

**San Diego Regional Invasive Plant
Early Detection and Rapid Response (EDRR) Program :**

**San Diego County,
Department of Agriculture Weights & Measures (AWM)**

Work Update June 2016

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11 EDRR Species

26 sites

County AWM Invasives Work: 2015

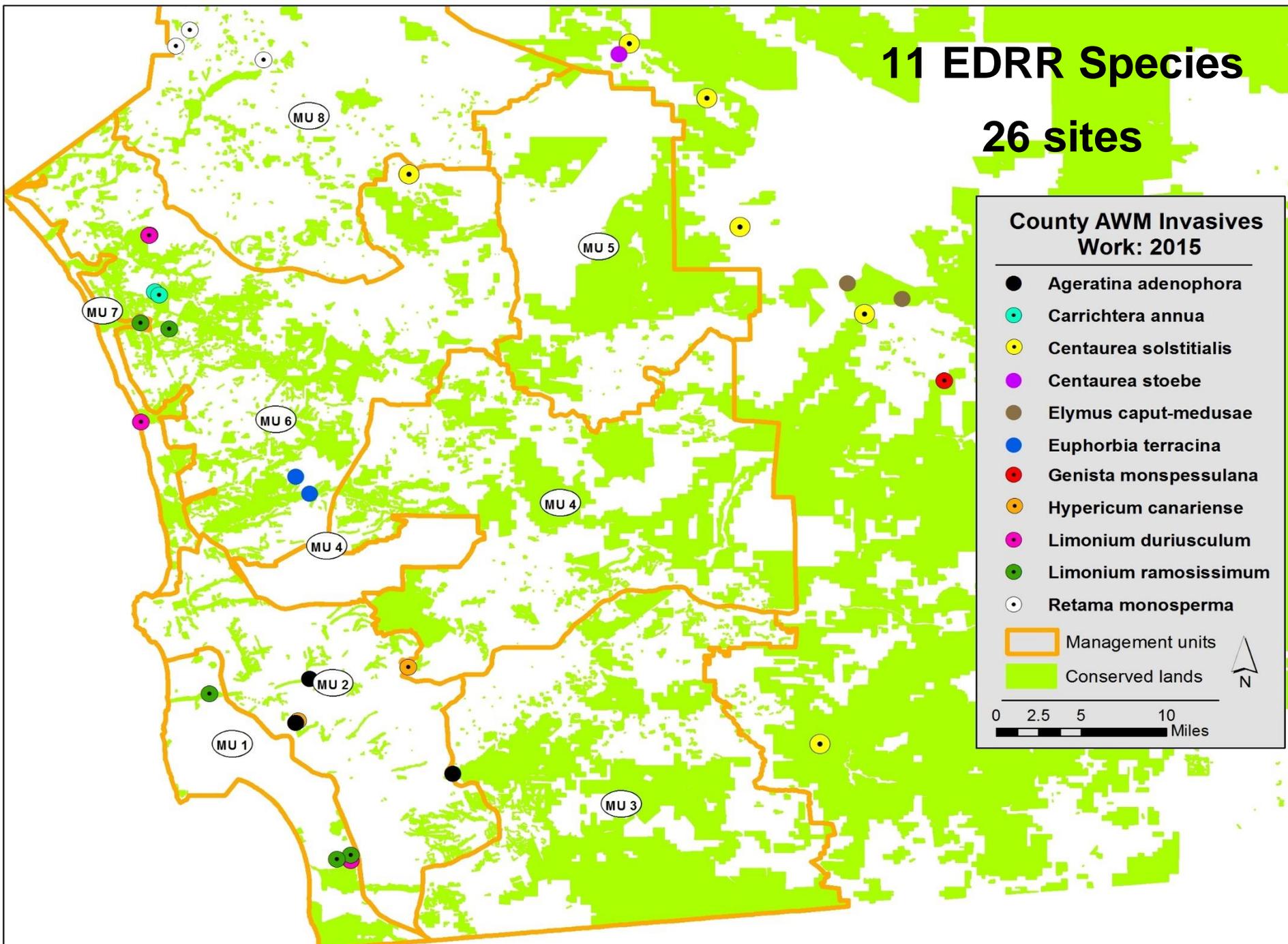
- *Ageratina adenophora*
- *Carrichtera annua*
- *Centaurea solstitialis*
- *Centaurea stoebe*
- *Elymus caput-medusae*
- *Euphorbia terracina*
- *Genista monspessulana*
- *Hypericum canariense*
- *Limonium duriusculum*
- *Limonium ramosissimum*
- *Retama monosperma*

Management units

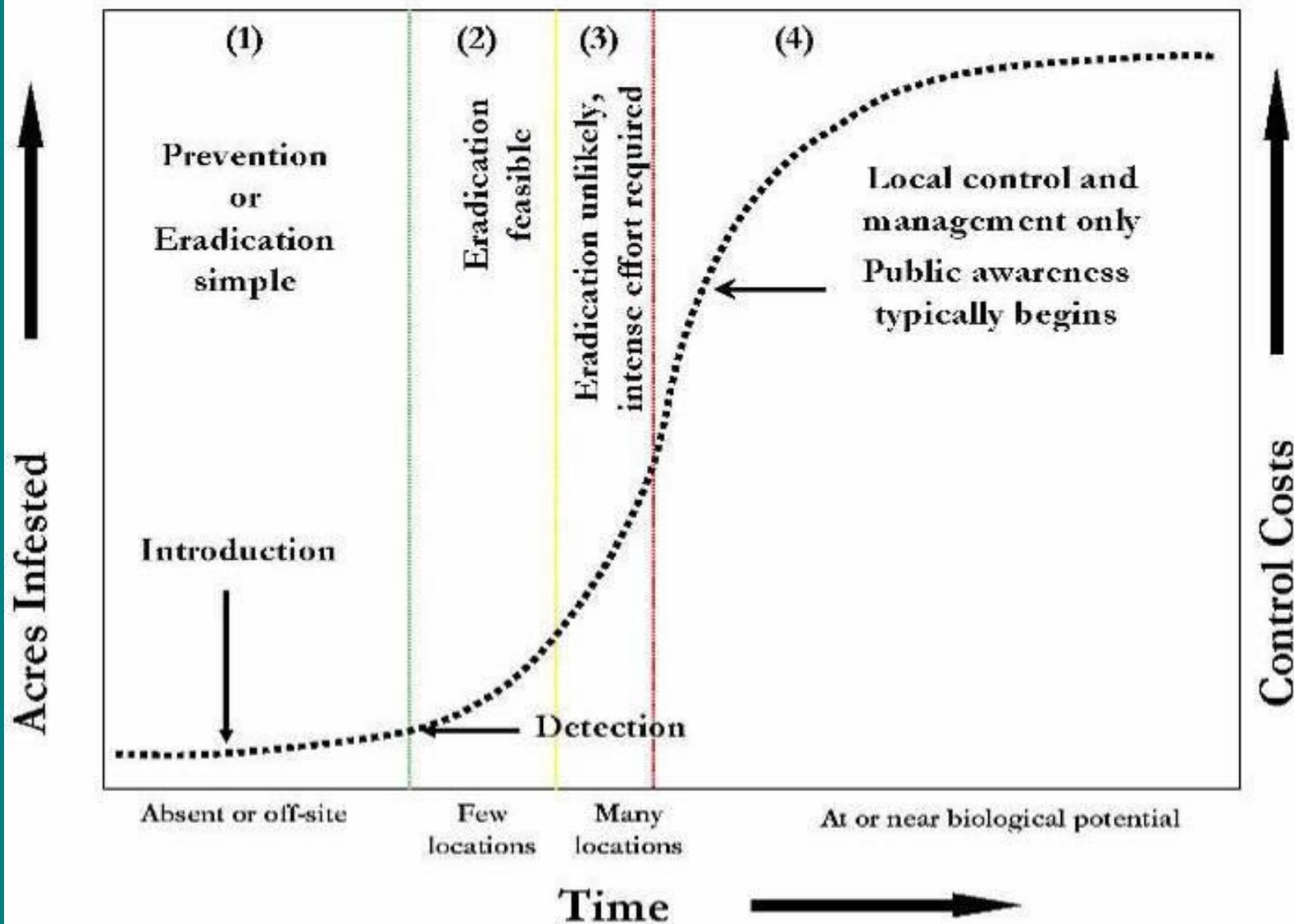
Conserved lands



0 2.5 5 10
Miles



Weed Increase Over Time and Control Potential



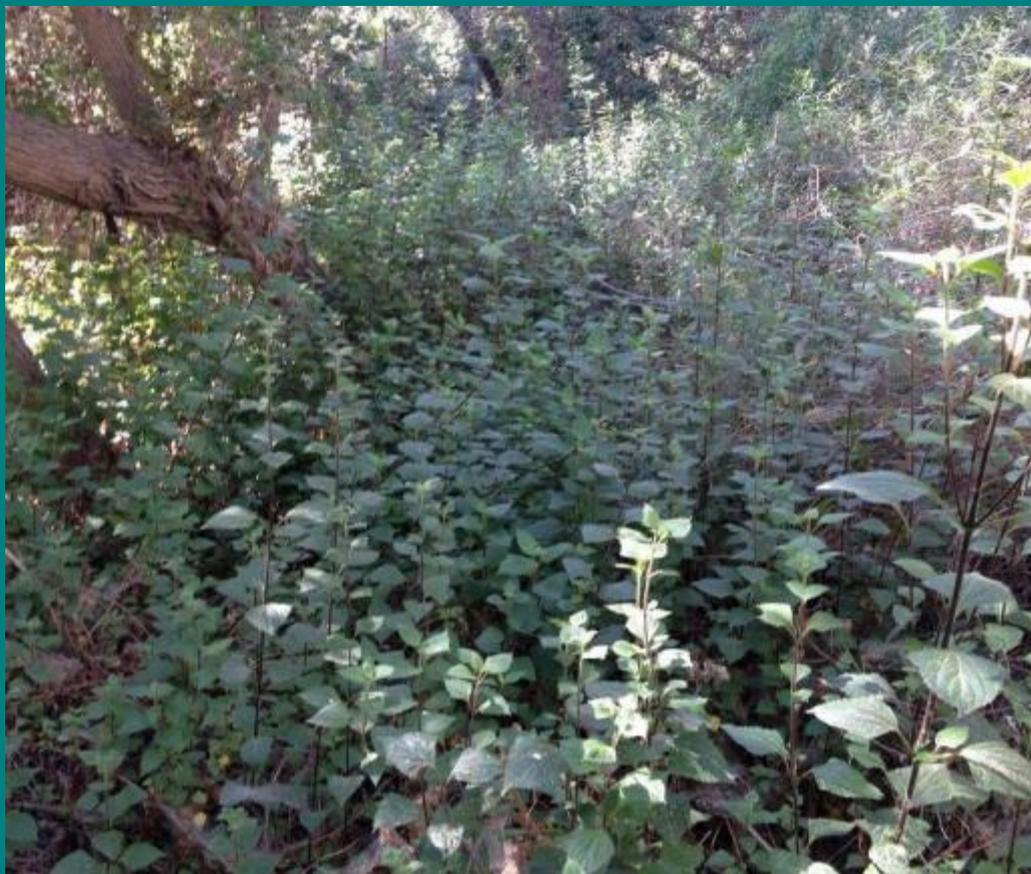
Ageratina adenophora: Eupatory

3 sites:
3 under treatment
(one partly)

