

Invasive Vegetation Reporting & SELC Management and Monitoring Activities



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

David Varner

david@sanelijo.org



- Non-profit, membership-based land conservancy
- Eight staff people
- Cooperatively manage the San Elijo Lagoon Ecological Reserve with County and CDFG
- Environmental & Experiential Education
 - all programs meet State Science Standards
- Natural Resource Conservation & Restoration of Native Habitats
- Robust Internship Program!

Habitat Management Program

- SELER resource and visitor management
- SELER Habitat Restoration
- CHU Hydrologic Monitoring
- CHU Habitat Restoration/Conservation

SELER = San Elijo Lagoon Ecological Reserve

CHU = Carlsbad Hydrologic Unit

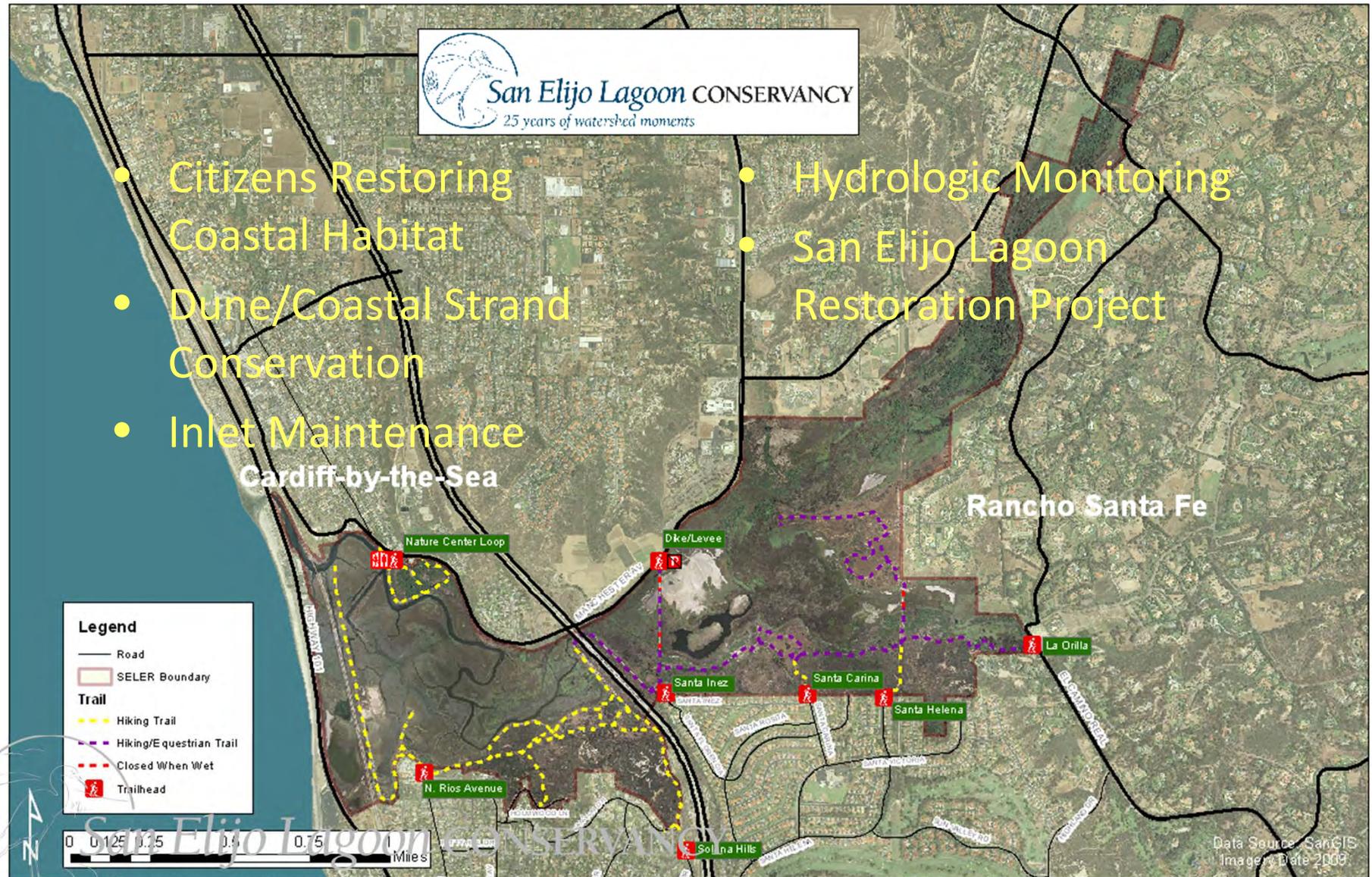


San Elijo Lagoon CONSERVANCY

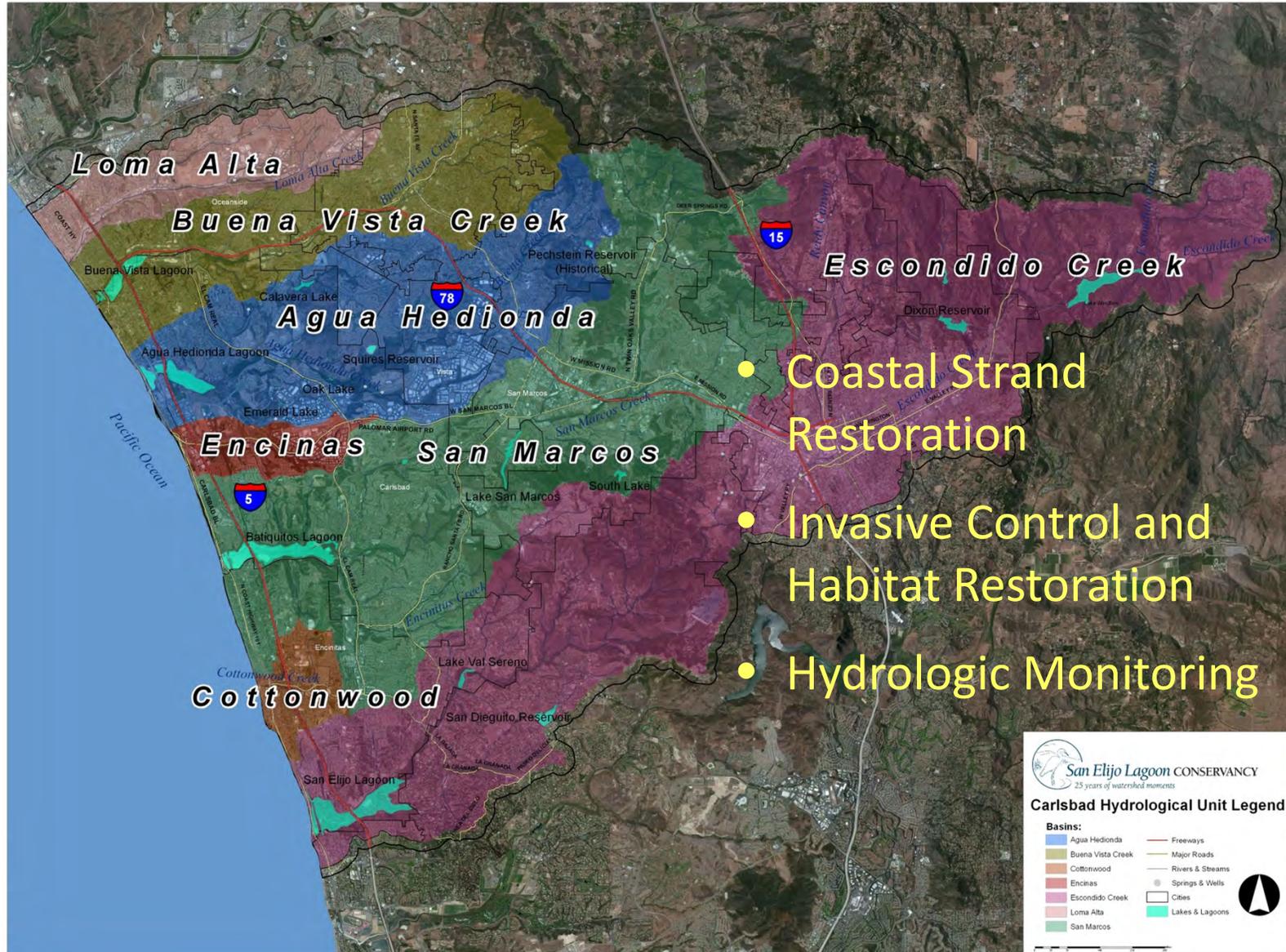
Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

Habitat Management Program

- Citizens Restoring Coastal Habitat
- Dune/Coastal Strand Conservation
- Inlet Maintenance
- Hydrologic Monitoring
- San Elijo Lagoon Restoration Project

