for livestock.

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68	HELIOGRAPH PEAK FLEABANE	*Erigeron heliographis*		G1	S1	AZ	Graham	COR	Extremely limited distribution, recreation, road building and other construction, fire	Endemic to Pinaleno Mts. At high altitudes. Needs study to determine vulnerability to development, recreation, and fire.
69	HESS' FLEABANE	*Erigeron hessii*		G1	S1	NM	Catron	GIL	Extreme rarity, fire	A very narrow endemic of the Mogollon Mountains in southwestern New Mexico. It is presently known from only two locations in the vicinity of Whitewater Baldy in the Gila Wilderness. Each population consists of only a few hundred plants. Plants grow on rock outcrops so there are have few potential impacts, but they could be vulnerable to catastrophic wildfire. The State of New Mexico lists this plant as endangered.
70	CHIRICAHUA FLEABANE	*Erigeron kuschei*		G1	S1	AZ	Cochise	COR	Rarity and specialized habitat, fire, disease	This plant grows on shaded north-facing cliffs in mixed conifer forest. It could be directly vulnerable to fire or the killing of overstory trees from fire or disease could cause the moist shaded habitat to dry out. Logging is not a factor because this plant is mostly in wilderness.
71	FISH CREEK FLEABANE	*Erigeron piscaticus*		G1	S1	AZ	Graham	TON	Extreme rarity, recreation	This plant is historically known from three locations with two of them likely now extirpated. The site on Tonto NF in Fish Creek Canyon of the Superstition Mountains is one of the extirpated sites. This plant is an annual that grows in upper flood plain terraces in moist shady canyon bottoms. It is vulnerable to recreation impacts and perhaps other activities. Searches are needed for additional populations.
72	ROCK FLEABANE	*Erigeron saxatilis*		G3	S3	AZ	Coconino, Yavapai	COC, KAI, PRE	Rarity, recreation	This plant grows on cliff faces in canyons within a limited range. It may be vulnerable to recreational impacts and cliff destruction.
73	SIVINSKI'S FLEABANE	*Erigeron sivinskii*		G2	S1,S2	AZ,NM	Apache, McKinley	CIB	Rarity, specialized habitat, ORVs, mining	This plant is known from only two small areas, Zuni Mountains, McKinley County, NM, and one area of the Navajo Nation. It grows on barren shale slopes of the Chinle formation, a very specialized and limited habitat. These barren hills are sometimes attractive for rour-wheelers and dirt bikes. The Chinle Formation has potential for uraniuim mining, although this is presently not economical.
74	PECOS FLEABANE	*Erigeron subglaber*		G3	S3	NM	San Miguel, Taos	CAR, SFE	Limited distribution, fire	This plant grows in subalpine meadows of high elevation coniferous forest. It could be vulnerable to forest fires, although these communities burn enfrequently. During a recent forest fire, knowledge of this rare plant helped protect it from having fire lines cut through its habitat.
75	HEATHLEAF WILD BUCKWHEAT	*Eriogonum ericifolium var. ericifolium*		G3G4T2	S2	AZ	Coconino, Yavapai	A-S, COC, PRE	Limited distribution, specialized habitat, urban development, grazing	This plant grows on white powdery gypseous limestone of Tertiary lakebed deposits where it occurs with several other rare plants adapted to this specialized habitat. Private land in this habitat in the Verde Valley is being developed resulting in local plant extirpations. The habitat is grazed. The plant from the A/S NF in Coconino Co. is from a different habitat than the others and needs to be verified.
76	MORTON WILD BUCKWHEAT	*Eriogonum mortonianum*		G1	S1	AZ	Mohave	KAI	Extreme rarity, highway maintenance, grazing	This plant is known from a single population. It is not on national forest land although the Kaibab NF has unsurveyed suitable habitat. The population of about 750 plants is partly in highway right-of-way where it could by impacted by highway maintenance. The habitat is grazed. It occurs with the equally rare Atwood wild buckwheat.
77	RIPLEY WILD BUCKWHEAT	*Eriogonum ripleyi*		G2	S2	AZ	Maricopa, Mohave, Yavapai	COC, PRE, TON	Limited distribution, specialized habitat, urban development, grazing	This plant grows on white powdery gypseous limestone of Tertiary lakebed deposits where it occurs with several other rare plants adapted to this specialized habitat. Private land in this habitat in the Verde Valley is being developed resulting in local plant extirpations. The habitat is grazed.
78	ATWOOD WILD BUCKWHEAT	*Eriogonum thompsonae var. atwoodii*		G4T1	S1	AZ	Mohave	KAI	Extreme rarity, highway maintenance, grazing, brush clearing, ORVs	This plant is known from two populations. It is not on national forest land although the Kaibab NF has unsurveyed suitable habitat. The population is partly in highway right-of-way where it could by impacted by highway maintenance. The habitat is grazed. It occurs with the equally rare Morton wild buckwheat.
79	VILLARD'S PINCUSHION CACTUS	*Escobaria villardii*		G2	S2	NM	Doña Ana?, Otero	LIN	Limited distribution	This plant is confirmed only from the western slope of the Sacramento Mountains; there is a doubtful reported occurrence from the Organ Mts. The habitat is grazed, but the rocky habitat of this cactus is usually not impacted. The State of New Mexico lists this plant as endangered.
80	WISLIZENI GENTIAN	*Gentianella wislizeni*		G2	S1	AZ,Mex	Cochise, Greenlee	A-S, COR	Limited distribution, grazing, recreation	This plant grows in high elevation clearings in pine-oak and mixed conifer forests at 2,060-2,880 m (6,880-9,600 ft). It appears to benefit from some disturbance such as low intensity fire. It flowers in late summer when its habitat tends to be most heavily grazed thus the seed crop is lost or reduced with grazing, which could be critical for a plant with low population numbers. Some of its habitats in the Chiricahua Mountains gets heavy recreational use.

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81	SHOOTINGSTAR GERANIUM	*Geranium dodecatheoides*		GNR	SNR	NM	Lincoln	LIN	Extreme rarity, recreation, collecting	This plant is known only from Three Rivers Canyon on the western slope of Sierra Blanca. This new and very distinctive geranium may be vulnerable to collecting as a novelty or for potential cultivation because the wild geraniuims are popular garden plants. More searches for this plant are needed to evaluate its abundance and threats. It was named in 2011 (Aedo and Alexander. Rhodora 113:252-259).
82	BARTRAM STONECROP	*Graptopetalum bartramii*		G3	S3	AZ,Mex	Pima, Santa Cruz	COR	Specialized habitat, limited distribution, low numbers, mining, road construction and maintenance, collecting	This is a cliff plant. Some populations occur in historic and presently active mining districts. Some plants occur near roads where they could be impacted by road maintenance or improvements. Stonecrops are sometimes collected for the cactus and succulent trade and rare species, such as this one, may be particularly sought.
