

**ATTACHMENT P-2**

PLANT DATA

**2001 SPRING SURVEY**

**Casmalia Hazardous Waste Management Facility  
Biological Surveys for Remedial Investigation/Feasibility Study**

**Plant Survey**

**Location:** North-facing slopes outside landfill boundary, between landfill and unnamed drainage to north

**Date:** 20 March 2001

**Weather:** Clear; slight W breeze; air temperature = 65 F  
at 1200 hrs

**North-facing slopes, grassland, beneath large eucalyptus grove, and along unnamed drainage:**

<i>Agoseris heterophylla</i>	Mountain dandelion
<i>Agrostis (diegoensis?)</i>	Bent grass
<i>Amsinckia</i> sp.	Fiddleneck
<i>Anagallis arvensis</i>	Scarlet pimpernel
<i>Artemisia californica</i>	California sagebrush
<i>Baccharis pilularis</i>	Coyote brush
<i>Brassica</i> sp.	Mustard
<i>Brodiaea (jolonensis?)</i>	Dwarf brodiaea
<i>Bromus diandrus</i>	Ripgut brome
<i>Calandrinia ciliata</i>	Red maids
<i>Callitriche</i> sp.	Starwort
<i>Camissonia cheiranthifolia</i>	Beach primrose
<i>Carduus pycnocephala</i>	Italian thistle
<i>Carex</i> sp.	Sedge
<i>Claytonia perfoliata</i>	Miners lettuce
<i>Conium maculatum</i>	Poison hemlock
<i>Convolvulus arvensis</i>	Bindweed
<i>Erodium botrys</i>	Filaree
<i>Erodium moschatum</i>	Whitestem filaree
<i>Eschscholzia californica</i>	California poppy
<i>Eucalyptus globulus</i>	Blue gum
<i>Gnaphalium californica</i>	Green everlasting
<i>Hemizonia fasciculata</i>	Fascicled tarweed
<i>Hemizonia increscens</i>	Tarweed
<i>Heterotheca grandiflora</i>	Telegraph weed
<i>Hordeum murinum</i>	Foxtail barley
<i>Isocoma menziesii</i>	Coast goldenbush
<i>Lamium amplexicaule</i>	Giraffe's head
<i>Layia platyglossa</i>	Tidy tips
<i>Lolium perenne</i>	Italian rye
<i>Lupinus succulentus</i>	Succulent lupine
<i>Malva parviflora</i>	Cheeseweed
<i>Marah macrocarpa</i>	Man-root
<i>Medicago polymorpha</i>	Bur clover
<i>Melilotus</i> sp.	Sweet clover
<i>Mimulus</i> sp.	Monkey flower
<i>Picris echioides</i>	Prickly ox-tongue
<i>Ranunculus californica</i>	California buttercup
<i>Rumex crispus</i>	Curly dock
<i>Salix exigua</i>	Sandbar willow
<i>Salix lasiolepis</i>	Arroyo willow
<i>Sambucus mexicana</i>	Elderberry
<i>Sanicula crassicaulis</i>	Pacific sanicle

North-facing slopes, grassland, beneath large eucalyptus grove, and along unnamed drainage (continued):

<i>Scrophularia atrata</i>	Black-flowered figwort
<i>Selaginella bigelovii</i>	Bigelow's spike-moss
<i>Silybum marianum</i>	Milk thistle
<i>Sonchus oleraceus</i>	Sow thistle
<i>Spergularia arvensis</i>	Corn spurrey
<i>Spergularia macrotheca</i>	Large-flowered sand spurrey
<i>Stellaria media</i>	Chickweed
<i>Urtica holosericea</i>	Giant creek nettle
<i>Verbena lasiostachys</i>	Western vervain
<i>Vicia sativa</i>	Vetch

**Steep Ravine W of PCB Landfill**

**20 April 2001**

CASMALIA LANDFILL		SITE: SLOPES W OF PCB LANDFILL - RAVINE							Page 1 of 2
Initials	Date	Site Section							
Common Name	Scientific Name	SLOPES							
Dandelion, mountain	Agoseris	•							
Fiddleneck	Amsinckia menziesii	•							
Mayweed	Anthemis cotula								
Saltbush, halberd-leaf	Atriplex hastata								
Australian saltbush	Atriplex semibaccata								
Oat, slender wild	Avena barbara	•							
Coyote brush	Baccharis pilularis								
Black mustard	Brassica nigra								
Brome, ripgut	Bromus diandrus	•							
Soft chess	Bromus hordeaceus	•							
Red maids	Calandrinia ciliata	•							
Thistle, Italian	Carduus pycnocephalus								
Hottentot fig	Carpobrotus								
Clover, Owl's	Castilleja erecta								
Fivehook	Chenopodiaceae A								
Thistle, California	Cirsium californicum								
Bindweed	Convolvulus arvensis								
Brass buttons	Cotula coronopifolia								
Grass, Bermuda	Cynodon dactylon								
Grass, salt	Distichlis spicata								
Filaree, Red-stem	Erodium cicutarium								
Meadow barley	Hordeum californicum								
Foxtail barley	Hordeum murinum	•							
Cat's ear, Smooth	Hypochoeris glabrata								
Goldfields, Coulter's allow, bull	Lasthenia glabrata Lavatera cretica								
Peppergrass	Lepidium nuditum	•							
Rye, giant wild	Leymus condensatus								
Ryegrass	Lolium multiflorum	•							
Lupine, dove	Lupinus bicolor	•							
Lupine, succulent	Lupinus succulentus	•							
Cheeseweed	Malva parviflora								
Bur clover	Medicago polymorpha	•							
Sweet-clover, White	Melilotus albus								
Sweet-clover, Yellow	Melilotus indicus								
Ox-tongue	Picris echioides								
Plantain, cut-leaf	Plantago coronopifolia								
Plantain, English	Plantago lanceolata								
Tiny grass	Poaceae A								
Knotweed	Polygonum arenastrum	•							
Rabbitsfoot grass	Polypogon monspeliensis								
Willow, Arroyo	Salix lasiolepis	•							
Russian thistle	Salsola tragus								
Figwort, Bl-flowered	Scrophularia atrata								
Figwort, California	Scrophularia californica								
Thistle, milk	Silybum marianum								
Prickly sow-thistle	Sonchus asper								
Sow thistle	Sonchus oleraceus								
Sand spurrey	Spergularia macroth (?)								
Clover, rose	Trifolium ciliatum	•							
Clover, tomcat	Trifolium tridentatum	•							
Vetch (axillary)	Vicia sativa (?)								
Grass, Fescue	Vulpia								
MINERS LETTUCE	CLAYTONIA PERFOLIATA	•							
UNID. PHACELIA	PHACELIA sp.	•							



**Steep Ravine West of PCB Landfill, South to Northern Margins of Pond A-5**

**3 May 2001**

CASMALIA LANDFILL		SITE: CANYON W OF PCB LANDFILL + N OFFROAD Page 1 of 2						
Initials KR+PM	Date 3 MAY 2001	Site Section A-5						
Common Name	Scientific Name	1	2	3	4	5	6	7
		FLOOR	W-FACE SLIPE	E-FACE SLIPE	PANO A-5	WET FLATS	E-FACE NATIVE	W-FACE NATIVE
Dandelion, mountain	Agoseris							
Fiddleneck	Amsinckia menziesii	•						•
Mayweed	Anthemis cotula							
Saltbush, halberd-leaf	Atriplex hastata					•		
Australian saltbush	Atriplex semibaccata	•			•		•	•
Oat, slender wild	Avena barbara	•	•		•		•	•
Coyote brush	Baccharis pilularis	•	•	•	•	•	•	•
Black mustard	Brassica nigra	•	•	•	•	•	•	•
Brome, riggut	Bromus diandrus	•	•	•	•		•	•
Soft chess	Bromus hordeaceus	•	•		•	•		
Red maids	Calandrinia ciliata							
Thistle, Italian	Carduus pycnocephalus	•	•		•		•	•
Hottentot fig	Carpobrotus							
Clover, Owl's	Castilleja erecta							
Fivehook	Chenopodiaceae A							
Thistle, California	Cirsium californicum							
Bindweed	Convolvulus arvensis	•	•			•	•	
Brass buttons	Cotula coronopifolia				•	•		
Grass, Bermuda	Cynodon dactylon							
Grass, salt	Distichlis spicata							
Filaree, Red-stem	Erodium cicutarium		•		•			
Meadow barley	Hordeum californicum							
Foxtail barley	Hordeum murinum	•	•		•	•		•
Cat's ear, Smooth	Hypochoeris glabrata							•
Goldfields, Coulter's	Lasthenia glabrata							
allow, bull	Lavatera cretica							
Peppergrass	Lepidium nuditum							
Rye, giant wild	Leymus condensatus							
Ryegrass	Lolium multiflorum	•	•		•	•	•	•
Lupine, dove	Lupinus bicolor							•
Lupine, succulent	Lupinus succulentus			•			•	
Cheeseweed	Malva parviflora							
Bur clover	Medicago polymorpha	•	•		•	•		
Sweet-clover, White	Melilotus albus					•	•	
Sweet-clover, Yellow	Melilotus indicus	•	•		•	•	•	•
Ox-tongue	Picris echioides	•	•		•	•	•	
Plantain, cut-leaf	Plantago coronopifolia							
Plantain, English	Plantago lanceolata							•
Tiny grass	Poaceae A	•				•		
Knotweed	Polygonum arenastrum							
Rabbitsfoot grass	Polyogon monspeliensis					•		
Willow, Arroyo	Salix lasiolepis							•
Russian thistle	Salsola tragus	•	•				•	
Figwort, Bl-flowered	Scrophularia atrata							
Figwort, California	Scrophularia californica							
Thistle, milk	Silybum marianum					•		•
Prickly sow-thistle	Sonchus asper				•	•	•	
Sow thistle	Sonchus oleraceus	•	•			•		•
Sand spurrey	Spergularia macroth (?)					•		
Clover, rose	Trifolium ciliatum							
over, tomcat	Trifolium tridentatum							•
vetch (axillary)	Vicia sativa (?)							•
Grass, Fescue	Vulpia myuros	•			•			
SILVER PUFFS	UROSPAPPUS LINDLEYI	•			•			•
GOLDENTOP	LAMARCKIA AUREA	•			•			

CASMALIA LANDFILL		SITE: CANYON W OF PCB LANDFILL; NOF POND							Page 2 of 2
Initials KR+PM	Date 3 MAY 2001	Site Section A-5							
Common Name	Scientific Name	1	2	3	4	5	6	7	
ED BROME	BROMUS MADRITENSIS SSP. RUBENS	•			•		•	•	
IRWEED	HEMIZONIA FASCICULATA				•		•		
CASTAL MORNING GLORY	CALYSTEZIA MACROSTEGIA VAR. CYCLOSTEGIA	•		•	•		•	•	
BULL-THISTLE	CIRSIUM VULGARE	•	•	•	•	•	•	•	
HARDING GRASS	PHALARIS AQUATICA	•			•				
GREEN EVERLASTING	GNAPHALIUM CALIFORNICA				•			•	
GIANT CREEK NETTLE	URTICA HOLOSERICEA				•		•	•	
PRAIRIE BOURNUSH	SCIRPUS MARITIMUS					•			
CELERY	APIUM GRAVEOLENS					•			
CATTAIL	TYPHA SP.					•			
SPEARSCALE	ATRIPLEX TRIANGULARIS					•			
CALIFORNIA ASTER	LESSINGIA FILAGINIFOLIA						•		
DOUGLAS' NIGHTSHADE	SOLANUM DOUGLASSII						•	•	
FORT-TEJON MILK-ASTER	STEPHANOMERIA CICHORIACEA							•	
COAST GOLDENBUSH	ESOCOMA MENZIESII							•	
UNID. ATRIPLEX	ATRIPLEX SP.					•		•	
MAN-ROOT	MARAH MACROCARPA							•	
SLENDER FESCUE	VULPIA OCTOFLORA							•	
WEEDY CUDWEED	GNAPHALIUM LUTEO-ALBUM							•	
UNID. SWEETPEA	LATHYRUS SP.							•	
FRAGRANT EVERLASTING	GNAPHALIUM CANESCENS SUBSP. BENEOLENS							•	
TOTALOTE	CENTAURUS MELITENSIS		•						
ELDERBERRY	SAMBUCUS MEXICANA							•	
OCK LETTUCE	DUDLEYA LANCEOLATA							•	
BUNCHGRASS	NASSELLA SP.			•			•		

**Plants Found in Non-Native Annual Grassland Between Landfill and  
Casmalia Creek**

**24 April 2001**

E:\15\PLANT\15000

**Casmalia Hazardous Waste Management Facility  
Biological Surveys for Remedial Investigation/Feasibility Study**

**Plant Survey**

**Location:** West-facing slopes outside landfill boundary, between landfill and Casmalia Creek

**Date:** 24 April 2001

**Weather:** Overcast, misting rain; air temperature = 50 F  
at 1200 hrs

West-facing slopes, in grassland and beneath scattered coast live oak, and on north-facing slopes in ravines on west-facing hillside:

*Trees and woody shrubs:*

<i>Quercus agrifolia</i>	Coast live oak
<i>Sambucus mexicana</i>	Elderberry
<i>Toxicodendron diversilobum</i>	Poison oak