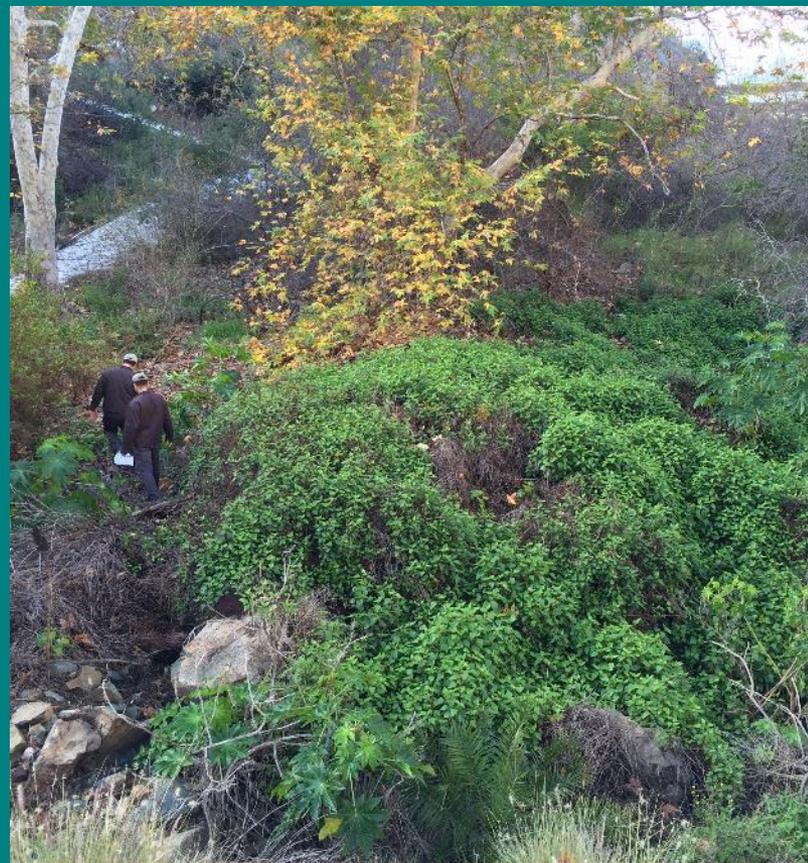
Eradication appears to be
realistic



Ageratina adenophora: Eupatory



San Diego River: part of population treated



Sweetwater: treated

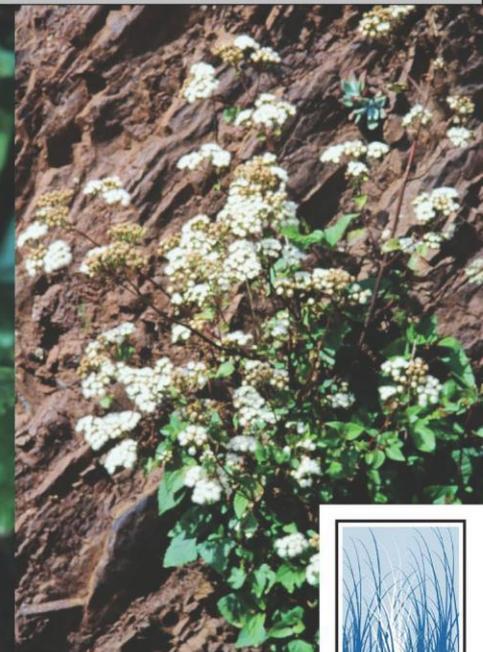


Invasive Non-Native:
Crofton Weed, Eupatory
(Ageratina adenophora)

Description: perennial herb or subshrub, woody base, 2-5 ft (.6-1.5m) tall. Opposite leaves 1-4" (3-10cm). Stems: purple, glandular hairy. Flowers: composite, flower head all discoid flowers (no ray flowers) 1/4" (6mm) across, clustered in groups, individual flowers 1/16-1/8" (<5mm) across, white or pink tinged.

Ecology: disturbed areas, wetland/riparian edges, canyons, hillsides.

Similar to: no common natives or non-natives. Mule-fat has discoid ray flowers, but thinner leaves.



Photos © Joe DiTomaso



Report sightings to: edrrsd@gmail.com and database at www.Calflora.org



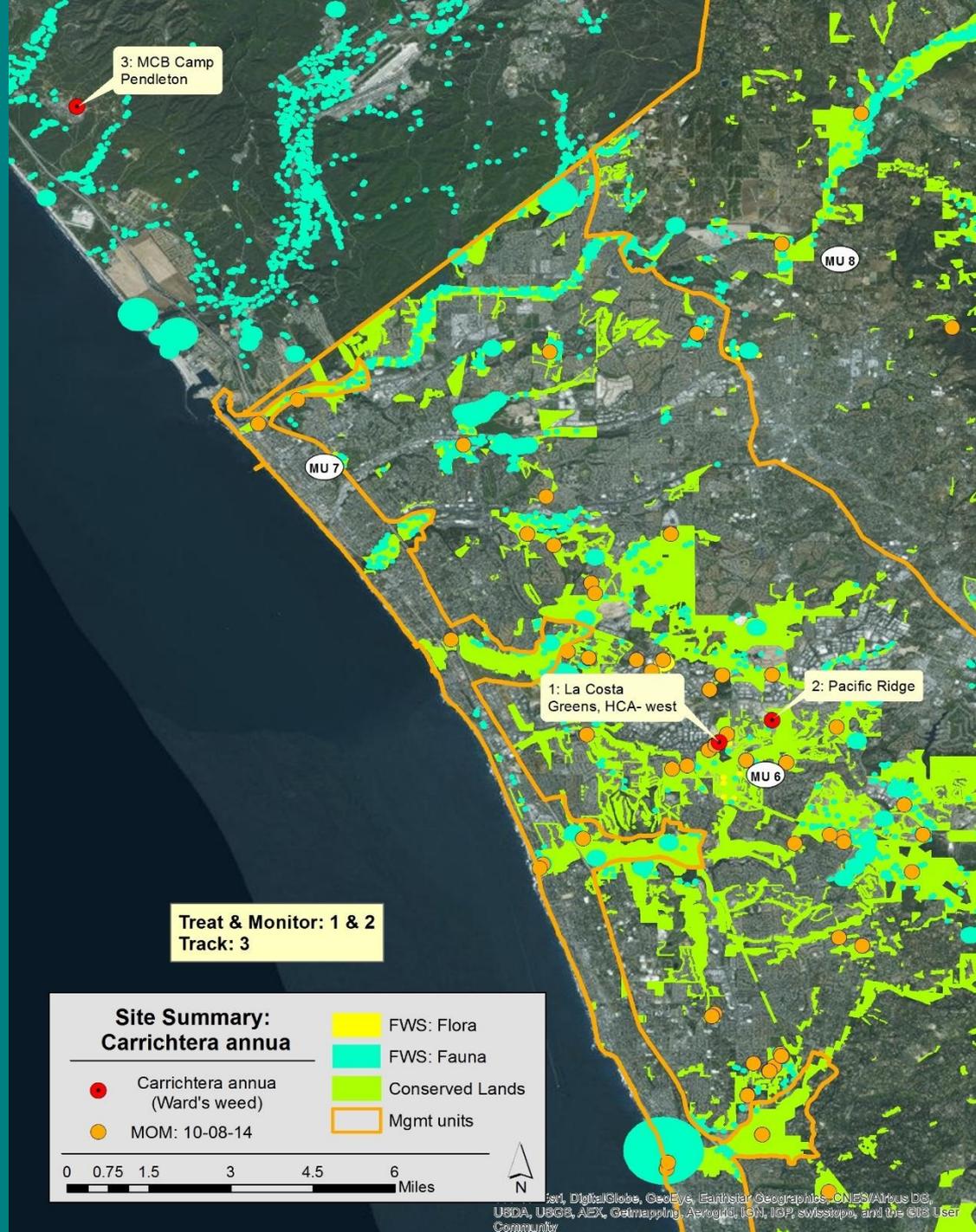
Cal-IPC

Carrichtera annua: Ward's weed

3 sites:
(for all of North America)

2 under treatment,
1 new site (start on part 2017)

Species is very difficult to
control, new site is large
(need to fully survey), work
should continue, but re-
assess in 2-3 years



***Carrichtera annua*:
Ward's weed**



***Pulled and bagged and treated with pre-emergent in 2015:
robust seedling growth/expression in spring 2016***



Spring 2015



Fall 2015



Spring 2016



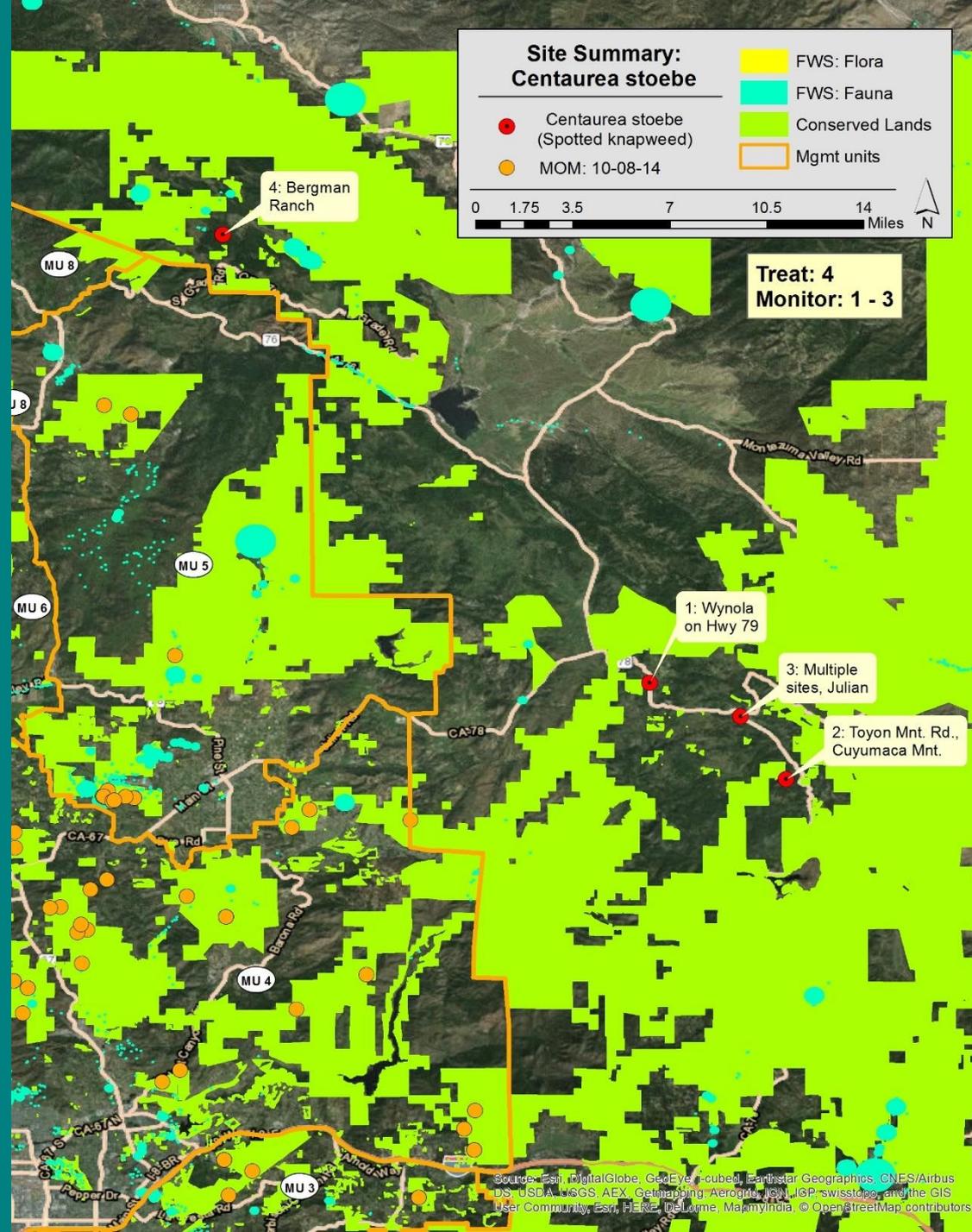
Centaurea stoebe: Spotted knapweed

4 sites:

1 under treatment,
3 eradicated

Progress being made,
many years into control
effort, regional control
achievable.

