Weed Manger

Cynthia Powell

www.calflora.org
Agenda

Introductions & who has used Geoweed

Calflora basics

Update on Weed Manager
  - approach
  - features & components
  - plans for next year

Using Phone App to Log Data
Agenda

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Using Phone App to Log Data
Our Nonprofit’s Mission

California’s digital plant library provides information on wild CA plants for conservation, education, and appreciation

- provides this info in readily usable electronic formats

- serve public information needs related to scientific study, land management, environmental analysis, education, and appreciation of CA plant life
Calflora database contains

> 10,000 native and introduced species

> 800,000 plant location observations (points, lines, and polygons)

> 30,000 relationships between old and new plant names

> 300,000 plant photos

For 36,000 unique Calflora e-visitors each month (1,200/day)
Of those 10,000 native and introduced species in CA,

- 20% of species in CA are not native
- 20% of the data contributed to Calflora are also not native
Calflora started as Ann Dennis sharing a text file of CA plants in 1994

And became a 501(c)3 non-profit in 2001
information on wild California plants for conservation, education, and appreciation

Data In

> 500 Professional Botanists
> 1000 Amateur Botanists
> 1800 Other Observers
> 100 Institutions

Data Out

Researchers
Students
Botanists
Ecologists
Land Managers
Conservationists

Calflora Database
Mona Robison's records

<table>
<thead>
<tr>
<th>ID</th>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Plant Status</th>
<th>Date</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>cbo18855</td>
<td>Rubus discolor</td>
<td>Himalayan blackberry</td>
<td>any</td>
<td>2013-08-24</td>
<td>Indian Grinding Rock State Historic Park</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>any</td>
<td>2013-08-24</td>
<td>Dense patches in main drainage way, going from park entrance, around parking area and west through meadows.</td>
</tr>
<tr>
<td>cbo18856</td>
<td>Hypericum perforatum</td>
<td>Kamish weed</td>
<td>any</td>
<td>2013-08-24</td>
<td>Indian Grinding Rock State Historic Park</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>any</td>
<td>2013-08-24</td>
<td>Scattered plants along trails, especially south nature trail, and around meadow edges.</td>
</tr>
</tbody>
</table>
Calflora partnership model
Calflora project best practices
Agenda

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Using Phone App to Log Data
O = **Occurrences** – species point data

A = **Assessments** – time-changing info
   - % cover
   - size of polygon
   - plant phenology

T = **Treatments** – herbicide, hand-pull, mow, etc.

S = **Surveys** – canvass defined area to seek target plants; includes absence data
Overview of Calflora Tools

Calflora

Using Data
- Observation Browsing
  - Observation Hotline
  - Plant Distribution
- Plant Browsing
  - What Grows Here
  - Taxon Report
- Data Export
  - CSV
  - geoJSON

Creating Data
- Weed Manager
  - Pro Mobile App
  - Web Apps
- Web Apps
  - Photo Upload
  - Observation Entry
  - Checklist Entry
  - Web Entry
  - Data Import

Intersection:
- My Observations
- Web Apps
About Weed Manager

- **Weed Manager** is a system to track weed infestations and treatments over time.

- It is an evolution of current Calflora tools for tracking weeds.

- Fully built out, Weed Manager will have feature parity with desktop Geoweed, with some improvements:
  - Configurable Field Sets
  - More Search and Report options

Anticipated Benefits of Using Weed Manager

- **Flexibility with respect to data collection.** Collect the data you need for a project, no more and no less.

- **Ease of data exchange.** Core data fields and the core methodology remain standard across all organizations who use the system, thus enabling data exchange and integration.

  New data is immediately visible in the context of historical data -- the 2 million plant observations available now in Calflora.

- **New generation data collection devices.** A smart phone or tablet assisted by a GPS puck (eg. Garmin Glo) is a strong platform for this kind of work, with low maintenance cost (phone contract not required).

- **Advantages of web technology.** Data can be seen and worked on by organization members no matter where they are.
Overview of Weed Manager Tools

Weed Manager

Using Data
- Search, Report
- My Observations
- Work Performed Summary
- Data Export

Creating Data
- Observer Pro Mobile App
- Project Setup
- Photo Upload
- Observation Entry
- Treatment Entry
- Work Performed Entry
- Data Import
Observation Entry in Weed Manager

**Observation Entry** has some new features:

When editing a record, view the **assessment and treatment history** of that record.

Make a new record part of the **assessment history** of a previously known occurrence.

Aka stack
Information on wild California plants for conservation, education, and appreciation.

Phase I
- Mockups of all apps
- Observation entry 75%
- Treatment entry 75%
- Project Setup 75%
- Observer Pro 50%
- Data import

Phase II
- Field Set configuration
- Work Performed entry
- Data export
- Project Setup 100%

Phase III
- Search, Report 75%
- Observation entry 100%
- Treatment entry 100%
- Sum Work Performed
- Data feed to Phone App
- Observer Pro 100%

Phase IV
- Search, Report 100%
- Training
- Outreach

November 2013
February 2014
May 2014
September 2014
With Cal-IPC, we are applying for a STDP grant (Special Technology Development Program, through the forest service).

We need $35K matching funds, non-federal. If your organization would like to contribute $2,500-$5,000 toward that matching funding, you receive a discount on your annual per organization usage fee.
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New Observation

OBSERVATION

Assessment

TREATMENT

Slim oat
Avena barbata

Number of Plants

- 1
- 2-10
- 11-100
- 101-1000
- 1001-10,000
- > 10,000
- 0

Percent Cover

- 0-1
- 1-5
- 5-25
- 25-50
- 50-75
- 75-100
- 0

Infected Area Sq. Meters

22

Gross Area Sq. Meters

55

Distribution
Slim oat
Avena barbata

Treatment Method
- Shovel shear
- Handpull
- Flower / seed removal
- Mow
- Lop
- Herbicide

Herbicide
- Aminopyralid
- Chlorsulfuron
- Glyphosate
- Imazapyr
- Rimsulfuron
- Triclorpyr

Concentration (Percent)

Percent Treated
- 5
- 10
- 15
- 25
Satellites and Accuracy
Dual XGPS150A
Universal Bluetooth® GPS receiver for portable devices
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THANK YOU! QUESTIONS?