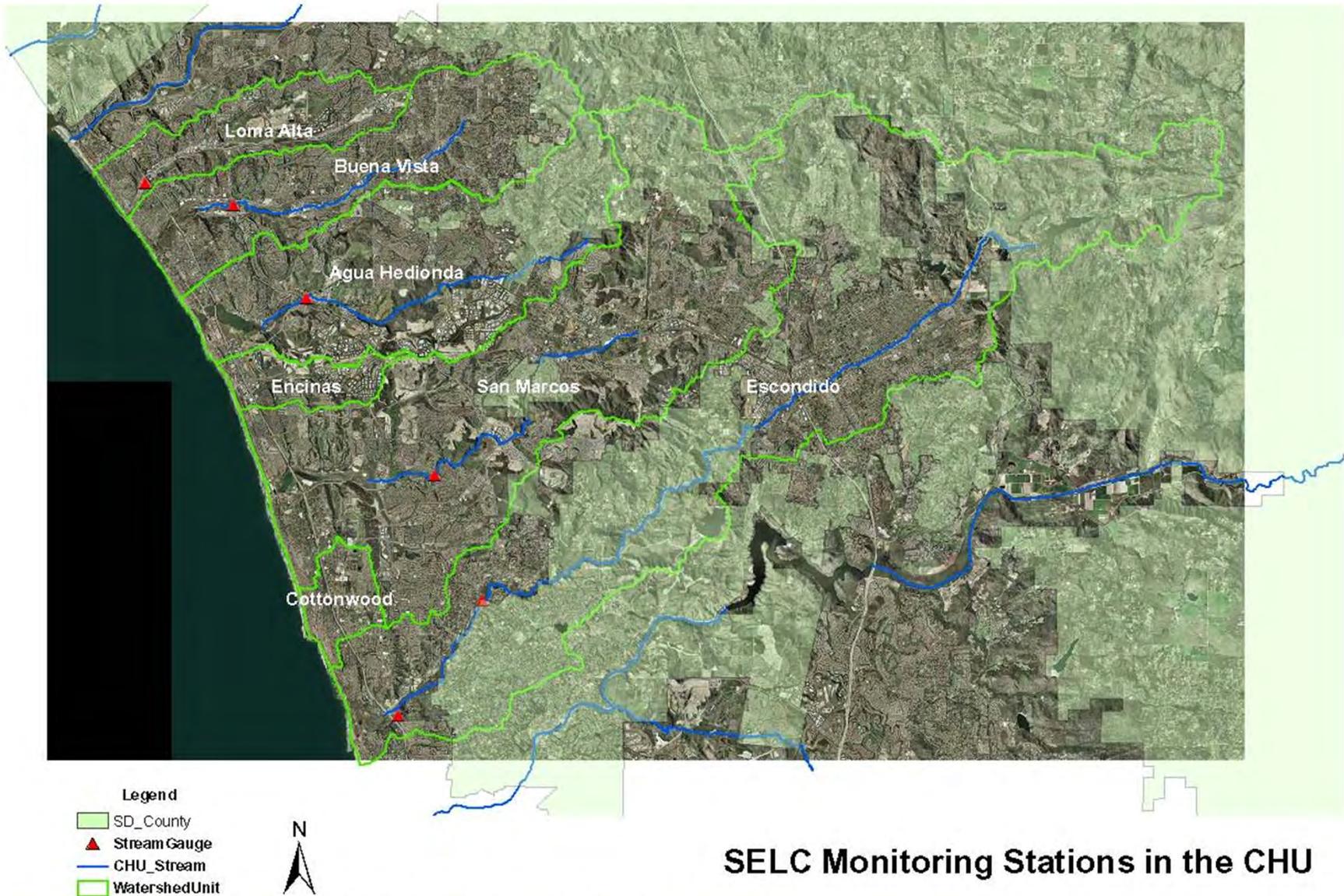


CHU Restoration & Conservation



- Coastal Strand Restoration
- Invasive Control and Habitat Restoration
- Hydrologic Monitoring

CHU Hydrologic Monitoring



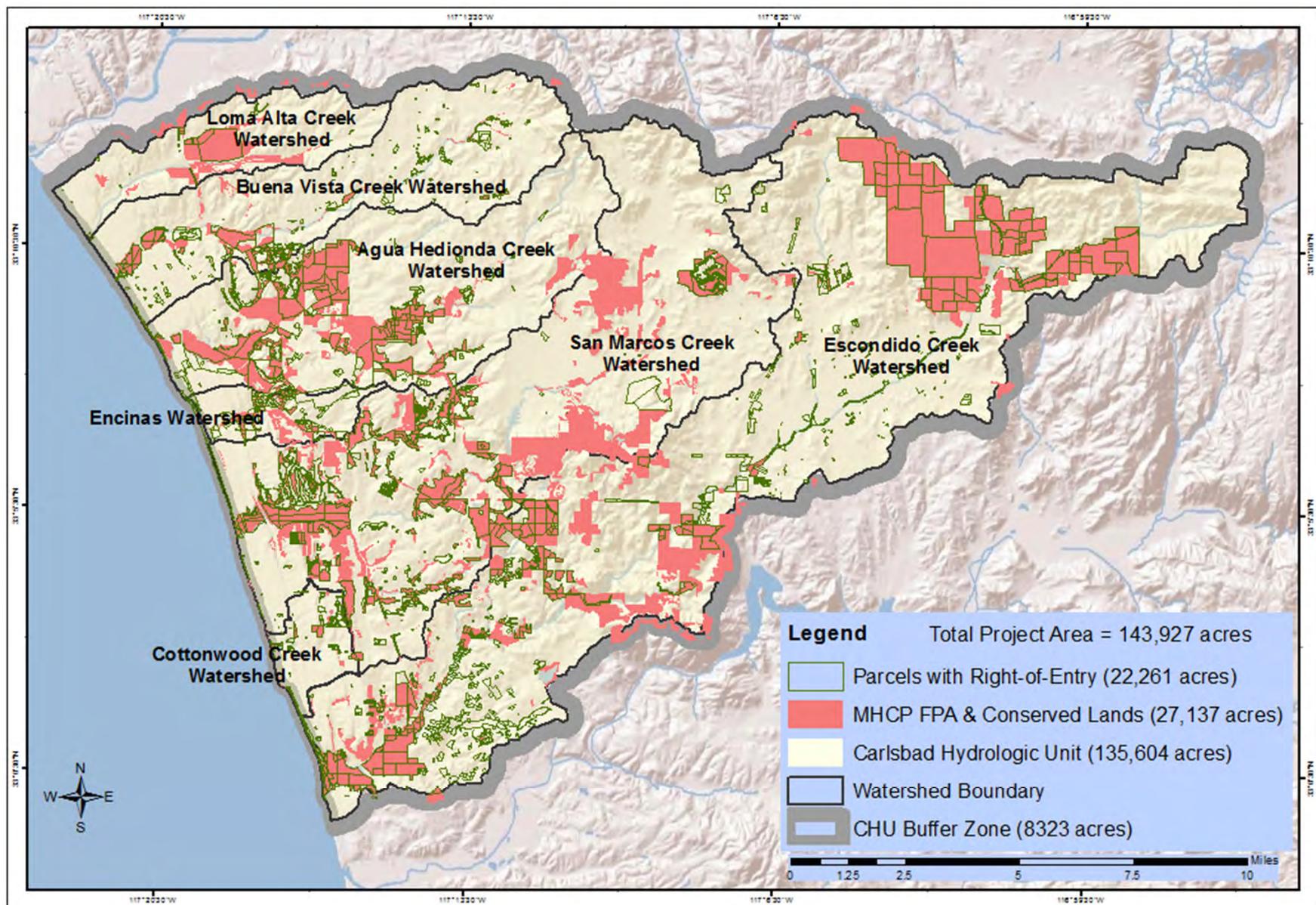
Carlsbad Hydrologic Unit Invasive Control and Habitat Restoration

- Invasive Vegetation Mapping
- Invasive Vegetation Control
- Protection of Sensitive Habitats & Conserved Lands
- Revegetation & Restoration of Degraded Habitats
- Monitoring
 - photomonitoring
 - cover estimates



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed



Carlsbad Hydrologic Unit Invasive Vegetation Control and Habitat Restoration Program

Areas outlined in green indicate properties where landowners granted permission to treat invasive species to the Program. Red-shaded areas indicate Focused Planning Area under the Multiple Habitat Conservation Program as well as SANDAG's Conserved Lands database.



