



Memorandum

Date June 25, 2002

To Debra Jones, Project Manager

From Rob Preston

Subject **Special Status Plant Survey Report for the BART Warm Springs Extension, Fremont, CA, June 10, 2002**

Introduction

This report presents the results of Jones & Stokes's special-status plant survey for the proposed San Francisco Bay Area Rapid Transit District (BART) Warm Springs Extension Project (WSX). The objective of this survey was to complete a botanical survey to determine whether special-status plants or their habitat occurred within the project area and to supplement information obtained during previous surveys. The results of this survey will be used to prepare the supplemental environmental impact report (SEIR) that was prepared for the project in 1992.

Project Description and Location

BART proposes to extend its existing service in Alameda County 5.4 miles to the south, from the current end-of-line at the Fremont Station to 2,000 feet north of Mission Boulevard, in the Warm Springs District. The project would consist of construction of new track, one or two new stations, and ancillary facilities such as traction power, train control and communications facilities, and maintenance and storage facilities. Most of the alignment would be at grade in the existing railroad alignment formerly operated by the Western Pacific Railroad. However, at the northern portion of the alignment, the alignment would be in a subway structure for approximately 1 mile under Fremont Central Park.

Biological Setting

The biological setting was described in the 1992 EIR prepared for the project (DKS Associates 1992). The land along the proposed alignment has been converted from its historical condition to agricultural, residential, and commercial uses. Much of the vegetation along the alignment consists of ornamental plantings, such as grass lawn and landscaping trees. Several vacant lots and fallow fields along the alignment are vegetated by non-native grasses and ruderal forbs. Mission Creek, which crosses the alignment on the east side of Fremont Central Park, supports a mixed riparian forest of willows, Fremont cottonwood, and black walnut. Mixed riparian forest is also present at Tule Pond, (a natural depression currently used for flood control) located just south of the Fremont BART station. Most of the other streams crossing the alignment have been channelized and have concrete-lined bottoms. Small seasonal wetlands are present in the toe-drain along the existing railroad alignment.

Methods

Prior to conducting the field work, Jones & Stokes botanists reviewed existing information on the potential occurrence of special-status plant species along the alignment, including the 1992 EIR (DKS Associates 1992), other biological surveys conducted in the project vicinity (Environmental Science Associates 1993, Environmental Collaborative 2002), and a search of the California Natural Diversity Data Base (2002). Based on this information, we generated a list of potentially occurring special-status plant species (Table 1) to assist with planning the field survey.

Jones & Stokes botanists Robert Preston, Ph.D., and Brad Schafer, conducted a 1-day survey of the proposed alignment on May 17, 2002. The survey area consisted of an approximately 100-foot-wide corridor centered on the proposed alignment. We walked the entire length of the proposed alignment and visually inspected the survey area, except for a segment between Lake Elizabeth and Paseo Padre Parkway. We recorded all spontaneously occurring plants encountered, which we identified to species, except for a few that lacked flowers, fruits, or other diagnostic features.

Results

Table 2 lists all of the plant species we encountered during the survey. We did not encounter any special-status plant species in the project area. The absence of natural vegetation, which is reflected in the high percentage of introduced species present (67 of 100 species), indicates that the potential for special-status species to occur in the project area is very low. No habitat is present for most of the species in Table 1. Of the special-status species known to occur in the project area, potential habitat appears to be present for two species.

Grassland habitat at the proposed Warm Springs Station is potential habitat for Congdon's spikeweed (*Hemizonia parryi* ssp. *congdonii*). Congdon's spikeweed occurs in similar ruderal forb-grassland habitat at several locations in the Warm Springs District, including an occurrence about 0.4 miles west of the project alignment at Auto Mall Parkway (California Natural Diversity Data Base 2002). Although we did not observe any spikeweeds at the proposed station site, it may have been too early in the season to detect them. As a reference, we visited the Auto Mall Parkway locality and also did not observe any spikeweed plants present. Congdon's spikeweed normally blooms during the autumn, and the best time to survey for the species is during September or October. Consequently, we cannot rule out the possibility that Congdon's spikeweed occurs in the project area but was not evident because of its late blooming season.

