UNIVERSITY OF CALIFORNIA
Agriculture and Natural Resources
CNPS
2022 CONFERENCE
ROOTING TOGETHER
Cultivating Biodiversity in San Francisco’s Western Ecological Corridor

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San Francisco Public Works

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CNPS – Yerba Buena Chapter
HISTORY
THE SUNSET – 1928 and 1900s

1. The Sunset District encroaches on the remaining sand dunes in 1928, just south of Golden Gate Park. Below, native dune vegetation in a photograph taken about two decades earlier.

2. [Image of the Great Sand Bank]
THE SUNSET – Vernal Pools

Example Pre-Development Section
SUNSET BOULEVARD - June 2020
SUNSET BOULEVARD - June 2020
SUNSET BOULEVARD SITE ANALYSIS
SUNSET BOULEVARD PILOT BLOCK RENDERINGS

SUNSET BOULEVARD
EXAMPLE BLOCKS: IRVING TO JUDAH

BOULEVARD PLANTINGS
COASTAL SOWN SELECTION

COASTAL NATURALS SELECTION

WELDED MEADOW SELECTION

CALIFORNIA NATIVES AND VARIETIES
APRIL 2020
SUNSET BOULEVARD – Bio Derby
SUNSET BOULEVARD BIOBLITZ

FLORA AND FAUNA MAPPING:

San Francisco Natives identified in species visualization map:

- Purple Sage
- Salvia leucophylla
- Common Yarrow
- Achillea millefolium
- Coast Live Oak
- Quercus agrifolia
- Seaside Daisy
- Erigeron glaucus
- Hummingbird Sage
- Salvia spathacea
- California Coffeeberry
- Prunus pumila

CULTIVATING BIODIVERSITY IN SAN FRANCISCO’S WESTERN ECOLOGICAL CORRIDOR | 18
SFPW AND CNPS| SUNSET BOULEVARD BIODIVERSITY| 10.21.22
JUNE–AUGUST 2020
OUR PARTNERSHIP

SF Public Works
- Granted permission to work on the garden
- Created design for the garden
- Provided soil and mulch on site
- Provided tools, toolbox, gloves, sanitizer, wheelbarrow, hoses
- Staff made holes with auger through the chert for plants
- Picks up weeds and other detritus

CNPS Yerba Buena
- Purchased plants
- Managed plant purchase, delivery and planting
- Brought in and managed volunteers (more than 50)
- Manages upkeep, weeding and watering of site for three years

Together
- Decisions about plant palette
- Managed pre-planting and planting days
- Communicate with community and supervisors about the work
- Advocate for additional gardeners and resources for the West Side and Sunset Blvd.
- MOU

