Floral and Faunal Compendium

ANGIOSPERMS (DICOTYLEDONS)

	SCIENTIFIC NAME	COMMON NAME
	Aizoaceae	**Fig-Marigold Family**
*	*Carpobrotus edulis*	hottentot fig
*	*Mesembryanthemum crystallinum*	common iceplant
	Anacardiaceae	**Sumac Family**
	Malosma laurina	laurel sumac
*	*Schinus terebinthifolius*	Brazilian peppertree
	Asteraceae	**Aster Family**
	Arctotis stoechadifolia	African daisy
	Baccharis pilularis	coyotebrush
	Baccharis salicifolia	mule fat
*	*Chrysanthemum coronarium*	garland daisy
*	*Cynara cardunculus*	artichoke thistle
	Encelia californica	California encelia
	Hemizonia parryi ssp. *australis*	southern tarplant
	Boraginaceae	**Borage Family**
	Heliotropium curassavicum	saltmarsh heliotrope
	Brassicaceae	**Mustard Family**
*	*Hirschfeldia incana*	shortpod mustard
	Raphanus raphanistrum	wild radish
*	*Sisymbrium irio*	London rocket
	Chenopodiaceae	**Goosefoot Family**
	Atriplex semibaccata	Australian saltbush
	Salicornia virginica	common pickleweed
*	*Salsola tragus*	Russian thistle
	Convolvulaceae	**Morning-Glory Family**
	Cressa truxillensis	alkali weed
	Euphorbiaceae	**Spurge Family**
*	*Ricinus communis*	castor bean
	Fabaceae	**Legume Family**
*	*Medicago polymorpha*	bur clover
*	*Melilotus albus*	white sweetclover
	Malvaceae	**Mallow Family**
	Malvella leprosa	alkali-mallow
	Myoporaceae	**Myoporum Family**
*	*Myoporum laetum*	lollypop tree
*	*Eucalyptus sp.*	gum tree

*=Non-native Species

ANGIOSPERMS (DICOTYLEDONS)

SCIENTIFIC NAME	COMMON NAME
Oleaceae	**Olive Family**
* *Olea europaea*	olive
Onagraceae	**Evening Primrose Family**
Camissonia sp.	suncup
Oxalidaceae	**Oxalis Family**
* *Oxalis pes-caprae*	Bermuda buttercup
Polygonaceae	**Buckwheat Family**
Eriogonum parvifolium	bluff buckwheat
* *Rumex crispus*	curly dock
Solanaceae	**Nightshade Family**
* *Nicotiana glauca*	tree tobacco
Arecaceae	**Palm Family**
* *Washingtonia robusta*	Mexican fan palm
Yucca elephantipes	giant yucca
Poaceae	**Grass Family**
* *Arundo donax*	giant reed
Avena sp.	oat
* *Bromus diandrus*	ripgut grass
* *Bromus madritensis*	foxtail chess
Distichlis spicata	saltgrass
Hordeum sp.	barley

BIRDS

SCIENTIFIC NAME	COMMON NAME
Charadriidae	**Plovers**
Charadrius vociferus	killdeer
Columbidae	**Pigeons and Doves**
Zenaida macroura	mourning dove
Trochilidae	**Hummingbirds**
Calypte anna	Anna's hummingbird
Corvidae	**Jays and Crows**
Corvus brachyrhynchos	American crow
Polioptilidae	**Gnatcatchers**
Polioptila caerulea	blue-gray gnatcatcher
Turdidae	**Thrushes**
Sialia mexicana	western bluebird

*=Non-native Species

BIRDS

SCIENTIFIC NAME	COMMON NAME
Mimidae	**Thrashers**
Mimus polyglottos	northern mockingbird
Emberizidae	**Emberizine Sparrows and Allies**
Zonotrichia leucophrys	white-crowned sparrow
Fringillidae	**Finches**
Carpodacus mexicanus	house finch