83	FLAGSTAFF PENNYROYAL	*Hedeoma diffusum*		G3	S3	AZ	Coconino, Yavapai	COC, KAI, PRE	Limited range, urban expansion, loss of natural fire regime	This plant occurs near Flagstaff and on the rims of Oak Creek and Sycamore canyons on the Coconino and Prescott NF. Urban expansion on private land has destroyed some populations. It is in habitats on national forest that would be desirable for development and could be proposed for land exchange. It benefits from fire in some situations.
84	ARIZONA SNEEZEWEED	*Helenium arizonicum*		G3	S3	AZ	Apache, Coconino, Gila, Navajo	A-S, COC	Limited range, wetland loss, noxious weeds	This plant is endemic to northcentral Arizona in Coconino, Gila, Apache, and Navajo counties. It occurs around wet places such as ponds, lakes, and roadside ditches. It can be abundant in its habitat and does not appear to be grazed even though its habitat can have heavy grazing impacts. It is vulnerable to drainage or drying of wetlands. Leafy spurge, spotted knapweed, and Dalmatian toadflax noxious weeds are threats in its habitat.
85	ARIZONA SUNFLOWER	*Helianthus arizonensis*		G4?	SNR, S4?	AZ,NM	Coconino, Navajo, Catron	A-S, COC	Extreme rarity, grazing	This plant grows in dry, frequently sandy soil at 4,000-7,000 ft. It has a fairly broad range but appears to be very rare. It is perhaps being confused with the more common blueweed (*Helianthus ciliaris*) that is taller and has reddish rather than yellow disk flowers. This plant appears to grow in habitats that are regularly grazed, but more information is needed to fully assess potential management impacts. There is a known collection from the east side of Anderson Mesa.
86	RUTTER'S FALSE GOLDENASTER	*Heterotheca rutteri*		G2	S2	AZ,Mex	Cochise, Pima, Santa Cruz	COR	Rarity, loss of grasslands, loss of natural fire regime	This species is dependent on healthy grassland habitats and may be vulnerable to loss of grassland. Fire may be an important management factor because it is found in habitats that historically burned frequently. The rarity of this plant is puzzling because it has many close relatives that are very weedy.
87	EASTWOOD ALUM ROOT	*Heuchera eastwoodiae*		G3	S3	AZ	Coconino, Gila, Maricopa, Yavapai	A-S, COC, PRE, TON	Limited range, fire	This species grows in rocky areas on hillsides and along streams from chaparral up to ponderosa pine forest. It is known only from central Arizona. It may be vulnerable to fire, particularly in chaparral habitats.
88	ARIZONA ALUM ROOT	*Heuchera glomerulata*		G3	S3,S1	AZ,NM	Apache, Cochise, Gila, Graham, Greenlee, Navajo, Hidalgo	A-S, COR, TON	Rarity, wetland impacts from livestock, wildlife, or recreation	This species is found in shaded rocky slopes in humus soil near seeps, streams, and riparian areas of mountain ranges in southeastern Arizona. Its habitat is limited and it is infrequently collected. Its wetland habitats are vulnerable to multiple impacts.
89	SANDIA ALUM ROOT	*Heuchera pulchella*		G3	S3	NM	Bernalillo, Sandoval, Torrance	CIB	Rarity, recreation	Restricted to the Sandia and Manzano mountains as currently understood. Plants along Sandia Crest could be vulnerable to recreation impacts.
90	CAPITAN PEAK ALUMROOT	*Heuchera woodsiaphila*		GNR	SNR	NM	Lincoln	LIN	Extreme rarity, recreation	This plant is endemic to the upper elevations of the Capitan Mts. It was named in 2008 (Alexander. JBRIT 2:447-453). Many plants grow near existing hiking trails.
91	COLEMAN'S CRESTED CORALROOT	*Hexalectris colemanii*		GNR	SNR	AZ	Cochise, Pima, Santa Cruz	COR	Mining, collecting	The plants in Arizona were formerly included in *H. revoluta*, but are now considered a distinct species making them even rarer than before (Kennedy and Watson. Systematic Botany 35:64-76 (2010)). Some plants in the Santa Rita Mts are threatened by mining.
92	CHISOS MT. CRESTED CORALROOT	*Hexalectris revoluta*		G1G2	SNR	NM,TX,Mex	Eddy	LIN	Extreme rarity, collecting	This plant is rare in the Big Bend, Texas, northern Mexico, and the Guadalupe Mts. Orchids, particularly rare species, are sometimes collected by hobbyists interested in certain groups. Plants from Arizona are now a separate species, *Hexalectris colemanii*.
93	WOOTON'S ALUMROOT	*Heuchera wootonii*		G1G2	S1	NM	Lincoln	LIN	Extreme rarity, collecting, sky island	Add to list. This plant is endemic to the upper elevations of the Sierra Blanca range. Many plants grow near the existing hiking trails and just below the alpine areas.
94	ARIZONA CORALROOT	*Hexalectris spicata var. arizonica*		G5T2T4	SNR,SNR	AZ,NM,TX,Mex	Cochise, Pima, Santa Cruz, Doña Ana, Otero, Hidalgo, Sierra	COR, GIL, LIN	Extreme rarity, fire, collecting	This variety is extremely rare and sporadic mostly occurring under oaks. Response to fires and other disturbance are unknown. Orchids, particularly rare species, are sometimes collected by hobbyists interested in certain groups. The State of New Mexico lists this plant as endangered. NMC Herbarium has one specimen from the Black Range (Gila NF) and two specimens from the Sacramento Mts. (Lincoln NF).

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95	TEXAS PURPLE-SPIKE	*Hexalectris warnockii*		G2	S1	AZ,TX,Mex	Cochise	COR	Extreme rarity, fire, collecting	This plant is sporadic and extremely rare across a broad area in Texas, southeastern Arizona, and Baja, Mexico. There are only four locations in Arizona (only one on Forest lands, which was last seen in 1992 despite several later searches). Response to fires and other disturbance are unknown. Orchids, particularly rare species, are sometimes collected by hobbyists interested in certain groups. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
96	MOGOLLON HAWKWEED	*Hieracium brevipilum (=H. fendleri var. mogollense)*		G4T2?	SNR,S2?	AZ,NM	Apache, Catron	A-S, GIL	Rarity, fire	This plant has been collected only a few times and much about it is uncertain. Its likely habitat is coniferous forest understory. This plant's response to logging and forest fire have not been studied. Additional field surveys are needed to determine its abundance and habitat requirements.
97	RUSBY HAWKWEED	*Hieracium abscissum (= H. rusbyi)*		G2?	S1,SNR	AZ,NM,Mex	Cochise, Graham, Pima, Catron, Grant	COR, GIL	Rarity, fire	This plant is found in mixed confier forests above 8,000 ft. Of the four sites in Arizona, only one has been confirmed since 1990. Its status in New Mexico is unknown. Its response to catastrophic forest fire is likely negative.
98	NEW MEXICO BITTERWEED	*Hymenoxys ambigens var. neomexicana*		G3?T2?	S2?	NM	Hidalgo	COR	Extreme rarity, noxious weed control	This variety is known from near the Forest in the NM bootheel. This narrow endemic occurs in small populations and is known from only three localities, all within a 30 km area. It is not well studied and needs additional field surveys to determine abundance and potential threats. Members of this genus are often considered to be noxious weeds and could be targeted for control; although with the rarity and remote locations of this plant, this is unlikely.