A seasonal wetland present along the railroad right-of-way south of Washington Boulevard supports species found in vernal pools. This is potential habitat for Hoover's button-celery (*Eryngium aristulatum* var. *hooveri*). Hoover's button-celery is known historically from

collections made near Alviso (Sheikh 1978), although no populations are currently known to occur in the east San Francisco Bay Area. Because Hoover's button-celery was not found in the project area, we conclude that it is not present and would not be affected by the proposed project.

References

California Natural Diversity Data Base. 2002. RareFind 2, Version 2.1.2 (March 1, 2002 update). California Department of Fish and Game, Sacramento, CA.

DKS Associates. 1991. *BART Warm Springs Extension Draft Environmental Impact Report*. July, 1991. Oakland, CA. Prepared for San Francisco Bay Area Rapid Transit District.

Environmental Collaborative. 2000. Biological Resource Assessment for the Grimmer Boulevard and Irvington Pump Station Sites owned by San Francisco Public Utilities Commission, Fremont, California. August 2000. Prepared for BASELINE Environmental Consulting, Emeryville, CA.

Environmental Science Associates. 1993. *Lake Elizabeth/Stivers Lagoon Marsh Design and Improvement Program, Environmental Impact Report*. Draft. February 1993. Prepared for City of Fremont, Fremont, CA.

Sheikh, M. Y. 1978. *A Systematic Study of West North American Genus Eryngium (Umbelliferae - Apoideae)*. Ph.D. Dissertation, University of California, Berkeley.

Table 1. Special-Status Plants Potentially Occurring in the Vicinity of the Proposed BART Warm Springs Extension

Name	Status ^a Federal/State/ CNPS	Distribution	Habitat	Occurrence in Project Area
Alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	-/-/1B	Merced, Solano, and Yolo Counties	Grassy flats and vernal pool margins, on alkali soils; blooms March-June	Not present; habitat not present
San Joaquin saltbush <i>Atriplex joaquiniana</i>	-/-/1B	West edge of Central Valley from Glenn County to Tulare County	Alkali meadow, alkali grassland, saltbush scrub; blooms April-September	Not present; habitat not present
Big scale balsamroot <i>Balsamorhiza macrolepis</i>	-/-/1B	Scattered occurrences in the Coast Ranges and Sierra Nevada foothills	Fields and rocky hillsides, below 2,000 feet; grassland, foothill woodland; blooms March-June	Not present; habitat not present
Congdon's spikeweed <i>Centromadia parryi</i> ssp. <i>congdonii</i>	-/-/1B	East San Francisco Bay Area, Salinas Valley, Los Osos Valley	Annual grassland, on lowers slopes, flats, and swales, sometimes on alkaline or saline soils, below 560 feet; blooms June-November	Not observed; potential habitat present
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	E/-/1B	Coastal central California, from San Mateo to Monterey County	Coastal dunes, coastal scrub, on sandy soil; blooms May-September	Not present; habitat not present

Table 1. Continued

Name	Status ^a Federal/State/ CNPS	Distribution	Habitat	Occurrence in Project Area
Point Reyes bird's-beak <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>	-/-/1B	Coastal northern California, from Humboldt to Santa Clara County; Oregon	Coastal salt marsh; blooms June-October	Not present; habitat not present
Western leatherwood <i>Dirca occidentalis</i>	-/-/1B	San Francisco Bay Area, from Sonoma County to Santa Clara County	Chaparral, forest, and woodland habitats; blooms January-April	Not present; habitat not present
Hoover's button-celery <i>Eryngium aristulatum</i> var. <i>hooveri</i>	-/-/1B	South San Francisco Bay area, South Coast Ranges	Vernal pools; blooms July	Not present; potential habitat present
Fragrant fritillary <i>Fritillaria liliacea</i>	-/-/1B	Coast Ranges from Marin County to San Benito County	Coastal scrub, coastal prairie, annual grassland, often on serpentine soils , below 1,350 feet; blooms February-April	Not present; habitat not present
Diablo helianthella <i>Helianthella castanea</i>	-/-/1B	San Francisco Bay area	At chaparral/oak woodland ecotone, often in partial shade, on rocky soils, between 80-3,800 feet; blooms April-June	Not present; habitat not present

