

Cycles of EDRR on Mt. Tamalpais

Finding the sweet spot between structure and flexibility

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Protocol Basics

- Road and Trail Surveys
 - Cover the full network of 350+ miles every three years
- 61 Species in two ranks
- Occurrence and treatment mapping



EARLY DETECTION
BEYOND BOUNDARIES



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Program Review

It's time for protocol revision

- Species List
- Survey Geography

California State Parks
Early Detection and Rapid Response (EDRR) Handbook
for Invasive Species Management



Prepared by:

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Revised 2020
by Leah Gardner and Rachel Kesel

Pillars of EDRR

Species List

Survey Geography

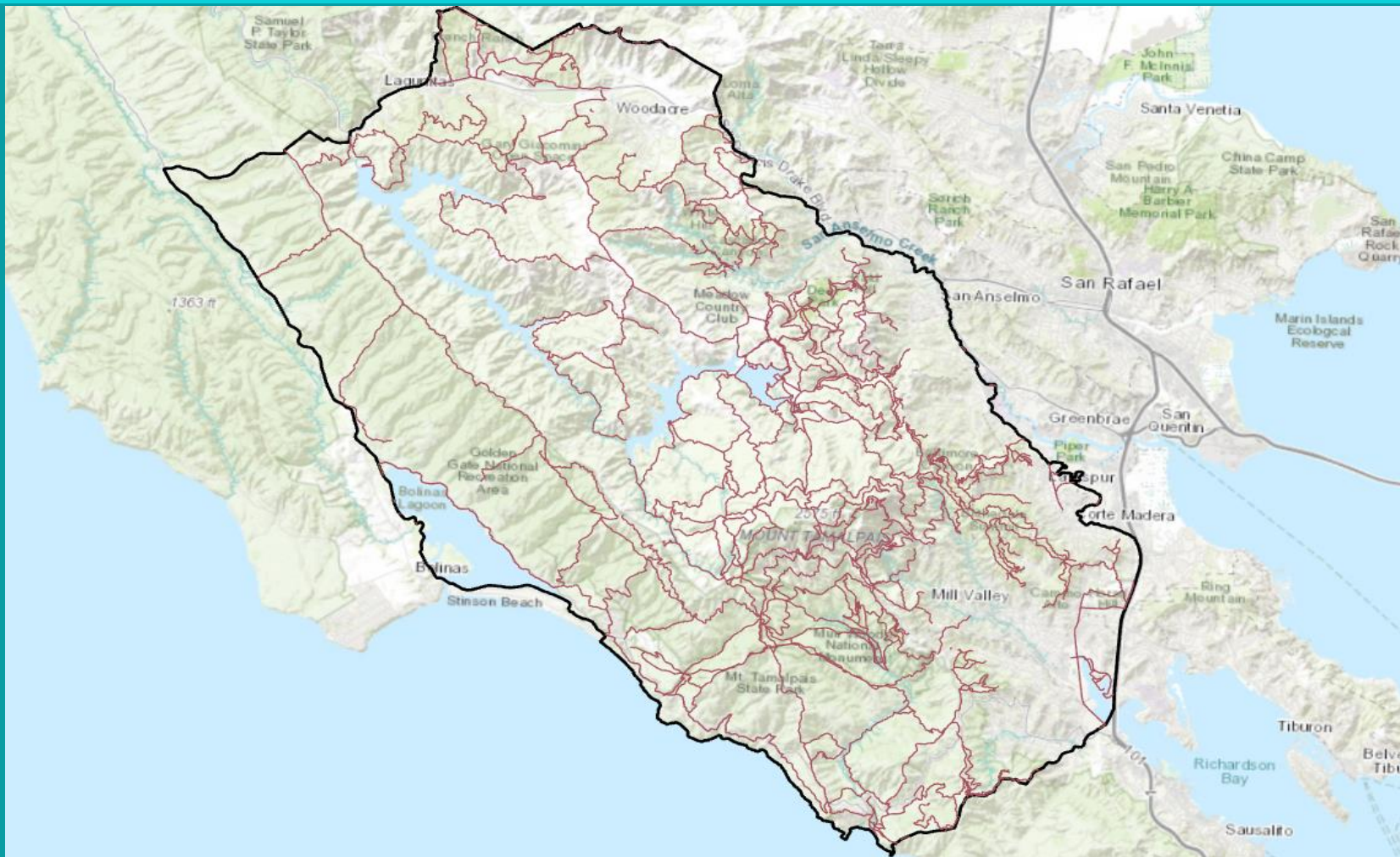
Data Collection and
Management

Team Effort

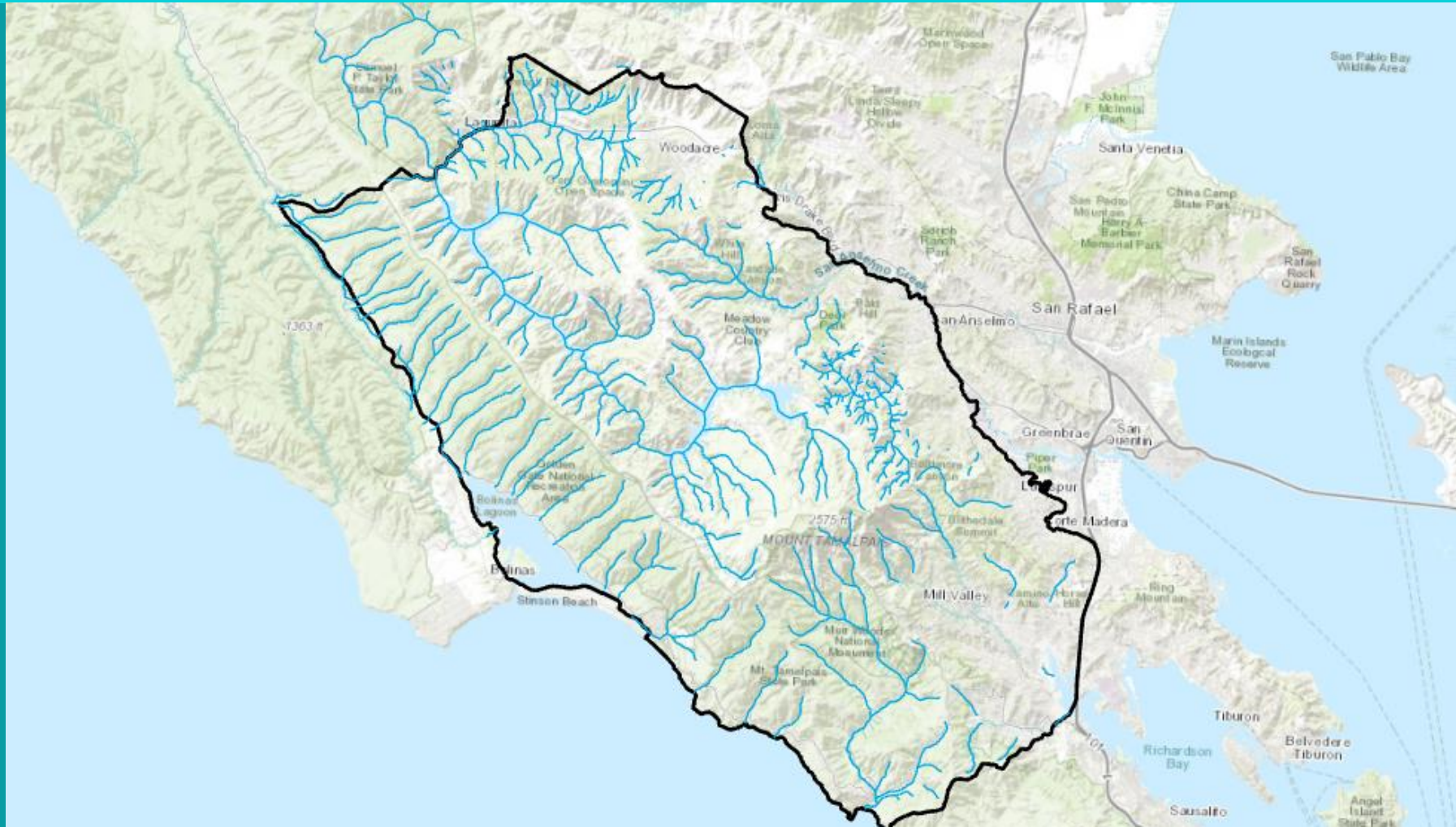


Photo: Tatiana Manzanillo

Survey Geography: Keeping Surveys Classic



