California Native Plant Society

Forest Issues Program
P.O. Box 1067
Arcata, CA 95518
February 10, 2006

Brian Amme
PEIS Project Manager
Nevada State Office
1340 Financial Boulevard
P.O. Box 12000
Reno, Nevada 89520-0006

See RMC-0213

Re: Comments of the California Native Plant Society on the Draft Programmatic Environmental Impact Statement for Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States

Dear Mr. Amme:

The California Native Plant Society (CNPS) is a nonprofit organization of nearly 10,000 amateurs and professionals dedicated to the preservation of California's diverse native flora. CNPS conducts a variety of conservation efforts focused on long-term protection and preservation of native flora in its natural habitat. The Society has been assessing the status of rare plant species for over 30 years, and is the foremost non-governmental organization working to protect rare, threatened, and endangered plants in California.

We have reviewed the Draft Programmatic Environmental Impact Statement ("Draft PEIS"), the Draft Programmatic Environmental Report (Draft "PER"), and the Draft Biological Assessment ("Draft BA"), prepared by the Bureau of Land Management ("BLM") pursuant to the National Environmental Policy Act ("NEPA") for its proposed use of herbicides to treat vegetation on BLM managed land in 17 western states, including California. Our concerns about the potential impacts and inadequate assessment of the proposed actions are described in detail below.

Please regard these comments as supplemental to our comments dated March 29, 2002 on the "Notice of Intent to Prepare an EIS," since many of these concerns have not been addressed in the document currently under review.

Herbicide Impacts to Rare, Threatened, and Endangered Plant Species

The best available science indicates that many registered pesticides are likely to cause negative impacts to endangered species even when used lawfully. There is evidence that long-term impacts of herbicides can have dire effects on rare plants. CNPS is particularly concerned with the known reproductive effects of sulfonylurea herbicides. Many of the current scientific publications addressing the reproductive effects of the sulfonylurea herbicides are not included in the literature review for the BLM's assessment. **Copes of these omitted references will be sent by U.S. mail** and are summarized and cited below. We hope that your staff will review these important sources and reevaluate the PEIS to address these well-known impacts that have been documented by peer-reviewed scientific studies funded by the U.S. EPA.

The sulfonylurea herbicides such as sulfometuron methyl (Oust©) and chlorsulfuron (Glean©) are known to cause significant reductions in fruit and seed production in a variety of plant species, even at 1000 times lower than the recommended application rate.[1] Current EPA registration requirements do not include testing for reproductive effects, yet more than 230 formulations containing these chemicals had been registered by 1987.[2] Reproductive damage to rare plant populations could severely threaten rare and endangered species' long-term survival. Although rare plant species have been directly impacted by this herbicide, no monitoring has been done to determine whether surviving individuals have been reproductively affected, even though these impacts could lead to severe impacts to the species as a whole.

In Idaho, Oust was sprayed aerially in 1999 and 2000, resulting in drift that allegedly damaged 100,000 acres of farmland.[3] Use of the chemical was subsequently suspended by the Idaho BLM, and the incident is the subject of an ongoing lawsuit involving over 100 farmers, BLM, and DuPont (manufacturer of the chemical).[4] While DuPont claims that BLM used the chemical improperly, BLM claims that it followed label instructions. This incident suggests that such damage cannot be predicted or avoided even if the chemical is used according to instructions approved by the U.S. Environmental Protection Agency's pesticide registration process. Soil tests conducted by the Montana State University have

---

[1] Fletcher, J. S., T. G. Pfleeger, H. C. Ratsch, and R. Hayes. 1996. Potential impact of low levels of chlorsulfuron and other herbicides on growth and yield of nontarget plants. Environmental Toxicology and Chemistry. 15: 1189-1196.

[2] Pfleeger, T., J. Fletcher, and H. Ratsch. 1992. Effects of Glean, a sulfonylurea herbicide, on the reproductive biology and fruit set in cherry trees. Progress Report to the EPA Region X. EPA/600/R-92/020.

[3] Warbis, M. 2002. Landowners sue DuPont, alleging herbicide damage. Associated Press. http://www.anomalous-images.com/news/news707.html

[4] Hand, Guy. 2002. Exotic-killing herbicide is ousted from the range. High Country News: Vol. 34, No. 11.

determined that crop damage was caused by concentrations of Oust© ranging from 0.079-24 ppb.[5]

CNPS believes that the continued use of Oust©, Glean©, and related sulfonylurea herbicides is irresponsible due to its reproductive impacts to non-target plants.