Eradication achievable





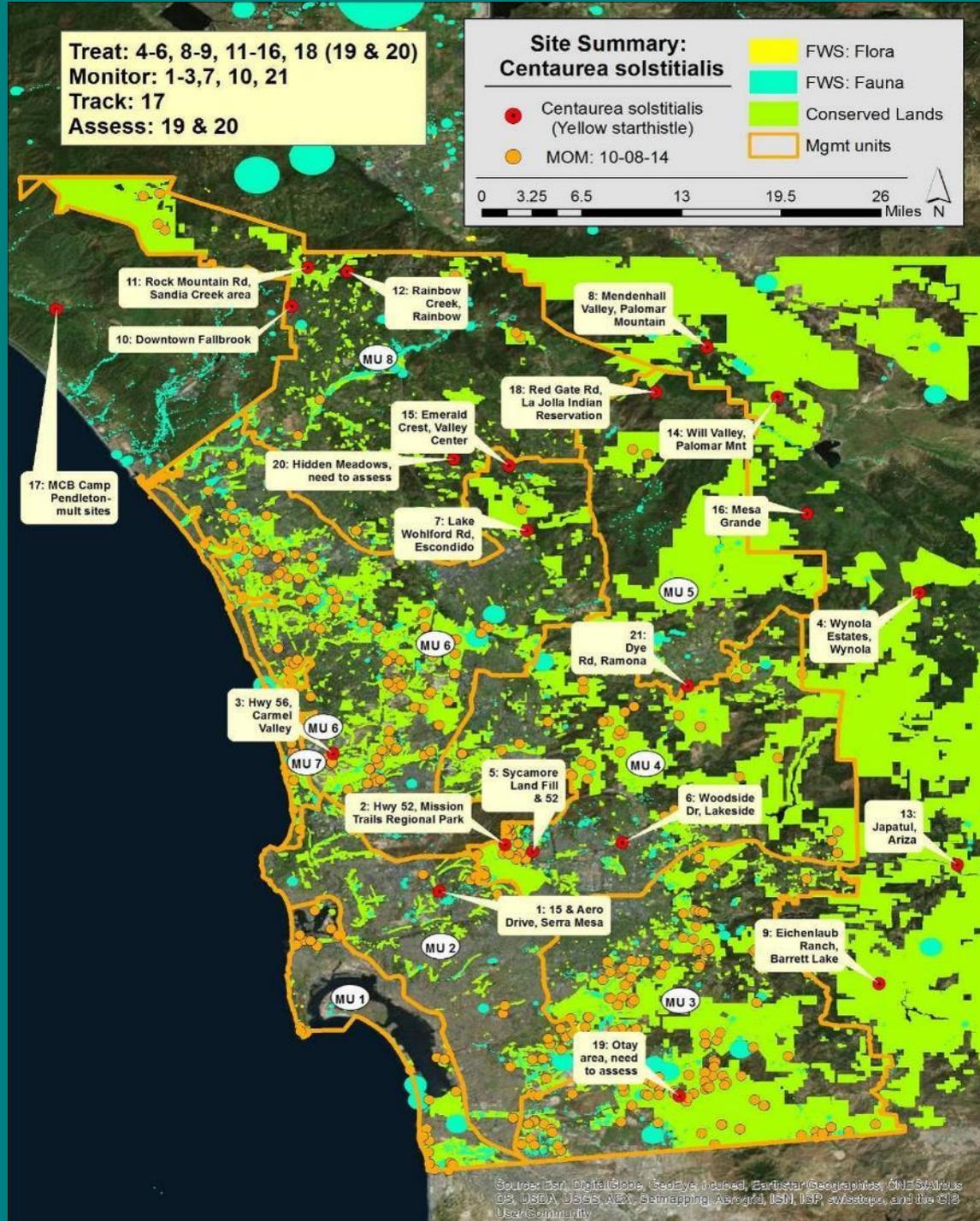
Summer 2015

Centaurea solstitialis: Yellow star thistle

20 sites:
7 under treatment,
8 eradicated, 1 track,
4 assess

Progress being made,
many years into control
effort.

Regional control achievable,
but re-introduction likely.



Centaurea solstitialis: Yellow star thistle

Summer 2015

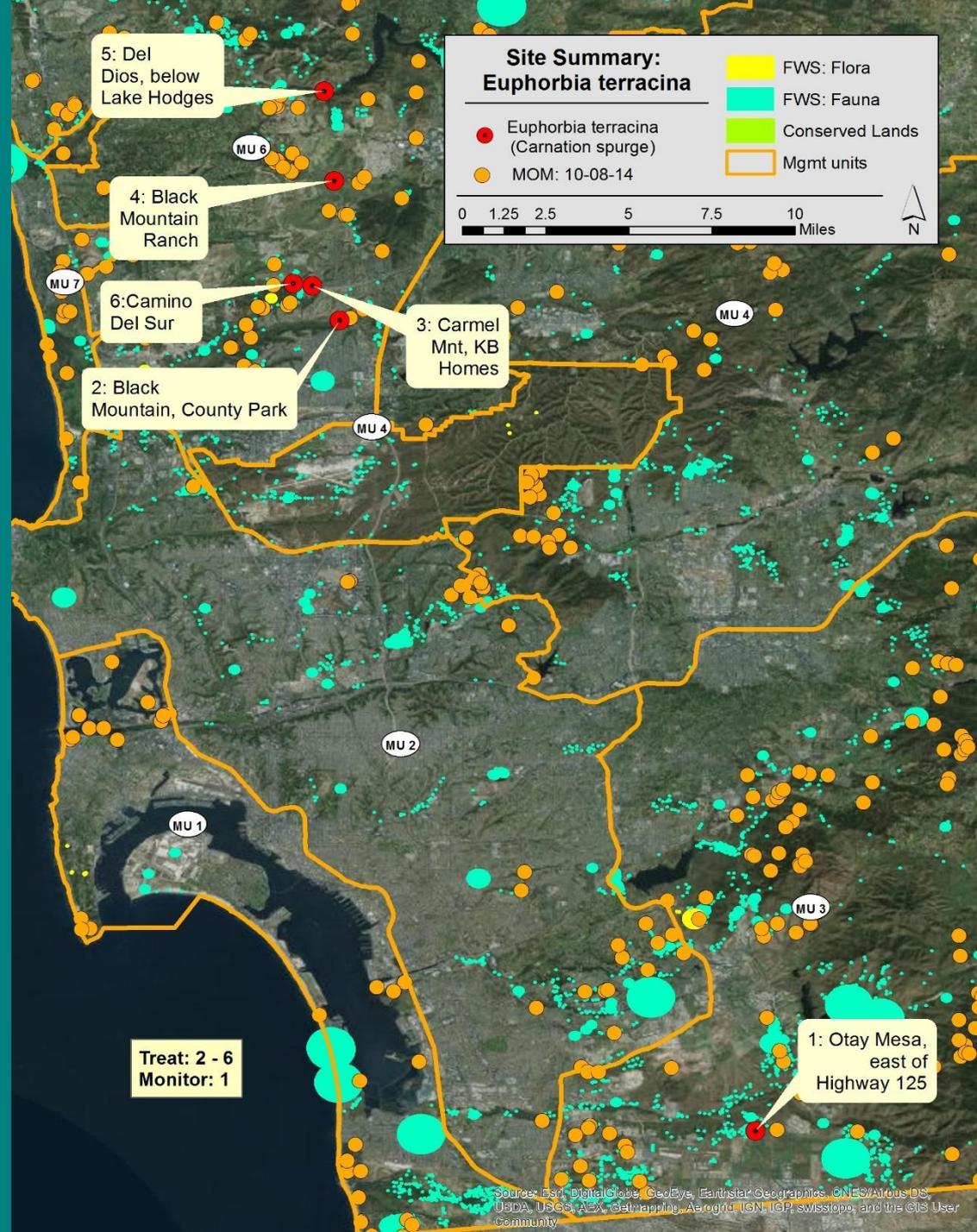


Euphorbia terracina: Carnation spurge

6 sites (with several
sub-sites):
all under treatment

Additional sites are being
found in Black Mountain
area- but seems restricted
enough to work on
(Reporting: AECOM, City,
County, CNPS, Mike Kelly)

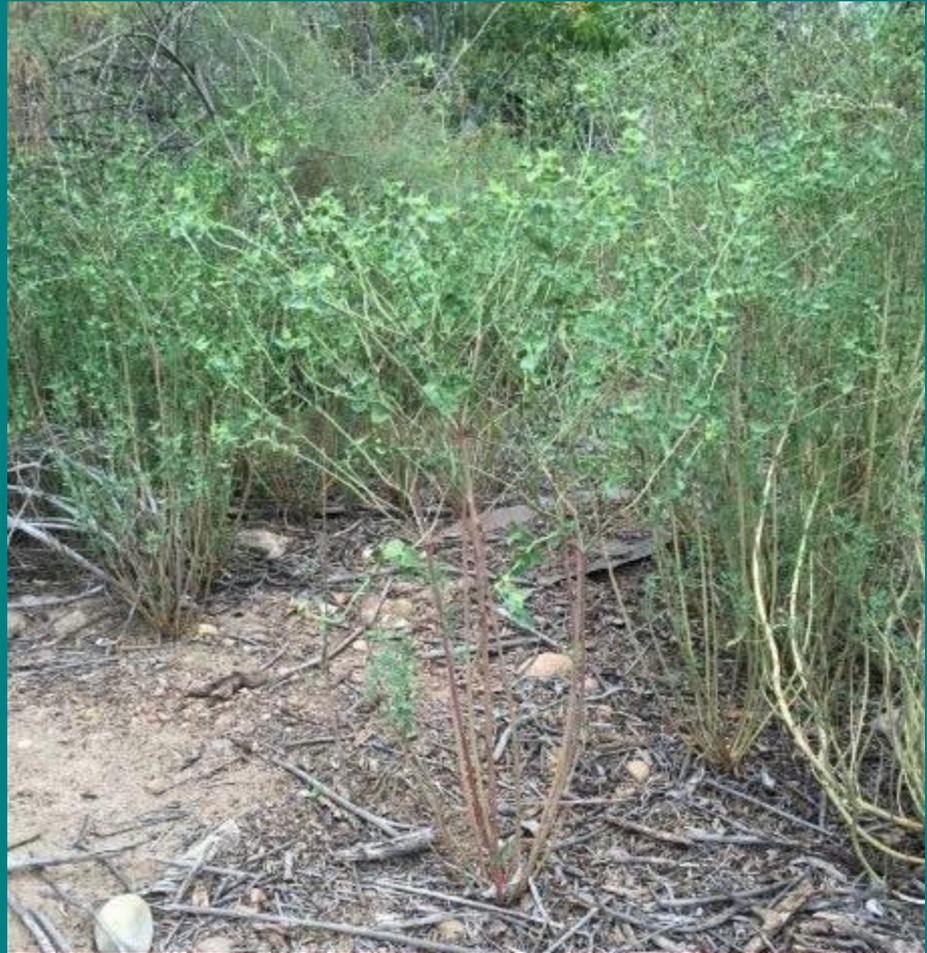
Eradication still achievable.