MAMMALS

SCIENTIFIC NAME	COMMON NAME
Didelphidae	**Opossums**
Didelphis virginiana	Virginia opossum
Leporidae	**Hares and Rabbits**
Sylvilagus audubonii	cottontail
Sciuridae	**Squirrels and Chipmunks**
Spermophilus beecheyi	California ground squirrel

*=Non-native Species

From: Tony Bomkamp [mailto:tbomkamp@wetlandpermitting.com]
Sent: Wednesday, August 05, 2009 12:35 PM
To: Crysta Dickson
Subject: RE: Southern Tarplant

Crysta,

I think Fred's update is fairly accurate with the addition of a population of over 5,000 in Long Beach and a population of over 5,000 in Seal Beach that is part of a restoration project. His take on potential threats seems reasonable, though I would note that any meaningful populations within the Coastal Zone will be protected either through full avoidance (e.g., ESHA determination) or mitigation such as we have done for Boeing in Seal Beach. I believe your biggest challenge will be to find suitable receptor sites that function biologically while also allowing for long-term preservation.

Tony

From: Crysta Dickson [mailto:c.dickson@pcrnet.com]
Sent: Wednesday, August 05, 2009 11:18 AM
To: tbomkamp@wetlandpermitting.com
Cc: Steve Nelson
Subject: FW: Southern Tarplant

Hi Tony – Thank you again for your help yesterday - not only confirming the species I.D. for us, but your insight on regulating and mitigating the species has really helped us.

I'd also like to pick your brain on your knowledge of the distribution/threats/impacts of the species regionally. We are trying to make a determination of cumulative impacts. The information we have re: species occurrence so far has been limited to the CNDDB and what Fred provided to us. Can you expand on this form us? We'd like to make sure we've exhausted all resources to determine the true distribution and population numbers on this species in the region. I know you mentioned a population you recently found in Long Beach. Also your thoughts on the known populations and their potential future threats or any future projects that will impacts a known population. I've included Fred's email that I let you read yesterday below.

Kind Regards,

Crysta Dickson
Senior Biologist II

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From: Maile Tanaka [mailto:smaile2602@yahoo.com]
Sent: Tuesday, July 28, 2009 7:33 PM
To: Crysta Dickson; Stephanie Gasca; Steve Nelson
Subject: Southern Tarplant

Here's what Fred said.

From: Fred Roberts [mailto:antshrike@cox.net]
Sent: Tuesday, July 28, 2009 12:20 PM
To: Maile Tanaka
Subject: Re: Plant Question

Hi Maile,

I am familiar with southern tarplant. Some of the CNDDB records need to be re-examined. A few are duplicates reported by different parties but overall it presents a reasonable picture on tarplant status. Southern tarplant is an interesting contradiction in conservation since it is a fairly tough plant and can persist in pretty disturbed habitat but some how we have lost a lot of it (most of it probably). Historically it was fairly widespread and probably was found in virtually every mesic coastal grassland and along every alkaline ditch or estuary border in the southern LA Basin.. It was most abundant in the SE Los Angeles Basin between the Palos Verde Peninsula and Newport Beach and Irvine. Many of the Los Angeles Co. populations have been extirpated. The majority of the remaining populations are in Orange County.

According to a Status Review I wrote up (Roberts 2000, Southern Tarplant (Hemizonia parryi ssp. australis) Priliminary Status and Distrribution Summary of U.S. Populations) and a study on Bolsa Chica (Roberts 2007, Southern Tarplant: West Lower Bench, Bolsa Chica Mesa, Orange Co., California, prepared for the Bolsa Chica Land Trust), t about thirty percent of the known populations are extirpated and an additional 40 percent have clearly identifiable threats. This is comparable with the level of extirpation and threat with many State and Federal species.

