APPENDIX B
RARE PLANT SURVEY MEMORANDUM, 2002

URS

Memorandum

Date: February 15, 2002

To: Brian Johnson, Ralph Stahl, Jr.

From: Francesca Demgen

Subject: ***Rare Plant Survey, Final Memorandum***

Attached you will find the final technical memorandum describing the rare plant survey conducted at the duPont Oakley plant during 2001. The text of the November 20 draft version has been slightly edited to reflect your comments. The tables and figures have not changed. The contents of the technical memorandum are as follows:

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Introduction

This memorandum presents the findings of the rare plant surveys conducted by URS Corporation (URS) at the DuPont Oakley Plant in the spring and summer 2001 (Figure 1).

Site records suggest that there are several areas of the property that have remained undisturbed for many years. These conditions increase the potential for the presence of special status plant species on the site. During the wetland delineation conducted by URS at the Oakley Plant in July and August 2000, a number of species identified were listed by the California Native Plant Society (CNPS) as locally uncommon in Contra Costa and Alameda Counties (Lake 2001a). The Department of Fish and Game's California Natural Diversity Database (CNDDB) records also indicated that several special status plant species occur within 1 mile of the plant site (CNNB 2001; Figure 2).

Methods

Based on a review of lists provided by the U.S. Fish and Wildlife Service (USFWS) and existing CNDDB records, a list was compiled of special status plants with the potential to occur at the DuPont Oakley plant (Table 1). The potential presence of a species was determined by the presence of suitable habitat, including marginal habitat, at the plant site. The USFWS lists contain federally listed species that potentially occur in Contra Costa County and in the following 7.5 minute U.S. Geological Survey quadrangles: Brentwood, Antioch South, Jersey Island, and Antioch North. The CNNDB records provide information on the habitat and location of known occurrences of special status species. Table 1 includes common and Latin names; federal, state and CNPS status; CNDDB habitat descriptions; and flowering periods.

The survey dates were scheduled for the spring and the summer to coincide with the flowering period of most of the target species. Surveys were conducted on May 8, May 23, June 7, August 28, and August 29, 2001. Table 2 lists the target species, areas that were surveyed on those dates, and the results.

Vegetation community maps developed for the wetland delineation of the site were used to identify areas to survey for special status plants (URS 2000). The discussion in the results section refers to the vegetation communities defined in the wetland delineation report. In the areas surveyed, URS biologists walked transect lines through the vegetation community. The width of the area surveyed along a transect line varied, depending on the vegetation community. In most of the surveyed areas the width was approximately 25-40 feet wide. In some of the larger vegetation communities, the surveyed areas were approximately 50 feet wide.

All of the *Scirpus* spp./willow areas surveyed are narrow habitats adjacent to the San Joquain River or along sloughs. Surveys in this community were conducted at low tide to facilitate

observing Mason's lilaeopsis (*Lilaeopsis masonii*) and Delta mudwort (*Limosella subulata*), which inhabitat the intertidal zone that becomes submerged during high tides. In addition, low tides facilitated walking along the edge of these communities. At several points in this community along on the San Joaquin River and the Little Break levee, a boat was used to gain access to an area that could then be walked.

Within vegetation communities surveyed, several areas that occur along the edges of sloughs that could be considered microhabitats within the larger vegetation communities were also surveyed. These slough edges often provide bare edges that are subject to tidal fluctuations and potentially provide habitat for some of the special status plants that prefer sparse areas or tidally influenced areas. Three sloughs inside Little Break that are shown as *Scirpus* spp. (s) communities were investigated from the boat to determine if potential habitat was present for special status species (Figure 3). In addition, at the Central Slough and at three narrow channels in the center of the site, the entire edge of the sloughs were surveyed within a band that was approximately 25 feet wide (Figure 3).

On June 7, 2001 the locations of Mason's lilaeopsis, Delta mudwort, and Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*) populations were recorded with the Global Positioning System (GPS) and populations sizes were estimated. After June 7th, populations were no longer recorded with the GPS because: 1) access to some survey areas along the San Joaquin River was impeded by dense Himalayan blackberry (*Rubus discolor*), 2) the total number of populations found was greater than anticipated, and 3) distinguishing the beginning and ending of linear populations was difficult. The only areas that were recorded with the GPS were along the edge of the San Joaquin River in the western part of the site. For the remaining area, locations and population sizes were visually estimated. Estimating population sizes was problematic for Mason's lilaeopsis and Delta mudwort because these species often grow together with other species that are similar in appearance and they form a mat-like carpet of plants that are difficult to distinguish from one another. Sometimes the species were distinguishable because some plants were flowering.

Results

Plant species that were observed during the surveys were recorded and added to the previous vegetation community list and the plant species list that were produced during the wetland delineation (Tables 3 and 4). Tables 3 and 4 also provide the status of each species, including plants listed by CNPS as unusual for Alameda and Contra Costa Counties (Lake 2001a).

Table 2 summarizes the survey dates, target species, habitats surveyed, and the results of the survey. The areas that were surveyed are shown in Figure 3. Five special status species were found on the plant site: Suisun Marsh aster (*Aster lentus*), Northern California black walnut (*Juglans californica* var. *hindsii*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), and Delta mudwort (*Limosella subulata*). The identificaiton

of these species was confirmed by comparing specimens from the plant site with known site occurences or specimens at the Antioch Dunes National Wildlife Refuge that were observed or collected during a CNPS rare plant survey on May 26, 2001. The Antioch Dunes National Wildlife Refuge is located along the San Joaquin River approximately 2 miles west of the DuPont Oakley plant.

In California, Suisun Marsh aster, Delta tule pea, Mason's lilaeopsis, and Delta mudwort primarily occur in the Sacramento-San Joaquin Delta. These species are relatively common within the Delta but their distribution is limited primarily to the Delta; therefore, they are listed as special status plants. These four species, except for Delta mudwort are federal species of concern and are listed by CNPS as class 1B: rare, threatened, or endangered in California and elsewhere. Delta mudwort is listed by CNPS as class 2: rare, threatened, or endangered in California, but more common elsewhere. The CNDDB (2001) states that Delta mudwort is "probably the rarest of the suite of Delta rare plants." Although Delta mudwort is a rare species, there is some debate about whether or not it is a native species and the Jepson Manual lists it as a non-native species (Ertter and Morosco 1997; Hickman 1993).

Northern California black walnut is listed by CNPS as 1B. Many occurrences of this species are associated with former homesteads or the rootstocks of the cultivated English walnut (*Juglans regia*) (Hickman 1993). Black walnut is readily naturalized from ornamental plantings because the seeds are transported by birds or other animals. It is likely that this occurrence is not a native occurrence because this area is not one of the few known native occurrences.

The five special status species at the site occur in the *Scirpus* spp./willow community along the San Joaquin River in specific tidal zones. Populations of these special status species found during the surveys are mapped in Figure 4 (except for California black walnut). Photographs of these species and their habitat are shown in Figures 5, 6 and 7.