Additional Partners
- Climate Action Now! (trees)
- Nature in the City (groundplane)
<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
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<td><strong>PLANT PALETTE</strong></td>
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<td><strong>SUNSET BOULEVARD PLANT LIST</strong></td>
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<tr>
<td><strong>Latin Name</strong></td>
<td><strong>Common Name</strong></td>
<td><strong>Source</strong></td>
<td><strong>Number/Size</strong></td>
<td><strong>Cost</strong></td>
<td><strong>Season</strong></td>
<td><strong>wasteland cost</strong></td>
<td><strong>CMPS Plants</strong></td>
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<td><strong>GRASSES</strong></td>
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<tr>
<td>5</td>
<td>Festuca californica</td>
<td>California Fescue</td>
<td>SBP</td>
<td>24/1-gallon</td>
<td>$240.00</td>
<td>Spring, Winter</td>
<td>$282</td>
<td>Artemisia californica</td>
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<td>Dipsacus fullonum</td>
<td>Purple Needlegrass</td>
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<td>spring</td>
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<td>Pearly Everlasting</td>
<td>SBP</td>
<td>13 1-gallon</td>
<td>$120.00</td>
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<td>Anaphalis margaritacea</td>
<td>Brittle leaf manzanita</td>
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<td>BUY-20 Watershed</td>
<td>29 - 1 gallon</td>
<td>winter, spring</td>
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<td>Armeria maritima var. californica</td>
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<td>CNPS</td>
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<td>spring</td>
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<td>5</td>
<td>Clarkia amoena, rubicunda, unguiculate</td>
<td>Farewell to spring</td>
<td>CNPS, seed - 20</td>
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<td>spring/summer</td>
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<td>Ribes sanguineum glutinosum</td>
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<td>Dichelostachys cucumis</td>
<td>Coastal Wood Fern</td>
<td>CNPS</td>
<td>BUY Watershed</td>
<td>9-5 gallon</td>
<td>winter, spring, summer</td>
<td>$342</td>
<td>Coral Pink</td>
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<td>5</td>
<td>Galium aparine</td>
<td>California Fiddleneck</td>
<td>CNPS</td>
<td>BUY</td>
<td>20&quot; 4&quot; pots</td>
<td>winter, spring, summer</td>
<td>115</td>
<td>Arctostaphylos (possibly)</td>
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<td>Eschscholzia californica</td>
<td>California Poppies</td>
<td>CNPS</td>
<td></td>
<td></td>
<td>winter, spring, summer</td>
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<td>Available from Steven Fields (around the first)</td>
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<td>Eriogonum leucotrichum</td>
<td>Coast Buckwheat</td>
<td>SBP</td>
<td>15-1 gallon</td>
<td>$150.00</td>
<td>spring/summer</td>
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<td>Yarrow</td>
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<td>Eryngium agnotocladium</td>
<td>Eriogonum</td>
<td>CNPS/Sp</td>
<td></td>
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<td>Woodland strawberry</td>
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<td>5</td>
<td>Fragaria chiloensis</td>
<td>Coast Strawberry</td>
<td>SBP/Sp</td>
<td>30&quot; 4&quot; pots</td>
<td>$150.00</td>
<td>spring/summer</td>
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<td>California aster</td>
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<td>Grindelia squarrosa</td>
<td>Great Valley Gumplant</td>
<td>CNPS</td>
<td></td>
<td></td>
<td>spring/summer, fall</td>
<td></td>
<td>Available from Garry Guard</td>
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<tr>
<td>5</td>
<td>Grindelia viscosa</td>
<td>Hairy Grown</td>
<td>CNPS</td>
<td></td>
<td></td>
<td>spring/summer, fall</td>
<td></td>
<td>Heter's growing 2 flats of coastal buckwheat</td>
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<td>5</td>
<td>Hildjangoirene</td>
<td>Douglas Iris</td>
<td>CNPS</td>
<td>BUY/watershed</td>
<td>86 4&quot; pots</td>
<td>winter, spring</td>
<td>494.5</td>
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<td>5</td>
<td>Lasthenia filifolia</td>
<td>California Aster</td>
<td>CNPS/Sp</td>
<td></td>
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<td>spring, fall, winter</td>
<td></td>
<td>Yarrow</td>
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<td>5</td>