99	TALL BITTERWEED	*Hymenoxys brachyactis*		G3	S3	NM	Lincoln, Socorro, Torrance	CIB	Narrow range, noxious weed control	This narrow endemic can be locally abundant and occurpies disturbed habitats, but it could be mistaken for a noxious weed and become the subject of attempted eradication.
100	SIERRA BLANCA CLIFF DAISY	*Ionactis elegans (=Chaetopappa e.)*		G2	S2	NM	Lincoln	LIN	Very narrow range, fire	Known from two small areas on the east and west slopes of Sierra Blanca. Grows on cliffs, but fire could affect some sites.
101	KAIBAB BLADDERPOD	*Lesquerella kaibabensis*		G2	S2	AZ	Coconino	KAI	Extremely narrow range, grazing, highway maintenance	This plant grows in the driest most exposed sites of subalpine meadows. It is fairly common in its extremely narrow range. OHV use in habitat is prohibited. The habitat is grazed. Some plants grow on the highway right-of-way. Due to the extremely narrow range, this plant should have regular monitoring to determine population trends.
102	LEMON LILY	*Lilium parryi*		G3	S2	AZ,CA,Mex	Cochise, Pima, Santa Cruz	COR	Rarity, fire, flooding, collecting, grazing	There are only a few hundred plants in Arizona and a few thousand in California. This plant grows in wet shady canyon bottoms along perennial streams. These areas are vulnerable to the effects of scouring floods, often after severe watershed damage from forest fires. It is an attractive plant vulnerable to collecting. Lemon lily grows in riparian areas that are easily degraded by grazing or by the indirect effects of grazing induced watershed damage. No Arizona populations are presently grazed.
103	WOOD LILY	*Lilium philadelphicum*		G5	SU, S3?	AZ,NM, eastern and northern US, Can	Los Alamos, Otero, Rio Arriba, Sandoval, San Miguel, Santa Fe	LIN, SFE	drought, water management, grazing, ORVs, collecting	This is a common plant farther north. It has only limited populations in New Mexico and was only reported in Arizona once in 1869 without a definite locality. It is a wetland plant that is sensitive to wetland damage and alteration. It has a large bulb and collecting this attractive plant is a threat. The State of New Mexico lists this plant as endangered.
104	CHIRICAHUA MUDWORT	*Limosella pubiflora*		GUGHQ	SX,SH	AZ, NM	Cochise, Hidalgo	COR	Extreme rarity, wetland loss from multiple factors	This is an extremely rare wetland plant. The Arizona HDMS ranks it as "presumed extirpated" from AZ and the New Mexico NHP ranks it as "likely extirpated" from NM, although it was collected in NM in 1991. The taxonomy of this species is in doubt, but even the species in which it would be included, Limosella aquatica,is seriously depleted in the two states from wetland loss.
105	ALAMOS DEER VETCH	*Lotus alamosanus*		G4	S1	AZ, Mex	Santa Cruz	COR	Rarity, flooding, grazing	This species has only two recent occurrences in Arizona both in wilderness areas, although it is reported to be abundant locally in Mexico. It is a semi-aquatic perennial that occurs in wet soil or sand in springs, seeps, and streams of canyons or meadows. This habitat is sensitive to natural floods, grazing impacts, and watershed degradation.
106	HORSESHOE DEER VETCH	*Lotus mearnsii var. equisolensis*		G3T1	S1	AZ	Maricopa	TON	Limited distribution, specialized habitat, urban development, grazing	This plant grows on white powdery gypseous limestone of Tertiary lakebed deposits where it occurs with several other rare plants adapted to this specialized habitat. However, this plant, which was not named until 1996, is known only from the Horseshoe Reservoir area. The habitat is open to grazing, but is only lightly grazed because of limited forage. There is also unauthorized ORV use in the vicinity of the lake.
107	HUACHUCA MOUNTAINS LUPINE	*Lupinus huachucanus*		G2	S2	AZ	Cochise, Pima, Santa Cruz	COR	Rarity, logging, fire	This plant is restricted to the Chiricahua, Huachuca, and Santa Rita mountains where it occurs in scattered, but sometimes dense populations. This plant occurs in pine forest on moderate to steep slopes. It is likely sensitive to overstory removal from logging or fire.

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108	BROADLEAF LUPINE	*Lupinus latifolius ssp. leucanthus*		G5T1T2	S2	AZ, UT	Yavapai	PRE	Rarity, riparian damage	This plant is mostly restricted to Santa Maria and Bradshaw mountains where it occurs along several perennial and intermittent streams between 4800-7000 ft. Responses to fire are unknown. Its habitat is subject to salt cedar and other noxious weeds invasion.
109	LEMMON'S LUPINE	*Lupinus lemmonii*		G1G2Q	SNR	AZ	Cochise, Pima	COR	Narrow range, rarity	This plant is endemic to the mountains of southeastern Arizona where it occurs mostly in the Chiricahua and Dragoon mountains in open grassland, juniper and oak communities at 4,000-7,300 ft.
110	MAPLELEAF FALSE SNAPDRAGON	*Mabrya acerifolia (=Maurandya a.)*		G2	S2	AZ	Maricopa, Pinal	TON	Narrow range, mining, recreation	This plant is a narrow endemic confined almost completely to the Superstition Mountains east of Phoenix where it grows on shaded rock ledges and cliffs. It is sometimes locally common. The name in Kearney and Peebles is *Maurandya acerifolia.* This plant grows in historical mining areas and in the heavily used Superstition Wilderness.
111	SUPINE BEAN	*Macroptilium supinum*		G2	S1	AZ,Mex	Santa Cruz	COR	Rarity, grazing, ORVs, road construction and maintenance, noxious weeds control	There are only about 12 populations of this plant in the U.S. with a relatively small acreage of occupied habitat. This plant grows on ridge tops and gentle slopes of rolling hills in semi-desert grassland or grassy openings in oak-juniper woodlands. These habitats are grazed and this plant is eaten by rodents and livestock. Some plants are near roads where they could be damaged by road maintenance or construction, or by highway right-of-way noxious weeds control efforts.
112	ARIZONA MANIHOT	*Manihot davisiae*		G4	S2	AZ,Mex	Pima, Santa Cruz	COR	Extreme rarity, grazing	There are only 11 specimen records from the U.S., the most recent collected in 1991 and the others collected in 1980 or earlier. Arizona manihot is unpalatable to ungulates and not grazed, but it grows in habitats that grazing can easily degrade. The effects from grazing-induced habitat alteration have not been studied.
113	CHAMA BLAZING STAR	*Mentzelia conspicua*		G2	S2	NM	Rio Arriba	CAR, SFE	Rarity, specialized habitat, road maintenance, ORVs, invasive exotic species	This plant is a narrow endemic of the upper Chama River valley in Rio Arriba County, NM, where it grows in specialized habitat of gray to red shales and clays of the Mancos and Chinle formations. These open areas are attractive to ORV users. This plant is early successional and is crowded out by more aggressive often introduced species like sweet clover.