Mason's lilaeopsis and Delta mudwort grow in the intertidal zone that becomes submerged at high tides. Associated species in this intertidal community at the site include bulrush (*Scirpus* spp.), whorled marsh-pennywort (*Hydrocotyle verticillata*), spikerush (*Eleocharis sp.*), three-ribbed arrow-grass (*Triglochin striata*), and Howell's quillwort (*Isoetes howellii*).

Suisun Marsh aster and Delta tule pea inhabit the middle and upper marsh zone. They grow in association with bulrush, willow (*Salix* spp.), Himalayan blackberry, giant reed (*Arundo donax*), bur-marigold (*Bidens laevis*), smartweed (*Polygonum* spp.), Baltic rush (*Juncus balticus*), common reed (*Phragmites australis*), and marsh morning-glory (*Calystegia sepium* ssp. *limnophila*). Delta tule pea was observed more often at a slightly higher marsh elevation than Suisun Marsh aster. Delta tule pea was often observed twining on giant reed and Himalayan blackberry. Suisun Marsh aster occurred in a slightly lower marsh elevation than Delta tule pea in areas that were more open than the dense giant reed and Himalayan blackberry areas.

Population sizes for the four special status species at the site were visually estimated. A population is defined as plants growing together in a group with a definable boundary. Population estimates of Mason's lilaeopsis and Delta mudwort along the San Joaquin River varied from approximately 50 to 6,000 individuals. Population sizes for Delta tule pea varied from 1-40 individuals. The densest population of Delta tule pea was observed along the edge of the San Joaquin River in the Little Break area (Figure 4). There were fewer populations and fewer individuals in a population of the Suisun Marsh aster than the other three special status species. Populations of Suisun Marsh aster usually only consisted of 1-3 individual plants.

Conclusions and Recommendations

In addition to the five special status plants found on the site, a number of species are listed by CNPS as uncommon for Alameda and Contra Costa Counties (Lake 2001a). The presence of these unusual species and the habitats that support them, are useful for land managers to indicate which habitats should have a high conservation priority in the East Bay. The undisturbed, wetland areas of the Oakley site have a higher number of rare and uncommon plants than the uplands on the site. Upland sites are generally very disturbed and unlikely to support rare plants. Most of the rare and unusual plants occur in the *Scirpus* spp./willow community along the San Joaquin River (Table 4). Most of the uplands shown in Figure 3 were disked during the surveys and have a history of disturbance.

Special status species at the site are threatened by invasive non-natives, potential development and levee repairs. Himalayan blackberry and giant reed are common in the habitats of these rare plants. These aggressive exotic plants could potentially eliminate the habitat for rare plants and other native species. Both of these species are listed on the California Exotic Pest Plant Council's A-1 list, which lists the most widespread, invasive wildland pest plants that are documented as aggressive invaders that displace natives and disrupt natural habitats (CalEPPC 1999). Giant reed is a major pest that could potentially form very dense monotypic stands at the site. In addition, disturbances from development or levee repairs could increase the establishment of these invasive non-natives.

Implementation of a rare plant monitoring program at the site could provide annual data on the extent and health of the rare plant populations. Populations sizes of the four special status species at the site were only visually estimated. Populations could be more accurately estimated and mapped as part of a rare plant monitoring program. In addition, more extensive surveys could detect additional populations on the site. The monitoring program could include information on the spread of invasive exotic species and the health and stability of the rare plant populations. In particular, overall, the Delta tule pea at the site appeared healthy, but in several locations, its leaves were discolored with a whitish tinge. This condition could be caused by a variety of factors such as soil micronutrient concentrations, fungus, or insects.

More extensive surveys are recommended for soft bird's beak (*Cordylanthus mollis* ssp. *mollis*) and small spikerush (*Eleocharis parvula*). Soft bird's beak was one of the target species included in the surveys; however, some of the dense pickleweed areas on the site were not surveyed. Areas that were more sparsely vegetated were the focus of the surveys. In addition, a short spikerush (*Eleocharis* sp.) that is potentially a special status species, was found in the *Scirpus* spp./willow community along the San Joaquin River. Small spikerush (*Eleocharis parvula*) is listed by CNPS as a species with limited distribution (4). Small spikerush was recorded at the Antioch Dunes National Wildlife Refuge in the 1970's, 1984, and 1994, but was not observed there in recent rare plant surveys in 2001 (Lake 2001b). The spikerush found at the site did not have fruit and thus was not identifiable to the species level.

References

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Table 1. Special Status Plant Species that Potentially Occur at the DuPont Oakley Site.

Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period[d]
		Federal[a]	State[b]	CNPS[c]	
Amsinckia grandiflora	Large-flowered fiddleneck	E	E	1B	Cismontane woodland, annual grassland in various soils; Apr-May
Astragalus tener var. *tener*	Alkali milk-vetch	None	None	1B	Playas, grassland (adobe clay), vernal pools; alkaline; Mar-Jun
Aster lentus	Suisun Marsh aster	SC	None	1B	Brackish and freshwater marshes, most often seen along sloughs with *Phragmites*, *Scirpus*, blackberry, *Typha*, etc. Endemic to the Sac/San Joaquin River Delta; Aug-Nov
Atriplex cordulata	Heartscale	SC	None	1B	Chenopod scrub, valley and foothill grassland, meadows. Alkaline flats and scalds in the Central Valley, sandy soils; May-Oct
Atriplex depressa	brittlescale	None	None	1B	Chenopod scrub, playas, valley & foothill grassland, meadows, and vernal pools. Usually in alkali scalds or alkali clay in meadows or annual grassland; May-Oct
Atriplex joaquiniana	San Joaquin saltbush	SC	None	1B	Chenopod scrub, valley and foothill grassland, alkali meadows. In seasonal alkaline wetlands or alkali sink scrub with *Distichlis spicata*, *Frankenia*, etc; Apr-Sept
Blepharizonia plumosa ssp. *plumosa*	Big tarplant	None	None	1B	Dry hills and plains in annual grassland. Clay to clay loam soils; usually on slopes and often in burned areas; July-Oct
Cordylanthus mollis ssp. *mollis*	Soft bird's beak	E	R	1B	Brackish marsh, often found with *Distichlis, Salicornia, Frankenia*, etc.; July-Sept
Delphinium recurvatum	Recurved larkspur	SC	None	1B	Chenopod scrub, valley and foothill grassland, cismontane woodland. On alkaline soils; often in valley saltbush or valley chenopod scrub; Mar-May
Eriogoum truncatum	Mt. Diablo buckwheat	None	None	1A	Chaparral, coastal scrub, valley and foothill grassland; on dry exposed clay or sandy substrate. Historically from Alameda, Contra Costa and Solano Counties; Apr-June