CHU Invasives Control and Habitat Restoration

- *Arundo donax* (giant reed)
- *Cortaderia* sp. (pampas grass)
- *Washingtonia robusta* (Mexican fan palm)
- *Phoenix canariensis* (Canary Island date palm)
- *Lepidium latifolium* (perennial pepperweed)
- *Tamarix* sp. (salt cedar)
- *Lythrum salicaria* (purple loosestrife)
- *Foeniculum vulgare* (fennel)
- *Cynara cardunculus* (artichoke thistle)



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

CHU Invasives Control and Habitat Restoration Funding Situation

- EMP funding (two years) started April 2012
- WCB Funding ended September 2012
 - New application under review; if successful may commence January 2013
- Need:
 - Longer-term program funding
 - Increased funds for infestation control/retreatments
 - Program enhancements to facilitate direct-contractor contracts
 - Increased funds for highly-networked restoration projects



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

Two Applications, both available for Android and iPhone:

- *What's Invasive!*
 - SMMNRA (NPS)
- *Observer*
 - Calflora/E.D.N.



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

What's Invasive!

Smartphone App
available for Android and iPhone

- Select Park:
 - "San Diego County"
- Choose from pre-defined target plants & animals.
- Photo-capable
- www.whatsinvasive.com



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

11 People Contributing 441 Invasive Weeds 0 Invasive Animals

Top Invasive Plants!

(no image.)
**Brazilian
peppertree**



**Canary Island
date palm**



**Cape ivy,
German ivy**



Castorbean



**Crimson
fountaingrass**

(no image.)
Eucalyptus



Fennel



Giant reed



**Greater
periwinkle**

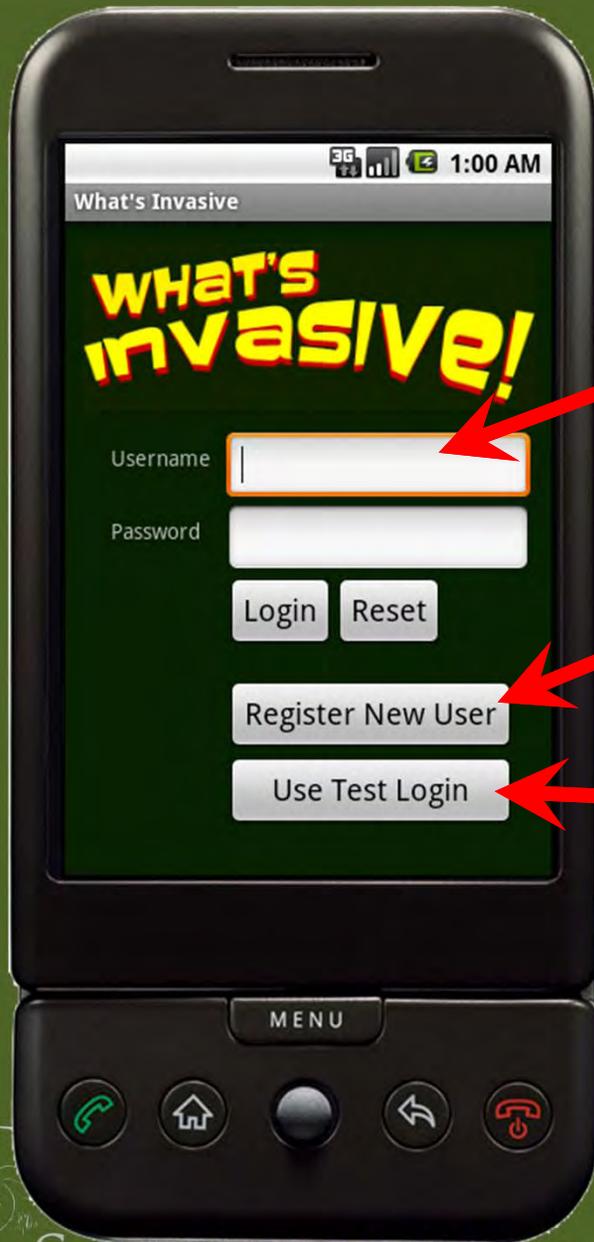
County of San Diego



Photo credit: County of San Diego DPLU GIS

The County of San Diego is in California and at the extreme southwest of the conterminous United States. It is bordered to the east by Imperial County; to the north by Riverside and Orange counties; to the west by the Pacific Ocean; and to the south by Mexico. The County of San Diego encompasses more than 4500 square miles; has altitudes ranging from zero to more than 6500

The main What's Invasive! Android phone features and functions.



Login to your personal *What's Invasive!* account to make your observations.

Register previously online through the website or from the phone.

Test out the app before you create a login, or log in anonymously.

After registering and logging into the application...