Omissions from the Special Status Species List in Appendix H of the Draft PEIS

The following at-risk taxa are also known or likely to occur on BLM lands in California, Nevada, or both, and should be included in the Special Status Species List in Appendix H of the Draft PEIS:

Astragalus cimae var. *cimae*
Astragalus inyoensis
Astragalus johannis-howellii
Atriplex argentea var. *longitrichoma*
Eriogonum beatleyae
Eriogonum microthecum var. *schoolcraftii*
Lathyrus hitchcockianus
Opuntia pulchella
Pediomelum castoreum
Salvia funerea
Sclerocactus polyancistrus

This does not include additional taxa in the Watch-list portion, which could number at least as many species that should be considered.

Please see the attached appendices for additional species that should also be considered under this and any subsequent plans that tier to the plan:

- Appendix A: CNPS List 1B plants of sagebrush scrub
- Appendix B: CNPS List 1B plants of pinyon-juniper woodlands
- Appendix C: Sensitive plants that occur in both California and Nevada.

Impacts to Pollinators

In addition to direct and cumulative impacts to rare plant species, pesticide use constitutes a significant threat to pollinators of rare plants.[6] Research has shown

[5] University of Idaho Pest Management Center Newsletter, Vol. I , no.3, June 2001. University of Idaho College of Agriculture. http://www.ag.uidaho.edu/ipm/Newletters/newsletter3.pdf

[6] Spira, T. P. 2001. Plant-pollinator interactions: A threatened mutualism with implications for the ecology and management of rare plants. Natural Areas Journal. 21: 78-88.

that pesticide damage to native pollinators—either from direct exposure or from foraging on contaminated plants—can cause significant reductions in seed set.[7] Pesticide use in rangelands and agricultural regions also threatens rare plant survival by reducing pollinator populations.[8] In the case of butterflies and moths, detailed information on host (larval and nectar) food sources is crucial to assess impacts to plants that rely on these species for pollination services. Studies have found that herbicides negatively impact pollinators' eggs as well as their host plants.[9] Herbicide use can have adverse impacts to pollinators necessary for reproduction in native plant populations. Studies have also found that use of herbicides over large landscapes can deplete pollinators that may depend upon exotic species for nectar and pollen in order to survive during migrations.[10],[11]

Impacts to seed- and fruit-bearing plants important to wildlife for food

CNPS is concerned about native plants that provide important food sources for birds, deer, and other wildlife. The impacts to rare plants described above, especially from chlorsulfuron and sulfometuron methyl, are of concern because reproductive damage to food-source plants is likely to have detrimental effects for animal species that rely on these plants for food. Of particular concern are threatened, endangered, and sensitive species, and we believe that these potential negative impacts must be considered in any proposed use of herbicides, but especially aerial and broadcast ground spray plans.

CNPS believes that the continued use of Oust©, Glean©, and related sulfonylurea herbicides is irresponsible due to its reproductive impacts to non-target plants.

Inappropriate Definition of "Weed" in Draft PEIS

---

[7] Thomson, J.D., R.C. Plowright, and G.R. Thaler. 1985. Matacil insecticide spraying, pollinator mortality, and plant fecundity in New Brunswick forests. Canadian Journal of Botany. 63: 2056-2061.

[8] Sipes, S.D. and V.J. Tepedino. 1995. Reproductive biology of the rare orchid, Spiranthes diluvialis: Breeding system, pollination, and implications for conservation. Conservation Biology: 9: 929-938.

[9] Sucoff, E., T. Nichols and E. Lu. 2001. Herbicide Effects on Host Plants of Karner Blue Butterfly and on Butterfly Development from Egg to Adult. Department of Forest Resources Staff Paper Series Number 151, Department of Forest Resources, College of Natural Resources and Minnesota Agricultural Experiment Station, University of Minnesota, St. Paul, Minnesota.
http://www.cnr.umn.edu/FR/publications/staffpapers/Staffpaper151.PDF

[10] Buchmann, S.L. and G.P. Nabhan. 1997. *The Forgotten Pollinators*. Island Press, Washington D.C.

[11] Kearns, C.A., D.W. Inouye, and N.M. Waser. 1998. Endangered mutualisms: the conservation of plant-pollinator interactions. *Ann. Rev. Ecol. Syst*. 29:83-112.