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Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period[d]
		Federal[a]	State[b]	CNPS[c]	
Erysimum capitatum ssp. *angustatum*	Contra Costa wallflower	E	E	1B	Inland dunes; stabilized dunes of sand and clay near Antioch along San Joaquin River. Endemic to Contra Costa County; Mar-July
Eschscholzia rhombipetala	Diamond-petaled California poppy	SC	None	1A	Valley and foothill grassland. Most sites are historical. Alkaline, clay slopes and flats; Mar-Apr
Fritillaria liliacea	Fragrant fritillary	SC	None	1B	Coastal prairie, coastal scrub, grassland; often serpentinite; Feb-Apr
Helianthella castanea	Diablo helianthella	SC	None	1B	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, grassland; Apr-Jun
Hesperolinon breweri	Brewer's western flax	None	None	1B	Chaparral, cismontane woodland, and valley and foothill grassland; often in rocky serpentine soil in chaparral and grassland; May-July
Hibiscus lasiocarpus	rose-mallow	None	None	2	Moist, freshwater-soaked river banks and low peat islands in sloughs; in California, know from the Delta watershed; Aug-Sept
Holocarpha macradenia	Santa Cruz tarplant	T	E	1B	In coastal prairies & valley and foothill grasslands in light, sandy soil or sandy clay; often with non-natives; June-Oct
Isocoma arguta	Carquinez goldenbush	SC	None	1B	Valley and foothill grassland in alkaline soils, flats, and lower hills. On benches near drainages and on tops and sides of mounds in swale habitat. Known only from Contra Costa and Solano Counties; Aug-Dec.
Lasthenia conjugens	Contra Costa goldfields	E	None	1B	In vernal pools, swales and low depressions in open grassy areas in valley & foothill grassland and cismontane woodland; Mar-June

Table 1. Special Status Plant Species that Potentially Occur at the DuPont Oakley Site.

Scientific Name	Common Name	Status			Supporting Habitat/Flowering Period[d]
		Federal[a]	State[b]	CNPS[c]	
Lathyrus jepsonii var. *jepsonii*	Delta tule pea	SC	None	1B	Freshwater and brackish marshes, often found with *Typha* spp., *Aster lentus*, *Rosa california*, *Juncus* spp., and *Scirpus* spp. Usually on marsh and slough edges. Most of distribution limited to Sacramento/San Joaquin River Delta; May-June.
Lilaeopsis masonii	Mason's lilaeopsis	SC	R	1B	Freshwater and brackish marshes and riparian scrub, in muddy or silty soil formed through river deposition or river bank erosion; Apr-Oct
Limosella subulata	Delta mudwort	None	None	2	Riparian scrub, freshwater marsh, brackish marsh; usually on mud banks of the Delta on marshy or scrubby riparian association, often with *Lilaeopsis masonii*; May-Aug
Madia radiata	Showy madia	None	None	1B	Valley and foothill grassland, cismontane woodland, chenopod scrub; mostly on adobe clay in grassland and among shrubs; Mar-May
Oenothera deltoides ssp. *howellii*	Antioch Dunes evening-primrose	E	E	1B	Interior dunes; river bluffs and sand dunes east of Antioch. Known only from Contra Costa and Sacramento Counties; March-Sept
Potentilla hickmanii	Hickman's potentilla (cinquefoil)	E	E	1B	Coastal bluff scrub, coniferous forest, vernally mesic meadows, freshwater marsh; Apr-Aug
Scutellaria lateriflora	Blue skullcap	None	None	1B	Wet meadows, seeps and marshes; July-Sept
Tropidocarpum capparideum	Caper-fruited tropidocarpum	SC	None	1A	Alkaline hills in valley and foothill grassland; Mar-Apr

Table 1. Special Status Plant Species that Potentially Occur at the DuPont Oakley Site.

Notes:

[a]Federal Status Codes:

E=Endangered. Species in danger of extinction throughout all or a significant portion of its range.
T=Threatened. Species likely to become endangered within the foreseeable future.
PE=Proposed for listing as endangered.
PT=Proposed for listing as threatened.
PD=Proposed for delisting
C=Candidate for listing.
SC=Special concern species.

[b]California Status Codes:

E=Endangered. Species whose continued existence in California is in jeopardy.
T=Threatened. Species likely to become endangered within the foreseeable future.
R=Rare. Plant species, although not presently threatened with extinction, that may become endangered in the forseeable future.
SC=California Department of Fish and Game species of special concern.
FP&P=Fully protected and protected species defined in the State of California under Sections 3511 and 4700 of the Fish and Game Code.

[c]California Native Plant Society Status Codes:

1A=Plants presumed extinct in California.
1B=Plants that are rare, threatened, or endangered in California and elsewhere.
2=Plants that are rare, threatened, or endangered in California, but more common elsewhere.
3=Plants about which more information is needed.
4=Plants of limited distribution

H=Hybrid. Rejected for classification by the California Native Plant Society Inventory.
NA=Not Applicable

[d]Sources for supporting habitat descriptions:

1a. Skinner and Pavlik 1994
1b. California Natural Diversity Data Base 2000

Table 2. Special Status Plant Surveys at the DuPont Oakley Plant.

Survey Date	Species Targeted	Habitats Examined*	Results
May 8, 2001	*Amsinckia grandiflora* *Astragalus tener* var. *tener* *Atriplex cordulata* *Atriplex depressa* *Atriplex joaquiniana* *Blepharizonia plumosa* ssp. *plumosa* *Cordylanthus mollis* ssp. *mollis* *Delphinium recurvatum* *Eriogoum truncatum* *Erysimum capitatum* ssp. *angustatum* *Eschscholzia rhombipetala* *Fritillaria liliacea* *Helianthella castanea* *Hesperolinon breweri* *Holocarpha macradenia* *Isocoma arguta* *Lasthenia conjugens* *Madia radiata* *Oenothera deltoides* ssp. *howellii* *Potentilla hickmanii* *Scutellaria lateriflora* *Tropidocarpum capparideum*	Alkali Swale (as) *Distichlis spicata* (di) *Distichlis spicata*/seasonal grassland (di/sg) *Juncus* (j) - all except for dense area near central part of site pickleweed (p) - only at Central Slough Seasonal Grassland (sg) Upland (u) - all except Little Break levee and section just west of Little Break Marina	None of the target species were observed.
May 23, 2001	*Aster lentus* *Erysimum capitatum* ssp. *angustatum* *Hibiscus lasiocarpus* *Lathyrus jepsonii* var. *jepsonii* *Lilaeopsis masonii* *Limosella subulata* *Oenothera deltoides* ssp. *howellii* *Potentilla hickmanii* *Scutellaria lateriflora*	*Scirpus* spp./willow (s/w) *Scirpus* spp. (s) edges and three slough edges inside Little Break (s)	Found occurrences of *Juglans californica* var. *hindsii*, *Lathyrus jepsonii* var. *jepsonii*, *Lilaeopsis masonii*, and *Limosella subulata*. Found *Aster lentus* that was not flowering, so confirmed identification during August 28, 2001 survey when it was flowering.

Table 2. Special Status Plant Surveys at the DuPont Oakley Plant.