*Grasses and Forbs:*

<i>Achillea millefolium</i>	Yarrow
<i>Agoseris heterophylla</i>	Mountain dandelion
<i>Amsinckia sp.</i>	Fiddleneck
<i>Anthemis cotula</i>	Mayweed
<i>Avena barbata</i>	Slender wild oat
<i>Brassica sp.</i>	Mustard
<i>Brodiaea (jolonensis?)</i>	Dwarf brodiaea
<i>Bromus diandrus</i>	Ripgut brome
<i>Calandrinia ciliata</i>	Red maids
<i>Calystegia sp.</i>	Morning-glory
<i>Carduus pycnocephala</i>	Italian thistle
<i>Claytonia perfoliata</i>	Miners lettuce
<i>Collinsia heterophylla</i>	Bicolored Chinese houses
<i>Cotula coronopifolia</i>	Brass buttons
<i>Erodium botrys</i>	Filaree
<i>Erodium moschatum</i>	Whitestem filaree
<i>Eschscholzia californica</i>	California poppy
<i>Eschscholzia sp.</i>	Poppy
<i>Galium aparine</i>	Bedstraw
<i>Hemizonia fasciculatum</i>	Fascicled tarweed
<i>Hemizonia increscens</i>	Tarweed
<i>Hordeum murinum</i>	Foxtail barley
<i>Hypochoeris glabrata</i>	Smooth cat's ear
<i>Isocoma menziesii</i>	Coast goldenbush
<i>Layia platyglossa</i>	Tidy tips
<i>Lepidium nuditum</i>	Peppergrass
<i>Lessingia filaginifolia</i>	Cudweed aster
<i>Lolium perenne</i>	Italian rye
<i>Lupinus bicolor</i>	Dove lupine
<i>Lupinus succulentus</i>	Succulent lupine
<i>Lupinus truncatus</i>	Lupine
<i>Madia sp.</i>	Tarweed
<i>Malacothrix sp.</i>	Malacothrix
<i>Marah macrocarpa</i>	Man-root
<i>Medicago polymorpha</i>	Bur clover

West-facing slopes, in grassland and beneath scattered coast live oak, and on north-facing slopes in ravines on west-facing hillside (continued):

<i>Phacelia (distans?)</i>	Wild heliotrope
<i>Pholistoma auritum</i>	Fiesta flower
<i>Plagiobothrys sp.</i>	Popcorn flower
<i>Poa annua</i>	Annual blue grass
<i>Ranunculus californica</i>	California buttercup
<i>Silene gallica</i>	Windmill pink
<i>Silybum marianum</i>	Milk thistle
<i>Spergularia arvensis</i>	Corn spurrey
<i>Stephanomeria (cichoriacea?)</i>	Fort Tejon milk-aster
<i>Thysanocarpus (curvipes?)</i>	Hairy lace pod
<i>Trifolium tridentatum</i>	Tomcat clover
<i>Vicia sativa</i>	Vetch
<i>Vulpia sp.</i>	Fescue

**Heavy Metals Landfill**

**23 April 2001**

CASMALIA LANDFILL		SITE: HEAVY METALS LANDFILL					Page 1 of 2
Initials KR+PM	Date 23 APRIL 2001	Site Section					
Common Name	Scientific Name	1	2	3	4	5	
Dandelion, mountain	Agoseris				•		
Fiddleneck	Amsinckia menziesii			•	•		
Mayweed	Anthemis cotula			•			
Saltbush, halberd-leaf	Atriplex hastata	B	B				
Australian saltbush	Atriplex semibaccata	A	A	•	•	•	
Oat, slender wild	Avena barbara			•	•		
Coyote brush	Baccharis pilularis	R	R	•	•		
Black mustard	Brassica nigra	E	E	•	•	•	
Brome, ripgut	Bromus diandrus			•	•		
Soft chess	Bromus hordeaceus	S	S	•	•		
Red maids	Calandrinia ciliata	O	O				
Thistle, Italian	Carduus pycnocephalus			•	•		
Hottentot fig	Carpobrotus CHILENSE	I	I	•			
Clover, Owl's	Castilleja erecta	L	L	•	•		
Fivehook	Chenopodiaceae A			•			
Thistle, California	Cirsium californicum	↓	↓	•	?		
Bindweed	Convolvulus arvensis						
Brass buttons	Cotula coronopifolia			•			
Grass, Bermuda	Cynodon dactylon			?			
Grass, salt	Distichlis spicata						
Filaree, Red-stem	Erodium cicutarium			•	•		
Meadow barley	Hordeum californicum			•	•		
Foxtail barley	Hordeum murinum			•	•	•	
Cat's ear, Smooth	Hypochoeris glabrata						
Goldfields, Coulter's	Lasthenia glabrata			•	•	•	
Flower, bull	Lavatera cretica					•	
Peppergrass	Lepidium nuditum						
Rye, giant wild	Leymus condensatus						
Ryegrass	Lolium multiflorum			•	•	•	
Lupine, dove	Lupinus bicolor					•	
Lupine, succulent	Lupinus succulentus			•	•		
Cheeseweed	Malva parviflora			•	•		
Bur clover	Medicago polymorpha			•	•	•	
Sweet-clover, White	Melilotus albus			•	•	•	
Sweet-clover, Yellow	Melilotus indicus			•	•	•	
Ox-tongue	Picris echioides			•	•		
Plantain, cut-leaf	Plantago coronopifolia						
Plantain, English	Plantago lanceolata						
Tiny grass	Poaceae A						
Knotweed	Polygonum arenastrum			•			
Rabbitsfoot grass	Polyogon monspeliensis						
Willow, Arroyo	Salix lasiolepis						
Russian thistle	Salsola tragus			•	•		
Figwort, Bl-flowered	Scrophularia atrata						
Figwort, California	Scrophularia californica						
Thistle, milk	Silybum marianum			•	•		
Prickly sow-thistle	Sonchus asper			•	•		
Sow thistle	Sonchus oleraceus			•	•		
Sand spurrey	Spergularia macroth (?) RUBRA			•			
Clover, rose	Trifolium ciliatum			•	•	•	
Clover, tomcat	Trifolium tridentatum						
Vetch (axillary)	Vicia sativa (?)			•	•		
Grass, Fescue	Vulpia			•		•	
BULL THISTLE	CIRSIIUM VULGARE			•	•		
CALIFORNIA SAGEBRUSH	ARTEMISIA CALIFORNICA			•	•		

CASMALIA LANDFILL

SITE: HEAVY METALS LANDFILL

Initials KR+PM Date 23 APRIL 2001

Site Section

Common Name

Scientific Name

1

2

3

4

5

VELDT GRASS

EHRHARTIA CALYCINA

•

GREEN EVERLASTING

SNAPHALUM CALIFORNICA

B

B

•

WILD OAT

AUENA FATUA

A

A

•

•

RED BROME

BRAMUS MADRITENSIS ssp. RIGIDENS

•

•

TOCALOTE

CENTAUREA MELITENSIS

R

R

•

•

TARWEED

HEMIZONIA FASCICULATA

F

F

•

FENNEL

FOENICULUM VULGARE

•

CUDWEED ASTER

LESSINGIA FILAGINIFOLIA

S

S

•

SANTOOTH GOLDENBUSH

HAZARDIA SQUARROSA

S

S

•

GOLDENTOP

LAMARCHIA AUREA

O

O

•

COAST GOLDENBUSH

TSOCOMA MENZIESII

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I

•

COMMON DWARF LOGWEED

ASTRAGALUS DIDYMACARPUS?

L

L

•

ALKALI RUE

LEYMUS TRITICOIDES

L

L

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WHITESTEM FILAREE

ERODIUM MOSCHATUM

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**Caustics/Cyanide Landfill**

**23 April 2001**

CASMALIA LANDFILL		SITE: CAUSTICS/CYANIDE LANDFILL						Page 1 of 2
Initials KR & PM	Date 23 APRIL 2001	Site Section						
Common Name	Scientific Name	1	2	3	4	5	6	
Dandelion, mountain	Agoseris	•	•					
Fiddleneck	Amsinckia menziesii	•		•	•			
Mayweed	Anthemis cotula							
Saltbush, halberd-leaf	Atriplex hastata							
Australian saltbush	Atriplex semibaccata	•	•	•	•	•	•	
Oat, slender wild	Avena barbara	•	•	•	•	•	•	
Coyote brush	Baccharis pilularis	•	•	•	•	•	•	
Black mustard	Brassica nigra	•	•	•	•	•	•	
Brome, ripgut	Bromus diandrus	•	•	•	•	•	•	
Soft chess	Bromus hordeaceus	•	•	•	•		•	
Red maids	Calandrinia ciliata							
Thistle, Italian	Carduus pycnocephalus	•	•	•	•			
Hottentot fig	Carpobrotus		•					
Clover, Owl's	Castilleja erecta							
Fivehook	Chenopodiaceae A	•	•					
Thistle, California	Cirsium californicum		•					
Bindweed	Convolvulus arvensis							
Brass buttons	Cotula coronopifolia		•					
Grass, Bermuda	Cynodon dactylon			•				
Grass, salt	Distichlis spicata							
Filaree, Red-stem	Erodium cicutarium			•	•			
Meadow barley	Hordeum californicum							
Foxtail barley	Hordeum murinum	•	•	•	•	•	•	
Cat's ear, Smooth	Hypochoeris glabrata							
Goldfields, Coulter's	Lasthenia glabrata							
fallow, bull	Lavatera cretica			•				
Peppergrass	Lepidium nuditum							
Rye, giant wild	Leymus condensatus							
Ryegrass	Lolium multiflorum	•	•	•	•	•	•	
Lupine, dove	Lupinus bicolor							
Lupine, succulent	Lupinus succulentus			•	•		•	
Cheeseweed	Malva parviflora							
Bur clover	Medicago polymorpha	•	•	•	•		•	
Sweet-clover, White	Melilotus albus	•	•					
Sweet-clover, Yellow	Melilotus indicus	•	•	•	•		•	
Ox-tongue	Picris echioides	•	•	•	•		•	
Plantain, cut-leaf	Plantago coronopifolia							
Plantain, English	Plantago lanceolata							
Tiny grass	Poaceae A							
Knotweed	Polygonum arenastrum	•			•		•	
Rabbitsfoot grass	Polypogon monspeliensis	•	•	•				
Willow, Arroyo	Salix lasiolepis							
Russian thistle	Salsola tragus	•	•	•	•		•	
Figwort, Bl-flowered	Scrophularia atrata							
Figwort, California	Scrophularia californica							
Thistle, milk	Silybum marianum	•	•	•	•		•	
Prickly sow-thistle	Sonchus asper	•	•	•	•			
Sow thistle	Sonchus oleraceus	•	•	•	•			
Sand spurrey	Spergularia macroth (?)	•	•	•	•	•	•	
Clover, rose	Trifolium ciliatum							
over, tomcat	Trifolium tridentatum							
etch (axillary)	Vicia sativa (?)	•	•	•	•		•	
Grass, Fescue	Vulpia							
WINTER VETCH	VICIA VILLOSA <sup>ssp. PASYCARPA</sup>	•	•					
RED BROME	BROMUS MADRITENSIS <sup>ssp. RUBENS</sup>		•	•	•			

Initials KR + PM

Date 23 APRIL 2001

Site Section

Common Name

Scientific Name

1

2

3

4

5

6

TOCALOTE

CENTAUREA MELITENSIS

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CALIFORNIA SAGEBRUSH

ARTEMESIA CALIFORNICA

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UNID. PERENNIAL BROME

BROMUS SP. (OR FESTUCA)

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WILD OAT

AVENA FATUA

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BULLTHISTLE

CIRSIIUM VULGARE

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.

UNID. SALT BUSH

ATRIPLEX SP.

.

.

SAWTOOTH GOLDENBUSH

HAZARDIA SCLARROSA

.

.

.

ZORRO FESCUE

VULPIA MYURAS

.

UNID. AMSINCKIA

AMSIKCKIA SP.

.

PRICKLY LETTUCE

LACTUCA SERRIOLA

.

COASTAL GOLDENBUSH

ISOCOMA MENZIESII

.

.

GUM PLANT

GRINDELIA SP.

.

GREEN EVERLASTING

GNAPHALIUM CALIFORNICA

.

CANARY GRASS

PHALARIS SP.

.

CALIFORNIA POPPY

ESCHSCHOLZIA CALIFORNICA

.

NETTLE-LEAF GOOSEFOOT

CHEMOPEDIUM MURALE

.

SILVER PUFFS

UROPOPPUS LINDLEYI

.

.

**Borrow Area North of PCB Landfill**

**24 April 2001**

CASMALIA LANDFILL		SITE: BORROW AREA N. OF PCB LANDFILL		Page 1 of 1					
Initials K.R.	Date 24 APRIL 2001	Site Section							
Common Name	Scientific Name	SLOPES							
Dandelion, mountain	Agoseris								
Fiddleneck	Amsinckia menziesii								
Mayweed	Anthemis cotula								
Saltbush, halberd-leaf	Atriplex hastata								
Australian saltbush	Atriplex semibaccata								
Oat, slender wild	Avena barbara								
Coyote brush	Baccharis pilularis								
Black mustard	Brassica nigra	•							
Brome, rippgut	Bromus diandrus	•							
Soft chess	Bromus hordeaceus								
Red maids	Calandrinia ciliata								
Thistle, Italian	Carduus pycnocephalus	•							
Hottentot fig	Carpobrotus								
Clover, Owl's	Castilleja erecta								
Fivehook	Chenopodiaceae A								
Thistle, California	Cirsium californicum								
Bindweed	Convolvulus arvensis								
Brass buttons	Cotula coronopifolia								
Grass, Bermuda	Cynodon dactylon								
Grass, salt	Distichlis spicata								
Filaree, Red-stem	Erodium cicutarium								
Meadow barley	Hordeum californicum	•							
Foxtail barley	Hordeum murinum								
Cat's ear, Smooth	Hypochoeris glabrata								
Goldfields, Coulter's allow, bull	Lasthenia glabrata Lavatera cretica	•							
Peppergrass	Lepidium nuditum								
Rye, giant wild	Leymus condensatus								
Ryegrass	Lolium multiflorum	•							
Lupine, dove	Lupinus bicolor								
Lupine, succulent	Lupinus succulentus								
Cheeseweed	Malva parviflora	•							
Bur clover	Medicago polymorpha	•							
Sweet-clover, White	Melilotus albus								
Sweet-clover, Yellow	Melilotus indicus								
Ox-tongue	Picris echioides								
Plantain, cut-leaf	Plantago coronopifolia								
Plantain, English	Plantago lanceolata								
Tiny grass	Poaceae A								
Knotweed	Polygonum arenastrum								
Rabbitsfoot grass	Polypogon monspeliensis								
Willow, Arroyo	Salix lasiolepis								
Russian thistle	Salsola tragus								
Figwort, Bl-flowered	Scrophularia atrata								
Figwort, California	Scrophularia californica								
Thistle, milk	Silybum marianum								
Prickly sow-thistle	Sonchus asper								
Sow thistle	Sonchus oleraceus								
Sand spurrey	Spergularia macroth (?)								
Clover, rose	Trifolium ciliatum								
ver, tomcat	Trifolium tridentatum	•							
etch (axillary)	Vicia sativa (?)	•							
Grass, Fescue	Vulpia								