114	SPRINGER'S BLAZING STAR	*Mentzelia springeri*		G2?	S2?	NM	Los Alamos, Sandoval, Santa Fe	SFE	Extreme rarity, specialized habitat, road maintenance, mining	Occurs only on pumice in the Jemez Mts. It needs disturbance such as road cuts. Vulnerable to mining.
115	WIGGINS MILKWEED VINE	*Metastelma mexicanum (=Cynanchum wigginsii)*		G4	S1S2	AZ,Mex	Pima, Santa Cruz	COR	Rarity, habitat alterations	This plant is known from only 11 sites in the U.S. It occurs on open slopes in open oak woodland where it grows underneath shrubs and twining on grasses and shrubs. It is likely sensitive to habitat alterations from fire or grazing.
116	LADIES'-TRESSES	*Microthelys rubrocallosa (=Schiedeella r., Spiranthes r.)*		GNR	SNR	NM	Otero	LIN	Rarity	This is the only occurrence of this species in the US. It is otherwise known from the Sierra Madre of Mexico. It was discovered in late 2004 by Dr. Ronald Coleman, an orchid expert.
117	SOUTHWESTERN MUHLY	*Muhlenbergia palmeri (=M. dubioides)*		GNR	S1	AZ, Mex	Cochise, Pima, Santa Cruz	COR	Rarity, grazing	This plant has been collected at only seven different localities in Arizona. There are no data from which to determine population trends. Southwestern muhly is palatable to ungulates. It occurs in woodland canyons and along stream courses that ungulate grazing could both directly and indirectly affect.
118	SYCAMORE CANYON MUHLY	*Muhlenbergia elongata (=M. xerophila)*		G4	S1	AZ,Mex	Pima, Santa Cruz	COR	Rarity, grazing	This plant has been collected at only ten different localities in Arizona. There are no data from which to determine population trends. Sycamore Canyon muhly is palatable to ungulates. It occurs around rocky seeps in woodland canyons and in wet soil adjacent to bedrock streambeds that ungulate grazing could both directly and indirectly affect.
119	HEARTLEAF GROUNDSEL	*Packera cardamine (=Senecio cardamine)*		G3	S2,S3	AZ,NM	Apache, Catron	A-S, GIL	Narrow range, fire, logging	An endemic to climax spruce-fir forest in the high mountains of southwestern New Mexico and adjacent Arizona. Populations are small and sporadic, but not infrequent in suitable habitat. Many populations of this plant are on steep inaccessible slopes. Its response to timber harvest and forest fire have not been studied.
120	TOUMEY GROUNDSEL	*Packera neomexicana var. toumeyi (=Senecio n. var. t.)*		G5T2Q	S2	AZ	Cochise, Gila, Pima	COR, TON	Rarity, fire, logging	This is a plant of infrequent occurrence in the Chiricahua, Huachuca, Santa Catalina, and Pinal mountains. It occurs mostly in pine forest at 5,200-9,200 ft in elevation. It may be negatively affected by overstory removal throuth fire or logging, but this needs study
121	SPELLENBERG'S GROUNDSEL	*Packera spellenbergii (=Senecio s.)*		G2?	S2	NM	Harding, Union	CIB	Rarity, limited habitat, mining	This plant is a narrow endemic of New Mexico grasslands where it grows on specialized habitat of gravelly balds and mesa rims of chalky, sandy limestone in short grass steppe and juniper savanna. These gravelly balds are sometimes mined for roadbed material.

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122	VIRLET PASPALUM	*Paspalum virletii*		G3?	S1	AZ, Mex	Cochise, Santa Cruz	COR	Extreme rarity, grazing	This plant is known from only two localities in Arizona and has not been collected since 1970. Its habitats are sandy soil of canyon bottoms in semi-desert grassland and grassy areas in Madrean evergreen woodland. This is a palatable grass and its habitats are subject to grazing.
123	ARIZONA PASSIONFLOWER	*Passiflora arizonica*		GNR	SNR	AZ,Mex	Pima, Santa Cruz	COR	Rarity	This species was recently elevated to the rank of full species (Goldman in Madrono 50:243-264) after formerly being considered a variety of *Passiflora foetida* . It occupies the Lower Sonoran Zone at elevations up to 5,900 feet. There is one collection from near the Pajarito Wilderness. Other U.S. collections are from Buenos Aires NWR and the Baboquivari Mts. There are a few widely scattered collections from Sonora, Mex., but its abundance and status in Mexico are unknown. It grows on rocky desert hillsides and should be evaluated for possible impacts from FS activities.
124	BEARDLESS CHINCHWEED	*Pectis imberbis*		G3	S1	AZ,Mex	Cochise, Pima, Santa Cruz	COR	Rarity, grazing, road maintenance	This plant grows in open semi-desert grasslands and Madrean evergreen woodlands. Within these communities, it has also been found on steep south-facing road cuts of decomposing granite. This plant has been recorded from about 12 localities in Arizona from 1937 to 1993. Several populations grow on road cuts that could be damaged or destroyed by road maintenance. Plants also occur in desert grassland communities subject to grazing, but plants are too rare to assess possible grazing impacts.
125	KAIBAB PINCUSHION CACTUS	*Pediocactus paradinei*		G2	S2	AZ	Coconino	KAI	Extremely limited range, small mammal predation, fire, loss of natural fire regime, collecting	This cactus occurs in grassy openings in pinyon-juniper woodland and shrub grassland plant communities at 1,520-2,130 m (5,000-7,000 ft) in elevation. The shrub grasslands are dominated by big sage (*Artemesia tridentata*) and blue grama (*Bouteloua gracilis*). The major threats to this cactus are drought, small mammal predation, human collecting, and increased fire frequencies due to non-native annual grasses (cheatgrass). Plants appear relatively tolerant of low intensity fire, but high intensity fire can kill plants. In the long-term, these cacti are vulnerable to community-type changes that favor woodland canopy closure or increases in sagebrush dominance. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
126	FICKEISEN PINCUSHION CACTUS	*Pediocactus peeblesianus var. flickeisniae*	**P***	G1G2T1T2	S1S2	AZ	Coconino, Mohave	KAI	Rarity, limited distribution, collecting, insect and rodent predation	This cactus is confined to small sites at scattered locations in northwestern Arizona. Most of the habitat is on BLM and Navajo Nation. There is limited habitat on the North Kaibab Ranger District. This interesting little cactus is prized by collectors. Rodent predation has been noticed, especially during drought. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
127	CHIHUAHUA SCURF-PEA	*Pediomelum pentaphyllum*		G1	SH,S1	AZ,NM,TX, Mex	Cochise, Hidalgo	COR	Extreme rarity, habitat conversion, collecting	This plant grows in desert grassland or among creosote bush in sandy or gravelly loam soils. It is extremely rare, perhaps partly due to habitat type conversions from desert grassland to shrub dominated communities. It is reportedly a medicinal plant for native Americans and perhaps once collected although it is now too rare in the U.S. to be under any collecting pressure. There are no confirmed collection from NFS lands but a specimen was collected along State Highway 181 near Chiricahua National Monument in 1963. This collection is very near the Coronado NF and there is likely suitable habitat on NFS lands.