Survey Geography: Going with the Flow

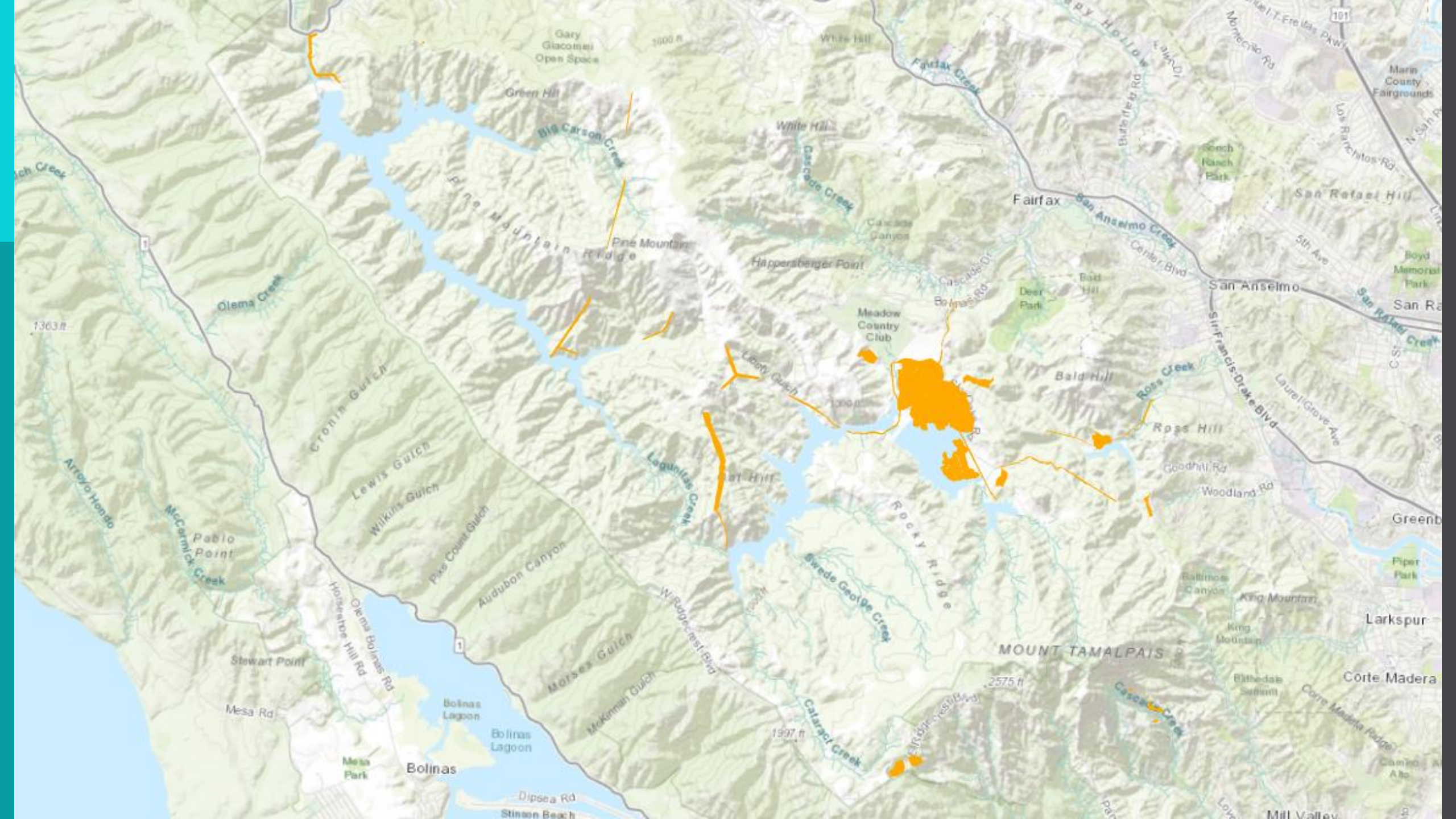


Going with the Flow: Japanese knotweed

Sometimes you can't do everything

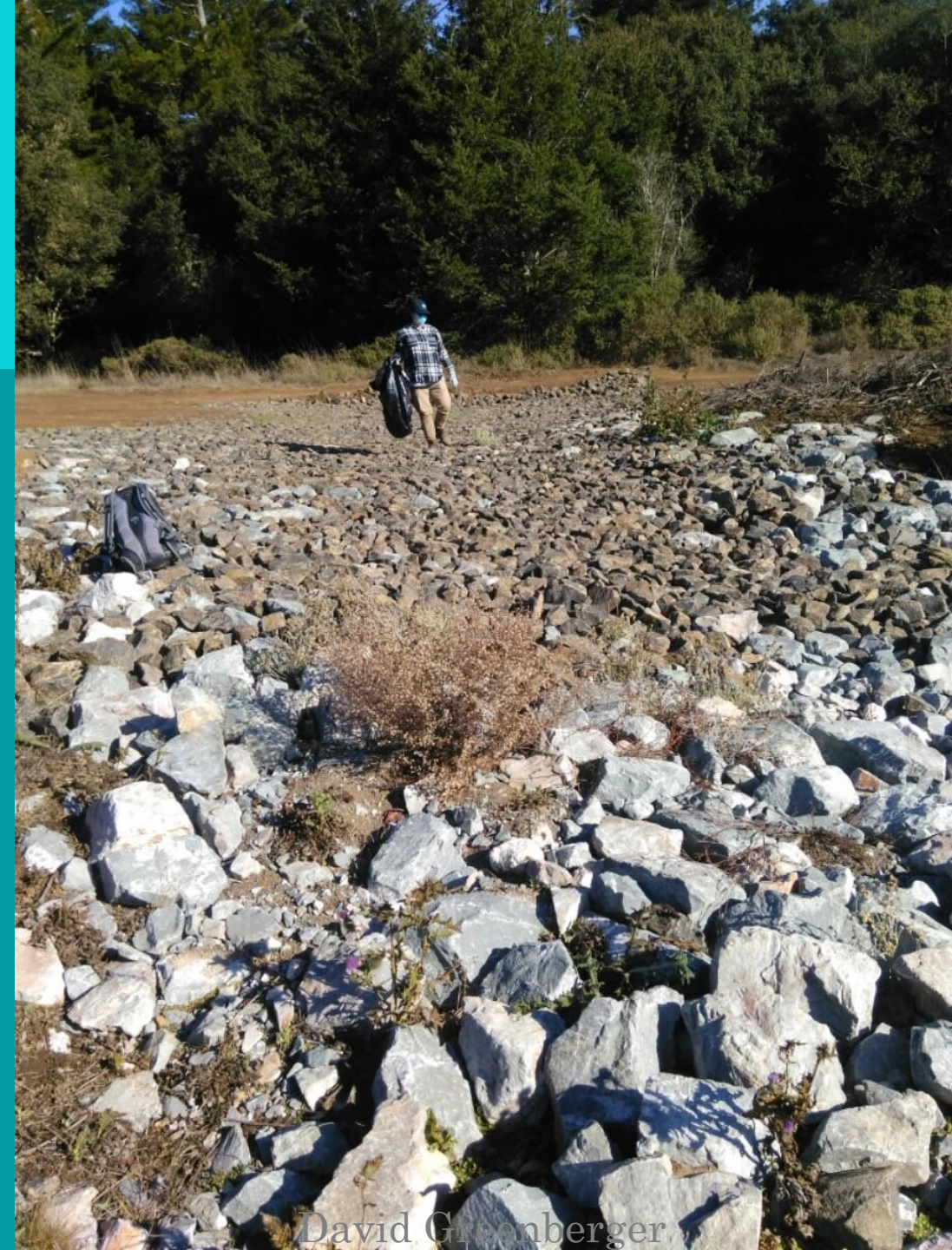
- We just look for knotweed
 - And malfurada
 - And anything super weird that we see...