**Between Acids Landfill and Caustics/Cyanide Landfill**

**24 April 2001**

CASMALIA LANDFILL		SITE: BETWEEN ACIDS & CAUSTIC / CYANIDE			Page 1 of 2
Initials KR 1/2 PM	Date 24 APRIL 2001	Site Section LANDFILLS			
Common Name	Scientific Name	SLOPES	WETLAND	FLATS	
Jandelion, mountain	Agoseris				
Fiddleneck	Amsinckia menziesii				
Mayweed	Anthemis cotula				
Saltbush, halberd-leaf	Atriplex hastata			•	
Australian saltbush	Atriplex semibaccata	•		•	
Oat, slender wild	Avena barbara	•			
Coyote brush	Baccharis pilularis	•			
Black mustard	Brassica nigra	•		•	
Brome, ripgut	Bromus diandrus	•	•	•	
Soft chess	Bromus hordeaceus	•		•	
Red maids	Calandrinia ciliata				
Thistle, Italian	Carduus pycnocephalus	•		•	
Hottentot fig	Carpobrotus			•	
Clover, Owl's	Castilleja erecta				
Fivehook	Chenopodiaceae A				
Thistle, California	Cirsium californicum				
Bindweed	Convolvulus arvensis				
Brass buttons	Cotula coronopifolia		•	•	
Grass, Bermuda	Cynodon dactylon				
Grass, salt	Distichlis spicata				
Filaree, Red-stem	Erodium cicutarium				
Meadow barley	Hordeum californicum				
Foxtail barley	Hordeum murinum	•	•	•	
Cat's ear, Smooth	Hypochoeris glabrata				
Goldfields, Coulter's	Lasthenia glabrata				
Yellow, bull	Lavatera cretica				
Peppergrass	Lepidium nuditum				
Rye, giant wild	Leymus condensatus				
Ryegrass	Lolium multiflorum	•	•	•	
Lupine, dove	Lupinus bicolor				
Lupine, succulent	Lupinus succulentus	•		•	
Cheeseweed	Malva parviflora				
Bur clover	Medicago polymorpha	•	•	•	
Sweet-clover, White	Melilotus albus				
Sweet-clover, Yellow	Melilotus indicus			•	
Ox-tongue	Picris echioides	•		•	
Plantain, cut-leaf	Plantago coronopifolia				
Plantain, English	Plantago lanceolata				
Tiny grass	Poaceae A				
Knotweed	Polygonum arenastrum			•	
Rabbitsfoot grass	Polypogon monspeliensis			•	
Willow, Arroyo	Salix lasiolepis				
Russian thistle	Salsola tragus	•		•	
Figwort, Bl-flowered	Scrophularia atrata				
Figwort, California	Scrophularia californica				
Thistle, milk	Silybum marianum				
Prickly sow-thistle	Sonchus asper	•		•	
Sow thistle	Sonchus oleraceus	•		•	
Sand spurrey	Spergularia macroth (?)			•	
Clover, rose	Trifolium ciliatum	•			
Clover, tomcat	Trifolium tridentatum				
Black vetch (axillary)	Vicia sativa (?)	•		•	
Grass, Fescue	Vulpia	•			
CALIFORNIA SAGEBRUSH	ARTEMISIA CALIFORNICA	•			
RED BROME	BROMUS MADRITENSIS SSP. RUBENS	•			



**Acids Landfill**

**24 April 2001**

CASMALIA LANDFILL		SITE: ACIDS LANDFILL						Page 1 of 2
Initials KR+PM	Date 24 APRIL 2001	Site Section						
Common Name	Scientific Name	1	2	3	4	5	6	
Jandelion, mountain	Agoseris		•		•	•		
Fiddleneck	Amsinckia menziesii	•		?	•	•		
Mayweed	Anthemis cotula							
Saltbush, halberd-leaf	Atriplex hastata		•	•				
Australian saltbush	Atriplex semibaccata	•	•	•	•	•		
Oat, slender wild	Avena barbara	•	•	•	•	•	•	
Coyote brush	Baccharis pilularis		•	•	•	•	•	
Black mustard	Brassica nigra	•	•	•	•	•	•	
Brome, ripgut	Bromus diandrus	•	•	•	•	•	•	
Soft chess	Bromus hordeaceus	•	•	•	•	•	•	
Red maids	Calandrinia ciliata							
Thistle, Italian	Carduus pycnocephalus	•	•	•	•	•	•	
Hottentot fig	Carpobrotus CHILENSE	•	•	•				
Clover, Owl's	Castilleja erecta							
Fivehook	Chenopodiaceae A						•	
Thistle, California	Cirsium californicum			•	•	•		
Bindweed	Convolvulus arvensis							
Brass buttons	Cotula coronopifolia	•	•	•	•	•		
Grass, Bermuda	Cynodon dactylon							
Grass, salt	Distichlis spicata							
Filaree, Red-stem	Erodium cicutarium	•	•	•	•	•	•	
Meadow barley	Hordeum californicum							
Foxtail barley	Hordeum murinum	•	•	•	•	•		
Cat's ear, Smooth	Hypochoeris glabrata					•		
Goldfields, Coulter's	Lasthenia glabrata							
allow, bull	Lavatera cretica			•	•			
peppergrass	Lepidium nuditum							
Rye, giant wild	Leymus condensatus							
Ryegrass	Lolium multiflorum	•	•	•	•	•		
Lupine, dove	Lupinus bicolor							
Lupine, succulent	Lupinus succulentus		•	•	•	•	•	
Cheeseweed	Malva parviflora	•		•				
Bur clover	Medicago polymorpha	•	•	•	•	•	•	
Sweet-clover, White	Melilotus albus							
Sweet-clover, Yellow	Melilotus indicus	•	•	•	•	•	•	
Ox-tongue	Picris echioides	•	•	•	•	•	•	
Plantain, cut-leaf	Plantago coronopifolia							
Plantain, English	Plantago lanceolata							
Tiny grass	<del>Poa</del> A. AGROSTIDAE				•			
Knotweed	Polygonum arenastrum	•	•	•	•	•	•	
Rabbitsfoot grass	Polypogon monspeliensis	•	•	•				
Willow, Arroyo	Salix lasiolepis							
Russian thistle	Salsola tragus	•	•	•	•	•		
Figwort, Bl-flowered	Scrophularia atrata							
Figwort, California	Scrophularia californica							
Thistle, milk	Silybum marianum	•	•			•	•	
Prickly sow-thistle	Sonchus asper	•					•	
Sow thistle	Sonchus oleraceus	•	•	•	•	•	•	
Sand spurrey	Spergularia macroth (?)	•	•	•	•	•		
Clover, rose	Trifolium ciliatum				•			
lover, tomcat	Trifolium tridentatum							
atch (axillary)	Vicia sativa (?)	•	•	•	•	•	•	
Grass, Fescue	Vulpia							
WILD OAT	AVENA FATUA					•		
BULL THISTLE	CIRSIIUM VULGARE			•	•			

Initials KR+PM

Date 24 APRIL 2001

Site Section

Common Name

Scientific Name

1 2 3 4 5 6

LARDING GRASS

PHALARIS AQUATICA

• • • • •

CALIFORNIA SAGEBRUSH

ARTEMISIA CALIFORNICA

• • • • •

UNID. SOW-THISTLE

SONCHUS SP.

• •

WHITESTEM FILAREE

ERODIUM MOSCHATUM

•

VELDT GRASS

EHRHARTA CALYCINA

•

GOLDENTOP

LAMARCKIA AUREA

• • • •

RED BROME

BROMUS MADRITENSIS SSP  
RUBENS

• • •

SWEET ALYSSUM

LOBULARIA MARITIMA

• •

CALIFORNIA POPPY

ESCHSCHOLZIA CALIFORNICA

•

UNID. LOCOWEED

ASTRAGALUS SP.

•

FLAX-LEAVED FLEABANE

CONYZA BONARIENSIS

•

CHICORY

CICHORIUM INTYBUS

•

PRICKLY LETTUCE

LACTUCA SERRIOLA

•

GREEN EVERLASTING

GNAPHALIUM CALIFORNICA

•

CURLY DOCK

RUMEX CRISPUS

•

HAIRY CAT'S EAR

HYDCHAERIS RADICATA

•

TALCOTE

CENTAUREA MELITENSIS

• •

**Between Caustics/Cyanide Landfill and Metals Landfill**

**25 April 2001**





**Slopes South of Pesticides/Solvents Landfill**

**2 May 2001**

**Casmalia Hazardous Waste Management Facility  
Biological Surveys for Remedial Investigation/Feasibility Study**

**Plant Survey**

**Location:** Slopes south of gallery well at toe of Pesticides/Solvents Landfill

**Date:** 2 May 2001      **Weather:** Clear; slight W breeze; air temperature = 75 F at  
1200 hrs

*Clump of coastal sage scrub vegetation (may be remnant of original vegetation on landfill):*

<i>Artemisia californica</i>	California sagebrush
<i>Avena fatua</i>	Wild oat
<i>Baccharis pilularis</i>	Coyote brush
<i>Brassica</i> sp.	Mustard
<i>Bromus hordeaceus</i>	Soft chess
<i>Bromus madritensis</i> subsp. <i>rubens</i>	Red brome
<i>Calystegia macrostegia</i> var.	
<i>Cirsium vulgare</i>	Bull thistle
<i>Cotula coronopifolia</i>	Brass buttons
<i>cyclostegia</i>	Morning-glory
<i>Gnaphalium californica</i>	Green everlasting
<i>Gnaphalium canescens beneolens</i>	Fragrant everlasting
<i>Hordeum murinum</i>	Foxtail barley
<i>Lolium perenne</i>	Italian rye
<i>Medicago polymorpha</i>	Bur clover
<i>Melilotus</i> sp.	Sweet clover
<i>Picris echioides</i>	Prickly ox-tongue
<i>Salsola tragus</i>	Russian thistle
<i>Satureja douglasii</i>	Yerba buena
<i>Vicia sativa</i>	Vetch

**Pesticides/Solvents Landfill**

**2 May 2001**

CASMALIA LANDFILL		SITE: PESTICIDES SOLVENTS LANDFILL		Page 1 of 2			
Initials KR+PM	Date 2 MAY 2001	Site Section					
Common Name	Scientific Name	1	2	3	4	5	6
Jandelion, mountain	Agoseris						
Fiddleneck	Amsinckia menziesii	•					
Mayweed	Anthemis cotula						
Saltbush, halberd-leaf	Atriplex hastata						
Australian saltbush	Atriplex semibaccata				•	•	•
Oat, slender wild	Avena barbara	•	•	•	•	•	•
Coyote brush	Baccharis pilularis		•		•	•	
Black mustard	Brassica nigra	•	•	•	•	•	•
Brome, ripgut	Bromus diandrus	•	•	•	•	•	•
Soft chess	Bromus hordeaceus	•	•	•	•	•	•
Red maids	Calandrinia ciliata						
Thistle, Italian	Carduus pycnocephalus	•	•	•	•	•	•
Hottentot fig	Carpobrotus						•
Clover, Owl's	Castilleja erecta	•	•	•			
Fivehook	Chenopodiaceae A						
Thistle, California	Cirsium californicum						
Bindweed	Convolvulus arvensis						
Brass buttons	Cotula coronopifolia						•
Grass, Bermuda	Cynodon dactylon						
Grass, salt	Distichlis spicata						
Filaree, Red-stem	Erodium cicutarium		•	•			
Meadow barley	Hordeum californicum	•	•	•	•	•	•
Foxtail barley	Hordeum murinum	•	•	•	•	•	•
Cat's ear, Smooth	Hypochoeris glabrata	•					
Goldfields, Coulter's	Lasthenia glabrata	•	•	•	•	•	•
allow, bull	Lavatera cretica	?					
oppergrass	Lepidium nuditum	•	•				
Rye, giant wild	Leymus condensatus						
Ryegrass	Lolium multiflorum	•	•	•	•	•	•
Lupine, dove	Lupinus bicolor	•	•	•	•		
Lupine, succulent	Lupinus succulentus	•					
Cheeseweed	Malva parviflora	•	•	•	•	•	
Bur clover	Medicago polymorpha	•	•	•	•	•	•
Sweet-clover, White	Melilotus albus		•			•	•
Sweet-clover, Yellow	Melilotus indicus	•	•	•	•	•	•
Ox-tongue	Picris echioides		•	•	•	•	•
Plantain, cut-leaf	Plantago coronopifolia						
Plantain, English	Plantago lanceolata						
Tiny grass	Poaceae A	•	•	•			
Knotweed	Polygonum arenastrum						
Rabbitsfoot grass	Polypogon monspeliensis						•
Willow, Arroyo	Salix lasiolepis	•					
Russian thistle	Salsola tragus			•	•	•	•
Figwort, Bl-flowered	Scrophularia atrata						
Figwort, California	Scrophularia californica						
Thistle, milk	Silybum marianum	•	•	•	•	•	•
Prickly sow-thistle	Sonchus asper	•	•	•	•	•	•
Sow thistle	Sonchus oleraceus	•	•	•	•	•	•
Sand spurrey	Spergularia macroth (?)						
Clover, rose	Trifolium <del>ciliatum</del> HIRTUM	•	•	•	•	•	•
lover, tomcat	Trifolium tridentatum						
ch (axillary)	Vicia sativa (?)	•	•	•	•	•	•
Grass, Fescue	Vulpia						
BULL MAJOW	MALVA NICAEENSIS	•	•	•	•	•	•
HOREHOUND	MARRUBIUM VULGARE		•				