<td>Lomereae hirsuta</td>
<td>California Honey weed</td>
<td>CNPS</td>
<td>BUY/Watershed</td>
<td>2 1 gallon</td>
<td>summer, spring</td>
<td>500</td>
<td>Seeds we're growing from Garry Guard's garden</td>
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<td>20/1 gallon</td>
<td>$200.00</td>
<td>spring/summer</td>
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<td>Yarrow</td>
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<tr>
<td>5</td>
<td>Salvia lyrata</td>
<td>Coast Purple Sage</td>
<td>CNPS</td>
<td>BUY</td>
<td>20 1 gallon, 15 1.5 gallon</td>
<td>spring, fall</td>
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<td>Coastal Buckwheat</td>
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<td>5</td>
<td>Scribner Melaleuca</td>
<td>Black Sage</td>
<td>CNPS</td>
<td>BUY</td>
<td>12 4&quot; pots</td>
<td>winter, spring, summer</td>
<td>360</td>
<td>Lupine</td>
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<td>5</td>
<td>Spirea salicifolia</td>
<td>Hummingbird Sage</td>
<td>Gerry</td>
<td>SY</td>
<td>24 4&quot; or 1 gallon</td>
<td>winter, spring, summer</td>
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<td>Common Aster</td>
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<td>5</td>
<td>Symphyotricha californica</td>
<td>California Bee Plant</td>
<td>SBP/CNPS</td>
<td>16 4&quot; plants</td>
<td>$50.00</td>
<td>winter, spring</td>
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<td>Grindelia</td>
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<td><strong>SHRUBS</strong></td>
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<td>5</td>
<td>Artemisia californica</td>
<td>California Sycamore</td>
<td>CNPS</td>
<td></td>
<td></td>
<td>spring, fall</td>
<td></td>
<td>Ribes</td>
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<td>5</td>
<td>Baccharis pilularis</td>
<td>Coyote Brush</td>
<td>CNPS</td>
<td>Watershed</td>
<td>27 1 gallon, 10 5 gallon</td>
<td>spring, winter, summer, fall</td>
<td>467.25</td>
<td>Woolly Sunflower (Lizard's tail)</td>
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<td>5</td>
<td>Callistemon taysanus &quot;Dark Star&quot;</td>
<td>Dark Star Callisto</td>
<td>SBP/CNPS/Watershed</td>
<td>2 gallon</td>
<td>21 1 gallon, 20 2 gallon</td>
<td>$210.00</td>
<td>winter, spring</td>
<td>378</td>
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<td>Encelia farinosa x echinacea</td>
<td>Achoo Heath</td>
<td>CNPS</td>
<td>78 CNPS cutting/Waterhed 10</td>
<td>10 gallon</td>
<td>spring, summer</td>
<td>300</td>
<td>Purple needle grass</td>
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<tr>
<td>5</td>
<td>Frangula californica</td>
<td>CoRebey</td>
<td>CNPS</td>
<td>78 CNPS cutting/Waterhed 10</td>
<td>10 gallon</td>
<td>spring, summer</td>
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<td>Ribes</td>
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<td>Lupinus albifrons</td>
<td>Silver Bush Lupine</td>
<td>CNPS</td>
<td>80 CNPS cutting/Waterhed 10</td>
<td>10 gallon</td>
<td>spring, summer</td>
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<td>Ribes</td>
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<td>Lupinus arcturus</td>
<td>Yellow Bush Lupine</td>
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<td>80 CNPS cutting/Waterhed 10</td>
<td>10 gallon</td>
<td>spring, summer</td>
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<td>Ribes</td>
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<td>Minnula auriculata</td>
<td>Sticky Monkey Flower</td>
<td>CNPS</td>
<td>20/1 gallon</td>
<td>$200.00</td>
<td>winter, spring</td>
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<td>Ribes</td>
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<td>Ribes sanguineum var. glutinosum</td>
<td>Pink Flowering Current</td>
<td>CNPS</td>
<td>Watershed</td>
<td>10 1 gallon</td>
<td>winter, spring</td>
<td></td>
<td>Ribes</td>
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<td>Salvia hispida</td>
<td>Coast Gold Crown</td>
<td>CNPS</td>
<td></td>
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<tr>
<td>5</td>
<td>Rosa californica</td>
<td>California Wildrose</td>
<td>CNPS</td>
<td>Watershed</td>
<td>8 5 gallon</td>
<td>summer, spring</td>
<td>$240</td>
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</table>
PLANTING PLAN NOTES
SUNSET BOULEVARD –June 2020
SEPTEMBER–OCTOBER 2020
BUYING PLANTS
OCTOBER–DECEMBER 2020
SUNSET BOULEVARD – October through December 2020
SUNSET BOULEVARD – October through December 2020
SUNSET BOULEVARD - October through December 2020
SUNSET BOULEVARD - October through December 2020
SUNSET BOULEVARD – December 2020
LOGISTICS