Euphorbia terracina: *Carnation spurge*



Summer 2015



Treated: reduction in cover, significant seedling expression spring 2016 (as expected for an annual)



Spring 2016



Summer 2015





*William Heise
County Park*

Summer 2015

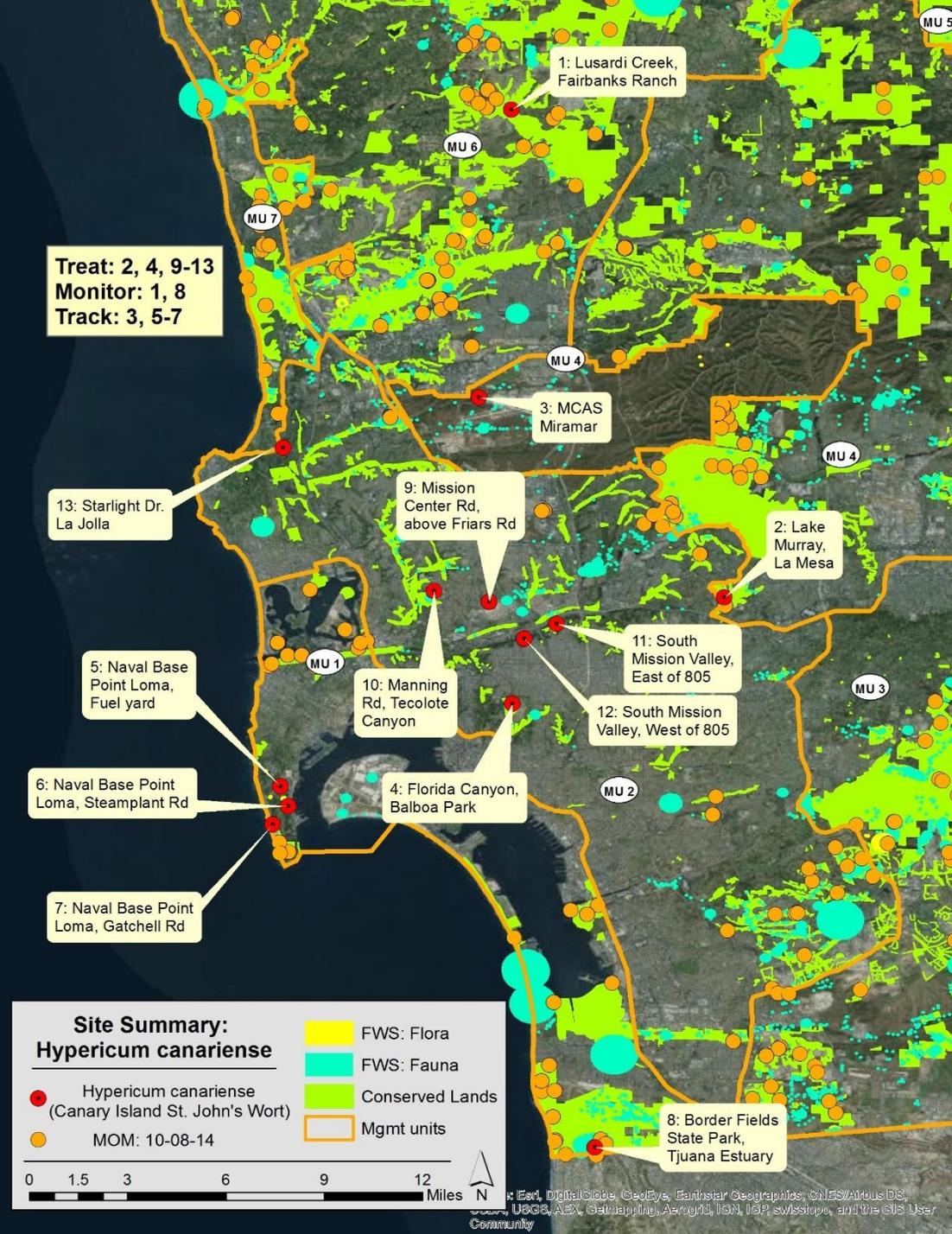


Hypericum canariense: Canary Island St John's Wort

13 sites:
9 under treatment

4 sites left to start on (two are steep), control at sites appears good (foliar) to fair (cut stump)

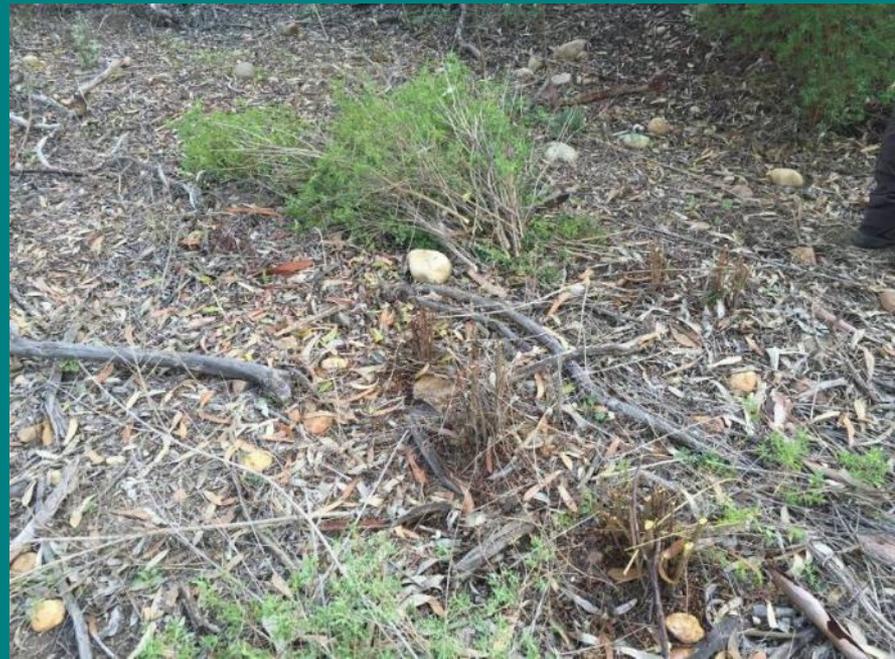
Eradication seems feasible.



Map data: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community



Balboa Park: Fall 2015





***Balboa Park:
Winter 2015/16***



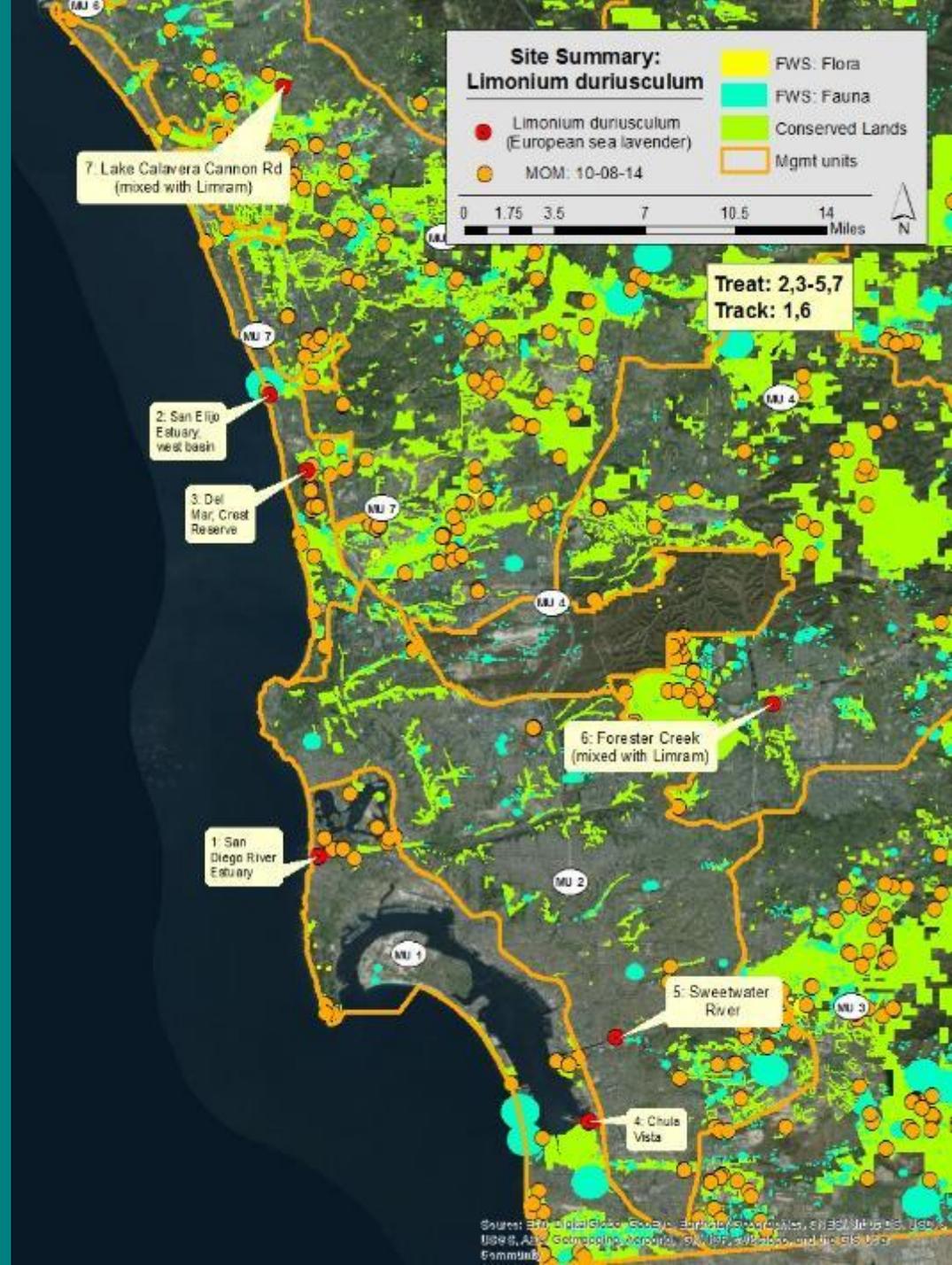


Limonium duriusculum: European sea lavender

7 sites:
5 under treatment

Control feasible, but upland
sources likely.