Survey Date	Species Targeted	Habitats Examined*	Results
June 7, 2001	*Amsinckia grandiflora* *Aster lentus* *Atriplex joaquiniana* *Blepharizonia plumosa* ssp. *plumosa* *Cordylanthus mollis* ssp. *mollis* *Eriogoum truncatum* *Erysimum capitatum* ssp. *angustatum* *Eschscholzia rhombipetala* *Fritillaria liliacea* *Helianthella castanea* *Hesperolinon breweri* *Hibiscus lasiocarpus* *Holocarpha macradenia* *Isocoma arguta* *Lasthenia conjugens* *Lathyrus jepsonii* var. *jepsonii* *Lilaeopsis masonii* *Limosella subulata* *Madia radiata* *Oenothera deltoides* ssp. *howellii* *Potentilla hickmanii* *Scutellaria lateriflora* *Tropidocarpum capparideum*	Central Slough edges - 25 foot wide areas across various habitats adjacent to water Channel edges (25 feet wide) at three channels in center of site within *Scirpus* spp. (s) community *Distichlis spicata* (di) *Distichlis spicata*/seasonal grassland (di/sg) - only at Central Slough *Juncus* (j) - only at Central Slough pickleweed (p) - only at Central Slough *Scirpus* spp./willow (s/w) - only along San Joaquin River to map *Lathyrus jepsonii* var. *jepsonii*, *Lilaeopsis masonii*, and *Limosella subulata*. Upland (u) - only the section west of Little Break Marina and upland levee near narrow channels in center of site	Found occurrences of *Lathyrus jepsonii* var. *jepsonii*, *Lilaeopsis masonii*, and *Limosella subulata*. Found *Aster lentus* that was not flowering, so confirmed identification during August 28, 2001 survey when it was flowering.

Table 2. Special Status Plant Surveys at the DuPont Oakley Plant.

Survey Date	Species Targeted	Habitats Examined*	Results
August 28, 2001	*Amsinckia grandiflora* *Aster lentus* *Astragalus tener* var. *tener* *Atriplex cordulata* *Atriplex depressa* *Atriplex joaquiniana* *Blepharizonia plumosa* ssp. *plumosa* *Cordylanthus mollis* ssp. *mollis* *Delphinium recurvatum* *Eriogoum truncatum* *Erysimum capitatum* ssp. *angustatum* *Eschscholzia rhombipetala* *Fritillaria liliacea* *Helianthella castanea* *Hesperolinon breweri* *Hibiscus lasiocarpus* *Holocarpha macradenia* *Isocoma arguta* *Lasthenia conjugens* *Lathyrus jepsonii* var. *jepsonii* *Lilaeopsis masonii* *Limosella subulata* *Madia radiata* *Oenothera deltoides* ssp. *howellii* *Potentilla hickmanii* *Scutellaria lateriflora* *Tropidocarpum capparideum*	alkali swale (as) *Distichlis spicata*/seasonal grassland (di/sg) - only the section northeast of the Central Slough and south of (j) community *Juncus* sp. (j) - only the section just north of (di/sg) community and south of (w) community *Scirpus* spp./willow (s/w) - only at Little Break, along both sides of the upland levee and along the San Joaquin River Upland (u) - only Little Break levee	Found occurrences of *Aster lentus*, *Lathyrus jepsonii* var. *jepsonii*, *Lilaeopsis masonii*, and *Limosella subulata*.
August 29, 2001	*Aster lentus* *Erysimum capitatum* ssp. *angustatum* *Hibiscus lasiocarpus* *Lathyrus jepsonii* var. *jepsonii* *Lilaeopsis masonii* *Limosella subulata* *Oenothera deltoides* ssp. *howellii* *Potentilla hickmanii* *Scutellaria lateriflora*	*Scirpus* spp./willow (s/w) - only the section along the San Joaquin River west of Little Break	Found occurrences of *Aster lentus*, *Lathyrus jepsonii* var. *jepsonii*, *Lilaeopsis masonii*, and *Limosella subulata*.

***Note: Areas surveyed are shown in Figure 3.**

Table 3. Plant Species Observed at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status**
Allenrolfea occidentalis	iodine bush	native	A2
Alnus rhombifolia	white alder	native	-----
Ambrosia psilostachya	Western ragweed	native	-----
Amsinckia menziesii var. *intermedia*	common fiddleneck	native	-----
Anaphalis margaritaceae	pearly everlasting	native	-----
Anemopsis californica	yerba manza	native	A2
Apium graveolens	celery	non-native	-----
Apocynum cannabinum	Indian-hemp	native	A2
Arundo donax	giant reed	non-native	-----
Asparagus officinalis ssp. *officinalis*	asparagus-fern	non-native	-----
Aster lentus	Suisun Marsh aster	native	FSC/1B/A2
Atriplex semibaccata	Australian saltbush	non-native	-----
Atriplex triangularis	fat hen	native	-----
Avena barbata	slender wild oats	non-native	-----
Avena fatua	wild oats	non-native	-----
Baccharis pilularis	coyote bush	native	-----
Baccharis salicifolia	mule fat	native	-----
Bidens laevis	bur-marigold	native	A2
Brassica nigra	black mustard	non-native	-----
Bromus diandrus	ripgut brome	non-native	-----
Bromus hordeaceus	soft chess	non-native	-----
Calystegia sepium ssp. *limnophila*	hedge bindweed	native	A2
Carduus pycnocephalus	Italian thistle	non-native	-----
Carex sp.	sedge	non-native or native	-----
Carpobrotus edulis	Hottentot fig	non-native	-----
Centaurea solstitialis	yellow star-thistle	non-native	-----
Centaurium muehlenbergii	Monterey centaury	native	C
Cirsium vulgare	bull thistle	non-native	-----
Conium maculatum	poison hemlock	non-native	-----
Conyza canadensis	horseweed	native	-----
Cotula coronopifolia	brass-buttons	non-native	-----
Cortaderia jubata	pampas grass	non-native	-----
Cressa truxillensis	alkali weed	native	-----
Crypsis schoenoides	swamp grass	non-native	-----
Cynodon dactylon	Bermuda grass	non-native	-----
Cyperus eragrostis	nutsedge	native	-----
Cyperus niger	black flatsedge	native	A1

Table 3. Plant Species Observed at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status*
Cyperus odoratus	fragrant flatsedge	native	A1
Cyperus strigosus	false nutsedge	native	A1
Deschampsia cespitosa ssp. *cepitosa*	tufted hairgrass	native	B
Deschampsia cespitosa ssp. *holciformis*	coastal tufted hairgrass	native	A2
Distichlis spicata	saltgrass	native	-----
Eichhornia crassipes	water hyacinth	non-native	-----
Egeria densa	Brazilian waterweed	non-native	-----
Eleocharis sp.	spikerush	native	-----
Epilobium brachycarpum	panicled willowherb	native	-----
Epilobium ciliatum	willowherb	native	-----
Erodium moschatum	white-stem filaree	non-native	-----
Eryngium articulatum	beethistle	native	A1
Eucalyptus sp.	eucalyptus	non-native	-----
Euthamia occidentalis	Western goldenrod	native	C
Frankenia salina	alkali heath	native	-----
Fraxinus sp.	ash	non-native or native	-----
Galium sp.	bedstraw	non-native or native	-----
Gilia achilleifolia ssp. *achilleifolia*	California gilia	native	A2
Grindelia camporum var. *camporum*	Great Valley gum plant	native	-----
Hedera helix	English ivy	non-native	-----
Helenium bigelovii	sneezeweed	native	A1
Heliotropium curassavicum	seaside heliotrope	native	-----
Hemizonia pungens ssp. *pungens*	common spikeweed	native	-----
Heterotheca grandiflora	telegraph weed	native	-----
Hirschfeldia incana	short pod mustard	non-native	-----
Hordeum jubatum	squirreltail barley	native	A2
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	non-native	-----
Hordeum murinum ssp. *leporinum*	foxtail barley	non-native	-----
Hydrocotyle verticillata	whorled-marsh pennywort	native	A2
Hypochaeris glabra	smooth cat's ear	non-native	-----
Iris pseudacorus	yellow flag	non-native	-----
Isoetes howellii	Howell's quillwort	native	A2