- Time from inception of pilot block idea to completion:
  - 6 months
  - Started June 9, 2020
  - Final plants in the ground on Dec 19
- Total volunteers: 58
- Total volunteer hours for planting: 1142
- Number of native plants: ~1080
- Cost of plants: ~$6,590
  - The Chapter funded $4,000 and the rest was contributed by board members.
- We used plants that had been grown out from cuttings that we collected (with permit) from San Bruno Mountain.
- CNPS members contributed their home-grown natives.
SUNSET BOULEVARD - Lessons Learned

The Process:
- Have a dedicated PM to make the work path go smoothly.
- Expect the unexpected: Chert – what lies beneath. Pre-drilling holes is best.
- Sheet mulch with paper does help deter weeds but you need a steady group of volunteers in the spring to continue weeding the troublesome weeds (ehrharta, oxalis)
- Sheet mulch with rolls of paper before planting – harder to navigate around plants using cardboard boxes.

The Native Plant Garden:
- Need to water the first year.
- Watch out for weedy natives (lupine and bee plant). Cut back at end of season. Careful not to overwater.
- Sensitive native plants that are not geo-specific may not survive (‘Dark Star’ ceanothus)
- Consider other elements such as the wind and pine needles in your design. Pine needles are not conducive for plants because they contribute acidity to soil.
- Wildflower meadows are not a viable long-term design in and of themselves (for Sunset Boulevard).
- Design planting for year-round pollen for the various pollinators and animals in the gardens.
SUNSET BOULEVARD – 2022
SUNSET BOULEVARD – 2022
SUNSET BOULEVARD – 2022
SUNSET BOULEVARD – 2022
Success Attracts Success

- Recycled water to be installed within the next 2 years
- More gardeners (6) for Sunset Blvd.
- Part of the SF Climate Action Plan
- Sunset Boulevard is included in a Coastal Conservancy grant for the Sunset Natural Resiliency Project (SNRP) facilitated via San Francisco Estuary Institute (SFEI)
- City leaders sharing and supporting knowledge of biodiversity and native plants with their communities
- CNPS-YB Plantsgiving annual event
- New seed source
SUNSET BOULEVARD – 360 Video
Westwood Greenway

Restoring Native Habitat to the Los Angeles Urban Environment
Westwood Greenway
Restoring Native Habitat to the Los Angeles Urban Environment

An oasis of restored native habitat along the Metro E-Line in Los Angeles.
Why Plant California Natives?

- Biodiversity Crisis
- Water Savings
- Energy Savings
- Reduce Water Pollution
- Reduce Landfill Waste
- Reduce GHG Emissions
- Climate Change Adaptability
- Civic Pride and Cultural Identity
- Human Health and Happiness
Hotter Years Typically Have More Fires

Western U.S. Large Fires and May – September Temperatures

Data: Westerling, et al.; Climate Central, “The Age of Western Wildfires,” Fig. 9, September, 2012 - Updated 2019
“More drought creates a longer fire season or even a continuous fire season through the year.”

Craig Clements, San Jose State University
Wildfire Interdisciplinary Research Center
January 2022
The “Colorado” fire burned 687 acres in Big Sur in January.
The Dixie Fire, the second-largest fire in California’s history, destroyed most of the town of Greenville.
South Lake Tahoe, California
August 30, 2021

Six of the seven largest fires in California’s history have occurred since August 2020.
For every 1°C of warming, lightning strikes increase 10 – 12%
A “Freakish Siege” of nearly 14,000 lightning strikes ignited over 900 fires in California.

The CZU August Lightning Complex Fire, in Boulder Creek, California was one of the fires started by lightning.
Why Plant California Natives?

- Human driven climate change requires us to create urban sanctuaries in order to give biodiversity a fighting chance. All species in an ecosystem are connected.
- Native urban forests can play an essential role in species preservation.
- Only our natives have climate adaptation built into their DNA while also providing habitat ecosystem services.
- We can no longer afford to think of nature as “out there”.
- Only human hubris would conclude we know better than millions of years of evolution and should import plants from other regions to adapt to climate change.
Westwood Greenway

Restoring Native Habitat to the Los Angeles Urban Environment

• 150 years ago, nearly all the plants in Los Angeles were native.

• Today, in the 470 square miles that constitute the City of Los Angeles, less than 3% of the Street Trees are native.

• Every newly planted non-native street tree becomes an island of biodiversity sterility for centuries to come.

• California native tree options exist for every planting situation. Even so, many government and private programs continue to plant only non-native trees.