The definition of a weed is inappropriate, since it could include many native plants that are important habitat and/or food sources for native pollinators, birds, mammals, amphibians, and reptiles, many of which are protected by state and federal laws. Herbicides should be used a last resort to manage invasive, non-native species that have been shown by scientific research to have negative impacts on native species. Prevention and non-chemical management should be the priority methods of managing invasive, non-native species.

Impacts of Drift and Atmospheric Deposition of Herbicides

In a study on injury to nearby plants from localized atmospheric deposition of herbicides, researchers found these effects particularly with the use of sulfonylurea compounds such as Oust. The results suggested a general atmospheric loading of herbicides with occasional deposition, rather than point source drift.[12]

Non-Native Seed Planting by BLM

BLM introduces non-native seeds to a variety of habitats such as prairies. CNPS believes that BLM's seeding program should be assessed before or along with proposals to spray herbicides to manage non-native plants. Introductions include alfalfa, crested wheatgrass, sweetclover, white and subterranean clover, tall fescue, smooth brome, non-native pines, and Norway spruce. The BLM Seed Guidebook recommends many non-native grasses and forbs for "rehabilitation and conservation seeding," including many species considered to be moderately to highly invasive in natural ecosystems by the Exotic Pest Plant Councils, U.S. Fish and Wildlife Service, National Invasive Species Council and Executive Order No.13112 concerning Invasive Species.[13]

Cumulative Impacts

Cumulative impacts are not adequately addressed, in part due to the inadequate assessment of direct impacts described above. When these impacts have been addressed and minimized, CNPS would be happy to have the opportunity for further review of the cumulative impacts analysis as required by the National Environmental Policy Act.

---

[12] Allan S. F., M. A. Bhatti, G. I. Mink, and G. Reisenauer. 1995. Biomonitoring with Sentinel Plants to Assess Exposure of Nontarget Crops to Atmospheric Deposition of Herbicide Residues. Environmental Toxicology and Chemistry: No. 15, pp. 452–459.
[13]Lambert, S. 2005. Guidebook to the Seeds of Native and Non-Native Grasses, Forbs and Shrubs of the Great Basin. Idaho Technical Bulletin No. 2005-04. U. S. Department of the Interior, Bureau of Land Management, Idaho State Office. http://www.id.blm.gov/techbuls/05_04/

While CNPS is not opposed to the judicious use of herbicides when there are no other options, particularly when necessary to protect rare native species, we also know that there are many risks associated with their use. Herbicide use can result in unforeseen non-target effects and can have long-term effects upon ecosystem processes and composition. Some of these non-target, indirect, or cumulative effects include:

Herbicides can shift vegetation composition towards weedy grasses.
Use of herbicides such as 2,4-D, clopyralid, picloram, atrazine can have the effect of killing native and exotic species while allowing weedy, exotic grasses to thrive. The use of Transline (clopyralid) in many instances has the potential to cause explosive growth of medusa head, cheat grass, barbed goat grass, and other weedy exotic grasses.[14]

Herbicide resistance
Reliance on herbicides for vegetation management can result in rapid development of herbicide-resistant ecotypes. Herbicide use also leaves a vacuum that sets the stage for further invasion by a more aggressive ecotype of the targeted weed or by a new invading species.[15]

Therefore, it is necessary to include a full report and accounting in this EIS of the actual acreage, quantity, formulations of the herbicides used, and the number of years to date that herbicides have been used in order to kill sagebrush and other native vegetation on BLM lands in the western region. We ask that the EIS include direct, indirect, and cumulative effects analysis of these types of effects resulting from herbicide use listed above.

Sincerely,

Jennifer Kalt
Forest Issues Coordinator

Ec: Nevada Native Plant Society
California Oak Foundation

[14] DiTomaso, J.M., G.B. Kyser, S.B. Orloff, and S.F. Enloe. 2000. Integrated strategies offer site-specific control of yellow starthistle. *Calif. Ag.* 54:6; 30-36.
[15] Groves, R.H. 1989. Ecological control of invasive terrestrial plants. Pp. 437-461 *in:* Drake, J.A., H.A. Mooney, F.D. Castri, R.H. Groves, F.J. Kruger, M. Rejmánek, and M. Williamson, eds., *Biological Invasions: A Global Perspective*. Wiley & Sons, Chichester.

