

October 30, 2009

Ms. Jemellee Cruz
Flood Maintenance Division
Department of Public Works
County of Los Angeles
900 South Fremont Ave
Annex Building, 2nd Floor
Alhambra, CA 91802-1460

VIA EMAIL AND OVERNITE EXPRESS
jcruz@dpw.lacounty.gov

Subject: Results of Focused Plant Surveys for the Dominguez Soft-Bottom Channel,
Los Angeles County, California

Dear Ms. Cruz:

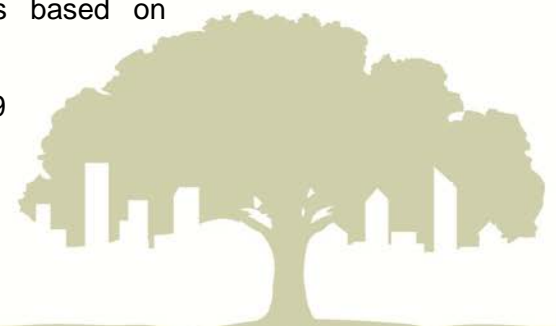
This letter report presents the findings of focused plant surveys conducted for the Dominguez Soft-Bottom Channel (SBC), in Los Angeles County, California. Surveys were conducted for southern tarplant (*Centromadia parryi* ssp. *australis*), a California Native Plant Society (CNPS) List 1B species with potential to occur because of the presence of suitable habitat. The Dominguez SBC is located in the cities of Los Angeles and Carson, and is surrounded mainly by residential, commercial, and industrial development (Exhibits 1 and 2). Victoria Park and Victoria Golf Course are located adjacent to the SBC in the upper portion of the reach. The SBC starts at Vermont Avenue southwest of the Highway 91 and Interstate 110 interchange, crosses under Interstate 110, continues southeast along and then crosses under Interstate 405, turns south to cross State Highway 1/Pacific Coast Highway, and ends at Henry Ford Avenue. The survey area is located on the Torrance and Long Beach U.S. Geological Survey (USGS) 7.5-minute quadrangle maps, with an elevation below approximately ten feet above mean sea level (msl).

METHODS

Prior to the field survey, a literature review was conducted to identify special status plants known from the general vicinity. This included a review of Inglewood, South Gate, Whittier, Torrance, Long Beach, Los Alamitos, San Pedro, and Seal Beach USGS 7.5-minute quadrangles in the California Department of Fish and Game (CDFG) California Natural Diversity Database (CDFG 2009) and the CNPS Inventory (CNPS 2009). A reference population of southern tarplant was visited to confirm that it was blooming during the surveys. This species was observed to be flowering in the Newport Beach area on July 9, 2009,

According to the National Weather Service, Long Beach Airport (located about four miles from the survey area) has received 9.4 inches of precipitation over the past year (since July 1, 2008), which is about 73 percent of the normal 12.9 inches based on 1971-2000 averages (National Weather Service 2009).

Special status plant surveys were conducted on July 13, 2009 by BonTerra Consulting Botanists Sandra Leatherman and Jeff Crain with Ecologists Allison Rudalevige and



Jennifer Pareti; and on July 14, 15, and 17, 2009 by BonTerra Consulting Botanist Andrea Edwards and Ecologist David Hughes. Meandering transects were used to search the survey area. All plant species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Hickman (1993) and Munz (1974). Taxonomy follows Hickman (1993) and current scientific data (e.g., scientific journals) for scientific and common names.

SITE DESCRIPTION

Open water was present within this SBC reach at the time of the surveys. The SBC also contains developed areas consisting of un-grouted rip-rap (large piled rocks) along the channel banks, and some areas of grouted rip-rap. These areas contain bands and patches of saltgrass (*Distichlis spicata*) grassland present mainly in the upper portion of the reach (BonTerra Consulting 2009). Soil types generally consist of the Hanford, Tujunga-Soboba, Chino, Yolo, Oceano, and Ramona-Placentia associations (USDA 1969).

RESULTS

One special status plant species was observed during the surveys: southern tarplant (Exhibit 3). A voucher specimen was collected and will be deposited in the herbarium at the Rancho Santa Ana Botanic Garden in Claremont, California. A list of all plants observed within the survey area during focused surveys can be found in Attachment A.