Street Trees
Advocacy

- There are many well-intentioned people in the position of making decisions who will not advocate for native plants either because they do not know to do so, or they have other priorities.

- There are also others who have a financial incentive to resist planting of natives.

- Reversing the inertia of 150 years of disastrous ecosystem replacement will require grassroots stakeholder pressure.

- Native plants are a potential issue of political agreement for conservatives, centrists, and progressives in a time of deep political division.

- This is the low-hanging fruit of the environmental movement. No other issue can produce tangible results for Los Angeles in the areas of water consumption, energy consumption, water pollution, climate change, waste reduction, human health, and environmental justice with no human suffering and no major expense.
1875 origins as the Los Angeles and Independence Railroad.

Crossing of Brown Canyon Creek, aka Mar Vista Creek
CASE STUDY

LA Native

1944 Developer Oddity Created an Opportunity
2009 Expo Line Phase Two
Westwood Greenway Waterworks
Pollution Remediation Advocacy
2009 Westwood Greenway Site
Native Plants Advocacy
Expo Authority Landscaping Plan included no natives.
After three years of stakeholder input asking for natives, Expo added two native plants to the list.
LA Native was formed to serve as a coalition umbrella for native plant advocacy.
2013 Westwood Greenway Groundbreaking
$5.5 Million in Construction Costs from LA Prop O and California Prop 84.
Westwood Greenway
Restoring Native Habitat to the Los Angeles Urban Environment
2013
Westwood Greenway
Restoring Native Habitat to the
Los Angeles Urban Environment

2015
Westwood Greenway
Restoring Native Habitat to the
Los Angeles Urban Environment

2017
Westwood Greenway
Restoring Native Habitat to the
Los Angeles Urban Environment
2019
Native Habitat Corridor

- Today Westwood Greenway is the showpiece in a corridor of native landscaping along the Metro E-Line, the longest strip of restored urban native habitat in the country on the light rail line with the highest ridership in the country.

- Only two years after planting California native plants along a strip of land that was repurposed for 150 years with non-native plants, butterflies, songbirds, and soil health have returned.
How to be Part of the Solution

Find a Project Worthy of Support
Get in Early and Stay the Course
Make Allies Wherever You Can

Become an Active Stakeholder in Government
Neighborhood Councils
Community Advisory Committees
City Agency Public Forums

Utilize Your Environmental Groups
Push for an Official Position on Natives
Make Natives Part of the Group Mission

Connect the Dots
Move the Needle Where Needed
Speak to Environmental Advocates
Require Candidates to Support Natives

PLANT CALIFORNIA NATIVES
GROWING TOGETHER

How the Orange County Native Seed Partnership is working to improve access to native plant material in Southern California

Matthew Garrambone
Irvine Ranch Conservancy
An Orange County where sufficient access to regionally appropriate native plant materials facilitates ecological restoration at a scope and scale needed to increase the resiliency, diversity, and functionality of its ecosystems.
To improve access to locally appropriate native plant materials for use on the Nature Reserve of Orange County (Reserve) and adjacent lands.
Nature Reserve of Orange County

- 38,000 acres
- Established 1996
- Non-profit and public land managers
- Natural Communities Coalition (NCC)
Central and Coastal Subregion NCCP/HCP
Habitat Restoration & Enhancement Plans

• Small scale, passive restoration (no seed addition)
• Targeted invasive control

• Landscape scale, active restoration (seed addition)
• Targeted invasive control
SEED PARTNERSHIPS

- Establish a network of partners that can share resources, knowledge, etc.
- Establish regional standards and best practices.
- Consolidate and streamline seed collection and bulking contracts.
- Facilitate new species and local genetics entering the commercial marketplace.
- Increase the quality and quantity of plant materials available to land managers and restoration practitioners.
OC NATIVE SEED PARTNERSHIP
Core Planning Team

Mendel Stewart & Danny Fry (Natural Communities Coalition)

Matt Major (Orange County Parks)

Matt Garrambone (Irvine Ranch Conservancy)

Sierra Smith (Sapsucker Consulting)

