Table 1. Plants Species Observed at Sutter's Landing Regional Park (Toe-of-Levee to Edge of American River)

Plant Species [1]			N/E [2]	Cal-IPC [3]	Control Recommended [4]
Plant Family	**Scientific Name**	**Common Name**			
FERNS & ALLIES					
Equisetaceae	*Equisetum arvense*	Common horsetail	N		
Equisetaceae	*Equisetum laevigatum*	Smooth scouring rush	N		
DICOTS					
Aceraceae	*Acer macrophyllum*	Big-leaf maple	N		
Aceraceae	*Acer negundo var. californicum*	Box elder	N		
Amaranthaceae	*Amaranthus albus*	Tumbleweed	E		
Anacardiaceae	*Toxicodendron diversilobum*	Western poison oak	N		
Apiaceae	*Conium maculatum*	Poison hemlock	E	Moderate	Eradication
Apiaceae	*Foeniculum vulgare*	Fennel	E	High	Eradication
Asteraceae	*Ambrosia pilostachya*	Western ragweed	N		
Asteraceae	*Artemisia douglasiana*	Mugwort	N		
Asteraceae	*Aster* sp.	Aster	Unk		
Asteraceae	*Baccharis pilularis*	Coyote brush	N		
Asteraceae	*Bidens frondosa*	Sticktight	E		
Asteraceae	*Carduus pycnocephalus*	Italian thistle	E	Moderate	Suppression
Asteraceae	*Centaurea solstitialis*	Yellow star-thistle	E	High	Suppression
Asteraceae	*Cirsium vulgare*	Bull thistle	E	Moderate	Suppression
Asteraceae	*Conyza canadensis*	Horseweed	E		
Asteraceae	*Euthamia occidentalis*	Western goldenrod	N		
Asteraceae	*Gnaphalium* sp.	Cudweed	Unk		
Asteraceae	*Lactuca serriola*	Prickly lettuce	E		
Asteraceae	*Silybum marianum*	Milk thistle	E	Limited	Suppression
Asteraceae	*Sonchus oleraceus*	Common sow thistle	E		
Asteraceae	*Xanthium strumarium*	Cocklebur	N		
Bignoniaceae	*Catalpa bignonioides*	Southern catalpa	E		
Boraginaceae	*Heliotropium curassavicum*	Heliotrope	E		
Brassicaceae	*Hirschfeldia incana*	Hirschfeldia	E	Moderate	Suppression
Brassicaceae	*Lepidium latifolium*	Perennial pepperweed	E	High	Eradication
Brassicaceae	*Raphanus sativus*	Radish	E	Limited	Suppression
Caprifoliaceae	*Sambucus mexicana*	Blue elderberry	N		
Caryophyllaceae	*Dianthus* sp.	Carnation	E		
Chenopodiaceae	*Chenopodium album*	Lamb's quarters	E		
Chenopodiaceae	*Chenopodium ambrosioides*	Mexican tea	E		
Chenopodiaceae	*Salsola tragus*	Tumbleweed	E	Limited	Suppression
Cuscutaceae	*Cuscuta californica*	Dodder	N		
Euphorbiaceae	*Chamaesyce maculata*	Spotted spurge	E		
Euphorbiaceae	*Eremocarpus setigerus*	Turkey mullein	N		
Fabaceae	*Robinia pseudoacacia*	Black locust	E	Limited	Eradication
Fabaceae	*Vicia villosa* ssp. *villosa*	Winter vetch	E		
Fagaceae	*Quercus lobata*	Valley oak	N		
Fagaceae	*Quercus wislizenii*	Interior live oak	N		

Geraniaceae	*Erodium cicutarium*	Storksbill	E	Limited	
Geraniaceae	*Geranium molle*	Cranesbill	E		
Juglandaceae	*Juglans californica* var. *hindsii*	Northern California black walnut	N		
Lamiaceae	*Marrubium vulgare*	Horehound	E	Limited	Suppression
Moraceae	*Ficus carica*	Edible fig	E	Moderate	Eradication
Oleaceae	*Fraxinus latifolia*	Oregon Ash	N		
Onagraceae	*Epilobium ciliatum*	Willow herb	N		
Onagraceae	*Oenothera* sp.	Evening primrose	Unk		
Papaveraceae	*Eschscholzia californica*	California poppy	N		
Polygonaceae	*Polygonum* sp.	Knotweed	Unk		
Polygonaceae	*Rumex crispus*	Curly dock	E	Limited	
Portulacaceae	*Portulaca oleracea*	Common purslane	E		
Rosaceae	*Rubus discolor*	Himalayan blackberry	E	High	Suppression
Rosaceae	*Rubus ursinus*	California blackberry	N		
Rubiaceae	*Galium aparine*	Goose grass	N		
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	N		
Salicaceae	*Salix exigua*	Narrow-leaved willow	N		
Salicaceae	*Salix gooddingii*	Goodding's black willow	N		
Salicaceae	*Salix lucida*	Shining willow	N		
Simaroubaceae	*Ailanthus altissima*	Tree of heaven	E	Moderate	Eradication
Solanaceae	*Nicotiana acuminata* var. *multiflora*	Tobacco	E		
Solanaceae	*Solanum* sp. (black fruit)	Nightshade	Unk		
Ulmaceae	*Ulmus* sp.	Elm	E		
Verbenaceae	*Verbena* sp.	Verbena	Unk		
Viscaceae	*Phoradendron macrophyllum*	Big leaf mistletoe	N		
Vitaceae	*Vitis californica*	California wild grape	N		
Zygophyllaceae	*Tribulus terrestris*	Puncture vine	E		
MONOCOTS					
Arecaceae	*Phoenix* sp.	Palm	E		Eradication
Cyperaceae	*Carex* sp.	Sedge	N		
Cyperaceae	*Cyperus eragrostis*	Nutsedge	N		
Juncaceae	*Juncus balticus*	Rush	N		
Poaceae	*Arundo donax*	Giant reed	E	High	Eradication
Poaceae	*Avena* sp.	Wild oat	E	Moderate	
Poaceae	*Bromus diandrus*	Ripgut grass	E	Moderate	
Poaceae	*Bromus* sp.	Brome	Unk		
Poaceae	*Cynodon dactylon*	Bermuda grass	E	Moderate	
Poaceae	*Elymus glaucus*	Blue wildrye	N		
Poaceae	*Hordeum murinum* ssp. *Leporinum*	Foxtail barley	E		
Poaceae	*Leymus triticoides*	Creeping wildrye	N		