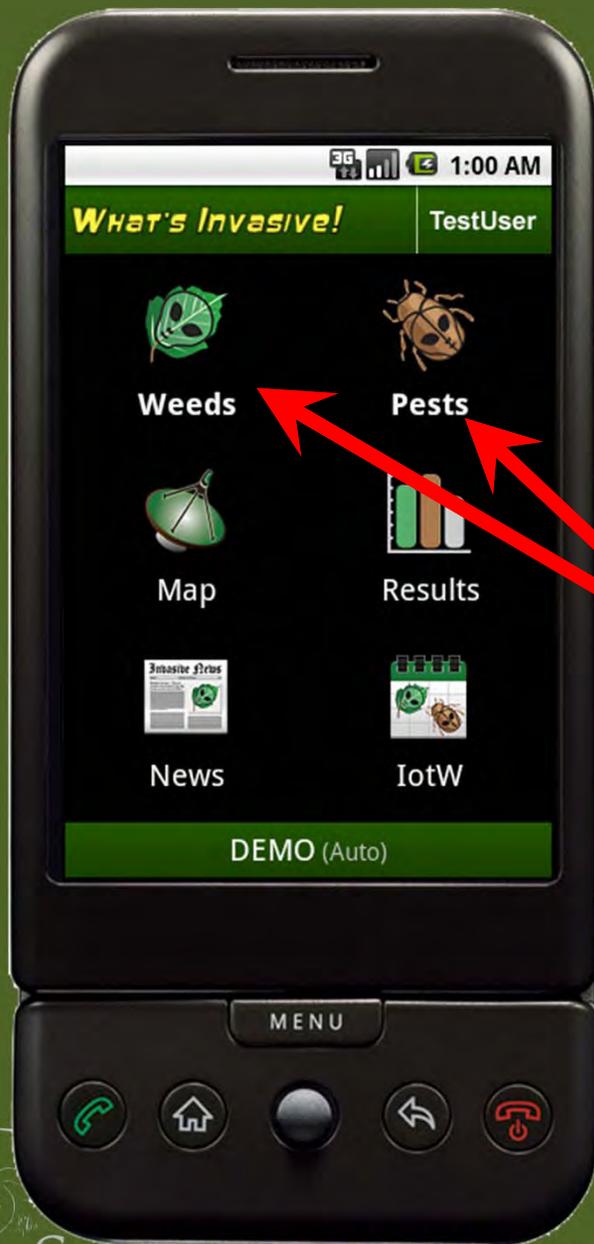
San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

The main What's Invasive! Android phone features and functions.

After logging into your account, or using the Preview login, you will see the main page and six icons.

These icons are the main functions of the What's Invasive application.



The **Weeds** and **Pests** buttons are the main functions that allow you to:

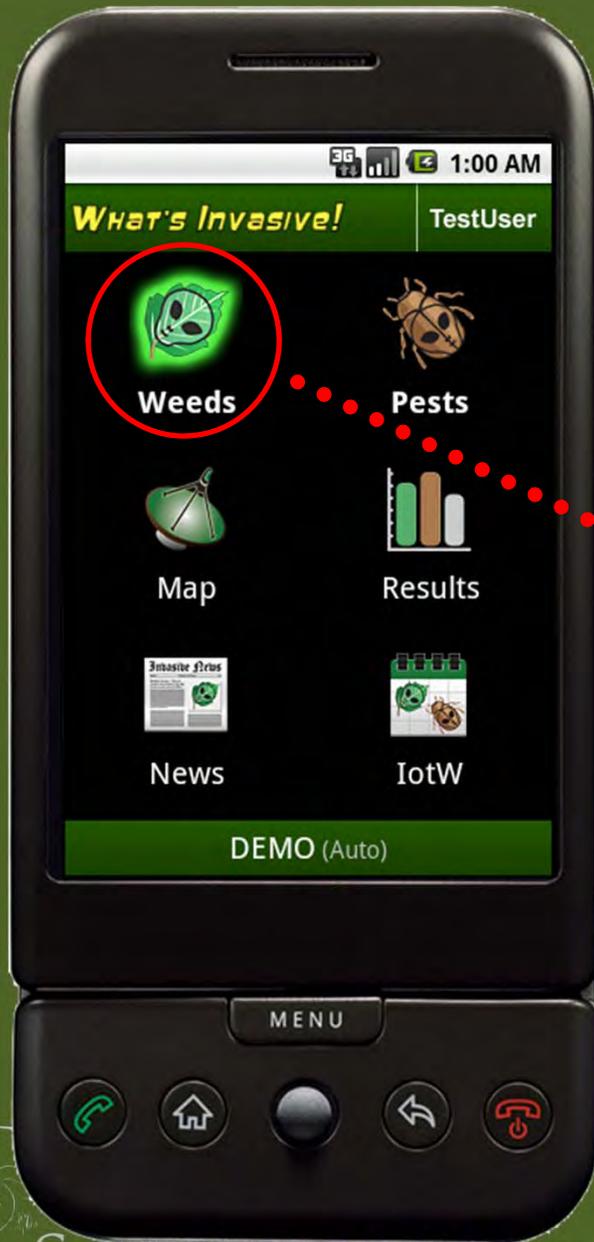
- (1) Browse the top invasive species in the selected area.
- (2) Create an observation, mapping the location of an invasive.



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

You can make a contribution of data that the experts are looking for.



- (1) **One, Few, or Many** is the amount of invasives you see.
 - (2) **Photo on/off** and **Note on/off** to add a photo and notes to your observation.
- The phone has automatically selected the appropriate weed list based on your location.



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

Weed identification in the field.

A photo icon links to handy reminder information and a photo.