Southern tarplant typically blooms between June and September, and occurs in valley grassland habitats in lowlands near the coast (Munz 1974). This annual herb prefers seasonally moist, often saline, soils below about 650 feet above msl (Hickman 1993). In southern California, this species occurs in Los Angeles, Orange, Santa Barbara, San Diego, and Ventura counties (CNPS 2009). Southern tarplant was observed in 34 locations growing at the base of the slopes in silty soils along both banks of the channel (see additional information in Table 1 below). A California Natural Diversity Database (CNDDB) Field Survey Form for this species is included as Attachment B. There were a total of 627 plants observed, with 618 flowering and 9 in fruit.

TABLE 1
SOUTHERN TARPLANT OCCURRENCE INFORMATION

Occurrence #	# of Plants	Associated Species
1	6	Peppergrass (<i>Lepidium nitidum</i>), common horseweed (<i>Conyza canadensis</i>), bristly ox tongue (<i>Picris echioides</i>), lamb's quarters (<i>Chenopodium album</i>), Russian thistle (<i>Salsola tragus</i>), wild radish (<i>Raphanus sativus</i>), Australian brass buttons (<i>Cotula australis</i>), slender wild oat (<i>Avena barbata</i>), wild oat (<i>Avena fatua</i>), Italian ryegrass (<i>Lolium multiflorum</i>), annual beard grass (<i>Polypogon monspeliensis</i>), and little-seed canary grass (<i>Phalaris minor</i>).
2	350	
3	5	
4	19	
5	7	
6	23	
7	3	
8	13	
9	6	
10	2	
11	1	
12	3	

TABLE 1 (Continued)
SOUTHERN TARPLANT OCCURRENCE INFORMATION

Occurrence #	# of Plants	Associated Species
13	40	
14	35	
15	7	
16	9	Five-hook bassia (<i>Bassia hyssopifolia</i>), lamb's quarters, peppergrass (<i>Lepidium nitidum</i>), saltgrass, Russian thistle, annual beard grass, Australian brass buttons, English plantain (<i>Plantago lanceolata</i>), and foxtail chess (<i>Bromus madritensis</i> ssp. <i>rubens</i>).
17	4	
18	1	
19	1	
20	2	
21	1	
22	4	
23	1	
24	1	
25	2	
26	1	
27	11	
28	27	
29	1	
30	14	
31	23	
32	2	
33	1	
34	1	
Total	627	

If you have any comments or questions, please call Marc Blain at (626) 351-2000.