Table 3. **Plant Species Observed at the DuPont Oakley Plant. (Updated November 2001)**

Scientific Name	Common Name	Native/ Non-native	Status*
Juglans californica var. *hindsii*	California black walnut	native	1B/A2
Juncus balticus	Baltic rush	native	-----
Juncus bolanderi	Bolander's rush	native	-----
Juncus oxymeris	pointed rush	native	A1
Juncus xiphioides	iris-leaved rush	native	-----
Lactuca serriola	prickly lettuce	non-native	-----
Lathyrus jesponii var. *jepsonii*	Delta tule pea	native	FSC/1B/A2
Lepidium latifolium	peppergrass	non-native	-----
Leymus triticoides	creeping wild-rye	native	-----
Lilaeopsis masonii	Mason's lilaeopsis	native	FSC/R/1B/A2
Limonium californicum	marsh rosemary	native	B
Limosella subulata	Delta mudwort	native*	2/B
Lolium multiflorum	Italian ryegrass	non-native	-----
Lonicera japonica	Japanese honeysuckle	non-native	-----
Lotus corniculatus	birdfoot trefoil	non-native	-----
Lotus purshianus var. *purshianus*	Spanish lotus	native	-----
Lotus scoparius var. *scoparius*	deerweed	native	-----
Ludwigia hexapetala	six-petal water-primrose	native	-----
Ludwigia peploides	floating water-primrose	non-native or native	-----
Lycopus americanus	cutleaf bugleweed	native	A2
Lythrum californicum	California loosestrife	native	B
Medicago polymorpha	California burclover	non-native	-----
Medicago sativa	alfalfa	non-native	-----
Melilotus alba	white sweetclover	non-native	-----
Melilotus indica	Indian sweetclover	non-native	-----
Mentha arvensis	marsh mint	native	B
Mimulus guttatus	common yellow monkeyflower	native	-----
Myriophyllum sp.	water-milfoil	non-native or native	-----
Nitrophila occidentalis	boraxweed	native	A1
Oenothera elata ssp. *hookeri*	evening primrose	native	B
Parapholis incurva	sickle grass	non-native	-----
Paspalum dilatatum	Dallis grass	non-native	-----
Phalaris sp.	canary grass	non-native or	-----

Table 3. Plant Species Observed at the DuPont Oakley Plant. (Updated November 2001)

		native	
Phalaris aquatica	Harding grass	non-native	-----
Phoenix sp.	date palm	non-native	-----
Phragmites australis	common reed	native	A2
Pinus sp.	pine	non-native or native	-----
Plantago coronopus	cut-leaf plantain	non-native	-----
Plantago lanceolata	English plantain	non-native	-----
Polygonum sp.	smartweed	non-native or native	-----
Polygonum amphibium var. *emersum*	longroot smartweed	native	-----
Polygonum arenastrum	common knotweed	non-native	-----
Polygonum hydropiperoides	swamp smartweed	native	A1
Polygonum punctatum	punctate smartweed	native	B
Polypogon monspeliensis	rabbitsfoot grass	non-native	-----
Populus fremontii ssp. *fremontii*	Fremont cottonwood	native	-----
Potamogeton crispus	crispate-leaved pondweed	non-native	-----
Prunus dulcis	almond	non-native	-----
Quercus agrifolia	coast live oak	native	-----
Raphanus sativus	wild radish	non-native	-----
Rubus discolor	Himalayan blackberry	non-native	-----
Rubus ursinus	California blackberry	native	-----
Rumex crispus	curly dock	non-native	-----
Sagittaria sp.	arrowhead	native	-----
Salicornia virginica	pickleweed	native	-----
Salix sp.	willow	native	-----
Salsola tragus	Russian thistle	non-native	-----
Samolus parviflorus	water-pimpernel	native	A1
Scirpus acutus	bulrush	native	-----
Scirpus americanus	three-square	native	-----
Scirpus californicus	California bulrush	native	-----
Scirpus cernuus	low club rush	native	B
Scirpus robustus	alkali bulrush	native	-----
Senecio hydrophilus	alkali marsh butterweed	native	A1
Silybum marianum	milk-thistle	non-native	-----
Sium suave	hemlock water parsnip	native	A1
Solanum sp.	nightshade	non-native or native	-----
Sonchus oleraceus	common sow-thistle	non-native	-----
Sorghum halepense	Johnsongrass	non-native	-----

Table 3. Plant Species Observed at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status*
Spergularia sp.	sandspurry	non-native or native	-----
Spergularia macrotheca var. *leucantha*	white sticky sand-spurry	native	A1
Stachys albens	white hedge-nettle	native	B
Tribulus terrestris	puncture vine	non-native	-----
Triglochin striata	three-ribbed arrow-grass	native	A1
Tragopogon porrifolius	salsify	non-native	-----
Typha angustifolia	narrow-leaved cattail	native	-----
Typha latifolia	broad-leaved cattail	native	-----
Vicia sativa ssp. *nigra*	common vetch	non-native	-----
Vitus sp.	grape	non-native	-----
Verbena bonariensis	cluster-flowered verbena	non-native	-----
Vulpia myuros	zorro grass	non-native	-----
Washingtonia filifera	fanpalm	native to CA (but not locally native)	-----
Xanthium strumarium	cocklebur	native*	-----

Notes:

***Possibly non-native**

**** Status Legend**

Federal Status Codes:

E=Endangered. Species in danger of extinction throughout all or a significant portion of its range.
T=Threatened. Species likely to become endangered within the foreseeable future.
PE=Proposed for listing as endangered.
PT=Proposed for listing as threatened.
PD=Proposed for delisting
C=Candidate for listing.
FSC=Special concern species.

California Status Codes:

E=Endangered. Species whose continued existence in California is in jeopardy.
T=Threatened. Species likely to become endangered within the foreseeable future.
R=Rare. Plant species, although not presently threatened with extinction, that may become endangered in the foreseeable future.
SC=California Department of Fish and Game species of special concern.
FP&P=Fully protected and protected species defined in the State of California under Sections 3511 and 4700 of the Fish and Game Code.

California Native Plant Society Status Codes:

1A=Plants presumed extinct in California.
1B=Plants that are rare, threatened, or endangered in California and elsewhere.