CASMALIA LANDFILL		SITE: RCFPOND AREA & FLATS TO NORTH								Page 1 of 2
Initials KR+PM	Date 2-3 MAY 2001	Site Section								
Common Name	Scientific Name	1	2	3	4	5	6	7	8	
Jandelion, mountain	Agoseris									
Fiddleneck	Amsinckia menziesii									
Mayweed	Anthemis cotula									
Saltbush, halberd-leaf	Atriplex hastata	•				•	•			
Australian saltbush	Atriplex semibaccata	•	•			•	•	•	•	
Oat, slender wild	Avena barbara		•	•	•	•	•		•	
Coyote brush	Baccharis pilularis	•	•	•		•	•	•	•	
Black mustard	Brassica nigra	•	•	•	•	•	•	•	•	
Brome, ripgut	Bromus diandrus	•	•	•		•	•	•	•	
Soft chess	Bromus hordeaceus	•	•	•		•		•	•	
Red maids	Calandrinia ciliata									
Thistle, Italian	Carduus pycnocephalus	•				•	•	•	•	
Hottentot fig	Carpobrotus CHILENSE	•		•		•	•			
Clover, Owl's	Castilleja erecta									
Fivehook	Chenopodiaceae A					•				
Thistle, California	Cirsium californicum									
Bindweed	Convolvulus arvensis									
Brass buttons	Cotula coronopifolia	•	•	•	•	•	•	•	•	
Grass, Bermuda	Cynodon dactylon									
Grass, salt	Distichlis spicata	•				•	•			
Filaree, Red-stem	Erodium cicutarium			•			•			
Meadow barley	Hordeum californicum									
Foxtail barley	Hordeum murinum	•		•			•	•		
Cat's ear, Smooth	Hypochoeris glabrata		•			•	•			
Goldfields, Coulter's	Lasthenia glabrata									
allow, bull	Lavatera cretica									
ppergrass	Lepidium nuditum									
Rye, giant wild	Leymus condensatus									
Ryegrass	Lolium multiflorum	•	•	•		•	•	•	•	
Lupine, dove	Lupinus bicolor									
Lupine, succulent	Lupinus succulentus					•				
Cheeseweed	Malva parviflora									
Bur clover	Medicago polymorpha		•			•		•	•	
Sweet-clover, White	Melilotus albus							•		
Sweet-clover, Yellow	Melilotus indicus	•	•	•		•	•	•	•	
Ox-tongue	Picris echioides	•	•	•		•	•	•	•	
Plantain, cut-leaf	Plantago coronopifolia						•			
Plantain, English	Plantago lanceolata									
Tiny grass	Poaceae A			•		•	•	•		
Knotweed	Polygonum arenastrum					•	•			
Rabbitsfoot grass	Polypogon monspeliensis	•	•			•	•			
Willow, Arroyo	Salix lasiolepis						•			
Russian thistle	Salsola tragus					•	•	•	•	
Figwort, Bl-flowered	Scrophularia atrata									
Figwort, California	Scrophularia californica									
Thistle, milk	Silybum marianum									
Prickly sow-thistle	Sonchus asper	•	•	•		•	•			
Sow thistle	Sonchus oleraceus	•				•	•	•		
Sand spurrey	Spergularia macroth (?)	•				•	•			
Clover, rose	Trifolium ciliatum									
Clover, tomcat	Trifolium tridentatum									
ch (axillary)	Vicia sativa (?)		•			•	•	•		
Grass, Fescue	Vulpia MYUROS		•					•	•	
CALIFORNIA BULRUSH	SCIRPUS CALIFORNICUS	•								
CELERY	APIUM GRAVEOLENS	•				•				

**Margins of RCF Pond, Marsh Area to West and Northwest, and Irrigated  
Flats to North**

**2-3 May 2001**

CASMALIA LANDFILL		SITE: RCF POND AREA + FLATS TO NORTH								Page 2 of 2
Initials KR+PM	Date 2-3 MAY 2001	Site Section								
Common Name	Scientific Name	1	2	3	4	5	6	7	8	
PAMPAS GRASS	CORTADERIA JUBATA		•			•				
DAST GOLDENBUSH	ISOCOMA MENZIESII	•					•			
TOAD RUSH	JUNCUS BUFONIUS	•								
UNID. BULRUSH	SCIRPUS SP. A	•								
UNID. ATRIPLEX	ATRIPLEX SP.	•								
UNID. BULRUSH	SCIRPUS SP. B (MARITIMUS?)	•				•				
RED BROME	BRAMUS MATRITENSIS SSP. RUBENS	•	•	•		•	•	•	•	
GREEN EVERLASTING	GNAPHALIUM CALIFORNICUM		•				•			
HELIOTROPE	HELIOTROPUM CURASSAVICUM	•					•			
TAMARISK	TAMARIX RAMOSISSIMA	•				•	•			
GOLDENTOP	LAMARCKIA AUREA		•	•		•	•			
WEEDY CUDWEED	GNAPHALIUM LUTEO-ALBUM		•			•	•			
PRICKLY LETTUCE	LACTUCA SERRICOLA	•								
BULL THISTLE	CIRSILUM VULGARE	•		•		•	•			
TARWEED	HEMIZONIA FASCICULATA	•		•		•	•			
FORT TETON MILK-ASTER	STEPHANOMERIA CICHORIACEA			•		•	•	•		
ENCELIA	ENCELIA CALIFORNICA			•						
CALIFORNIA SAGEBRUSH	ARTEMISIA CALIFORNICA			•		•	•			
SPEARSCALE	ATRIPLEX TRIANGULARIS	•				•				
CUT-LEAVED PLANTAIN	PLANTAGO CORANOPUS					•				
COMMON DWARF LOGWEED	ASTRAGALUS DIDYMOCARPIS			•		•				
SILVER PUFFS	UROSAURUS LINDLEYI					•	•	•	•	
TIDY-TIPS	LAYIA PLATYGLOSSA					•				
TICALOTE	CENTAUREA MELITENSIS					•	•			
COMMON GROUNDSEL	SENECIO VULGARIS						•			
UNID. SENECIO	SENECIO SP.						•			
ORSEWEED	CONYZA CANADENSIS						•	•		
WATER SPEEDWELL	VERONICA ANAGALLIS-AQUATICA	•								
CURLY DOCK	RUMEX CRISPUS						•			
CATTAIL	TYPHA SP.						•			
FENNEL	FOENICULUM VULGARE						•			
POISON HEMLOCK	CONIUM MACULATUM						•			
BEDSTRAW	GALLIUM APARINE						•			
SANDBAR WILLOW	SALIX EXIGUA						•			
GUM PLANT	GRINDELIA CAMBRIUM						•			

**PCB Landfill**

**3 May 2001**

CASMALIA LANDFILL		3 MAY 2001	SITE: PCB LANDFILL			Page 1 of 2			
Initials KR+PM	Date	Site Section							
Common Name	Scientific Name	1	2	3					
Dandelion, mountain	Agoseris								
Fiddleneck	Amsinckia menziesii	•		•					
Mayweed	Anthemis cotula								
Saltbush, halberd-leaf	Atriplex hastata								
Australian saltbush	Atriplex semibaccata	•	•	•					
Oat, slender wild	Avena barbara	•	•	•					
Coyote brush	Baccharis pilularis	•							
Black mustard	Brassica nigra	•		•					
Brome, ripgut	Bromus diandrus	•	•	•					
Soft chess	Bromus hordeaceus	•	•	•					
Red maids	Calandrinia ciliata								
Thistle, Italian	Carduus pycnocephalus	•	•	•					
Hottentot fig	Carpobrotus								
Clover, Owl's	Castilleja erecta		•	•					
Fivehook	Chenopodiaceae A								
Thistle, California	Cirsium californicum								
Bindweed	Convolvulus arvensis	•							
Brass buttons	Cotula coronopifolia								
Grass, Bermuda	Cynodon dactylon								
Grass, salt	Distichlis spicata								
Filaree, Red-stem	Erodium cicutarium	•	•	•					
Meadow barley	Hordeum californicum		•	•					
Foxtail barley	Hordeum murinum	•	•	•					
Cat's ear, Smooth	Hypochoeris glabrata								
Goldfields, Coulter's	Lasthenia glabrata	•	•	•					
Flower, bull	Lavatera cretica								
Uppergrass	Lepidium niditum								
Rye, giant wild	Leymus condensatus								
Ryegrass	Lolium multiflorum	•	•						
Lupine, dove	Lupinus bicolor		•						
Lupine, succulent	Lupinus succulentus								
Cheeseweed	Malva parviflora	•		•					
Bur clover	Medicago polymorpha	•	•	•					
Sweet-clover, White	Melilotus albus								
Sweet-clover, Yellow	Melilotus indicus	•	•	•					
Ox-tongue	Picris echioides	•	•	•					
Plantain, cut-leaf	Plantago coronopifolia								
Plantain, English	Plantago lanceolata								
Tiny grass	Poaceae A		•						
Knotweed	Polygonum arenastrum								
Rabbitsfoot grass	Polypogon monspeliensis	•		•					
Willow, Arroyo	Salix lasiolepis								
Russian thistle	Salsola tragus	•		•					
Figwort, Bl-flowered	Scrophularia atrata								
Figwort, California	Scrophularia californica								
Thistle, milk	Silybum marianum								
Prickly sow-thistle	Sonchus asper	•	•						
Sow thistle	Sonchus oleraceus	•	•	•					
Sand spurrey	Spergularia macroth (?)								
Clover, rose	Trifolium <del>eliatum</del> HIRTUM	•	•	•					
Clover, tomcat	Trifolium tridentatum								
Ch (axillary)	Vicia sativa (?)	•	•						
Grass, Fescue	Vulpia MYUROS	•							
SILVER PUFFS	UROAPPUS LINDLEYI	•		•					

Initials KR & PM

Date 3 MAY 2001

Site Section

Common Name

Scientific Name

1	2	3							
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WHITESTEM FILAREE	ERODIUM MOSCHATUM	•							
WILD THISTLE	CIRSIUM VULGARE	•		•					
TIDY-TIPS	LAYIA PLATYGLOSSA	•							
GOLDENTOP	LAMARCKIA AUREA	•							
RED BROME	BRONX MATRITENSIS SSP. RUBENS	•		•					
CALIFORNIA ASTER	LESSINGIA FLAGINIFOLIA	•							
COAST GOLDENBUSH	ISADOMA MENZIESII	•							
TARWEED	HEMIZONIA FASCICULATA	•							
OWL'S CLOVER	ORTHOCAARPUS			•					
CALIFORNIA SAGEBRUSH	ARTEMISIA CALIFORNICA					•			
FORT TETON MILK-ASTER	STEPHANOMERIA CICHORIACEA	•		•		•			
PRICKLY LETTUCE	LACTUCA SERRIOLA	•							
TECALOTE	CENTAUREA MELTENSIS	•							
CALIFORNIA POPPY	ESCHSCHOLZIA CALIFORNICA					•			
FIDDLE DOCK	RUMEX (PULCHER?)	•							
BEACH PRIMROSE	CAMISSONIA CHEIRANTHIFOLIA	•							

**Margins of Pond 13, Pond 18, A-Series Pond, and Southern Margins of  
Pond A-5**

**14 May 2001**

CASMALIA LANDFILL		SITE: MARGINS OF POND 13, 18 → A-SERIES			Page 1 of 2
Initials KR+PM	Date 14 MAY 2001	Site Section			
Common Name	Scientific Name	POND 13	A-SERIES POND	POND 18	
Jandelson, mountain	Agoseris	•			
Fiddleneck	Amsinckia menziesii	•	•		
Mayweed	Anthemis cotula				
Saltbush, halberd-leaf	Atriplex hastata	•		•	
Australian saltbush	Atriplex semibaccata	•	•	•	
Oat, slender wild	Avena barbara	•	•	•	
Coyote brush	Baccharis pilularis	•	•	•	
Black mustard	Brassica nigra	•	•	•	
Brome, ripgut	Bromus diandrus	•	•	•	
Soft chess	Bromus hordeaceus	•	•	•	
Red maids	Calandrinia ciliata				
Thistle, Italian	Carduus pycnocephalus	•	•	•	
Hottentot fig	Carpobrotus CHILENSE	•		•	
Clover, Owl's	Castilleja erecta				
Fivehook	Chenopodiaceae A	•		•	
Thistle, California	Cirsium californicum				
Bindweed	Convolvulus arvensis				
Brass buttons	Cotula coronopifolia	•	•	•	
Grass, Bermuda	Cynodon dactylon				
Grass, salt	Distichlis spicata	•		•	
Filaree, Red-stem	Erodium cicutarium	•	•	•	
Meadow barley	Hordeum californicum	•			
Foxtail barley	Hordeum murinum	•	•	•	
Cat's ear, Smooth	Hypochoeris glabrata	•	•		
Goldfields, Coulter's	Lasthenia glabrata				
allow, bull	Lavatera cretica				
peppergrass	Lepidium nuditum				
Rye, giant wild	Leymus condensatus	•			
Ryegrass	Lolium multiflorum	•	•	•	
Lupine, dove	Lupinus bicolor	•			
Lupine, succulent	Lupinus succulentus		•		
Cheeseweed	Malva parviflora	•		•	
Bur clover	Medicago polymorpha	•	•	•	
Sweet-clover, White	Melilotus albus	•	•		
Sweet-clover, Yellow	Melilotus indicus	•	•	•	
Ox-tongue	Picris echioides	•	•	•	
Plantain, cut-leaf	Plantago coronopifolia				
Plantain, English	Plantago lanceolata				
Tiny grass	Poaceae A	•			
Knotweed	Polygonum arenastrum	•			
Rabbitsfoot grass	Polypogon monspeliensis	•	•	•	
Willow, Arroyo	Salix lasiolepis				
Russian thistle	Salsola tragus	•	•	•	
Figwort, Bl-flowered	Scrophularia atrata				
Figwort, California	Scrophularia californica				
Thistle, milk	Silybum marianum	•			
Prickly sow-thistle	Sonchus asper	•	•	•	
Sow thistle	Sonchus oleraceus	•	•	•	
Sand spurrey	Spergularia macroth (?)	•			
Clover, rose	Trifolium ciliatum HIRTUM	•			
ower, tomcat	Trifolium tridentatum				
ch (axillary)	Vicia sativa (?)	•	•	•	
Grass, Fescue	Vulpia MYUROS	•	•	•	
PURPLE VETCH	VICIA BENGHALENSIS	•	•		
CALIFORNIA SAGEBRUSH	ARTEMISIA CALIFORNICA	•		•	