Sincerely,

BONTERRA CONSULTING



Marc T. Blain
 Biological Resources Manager/Associate



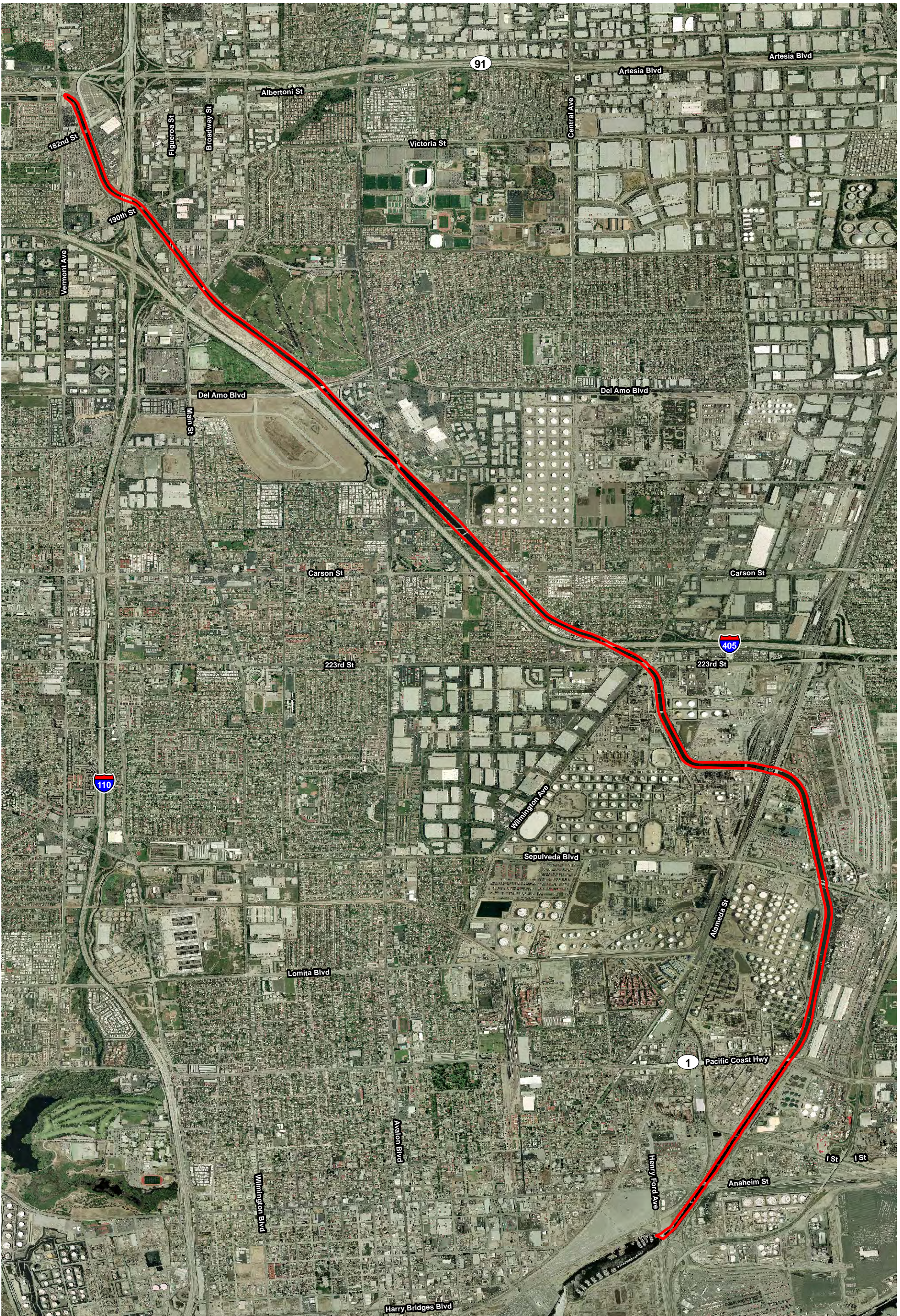
Andrea D. Edwards
 Botanist

Enclosures:

- Exhibit 1 – Local Vicinity
- Exhibit 2 – Aerial Photograph
- Exhibit 3 – Special Status Plant Species Locations
- Attachment A – Plant Compendium
- Attachment B – CNDDDB Field Survey Form

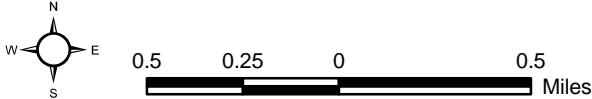
REFERENCES

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- California Native Plant Society (CNPS). 2009. Electronic Inventory of Rare and Endangered Vascular Plants of California (v7-09d). Records of Occurrence for Inglewood, South Gate, Whittier, Torrance, Long Beach, Los Alamitos, San Pedro, and Seal Beach quadrangle maps. Sacramento, CA: CNPS. <http://www.cnps.org/inventory>.
- Hickman, J.C., Ed. 1993. The Jepson Manual of Higher Plants of California. Berkeley, CA: University of California Press.
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Aerial Photograph
Dominguez Soft-Bottom Channel, Los Angeles County California

Exhibit 2





- Southern Tarplant (*Centromadia parryi* ssp. *australis*)
- # Plant Occurrence Number

Special Status Plant Species Locations

Dominguez Soft-Bottom Channel, Los Angeles County, California

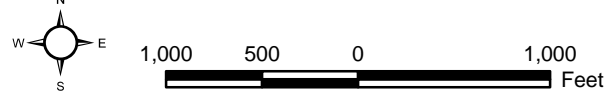


Exhibit 3



ATTACHMENT A PLANT COMPENDIUM

FLOWERING PLANTS
CLASS DICOTYLEDONES (DICOTS)
AIZOACEAE - FIG-MARIGOLD FAMILY
<i>Carpobrotus edulis</i> * hottentot fig
<i>Mesembryanthemum nodiflorum</i> * slender-leaved iceplant
AMARANTHACEAE - AMARANTH FAMILY
<i>Amaranthus albus</i> * tumbleweed
ANACARDIACEAE - SUMAC FAMILY
<i>Malosma laurina</i> laurel sumac
<i>Schinus terebinthifolius</i> * Brazilian pepper tree
APIACEAE (UMBELLIFERAE) - CARROT FAMILY
<i>Apium graveolens</i> * common celery
ASTERACEAE (COMPOSITAE) - SUNFLOWER FAMILY
<i>Baccharis salicifolia</i> mule fat
<i>Centromadia parryi</i> ssp. <i>australis</i> southern tarplant
<i>Chrysanthemum coronarium</i> * garland daisy
<i>Cirsium vulgare</i> * bull thistle
<i>Conyza bonariensis</i> * flax-leaved horseweed
<i>Conyza canadensis</i> common horseweed
<i>Cotula australis</i> * Australian brass buttons
<i>Cotula coronopifolia</i> * African brass buttons
<i>Gazania</i> sp.* gazania
<i>Gnaphalium luteo-album</i> * weedy cudweed
<i>Helianthus annuus</i> western sunflower
<i>Hemizonia fasciculata</i> fascicled tarweed
<i>Heterotheca grandiflora</i> telegraph weed
<i>Lactuca serriola</i> * prickly lettuce
<i>Picris echioides</i> * bristly ox tongue