Eradication may not be realistic
on all watersheds (San Diego)





***Limonium duriusculum:*
European sea lavender**

**San Elijo Lagoon source plants,
- landscape along highway 101,
Solana Beach**

- 95% control

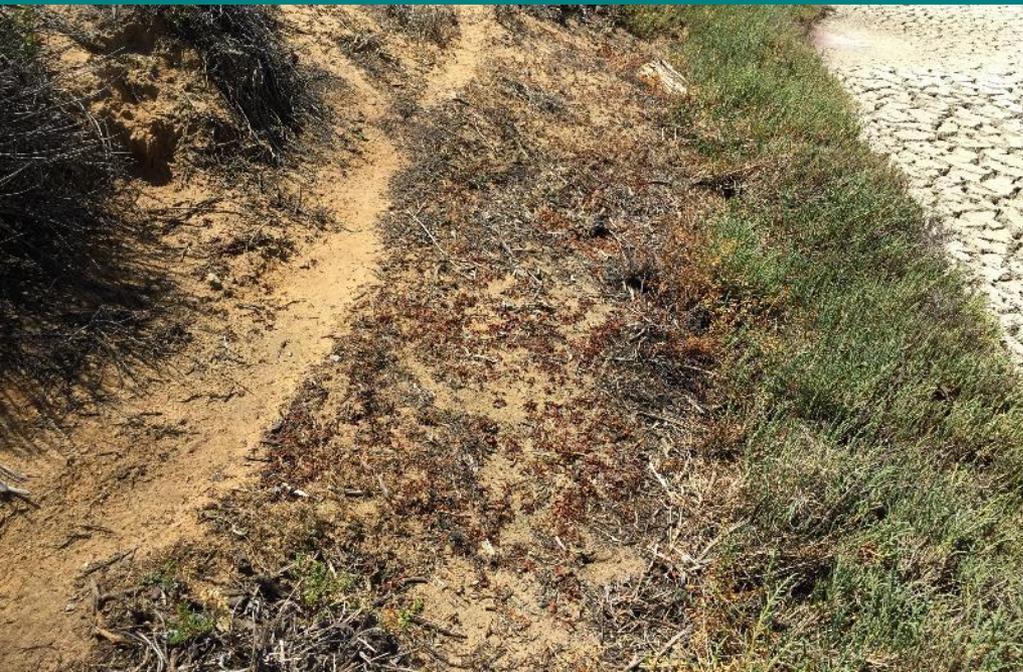




***Limonium duriusculum*:**
European sea lavender

San Elijo Lagoon

- Three treatments: about 90% control, mostly seedlings now



Situations to avoid:

Limonium duriusculum (European sea lavender)
with *Cordylanthus maritimus* ssp. *maritimus* (salt marsh bird's beak)



Invasive Non-Native:
European Sea Lavender
(Limonium duriusculum)

Description: perennial herb 6-12" (20-30 cm) tall in flower, lower leaves in dense rosettes ½ - 1 ½" (1-4 cm) long, 1/8 - ¼" (5-9 mm) wide, rounded. Flower: evenly distributed at branch tip, small < ¼" (7mm), pale pink.

Ecology: salt tolerant, coastal salt marsh as well as riparian habitat (even grassland & disturbed areas).

Similar to (see back): Algerian sea lavender (non-native) has narrower leaves and flowers are closer together. Perez's sea lavender (common non-native used in landscaping) is a larger species with wider, longer, bright green leaves. California sea lavender (native) has longer leaves and stouter taproot.



Native
Limonium



Limonium ramosissimum: Algerian sea lavender

15 sites:

8 under treatment, 1 Eradicated

Control feasible, but upland sources likely (sources found on four watersheds).

Eradication may not be realistic on all watersheds





First treatment: ~ 75% kill



Limonium ramosissimum:
Algerian sea lavender

**La Costa Ave (source of Batiquitos
Lagoon population)**

Second treatment: ~ 98% kill



Fall 2015

Limonium ramosissimum:
Algerian sea lavender

CVNR (San Diego Bay)

February 2016





Invasive Non-Native:
Algerian Sea Lavender
(Limonium ramosissimum)

Description: perennial herb 6-12" (20-50 cm) tall in flower, lower leaves in dense rosettes 1-4" (3-10 cm) long, $\frac{1}{4}$ - $\frac{3}{4}$ " (7-20 mm) wide, spoon shaped, tip acute to rounded. Flower: delicate multi-branched, tight clusters. Flower: calyx (outer flower part) white < $\frac{1}{4}$ " (4-6mm), corolla (inner flower part) pale pink to purple < $\frac{1}{4}$ " (5-7 mm).

Ecology: salt-tolerant, coastal salt marsh as well as riparian habitat (even grassland & disturbed areas).

Similar to (see back): European sea lavender (non-native) has rounded leaves and flowers are evenly spaced. Perez's sea lavender (common non-native used in landscaping) is a larger species with wider, longer, bright green leaves. California sea lavender (native) has longer leaves and stouter taproot.





Near Hwy 76

Reporting Weed Observations

App Store > Utilities > Calflora Database



Download

Rating: 4+

LINKS

Developer Website

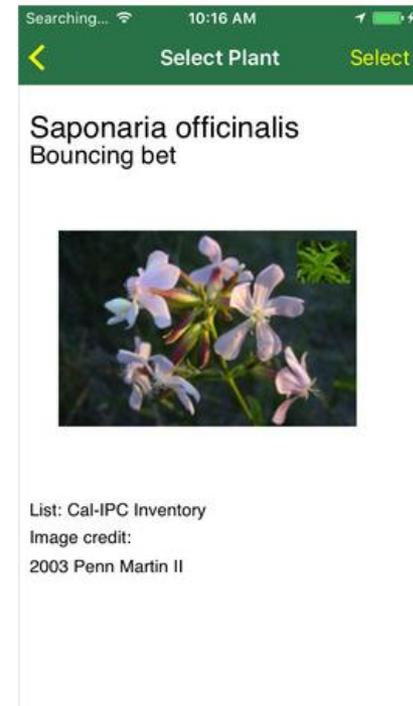
© 2015 Calflora Database

Calflora 4+

Calflora Database >

Details Ratings and Reviews Related

iPhone Screenshots





GPS Updated:06-06 09:40:29

Add photo or note

- Single plant
- Scattered plants
- Scattered patches
- Dense monoculture



unknown



Carrichtera annua



Cynara cardunculus



Limonium ramosissimum



Euphorbia terracina



Limonium duriusculum



Centaurea solstitialis

How to make an observation:

- 1) Select density
- 2) Select Add photo or note
- 3) Select plant:
(--CREATES OBSERVATION--)
 - from list of species listed
 - or 'pick new plant' (long list)
 - or unknown (if plant is not on list- I'll try to fix this)

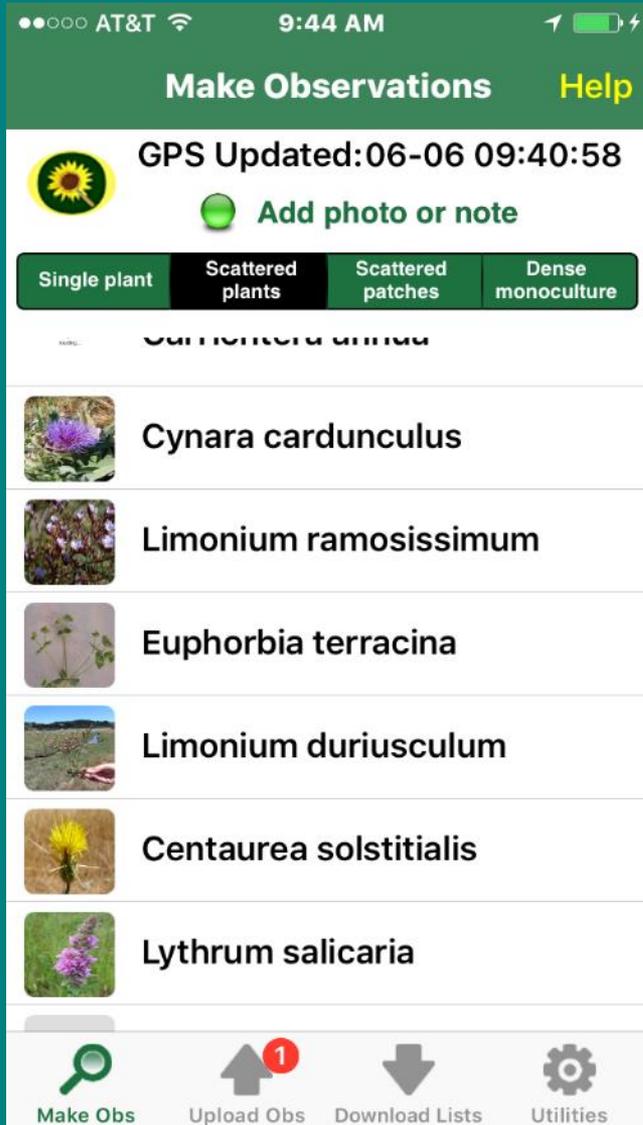
In nng adjacent to css.
In conserved habitat next to housing. |



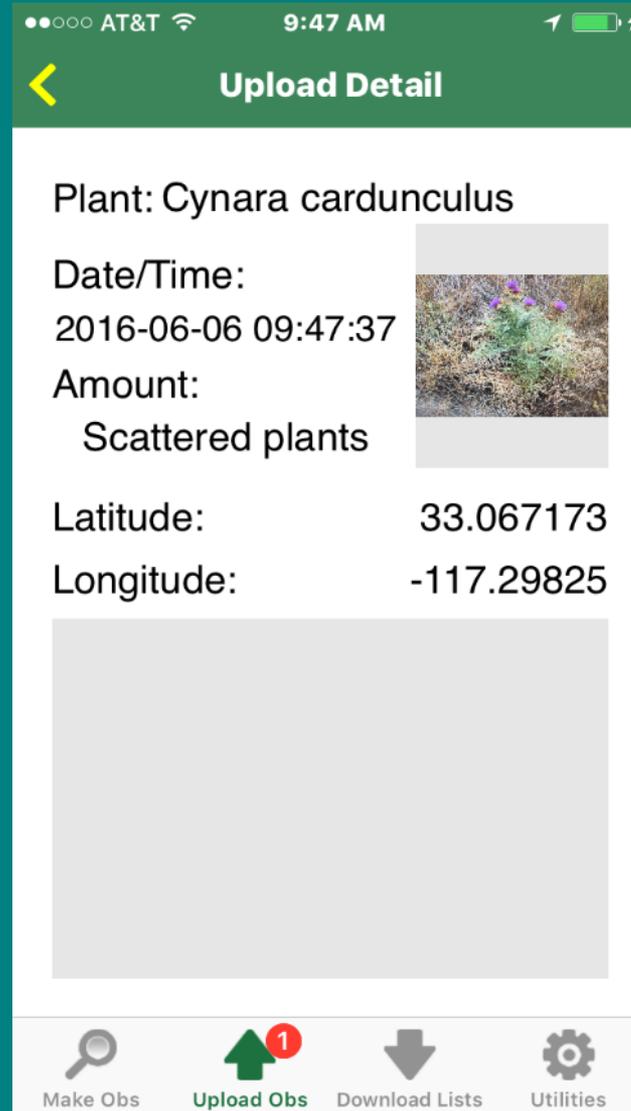
Take photo:

- a good close up photo to help confirm ID
- Important if you have to list as 'unknown' or if the species is not listed

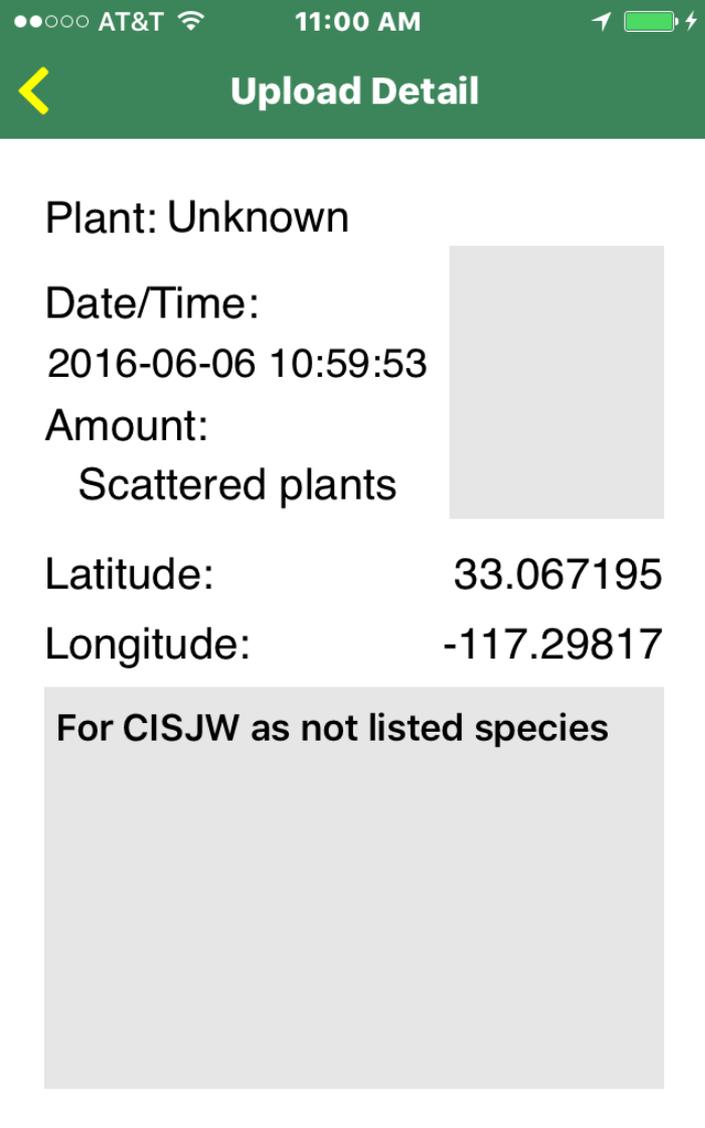
and notes if needed.....