Survey Geography: Emerging Needs

Construction areas



Survey Geography: Preparing for the Future

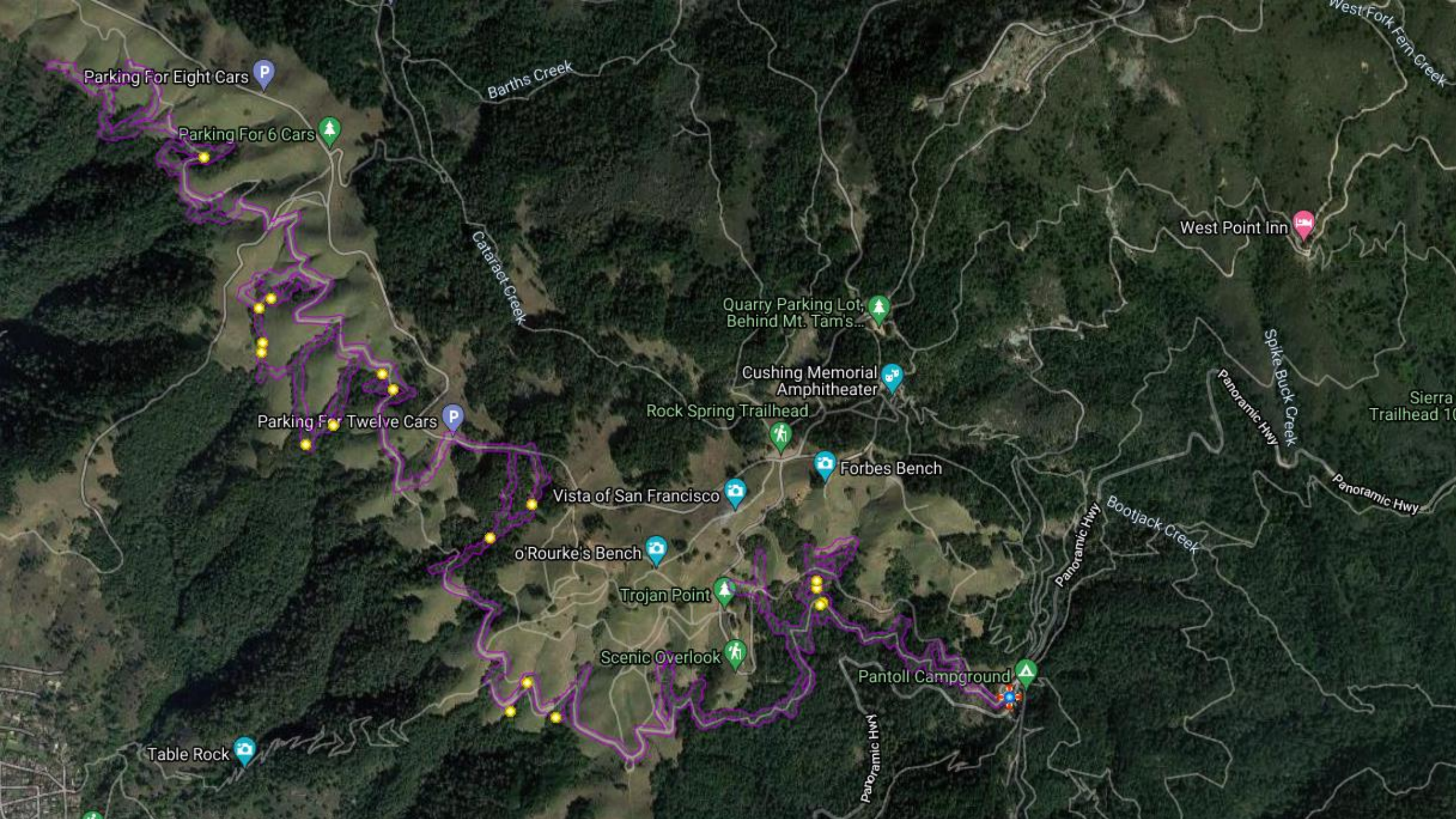
Adding post fire surveys to the protocol

Getting experience where we can



Survey Geography: Letting Treatments Guide Us





So, we know where we're going

That's good, but what should we look for when we get there?

