

# Candidate Plant Species for Phytoremediation and Selection Rationale

February 6<sup>th</sup>, 2014 STIG meeting

2012 Jepson Manual Name <sup>a</sup>	Common Name	Origin	Habit	Duration <sup>b</sup>	Abundance <sup>c</sup>	Annual Growth Rate	Dioxin	PCB	PAH	TPH	Metals	Mercury
<i>Acemison americanus</i>	Spanish Lotus	Native	Forb	Annual	Low	Medium		A	A	A		
<i>Acemison glaber</i>	Common Deerweed	Native	Shrub	Perennial	Medium	Medium		A	A	A		
<i>Artemisia californica</i>	California Sagebrush	Native	Shrub	Perennial	Medium	Low					A	
<i>Asclepias fascicularis</i>	Narrowleaf Milkweed	Native	Forb	Perennial	Low	Medium						
<i>Avena barbata</i>	Slender Wild Oat	Alien	Grass	Annual	High	High					A	
<i>Avena fatua</i>	Wild Oat	Alien	Grass	Annual	High	High					A	
<i>Baccharis pilularis</i>	Coyotebrush	Native	Shrub	Perennial	Medium	Medium					A	
<i>Baccharis salicifolia</i>	Mule-Fat	Native	Shrub	Perennial	High	Medium					A	
<i>Brickellia californica</i>	California Bricklebush	Native	Shrub	Perennial	Low	Medium					A	
<i>Bromus diandrus</i>	Ripgut Brome	Alien	Grass	Annual	High	High		A			A	
<i>Bromus hordeaceus</i>	Soft Chess	Alien	Grass	Annual	High	High		A			A	
<i>Bromus madritensis</i>	Red Brome	Alien	Grass	Annual	High	High		A			A	
<i>Corethrogyne filaginifolia</i>	Common Sandaster	Native	Forb	Perennial	Medium	Medium					A	
<i>Deinandra minthornii</i>	Santa Susanna Tarweed	Native	Shrub	Perennial	Medium	Low					A	
<i>Ericameria palmeri</i>	Palmer Goldenbush	Native	Shrub	Perennial	High	Medium					A	
<i>Erigeron canadensis</i>	Canadian Horseweed	Native	Forb	Annual	Medium	High					A	
<i>Eriodictyon crassifolium</i>	Thickleaf Yerba Santa	Native	Shrub	Perennial	High	Medium						
<i>Eriogonum fasciculatum</i>	California Buckwheat	Native	Shrub	Perennial	High	Medium						
<i>Heterotheca grandiflora</i>	Telegraph weed	Native	Forb	Annual	Medium	High					A	
<i>Hirschfeldia incana</i>	Summer Mustard	Alien	Forb	Perennial	High	High					A	A
<i>Malosma laurina</i>	Laurel Sumac	Native	Shrub	Perennial	Medium	Medium						
<i>Prunus ilicifolia</i>	Hollyleaf Cherry	Native	Tree/ Shrub	Perennial	Medium	Medium						

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<i>Pseudognaphalium californicum</i>	California Cudweed	Native	Forb	Perennial	Medium	High					A	
<i>Rhamnus ilicifolia</i>	Hollyleaf Redberry	Native	Shrub	Perennial	Low	Medium						
<i>Rhus ovata</i>	Sugar Bush	Native	Shrub	Perennial	Low	Medium						
<i>Ribes malvaceum</i>	Chaparral Current	Native	Shrub	Perennial	Low	Medium						
<i>Salix lasiolepis</i>	Arroyo Willow	Native	Tree/ Shrub	Perennial	Low	Medium	A	A				A
<i>Salvia leucophylla</i>	Purple Sage	Native	Shrub	Perennial	Medium	Medium						
<i>Salvia mellifera</i>	Black Sage	Native	Shrub	Perennial	Medium	Medium						
<i>Sambucus nigra</i>	Blue Elderberry	Native	Tree/ Shrub	Perennial	Low	Medium						
<i>Stipa cernua</i>	Nodding Needlegrass	Native	Grass	Perennial	Medium	Low						
<i>Stipa pulchra</i>	Purple Needlegrass	Native	Grass	Perennial	Low	Low						

<sup>a</sup> :Scientific name from the 2012 Jepson Manual: Vascular Plants of California (Baldwin, 2012)

<sup>b</sup> :Duration indicates the life expectancy of the plant

<sup>c</sup> :The plant abundance in Area IV as observed during May 30<sup>th</sup>, 2013 site visit

A : The 'A' indicates that the plant is analogous to a species shown to uptake this chemical as identified by the 2012 Sandia Study

## Acronyms

PAH polyaromatic hydrocarbon

PCB polychlorinated biphenyl

TPH total petroleum hydrocarbons

## References

Baldwin BG, Goldman DH, Keil DJ, Patterson R, Rosatti TJ, and Wilken DH (eds.). 2012. The Jepson Manual: Vascular Plants of California, ed. 2. Berkeley: University of California Press.

Sandia. 2012. "Investigations Recommended for Resolving Uncertainty About Soil Remediation at ETEC." Soil Treatability Study Update. September 18.