CASMALIA LANDFILL

SITE: MARGINS OF PONDS 13, 18, → + A-SERIES Page 2 of 2

Initials KR+PM	Date 14 MAY 2001	Site Section				
Common Name	Scientific Name	POND 13	A-SERIES POND	POND 18		
ZINK PLANT	GRINDELIA CAMFORUM	•	•			
GIANT WILD RYE	LEYMUS CONDENSATUS	•				
RED BROME	BROMUS MAERTENSIS S.S.P. RUBENS	•	•	•		
TARWEED	HEMIZONIA INCRESCENS	•	•	•		
POISON HEMLOCK	CONIUM MACULATUM	•	•	•		
PRAIRIE BULRUSH	SCIRPUS MARITIMUS	•	•			
HELIOTROPE	HELIOTROPUM CURASAVICUM	•		•		
CLARKIA	CLARKIA SP.	•		•		
GREEN EVERLASTING	GNAPHALIUM CALIFORNICUM	•	•	•		
BULLTHISTLE	CRBSIUM VULGARE	•	•	•		
GNAPHALIUM	GNAPHALIUM SP. (BENEQUENS?)	•	•	•		
CONYZA	CONYZA SP.	•				
SENECIO	SENECIO SP.	•				
TAMARISK	TAMARIX RAMOSISSIMA	•		•		
CHENOPODIUM (GOOSEFOOT)	CHENOPODIUM AURALE	•	•	•		
TOCALOTE	CENTAUREA MELITENSIS	•	•	•		
GOLDENTOP	LAMARCKIA AUREA	•	•	•		
DOUGLAS' NIGHTSHADE	SOLANUM DOUGLASSII	•				
HURDLEWEED	CONYZA CANADENSIS	•		•		
ATRIplex	ATRIplex SP. A	•				
PHALARIS	PHALARIS SP.	•	•	•		
MULE-FAT	BACCHARIS SALICIFOLIA	•				
WHITESTEM FILAREE	ERODIUM MOSCHATUM	•				
FORTTESON MILK-ASTER	STEPHANOMERIA LICHORIACEA	•	•	•		
POLYGONUM	POLYGONUM SP.	•				
CALIFORNIA POPPY	EXSCHSCHOLZIA CALIFORNICA	•				
DWARF LOCWEED	ASTRAGALUS DIDYMOCARUM	•				
STEBBINSOSERIS	STEBBINSOSERIS HETERO- CARPA			•		
CURLY DOCK	RUMEX CRISPUS	•				
CALYSTEGIA - MORNING-GLO	CALYSTEGIA CYCLOT. VARMANII	•				
CALIFORNIA BUCKWHEAT	ERIDGONUM PARVIFOLIUM	•				
RESCUE GRASS	BROMUS CATHARTICUS	•	•			
BEDSTRAW	GALIUM APARINE	•				
YARROW	ACHILLEA MILLEFOLIUM	•				
SALINE SAND SALREY	SPERGUARIA MARINA	•		•		
COASTAL LOTUS	LOTUS SALSUGINOSUS					
WEEDY CUDWEED	GNAPHALIUM LUTEO-ALBUM	•	•	•		
SPEARSCALE	ATRIplex TRIANGULARIS		•	•		
ATRIplex	ATRIplex SP. B		•			
CALIFORNIA BULRUSH	SCIRPUS CALIFORNICUS		•	•		
SEDE	CYPERUS ERASROSTIS		•			
SILVER PUFFS	URAPAPPUS LINDLEYI	•	•			
UNID. FESCUE	VULPIA SP.	•	•			
PRICKLY LETTUCE	LACTUCA SERRIOLA		•			
GIANT FRESH NETTLE	URTICA HOLOSERICEA			•		

**2001 FALL SURVEY**

**Casmalia Waste Management Facility  
Biological Species and Habitat Survey Fall 2001  
Plant Surveys**

**Table A**

**CASMALIA SITE FALL 2001 PLANT SURVEYS**

Date: November 27, 2001

Surveyors: Bill Goggin, Michael Clary

Scientific Name	Common Name	Ravine West of PCB Landfill	PCB Landfill	Pesticides Solvents Landfill	Grassland between Casamalia Creek and Landfill	Flats north of the RCF Pond	Borrow Area North of PCB Landfill
<i>Anthemis arvensis</i>	Corn chamomile	x	x	x	x		<b>BARE SOIL</b>
<i>Artemisia californica</i>	California sagebrush	x	x				
<i>Asclepias speciosa</i>	Milkweed			x			
<i>Atriplex</i> sp.	Saltbush						
<i>Atriplex semibaccata</i>	Australian saltbush	x	x				
<i>Avena fatua</i>	Wild oat	x	x	x			
<i>Baccharis pilularis</i>	Coyote bush	x	x	x			
<i>Baccharis salicifolia</i>	Mulefat	x					
<i>Brachypodium distachyon</i>	False brome						
<i>Brassica nigra</i>	Black mustard	x	x	x	x		
<i>Bromus diandrus</i>	Ripgut brome	x	x	x	x		
<i>Bromus hordeaceus</i>	Soft chess	x	x	x	x		
<i>Bromus madritensis</i>	Red brome	x	x	x	x		
<i>Carduus pycnocephalus</i>	Italian thistle	x	x		x		
<i>Carpobrotus chilenses</i>	Hottentot fig						
<i>Centauraea calcitrapa</i>	Purple star-thistle	x					
<i>Centauraea solstitialis</i>	Yellow star-thistle		x		x		
<i>Cirsium vulgare</i>	Bull thistle	x	x	x	x		
<i>Conium maculatum</i>	Poison hemlock			x			
<i>Convolvulus arvensis</i>	Bindweed	x					
<i>Conyza bonariensis</i>	Horseweed					x	
<i>Conyza canadiensis</i>	Pampas grass						
<i>Cortaderia seloana</i>	Brass buttons						
<i>Cotula coronopifolia</i>	Salt grass	x					
<i>Distichlis spicata</i>	Blue wild rye	x					
<i>Elymus glaucus</i>	Willow herb			x			
<i>Epilobium</i> sp.	Dove weed				x		
<i>Eremocarpus setigerus</i>							

**Casmalia Waste Management Facility  
Biological Species and Habitat Survey Fall 2001**

**Plant Surveys  
Table A**

**CASMALIA SITE FALL 2001 PLANT SURVEYS**

Date: November 27, 2001

Surveyors: Bill Goggin, Michael Clary

Scientific Name	Common Name	Ravine West of PCB Landfill	PCB Landfill	Pesticides Solvents Landfill	Grassland between Casamalia Creek and Landfill	Flats north of the RCF Pond	Borrow Area North of PCB Landfill
<i>Erodium cicutarium</i>	Red stem filaree				X		<b>BARE SOIL</b>
<i>Eucalyptus globulus</i>	Blue gum						
<i>Foeniculum vulgare</i>	Fennel	X					
<i>Gnaphalium californica</i>	Cudweed	X			X		
<i>Gnaphalium luteo-album</i>	Weedy cudweed				X		
<i>Grindelia</i> sp.	Gumplant						
<i>Heliotropium europaeum</i>	looks like phacelia					X	
<i>Heterotheca grandiflora</i>	Telegraph weed	X					
<i>Hordeum</i> sp.				X			
<i>Hordeum murinum</i>	Foxtail barley		X		X		
<i>Isocoma menziesii</i>	Goldenbush	X	X		X		
<i>Lactuca serriola</i>	Prickly lettuce						
<i>Lamarckia aurea</i>	Goldentop	X					
<i>Lepidium</i> sp.	Peppergrass						
<i>Lessingia filaginifolia</i>	California aster	X		X			
<i>Lolium multiflorum</i>	English ryegrass	X	X	X			
<i>Malacothrix saxatilis</i>		X					
<i>Malva parvifolia</i>	Cheeseweed		X	X	X		
<i>Marah macrocarpa</i>	Man-root						
<i>Medicago polymorpha</i>	Bur-clover	X					
<i>Melilotus indica</i>	Sour clover						
<i>Phalaris aquatica</i>	Harding grass	X					
<i>Picris echioides</i>	Prickly ox-tongue	X	X	X	X	X	
<i>Plantago erecta</i>	California plantain		X				
<i>Polygonum monspeliensis</i>	Rabbitsfoot grass	X				X	
<i>Rumex acetosella</i>	Sheep sorrel	X		X			
<i>Rumex crispus</i>	Curly dock	X		X	X		

**Casmalia Waste Management Facility  
Biological Species and Habitat Survey Fall 2001  
Plant Surveys**

**Table A**

**CASMALIA SITE FALL 2001 PLANT SURVEYS**

Date: November 27, 2001

Surveyors: Bill Goggin, Michael Clary

Scientific Name	Common Name	Ravine West of PCB Landfill	PCB Landfill	Pesticides Solvents Landfill	Grassland between Casamalia Creek and Landfill	Flats north of the RCF Pond	Borrow Area North of PCB Landfill
<i>Salix lasiolepis</i>	Arroyo willow			X	X		<b>BARE SOIL</b>
<i>Salsola tragus</i>	Russian thistle		X	X			
<i>Scirpus californicus</i>	California bullrush						
<i>Scirpus maritimus</i>							
<i>Silybum marianum</i>	Milk thistle		X		X		
<i>Solanum douglasii</i>	Douglas's nightshade	X					
<i>Sonchus asper</i>	Prickly sow thistle	X	X				
<i>Spergularia macrotheca</i>	Sand spurry	X	X		X		
<i>Stephanomeria chioniceae</i>		X					
<i>Tamarisk</i>	Salt cedar					X	
<i>Trifolium hirtum</i>	Rose clover	X	X	X			
<i>Typha latifolia</i>	Cattail						
Unknown basidiocarp		X					
<i>Urtica holocenceae</i>	Giant creek nettle	X			X		
<i>Vicia sativa</i>	Common vetch		X		X		
<i>Xanthium spinosa</i>	Dove weed			X			

Note: where common names for plant species are not given, none was listed in reference guide:  
*The Jepson Manual: Higher Plants of California*. 1993. Hickman et al.

**Casmalia Waste Management Facility  
Biological Species and Habitat Survey Fall 2001  
Plant Surveys**

**Table A**

**CASMALIA SITE FALL 2001 PLANT SURVEYS**

Date: November 28, 2001

Surveyors: Bill Goggin, Alan Bate

Scientific Name	Common Name	A Series Pond	Pond 18	Pond 13	Unnamed Drainage and Eucalyptus Grove	Acids Landfill	Metals Landfill	Caustic Cyanides Landfill
<i>Anthemis arvensis</i>	Corn chamomile	x	x	x				
<i>Artemisia californica</i>	California sagebrush		x		x	x		
<i>Asclepias speciosa</i>	Milkweed							
<i>Atriplex</i> sp.	Saltbush	x						
<i>Atriplex semibaccata</i>	Australian saltbush	x	x	x		x		
<i>Avena fatua</i>	Wild oat	x	x	x	x			
<i>Baccharis pilularis</i>	Coyote bush	x	x	x	x	x		
<i>Baccharis salicifolia</i>	Mulefat	x	x	x	x			
<i>Brachypodium distachyon</i>	False brome							
<i>Brassica nigra</i>	Black mustard	x	x	x	x			
<i>Bromus diandrus</i>	Ripgut brome	x	x	x	x	x		
<i>Bromus hordeaceus</i>	Soft chess	x						
<i>Bromus madritensis</i>	Red brome		x		x	x		
<i>Carduus pycnocephalus</i>	Italian thistle	x	x	x	x			
<i>Carpobrotus chilenses</i>	Hottentot fig					x		
<i>Centaurea solstitialis</i>	Purple star-thistle		x		x	x		
<i>Centaurea solstitialis</i>	Yellow star-thistle	x	x		x	x		
<i>Cirsium vulgare</i>	Bull thistle				x	x		
<i>Conium maculatum</i>	Poison hemlock				x			
<i>Convolvulus arvensis</i>	Bindweed							
<i>Conyza bonariensis</i>			x					
<i>Conyza canadensis</i>	Horseweed	x						
<i>Cortaderia selloana</i>	Pampas grass							
<i>Cotula coronopifolia</i>	Brass buttons	x	x	x	x	x		
<i>Distichlis spicata</i>	Salt grass	x	x	x	x			
							BARE SOIL	
							BARE SOIL	

**Casmalia Waste Management Facility  
Biological Species and Habitat Survey Fall 2001  
Plant Surveys**

**Table A**

CASMALIA SITE FALL 2001 PLANT SURVEYS  
Date: November 28, 2001  
Surveyors: Bill Goggin, Alan Bate