Table 3. Plant Species Observed at the DuPont Oakley Plant. (Updated November 2001)

2=Plants that are rare, threatened, or endangered in California, but more common elsewhere.
3=Plants about which more information is needed.
4=Plants of limited distribution

California Native Plant Society, Unusual and Significant Plants in Alameda and Contra Costa Counties Codes:
A1= Species known from 2 or less botanical regions in Alameda and Contra Costa Counties, either currently or historically.
A1x=Species previously known from Alameda and Contra Costa Counties, but now believed to be extirpated, and no longer occurring there.
A2=Species currently known from 3 to 5 regions in the two counties, or, if more, meeting other important criteria such as small populations, stressed or declining populations, small geographical range, limited or threatened habitat, etc.
B=Species currently known form 6 to 9 regions in the two counties, or, if more, meeting other important criteria as described above for A2.
C=A Watch List: Species currently known from 10 or more regions in the two counties, but potentially threatened if certain conditions persist such as over-development, water diversions, excessive grazing, weed or insect invasions, etc.

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status*
Alkali Swale			
Atriplex triangularis	fat hen	native	-----
Carex sp.	sedge	non-native or native	-----
Cressa truxillensis	alkali weed	native	-----
Crypsis schoenoides	swamp grass	non-native	-----
Cyperus eragrostis	nutsedge	native	-----
Distichlis spicata	saltgrass	native	-----
Frankenia salina	alkali heath	native	-----
Parapholis incurva	sicklegrass	non-native	-----
Polypogon monspeliensis	rabbitsfoot grass	non-native	-----
Salicornia virginica	pickleweed	native	-----
Aquatic			
Eichhornia crassipes	water hyacinth	non-native	-----
Egeria densa	Brazilian waterweed	non-native	-----
Ludwigia hexapetala	six-petal water-primrose	native	-----
Ludwigia peploides	floating water-primrose	non-native or native	-----
Myriophyllum sp.	water-milfoil	non-native or native	-----
Potamogeton crispus	crispate-leaved pondweed	non-native	-----
Sagittaria sp.	arrowhead	native	-----
Cynodon dactylon			
Anaphalis margaritaceae	pearly everlasting	native	-----
Conyza canadensis	horseweed	native	-----
Cotula coronopifolia	brass-buttons	non-native	-----
Cynodon dactylon	Bermuda grass	non-native	-----
Cyperus eragrostis	nutsedge	native	-----
Distichlis spicata	saltgrass	native	-----
Heliotropium curassavicum	seaside heliotrope	native	-----
Lactuca serriola	prickly lettuce	non-native	-----
Lotus purshianus var. *purshianus*	Spanish lotus	native	-----
Melilotus indica	Indian sweet clover	non-native	-----
Paspalum dilatatum	Dallis grass	non-native	-----
Polygonum arenastrum	common knotweed	non-native	-----
Polypogon monspeliensis	rabbitsfoot grass	non-native	-----
Rumex crispus	curly dock	non-native	-----
Salix sp.	willow	native	-----
Salsola tragus	Russian thistle	non-native	-----
Scirpus acutus	bulrush	native	-----

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status*
Solanum sp.	nightshade	non-native or native	-----
Sonchus oleraceus	common sow-thistle	non-native	-----
Vitus sp.	grape	non-native	-----
Distichlis spicata			
Allenrolfea occidentalis	iodine bush	native	A2
Atriplex triangularis	fat hen	native	-----
Avena barbata	slender wild oats	non-native	-----
Avena fatua	wild oats	non-native	-----
Baccharis salicifolia	mule fat	native	-----
Cressa truxillensis	alkali weed	native	-----
Distichlis spicata	saltgrass	native	-----
Heliotropium curassavicum	seaside heliotrope	native	-----
Juncus balticus	Baltic rush	native	-----
Lactuca serriola	Prickly lettuce	non-native	-----
Nitrophila occidentalis	boraxweed	native	A1
Polypogon monspeliensis	rabbitsfoot grass	non-native	-----
Salicornia virginica	pickleweed	native	-----
Sonchus oleraceus	common sow-thistle	non-native	-----
***Distichlis spicata*/seasonal grasses**			
Anemopsis californica	yerba manza	native	A2
Atriplex triangularis	fat hen	native	-----
Asparagus officinalis ssp. *officinalis*	asparagus-fern	non-native	-----
Avena barbata	slender wild oats	non-native	-----
Avena fatua	wild oats	non-native	-----
Bromus hordeaceus	soft chess	non-native	-----
Bromus diandrus	ripgut brome	non-native	-----
Carex sp.	sedge	non-native or native	-----
Distichlis spicata	saltgrass	native	-----
Frankenia salina	alkali heath	native	-----
Grindelia camporum var. *camporum*	Great Valley gum plant	native	-----
Heliotropium curassavicum	seaside heliotrope	native	-----
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	non-native	-----
Hordeum murinum ssp. *leporinum*	foxtail barley	non-native	-----
Juncus balticus	Baltic rush	native	-----

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status*
Lactuca serriola	prickly lettuce	non-native	-----
Leymus triticoides	creeping wild-rye	native	-----
Limonium californicum	marsh rosemary	native	B
Lolium multiflorum	Italian ryegrass	non-native	-----
Melilotus alba	white sweetclover	non-native	-----
Polypogon monspeliensis	rabbitsfoot grass	non-native	-----
Rumex crispus	curly dock	non-native	-----
Salicornia virginica	pickleweed	native	-----
Sonchus oleraceus	common sow-thistle	non-native	-----
Juncus			
Anemopsis californica	yerba manza	native	A2
Asparagus officinalis ssp. *officinalis*	asparagus-fern	non-native	-----
Atriplex triangularis	fat hen	native	-----
Carex sp.	sedge	non-native or native	-----
Cressa truxillensis	alkali weed	native	-----
Distichlis spicata	saltgrass	native	-----
Frankenia salina	alkali heath	native	-----
Grindelia camporum var. *camporum*	Great Valley gum plant	native	-----
Heliotropium curassavicum	seaside heliotrope	native	-----
Juncus balticus	Baltic rush	native	-----
Lactuca serriola	prickly lettuce	non-native	-----
Lepidium latifolium	peppergrass	non-native	-----
Limonium californicum	marsh rosemary	native	-----
Polygonum arenastrum	common knotweed	non-native	-----
Polypogon monspeliensis	rabbitsfoot grass	non-native	-----
Rumex crispus	curly dock	non-native	-----
Salicornia virginica	pickleweed	native	-----
Sonchus oleraceus	common sow-thistle	non-native	-----
Typha angustifolia	narrow-leaved cattail	native	-----
Typha latifolia	broad-leaved cattail	native	-----
Xanthium strumarium	cocklebur	native*	-----
Paspalum dilatatum			
Paspalum dilatatum	Dallis grass	non-native	-----
Eleocharis sp.	spikerush	native	-----
Galium sp.	bedstraw	non-native or Native	-----
Pickleweed			
Allenrolfea occidentalis	iodine bush	native	A2