128	VERDE BREADROOT	*Pediomelum verdiensis*		G1	S1	AZ	Coconino, Yavapai	COC, PRE, TON	Limited distribution, specialized habitat, urban development, grazing	Add to list. This plant grows on white powdery gypseous limestone of Tertiary lakebed deposits where it occurs with several other rare plants adapted to this specialized habitat. Private land in this habitat in the Verde Valley is being developed resulting in local plant extirpations. The habitat is grazed. This palnt was named in 2010 (Welsh and Licher, Western North American Naturalist 70:9-18).
129	LYNGHOLM'S BRAKEFERN	*Pellaea lyngholmii*		G2?Q	SNR	AZ	Coconino	COC	Extreme rarity	Type collection from Fay Canyon, Coconino NF; endemic to Arizona. Not many specimens collected.
130	ALAMO PENSTEMON	*Penstemon alamosensis*		G3	S3	NM	Doña Ana, Lincoln, Otero	LIN	Rarity, collecting, grazing	This plant grows only on the eastern slope of the San Andres Mountains and western slope of the Sacramento Mountains. This plant grows in sheltered rocky areas on canyon sides and bottoms. It is an attractive plant and sometimes collected by gardeners or collectors specializing in the genus Penstemon. Some plants grow in sites accessible to grazing.

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131	GUADALUPE PENSTEMON	*Penstemon cardinalis ssp. regalis*		G3T2	S2	NM, TX	Eddy, Otero	LIN	Rarity, limited range, collecting, oil and gas exploration	This plant grows on limestone slopes and canyon bottoms in montane scrub, piñon-juniper woodland, and lower montane coniferous forests within a very limeted range in the Guadalupe Mountains of New Mexico and Texas. It is known from only six occurrences. It grows in remote localities not normally subject to threats. Penstemons are sometimes collected by gardeners or collectors specializing in the genus Penstemon. There is new interest in this general region for oil and gas exploration.
132	SUNSET CRATER BEARDTONGUE	*Penstemon clutei*		G2	S2	AZ	Coconino	COC	Rarity, specialized habitat, ORVs	This plant is known only from the cinder fills area northeast of Flagstaff. There are several discontinuous populations surrounding Sunset Crater. It grows in cinder fields with little soil development or other vegetation in Ponderosa pine forest. These relatively open habitats are extensively used by OHVs and noxious weeds threaten the species.
133	CATALINA BEARDTONGUE	*Penstemon discolor*		G2	S2	AZ	Graham, Pima, Pinal, Santa Cruz	COR	Infrequent occurrence, recreation, grazing	This plant occurs in soil pockets of bare rock outcrops in chaparal or pine-oak communities. It is known from 14 populations scattered in southeastern Arizona. One population is in an area of recreational rock climbing. Several populations are in grazing areas, but impacts are likely small. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
134	MAGUIRE'S BEARDTONGUE	*Penstemon linarioides ssp. maguirei*		G4T1	S1,SH	AZ,NM	Greenlee, Grant	A-S, GIL	Extreme rarity, mining	Collected only 4 time, the most recent in 1994 on private land near Morenci, AZ. Could occur on either the Gila or A/S NFs. The known plants occur in an active mining district.
135	METCALFE'S PENSTEMON	*Penstemon metcalfei*		G1	S1	NM	Sierra	GIL	Rarity, extremely narrow distribution, fire	Occurs on cliffs and north-facing slopes in lower and upper montane coniferous forest at 6,600-9,500 ft. It is known from only 2 locations in a remote part of the Black Range. Responses to fire and other management are unknown.
136	FLAGSTAFF BEARDTONGUE	*Penstemon nudiflorus*		G2G3	S2S3	AZ	Coconino, Yavapai	COC, KAI, PRE	Rarity, grazing, fire	This plant is restricted to small, scattered limestone and sandstone outcrops of relatively undisturbed habitats at elevations ranging from 4,500 to 7,000 feet. Associated vegetation includes ponderosa pine, gambel oak, blue grama, and alligator juniper. Much of its habitat is grazed. Species responded favorably to low intensity fire in Trick Fire, Kaibab NF.
137	SAN MATEO PENSTEMON	*Penstemon pseudoparvus*		G3?Q	S3?	NM	Socorro	CIB	Rarity, narrow range, grazing, fire, observatory construction	This plant occurs in open ponderosa pine or spruce-fir forests and high montane meadows at 9,000-10,000 ft in elevation. It is restricted to the Magdalena and northern San Mateo mountains. Expansion of research facilities in the Magdalena Mts will remove some habitat. The habitat is grazed with unknown effects. Populations are at risk from catastrophic forest fire.
138	CHIRICAHUA ROCKDAISY	*Perityle cochisensis*		G1G2	S1S2	AZ	Cochise	COR	Extreme rarity, narrow range, specialized habitat, recreation, fire	This plant is endemic to rhyolite cliffs in the Chiricahua Mts. Most occurrences are on Chiricahua National Monument, but there are two recorded occurrences on the Forest. Recreation is a concern for the National Monument. Responses to fire are unknown.
139	SALT RIVER ROCKDAISY	*Perityle gilensis var. salensis*		G2?T2?	S2?	AZ	Gila	TON	Extreme rarity, dam building	This plant grows on cliffs of the Salt River Canyon. It is presently known from a single locations where U.S. Highway 60 crosses the canyon on the San Carlos Indian Reservation. It likely occurs on downstream cliffs on the Tonto NF. Its habitat makes it secure from most activities, except from any extreme changes in the canyon.
140	FISH CREEK ROCKDAISY	*Perityle saxicola*		G1	S1	AZ	Gila, Maricopa	TON	Extremely limited distribution, dam, road, and trail construction	This plant grows on cliffs. It has few known sites all within a limited range. It can be common at known sites. Threats are limited to major activities requiring blasting. Roosevelt Dam reconstruction in the 1990s may have impacted some plants.
141	CLOUDCROFT SCORPIONWEED	*Phacelia cloudcroftensis*		G1	S1	NM	Otero	LIN	Extreme rarity, road maintenance, herbicides	This extremely rare plant is presently know mostly from along Highway 82 where it is vulnerable to activities associated with the highway. It was named in 2007 (Atwood. Novon 17:403-446).
142	ARIZONA PHLOX	*Phlox amabilis*		G2	S2	AZ	Coconino, Mohave, Navajo, Yavapai	A-S, COC, KAI,PRE, TON	grazing, fire	This plant is a central Arizona endemic. It occurs in open, exposed, limestone or basalt rocky slopes within pinyon-juniper and ponderosa pine-gambel oak communities. These communities are grazed and often subject to catastrophic fire and unnatural fire regimes. SEINet has over 50 specimens of this species ranging from the Arizona Strip to near Phoeniz and east to Show Low. It may be too common to include as sensitive.