Appendix A: CNPS List 1B plants of sagebrush scrub[16,17]

Allium howellii var. clokeyi	Mt. Pinos onion, Clokey's onion
Arabis bodiensis	Bodie Hills rockcress, Bodie Hills rock cress
Astragalus anxius	troubled milk-vetch, troubled milkvetch
Astragalus atratus var. mensanus	Darwin Mesa milkvetch, Darwin Mesa milk-vetch
Astragalus cimae var. cimae	cima milkvetch, Cima milk-vetch
Astragalus gilmanii	Gilman's milkvetch, Gilman's milk-vetch
Astragalus johannis-howellii	Long Valley milk-vetch
Astragalus lemmonii	Lemmon's milk-vetch
Astragalus lentiformis	lens-pod milk-vetch
Astragalus monoensis	Mono milkvetch, Mono milk-vetch
Astragalus oophorus var. lavinii	Lavin's milk-vetch
Astragalus pseudiodanthus	Tonopah milk-vetch
Astragalus pulsiferae var. pulsiferae	Ames' milk-vetch, Pulsifer's milk-vetch
Astragalus pulsiferae var. suksdorfii	Suksdorf's milk-vetch
Cusickiella quadricostata	Bodie Hills cusickiella
Erigeron calvus	bald fleabane, bald daisy
Eriogonum prociduum	prostrate buckwheat
Galium glabrescens ssp. modocense	Modoc bedstraw
Horkelia hispidula	White Mountain horkelia
Ivesia aperta var. aperta	Sierra Valley mousetail, Sierra Valley ivesia
Ivesia kingii var. kingii	alkali ivesia
Ivesia paniculata	Ash Creek ivesia, Ash Creek mousetail
Ivesia sericoleuca	Plumas mousetail, Plumas ivesia
Ivesia webberi	Webber's ivesia, wire mousetail
Lupinus duranii	Duran's Lupine, Mono Lake lupine
Lupinus magnificus var. hesperius	McGee Meadows lupine, Panamint Mountain lupine
Lupinus magnificus var. magnificus	Panamint Mtns. lupine, Panamint Mountain lupine
Lupinus padre-crowleyi	Dedecker lupine, Father Crowley's lupine
Orthocarpus pachystachyus	Shasta orthocarpus, Shasta owl's-clover
Phacelia cookei	Cooke's phacelia
Phacelia inundata	playa yellow phacelia, playa phacelia
Phacelia monoensis	Mono phacelia, Mono County phacelia
Polyctenium fremontii var. confertum	desert combleaf, flat-pod polyctenium
Polygonum polygaloides ssp. esotericum	whitemargin knot weed
Pyrrocoma uniflora var. gossypina	Bear Valley pyrrocoma, plantain goldenweed
Sidalcea covillei	Owens Valley checkerbloom ENDANGERED
Thelypodium howellii ssp. howellii	Howell's thelypody, Howell's thelypodium

[16] California Department of Fish and Game, Natural Diversity Database. Nov. 2002. Special Vascular Plants, Bryophytes, and Lichens. Biannual publication, Mimeo. 150 pp. Electronic version queried in Dec. 2005.

[17] CNPS. 2001. *Inventory of Rare and Endangered Plants of California* (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, CA.

Appendix B: CNPS List 1B plants of pinyon-juniper woodlands[18,19]