Julia Groebner, Diana Brand Ramirez, & Johnathan Dunn (AECOM)
ORGANIZATIONAL STRUCTURE

ADMINISTRATIVE        COORDINATING        ADVISORY
STEERING COMMITTEE
DEFINING PARTICIPATION

MOU
- Non-binding
- General

Service agreement
- Formal
- Specific
EXPENSES

Start up expenses
- Seed storage

Recurring expenses (demand dependent)
- Seed collection
- Seed bulking

Recurring expenses (demand independent)
- Program coordination
PRODUCTS

- Orange County regional ecotypes
  - Based on Bowers et al. 2014
  - Guides collection - not transfer

- Coastal sage scrub, grassland/prairie, and riparian species

- Species TBD
REALIZING THE VISION

Land Managers

Seed Producers

Seed Users
THANK YOU!

Matthew Garrambone
mgarrambone@irconservancy.org
**Empirical zone**
- focused on single species
- based on species specific research and/or genetic data

**Provisional zone**
- focused on multiple species
- based on environmental data/modeling

*Bowers et al., 2014*
Closing the Protection Gap for Conglomerate Mesa and Centennial Flat
Western Joshua Tree Refugia: elevation and latitude

Photo: Bob Wick
Inyo Rock Daisy

Perityle inyoensis

- 1B.2 Rank
- BLM Sensitive Species
- February 2022: listing petition
- August 2022: candidate for threatened or endangered species status.

Photos: Patrick Donnelly, Duncan Bell
Badger Flat threadplant

*Nemacladus inyoensis*

- Formally described in 2020
- Only emerges with adequate precipitation
- Southern extent of the known range
Other special plants

Greasewood Dune system (Unusual Plant Assemblage)

Pinyon Mesa buckwheat, *Eriogonum mensicola*

Jaeger’s hesperidanthus, *Hesperidanthus jaegeri*

Mojave Fishhook Cactus, *Sclerocactus polyancistrus*

Photos: Maria Jesus, Duncan Bell
Cultural, Spiritual and Recreation Significance

• Land used for traditional and ceremonial practices by local Paiute and Shoshone people;

• A place of solitude, with exceptional opportunities for scenic touring, camping, hiking, photography and dark sky viewing.

Geological Significance

• Conglomerate Mesa contains an unusually complete geological record;

• Limestone formations between the Inyo and Coso Mountains contain abundant marine fossils;

• Three genera and twelve species of ocean dwelling shelled organisms known nowhere else in the world.
Mining Threats

• 11 companies since 1980s
• K2/Gold Mojave Precious Metals, previous exploration completed in 2020 via helicopter
• BLM requiring an EIS for second phase
A vision for future protection

- Seeking Mineral Withdrawal and Tribal co-management
- Create connectivity between existing protected areas;
- Protects the extent of W. Joshua tree woodland and other plant communities;
- Initial draft boundary developed through field visits, data collection, tribal input and coalition consensus process
Effective coalition building

• Know who uses the land and for what;
• Invite tribal members into decision making spaces;
• Bring in local volunteers;
• Expand your network to include other interests: outdoor business, recreation, etc.;
• Link your coalition to state and federal 30x30 goals;
• Bring people out on the land;
Acknowledgements

• The local people of the Lone Pine Paiute Shoshone and Timbisha Shoshone Tribes who continue to steward this place and fight for it’s protection

• Coalition member Maria Jesus and the invaluable research and expertise that informs our campaign*

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Important Plant Areas
IMPORTANT PLANT AREAS

• What are Important Plant Areas, and how are they a solution to current problems?

• How do we model Important Plant Areas?

• What are our Preliminary Results?

• Where do we go next?
Background and Context

Biodiversity is on the decline on a global scale

• Global Strategy for plant conservation first adopted in 2000
  • Called for protecting 50% of the most important areas for plant conservation
  • PlantLife International published criteria for identifying Important Plant Areas in 2002
Background and Context

California is a Global Biodiversity Hotspot

- More than 6500 taxa, approximately 25% of which are found nowhere else
- East Bay Chapter of CNPS publishes assessment of Botanical Priority Conservation Areas in 2006
- Governor’s Office issues Executive Order declaring September 7 CA Biodiversity Day, and calling for implementation of the California Biodiversity Initiative
But there are competing demands for resources...
What’s being done?