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status*
Atriplex triangularis	fat hen	native	-----
Asparagus officinalis ssp. *officinalis*	asparagus-fern	non-native	-----
Anemopsis californica	yerba manza	native	A2
Carex sp.	sedge	non-native or native	-----
Cirsium vulgare	bull thistle	non-native	-----
Conyza canadensis	horseweed	native	-----
Cressa truxillensis	alkali weed	native	-----
Distichlis spicata	saltgrass	native	-----
Epilobium brachycarpum	panicled willowherb	native	-----
Frankenia salina	alkali heath	native	-----
Grindelia camporum var. *camporum*	Great Valley gum plant	native	-----
Heliotropium curassavicum	seaside heliotrope	native	-----
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	non-native	-----
Juncus balticus	Baltic rush	native	-----
Juncus oxymeris	pointed rush	native	A1
Lactuca serriola	prickly lettuce	non-native	-----
Lepidium latifolium	peppergrass	non-native	-----
Limonium californicum	marsh rosemary	native	B
Lotus corniculatus	birdfoot trefoil	non-native	-----
Paspalum dilatatum	Dallis grass	non-native	-----
Plantago coronopus	cut-leaf plantain	non-native	-----
Polypogon monspeliensis	rabbitsfoot grass	non-native	-----
Rubus discolor	Himalayan blackberry	non-native	-----
Rumex crispus	curly dock	non-native	-----
Salicornia virginica	pickleweed	native	-----
Scirpus acutus	bulrush	native	-----
Scirpus americanus	three-square	native	-----
Scirpus robustus	alkali bulrush	native	-----
Sonchus oleraceus	common sow-thistle	non-native	-----
Spergularia macrotheca var. *leucantha*	white sticky sand-spurry	native	A1
Xanthium strumarium	cocklebur	native*	-----
Rubus discolor			
Rubus discolor	Himalayan blackberry	non-native	-----
***Scirpus* spp.**			
Apium graveolens	celery	non-native	-----
Asparagus officinalis ssp.	asparagus-fern	non-native	-----

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

officinalis			
Distichlis spicata	saltgrass	native	-----
Epilobium ciliatum	willowherb	native	-----
Juncus balticus	Baltic rush	native	-----
Mimulus guttatus	common yellow monkeyflower	native	-----
Polygonum sp.	smartweed	non-native or native	-----
Rubus discolor	Himalayan blackberry	non-native	-----
Scirpus acutus	bulrush	native	-----
Scirpus americanus	three-square	native	-----
Scirpus californicus	California bulrush	native	-----
Typha angustifolia	narrow-leaved cattail	native	-----
Typha latifolia	broad-leaved cattail	native	-----
***Scirpus* spp./Willow**			
Alnus rhombifolia	white alder	native	-----
Ambrosia psilostachya	western ragweed	native	-----
Apocynum cannabinum	Indian-hemp	native	A2
Arundo donax	giant reed	non-native	-----
Aster lentus	Suisun Marsh aster	native	FSC/1B/A2
Baccharis salicifolia	mule fat	native	-----
Bidens laevis	bur-marigold	native	A2
Calystegia sepium ssp. *limnophila*	hedge bindweed	native	A2
Centaurium muehlenbergii	Monterey centaury	native	C
Cyperus eragrostis	nutsedge	native	-----
Cyperus niger	black flatsedge	native	A1
Cyperus odoratus	fragrant flatsedge	native	A1
Cyperus strigosus	false nutsedge	native	A1
Deschampsia cespitosa ssp. *cepitosa*	tufted hairgrass	native	B
Deschampsia cespitosa ssp. *holciformis*	coastal tufted hairgrass	native	B
Eleocharis sp.	spikerush	native	-----
Eryngium articulatum	beethistle	native	A1
Euthamia occidentalis	Western goldenrod	native	C
Fraxinus sp.	ash	non-native or native	-----
Juglans californica var. *hindsii*	California black walnut	native	1B/A2
Juncus balticus	Baltic rush	native	-----
Juncus bolanderi	Bolander's rush	native	-----
Juncus oxymeris	pointed rush	native	A1

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status*
Juncus xiphioides	iris-leaved rush	native	-----
Helenium bigelovii	sneezeweed	native	A1
Hydrocotyle verticillata	whorled-marsh pennywort	native	A2
Iris pseudacorus	yellow flag	non-native	-----
Isoetes howellii	Howell's quillwort	native	A2
Lathyrus jesponii var. *jepsonii*	Delta tule pea	native	FSC/1B/A2
Lepidium latifolium	peppergrass	non-native	-----
Lilaeopsis masonii	Mason's lilaeopsis	native	FSC/R/1B/A2
Limosella subulata	Delta mudwort	native*	2/B
Lonicera japonica	Japanese honeysuckle	non-native	-----
Lycopus americanus	cutleaf bugleweed	native	A2
Lythrum californicum	California loosestrife	native	B
Mentha arvensis	marsh mint	native	B
Mimulus guttatus	common yellow monkeyflower	native	-----
Oenothera elata ssp. *hookeri*	evening primrose	native	B
Paspalum dilatatum	Dallis grass	non-native	-----
Phalaris aquatica	Harding grass	non-native	-----
Phragmites australis	common reed	native	A2
Polygonum amphibium var. *emersum*	longroot smartweed	native	-----
Polygonum hydropiperoides	swamp smartweed	native	A1
Polygonum punctatum	punctate smartweed	native	B
Rubus discolor	Himalayan blackberry	non-native	-----
Rubus ursinus	California blackberry	native	-----
Salix sp.	willow	native	-----
Samolus parviflorus	water-pimpernel	native	A1
Scirpus acutus	bulrush	native	-----
Scirpus americanus	three-square	native	-----
Scirpus californicus	California bulrush	native	-----
Scirpus cernuus	low club rush	native	B
Senecio hydrophilus	alkali marsh butterweed	native	A1
Sium suave	hemlock water parsnip	native	A1
Sorghum halepense	Johnsongrass	non-native	-----
Stachys albens	white-hedge nettle	native	B
Triglochin striata	three-ribbed arrow-grass	native	A1
Typha angustifolia	narrow-leaved cattail	native	-----
Typha latifolia	broad-leaved cattail	native	-----
Verbena bonariensis	cluster-flowered verbena	non-native	-----