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
<i>Senecio vulgaris</i> * common groundsel
<i>Sonchus oleraceus</i> * common sow-thistle
<i>Stephanomeria</i> sp. wreath plant
BRASSICACEAE (CRUCIFERAE) - MUSTARD FAMILY
<i>Lepidium nitidum</i> peppergrass / shining peppergrass
<i>Lepidium virginicum</i> var. <i>pubescens</i> wild peppergrass
<i>Raphanus sativus</i> * wild radish
<i>Sisymbrium orientale</i> * hare's ear cabbage
CACTACEAE - CACTUS FAMILY
<i>Opuntia ficus-indica</i> * Indian fig
CARYOPHYLLACEAE - PINK FAMILY
<i>Spergularia marina</i> salt-marsh sand spurrey
CHENOPODIACEAE - GOOSEFOOT FAMILY
<i>Atriplex canescens</i> fourwing saltbush / shad scale
<i>Atriplex lentiformis</i> big saltbush
<i>Atriplex semibaccata</i> * Australian saltbush
<i>Atriplex triangularis</i> spearscale
<i>Bassia hyssopifolia</i> five-hook bassia
<i>Chenopodium album</i> * lamb's quarters
<i>Salicornia virginica</i> common woody pickleweed
<i>Salsola tragus</i> * Russian thistle
CONVOLVULACEAE - MORNING-GLORY FAMILY
<i>Cressa truxillensis</i> alkali weed
CUSCUTACEAE - DODDER FAMILY
<i>Cuscuta californica</i> California dodder
EUPHORBIACEAE - SPURGE FAMILY
<i>Ricinus communis</i> * castor bean

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
<i>FABACEAE (LEGUMINOSAE) - LEGUME FAMILY</i>
<i>Lotus corniculatus*</i> birdfoot trefoil
<i>Melilotus alba*</i> white sweet-clover
<i>Melilotus indica*</i> sourclover
<i>FRANKENIACEAE - ALKALI HEATH FAMILY</i>
<i>Frankenia salina</i> alkali heath
<i>MALVACEAE - MALLOW FAMILY</i>
<i>Malvella leprosa</i> alkali mallow
<i>MYRTACEAE - MYRTLE FAMILY</i>
<i>Callistemon</i> sp.* bottlebrush
<i>Eucalyptus</i> sp.* gum
<i>Feijoa sellowiana*</i> pineapple guava
<i>ONAGRACEAE - EVENING PRIMROSE FAMILY</i>
<i>Epilobium ciliatum</i> willow-herb
<i>PAPAVERACEAE - POPPY FAMILY</i>
<i>Eschscholzia californica</i> California poppy
<i>PLANTAGINACEAE - PLANTAIN FAMILY</i>
<i>Plantago lanceolata*</i> English plantain
<i>PLUMBAGINACEAE - LEADWORT FAMILY</i>
<i>Limonium californicum</i> western marsh-rosemary
<i>Limonium perezii*</i> Perez's sea-lavender
<i>POLYGONACEAE - BUCKWHEAT FAMILY</i>
<i>Polygonum</i> sp. knotweed / smartweed
<i>Rumex crispus*</i> curly dock
<i>SIMAROUBACEAE - QUASSIA FAMILY</i>
<i>Ailanthus altissima*</i> tree of heaven
<i>SOLANACEAE - NIGHTSHADE FAMILY</i>
<i>Lycopersicon esculentum*</i> tomato
<i>Nicotiana glauca*</i> tree tobacco
<i>Solanum americanum</i> white nightshade

PLANT COMPENDIUM (Continued)