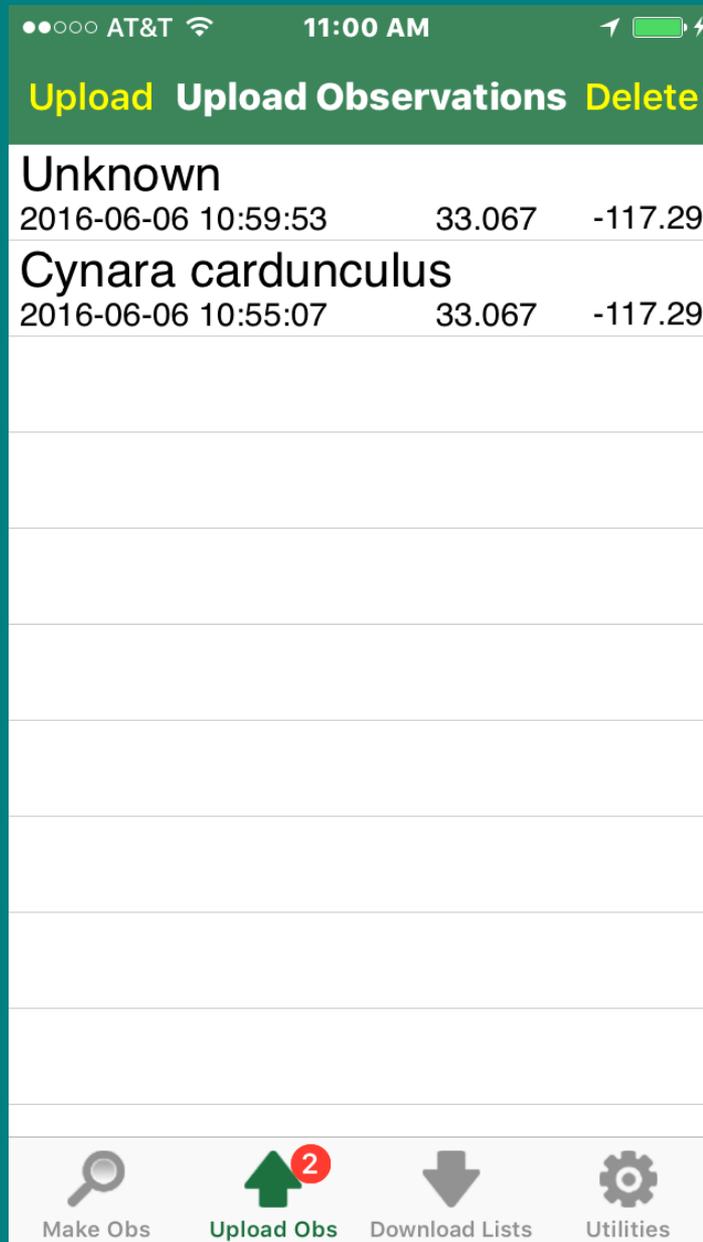
Record now recorded



Record details



Unknown record created



When done hit 'UPLOAD'

Back in office go to your CalFlora account...

32.8523, -117.2022

Scientific Name Common Name Plant Status

Observer Group Association

Start Date End Date Source Collection

Natural Status Access by others Location

in map area
 records with photos

only checklists

Column Set Order by Max Results

Map Satellite

RECORD DETAIL cbo51972 X
Taxon: Unknown
Date: 2016-06-05
Source: Dendra Inc.
Observer(s): Jason Giessow

Map data ©2016 Google, INEGI 20 km Terms of Use Report a map error

Click on ID to edit or publish a record. 9 records:

ID	Plant	Photo	Observer	Collection	Date	County	Location Description
cbo51972 unpublished	Unknown		Jason Giessow		2016-06-05	San Diego	
		<div style="background-color: #e0f2f1; padding: 10px; text-align: center;"> <p>Now you can see new 'unpublished' records.</p> </div>					
cbo51971 unpublished	Unknown		Jason Giessow		2016-06-05	San Diego	
cbo51763	<i>Cynara cardunculus</i> Cardoon		Jason Giessow		2016-05-26	San Diego	

Editing Record # **cbo51972** entered on 2016-06-06 by Jason Giessow

Organization: Project:

Access by others: History: none

Shape: none Point Location:

SIMPLE DATA COLLECTION

Scientific Name * Common Name

Ageratina adenophora - Thoroughwort
Ageratina herbacea - Fragrant snakeroot
Ageratina occidentalis - Western eupatorium
Ageratina shastensis - Shasta ageratina
 Ageratina

Observation Date *

Location Description

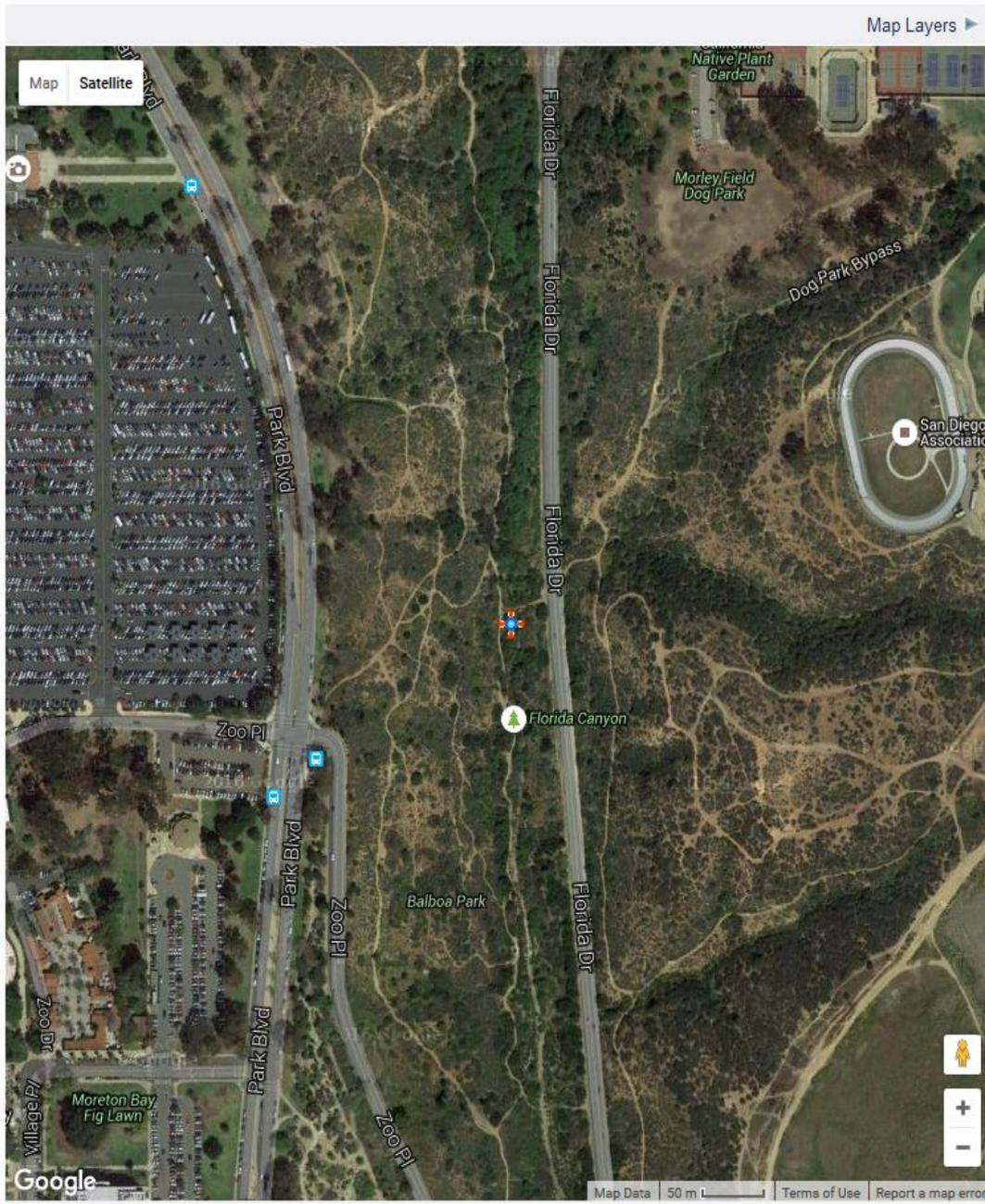
**Edit record details:
- Add species ID**

Number of Plants

Photos: Add a photo



Photos in this record: (click on a photo to see it larger) X



32.73592, -117.14403

32.8523, -117.2022

Scientific Name Common Name Plant Status

Observer Group Association

Start Date End Date Source Collection

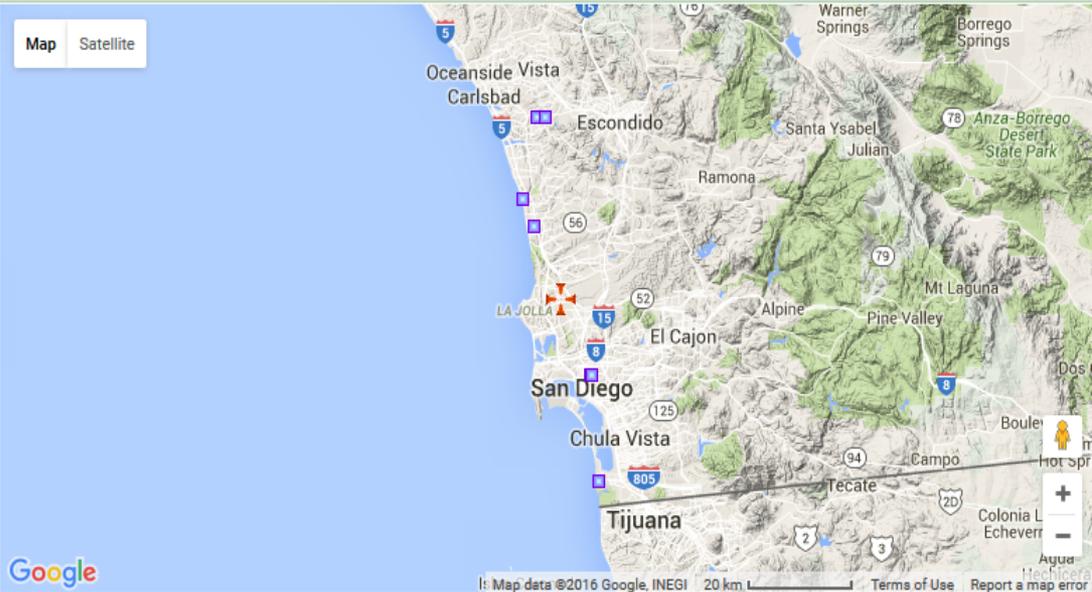
Natural Status Access by others Location

in map area

only checklists records with photos

Column Set [customize](#) Order by Max Results

Click on ID to edit or publish a record. 9 records:



ID	Plant	Photo	Observer	Collection	Date	County	Location Description
cbo51972 unpublished	Ageratina adenophora Thoroughwort		Jason Giessow		2016-06-05	San Diego	<div style="background-color: #e0f2f1; padding: 20px; text-align: center;"> <h2>Record now has correct plant name</h2> </div>
cbo51971 unpublished	Hypericum canariense Canary island st john's wort		Jason Giessow		2016-06-05	San Diego	
cbo51763	Cynara cardunculus Cardoon		Jason Giessow		2016-05-26	San Diego	
	Carrichtera annua						

32.8523, -117.2022

Scientific Name: Common Name: Plant Status: any

Observer: Group Association: any

Start Date: End Date: Source: Collection:

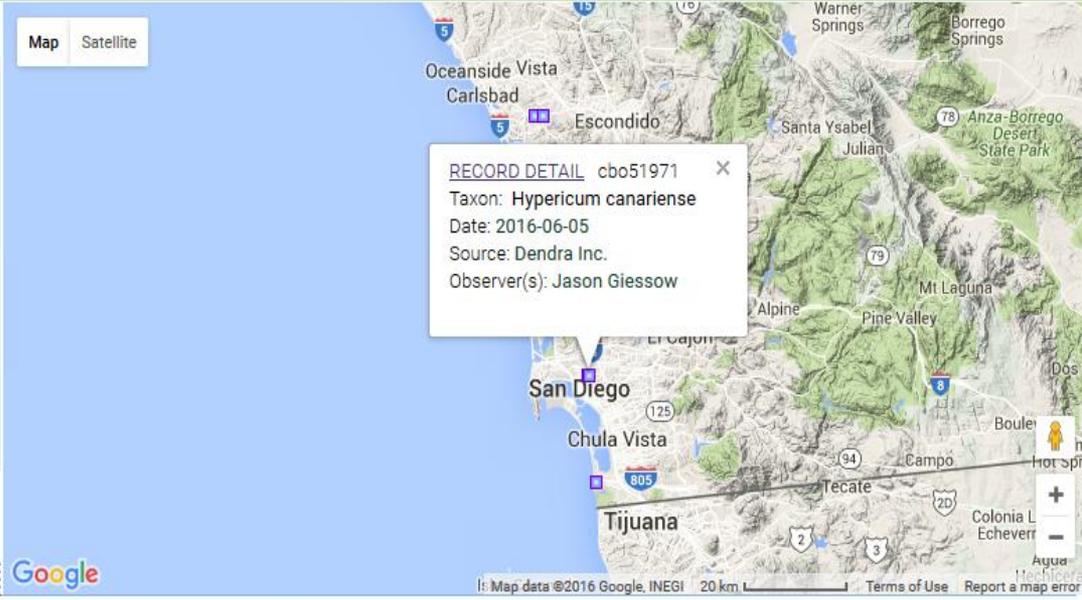
Natural Status: any Access by others: any Location:

in map area
 only checklists records with photos

Column Set: Basic Data customize Order by: Date Added Max Results: 50 SEARCH

Click on ID to edit or publish a record.

9 records:



ID	Plant	Photo	Observer	Collection	Date	County	Location Description
cbo51972	<i>Ageratina adenophora</i> Thoroughwort		Jason Giessow		2016-06-05	San Diego	
cbo51971 unpublished	<i>Hypericum canariense</i> Canary island st john's wort		Jason Giessow		2016-06-05	San Diego	
DETAIL edit delete PUBLISH							
cbo51763	<i>Cynara cardunculus</i> Cardoon		Jason Giessow		2016-05-26	San Diego	

Publish observation!
 Be sure your account settings allow sharing your records

Edit your account information:



Your Name

email address

password

password again

EXPERIENCE

- Professional Botanist
- Amateur Botanist
- Other

AGE

- Adult
- Teen 13 - 18
- Child <= 12

I agree that

I will ensure that all data I contribute is accurate and of the highest quality.

I will choose the correct scientific name for plants I report, to the best of my ability.

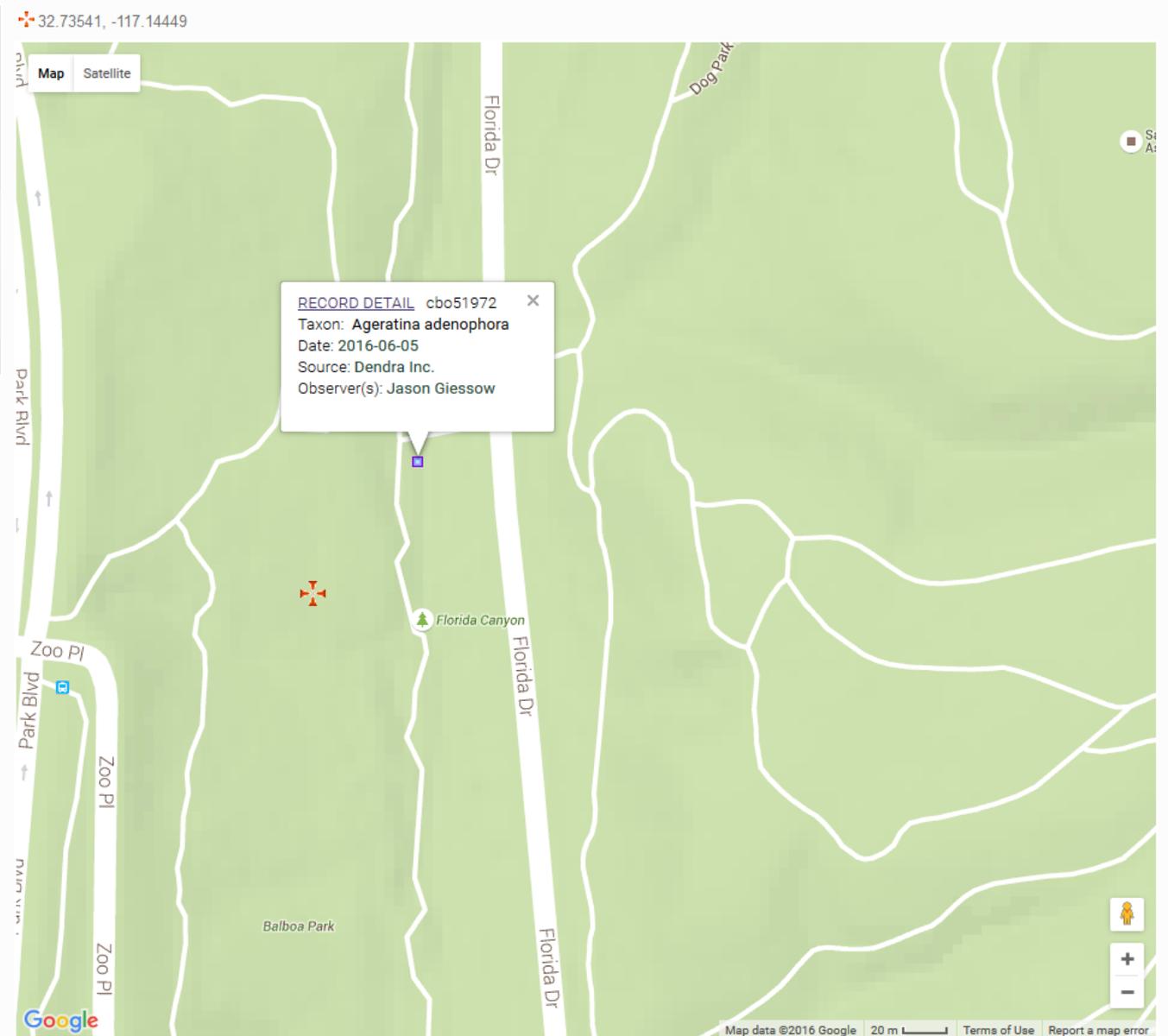
I will not let anyone else use my Calflora account.

I grant permission to the public to use data I contribute.

SAVE

Ageratina adenophora
 Perennial herb
 not native / invasive

Thoroughwort
 ASTERACEAE

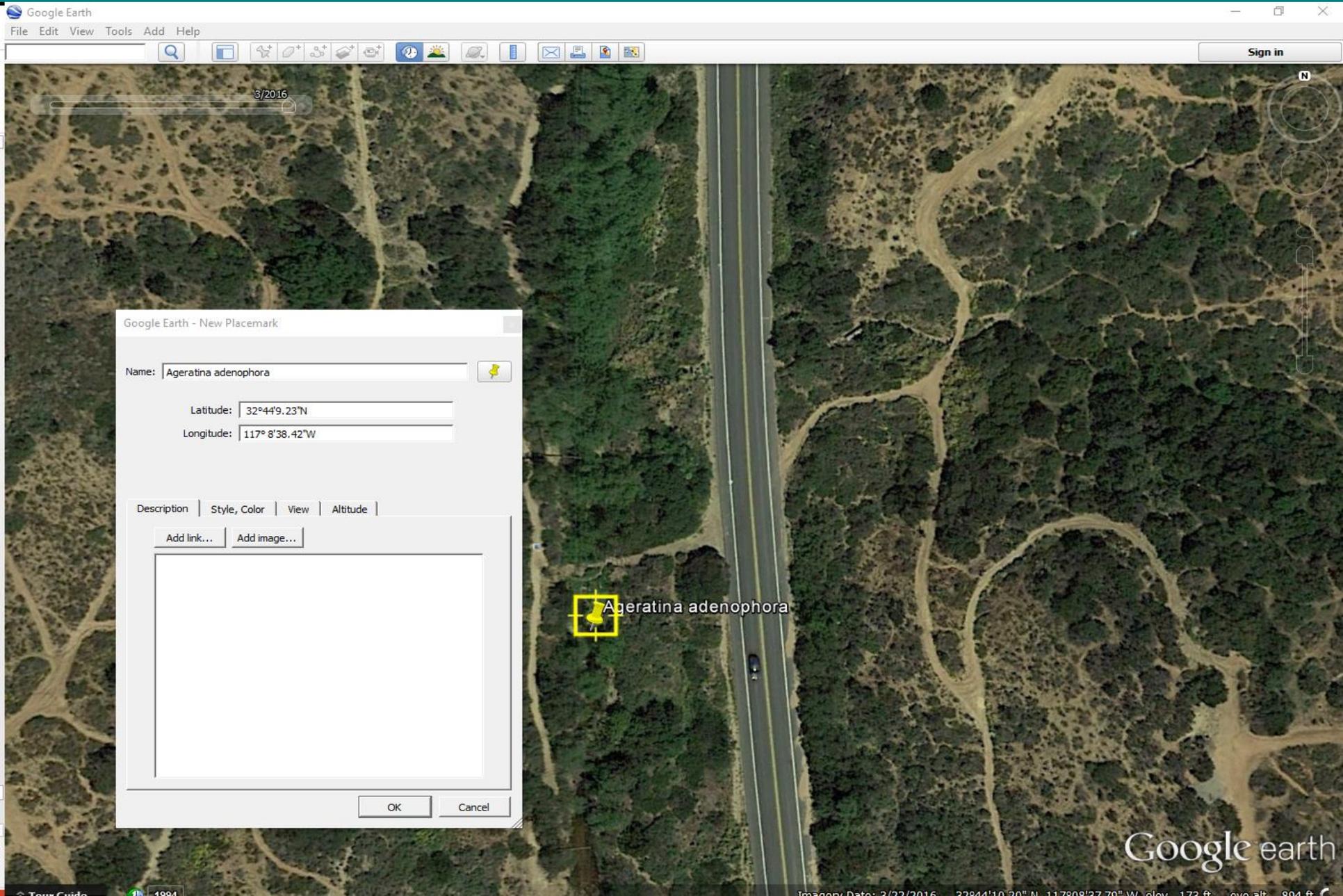


Cell size: 2 arc seconds - + update

Show grid
 Highlight cells where plant is present
 Show individual observations
 Show lines and polygons

point observations
 checklists
 observations with lines or polygons
 quads (Expert knowledge from CalWeedMapper)