Species List

PRIORITY TWO

Species	CDFA Rating	Cal-IPC Rating
<i>Acacia melanoxylon</i>	-	Limited
<i>Ageratina adenophora</i>	-	Moderate
<i>Arctotheca prostrata</i>	-	Moderate
<i>Calendula arvensis</i>	-	-
<i>Centaurea solstitialis</i>	-	High
<i>Cortaderia jubata</i>	-	High
<i>Cortaderia selloana</i>	-	High
<i>Cotoneaster franchetii</i>	-	Moderate
<i>Cotoneaster lacteus</i>	-	Moderate
<i>Cotoneaster pannosus</i>	-	Moderate
<i>Crataegus monogyna</i>	-	Limited
<i>Cytisus scoparius</i>	B	High
<i>Delairea odorata</i>	-	High
<i>Digitalis purpurea</i>	-	Limited
<i>Dipsacus fullonum</i>	-	Moderate
<i>Ehrharta erecta</i>	-	Moderate
<i>Eucalyptus globulus</i>	-	Limited
<i>Euphorbia oblongata</i>	-	Limited
<i>Festuca arundinacea</i>	-	Moderate
<i>Foeniculum vulgare</i>	-	Moderate
<i>Genista monspessulana</i>	-	High

Lists Can Change with New Info



David Greenberger

Species List: 2021 Catch Up

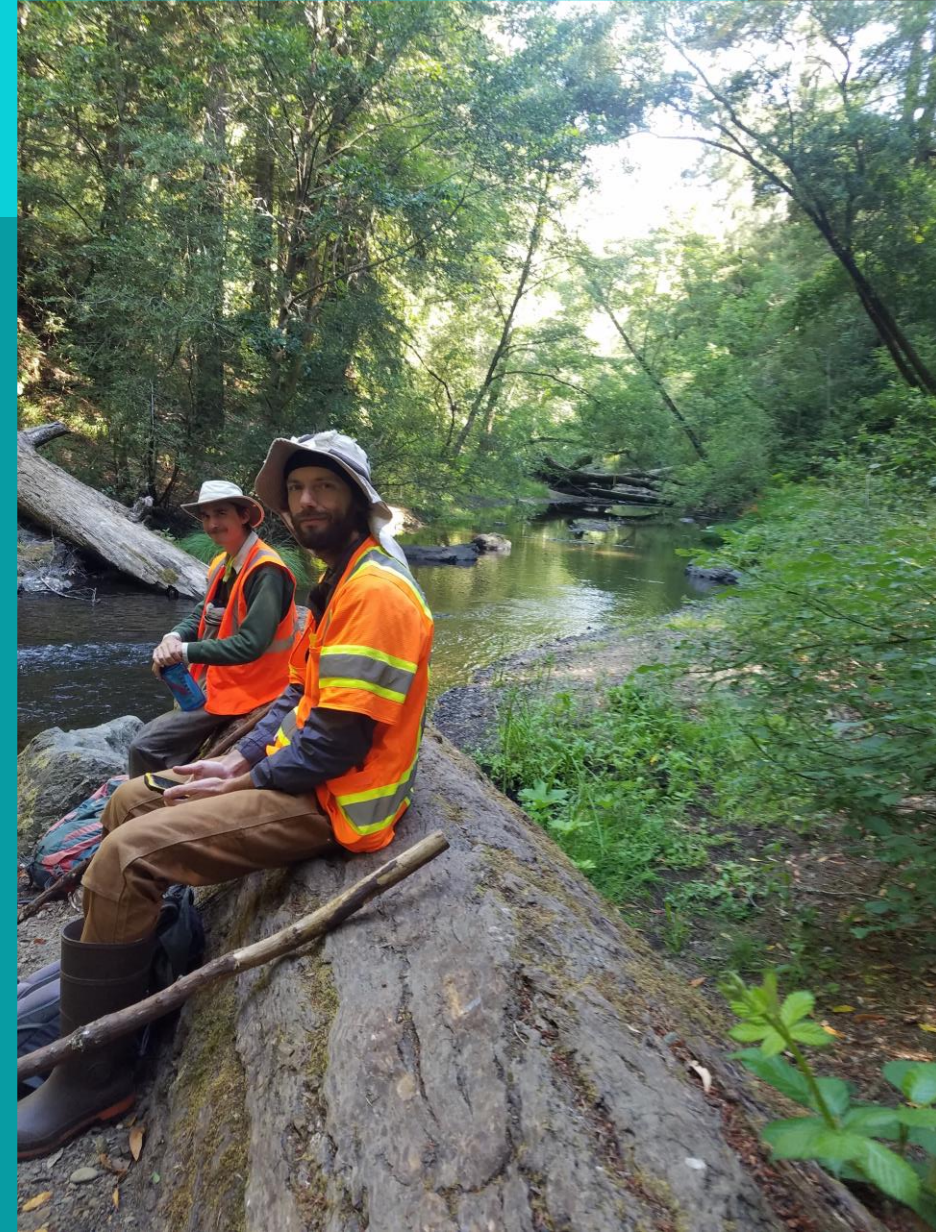
- In a typical year, we cover about 110 miles of roads and trails
- In 2020 we covered 27 miles
- In 2021 we caught up by covering over 160 miles