143	BROADLEAF GROUND CHERRY	*Physalis latiphysa*		G1	S1	AZ	Cochise, Graham, Pima, Santa Cruz	COR	Extreme rarity, grazing	This plant occurs in scattered localities in SE Arizona, but it is extremely rare with only four known occurrences. Its habitat is washes in desertscrub or desert grassland mostly below the elevation of national forests. Cattle often congregate in this habitat for shade or scarce green forage.

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144	ALCOVE BOG ORCHID	*Platanthera zothecina*		G2	S2	AZ, CO,UT	Coconino, Navajo	COC	Few occurrences, specialized habitat, spring development, drought	A regional endemic of the Colorado and Green rivers and their tributaries in eastern Utah, immediately adjacent northwest Colorado, and extreme northern Arizona. There are fewer than 30 sites known and these are small, scattered, and with few individuals. It grows at seeps and in hanging gardens. Water development and natural drought are threats. It is known from the West Fork of Oak Creek Canyon.
145	HINCKLEY'S POLEMONIUM	*Polemonium pauciflorum ssp. hinckleyi*		G3T2Q	S1	AZ,TX, Mex	Cochise	COR	Very localized in Arizona, recreation, grazing, fire	This plant is known from Big Bend Texas and Mexico, but only occurs in the Chiricahua Mountains in Arizona. It occurs in Ponderos pine and oak forrests up to Douglas fir and white fir forests in various habitats with moderate disturbance. The general area is grazed and has heavy recreational use. This plant's response to fire is unknown although it has been found in a recently burned area.
146	HUALAPAI MILKWORT	*Polygala rusbyi*		G3	S3	AZ	Mojave, Yavapai, Maricopa	COC, PRE, TON	Limited range, infrequent occurrence, recreation, grazing, private land development	This plant is a narrow endemic that occurs only on Verde Formation soils on National Forest lands. It shares habitat with several other rare and endemic plants, including the endangered Arizona cliffrose. In the Verde Valley, much habitat on private land is being developed. It may be subject to recreation pressures around Horseshoe Lake.
147	WHITE-FLOWERED CINQUEFOIL	*Potentilla albiflora*		G1G2	S1S2	AZ	Graham, Santa Cruz	COR	Extremely limited range, fire, or loss of natural fire regime	This plant is known only from the Pinaleno Mountains where it is locally abundant. It grows in open coniferous forests and rocky slopes at 7,500-10,000 ft elevation. Its response to fire or the effect on its habitat from unnatural fire regimes are unknown
148	CHIRICAHUA CINQUEFOIL	*Potentilla rhyolitica var. chiricahuensis*		GNR	SNR	AZ	Cochise	COR	Extremely limited range, recreation, grazing	This taxon was newly name in 2007 (Journal of the Botanical Research Institute of Texas 1(1):47-57). It is endemic to the upper elevations of the Chiricahua Mts in rocky openings in mixed conifer forest. Its abundance and potential impacts from Forest activities need to be evaluated.
149	HUACHUCA CINQUEFOIL	*Potentilla rhyolitica var. rhyolitica*		GNR	SNR	AZ	Cochise, Santa Cruz	COR	Limited range, recreation	This taxon was newly name in 2007 (Journal of the Botanical Research Institute of Texas 1(1):47-57). It is endemic to the summit areas of the Huachuca and Santa Rita mountains where it forms dense clumps in crevices of rhyolitic and quartzitic outcrops. Its abundance and potential impacts from Forest activities need to be evaluated.
150	MEXICAN TANSY ASTER	*Psilactis gentryi (=machaeranthera mexicana)*		G3	S1	AZ,Mex	Cochise	COR	Extreme rarity in U.S., grazing, wetland disturbance	This plant is know from only two collections in the U.S., both from the Huachuca Mts. It grows in moist habitats that might include highland meadows, fields, roadsides, and stream and lake margins. These habitats can be subject to heavy grazing and other disturbances.
151	WHISK FERN	*Psiilotum nudum*		G5	S1	AZ, Southeastern US, HI	Santa Cruz	COR	Extreme rarity in AZ, collecting	Although common in the tropics worldwide, this is a very rare plant in AZ. It is a very primative form of fern that is often collected as a novelty or for botanical study. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
152	DAVIDSON'S CLIFF CARROT	*Pteryxia davidsonii*		G2	S1,S2	AZ, NM	Greenlee, Catron, Grant	A-S,GIL	Extreme rarity, grazing, riparian degradation, fire	This plant grows in cool, rocky places in piñon-juniper woodland and lower montane coniferous forest at 6,500-8,000 ft. It was also once collected from a moist creek bed. It is rarely collected and poorly understood. The effects of grazing (particularly in creek bottoms), riparian degradation, and fire on this plant have not been studied
153	PARISH'S ALKALI GRASS	*Puccinellia parishii*		G2	S2,S1	AZ,NM,CA,CO	Apache, Cochise, Navajo, Yavapai, Catron, Cibola, Grant, Hidalgo, McKinley, Sandoval, San Juan	A-S	Rarity, specialized habitat, wetlands loss or modification	This plant grows in a specialized habitat of alkaline springs or seeps at only a few sites over a fairly broad range from New Mexico to California. Its biggest threat is groundwater withdrawals that lower the water table and dry up its desert spring habitat. The States of New Mexico and Arizona list this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law). It does not occur on NFS lands in New Mexico
154	GRAND CANYON ROSE	*Rosa stellata ssp. abyssa*		G4T2	S2	AZ	Coconino, Mohave	KAI	Rarity, wildlife browsing, uranium mining	Plants are found in a few scattered locations in northwestern Arizona near the Grand Canyon. Plants grow on or near canyon rims or on the tops of cliffs at the edges of mesas or plateaus. Wildlife may browse on this plant. It grows in breccia pipes where uranium prospects have been concentrated.
155	ERTTER'S ROSE	*Rosa woodsii var. ertterae*		GNR	SNR	AZ	Coconino	COC	Rarity, recreation	This plant is a variety of the very common *Rosa woodsii*. It is endemic to the West Fork of Oak Creek Canyon. This canyon gets heavy recreational use. This variety was named in 2010 (Lewis and Ertter. Novon 20:47-52).
156	SIERRA BLANCA CINQUEFOIL	*Potentilla sierrae-blancae*		G2?	S2?	NM	Lincoln, Otero	LIN	Rarity, recreation, ski area maintenance	This plant occurs in alpine tundra on Sierra Blanca, with occassional plants on rock outcrops as low as 8,000 ft. Recreation in this area is increasing. This plant occurs in the same alpine habitat as three other FS Sensitive plants.

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157	BLUMER'S DOCK	*Rumex orthoneurus*		G3	S3,S2?	AZ,NM	Apache, Cochise, Coconino, Gila, Catron, Mora, Otero, San Miguel, Taos	A-S, CAR, COC, COR, GIL, LIN, SFE, TON (sensitive only for AZ forests)	Recreation, grazing, wetland alterations	Taxonomic study has changed the concept of this species. Many plants formerly identified as R. occidentalis are now considered to be R. orthoneurus greatly expanding the range. The Heritage Program ranks are based on the old narrower concept of the species. The State of Arizona has retained this plant on its endangered list (Highly Safeguarded under the Arizona Native Plant Law).