Scientific Name	Common Name	A Series Pond	Pond 18	Pond 13	Unnamed Drainage and Eucalyptus Grove	Acids Landfill	Metals Landfill	Caustic Cyanides Landfill
<i>Elymus glaucus</i>	Blue wild rye							
<i>Epilobium</i> sp.	Willow herb							
<i>Eremocarpus setigerus</i>	Dove weed							
<i>Erodium cicutarium</i>	Red stem filaree	x			x			
<i>Eucalyptus globulus</i>	Blue gum				x			
<i>Foeniculum vulgare</i>	Fennel							
<i>Gnaphalium californica</i>	Cudweed			x				
<i>Gnaphalium luteo-album</i>	Weedy cudweed				x			
<i>Grindelia</i> sp.	Gumplant							
<i>Heliotropium europaeum</i>	looks like phacelia			x				
<i>Heterotheca grandiflora</i>	Telegraph weed							
<i>Hordeum</i> sp.								
<i>Hordeum murinum</i>	Foxtail barley	x						
<i>Isocoma menziesii</i>	Goldenbush							
<i>Lactuca serriola</i>	Prickly lettuce				x			
<i>Lamarckia aurea</i>	Goldentop	x		x		x		
<i>Lepidium</i> sp.	Peppergrass	x		x				
<i>Lessingia flaginifolia</i>	California aster							
<i>Lolium multiflorum</i>	English ryegrass	x	x	x				
<i>Malacothrix saxatilis</i>								
<i>Malva parvifolia</i>	Cheeseweed		x					
<i>Marah macrocarpa</i>	Man-root							
<i>Medicago polymorpha</i>	Bur-clover							
<i>Melilotus indica</i>	Sour clover							
							BARE SOIL	BARE SOIL

**Casmalia Waste Management Facility  
Biological Species and Habitat Survey Fall 2001  
Plant Surveys**

**Table A**

**CASMALIA SITE FALL 2001 PLANT SURVEYS**

Date: November 28, 2001

Surveyors: Bill Goggin, Alan Bate

Scientific Name	Common Name	A Series Pond	Pond 18	Pond 13	Unnamed Drainage and Eucalyptus Grove	Acids Landfill	Metals Landfill	Caustic Cyanides Landfill
<i>Phalaris aquatica</i>	Harding grass				x	x		
<i>Picris echioides</i>	Prickly ox-tongue	x	x	x	x	x		
<i>Plantago erecta</i>	California plantain							
<i>Polygonum monspeliensis</i>	Rabbitfoot grass	x	x	x	x	x		
<i>Rumex acetosella</i>	Sheep sorrel	x		x	x			
<i>Rumex crispus</i>	Curly dock			x	x			
<i>Salix lasiolepis</i>	Arroyo willow				x			
<i>Salsola tragus</i>	Russian thistle	x	x			x		
<i>Satureja douglasii</i>	yerba buena			x		x		
<i>Scirpus californicus</i>	California bullrush							
<i>Scirpus maritimus</i>								
<i>Silybum marianum</i>	Milk thistle				x			
<i>Solanum douglasii</i>	Douglas's nightshade				x			
<i>Sonchus asper</i>	Prickly sow thistle							
<i>Spergularia macrotheca</i>	Sand spurry		x			x		
<i>Stephanomeria chioriacae</i>		x	x					
<i>Tamarisk</i>	Salt cedar	x	x	x				
<i>Trifolium hirtum</i>	Rose clover	x				x		
<i>Typha latifolia</i>	Cattail							
Unknown basidiocarp				x		x		
<i>Urtica holocencea</i>	Giant creek nettle		x		x			
<i>Vicia sativa</i>	Common vetch	x		x	x	x		
<i>Xanthium spinosa</i>	Dove weed							

Note: where common names for plant species are not given, none was listed in reference guide:  
*The Jepson Manual: Higher Plants of California*. 1993. Hickman et al.

**Casmalia Waste Management Facility  
Biological Species and Habitat Survey Fall 2001  
Plant Surveys**

**Table A**

CASMALIA SITE FALL 2001 PLANT SURVEYS  
Date: November 29, 2001  
Surveyors: Bill Goggin, Alan Bate

Scientific Name	Common Name	RCF Pond	Flats North of RCF Pond	Slopes South of Pesticides/Solvents Landfill
<i>Anthemis arvensis</i>	Corn chamomile			
<i>Artemisia californica</i>	California sagebrush		X	
<i>Asclepias speciosa</i>	Milkweed			
<i>Atriplex</i> sp.	Saltbush	X		
<i>Atriplex semibaccata</i>	Australian saltbush	X		
<i>Avena fatua</i>	Wild oat	X		X
<i>Baccharis pilularis</i>	Coyote bush	X		X
<i>Baccharis salicifolia</i>	Mulefat	X		
<i>Brachypodium distachyon</i>	False brome			
<i>Brassica nigra</i>	Black mustard	X		X
<i>Bromus diandrus</i>	Ripgut brome	X		
<i>Bromus hordeaceus</i>	Soft chess			
<i>Bromus madritensis</i>	Red brome	X		X
<i>Carduus pycnocephalus</i>	Italian thistle	X		X
<i>Carpobrotus chilenses</i>	Hottentot fig	X		
<i>Centaurea calcitrapa</i>	Purple star-thistle			X
<i>Centaurea solstitialis</i>	Yellow star-thistle	X		X
<i>Cirsium vulgare</i>	Bull thistle			
<i>Conium maculatum</i>	Poison hemlock	X		
<i>Convolvulus arvensis</i>	Bindweed			
<i>Conyza bonariensis</i>				
<i>Conyza canadensis</i>	Horseweed	X		X
<i>Cortaderia selloana</i>	Pampas grass		X	
<i>Cotula coronopifolia</i>	Brass buttons	X		X
<i>Distichlis spicata</i>	Salt grass	X		
<i>Elymus glaucus</i>	Blue wild rye			
<i>Epilobium</i> sp.	Willow herb	X		
<i>Eremocarpus setigerus</i>	Dove weed		X	
<i>Erodium cicutarium</i>	Red stem filaree			

**Casmalia Waste Management Facility  
Biological Species and Habitat Survey Fall 2001  
Plant Surveys**

**Table A**

CASMALIA SITE FALL 2001 PLANT SURVEYS  
Date: November 29, 2001  
Surveyors: Bill Goggin, Alan Bate

Scientific Name	Common Name	RCF Pond	Flats North of RCF Pond	Slopes South of Pesticides/Solvents Landfill
<i>Eucalyptus globulus</i>	Blue gum			
<i>Foeniculum vulgare</i>	Fennel			
<i>Gnaphalium californica</i>	Cudweed			
<i>Gnaphalium luteo-album</i>	Weedy cudweed			
<i>Grindelia</i> sp.	Gumplant	x	x	
<i>Heliotropium europaeum</i>	looks like phacelia	x	x	
<i>Heterotheca grandiflora</i>	Telegraph weed			
<i>Hordeum</i> sp.		x	x	x
<i>Hordeum murinum</i>	Foxtail barley			
<i>Isocoma menziesii</i>	Goldenbush			
<i>Lactuca serriola</i>	Prickly lettuce			
<i>Lamarckia aurea</i>	Goldentop			
<i>Lepidium</i> sp.	Peppergrass	x	x	
<i>Lessingia flaginifolia</i>	California aster			
<i>Lolium multiflorum</i>	English ryegrass			
<i>Malacothrix saxatilis</i>				
<i>Malva parvifolia</i>	Cheeseweed			
<i>Marah macrocarpa</i>	Man-root			
<i>Medicago polymorpha</i>	Bur-clover	x	x	
<i>Mellilotus indica</i>	Sour clover	x	x	
<i>Phalaris aquatica</i>	Harding grass	x	x	x
<i>Picris echioides</i>	Prickly ox-tongue	x	x	x
<i>Plantago erecta</i>	California plantain			
<i>Polypogon monspeliensis</i>	Rabbitfoot grass	x	x	
<i>Rumex acetosella</i>	Sheep sorrel		x	
<i>Rumex crispus</i>	Curly dock	x	x	
<i>Salix lasiolepis</i>	Arroyo willow	x	x	
<i>Salsola tragus</i>	Russian thistle	x	x	x
<i>Satureja douglasii</i>	Yerba buena	x	x	

**Casmalia Waste Management Facility  
Biological Species and Habitat Survey Fall 2001  
Plant Surveys**

**Table A**

**CASMALIA SITE FALL 2001 PLANT SURVEYS**

Date: November 29, 2001

Surveyors: Bill Goggin, Alan Bate

Scientific Name	Common Name	RCF Pond	Flats North of RCF Pond	Slopes South of Pesticides/Solvents Landfill
<i>Scirpus californicus</i>	California bullrush	X	X	
<i>Scirpus maritimus</i>		X	X	
<i>Silybum marianum</i>	Milk thistle			
<i>Solanum douglasii</i>	Douglas's nightshade	X	X	
<i>Sonchus asper</i>	Prickly sow thistle			
<i>Spergularia macrotheca</i>	Sand spurry	X	X	X
<i>Stephanomeria chioioides</i>		X	X	X
<i>Tamarisk</i>	Salt cedar	X	X	
<i>Trifolium hirtum</i>	Rose clover	X	X	
<i>Typha latifolia</i>	Cattail		X	
Unknown basidiocarp				
<i>Urtica holocarpa</i>	Giant creek nettle			
<i>Vicia sativa</i>	Common vetch	X	X	X
<i>Xanthium spinosa</i>	Dove weed			

Note: where common names for plant species are not given, none was listed in reference guide:  
The Jepson Manual: Higher Plants of California. 1993. Hickman et al.

**2002 SPRING SURVEY**

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date(s):** March 11-12, 2002  
**Surveyors:** Bill Goggin, Michael Clary

Scientific Name	Common Name	Grassland West of the Landfill	Ravine West of PCB Landfill	PCB Landfill	Pesticides Solvents Landfill	Pond 13	Pond 18
<i>Anthemis arvensis</i>	Corn chamomile	x	x		x	x	
<i>Artemisia californica</i>	California sagebrush	x	x				
<i>Asclepias speciosa</i>	Milkweed				x		
<i>Atriplex</i> sp.	Saltbush						
<i>Atriplex semibaccata</i>	Australian saltbush		x				
<i>Avena fatua</i>	Wild oat	x	x		x		
<i>Baccharis pilularis</i>	Coyote bush	x	x		x		
<i>Baccharis salicifolia</i>	Mulefat	x					
<i>Brachypodium distachyon</i>	False brome						
<i>Brassica nigra</i>	Black mustard	x	x		x	x	
<i>Bromus diandrus</i>	Ripgut brome	x	x	x	x	x	
<i>Bromus hordeaceus</i>	Soft chess	x	x		x	x	
<i>Bromus madritensis</i>	Red brome	x	x		x	x	
<i>Carduus pycnocephalus</i>	Italian thistle	x	x			x	
<i>Carpobrotus chilenses</i>	Hottentot fig						
<i>Centaurea calcitrapa</i>	Purple star-thistle	x					
<i>Centaurea solstitialis</i>	Yellow star-thistle		x			x	
<i>Cirsium vulgare</i>	Bull thistle	x	x		x	x	
<i>Conium maculatum</i>	Poison hemlock				x		
<i>Convolvulus arvensis</i>	Bindweed	x		x			x
<i>Conyza bonariensis</i>	Horseweed						
<i>Conyza canadiensis</i>	Pampas grass			x		x	
<i>Cortaderia selloana</i>	Brass buttons	x					
<i>Cotula coronopifolia</i>	Salt grass	x					
<i>Distichlis spicata</i>	Blue wild rye				x		
<i>Elymus glaucus</i>							

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date(s):** March 11-12, 2002  
**Surveyors:** Bill Goggin, Michael Clary

Scientific Name	Common Name	Grassland West of the Landfill	Ravine West of PCB Landfill	PCB Landfill	Pesticides Solvents Landfill	Pond 13	Pond 18
<i>Epiobium</i> sp.	Willow herb		X				X
<i>Eremocarpus setigerus</i>	Dove weed					X	
<i>Erodium cicutarium</i>	Red stem filaree			X		X	
<i>Eucalyptus globulus</i>	Blue gum						
<i>Foeniculum vulgare</i>	Fennel	X	X				
<i>Gnaphalium californica</i>	Cudweed	X	X			X	
<i>Gnaphalium luteo-album</i>	Weedy cudweed					X	
<i>Grindelia</i> sp.	Gumplant						
<i>Heliotropium europaeum</i>	looks like phacelia						X
<i>Heterotheca grandiflora</i>	Telegraph weed	X					
<i>Hordeum</i> sp.		X			X		X
<i>Hordeum murinum</i>	Foxtail barley		X			X	
<i>Isocoma menziesii</i>	Goldenbush	X	X			X	
<i>Lactuca serriola</i>	Prickly lettuce						
<i>Lamarckia aurea</i>	Goldentop						
<i>Lepidium</i> sp.	Coulter's goldfields			X			
<i>Lessingia filaginifolia</i>	Peppergrass						
<i>Lolium multiflorum</i>	California aster	X			X	X	
<i>Malacothrix saxatilis</i>	English ryegrass	X	X		X		
<i>Malva parvifolia</i>	Cheeseweed	X	X		X	X	
<i>Marah macrocarpa</i>	Man-root						
<i>Medicago polymorpha</i>	Bur-clover	X		X			
<i>Melilotus indica</i>	Sour clover						
<i>Phalaris aquatica</i>	Harding grass					X	X
<i>Picris echioides</i>	Prickly ox-tongue	X	X		X	X	X

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date(s):** March 11-12, 2002  
**Surveyors:** Bill Goggin, Michael Clary

Scientific Name	Common Name	Grassland West of the Landfill	Ravine West of PCB Landfill	PCB Landfill	Pesticides Solvents Landfill	Pond 13	Pond 18
<i>Plantago erecta</i>	California plantain		X	X			
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	X				X	
<i>Rumex acetosella</i>	Sheep sorrel	X			X		
<i>Rumex crispus</i>	Curly dock				X	X	
<i>Salix lasiolepis</i>	Arroyo willow	X				X	
<i>Salsola tragus</i>	Russian thistle		X		X		
<i>Scirpus californicus</i>	California bullrush						
<i>Scirpus maritimus</i>							
<i>Silybum marianum</i>	Milk thistle	X	X			X	
<i>Solanum douglasii</i>	Douglas's nightshade					X	
<i>Sonchus asper</i>	Prickly sow thistle	X	X				X
<i>Spergularia macrotheca</i>	Sand spurry		X				
<i>Stephanomeria chiorifera</i>		X				X	
<i>Tamarisk</i>	Salt cedar					X	X
<i>Trifolium hirtum</i>	Rose clover	X	X		X		
<i>Typha latifolia</i>	Cattail					X	
Unknown basidiocarp							X
<i>Urtica holocerca</i>	Giant creek nettle	X					
<i>Vicia sativa</i>	Common vetch		X			X	
<i>Xanthium spinosa</i>	Dove weed	X				X	X

Note: where common names for plant species are not given, none was listed in reference guide:  
*The Jepson Manual: Higher Plants of California* . 1993. Hickman et al.