Allium munzii	Munz's onion ENDANGERED SPECIES
Arabis bodiensis	Bodie Hills rockcress, Bodie Hills rock cress
Arabis parishii	Parish's rock cress
Arenaria ursina	Bear Valley sandwort THREATENED SPECIES
Astragalus albens	Cushenbury milk-vetch ENDANGERED SPECIES
Astragalus atratus var. mensanus	Darwin Mesa milkvetch
Astragalus cimae var. cimae	cima milkvetch, Cima milk-vetch
Astragalus ertterae	Walker Pass milk-vetch
Astragalus gilmanii	Gilman's milkvetch
Astragalus lentiginosus var. sierrae	Big Bear Valley milk-vetch
Astragalus leucolobus	Bear Valley woollypod
Castilleja cinerea	ash-gray Indian paintbrush THREATENED
Caulanthus californicus	California jewelflower ENDANGERED SPECIES
Caulostramina jaegeri	Jaeger's caulostramina, cliffdweller
Chorizanthe xanti var. leucotheca	white-bracted spineflower, Riverside spineflower
Cupressus arizonica ssp. nevadensis	Piute cypress
Cusickiella quadricostata	Bodie Hills cusickiella
Delphinium purpusii	Kern County larkspur
Dudleya abramsii ssp. affinis	San Bernardino Mountains liveforever
Dudleya saxosa ssp. saxosa	Panamint liveforever
Erigeron aequifolius	Hall's fleabane, Hall's daisy
Erigeron parishii	Parish's daisy, Parish fleabane THREATENED
Eriogonum breedlovei var. breedlovei	Piute buckwheat, Breedlove's
Eriogonum eremicola	Telescope Peak buckwheat, Wildrose Canyon buckwheat
Eriogonum ericifolium var. thornei	Thorne's buckwheat ENDANGERED SPECIES
Eriogonum foliosum	leafy buckwheat, Baja buckwheat
Eriogonum hoffmannii var. robustius	robust Hoffmann's buckwheat
Eriogonum kennedyi var. pinicola	Kern buckwheat
Eriogonum microthecum var. panamintense	Panamint buckwheat
Eriogonum ovalifolium var. vineum	Cushenbury buckwheat ENDANGERED SPECIES
Galium hilendiae ssp. carneum	Panamint Mountains bedstraw
Galium hilendiae ssp. kingstonense	Kingston Mountains bedstraw
Glossopetalon pungens	Smooth greasewood, pungent glossopetalon
Ivesia jaegeri	Jaeger's ivesia, Jaeger's mousetail
Ivesia patellifera	Kingston Mtns. ivesia, Kingston Mountain mousetail
Layia heterotricha	paleyellow tidytips, pale-yellow layia
Lepidium flavum var. felipense	yellow pepperweed, Borrego Valley pepper-grass
Lesquerella kingii ssp. bernardina	San Bernardino Mtns. bladderpod ENDANGERED
Lewisia disepala	Yosemite lewisia
Linanthus killipii	Baldwin Lake linanthus

[18] California Department of Fish and Game, Natural Diversity Database. Nov. 2002. Special Vascular Plants, Bryophytes, and Lichens. Biannual publication, Mimeo. 150 pp. Electronic version queried in Dec. 2005.

[19] California Department of Fish and Game, Natural Diversity Database. Nov. 2002. Special Vascular Plants, Bryophytes, and Lichens. Biannual publication, Mimeo. 150 pp. Electronic version queried in Dec. 2005.

Lotus argyraeus var. multicaulis	scrub lotus, canyon bird's-foot trefoil
Lotus argyraeus var. notitius	Providence Mtns. lotus, canyon bird's-foot trefoil
Lotus haydonii	pygmy lotus, rock bird's-foot trefoil
Lupinus excubitus var. medius	Mountain Springs bush lupine
Lupinus peirsonii	Peirson's lupine, long lupine
Marina orcuttii var. orcuttii	California marina
Mimulus shevockii	Kelso Creek monkeyflower
Monardella robisonii	Rock Pennyroyal, Robison's monardella
Navarretia setiloba	Paiute Mountain pincushion plant
Opuntia basilaris var. brachyclada	short-joint beavertail, beavertail pricklypear
Orobanche valida ssp. valida	Rock Creek broomrape
Oxytheca emarginata	whitemargin oxytheca, white-margined oxytheca
Oxytheca parishii var. goodmaniana	Cushenbury oxytheca ENDANGERED SPECIES
Penstemon californicus	California beardtongue, California penstemon
Penstemon stephensii	Stephens's beardtongue
Perityle inyoensis	Inyo rock-daisy, Inyo rockdaisy
Perityle villosa	Hanaupah rockdaisy, Hanaupah rock daisy
Phacelia monoensis	Mono phacelia, Mono County phacelia
Phacelia mustelina	weasel phacelia
Phacelia nashiana	Charlotte's phacelia
Phacelia novenmillensis	Nine Mile Canyon phacelia
Streptanthus campestris	southern jewelflower, southern jewel-flower
Streptanthus cordatus var. piutensis	heartleaf twistflower, Piute Mtns. jewel-flower
Streptanthus oliganthus	Masonic Mtn. jewel-flower
Stylocline masonii	Mason neststraw, Mason's neststraw
Trifolium macilentum var. dedeckerae	DeDecker's clover