2021 Catch Up: Species and Staffing

Appendix A. Early Detection Species List

PRIORITY ONE

Species	CDFA Rating	Cal-IPC Rating
<i>Aegilops triuncialis</i>	-	High
<i>Ailanthus altissima</i>	C	Moderate
<i>Albizia lophantha</i>	-	-
<i>Arctotheca calendula</i>	A	Moderate
<i>Brachypodium sylvaticum</i>	-	Moderate
<i>Bromus tectorum</i>	C	High
<i>Buddleja davidii</i>	-	Watchlist
<i>Carex pendula</i>	-	Watchlist
<i>Centaurea calcitrapa</i>	-	Moderate
<i>Clematis vitalba</i>	A	Moderate
<i>Cytisus striatus</i>	B	Moderate
<i>Dittrichia graveolens</i>	-	Moderate
<i>Elymus caput-medusae</i>	-	High
<i>Fallopia japonica</i>	A	Moderate
<i>Hypericum grandifolium</i>	-	Watchlist
<i>Iris pseudacorus</i>	B	Limited
<i>Maytenus boaria</i>	-	Watchlist
<i>Sesbania punicea</i>	-	High
<i>Solanum aviculare</i>	-	Watchlist
<i>Stipa manicata</i>	-	Limited
<i>Stipa miliacea</i> var. <i>miliacea</i>	-	Limited
<i>Stipa tenuissima</i>	-	Watchlist
<i>Ulex europaeus</i>	-	High



Species List: Priority Two Perennials

Scientific Name: Rubus armeniacus Common Name: Himalayan blackberry

Start Date eg. 2021-12-31: End Date: ☐ anywhere ☒ in map area

Native Status: any Plant List: none [POLYGON](#)