158	ARIZONA WILLOW	*Salix arizonica*		G2G3	S2,S1	AZ,NM,CO,UT	Apache, Mora, Rio Arriba, Taos	A-S, CAR, SFE	Rarity, wildlife and cattle grazing, disease	This is a high elevation shrubby willow. It has a fairly broad distribution, but is only abundant at a few sites in Utah. High elevation meadows are sometimes heavily grazed by elk and cattle. Under heavy grazing, Arizona willow plants will grow as prostrate mats or as a few scattered stems that are closely cropped along with the grasses and sedges. Plants are susceptible to rust disease outbreaks when growing under stressed conditions. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).
159	BEBB'S WILLOW	*Salix bebbiana*		G5	SNR, SNR	Northern and western US, Can	Apache, Coconino, Greenlee, Navajo, Yavapai, Catron, Cibola, Lincoln, Rio Arriba, Sandoval, San Juan, San Miguel, Santa Fe, Socorro	Several (sensitive only for A-S and COC)	Grazing, recreation	The A/S and COC identify the continued existence of this species on their Forests as "perilous".
160	GALIURO SAGE	*Salvia amissa*		G2	S2	AZ	Gila, Graham, Maricopa, Pima	COR, TON	Rarity, grazing, recreation, wood cutting, watershed conditions	Galiuro sage is a narrow endemic found abundantly only in the Galiuro Mountains of southeastern Arizona. It is believed extirpated from the Santa Catalina and Superstition mountains. It grows in upper floodplain terraces in canyon bottoms with mature sycamore, ash, walnut, and mesquite plant communities at 1,500-5,000 ft in elevation. Riparian canyon habitats are potentially vulnerable to such impacts as grazing, camping, wood cutting, and ORVs. Catastrophic flooding is increased when upstream watersheds are in poor condition.
161	MEARNS SAGE	*Salvia dorrii ssp. mearnsii*		G5T3?	S3	AZ	Cochise, Yavapai	COC, PRE	Limited distribution, specialized habitat, urban development, grazing	This plant grows on white powdery gypseous limestone of Tertiary lakebed deposits where it occurs with several other rare plants adapted to this specialized habitat. Private land in this habitat in the Verde Valley is being developed resulting in local plant extirpations. The habitat is grazed.
162	CHIRICAHUA MOUNTAIN BROOKWEED	*Samolus vagans*		G2?	SNR	AZ,Mex	Cochise, Pima, Santa Cruz	COR	Limited distribution and habitat, water diversions, wetland degradation, waterehed damage	This plant grows in moist sandy soil around springs, seeps, and in and along streams at elevations of 4,000-7,200 ft. It occurs in mountains of SE Arizona, but is most abundant in the Huachuca Mts. It is threatened by any activity that might dry up or degrade wetlands. This could include water diversions, recreation, and grazing. Also, watershed impacts that include grazing and forest fire can lead to scouring floods that destroy habitat.
163	MIMBRES FIGWORT	*Scrophularia macrantha*		G2	S2	NM	Grant, Luna	GIL	Rarity, narrow distribution, mining, road building	This plant is known from only a few sites in southwestern NM. It grows on steep, rocky, usually north-facing igneous cliffs and talus slopes, occasionally in canyon bottoms in piñon-juniper woodland and lower montane coniferous forest at 6,500-8,200 ft. One population not on National Forest is threatened by copper mining. Several populations could be impacted by highway construction or improvement.
164	NEW MEXICAN STONECROP	*Sedum integrifolium ssp. neomexicana*		G5T1	S1	NM	Lincoln, Otero	LIN	Extreme rarity, limited habitat, recreation, road improvements, communications facilities	Endemic to alpine tundra of Sierra Blanca Peak. A few locations of New Mexico stonecrop occur within ski runs and on road cuts along the highway leading up to Ski Apache. The radio towers and access road on Buck Mountain also occur within this plant's habitat. Further assessment of abundance and viability are needed.
165	HUACHUCA GROUNDSEL	*Senecio multidentatus var. huachucanus (=s. huachucanus)*		G2G4T2	S2	AZ, Mex	Cochise, Santa Cruz	COR	Rarity, recreation, fire, lack of natural fire regime	This plant grows on rocky, poorly stablized mountain slopes and canyon bottoms in pine-oak or mixed conifer forests. It typically occurs in areas with a patchy matrix of moderate canopy cover and small openings. It is known from eight sites in three SE Arizona mountain ranges. Hikers could impact some populations. Populations monitored 1988-1993 showed downward trends for unknown reasons. Perhaps plants need more soil disturbance or canopy openings. The State of Arizona lists this plant as endangered (Highly Safeguarded under the Arizona Native Plant Law).

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166	NODDING BLUE-EYED GRASS	*Sisyrinchium cernuum*		G5	S2	AZ,TX,Mex	Cochise, Pima, Santa Cruz	COR	Infrequent occurrence, riparian degradation	This plant is widespread in western Mex. South to Jalisco and Guanajuato. Peripheral in U.S. Surveyed in 2001. Good populations in Shaw Can., Rincon Mts., and Big Casa Blanca Can., Santa Rita Mts. Coronado NF recommends not dropping until more surveys are done. It grows in riparian habitats that are sensitive to various types of disturbance.
167	GUADALUPE MOUNTAINS GOLDENROD	*Solidago wrightii var. guadalupensis*		G3T3	SNR	NM,TX	Chaves, Eddy	LIN	Rarity, narrow distribution, minerals development, grazing?	This variety represents the southeastern part of the range of *S. wrightii,* which is common. It was newly named in 2008 (Nesom. Phytologia 90:21-35) and needs surveys to evaluste abundance and threats.
168	GUADALUPE MESCAL BEAN	*Sophora gypsophila var. guadalupensis*		G1T1	S1	NM	Eddy, Otero	LIN	Rarity, narrow distribution, specialized habitat, oil and gas development	This plant has a very limited distribution. It grows on outcrops of pink, limy, fine-grained sandstone that is 1-2 percent gypsum (by analysis) in Chihuahuan desert scrub and juniper savanna at 5,260-6,650 ft. It grows in remote areas and is unpalatable to grazers. Interest in oil and gas exploration and development has recently increased in the region.
169	PORSILD'S STARWORT	*Stellaria porsildii*		G1	S1,S1	AZ,NM	Cochise, Grant	COR, GIL	Extreme rarity, grazing, fire	This plant is known from only two locations. It grows in partly shaded understory of mixed conifer or aspen at 7,000-8,200 ft. Its responses to fire and grazing are unknown.
170	LEMMON'S STEVIA	*Stevia lemmonii*		G3G4	SNR	AZ,Mex	Pima, Santa Cruz	COR	Rarity, recreation, fire	This plant grows in rocky canyon slopes and stream beds in pine-oak woodlands. There are only seven known occurrences in Arizona with most of these in the Santa Catalina and Rincon mountains near Tucson. These areas are under increasing recreation pressure. The response of this plant to fire is unknown.