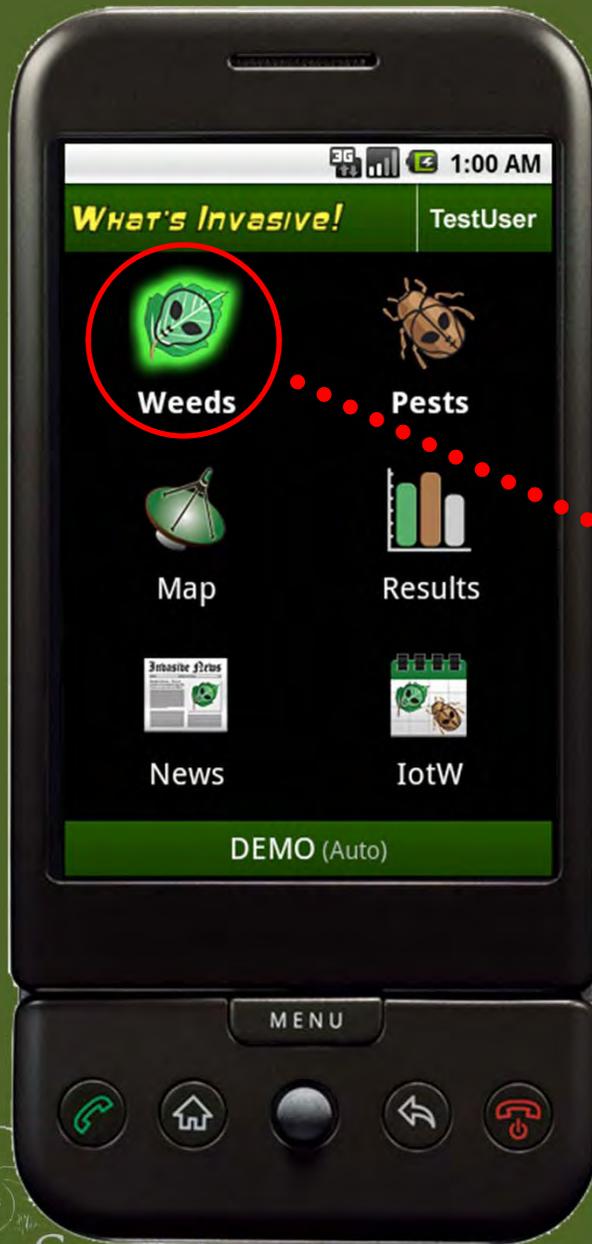


San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

Make your contribution of data.

Select the weed name to make your observation!



The phone will record your position and either go into **camera mode**, for you to take a picture, and/or pop-up a **note-taking field** for you to jot down some text.

Then this info is sent to the *What's Invasive!* database and website.

San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

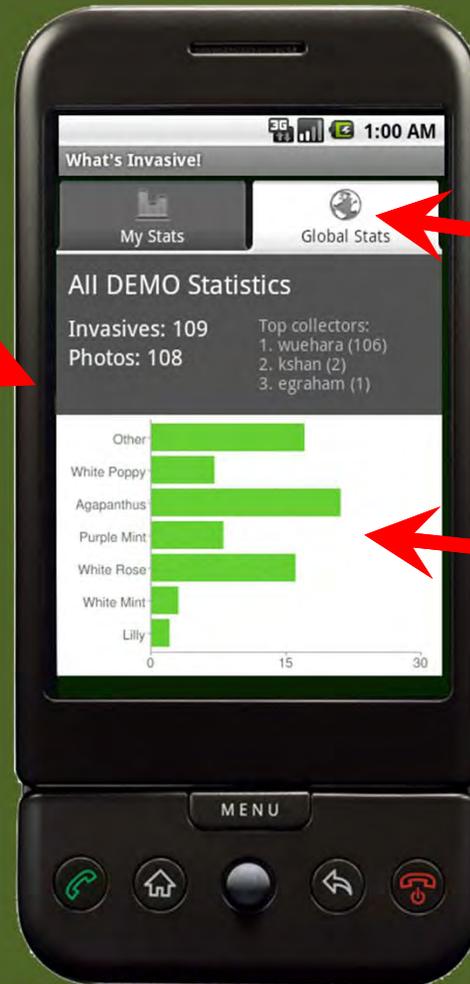
See your and other's data on a map.



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

Keep track of your contributions and progress while collecting data.



Global and Personal statistics are available both on the phone and on the website.

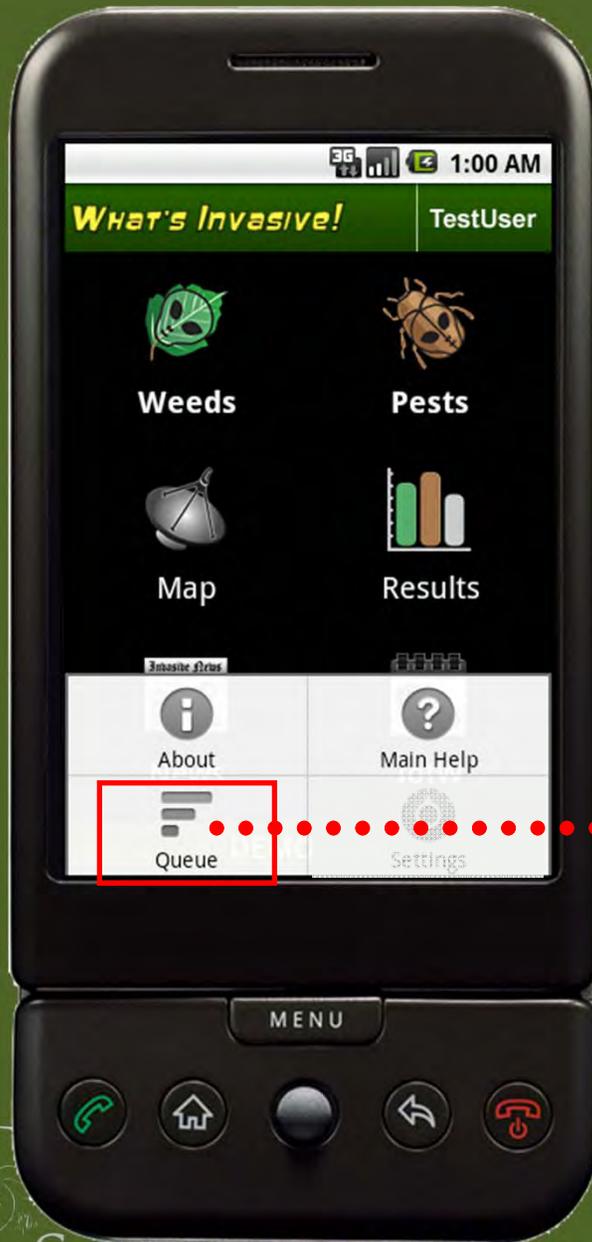
Your observations are grouped with everyone else's to see how the park is doing

View your participation statistics as well as how the entire campaign is going.