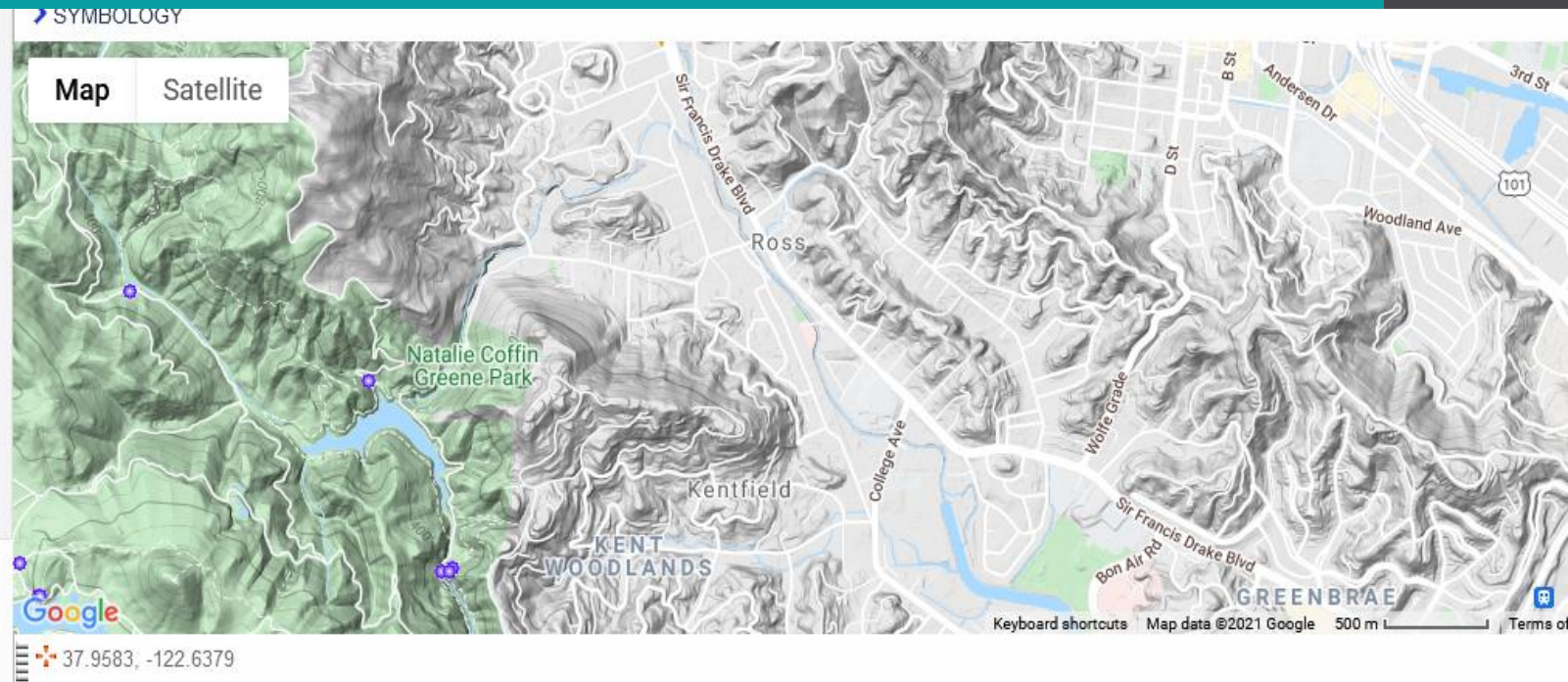
Geometry: any Group: Marin Municipal Water District [view](#)

Treatment: only treatment records [Projects](#) One Tam EDRR

History: All records [More Criteria](#) ☐ only my records

Column Set: Basic Data [Customize](#)

9 records. [SEARCH](#)



ID	Access	Taxon	Common Name	Observer	Date	Location Description	Latitude	Longitude
mg131148	published	Rubus armeniacus	Himalayan blackberry	David Greenberger	2021-04-12 10:07:26.0	LAKE LAGUNITAS	37.947686	-122.59599
mg129249	published	Rubus armeniacus	Himalayan blackberry	Rachel Kesel	2021-03-26 12:01:11.0	BILL WILLIAMS CANYON	37.948885	-122.57305
mg129241	published	Rubus armeniacus	Himalayan blackberry	Rachel Kesel	2021-03-26 11:30:05.0	BILL WILLIAMS CANYON	37.948745	-122.57370

Species List:

Building Capacity

By taking perennial Priority Two's off the list for a cycle or two we build capacity

- For more Priority One species
- For more survey geography

Species List:

Recognizing Emerging Threats



Carthamus lanatus



Take Home

Protocols need to respond to the moment, while maintaining structure.

Geography and species can change.

Staffing often changes whether we want it to or not.

Sweet Spot

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Naftali Moed