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

Seasonal Grasses			
Scientific Name	**Common Name**	**Native/ Non-native**	**Status***
Atriplex triangularis	fat hen	native	-----
Avena barbata	slender wild oats	non-native	-----
Avena fatua	wild oats	non-native	-----
Bromus hordeaceus	soft chess	non-native	-----
Bromus diandrus	ripgut brome	non-native	-----
Distichlis spicata	saltgrass	native	-----
Frankenia salina	alkali heath	native	-----
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	non-native	-----
Parapholis incurva	sickle grass	non-native	-----
Salicornia virginica	pickleweed	native	-----
***Typha* spp.**			
Atriplex triangularis	fat hen	native	-----
Distichlis spicata	saltgrass	native	-----
Cressa truxillensis	alkali weed	native	-----
Frankenia salina	alkali heath	native	-----
Heliotropium curassavicum	seaside heliotrope	native	-----
Juncus balticus	Baltic rush	native	-----
Scirpus acutus	bulrush	native	-----
Typha angustifolia	narrow-leaved cattail	native	-----
Typha latifolia	broad-leaved cattail	native	-----
Upland			
Alnus rhombifolia	white alder	native	-----
Ambrosia psilostachya	Western ragweed	native	-----
Amsinckia menziesii var. *intermedia*	common fiddleneck	native	-----
Anaphalis margaritaceae	pearly everlasting	native	-----
Asparagus officinalis ssp. *officinalis*	asparagus-fern	non-native	-----
Atriplex semibaccata	Australian saltbush	non-native	-----
Atriplex triangularis	fat hen	native	-----
Avena barbata	slender wild oats	non-native	-----
Avena fatua	wild oats	non-native	-----
Baccharis pilularis	coyote bush	native	-----
Brassica nigra	black mustard	non-native	-----
Bromus diandrus	ripgut brome	non-native	-----
Bromus hordeaceus	soft chess	non-native	-----
Carduus pycnocephalus	Italian thistle	non-native	-----
Carpobrotus edulis	Hottentot fig	non-native	-----

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status*
Cirsium vulgare	bull thistle	non-native	-----
Centaurea solstitialis	yellow star thistle	non-native	-----
Conium maculatum	poison hemlock	non-native	-----
Conyza canadensis	horseweed	native	-----
Cortaderia jubata	pampas grass	non-native	-----
Cressa truxillensis	alkali weed	native	-----
Cynodon dactylon	Bermuda grass	non-native	-----
Distichlis spicata	saltgrass	native	-----
Epilobium brachycarpum	panicled willowherb	native	-----
Erodium moschatum	white-stem filaree	non-native	-----
Eucalyptus sp.	eucalyptus	non-native	-----
Frankenia salina	alkali heath	native	-----
Gilia achilleifolia ssp. *achilleifolia*	California gilia	native	A2
Grindelia camporum var. *camporum*	Great Valley gum plant	native	-----
Hedera helix	English ivy	non-native	-----
Hemizonia pungens ssp. *pungens*	common spikeweed	native	-----
Heterotheca grandiflora	telegraph weed	native	-----
Hirschfeldia incana	short pod mustard	non-native	-----
Hordeum jubatum	squirreltail barley	native	A2
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	non-native	-----
Hordeum murinum ssp. *leporinum*	foxtail barley	non-native	-----
Hypochaeris glabra	smooth cat's ear	non-native	-----
Lactuca serriola	prickly lettuce	non-native	-----
Lepidium latifolium	peppergrass	non-native	-----
Lolium multiflorum	Italian ryegrass	non-native	-----
Lotus corniculatus	birdfoot trefoil	non-native	-----
Lotus purshianus var. *purshianus*	Spanish lotus	native	-----
Medicago polymorpha	California burclover	non-native	-----
Medicago sativa	alfalfa	non-native	-----
Melilotus alba	white sweetclover	non-native	-----
Melilotus indica	Indian sweetclover	non-native	-----
Paspalum dilatatum	Dallis grass	non-native	-----
Phalaris sp.	canary grass	non-native or native	-----
Phoenix sp.	date palm	non-native	-----

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

Scientific Name	Common Name	Native/ Non-native	Status*
Pinus sp.	pine	non-native or native	-----
Plantago coronopus	cut-leaf plantain	non-native	-----
Plantago lanceolata	English plantain	non-native	-----
Polygonum arenastrum	common knotweed	non-native	-----
Polypogon monspeliensis	rabbitsfoot grass	non-native	-----
Populus fremontii ssp. *fremontii*	Fremont cottonwood	native	-----
Prunus dulcis	almond	non-native	-----
Quercus agrifolia	coast live oak	native	-----
Raphanus sativus	wild radish	non-native	-----
Rubus discolor	Himalayan blackberry	non-native	-----
Rumex crispus	curly dock	non-native	-----
Salsola tragus	Russian thistle	non-native	-----
Silybum marianum	milk-thistle	non-native	-----
Solanum sp.	nightshade	non-native or native	-----
Sonchus oleraceus	common sow-thistle	non-native	-----
Spergularia sp.	sandspurry	non-native or native	-----
Tragopogon porrifolius	salsify	non-native	-----
Tribulus terrestris	puncture vine	non-native	-----
Vicia sativa ssp. *nigra*	common vetch	non-native	-----
Vitus sp.	grape	non-native	-----
Vulpia myuros	zorro grass	non-native	-----
Washingtonia filifera	fanpalm	native to CA (but not locally native)	-----
Willow			
Baccharis salicifolia	mule fat	native	-----
Cynodon dactylon	Bermuda grass	non-native	-----
Distichlis spicata	saltgrass	native	-----
Juncus balticus	Baltic rush	native	-----
Rubus discolor	Himalayan blackberry	non-native	-----
Salix sp.	willow	native	-----
Scirpus acutus	bulrush	native	-----
Scirpus americanus	three-square	native	-----
Scirpus californicus	California bulrush	native	-----
Typha angustifolia	narrow-leaved cattail	native	-----
Typha latifolia	broad-leaved cattail	native	-----

Table 4. Vegetation Communities at the DuPont Oakley Plant. (Updated November 2001)

Notes:

***Possibly non-native**

**** Status Legend**

Federal Status Codes:

E=Endangered. Species in danger of extinction throughout all or a significant portion of its range.
T=Threatened. Species likely to become endangered within the foreseeable future.
PE=Proposed for listing as endangered.
PT=Proposed for listing as threatened.
PD=Proposed for delisting
C=Candidate for listing.
FSC=Special concern species.

California Status Codes:

E=Endangered. Species whose continued existence in California is in jeopardy.
T=Threatened. Species likely to become endangered within the foreseeable future.
R=Rare. Plant species, although not presently threatened with extinction, that may become endangered in the foreseeable future.
SC=California Department of Fish and Game species of special concern.
FP&P=Fully protected and protected species defined in the State of California under Sections 3511 and 4700 of the Fish and Game Code.

California Native Plant Society Status Codes:

1A=Plants presumed extinct in California.
1B=Plants that are rare, threatened, or endangered in California and elsewhere.
2=Plants that are rare, threatened, or endangered in California, but more common elsewhere.
3=Plants about which more information is needed.
4=Plants of limited distribution

California Native Plant Society, Unusual and Significant Plants in Alameda and Contra Costa Counties Codes:

A1= Species known from 2 or less botanical regions in Alameda and Contra Costa Counties, either currently or historically.
A1x=Species previously known from Alameda and Contra Costa Counties, but now believed to be extirpated, and no longer occurring there.
A2=Species currently known from 3 to 5 regions in the two counties, or, if more, meeting other important criteria such as small populations, stressed or declining populations, small geographical range, limited or threatened habitat, etc.
B=Species currently known form 6 to 9 regions in the two counties, or, if more, meeting other important criteria as described above for A2.
C=A Watch List: Species currently known from 10 or more regions in the two counties, but potentially threatened if certain conditions persist such as over-development, water diversions, excessive grazing, weed or insect invasions, etc.