San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

Flexible data transfer for when connectivity is an issue.



The **Queue** will store your captured photos and location data for one minute to allow you to review your observation and, if needed, delete the entry (for instance, if the photo was blurry or of the wrong weed).

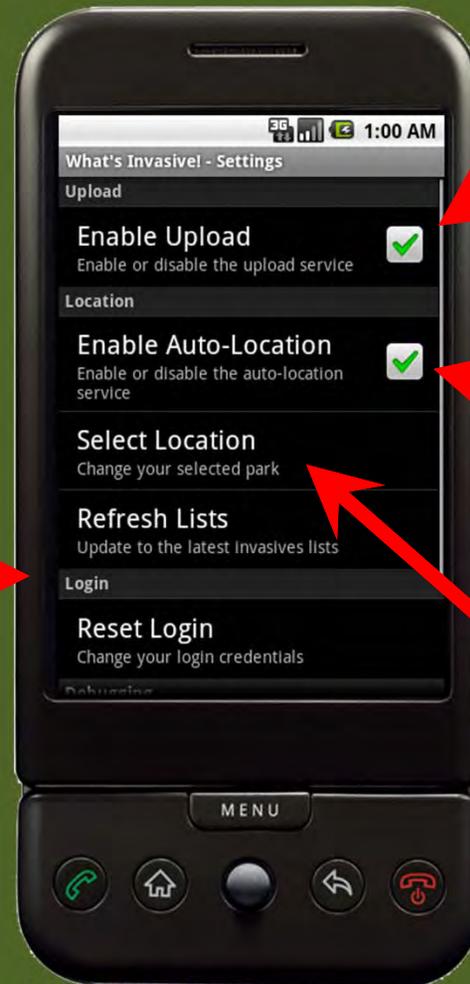
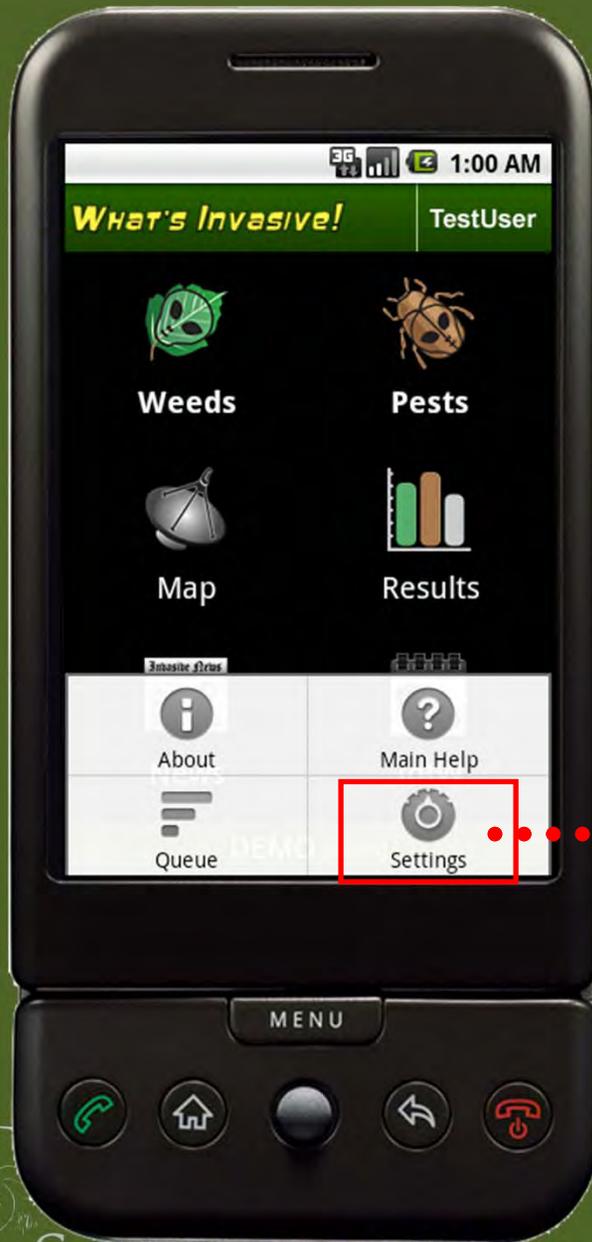
For more time to review, disable the **Automatic Upload** of observations.



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

*User-configurable for data collection
under your control.*



On the **Settings** page:

- Enable upload** will automatically send your observations to the website after 1 minute.
- Auto-location** picks the location and weed list nearest your present location based on GPS.
- Select location** lets you to manually pick your location from participating parks.