Orange County has about 26 populations, or over one third of all reported populations. These account for about 85 percent of all individuals ever reported for the plant and represent the highest number of remaining populations anywhere in southern California. There are only three very large populations that have over 5,000 plants and all three are from Orange Co. (UCI, Talbert Park, and Canada Chiquita). There were at least six medium-sized populations with 1,000-5,000 individuals with 4 of the 6 in Orange Co. (Hellman Ranch, Mile Square Park [although this population has potentially been moved?], Newport Bay Regional Park, and Mason Regional Park [this site once had tens of thousands of plants but restoration to willow woodland has apparently created a population crash so it may be much smaller today].

In 2006, I had the opportunity to do a more comprehensive survey of Bolsa Chica and we found about 2,500 plants, about 5 times the size previously reported, so this site is now considered one of the larger populations. Some additional populations have been found recently in Orange Co. in fairly fragmented habitat and the whole thing could use an updated review. However I think

the trend has not changed. Populations are generally declining due to lose of habitat. The UCI population especially needs review. It once had thousands of plants SE of the main campus but I suspect that based on the present habitat impacts, that plants are still there but could probably be counted in the hundreds, not thousands. I don't know the scale of your population, but generally I consider populations with 400 plants or less as being very small. Populations of 400-1,000 plants are small, 1,000-4,999 are moderate in size, and 5,000 or larger are either large (or huge in the case of Canada Chiquita). However, due to the overall loses rangewide even small populations have conservation value. Definitely populations with over 1,000 plants should be considered significant at a regional scale.

Hopefully that helps.

On Jul 28, 2009, at 9:20 AM, Maile Tanaka wrote:

Hi Fred,

I have a plant question for you. Are you somewhat familiar with southern tarplant? Do you know how the population trends are doing in Orange County region and within the distribution for the plant? On the CNPS site, it says it's State Rank is S2 (6-20 occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres) and based on that and CNDDB occurrences, I'm trying to figure out roughly what the regional populations may be and how this species is doing so I can determine how significant a population on one of our sites is.

Any information you can provide is appreciated!

Thanks,
Maile

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WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ascon | City/County: Orange | Sampling Date: 8-11-09

Applicant/Owner: DTSC | State: CA | Sampling Point: 1

Investigator(s): Tanaka/Dickson | Section, Township, Range:

Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): None | Slope (%): <1%

Subregion (LRR): C - Mediterranean California | Lat: | Long: | Datum:

Soil Map Unit Name: Bolsa silty loam | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [X] Soil [X] or Hydrology [X] significantly disturbed? Are "Normal Circumstances" present? Yes ( ) No (●)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes (●)	No ( )	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *none*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Salicornia virginica*	70	Yes	OBL
2. *Distichlis spicata*	10	No	FACW
3. *Atriplex sembiaccata*	15	No	FAC
4. *Hordeum sp.*	<1		
5.			
6.			
7.			
8.			
Total Cover:	95 %		
Woody Vine Stratum			
1. *none*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 5 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70
FACW species	10	x 2 =	20
FAC species	15	x 3 =	45
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	95 (A)		135 (B)

Prevalence Index = B/A = 1.42

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-12	10YR 4/2	100	7.5YR 4/6	1	C	M	Silty loam	
13-20	10YR 3/2	100	none				Silty loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils:[4]

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: No reduced odor; little to no redox features observed (however, ruled out as F3 due to absence of soft iron-manganese masses and/or pore linings).

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☒ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ◉ No ○

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: The area is severed from the historic coastal wetland to the west by the flood control channel. The area no longer receives tidal flows and is no longer part of the historic system.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ascon | City/County: Orange | Sampling Date: 8-11-09

Applicant/Owner: DTSC | State: CA | Sampling Point: 2

Investigator(s): Tanaka/Dickson | Section, Township, Range:

Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): None | Slope (%): <1%

Subregion (LRR): C - Mediterranean California | Lat: | Long: | Datum:

Soil Map Unit Name: Bolsa silty loam | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [X] Soil [X] or Hydrology [X] significantly disturbed? Are "Normal Circumstances" present? Yes ( ) No (●)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes (●)	No ( )	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *none*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Salicornia virginica*	75	Yes	OBL
2. *Distichlis spicata*	20	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	95 %		
Woody Vine Stratum			
1. *none*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 5 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	75	x 1 =	75
FACW species	20	x 2 =	40
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	95 (A)		115 (B)

Prevalence Index = B/A = 1.21

Hydrophytic Vegetation Indicators:

- [X] Dominance Test is >50%
- [X] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes (●) No ( )

Remarks:

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-20	10YR 4/2	100	none				Silty loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: No reduced odor; no redox features observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: The area is severed from the historic coastal wetland to the west by the flood control channel. The area no longer receives tidal flows and is no longer part of a functioning system.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: Ascon | City/County: Orange | Sampling Date: 8-11-09

Applicant/Owner: DTSC | State: CA | Sampling Point: 3

Investigator(s): Tanaka/Dickson | Section, Township, Range:

Landform (hillslope, terrace, etc.): Flat | Local relief (concave, convex, none): None | Slope (%): <1%

Subregion (LRR): C - Mediterranean California | Lat: | Long: | Datum:

Soil Map Unit Name: Bolsa silty loam | NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes (●) No ( ) (If no, explain in Remarks.)

Are Vegetation [X] Soil [X] or Hydrology [X] significantly disturbed? Are "Normal Circumstances" present? Yes ( ) No (●)

Are Vegetation [ ] Soil [ ] or Hydrology [ ] naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ( )	No (●)	
Hydric Soil Present?	Yes ( )	No (●)	**Is the Sampled Area within a Wetland?** Yes ( ) No (●)
Wetland Hydrology Present?	Yes ( )	No (●)	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *none*			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *none*			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Bromus diandrus*	5	No	Not Listed
2. *Atriplex semibaccata*	20	Yes	FAC
3. *Mesembryanthemum crystallinum*	70	Yes	Not Listed
4.			
5.			
6.			
7.			
8.			
Total Cover:	95 %		
Woody Vine Stratum			
1. *none*			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum 5 % | % Cover of Biotic Crust 0 %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	20	x 3 =	60
FACU species		x 4 =	0
UPL species	75	x 5 =	375
Column Totals:	95 (A)		435 (B)

Prevalence Index = B/A = 4.58

Hydrophytic Vegetation Indicators:

- [ ] Dominance Test is >50%
- [ ] Prevalence Index is ≤3.0[1]
- [ ] Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ( ) No (●)

Remarks:

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-20	10YR 4/2	100	none				Silty loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5) (**LRR C**)
- ☐ 1 cm Muck (A9) (**LRR D**)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[4]:

- ☐ 1 cm Muck (A9) (**LRR C**)
- ☐ 2 cm Muck (A10) (**LRR B**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (TF2)
- ☐ Other (Explain in Remarks)

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type:

Depth (inches):

Hydric Soil Present? Yes ○ No ◉

Remarks: No reduced odor; no redox features observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1) (**Nonriverine**)
- ☐ Sediment Deposits (B2) (**Nonriverine**)
- ☐ Drift Deposits (B3) (**Nonriverine**)
- ☐ Surface Soil Cracks (B6)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Salt Crust (B11)
- ☐ Biotic Crust (B12)
- ☐ Aquatic Invertebrates (B13)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (**Riverine**)
- ☐ Sediment Deposits (B2) (**Riverine**)
- ☐ Drift Deposits (B3) (**Riverine**)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ○ No ◉ Depth (inches):

Water Table Present? Yes ○ No ◉ Depth (inches):

Saturation Present? (includes capillary fringe) Yes ○ No ◉ Depth (inches):

Wetland Hydrology Present? Yes ○ No ◉

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: The area is severed from the historic coastal wetland to the west by the flood control channel. The area no longer receives tidal flows and is no longer part of a functioning system.