Appendix C: Sensitive plants that occur in California and Nevada BLM lands.[20]

OCC RANKS	ESA	BLM	FS	TAXON NAME AND (VERNACULAR NAME)	NV	2N	HAB
				AT-RISK TAXA TRACKED			
********** Plants - Pteridophytes (fern allies)							
G3 S1?		xC2	n	si Botrychium crenulatum (dainty moonwort)		W	W
********** Plants - Gymnosperms (conifers)							
G3Q S1			n	Pinus washoensis (Washoe pine)	CY	W	
********** Plants - Flowering Dicots							
G2 S2		xC2	nc	si Arabis bodiensis (Bodie Hills rockcress)		W	
G3 S3		xC2	n	s Arctomecon merriamii (white bearpoppy)		W	
G2 S2		xC2	nc	s Astragalus funereus (black woollypod)		W	
G3 S1		xC2	n	Astragalus gilmanii (Gilman milkvetch)		W	
G3? S1			c	Astragalus lemmonii (Lemmon milkvetch)		W	w
T2G4 S2		xC2	n	sw Astragalus oophorus var. lavinii (Lavin eggvetch)		W	
G2Q S2			c	w Astragalus pseudiodanthus (Tonopah milkvetch)		D	S
T2?G4 S1		xC2	c	c Astragalus pulsiferae var. coronensis (Rams Horn Spring milkvetch)		W	
T2G4 S1			c	c Astragalus pulsiferae var. pulsiferae (Ames milkvetch)		W	
G2 S2		xC2	nc	Cordylanthus tecopensis (Tecopa birdbeak)		T	w
? G3Q S3		xC2	nc	Cryptantha schoolcraftii (Schoolcraft catseye)		W	
G2 S2		xC2	nc	sw Cusickiella quadricostata (Bodie Hills draba)		W	

[20] http://heritage.nv.gov/lists/stcalifo.htm

T3QG3G4 S3	xC2	nc		Cymopterus ripleyi var. saniculoides (sanicle biscuitroot)		W		
G2 S2	xC2	nc		Eriogonum bifurcatum (Pahrump Valley buckwheat)		T		
G3 S1	xC2	nc	c	Eriogonum prociduum (prostrate buckwheat)		W		
T2G4 S1	xC2	nc		Galium hilendiae ssp. kingstonense (Kingston Mountains bedstraw)		T		
T1QG2G3 S1	xC2	nc	s	Glossopetalon pungens var. glabrum (smooth dwarf greasebush)		W		
T2G2 S1	xC2	nc	sc	Ivesia aperta var. aperta (Sierra Valley mousetails)		T		w
G2G3 S2S3	xC2	nc	s	Ivesia jaegeri (Jaeger ivesia)		W		
G2 S1	C	sc	sc	Ivesia webberi (Webber ivesia)	CE	T		
T1G4? S1?		n		Lotus argyraeus var. multicaulis (scrub lotus)		W		
G3?Q S2		n		Lupinus holmgrenianus (Holmgren lupine)		D		
G2G3 S2S3	xC2	n		Oryctes nevadensis (oryctes)		W		S
G2 S2	xC2	nc		Penstemon albomarginatus (white-margined beardtongue)		T		S
T2QG3 S2	xC2	n	s	Penstemon bicolor ssp. bicolor (yellow twotone beardtongue)		W		
T3QG3 S3	xC2	n	s	Penstemon bicolor ssp. roseus (rosy twotone beardtongue)		W		
T3G4 S2	xC2	nc	s	Penstemon fruticiformis ssp. amargosae (Death Valley beardtongue)		T		
G3 S3	xC2	n		Penstemon pahutensis (Pahute Mesa beardtongue)		W		
G2 S2?		nc	c	Phacelia inundata (playa phacelia)		W		W
G3Q S3	xC2	nc	si	Phacelia monoensis (Mono County phacelia)		T		
G2G3 S2		c	w	Phacelia mustelina (weasel phacelia)		W		
G2Q S2		sc	i	Polyctenium williamsiae (Williams combleaf)	CE	T		W
G1 S1	C	sc		Potentilla basaltica (Soldier Meadow cinquefoil)		T		W

G3 S2	xC2	nc	si	Streptanthus oliganthus (Masonic Mountain jewelflower)	W

********** Plants - Flowering Monocots

G2 S1	xC2	nc	c	Calochortus striatus (alkali mariposa lily)	W