Table 1. Continued

Name	Status ^a Federal/State/ CNPS	Distribution	Habitat	Occurrence in Project Area
Delta tulle pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	-/-/1B	Central Valley from Sacramento County to Fresno County	Marshes and swamps (freshwater and brackish); blooms May- June	Not present; habitat not present
Contra Costa goldfields <i>Lasthenia conjugens</i>	E/-/1B	Scattered occurrences in Coast Range valleys and southwest edge of Sacramento Valley	Alkaline or saline vernal pools and swales, below 700 feet; blooms March- June	Not present; habitat not present
Robust monardella <i>Monardella villosa</i> ssp. <i>globosa</i>	-/-/1B	North Coast Ranges and Eastern San Francisco Bay Area	Oak woodland and grassy openings in chaparral; blooms June-July	Not present; habitat not present
Hairless popcorn flower <i>Plagiobothrys glaber</i>	-/-/1A	Coastal valleys from Marin County to San Benito County	Alkaline meadows; blooms April-May	Not present; habitat not present
Maple-leaved checkerbloom <i>Sidalcea malachroides</i>	-/-/1B	North Coast and northern Central Coast: from Humboldt to Monterey County	Coastal Scrub, Perennial Grassland, Redwood Forest, Douglas-fir Forest, in open areas	Not present; habitat not present

Table 1. Continued

Name	Status ^a Federal/State/ CNPS	Distribution	Habitat	Occurrence in Project Area
Most beautiful jewel-flower <i>Streptanthus albidus</i> ssp. <i>peramoenus</i>	-/-/1B	Contra Costa, Alameda, and Santa Clara counties	Chaparral, annual grassland, on ridges and slopes, on serpentine outcrops, between 450-3,200 feet; blooms April-June	Not present; habitat not present
California seablite <i>Suaeda californica</i>	E/-/1B	Morro Bay, San Luis Obispo County; historically found in the south San Francisco Bay	Margins of tidal salt marsh; blooms July- October	Not present; habitat not present

Table 2. List of Plant Species Observed along Proposed Alignment of BART Warm Springs Extension

Scientific Name	Common Name
* <i>Agrostis stolonifera</i>	creeping bent
<i>Alisma plantago-aquatica</i>	water plantain
<i>Ambrosia psilostachya</i>	western ragweed
* <i>Anagallis arvensis</i>	scarlet pimpernel
* <i>Arundo donax</i>	giant reed
<i>Asclepias fascicularis</i>	narrow-leaf milkweed
* <i>Avena fatua</i>	wild oat
<i>Baccharis pilularis</i>	coyote brush
<i>Baccharis salicifolius</i>	mulefat
* <i>Beta vulgaris</i>	beet
* <i>Bromus catharticus</i>	rescue grass
* <i>Bromus diandrus</i>	riggut brome
* <i>Bromus hordeaceus</i>	soft chess
* <i>Bromus madritensis</i> ssp. <i>rubens</i>	red brome
* <i>Bromus tectorum</i>	cheatgrass
* <i>Capsella bursa-pastoris</i>	shepherd's-purse
* <i>Cardaria draba</i>	heart-podded hoary cress
* <i>Carduus pycnocephalus</i>	Italian thistle
* <i>Centaurea calcitrapa</i>	purple star-thistle
<i>Chamaesyce</i> sp.	spurge
<i>Chenopodium</i> sp.	goosefoot
* <i>Cirsium vulgare</i>	bull thistle
* <i>Conium maculatum</i>	poison hemlock
* <i>Convolvulus arvensis</i>	field bindweed
* <i>Conyza bonariensis</i>	horseweed
* <i>Coronopus didymus</i>	wartcress
<i>Crassula aquatica</i>	water pygmy-weed
* <i>Crypsis schoenoides</i>	swamp timothy
<i>Cyperus eragrostis</i>	umbrella sedge
<i>Distichlis spicata</i>	saltgrass
* <i>Dittrichia graveolens</i>	stinkweed
<i>Eleocharis macrostachys</i>	creeping spikerush
<i>Epilobium brachycarpum</i>	panicled willow-herb
<i>Eremocarpus setigerus</i>	turkey mullein
* <i>Erodium cicutarium</i>	red-stem filaree
<i>Eschscholzia californica</i>	California poppy
* <i>Eucalyptus camaldulensis</i>	red gum
* <i>Foeniculum vulgare</i>	sweet fennel
<i>Galium aparine</i>	bedstraw
* <i>Geranium dissectum</i>	cut-leaf geranium
* <i>Gnaphalium luteo-album</i>	weedy cudweed
* <i>Hirschfeldia incana</i>	Mediterranean mustard
<i>Hordeum brachyantherum</i>	meadow barley
* <i>Hordeum murinum</i> ssp. <i>leporinum</i>	foxtail barley
* <i>Hordeum vulgare</i>	barley
<i>Juglans</i> sp.	black walnut

