STATE PARKS
INVASIVE WEED MANAGEMENT

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TOPICS

- Program overview
- Example projects
- Partnerships
STATE PARKS OVERVIEW

- 1.5 million acres
- 279 Parks
- 70 Parks on closure list identified in May 2011

South Yuba River SP – on closure list
OUR MISSION

To provide for the health, inspiration and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation.

Sugar Pine Point SP
Natural Resources Funding FY 2010/11

Backlog

$240 million

Stewardship Projects (Bond Funds)

Approved Budget

$2.4 m

On-Going Maintenance

Documented Program need

$16 million

Minimum needed to halt downward trend in the health of primary natural resource values

$9 million

Approved Budget

$2.1 m

Approved Budget

$16 million

$9 million

$2.1 m
ANNUAL NATURAL RESOURCE FUNDING

- Invasive Plant Control: 38%
- Inspections, Inventory, Monitoring: 18%
- Special Species Management: 8%
- Community Restoration (fire, succession): 20%
- Invasive Animal Control: 5%
- Landform Restoration / Erosion Control: 11%
BACKGROUND ON WEED MANAGEMENT

Italian thistle mowing

Cape ivy removal
STATE PARKS DIRTY DOZEN

- Cape ivy (*Delairea*)
- Tamarisk
- Ice plant
- European beachgrass
- Yellow starthistle
- Giant reed (*Arundo*)

- Wild fennel
- Italian thistle
- Perennial pepperweed
- Tree of Heaven
- Veldt grass (*Ehrharta* spp.)
- French broom
MAPPING WITH DPR-WIMS

Mapping Scotch broom at Folsom Lake SRA
<table>
<thead>
<tr>
<th>30 WEEDS TRACKED USING DPR-WIMS</th>
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<tbody>
<tr>
<td><strong>Tree of Heaven</strong>*</td>
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<tr>
<td><strong>European beachgrass</strong></td>
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<tr>
<td><strong>Artichoke thistle</strong></td>
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<td><strong>Giant Reed</strong></td>
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<tr>
<td><strong>Black mustard</strong> (<em>Brassica nigra</em>)</td>
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<td><strong>Brooms</strong></td>
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<td><em>(Genista, Cytisus, Spartium)</em></td>
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<td><strong>Cape ivy</strong></td>
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<td><strong>Castor bean</strong></td>
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<td><strong>Diffuse knapweed</strong></td>
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<td><strong>English ivy</strong></td>
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<td><strong>Gorse</strong></td>
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<td><strong>Harding grass</strong></td>
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<td><strong>Licorice-plant</strong> (<em>Helichrysum</em>)</td>
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<td><strong>Himalayan blackberry</strong></td>
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<td><strong>Hoary cress</strong> (<em>Cardaria draba</em>)</td>
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<td><strong>Iceplant</strong></td>
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<td><strong>Italian thistle</strong></td>
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<td><strong>Jubata/Pampas Grass</strong></td>
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<td><strong>Milk thistle</strong></td>
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<td><strong>Perennial pepperweed</strong></td>
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<td><strong>Periwinkle</strong> (<em>Vinca</em>)</td>
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<td><strong>Tamarisk</strong></td>
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<td><strong>Tocalote</strong></td>
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<td><strong>Veldt grass</strong></td>
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<tr>
<td><strong>Wild fennel</strong></td>
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<tr>
<td><strong>Yellow starthistle</strong></td>
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*Species in yellow are “dirty dozen”*
SUMMARY OF NON-WIMS DATA SETS COLLECTED

• Collected in a number of formats
• Uploaded to Calflora with help from Cal-IPC!!
• Some interesting findings
EXAMPLE PROJECTS

- European beachgrass -- overview
- Central Valley riparian restoration
EUROPEAN BEACHGRASS
EUROPEAN BEACHGRASS MANAGEMENT METHODS

Heavy equipment

Prescribed fire, followed by herbicide

Hand pulling

Often Districts use a combination of methods

Sunset State Beach

Little River State Beach

Mackerricher SP
Mechanical removal methods pilot at Little River SB

- Tested three methods with heavy equipment

- Preferred method was Dozer-Grade as compared to excavation

- Also measured sand movement

Significant cost difference in heavy equipment vs. hand removal

(\(~\$5-6k\) compared to \$30k)

New large project starting at Prairie Creek Redwoods SP
MENDOCINO DISTRICT

Methods:
• Burn in fall, then spray with imazapyr and glyphosate
• Hand removal also done in sensitive areas
RUSSIAN RIVER DISTRICT --
BODEGA DUNES RESTORATION

- Size of restoration area: 300 acres
- Restoration partners: Bodega Marine Lab, NPS, Local RCD
- Methods planned: Combination of mechanical, hand and chemical
SANTA CRUZ, MONTEREY AND SAN LUIS OBISPO DISTRICTS

Before

During

After
RIPARIAN RESTORATION
CENTRAL VALLEY

Woodson Bridge SRA

Caswell Memorial SP
WOODSON BRIDGE SRA AND CASWELL MEMORIAL SP

Woodson Bridge natural area
219 acres on Sacramento River in Tehama County

Caswell Memorial SP
258 acres on Stanislaus River in San Joaquin County
WEEDS MANAGED AT WOODSON BRIDGE

- Fig (*Ficus carica*)
- Prunus rootstock
- Osage orange (*Maclura*)
- Giant reed
- Periwinkle (*Vinca*)
- Whitetop (*Cardaria draba*)
- Tree of Heaven (*Ailanthus*)
- Pokeweed (*Phytolacca*)
- Himalayan blackberry

Fig and Pokeweed major concerns in forest understory
POKEWEED
(Phytolacca americana)

- New invader in Woodson Bridge SRA riparian understory
- Also reported at DFG’s Gray Lodge Wildlife Area, Butte County
WEEDS MANAGED AT CASWELL SP

- Fig
- Milkthistle (*Silybum*)
- Tree of Heaven
- Giant reed
- Himalayan blackberry
- Mulberry (*Morus*)
- Hybrid grape (*Vitis*)
- Italian thistle
- Red sesbania (1 plant)

Fig also dominates forest understory
SOMETIMES WHEN YOU REMOVE THE WEEDS YOU GET SOMETHING YOU DIDN’T EXPECT

Bodega Head native grasses dominate after ice plant removal

Silver Strand SB

Phacelia stellaris uncovered after ice plant removal
Año Nuevo SP, former gorse patch now covered with blue-eyed grass and natives
PARTNERSHIPS

- Weed management areas (CDFA)
- Weed-free interagency collaboration
- Cal-IPC BMP development for land managers and transportation corridors
- Early detection with BAEDN and others
- DFG Lands Program
WEED MANAGEMENT AREAS

• Parks staff are active participants in WMAs throughout the state
• WMAs funded small projects on Parks in last several years

A-Listed Noxious Weed Biddy
Biddy at Salt Point SP
WEED-FREE COLLABORATION

• Interagency effort with NGOs and private industry
• Hay (forage) and straw
• Erosion control materials
• Gravel, fill and construction materials
• First effort list of weed free forage producers (UC Coop Extension & CDFA)
QUESTIONS?