The Global Stage: Convention on Biological Diversity

- Adopted to address biodiversity loss as part of the 1992 Rio Earth Summit
- Call for a Global Strategy for Plant Conservation in 2000 (during COP 5)
  - Target 5 updated in 2010: protection of 75% of the most important areas for plant diversity of each ecological region by 2020
What’s being done?

30x30

~6 million acres to be conserved by 2030

SB100

Need for mitigation lands and appropriate siting for renewable energy
Opportunities for Permanent Protections and Mitigation Partnerships
IPAs as a Solution

- Centralization of existing data
- Digitizing expert information at regional workshops
- Modelled and surrogate data to “fill in the blanks”
- Highlighting survey needs for data poor areas
- Transparent and collaborative process to facilitate adoption by policy makers, regulators, land managers, and conservation advocates - YOU

cnps.org
Complementing Existing Regional Conservation Efforts

IPAs seek to enhance the conservation vehicle rather than reinventing the wheel:

- Filling information gaps
- Building bridges with regional conservation
- Incorporating feedback from regional stakeholders
Important Plant Areas: A Timeline

1992
Rio Earth Summit establishes Convention on Biological Diversity

2000
Global Strategy for Plant Conservation calls for conserving Important Plant Areas

2002
Plant Life International creates criteria to identify Important Plant Areas

2006
CNPS East Bay Chapter Develops Botanical Priority Preservation Areas Maps

2010
Global Strategy for Plant Conservation goals updated and UN Decade on Biodiversity Begins

2013 - 2017
CNPS holds Charrette style round tables to identify Important Plant Areas in the DRECP region

2016 - 2017
CNPS Begins Important Plant Areas Pilot project

2018
CNPS formally creates Important Plant Areas Program and Governor Brown signs Executive Order to implement California Biodiversity Initiative

2022
Draft IPAs Released!
HOW DO IMPORTANT PLANT AREAS WORK?

1. Data Gathering
2. Expert Workshops
3. IPA Modeling
4. Output Analysis
5. External Review
6. Reiteration and Further Review
Important Plant Areas

Rare Species
- Set Threshold
- Count of unique rare species within each 1km² reporting unit
- Rare Species Location Data
  - CNDDDB, RPI, CCH, CalFlora/iNaturalist, SDMs, Expert Workshop Input

Rare Vegetation and Habitat Features
- Set Threshold
- Sum of rare vegetation coverage within each 1km² reporting unit
- Rare Vegetation Location Data
  - VegCAMP, Critical Habitat, CalVEG, SSURGO, Geology, Expert Workshop Input

Output Categories

Botanically Significant Areas
- Set Threshold
- Count/Sum of unique features each 1km² reporting unit
- Native Species and Habitat Diversity Metrics
- Ethnobotanical/Cultural Areas

Delineation Thresholds

Metrics

Inputs

Data Sources

CNDDB, RPI, CCH, CalFlora/iNaturalist, SDMs, Expert Workshop Input

CCH, SDMs, Land Facets, Lineage Survival Time, Expert Workshop Input

Workshop Input from Indigenous Communities
Criterion A
The site holds significant populations of one or more species that are of global or regional conservation concern.

Criterion B
The site has an exceptionally rich flora in a regional context in relation to its biogeographic zone.

Criterion C
The site is an outstanding example of a habitat or vegetation type of global or regional plant conservation and botanical importance.
16.8 million IPA Acres and
14.5 IPA Acres are within California
~6 million IPA Acres are considered conserved by the 30x30 pathways document

~8.5 million IPA Acres present opportunities for CA to more than meet its goal to increase conserved lands by roughly 6 million acres by 2030
Who can use IPAs

• NGOs and Advocacy Groups:
  • Proactive conservation on a Regional Scale
• Land Conservancies and Conservation Planners:
  • Transparent and data driven tool to guide land acquisition and use decisions
• Regulators and Policy Makers:
  • Increased transparency in resource allocation guided by stakeholders
  
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