171	GUADALUPE JEWELFLOWER	*Streptanthus sparsiflorus*		G2	S2	NM,TX	Eddy	LIN	Limited range, oil and gas development	This plant grows in limestone canyon bottoms and montane scrub at 5,000-7,000 ft. It is endemic to the Guadalupe Mountains. Interest in oil and gas exploration and development has recently increased in the region, which could impact populations.
172	PINOS ALTOS FLAME FLOWER	*Talinum humile*		G2	S1,S2	AZ,NM,Mex	Santa Cruz, Grant, Hidalgo	COR, GIL	Rarity, grazing, urban development	This plant grows in shallow, gravelly, usually clayey soils overlying rhyolite. It is present for only a short period after summer rains. It has 10 known occurrences in the U.S., 8 in NM and 2 in AZ. Heavy grazing seems to reduce populations, but once grazing pressure drops, populations may explode in numbers for several years until other vegetation again becomes competitive. In Arizona, and perhaps in New Mexico, housing may be a future threat because some populations are close to areas being developed.
173	TEPIC FLAME FLOWER	*Talinum marginatum*		G2	S1	AZ,Mex	Cochise, Santa Cruz	COR	Extreme rarity, limited distribution, specialized habitat, road building, mining, trampling.	This plant is known from only five sites in the U.S., with four of them relatively close to each other in the Huachuca Mts. Plants grow in shallow sandy soil on exposed bedrock ledges and outcrops. Plants do not appear threatened under present management. Activities in the area that could affect plants include road building, mining, and trampling by hikers or cattle.
174	ARAVAIPA WOODFERN	*Thelypteris puberula var. sonorensis*		G5T3	S2	AZ, CA, Mex	Coconino, Maricopa, Pima, Pinal, Yavapai	COR, TON	Rarity, spring development, drought	This rare fern occurs in several scattered localites across central AZ including BLM sites in the Arrastra Mts. and Aravaipa Canyon in the Galiuro Mts. and FS sites in the Catalina Mts. and the Four Peaks area. There are additional populations in Mex and CA. Spring development and water diversion could damage its localized wetland habitat. Prolonged dought could dry up some sites.
175	SONORAN NOSEBURN	*Tragia laciniata*		G3G4	S3?	AZ,Mex	Cochise, Pima, Santa Cruz	COR	Limited occurrence, grazing, fire	This plant grows along streams, canyon bottoms, and shaded hillsides at 3,500-5,650 ft in elevation. Plants occur at scattered locations mostly within Santa Cruz County. The habitat has many uses including grazing, mining, road building, recreation, etc. The response of this plant to fire is unknown.
176	MOGOLLON CLOVER	*Trifolium longipes ssp. neurophyllum (=T. neurophyllum)*		G2	S2,S2	AZ,NM	Greenlee, Catron	A-S, GIL	Limited distribution, specialized habitat, grazing	This plant occurs in wet meadows, springs, and along riparian corridors in montane coniferous forest at 6,500-9,000 ft. Elk and cattle will heavily graze this habitat. Plants in intensely grazed areas are prostrate rather than erect, and have very few flowering stems
177	TUMAMOC GLOBEBERRY	*Tumamoca macdougallii*		G4	S3	AZ,Mex	Maricopa, Pima, Pinal	COR	Rare on National Forest, urbanization, farming, overgrazing, recreation	This plant has been found to have a fairly broad distribution in desert habitats in southern Arizona and Mexico. The only known occurrence on National Forest lands is Sabino Canyon in the Santa Catalina Mountains. Many sites on private land west of Tucson are threateded with urban expansion.

USFS R3 REGIONAL FORESTER'S SENSITIVE SPECIES: PLANTS - 2013

Common Name	*Scientific Name*	FWS Status	Heritage Global	Heritage State (AZ,NM)	State of Occurrence	County	Forest(s)	Limiting Factors/Threats	Justifications as to why on list
SHADE VIOLET	*Viola umbraticola*		G3G4	S2?	AZ,Mex	Cochise, Pima	COR	Rarity, specialized habitat, grazing, fire	This plant occurs in shady areas in canyon bottoms, usually within riparian pine-oak forests at 5,500-7,300 ft. It is known from three mountain ranges (Santa Catalina, Huachuca, and Chiricahua), but there are only six known occurrences. Shady riparian canyon bottoms are sometimes subject to grazing pressures. The responses of this plant to fire are unknown, but are expected to be detrimental due to overstory removal and scouring floods.

DEFINITIONS

A-S	Apache-Sitgreaves National Forests
AZ	Arizona
AZGFD	Arizona Game and Fish Department
B	Status rank is for breeding population.
BBS	Breeding Bird Survey
BK	Black Kettle National Grassland
B-M	Bison-M
C	Candidate species for federal listing
CAR	Carson National Forest
CIB	Cibola National Forest
CO	Colorado
COC	Coconino National Forest
G	Heritage Global Ranking
G1	Globally critically imperiled
G2	Globally imperiled
G3	Globally vulnerable to extirpation or extinction
G4	Globally apparently secure
G5	Globally demonstrably widespread, abundant, secure
EMA	Ecosystem Management Area
FWS	U.S. Fish and Wildlife Service
GIL	Gila National Forest
KAI	Kaibab National Forest
KRB	Kiowa/Rita Blanca National Grasslands
LIN	Lincoln National Forest
N #	Heritage National Ranking
N	Nonbreeding qualifier e.g. S4N
NM	New Mexico
NMDGF	New Mexico Department of Game and Fish
NMSU	New Mexico State University
NR	Not ranked
NS	NatureServe
OK	Oklahoma
P*	Species is proposed for federal listing, and will be removed from the RFSS list if/once the final rule is published implementing the Federal protections provided by the ESA.
PRE	Prescott National Forest

	A	B	C	D	E	F	G	H	I	J
1	**USFS R3 REGIONAL FORESTER'S SENSITIVE SPECIES: PLANTS - 2013**									
2	**Common Name**	***Scientific Name***	**FWS Status**	**Heritage Global**	**Heritage State (AZ,NM)**	**State of Occurrence**	**County**	**Forest(s)**	**Limiting Factors/Threats**	**Justifications as to why on list**
215	Q	Questionable taxonomy that may reduce conservation priority								
216	S	Heritage subnational ranking								
217	S1	subnationally critically imperiled								
218	S2	sensationally imperiled								
219	S3	subnationally vulnerable to extirpation or extinction								
220	S4	subnationally demonstrably widespread, abundant, and secure								
221	SFE	Santa Fe National Forest								
222	SH	possibly extirpated								
223	SOC	U.S. Fish and Wildlife Service Species of Concern								
224	S?	Status unknown								
225	T	infraspecific taxon (trinomial) subspecies								
226	TON	Tonto National Forest								
227	TX	Texas								
228	U	Currently unrankable								
229	U.S.	United States								
230	WSC	Wildlife of Special Concern in Arizona. Species whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines, as described by the Arizona Game and Fish Department's listing of Wildlife of Special Concern in Arizona (WSCA, in prep). Species indicated on printouts as WSC are currently the same as those in Threatened Native Wildlife in Arizona (1988).								