FLOWERING PLANTS
<i>Solanum douglasii</i> Douglas' nightshade
CLASS MONOCOTYLEDONES (MONOCOTS)
ARECACEAE (PALMAE) - PALM FAMILY
<i>Washingtonia robusta</i> * Mexican fan palm
CYPERACEAE - SEDGE FAMILY
<i>Scirpus californicus</i> California bulrush
LILIACEAE - LILY FAMILY
<i>Asparagus densiflorus</i> * asparagus fern
POACEAE [GRAMINEAE] - GRASS FAMILY
<i>Agrostis viridis</i> * water bentgrass
<i>Avena barbata</i> * slender wild oat
<i>Avena fatua</i> * wild oat
<i>Bromus diandrus</i> * ripgut grass
<i>Bromus madritensis</i> ssp. <i>rubens</i> * foxtail chess
<i>Cynodon dactylon</i> * bermuda grass
<i>Distichlis spicata</i> salt grass
<i>Ehrharta calycina</i> * veldt grass
<i>Hordeum murinum</i> * foxtail barley
<i>Lolium multiflorum</i> * Italian ryegrass
<i>Pennisetum clandestinum</i> * Kikuyu grass
<i>Pennisetum setaceum</i> * African fountain grass
<i>Phalaris minor</i> * little-seed canary grass
<i>Piptatherum miliaceum</i> * smilo grass / millett ricegrass
<i>Polypogon monspeliensis</i> * annual beard grass
<i>Schismus barbatus</i> * Mediterranean schismus
* indicates non-native species

ATTACHMENT B
CNDDDB FIELD SURVEY FORM

For Office Use Only

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 07/13/2009

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Centromadia parryi ssp. australis*

Common Name: Southern tarplant

Species Found? ☒ Yes ☐ No If not, why? _____
Total No. Individuals 627 Subsequent Visit? ☐ yes ☒ no
Is this an existing NDDDB occurrence? ☒ no ☐ unk.
Yes, Occ. # _____
Collection? If yes: _____
Number _____ Museum / Herbarium _____

Reporter: Sandra Leatherman and Jeffrey Crain
Address: BonTerra Consulting, 151 Kalmus Dr. Ste E-200
Costa Mesa, California 92626
E-mail Address: sleatherman@bonterraconsulting.com
Phone: (714) 444-9199

Plant Information

Phenology: _____% vegetative 99% flowering 1% fruiting

Animal Information

adults # juveniles # larvae # egg masses # unknown
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

Found scattered along both banks of Dominguez soft-bottom flood control channel maintained by LA County, Dept of Public Works.

County: Los Angeles County Landowner / Mgr.: LA County, Dept of Public Works
Quad Name: Torrance Elevation: 0-10 ft
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐
T _____ R _____ Sec _____, _____ 1/4 of _____ 1/4, Meridian: H ☐ M ☐ S ☐
DATUM: NAD27 ☐ NAD83 ☒ WGS84 ☐
Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☒ OR Geographic (Latitude & Longitude) ☐
Coordinates: From 380736 3748416 to 382863 3745524.

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope):

Growing at base of slope with many associated species: peppergrass (*Lepidium nitidum*), common horseweed (*Conyza canadensis*), bristly ox tongue (*Picris echioides*), lamb's quarters (*Chenopodium album*), Russian thistle (*Salsola tragus*), wild radish (*Raphanus sativus*), Australian brass buttons (*Cotula australis*), slender wild oat (*Avena barbata*), wild oat (*Avena fatua*), Italian ryegrass (*Lolium multiflorum*), annual beard grass (*Polypogon monspeliensis*), little-seed canary grass (*Phalaris minor*), five-hook bassia (*Bassia hyssopifolia*), salt grass (*Distichlis spicata*), English plantain (*Plantago lanceolata*), and foxtail chess (*Bromus madritensis ssp. rubens*).

Other rare taxa seen at THIS site on THIS date: N/A
(separate form preferred)

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☒ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Residential, commercial, and industrial development

Visible disturbances: None

Threats: Channel maintenance

Comments: Accompanied by BonTerra Consulting Ecologists Jennifer Pareti and Allison Rudalevige.

Determination: (check one or more, and fill in blanks)

- ☒ Keyed (cite reference): Hickman 1993 (Jepson Manual)
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: (check one or more)

Slide Print Digital
Plant / animal ☐ ☐ ☒
Habitat ☐ ☐ ☒
Diagnostic feature ☐ ☐ ☐

May we obtain duplicates at our expense? yes ☒ no ☐