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date: March 13, 2002**  
**Surveyors: Bill Goggin, Michael Clary**

Scientific Name	Common Name	RCF Pond	Flats North of RCF Pond	Slopes South of Pesticides/Solvents Landfill	Metals Landfill
<i>Anthemis arvensis</i>	Corn chamomile				
<i>Artemisia californica</i>	California sagebrush		X		
<i>Asclepias speciosa</i>	Milkweed	X		X	
<i>Atriplex</i> sp.	Saltbush	X	X		
<i>Atriplex semibaccata</i>	Australian saltbush	X	X		
<i>Avena fatua</i>	Wild oat	X	X		X
<i>Baccharis pilularis</i>	Coyote bush	X	X		X
<i>Baccharis salicifolia</i>	Mulefat		X		
<i>Brachypodium distachyon</i>	False brome			X	
<i>Brassica nigra</i>	Black mustard	X	X		X
<i>Bromus diandrus</i>	Ripgut brome	X			
<i>Bromus hordeaceus</i>	Soft chess				
<i>Bromus madritensis</i>	Red brome	X	X		X
<i>Carduus pycnocephalus</i>	Italian thistle		X		X
<i>Carpobrotus chilenses</i>	Hottentot fig	X	X		
<i>Centaurea calcitrapa</i>	Purple star-thistle				X
<i>Centaurea solstitialis</i>	Yellow star-thistle	X	X	X	X
<i>Cirsium vulgare</i>	Bull thistle				
<i>Conium maculatum</i>	Poison hemlock	X	X		
<i>Convolvulus arvensis</i>	Bindweed				
<i>Coryza bonariensis</i>					
<i>Coryza canadensis</i>	Horseweed	X	X	X	
<i>Cortadaria seloana</i>	Pampas grass		X	X	
<i>Cotula coronopifolia</i>	Brass buttons	X	X		
<i>Distichlis spicata</i>	Salt grass	X	X		
<i>Elymus glaucus</i>	Blue wild rye				

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date: March 13, 2002**  
**Surveyors: Bill Goggin, Michael Clary**

Scientific Name	Common Name	RCF Pond	Flats North of RCF Pond	Slopes South of Pesticides/Solvents Landfill	Metals Landfill
<i>Epilobium</i> sp.	Willow herb	X			
<i>Eremocarpus setigerus</i>	Dove weed				
<i>Erodium cicutarium</i>	Red stem filaree			X	
<i>Eucalyptus globulus</i>	Blue gum				
<i>Foeniculum vulgare</i>	Fennel	X			
<i>Gnaphalium californica</i>	Cudweed				
<i>Gnaphalium luteo-album</i>	Weedy cudweed		X		
<i>Grindelia</i> sp.	Gumplant	X			
<i>Heliotropium europaeum</i>	looks like phacelia	X	X		
<i>Heterotheca grandiflora</i>	Telegraph weed				
<i>Hordeum</i> sp.		X	X	X	X
<i>Hordeum murinum</i>	Foxtail barley				
<i>Isocoma menziesii</i>	Goldenbush				
<i>Lactuca serriola</i>	Prickly lettuce			X	
<i>Lamarckia aurea</i>	Goldentop			X	
<i>Lasthenia glabarata</i> ssp. <i>coulteri</i>	Coulter's goldfields				
<i>Lepidium</i> sp.	Peppergrass	X	X		
<i>Lessingia filaginifolia</i>	California aster				X
<i>Lolium multiflorum</i>	English ryegrass			X	
<i>Malacothrix saxatilis</i>					
<i>Malva parvifolia</i>	Cheeseweed			X	X
<i>Marah macrocarpa</i>	Man-root				
<i>Medicago polymorpha</i>	Bur-clover	X	X		
<i>Melilotus indica</i>	Sour clover	X	X	X	
<i>Phalaris aquatica</i>	Harding grass	X	X	X	X
<i>Picris echioides</i>	Prickly ox-tongue	X	X		X

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date: March 13, 2002**

**Surveyors: Bill Goggin, Michael Clary**

Scientific Name	Common Name	RCF Pond	Flats North of RCF Pond	Slopes South of Pesticides/Solvents Landfill	Metals Landfill
<i>Plantago erecta</i>	California plantain				
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	X	X	X	
<i>Rumex acetosella</i>	Sheep sorrel		X		
<i>Rumex crispus</i>	Curly dock	X	X		
<i>Salix lasiolepis</i>	Arroyo willow	X			
<i>Salsola tragus</i>	Russian thistle	X	X	X	X
<i>Satureja douglasii</i>	Yerba buena	X			
<i>Scirpus californicus</i>	California bullrush	X	X		
<i>Scirpus maritimus</i>		X	X		
<i>Silybum marianum</i>	Milk thistle			X	
<i>Solanum douglasii</i>	Douglas's nightshade	X	X		
<i>Sonchus asper</i>	Prickly sow thistle				
<i>Spergularia macrotheca</i>	Sand spurry	X	X		X
<i>Stephanomeria chioriceae</i>		X	X		X
<i>Tamarisk</i>	Salt cedar	X	X		
<i>Trifolium hirtum</i>	Rose clover	X	X		
<i>Typha latifolia</i>	Cattail		X		
Unknown basidiocarp					
<i>Urtica holocarpa</i>	Giant creek nettle				
<i>Vicia sativa</i>	Common vetch	X	X	X	X
<i>Xanthium spinosa</i>	Dove weed				

Note: where common names for plant species are not given, none was listed in reference guide:  
*The Jepson Manual: Higher Plants of California* . 1993. Hickman et al.

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

Date: March 14, 2002  
 Surveyors: Bill Goggin

Scientific Name	Common Name	A Series Pond	Acids Landfill	Caustic Cyanides Landfill	Borrow Area North of PCB Landfill
<i>Anthemis arvensis</i>	Corn chamomile	x	BARE SOIL	BARE SOIL	BARE SOIL
<i>Artemisia californica</i>	California sagebrush				
<i>Asclepias speciosa</i>	Milkweed				
<i>Atriplex</i> sp.	Saltbush	x			
<i>Atriplex semibaccata</i>	Australian saltbush	x			
<i>Avena fatua</i>	Wild oat	x			
<i>Baccharis pilularis</i>	Coyote bush	x			
<i>Baccharis salicifolia</i>	Mulefat	x			
<i>Brachypodium distachyon</i>	False brome				
<i>Brassica nigra</i>	Black mustard	x			
<i>Bromus diandrus</i>	Ripgut brome	x			
<i>Bromus hordeaceus</i>	Soft chess	x			
<i>Bromus madritensis</i>	Red brome				
<i>Carduus pycnocephalus</i>	Italian thistle	x			
<i>Carpobrotus chilenses</i>	Hottentot fig				
<i>Centaurea solstitialis</i>	Purple star-thistle				
<i>Centaurea solstitialis</i>	Yellow star-thistle	x			
<i>Cirsium vulgare</i>	Bull thistle				
<i>Conium maculatum</i>	Poison hemlock				
<i>Convolvulus arvensis</i>	Bindweed				
<i>Conyza bonariensis</i>					
<i>Conyza canadensis</i>	Horseweed	x			
<i>Cortadaria seloana</i>	Pampas grass				
<i>Cotula coronopifolia</i>	Brass buttons	x			
<i>Distichlis spicata</i>	Salt grass	x			

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

Date: March 14, 2002  
 Surveyors: Bill Goggin

Scientific Name	Common Name	A Series Pond	Acids Landfill	Caustic Cyanides Landfill	Borrow Area North of PCB Landfill
<i>Elymus glaucus</i>	Blue wild rye		BARE SOIL	BARE SOIL	BARE SOIL
<i>Epilobium</i> sp.	Willow herb				
<i>Eremocarpus setigerus</i>	Dove weed				
<i>Erodium cicutarium</i>	Red stem filaree	x			
<i>Eucalyptus globulus</i>	Blue gum				
<i>Foeniculum vulgare</i>	Fennel				
<i>Gnaphalium californica</i>	Cudweed				
<i>Gnaphalium luteo-album</i>	Weedy cudweed	x			
<i>Grindelia</i> sp.	Gumplant				
<i>Heliotropium europaeum</i>	looks like phacelia				
<i>Heterotheca grandiflora</i>	Telegraph weed	x			
<i>Hordeum</i> sp.					
<i>Hordeum murinum</i>	Foxtail barley	x			
<i>Isocoma menziesii</i>	Goldenbush				
<i>Lactuca serrifolia</i>	Prickly lettuce				
<i>Lamarckia aurea</i>	Goldentop	x			
<i>Lasthenia glabarata</i> ssp. <i>coulteri</i>	Coulter's goldfields				
<i>Lepidium</i> sp.	Peppergrass	x			
<i>Lessingia filaginifolia</i>	California aster				
<i>Lolium multiflorum</i>	English ryegrass	x			
<i>Malacothrix saxatilis</i>					
<i>Malva parvifolia</i>	Cheeseweed				
<i>Marah macrocarpa</i>	Man-root				
<i>Medicago polymorpha</i>	Bur-clover	x			
<i>Meiblotus indica</i>	Sour clover	x			

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

Date: March 14, 2002  
 Surveyors: Bill Goggin

Scientific Name	Common Name	A Series Pond	Acids Landfill	Caustic Cyanides Landfill	Borrow Area North of PCB Landfill
<i>Phalaris aquatica</i>	Harding grass		<b>BARE SOIL</b>	<b>BARE SOIL</b>	<b>BARE SOIL</b>
<i>Picris echinoides</i>	Prickly ox-tongue	x			
<i>Plantago erecta</i>	California plantain				
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	x			
<i>Rumex acetosella</i>	Sheep sorrel	x			
<i>Rumex crispus</i>	Curly dock				
<i>Salix lasiolepis</i>	Arroyo willow	x			
<i>Salsola tragus</i>	Russian thistle	x			
<i>Satureja douglasii</i>	yerba buena				
<i>Scirpus californicus</i>	California bullrush	x			
<i>Scirpus maritimus</i>					
<i>Silybum marianum</i>	Milk thistle	x			
<i>Solanum douglasii</i>	Douglas's nightshade				
<i>Sonchus asper</i>	Prickly sow thistle				
<i>Spergularia macrotheca</i>	Sand spurry				
<i>Stephanomeria chioriaceae</i>		x			
<i>Tamarisk</i>	Salt cedar	x			
<i>Trifolium hirtum</i>	Rose clover	x			
<i>Typha latifolia</i>	Cattail	x			
Unknown basidiocarp		x			
<i>Urtica holocercea</i>	Giant creek nettle				
<i>Vicia sativa</i>	Common vetch	x			
<i>Xanthium spinosa</i>	Dove weed	x			

Note: where common names for plant species are not given, none was listed in reference guide:  
*The Jepson Manual: Higher Plants of California* . 1993. Hickman et al.

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

Date(s): April 30, 2002  
 Surveyors: Bill Goggin, Michael Clary

Scientific Name	Common Name	Grassland West of the Landfill	Ravine West of PCB Landfill	PCB Landfill	Pesticides Solvents Landfill	Pond 13	Pond 18
<i>Anthemis arvensis</i>	Corn chamomile	X	X		X	X	
<i>Artemisia californica</i>	California sagebrush	X	X				
<i>Asclepias speciosa</i>	Milkweed				X		
<i>Atriplex</i> sp.	Saltbush						
<i>Atriplex semibaccata</i>	Australian saltbush		X				
<i>Avena fatua</i>	Wild oat	X	X		X		
<i>Baccharis pilularis</i>	Coyote bush	X	X		X		
<i>Baccharis salicifolia</i>	Mulefat	X					
<i>Brachypodium distachyon</i>	False brome						
<i>Brassica nigra</i>	Black mustard	X	X		X	X	
<i>Bromus diandrus</i>	Ripgut brome	X	X	X	X	X	
<i>Bromus hordeaceus</i>	Soft chess	X	X		X	X	
<i>Bromus madritensis</i>	Red brome	X	X		X	X	
<i>Carduus pycnocephalus</i>	Italian thistle	X	X			X	
<i>Carpobrotus chilenses</i>	Hottentot fig						
<i>Centaurea calcitrapa</i>	Purple star-thistle	X					
<i>Centaurea solstitialis</i>	Yellow star-thistle		X			X	
<i>Cirsium vulgare</i>	Bull thistle	X	X		X	X	
<i>Conium maculatum</i>	Poison hemlock				X		
<i>Convolvulus arvensis</i>	Bindweed	X		X			X
<i>Conyza bonariensis</i>							
<i>Conyza canadensis</i>	Horseweed						
<i>Cortaderia selloana</i>	Pampas grass		X				
<i>Cotula coronopifolia</i>	Brass buttons	X					
<i>Distichlis spicata</i>	Salt grass	X					