Using google earth to email observation (Placemark): kml file



Search

Search

ex: 37 25.818' N, 122 05.36' W

Get Directions History

Places

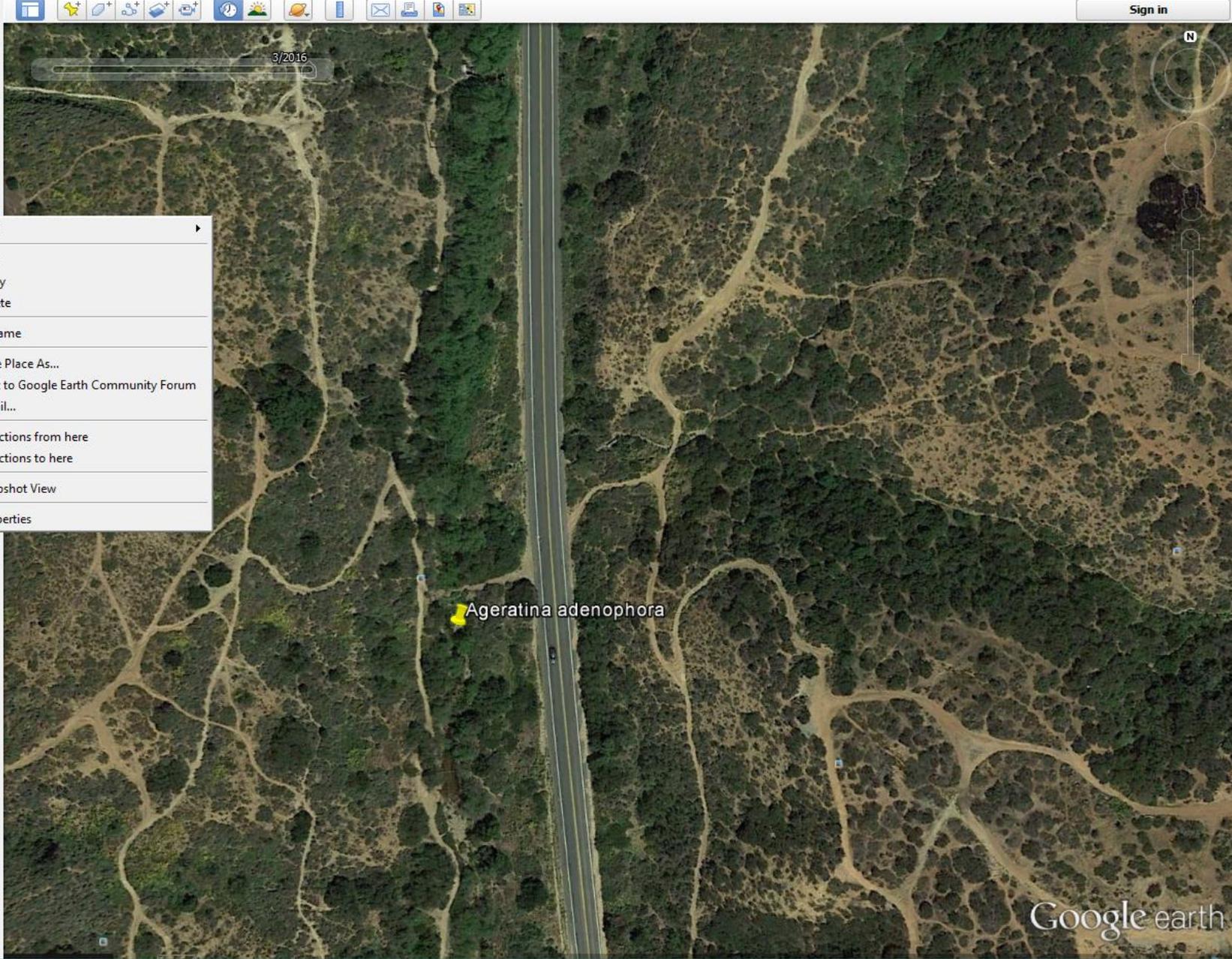
- My Places
- Sightseeing Tour
 - Make sure 3D Buildings layer is checked
- ~GE8105.kmz
- Ageratina adenophora
- Temporary Places

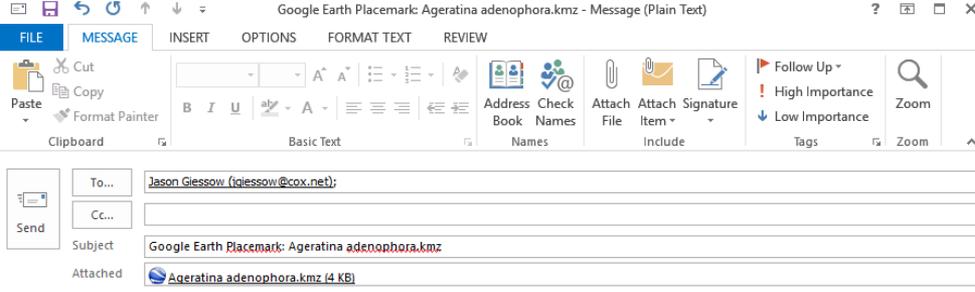
- Add
- Cut
- Copy
- Delete
- Rename
- Save Place As...
- Post to Google Earth Community Forum
- Email...
- Directions from here
- Directions to here
- Snapshot View
- Properties

Layers

Earth Gallery >>

- Primary Database
- Voyager
- Borders and Labels
- Places
- Photos
- Roads
- 3D Buildings
- Ocean
- Weather
- Gallery
- Global Awareness
- More





I get email and click kmz file- app opens to sighting location.....

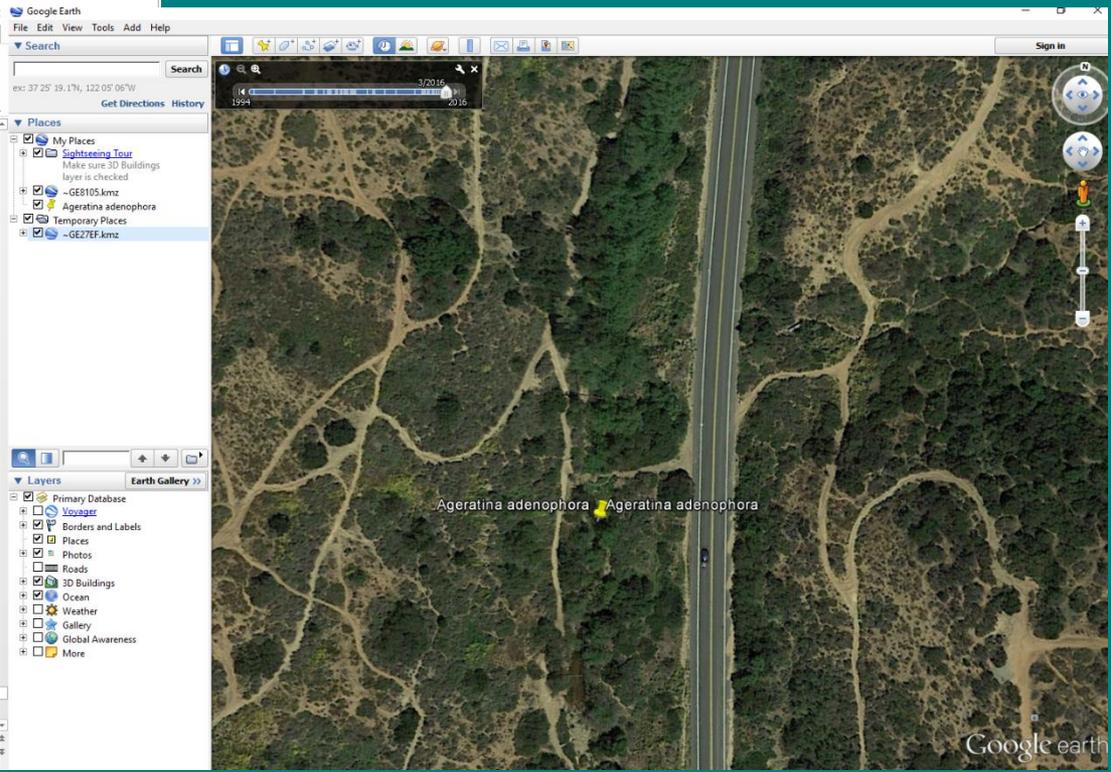
Hey Jason-

Saw this plant yesterday- thought you should know....

Google Earth streams the world over wired and wireless networks enabling users to virtually go anywhere on the planet and see places in photographic detail. This is not like any map you have ever seen. This is a 3D model of the real world, based on real satellite images combined with maps, guides to restaurants, hotels, entertainment, businesses and more. You can zoom from space to street level instantly and then pan or jump from place to place, city to city, even country to country.

Get Google Earth. Put the world in perspective.

(<http://earth.google.com>)



I don't know what this plant is- who can tell me? Drop it off at County AWM!

Plants and Insect IDs and pathogens....

COUNTY OF SAN DIEGO, DEPARTMENT OF AGRICULTURE, WEIGHTS AND MEASURES
9325 Hazard Way, Suite 100, San Diego, CA 92123-1217 www.sdcawm.org

Fee paid: \$ _____

- Insect
- Nematode
- Plant ID
- Disease
- Other

SPECIMEN FOR DETERMINATION

- DIAGNOSIS IS BASED ON THE INFORMATION AND SAMPLE PROVIDED -

OWNER/CONSIGNEE: _____

TELEPHONE: _____

MAILING ADDRESS: _____

SAMPLE (A): _____

CITY, STATE, ZIP: _____

SAMPLE (B): _____

EMAIL RESULTS TO: _____

SAMPLE (C): _____

SAMPLE (D): _____

Location/Address where sample(s) found: _____

Please check which apply:

Residential

Landscape Maintenance

Other: _____

Nursery

Commercial Grower

ENTOMOLOGY (INSECT):

Alive

Dead

Host(s)/Location found: _____

PLANT PATHOLOGY (DISEASE):

Grown in:

Sun

Shade

Partial

Greenhouse

Shade house

Indoor

Watering Schedule:

Daily

Weekly

Monthly

Only when it rains

Other: _____

Planted on/in:

Ground

Container

Soil texture:

Sand

Loam

Clay

Decomposed granite

Commercial soil mix

Soil drainage:

Well drained

Moderately drained

Poorly drained

Standing water

Hardpan

Chemical/Fertilizers applied: _____

Last applied: _____

Rate/Dosage: _____

Describe problem/situation: _____