Scientific Name	Common Name
<i>Juncus balticus</i>	Baltic rush
* <i>Lactuca serriola</i>	prickly lettuce
<i>Lepidium strictum</i>	wayside peppergrass
<i>Leymus triticoides</i>	creeping wildrye
* <i>Lolium multiflorum</i>	Italian ryegrass
* <i>Lotus corniculatus</i>	bird's-foot trefoil
* <i>Malva nicaensis</i>	bull mallow
<i>Malvella leprosa</i>	alkali mallow
* <i>Matricaria matricarioides</i>	pineapple weed
* <i>Medicago polymorpha</i>	burclover
* <i>Melilotus alba</i>	white sweetclover
* <i>Myoporum laetum</i>	myoporum
* <i>Nasturtium officinale</i>	watercress
* <i>Olea europaea</i>	olive
* <i>Opuntia</i> sp.	prickly-pear
* <i>Paspalum dilatatum</i>	Dallisgrass
* <i>Phalaris minor</i>	Mediterranean canary grass
* <i>Phalaris paradoxa</i>	paradox canary grass
* <i>Picris echioides</i>	bristly ox-tongue
* <i>Piptatherum mileaceum</i>	smilo grass
* <i>Plantago lanceolata</i>	English plantain
<i>Polygonum amphibium</i> var. <i>emersum</i>	kelp
* <i>Polygonum arenastrum</i>	common knotweed
* <i>Polypogon monspeliensis</i>	annual rabbit's-foot grass
* <i>Prunus dulcis</i>	almond
* <i>Raphanus sativus</i>	wild radish
* <i>Ricinis communis</i>	castor-bean
* <i>Rubus discolor</i>	Himalaya blackberry
<i>Rubus ursinus</i>	California blackberry
* <i>Rumex crispus</i>	curly dock
<i>Salix exigua</i>	narrow-leaved willow
<i>Salix laevigata</i>	red willow
<i>Salix lasiolepis</i>	arroyo willow
* <i>Salsola tragus</i>	Russian thistle
<i>Sambucus mexicanus</i>	blue elderberry
* <i>Schinus</i> sp.	pepper tree
<i>Schoenoplectus acutus</i> var. <i>occidentalis</i>	hard-stem bulrush
<i>Scrophularia californica</i>	California figwort
<i>Senecio vulgaris</i>	common groundsel
* <i>Silybum marianum</i>	milk-thistle
* <i>Sinapis arvensis</i>	field mustard
* <i>Sonchus asper</i>	prickly sow-thistle
* <i>Sonchus oleraceus</i>	common sow-thistle
<i>Sparganium eurycarpum</i>	bur-reed
<i>Toxicodendron diversilobum</i>	poison-oak
* <i>Tragopogon porrifolius</i>	salsify
* <i>Tribulus terrestris</i>	puncture vine

Scientific Name	Common Name
* <i>Trifolium pratense</i>	red clover
* <i>Triticum aestivum</i>	wheat
<i>Typha angustifolia</i>	narrow-leaved cattail
* <i>Vicia sativa</i> ssp. <i>sativa</i>	common vetch
* <i>Vicia villosa</i> ssp. <i>varia</i>	winter vetch
* <i>Vinca major</i>	greater periwinkle
* <i>Xanthium strumarium</i>	common cocklebur

Note: Introduced species are indicated by an asterisk (*).