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

Date(s): April 30, 2002  
 Surveyors: Bill Goggin, Michael Clary

Scientific Name	Common Name	Grassland West of the Landfill	Ravine West of PCB Landfill	PCB Landfill	Pesticides Solvents Landfill	Pond 13	Pond 18
<i>Elymus glaucus</i>	Blue wild rye				X		
<i>Epilobium</i> sp.	Willow herb						X
<i>Eremocarpus setigerus</i>	Dove weed					X	
<i>Erodium cicutarium</i>	Red stem filaree			X		X	
<i>Eucalyptus globulus</i>	Blue gum						
<i>Foeniculum vulgare</i>	Fennel	X	X				
<i>Gnaphalium californica</i>	Cudweed	X	X			X	
<i>Gnaphalium luteo-album</i>	Weedy cudweed					X	
<i>Grindelia</i> sp.	Gumplant						
<i>Heliotropium europaeum</i>	looks like phacelia						X
<i>Heterotheca grandiflora</i>	Telegraph weed	X					
<i>Hordeum</i> sp.		X	X		X		
<i>Hordeum murinum</i>	Foxtail barley		X			X	
<i>Isocoma menziesii</i>	Goldenbush	X	X			X	
<i>Lactuca seriola</i>	Prickly lettuce						
<i>Lamarckia aurea</i>	Goldentop						
<i>Lasthenia glabarata</i> ssp. <i>coulteri</i>	Coulter's goldfield			X			
<i>Lepidium</i> sp.	Peppergrass						
<i>Lessingia flagginifolia</i>	California aster	X			X		
<i>Lolium multiflorum</i>	English ryegrass	X	X		X		
<i>Malacothrix saxatilis</i>		X					
<i>Malva parvifolia</i>	Cheeseweed		X		X		X
<i>Marah macrocarpa</i>	Man-root			X			
<i>Medicago polymorpha</i>	Bur-clover	X		X			
<i>Melilotus indica</i>	Sour clover		X				

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date(s): April 30, 2002**

**Surveyors: Bill Goggin, Michael Clary**

Scientific Name	Common Name	Grassland West of the Landfill	Ravine West of PCB Landfill	PCB Landfill	Pesticides Solvents Landfill	Pond 13	Pond 18
<i>Phalaris aquatica</i>	Harding grass	X					
<i>Picris echinoides</i>	Prickly ox-tongue	X	X		X	X	X
<i>Plantago erecta</i>	California plantain		X	X			
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	X					X
<i>Rumex acetosella</i>	Sheep sorrel	X			X		
<i>Rumex crispus</i>	Curly dock	X	X		X	X	
<i>Salix lasiolepis</i>	Arroyo willow	X			X	X	
<i>Salsola tragus</i>	Russian thistle		X		X		
<i>Scirpus californicus</i>	California bullrush						
<i>Scirpus maritimus</i>							
<i>Silybum marianum</i>	Milk thistle	X	X			X	
<i>Solanum douglasii</i>	Douglas's nightshade						
<i>Sonchus asper</i>	Prickly sow thistle	X	X				
<i>Spergularia macrotheca</i>	Sand spurry		X	X			
<i>Stephanomeria chichoriaceae</i>		X				X	
<i>Tamarisk</i>	Salt cedar						X
<i>Trifolium hirtum</i>	Rose clover	X	X		X		
<i>Typha latifolia</i>	Cattail						
Unknown basidiocarp		X					
<i>Urtica holocercea</i>	Giant creek nettle					X	
<i>Vicia sativa</i>	Common vetch	X	X	X		X	
<i>Xanthium spinosa</i>	Dove weed				X		

Note: where common names for plant species are not given, none was listed in reference guide: *The Jepson Manual: Higher Plants of California*. 1993. Hickman et al.

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date: May 1, 2002**  
**Surveyors: Bill Goggin, Michael Clary, Alan Bate**

Scientific Name	Common Name	RCF Pond	Flats North of RCF Pond	Slopes South of Pesticides/Solvents Landfill	Metals Landfill
<i>Anthemis arvensis</i>	Corn chamomile				
<i>Artemisia californica</i>	California sagebrush		X		
<i>Asclepias speciosa</i>	Milkweed				
<i>Atriplex</i> sp.	Saltbush	X	X		
<i>Atriplex semibaccata</i>	Australian saltbush	X	X		
<i>Avena fatua</i>	Wild oat	X	X		X
<i>Baccharis pilularis</i>	Coyote bush	X	X		X
<i>Baccharis salicifolia</i>	Mulefat	X	X		
<i>Brachypodium distachyon</i>	False brome			X	
<i>Brassica nigra</i>	Black mustard	X	X		X
<i>Bromus diandrus</i>	Ripgut brome	X			
<i>Bromus hordeaceus</i>	Soft chess			X	
<i>Bromus madritensis</i>	Red brome	X	X		X
<i>Carduus pycnocephalus</i>	Italian thistle	X	X		X
<i>Carpobrotus chilenses</i>	Hottentot fig	X	X		
<i>Centaurea calcitrapa</i>	Purple star-thistle				X
<i>Centaurea solstitialis</i>	Yellow star-thistle	X	X		X
<i>Cirsium vulgare</i>	Bull thistle				
<i>Conium maculatum</i>	Poison hemlock	X	X		
<i>Convolvulus arvensis</i>	Bindweed				
<i>Conyza bonariensis</i>					
<i>Conyza canadiensis</i>	Horseweed	X	X	X	
<i>Cortaderia selloana</i>	Pampas grass		X	X	
<i>Cotula coronopifolia</i>	Brass buttons	X	X		
<i>Distichlis spicata</i>	Salt grass	X	X		
<i>Elymus glaucus</i>	Blue wild rye				
<i>Epilobium</i> sp.	Willow herb	X	X		

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date:** May 1, 2002  
**Surveyors:** Bill Goggin, Michael Clary, Alan Bate

Scientific Name	Common Name	RCF Pond	Flats North of RCF Pond	Slopes South of Pesticides/Solvents Landfill	Metals Landfill
<i>Eremocarpus setigerus</i>	Dove weed				
<i>Erodium cicutarium</i>	Red stem filaree			x	
<i>Eucalyptus globulus</i>	Blue gum				
<i>Foeniculum vulgare</i>	Fennel				
<i>Gnaphalium californica</i>	Cudweed				
<i>Gnaphalium luteo-album</i>	Weedy cudweed				
<i>Grindelia</i> sp.	Gumplant	x	x		
<i>Heliotropium europaeum</i>	looks like phacelia	x	x		
<i>Heterotheca grandiflora</i>	Telegraph weed				
<i>Hordeum</i> sp.		x	x		x
<i>Hordeum murinum</i>	Foxtail barley			x	
<i>Isocoma menziesii</i>	Goldenbush				
<i>Lactuca serriola</i>	Prickly lettuce			x	
<i>Lamarckia aurea</i>	Goldentop				
<i>Lasthenia glabarata</i> ssp. <i>coulteri</i>	Coulter's goldfield				
<i>Lepidium</i> sp.	Peppergrass	x	x		
<i>Lessingia filaginifolia</i>	California aster				
<i>Lolium multiflorum</i>	English ryegrass			x	
<i>Malacothrix saxatilis</i>					
<i>Malva parvifolia</i>	Cheeseweed				
<i>Marah macrocarpa</i>	Man-root				
<i>Medicago polymorpha</i>	Bur-clover	x	x		
<i>Meiblotus indica</i>	Sour clover	x	x	x	
<i>Phalaris aquatica</i>	Harding grass	x	x	x	x
<i>Picris echioides</i>	Prickly ox-tongue	x	x		x
<i>Plantago erecta</i>	California plantain				

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

**Date:** May 1, 2002  
**Surveyors:** Bill Goggin, Michael Clary, Alan Bate

Scientific Name	Common Name	RCF Pond	Flats North of RCF Pond	Slopes South of Pesticides/Solvents Landfill	Metals Landfill
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	X	X		
<i>Rumex acetosella</i>	Sheep sorrel		X		
<i>Rumex crispus</i>	Curly dock	X	X		
<i>Salix lasiolepis</i>	Arroyo willow	X	X		
<i>Salsola tragus</i>	Russian thistle	X	X		X
<i>Satureja douglasii</i>	Yerba buena	X			
<i>Scirpus californicus</i>	California bullrush	X	X		
<i>Scirpus maritimus</i>		X	X		
<i>Silybum marianum</i>	Milk thistle				
<i>Solanum douglasii</i>	Douglas's nightshade	X	X		
<i>Sonchus asper</i>	Prickly sow thistle				
<i>Spergularia macrotheca</i>	Sand spurry	X	X		X
<i>Stephanomeria chioriceae</i>		X	X		X
<i>Tamarisk</i>	Salt cedar	X	X		
<i>Trifolium hirtum</i>	Rose clover	X	X		
<i>Typha latifolia</i>	Cattail		X		
Unknown basidiocarp					
<i>Urtica holocorcea</i>	Giant creek nettle				
<i>Vicia sativa</i>	Common vetch	X	X		X
<i>Xanthium spinosa</i>	Dove weed				

Note: where common names for plant species are not given, none was listed in reference guide:  
*The Jepson Manual: Higher Plants of California* . 1993. Hickman et al.

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

Date: May 2, 2002  
 Surveyors: Bill Goggin

Scientific Name	Common Name	A Series Pond	Acids Landfill	Caustic Cyanides Landfill	Borrow Area North of PCB Landfill
<i>Anthemis arvensis</i>	Corn chamomile	x	<b>BARE SOIL</b>	<b>BARE SOIL</b>	<b>BARE SOIL</b>
<i>Artemisia californica</i>	California sagebrush				
<i>Asclepias speciosa</i>	Milkweed				
<i>Atriplex</i> sp.	Saltbush	x			
<i>Atriplex semibaccata</i>	Australian saltbush	x			
<i>Avena fatua</i>	Wild oat	x			
<i>Baccharis pilularis</i>	Coyote bush	x			
<i>Baccharis salicifolia</i>	Mulefat	x			
<i>Brachypodium distachyon</i>	False brome				
<i>Brassica nigra</i>	Black mustard	x			
<i>Bromus diandrus</i>	Ripgut brome	x			
<i>Bromus hordeaceus</i>	Soft chess	x			
<i>Bromus madritensis</i>	Red brome				
<i>Carduus pycnocephalus</i>	Italian thistle	x			
<i>Carpobrotus chilenses</i>	Hottentot fig				
<i>Centaurea solstitialis</i>	Purple star-thistle				
<i>Centaurea solstitialis</i>	Yellow star-thistle	x			
<i>Cirsium vulgare</i>	Bull thistle				
<i>Conium maculatum</i>	Poison hemlock				
<i>Convolvulus arvensis</i>	Bindweed				
<i>Conyza bonariensis</i>					
<i>Conyza canadiensis</i>	Horseweed	x			
<i>Cortaderia selloana</i>	Pampas grass				
<i>Cotula coronopifolia</i>	Brass buttons	x			
<i>Distichlis spicata</i>	Salt grass	x			

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

Date: May 2, 2002  
 Surveyors: Bill Goggin

Scientific Name	Common Name	A Series Pond	Acids Landfill	Caustic Cyanides Landfill	Borrow Area North of PCB Landfill
<i>Elymus glaucus</i>	Blue wild rye		<b>BARE SOIL</b>	<b>BARE SOIL</b>	<b>BARE SOIL</b>
<i>Epilobium</i> sp.	Willow herb				
<i>Eremocarpus setigerus</i>	Dove weed				
<i>Erodium cicutarium</i>	Red stem filaree	x			
<i>Eucalyptus globulus</i>	Blue gum				
<i>Foeniculum vulgare</i>	Fennel				
<i>Gnaphalium californica</i>	Cudweed				
<i>Gnaphalium luteo-album</i>	Weedy cudweed	x			
<i>Grindelia</i> sp.	Gumplant				
<i>Heliotropium europaeum</i>	looks like phacelia				
<i>Heterotheca grandiflora</i>	Telegraph weed				
<i>Hordeum</i> sp.					
<i>Hordeum murinum</i>	Foxtail barley	x			
<i>Isocoma menziesii</i>	Goldenbush				
<i>Lactuca serriola</i>	Prickly lettuce				
<i>Lamarckia aurea</i>	Goldentop	x			
<i>Lasthenia glabarata</i> ssp. <i>coulteri</i>	Coulter's goldfield				
<i>Lepidium</i> sp.	Peppergrass	x			
<i>Lessingia filaginifolia</i>	California aster				
<i>Lolium multiflorum</i>	English ryegrass	x			
<i>Malacothrix saxatilis</i>					
<i>Malva parvifolia</i>	Cheeseweed	x			
<i>Marah macrocarpa</i>	Man-root				
<i>Medicago polymorpha</i>	Bur-clover				
<i>Meibomia indica</i>	Sour clover	x			

**Table A**  
**Casmalia Waste Management Facility**  
**Biological Species and Habitat Survey**  
**Spring 2002 Plant Surveys**

Date: May 2, 2002  
 Surveyors: Bill Goggin

Scientific Name	Common Name	A Series Pond	Acids Landfill	Caustic Cyanides Landfill	Borrow Area North of PCB Landfill
<i>Phalaris aquatica</i>	Harding grass		BARE SOIL	BARE SOIL	BARE SOIL
<i>Picris echioides</i>	Prickly ox-tongue	x			
<i>Plantago erecta</i>	California plantain				
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass	x			
<i>Rumex acetosella</i>	Sheep sorrel	x			
<i>Rumex crispus</i>	Curly dock				
<i>Salix lasiolepis</i>	Arroyo willow				
<i>Salsola tragus</i>	Russian thistle	x			
<i>Satureja douglasii</i>	yerba buena				
<i>Scirpus californicus</i>	California bulrush				
<i>Scirpus maritimus</i>					
<i>Silybum marianum</i>	Milk thistle	x			
<i>Solanum douglasii</i>	Douglas's nightshade				
<i>Sonchus asper</i>	Prickly sow thistle				
<i>Spergularia macrotheca</i>	Sand spurry				
<i>Stephanomeria chioriaceae</i>		x			
<i>Tamarisk</i>	Salt cedar	x			
<i>Trifolium hirtum</i>	Rose clover	x			
<i>Typha latifolia</i>	Cattail				
Unknown basidiocarp		x			
<i>Urtica holocericea</i>	Giant creek nettle				
<i>Vicia sativa</i>	Common vetch	x			
<i>Xanthium spinosa</i>	Dove weed				

Note: where common names for plant species are not given, none was listed in reference guide:  
 The Jepson Manual: Higher Plants of California . 1993. Hickman et al.