Poaceae	*Lolium multiflorum*	Italian ryegrass	E	Moderate	
Poaceae	*Poa* sp.	Bluegrass	Unk		
Poaceae	*Sorghum halepense*	Johnsongrass	E		

[1] Taxonomy follows Hickman (1993).

[2] N = Native to California; E = Exotic to California; Unk = Unknown.

[3] California Invasive Plant Council ecological impact ratings (Cal-IPC 2006):

High – These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate – These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited – These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

[4] Control Recommended is the opinion of an ecologist with experience in weed management and restoration. Control recommendations are Eradication (complete removal from the survey area) and Suppression (control and removal, as resources allow, to facilitate restoration or other resource management goals). Control recommendations take into consideration the following factors: 1) Eradicability, based on species biology and extent of invasion in survey area 2) Probability of recolonization if eradicated, and 3) Ecological impacts and tendency to interfere with typical restoration activities. Emphasis is on sustainable invasive plant control with limited resources available. When resources allow, control should extend to other exotic species at the site.

Literature Cited

California Invasive Plant Council (Cal-IPC). 2006. Invasive plant inventory. California Invasive Plant Council, Berkeley, CA. Available at: www.cal-ipc.org.

Hickman, J., ed. 1993. The Jepson manual: Higher plants of California. University of California Press, Berkeley, CA.

INVASIVE SPECIES CONTROL INFORMATION RESOURCES:

Control methods for CDFA noxious weeds species are available here:
http://www.cdfa.ca.gov/phpps/ipc/weedinfo/winfo_table-commname.htm

Elemental Stewardship abstracts for invasive species are available here:

BUT, some links there appear to be broken (e.g., *Ailanthus altissima*), interested parties should Google "Elemental Stewardship Abstract [scientific name]" inserting the plant sci name into brackets.

Table 2. Native Plants Recommended for Restoration at Sutter's Landing [1]
(Toe-of-Levee to Edge of American River)

Native Plant Species [2]			Life Form
Plant Family	**Scientific Name**	**Common Name**	
DICOTS			
Aceraceae	*Acer negundo* var. *californicum*	Box elder	Tree
Asteraceae	*Artemisia douglasiana*	Mugwort	Perennial herb
Asteraceae	*Baccharis pilularis*	Coyote brush	Shrub
Asteraceae	*Euthamia occidentalis*	Western goldenrod	Perennial herb
Caprifoliaceae	*Sambucus mexicana*	Blue elderberry	Shrub
Fagaceae	*Quercus lobata*	Valley oak	Tree
Fagaceae	*Quercus wislizenii*	Interior live oak	Tree
Oleaceae	*Fraxinus latifolia*	Oregon Ash	Tree
Papaveraceae	*Eschscholzia californica*	California poppy	Annual or perennial herb
Rosaceae	*Rubus ursinus*	California blackberry	Vine
Salicaceae	*Populus fremontii* ssp. *fremontii*	Fremont cottonwood	Tree
Salicaceae	*Salix exigua*	Narrow-leaved willow	Shrub
Salicaceae	*Salix gooddingii*	Goodding's black willow	Tree
Salicaceae	*Salix lucida*	Willow	Shrub or Tree
Vitaceae	*Vitis californica*	California wild grape	Vine
MONOCOTS			
Cyperaceae	*Carex* sp.	Sedge	Perennial graminoid
Juncaceae	*Juncus balticus*	Rush	Perennial graminoid
Poaceae	*Elymus glaucus*	Blue wildrye	Perennial graminoid
Poaceae	*Leymus triticoides*	Creeping wildrye	Perennial graminoid

[1] Recommendation based on the following species-specific factors: 1) Locally native, 2) Demonstrated ability to thrive on site, 3) ability to outcompete invasive plants that co-occur, 4) diverse life forms, 5) provide ecological function such as soil stabilization, bird habitat, 6) generally regarded as easy to establish (with some exceptions), 7) not considered a weed or pest species (e.g., western ragweed, poison oak). List includes only species that are known from the site. Native plants known from offsite may also be recommended.

[2] Taxonomy follows Hickman (1993).