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

Calflora Observer



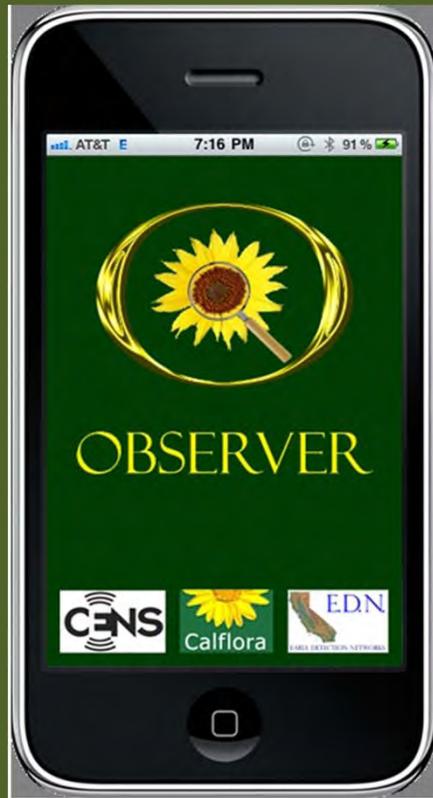
- Calflora, BAEDN, NPS, USFWS, Audubon Canyon Ranch
- Native & non-native plants
 - Existing plant lists or make your own
- Centralized database
- Web, GPS, photo-only options
- No cell plan/reception needed
- “pro-”tool; not for unskilled



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

Calflora Observer



- User account required
- Private until you make it public.
- Photo-capable
- More info: calflora.org/phone
- Step-by-step directions:
www.calflora.org/phone/iphone/iphone-steps.html



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

Calflora/BAEDN: basic weed observation form



www.calflora.org/entry/wentry.html

voiceofsandiego.org | Bing Maps | Google Maps | Google Voice - Inbox | KCRW 89.9 FM | Int... | SELC-Calendar | San Elijo Lagoon Cons... | Convert GPS Coords | Other bookmark

Calflora / BAEDN Weed Observation Entry v. 1.24 Background

Partially funded through a grant from the National Fish and Wildlife Foundation. welcome David Varner EDIT - LOGOUT

Add a new observation

Fill out the **required fields *** and as many optional fields as possible. Specify location by coordinates

Scientific Name *	report	Common Name	Latitude *	Longitude *	Drag to move the map.
<input type="text"/>		<input type="text"/>	37.84	-122.379	Click to mark the location and re-center.
Observation Date *	YYYY-MM-DD	Phenology			
<input type="text"/>	today calendar	----			
Infested Area *	<input type="text"/> Acres	Gross Area			
<input type="text"/>	Acres	<input type="text"/> Acres			
Canopy Closure *	----	Distribution			
<input type="text"/>		----			
Ownership *	Other / Unknown	Habitat			
<input type="text"/>		----			
Observer *		Source			
<input type="text"/>		<input type="text"/>			
Location Description	Comments				
<input type="text"/>	<input type="text"/>				

[Photos](#) [Show Observations](#)

Calflora/BAEDN: My Observations



Use this application to review and edit observations you have contributed to Calflora. Select a subset of your observations with the criteria below.

Scientific Name report Common Name Plant Status County multiple

Observer Source

Location in map area

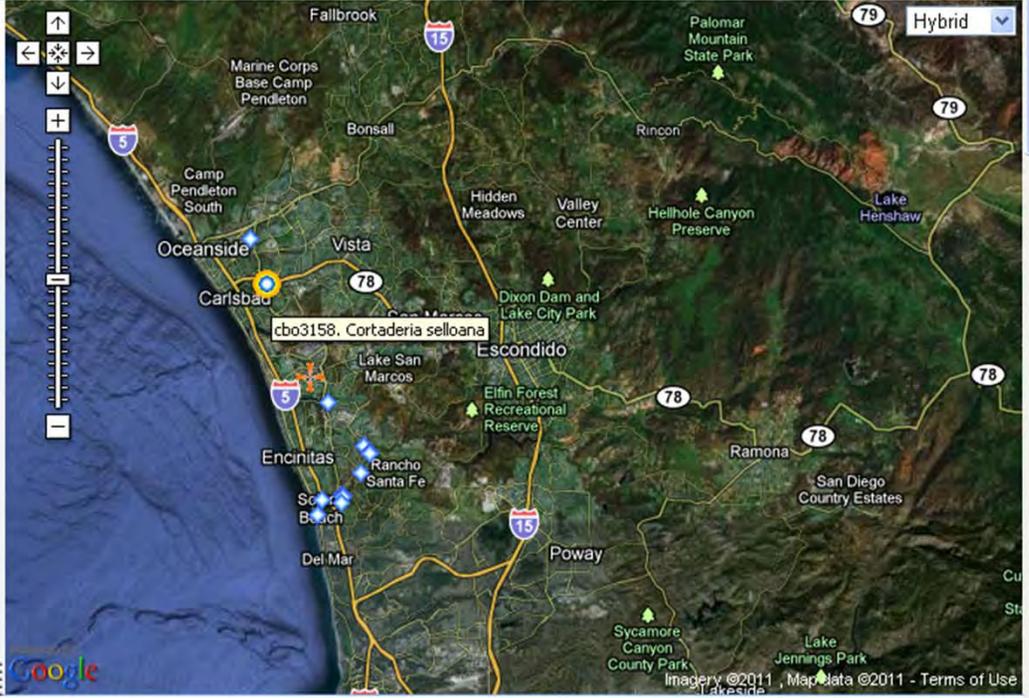
Added to Calflora on Published?

eg. 2012-12-31 include checklists only records with photos

Order by

Column Set [customize](#)

19 records: Press the ID number to edit an observation.



ID	Plant	Photo	Observer	Source	Index Date	Observation Date	County	Location Description	Comments
cbo3358	Limonium sinuatum		David Varner	San Elijo Lagoon Conservancy	2011-08-08	2011-08-08	San Diego		

Thanks and please feel free to
contact me:

David Varner

david@sanelijo.org

760-436-3944x710



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed