SANTA CRUZ COUNTY REGIONAL CONSERVATION INVESTMENT STRATEGY

Technical Advisors Meeting

June 25, 2020
WELCOME AND INTRODUCTIONS
Meeting Agenda

- Technical Advisor Roles and Goals
- RCIS Background
- Review Data and Plans
- Conservation Element Selection Process
RCIS Program Components

Regional Conservation Assessment (RCA)
Purpose: Assess conservation opportunities at an ecoregional scale

Regional Conservation Investment Strategy (RCIS)
Purpose: Develop a voluntary conservation strategy to inform conservation investments and advance mitigation

Mitigation Credit Agreement (MCA)
Purpose: Provide an advance mitigation tool for use on public and private lands, to offset CESA, CEQA, LSA, & other impacts
RCIS Essentials

• Developed by a public agency and approved by CDFW
• Voluntary, non-regulatory
• Non-binding on land use authorities
• Developed to complement HCPs, NCCPs, banks
• Intended to be done quickly
• Good for 10 years, extendable
• Required in order to develop CDFW mitigation credit agreements
• CDFW program but goal is to address other resource agency needs to make plans broadly applicable
RCIS Components

- Ecological assessment of focal species & other conservation elements
- Pressures/stressors (e.g. climate change, invasives)
- Goals and objectives
- Identify conservation & enhancement actions
  - Consistent with NCCP, HCP, RCA, and recovery plans
  - Major foreseeable development including infrastructure projects
  - Assess existing protected lands
  - Summary of banks in RCIS area
  - Opportunities for working lands conservation
Implementation Overview

RCIS can/should inform strategic conservation as part of

• Regional prioritization and road map for critical future actions
• Guide government and private grants/philanthropy
• Focus mitigation funding, including advance mitigation
Mitigation Credit Agreements

- Based on actions in an approved RCIS
- Anyone may apply for an MCA
- Habitat protection, restoration, expansion, and enhancement
- On public or private land
- Offset impacts under CESA, CEQA, LSA (and possibly other regs/laws)
- Offset permanent and *temporary* impacts
- Used to implement advance mitigation
- Excess project mitigation available as credits, which are transferable
- Consistent with CDFW’s Banking Program
Our Regional Conservation Investment Strategy Isn’t….

• An effort to re-invent the wheel
• An effort to collect new data
• A new set of laws or regulations governing local land-use
• A new set of land-use restrictions imposed by CDFW and/or other wildlife agencies.
• A permit enabling development or restoration projects that supplants existing state, federal or local environmental regulations
Foundational Principles

- **Science Based**: uses best available information
- **Integrative**: builds on prior processes and plans for the region
- **Locally Developed**: developed with experts in the region (**you!**)
- **Countywide**: will cover resources across the entire County
- **Accessible**: contents are widely accessible and usable (incl. pithy not wordy)
- **Efficient**: developed using existing content from approved RCIS
- **Strategic**: prioritizes actions of greatest benefit (protection and restoration/enhancement)
- **Implementable**: identifies actions of high direct conservation value
- **Forward Looking**: links to current state initiatives (Cutting the Green Tape)
Santa Cruz County RCIS will be UNIQUE because…

Building on tons of existing data and rich history of conservation planning:

• Long history of collaborative conservation
• 9+ Watershed Plans,
• Integrated Watershed Restoration Program (IWRP)
• Amphibian In-Lieu Fee Program w/USFWS
• Land Trust’s Conservation Blueprint
• Transportation Advance Mitigation MOU
• SC Co Steelhead and Coho Conservation Strategy
• Conceptual Area Protection Plans
• City of Santa Cruz’s draft HCPs
• County Steelhead Monitoring Program
• Depth and breadth of local biological knowledge
Santa Cruz County RCIS will be UNIQUE because...

Linked to:
- Santa Clara RCIS (complete)
- Monterey RCIS (in process)

Greater focus on ecological restoration and enhancement on protected lands vs acquiring more land.
Schedule Overview

Characterize Existing Conditions and Identify Conservation Elements
(April – September)

Assess Pressures and Stressors
Draft Conservation Goals, Objectives and Actions
(September 2020 – January 2021)

Develop Admin Draft RCIS
(January – April 2021)

Revise RCIS
Public Workshop and Review
(April – August 2021)

Finalize RCIS
(September - December 2021)

Technical Advisor Input
PLANNING
Existing Plans

Local
- Conservation Blueprint for Santa Cruz County
- Sandhills Conservation and Management Plan
- Conceptual Area Protection Plans (CAPPs)
  - Santa Cruz Mountains Redwoods, Santa Cruz Mountains Linkages, Sandhills, Long-Toed Salamander, Watsonville Wetlands
- Healthy Lands and Healthy Economies
- Watershed Enhancement Plans
  - Aptos Creek, Arana Gulch, San Lorenzo River, San Vicente Creek, Pinto Lake, Lower Pajaro River, Soquel Creek, Scotts Creek, Watsonville Sloughs
- Integrated Regional Water Management Plan

HCPs (no NCCPs)
- Draft City of Santa Cruz Aquatic HCP
- Draft City of Santa Cruz Terrestrial HCP
- Interim Programmatic HCP for Mount Hermon June beetle and Ben Lomond spineflower
- PG&E Vegetation Management HCP
- Project specific HCPs
  - 13 Mount Hermon June beetle
  - 4 California red-legged frog
  - 1 Santa Cruz tarplant
  - 1 Santa Cruz long-toed salamander

Regional/Statewide
- State Wildlife Action Plan
- Conservation Lands Network (2.0)
- 20 Recovery Plans for Federally Listed Species
- Central Coastal Basin Plan
- State Wildlife Action Plan
- Conservation Lands Network (2.0)
- 20 Recovery Plans for Federally Listed Species
- Central Coastal Basin Plan
Spatial Data Themes

Existing Conditions
- Vegetation and Landcover
- Soils
- Aquatic Resources
- Working Lands
- Existing Infrastructure

Planning
- Ecoregions
- Protected Areas
- Land Use
- Mitigation Areas
- New Infrastructure

Focal Species and other Conservation Elements
- Occurrences
- Critical Habitat
- Range/Distribution
- Habitat Connectivity

Pressures and Stressors
- Planned Land Use
- Climate change
- Sea-level Rise
- Invasive Species
- Fish Passage Barriers
Vegetation and Land Cover: Proposed Methods

- Conservation Blueprint Vegetation Layer
  - CALVEG
  - Local Enhancements
    - Maritime chaparral
    - Sandhills
    - Santa Cruz cypress
- MidPen Vegetation (~2,500 acres)
- Sandhills adjustments/refinements
- Cypress adjustments/refinements
- CARI Wetlands
  - Waters
  - Wetlands
  - Beach, dune, and rocky shore
- Update urban and cultivated areas

Overlays
- Streams (County)
- Old Growth and older second growth (Save-the-Redwoods League and Sempervirens Fund)
## Blueprint Vegetation Types

+ Old growth forests (SRL and Sempervirens Fund)
+ Beach, Dune, Rocky Shore and Cliffs (CARI)
CONSERVATION ELEMENTS
**RCIS Conservation Element Definitions**

- **Focal:** Sensitive species that are **identified and analyzed** in an RCIS and will benefit from conservation actions and habitat enhancement actions set forth in the RCIS.

- **Other Conservation Elements:** other elements **needing conservation** within the RCIS area, and that would help **achieve a comprehensive, cohesive, and connected** regional conservation outcome. Examples:
  - major and unique natural communities
  - Biodiversity
  - habitat connectivity
  - ecosystem functions
  - water resources

- **Non-Focal:** Species **associated with a focal species or other conservation element** and will **benefit from conservation actions** and habitat enhancement actions set forth in the RCIS.
Focal Species

- Species that will benefit from conservation and habitat enhancement
- Sensitive species as well as other species
- Representative of:
  - all major taxonomic groups
  - unique natural communities
  - ecosystem functions
- Characterize conservation needs of Santa Cruz County
- Link Santa Cruz RCIS to Santa Clara and Monterey RCISs
- Eligible for mitigation credits in an MCA
Other Conservation Elements

• needing conservation within the RCIS area
• inclusion would help to achieve a comprehensive, cohesive, and connected regional conservation outcome
• Eligible for mitigation credits in an MCA

Examples Include

• major and unique natural communities
• biodiversity
• habitat connectivity
• ecosystem functions
• water resources
• Working lands
Non-Focal Species

- Associated with a focal species or other conservation elements
- Will benefit from the conservation actions
- Eligible for mitigation credits in an MCA

Example: Santa Clara County RCIS

Western pond turtle
associated with aquatic and upland habitats of Focal Species

Focal Species

- California red-legged frog
- Tri-colored blackbird
- Central California Coast steelhead

Non-Focal Species

Example: Santa Clara County RCIS
Planning Framework for Focal Species and Other Conservation Elements

1. Distribution and habitat
2. Key aspects of life history/ecology
3. Stressors and pressures (incl. Climate Change Vulnerability)
4. Conservation Investment Strategy
   ▪ Goals
   ▪ Objectives (at least one quantitative)
   ▪ Actions
   ▪ Conservation Priorities
3.2.17 Steelhead (South-Central California Coast Distinct Population Segment (DPSI)) (*Oncorynchus mykiss irideus*)

**Status**
- Federally Threatened

**Ecological Requirements**
- **RCIS Regions:** Salinas River and Associated Corridor, Carmel River, Nacimiento River, Pajaro River (NMFS 2013)
- **RCIS Natural Communities:** River, Riparian (CDFW 2019; NMFS 2013)
- Highly migratory, adults spawn in coastal watersheds and juveniles rear in freshwater or estuarine habitats prior to migrating to the sea (NMFS 2013, 2016).
- Prefers cool, clear streams with abundant cover and well-vegetated banks, with relatively stable flows. Spawning habitat includes pool and riffle complexes and cold, gravelly streambeds (NMFS 2013)
- Full species account available: California Natural Diversity Database, RareFind 5 (CDFW 2019) and the National Marine Fisheries Service 5-Year Review Summary and Evaluation of South-Central California Coast Steelhead Distinct Population Segment (NMFS 2016)
- **RCIS Conservation Priority:** High (Federally listed, near endemic to RCIS area, representative of sensitive riparian corridors and aquatic connectivity)

**Associated Non-Focal Species**
- Least Bell’s vireo (*Vireo bellii pusillus*)
- Little willow flycatcher (*Empidonax traillii brevipes*)
- Clare’s pogonyme (*Pogonyle clarea*)
-eelgrass (*Zostera marina*)

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**Table 3-32. Steelhead Summary of Climate Change Vulnerability Ranking (Moyle et al. 2012)**

<table>
<thead>
<tr>
<th>Baseline (present day) Vulnerability²</th>
<th>Climate Change Vulnerability²</th>
<th>Combined Vulnerability Score⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approaching Extinction</td>
<td>Highly Vulnerable</td>
<td>On Path to Extinction</td>
</tr>
</tbody>
</table>

**Source:** Moyle et al. 2012.

**Table 3-33. Steelhead Summary of Climate Change Vulnerability Ranking (Croziler et al. 2019)**

<table>
<thead>
<tr>
<th>Sensitivity</th>
<th>Exposure</th>
<th>Overall Vulnerability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Life History</td>
<td>Stream Temperature</td>
<td>Overall Sensitivity</td>
</tr>
<tr>
<td>Juvenile Freshwater Stage</td>
<td>Summer Water Deficit</td>
<td>Overall Exposure</td>
</tr>
<tr>
<td>Estuary Stage</td>
<td>Flooding</td>
<td>Adaptive Capacity</td>
</tr>
<tr>
<td>Marine Stage</td>
<td>Hydrologic Regime</td>
<td>Overall Vulnerability</td>
</tr>
<tr>
<td>Adult Freshwater Stage</td>
<td>Sea Level Rise</td>
<td></td>
</tr>
<tr>
<td>Cumulative Life-Cycle Effects</td>
<td>Sea Surface Temperature</td>
<td></td>
</tr>
<tr>
<td>Hatchery Influence</td>
<td>Ocean Acidification Exposure</td>
<td></td>
</tr>
<tr>
<td>Other Stressors</td>
<td>Upwelling</td>
<td></td>
</tr>
<tr>
<td>Population Viability</td>
<td>Ocean Currents</td>
<td></td>
</tr>
<tr>
<td>Ocean Acidification Sensitivity</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Croziler et al. 2019
## Goals, Objectives and Actions

<table>
<thead>
<tr>
<th>Goal</th>
<th>Objective</th>
<th>Threats</th>
<th>Co-Benefits</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCCCS Goal 1: Promote persistence of steelhead south-central California coast DPS populations in the RCIS area through protection, restoration, and enhancement of habitat.</td>
<td>SCCCS Objective 1.2: Enhance occupied and suitable steelhead south-central California coast DPS habitat throughout the RCIS area, focusing on NMFS-designated Core Populations 1, 2 and 3 and throughout the RCIS area. Measure progress towards achieving this objective by the number of acres of Core Population and RCIS area riparian, riverine, and estuary habitat enhanced and occupied by steelhead.</td>
<td>• Modifications to natural flow regimes (e.g., water storage, withdrawal, conveyance, and diversions for agriculture, flood control, domestic use, and hydropower) • Climate change</td>
<td>• Water quality • Climate change resilience • Other focal/non-focal species • Biodiversity</td>
<td>SCCCS 1.2.1: Develop and implement operating criteria to ensure the pattern and magnitude of groundwater extractions and water releases, including bypass flows around diversions, from Uvas Dam, Pacheco Dam, Salinas Dam, San Antonio Dam, Nacimiento Dam, San Clemente Dam, Los Padres Dam, Arroyo Seco, Lower Salinas River, San Jose Creek, Little Sur River, Big Sur River to provide essential habitat functions (NMFS 2013).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Habitat loss, degradation, fragmentation • Climate change</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Water quality • Climate change resilience • Other focal/non-focal species • Biodiversity</td>
<td>SCCCS 1.2.2: Enhance estuarine rearing habitat, including the management of artificial sandbar breaching at river's mouth and enhancement of supplemental water in NMFS-designated Core Population 1, 2, and 3 watersheds and throughout the RCIS area (NMFS 2013).</td>
<td></td>
</tr>
</tbody>
</table>
Conservation Element Selection Process

1. Assemble list of rare species
2. Revise based on stakeholder review
3. Apply RCIS selection criteria
4. Draft conservation elements
   - Species meeting criteria will exceed the RCIS's capacity
   - We will need to be strategic
5. Finalize conservation elements
   - Input from stakeholders and technical advisors

Focal and Non-Focal Species List

- Listed
- Climate Vulnerable
- Wide-ranging
- Major Taxon Groups
Identify Rare Species

- Efficiently compile a list of rare and endemic species
- Use best available scientific information
- Utilize existing data sources
- Refine based on stakeholder and technical advisor review
## Rare Species Summary

<table>
<thead>
<tr>
<th>Taxonomic Group</th>
<th>ESA and/or CES (incl. FP)</th>
<th>Other Special Status (FSC, SSC, or CRPR List)</th>
<th>Statusless</th>
<th>Total</th>
<th>Endemic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plants</td>
<td>16</td>
<td>76</td>
<td>23</td>
<td>115</td>
<td>17</td>
</tr>
<tr>
<td>Invertebrates</td>
<td>5</td>
<td>1</td>
<td>25</td>
<td>30</td>
<td>17</td>
</tr>
<tr>
<td>Fish</td>
<td>5</td>
<td>1</td>
<td>4</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Amphibians</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Reptiles</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Birds</td>
<td>12</td>
<td>18</td>
<td>18</td>
<td>49</td>
<td>0</td>
</tr>
<tr>
<td>Mammals</td>
<td>2</td>
<td>8</td>
<td>7</td>
<td>17</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>46</strong></td>
<td><strong>110</strong></td>
<td><strong>81</strong></td>
<td><strong>237</strong></td>
<td><strong>35</strong></td>
</tr>
</tbody>
</table>

Important: Focal species may include non-rare species
Approach to Preliminary List of Conservation Elements

• Create an **efficient but comprehensive** conservation strategy to ‘cover’ all of the conservation values
  – Account for **all endemic species**
  – Select regional species for which Santa Cruz County is important and where **actions can be impactful**
  – Avoid redundancy/ **focus planning**
  – Anticipate **mitigation needs** and ensure mitigation species eligible for MCAs
  – Make ties to other RCISs, where appropriate

• **Iterative analysis of all three categories collectively**
  – Look for ‘gaps’
  – Not conducive to simple scoring system
Conservation Elements

- Focal Species
- Non-Focal Species
- Cobenefits
- Aquatic Systems
- Native Plant Communities
- Other Bio Conservation Values
- Other Conservation Elements
Focal Species in other RCISs that are also in Santa Cruz County

- Congdon's tarplant
- Monterey spineflower
- Monarch butterfly
- California brackishwater snail
- Tidewater goby
- Steelhead - central California coast DPS
- Steelhead - south-central California coast DPS
- California tiger salamander
- Santa Cruz long-toed salamander
- Foothill yellow-legged frog
- California red-legged frog
- Blainville's horned lizard
- Tricolored blackbird
- Burrowing owl
- Western snowy plover
- Mountain lion
Questions to Consider when Adding Focal Species or OCEs

• Does it require **unique considerations** from the proposed conservation elements?
  – Different habitat requirements
  – Unique life history or ecology
  – Different conservation needs (habitat protection, restoration, management)

• Would the overall conservation strategy differ if we add it?

• Would a RCIS based on the existing conservation elements not be sufficiently detailed to support mitigation credit agreements?

• Can the new species or OCE replace an existing one and have a net benefit to the strategy?
Preliminary Other Conservation Elements

- Beach, Dune, Rocky Shore and Cliffs
- Karst caves
- Coastal prairie
- Maritime chaparral
- Sandhills
- Water resources (wetlands and waters of the State)
- Connectivity
- Working lands
# Preliminary Focal Species List (n=22)

<table>
<thead>
<tr>
<th>Taxonomic Group</th>
<th>Common Name</th>
<th>General Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Monterey pine</td>
<td>Monterey Pine Forest</td>
</tr>
<tr>
<td></td>
<td>robust spineflower</td>
<td>grassland/oak woodland</td>
</tr>
<tr>
<td></td>
<td>Santa Cruz cypress</td>
<td>cypress forest</td>
</tr>
<tr>
<td></td>
<td>Santa Cruz tarplant</td>
<td>coastal prairie</td>
</tr>
<tr>
<td></td>
<td>Santa Cruz wallflower</td>
<td>sandhills</td>
</tr>
<tr>
<td></td>
<td>Schreiber's manzanita</td>
<td>maritime chaparral</td>
</tr>
<tr>
<td></td>
<td>Scotts Valley polygonum</td>
<td>coastal prairie</td>
</tr>
<tr>
<td><strong>Invertebrates</strong></td>
<td>Monarch butterfly</td>
<td>Non-native Tree</td>
</tr>
<tr>
<td></td>
<td>Mount Hermon June beetle</td>
<td>sandhills</td>
</tr>
<tr>
<td></td>
<td>Ohlone tiger beetle</td>
<td>coastal prairie</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td>coho salmon - central California coast ESU</td>
<td>streams</td>
</tr>
<tr>
<td></td>
<td>steelhead - central California coast DPS</td>
<td>streams</td>
</tr>
<tr>
<td></td>
<td>steelhead - south-central California coast DPS</td>
<td>streams</td>
</tr>
<tr>
<td></td>
<td>Tidewater goby</td>
<td>lagoons</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td>California red-legged frog</td>
<td>ponds/stream/upland</td>
</tr>
<tr>
<td></td>
<td>Santa Cruz long-toed salamander</td>
<td>ponds/oak woodlands</td>
</tr>
<tr>
<td><strong>Birds</strong></td>
<td>Marbled murrelet</td>
<td>old, complex forests</td>
</tr>
<tr>
<td></td>
<td>Tricolored blackbird</td>
<td>ponds/agricultural lands</td>
</tr>
<tr>
<td></td>
<td>Western snowy plover</td>
<td>dunes</td>
</tr>
<tr>
<td></td>
<td>Yellow Warbler</td>
<td>riparian</td>
</tr>
<tr>
<td><strong>Mammals</strong></td>
<td>Mountain lion</td>
<td>most upland</td>
</tr>
<tr>
<td></td>
<td>Townsend's big-eared bat</td>
<td>hardwood and conifer forests</td>
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<tr>
<td>Vegetation Type</td>
<td>Acres</td>
<td>Conservation Elements</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---------</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>Chamise</td>
<td>2053.7</td>
<td>Mountain lion</td>
</tr>
<tr>
<td>Coast Live Oak</td>
<td>19894.8</td>
<td>Robust spineflower, Mountain lion</td>
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<tr>
<td>Coastal Mixed Hardwood</td>
<td>5942.6</td>
<td>Mountain lion</td>
</tr>
<tr>
<td>Coastal Scrub</td>
<td>13177.7</td>
<td>Mountain lion</td>
</tr>
<tr>
<td>Dunes</td>
<td>361.9</td>
<td>Western Snowy Plover</td>
</tr>
<tr>
<td>Grasslands</td>
<td>15145.1</td>
<td>Coastal Prairie OCE, Santa Cruz Tarplant, Scotts Valley Polygonum, Ohlone Tiger Beetle</td>
</tr>
<tr>
<td>Knobcone Pine</td>
<td>6139.0</td>
<td>Maritime Chaparral OCE</td>
</tr>
<tr>
<td>Maritime Chaparral</td>
<td>8120.8</td>
<td>Schreiber's manzanita, Maritime Chaparral OCE</td>
</tr>
<tr>
<td>Monterey Pine</td>
<td>703.4</td>
<td>Monterey pine</td>
</tr>
<tr>
<td>Pacific Douglas-Fir</td>
<td>7367.5</td>
<td>Mountain lion, Townsend’s big-eared bat</td>
</tr>
<tr>
<td>Redwood</td>
<td>123386.3</td>
<td>Mountain lion, Marbled Murrelet, Townsend’s big-eared bat</td>
</tr>
<tr>
<td>Redwood - Douglas-Fir</td>
<td>12056.7</td>
<td>As above</td>
</tr>
<tr>
<td>Riparian</td>
<td>1615.7</td>
<td>Coho, Steelhead, Yellow Warbler</td>
</tr>
<tr>
<td>Sandhill Parkland</td>
<td>227.9</td>
<td>Sandhills OCE</td>
</tr>
<tr>
<td>Sandhills</td>
<td>5678.7</td>
<td>Sandhills OCE</td>
</tr>
<tr>
<td>Santa Cruz Cypress</td>
<td>208.0</td>
<td>Santa Cruz Cypress</td>
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# Aquatic Systems

<table>
<thead>
<tr>
<th>System</th>
<th>Conservation Elements</th>
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<tbody>
<tr>
<td>Lagoons</td>
<td>Tidewater goby</td>
</tr>
<tr>
<td></td>
<td>steelhead</td>
</tr>
<tr>
<td></td>
<td>Water Resources (incl. Wetlands)</td>
</tr>
<tr>
<td>Streams</td>
<td>Coho</td>
</tr>
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<td>Steelhead</td>
</tr>
<tr>
<td></td>
<td>Water Resources (incl. Wetlands)</td>
</tr>
<tr>
<td>Ponds</td>
<td>California red-legged frog</td>
</tr>
<tr>
<td></td>
<td>Santa Cruz long-toed</td>
</tr>
<tr>
<td></td>
<td>Tricolored blackbird</td>
</tr>
<tr>
<td></td>
<td>Water Resources (incl. Wetlands)</td>
</tr>
<tr>
<td>Sloughs/Wetlands</td>
<td>Tricolored blackbird</td>
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<tr>
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<td>Water Resources (incl. Wetlands)</td>
</tr>
<tr>
<td>Riparian</td>
<td>Yellow warbler</td>
</tr>
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</table>
Example: Riparian and Riverine Systems

Non-Focal Species
- California giant salamander
- Foothill yellow-legged frog
- Western pond turtle
- Pacific lamprey
- Monterey roach
- speckled dace

Other Bio Values
- Aquatic Linkages/Connectivity
- Diversity
- Climate refugia

Co-Benefits
- water supply
- Water quality
Example: Coastal Prairie Grasslands

Non-Focal Animals
- Opler’s longhorn moth
- American badger
- Golden eagle
- Burrowing owl
- White tailed kite
- merlin

Other Bio Values
- Diversity
- Raptor assemblages

Non-Focal Plants
- San Francisco popcorn flower
- Scotts Valley spineflower
- Blasdale’s bent grass
- Johnny nip
- Santa Cruz clover
- Scotts Valley sandwort
- Scotts Valley bouquet clover
- San Lorenzo Valley Bouquet clover
- Gairdner’s yampah
- Harlequin lotus
- Bent-flowered fiddleneck
- Harlequin lotus
- Choris’s popcornflower
- Pacific Grove clover
### Example Preliminary Non-Focal Species List

*(this list could be greatly expanded)*

<table>
<thead>
<tr>
<th>Species Group</th>
<th>Common Name</th>
<th>General Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plants</strong></td>
<td>Ben Lomond buckwheat</td>
<td>sandhills</td>
</tr>
<tr>
<td></td>
<td>Ben Lomond spineflower</td>
<td>sandhills</td>
</tr>
<tr>
<td></td>
<td>San Francisco popcornflower</td>
<td>coastal prairie</td>
</tr>
<tr>
<td></td>
<td>Scotts Valley spineflower</td>
<td>coastal prairie</td>
</tr>
<tr>
<td><strong>Invertebrates</strong></td>
<td>Santa Cruz rainbeetle</td>
<td>sandhills</td>
</tr>
<tr>
<td></td>
<td>Zayante band-winged grasshopper</td>
<td>sandhills</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td>Monterey roach</td>
<td>streams</td>
</tr>
<tr>
<td></td>
<td>Pacific lamprey</td>
<td>streams</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
<td>California giant salamander</td>
<td>streams</td>
</tr>
<tr>
<td></td>
<td>California tiger salamander</td>
<td>ponds/grasslands</td>
</tr>
<tr>
<td></td>
<td>Foothill yellow-legged frog</td>
<td>streams</td>
</tr>
<tr>
<td></td>
<td>Santa Cruz black salamander</td>
<td>Grasslands, Woodlands, Forests</td>
</tr>
<tr>
<td><strong>Reptiles</strong></td>
<td>northern California legless lizard</td>
<td>dunes</td>
</tr>
<tr>
<td></td>
<td>San Francisco garter snake</td>
<td>ponds/grasslands</td>
</tr>
<tr>
<td></td>
<td>Southwestern pond turtle</td>
<td>ponds (and mixed upland)</td>
</tr>
<tr>
<td><strong>Birds</strong></td>
<td>Burrowing owl</td>
<td>coastal prairie</td>
</tr>
<tr>
<td></td>
<td>Golden eagle</td>
<td>coastal prairie</td>
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<tr>
<td></td>
<td>Northern harrier</td>
<td>Coastal prairie, wetlands</td>
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<tr>
<td></td>
<td>Vaux's Swift</td>
<td>Redwood forests</td>
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<tr>
<td><strong>Mammals</strong></td>
<td>American badger</td>
<td>coastal prairie</td>
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<tr>
<td></td>
<td>San Francisco dusky-footed woodrat</td>
<td>Shrublands, woodlands/forests</td>
</tr>
<tr>
<td></td>
<td>Santa Cruz kangaroo rat</td>
<td>sandhills</td>
</tr>
</tbody>
</table>
# Endemic Species and Systems

*(n=35, all accounted for)*

<table>
<thead>
<tr>
<th>Conservation Element</th>
<th>Common Name</th>
<th>Habitat</th>
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<tbody>
<tr>
<td></td>
<td>Strohbeen parnassium (Extinct)</td>
<td>Forests</td>
</tr>
<tr>
<td></td>
<td>undescribed fulboroid roothopper</td>
<td>?</td>
</tr>
<tr>
<td><strong>Focal</strong></td>
<td>Mountain Hermon (=barbate) June beetle</td>
<td>Sandhills</td>
</tr>
<tr>
<td></td>
<td>Ohlone tiger beetle</td>
<td>Coastal prairie</td>
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<tr>
<td></td>
<td>Santa Cruz wallflower</td>
<td>Sandhills</td>
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<tr>
<td></td>
<td>Schreiber’s manzanita</td>
<td>Maritime chaparral</td>
</tr>
<tr>
<td></td>
<td>Scotts Valley polygonum</td>
<td>Coastal prairie</td>
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<tr>
<td><strong>Non-Focal</strong></td>
<td>Ben Lomond buckwheat</td>
<td>Sandhills</td>
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<tr>
<td></td>
<td>Ben Lomond spineflower</td>
<td>Sandhills</td>
</tr>
<tr>
<td></td>
<td>Bonny Doon manzanita</td>
<td>Sandhills</td>
</tr>
<tr>
<td></td>
<td>Santa Cruz kangaroo rat</td>
<td>Sandhills</td>
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<tr>
<td></td>
<td>Scotts Valley spineflower</td>
<td>Coastal prairie</td>
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<tr>
<td></td>
<td>Zayante band-winged grasshopper</td>
<td>Sandhills</td>
</tr>
<tr>
<td><strong>OCE</strong></td>
<td>Bentham’s ponderosa pine</td>
<td>Sandhills</td>
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<tr>
<td></td>
<td>Dolloff Cave spider</td>
<td>Karst caves</td>
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<tr>
<td></td>
<td>Empire Cave neochthonius</td>
<td>Karst caves</td>
</tr>
<tr>
<td></td>
<td>Empire Cave pseudoscorpion</td>
<td>Karst caves</td>
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<tr>
<td></td>
<td>Mackenzie’s cave amphipod</td>
<td>Karst caves</td>
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<tr>
<td></td>
<td>Ohlone manzanita</td>
<td>Maritime chaparral</td>
</tr>
<tr>
<td></td>
<td>Palmer’s live forever</td>
<td>Sandhills</td>
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<td></td>
<td>San Lorenzo Valley bouquet clover</td>
<td>Coastal prairie</td>
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<tr>
<td></td>
<td>Sand Hill Bluff clarkia</td>
<td>Coastal bluff</td>
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<td></td>
<td>Sandhills everlasting</td>
<td>Sandhills</td>
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<tr>
<td></td>
<td>Sandhills flesh-fly</td>
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<tr>
<td></td>
<td>Sandhills Jerusalem cricket</td>
<td>Sandhills</td>
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<tr>
<td></td>
<td>Sandhills melittid bee</td>
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<td>Sandhills metopia</td>
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<tr>
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<td>Sandhills poppy</td>
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<td>Sandhills robberfly</td>
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<tr>
<td></td>
<td>Sandhills scorpion</td>
<td>Sandhills</td>
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<tr>
<td></td>
<td>Santa Cruz teleman spider</td>
<td>Karst caves?</td>
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<td></td>
<td>Scotts Valley bouquet clover</td>
<td>Coastal prairie</td>
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<tr>
<td></td>
<td>Scotts Valley sandwort</td>
<td>Coastal prairie</td>
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<tr>
<td></td>
<td>Undescribed aquatic cave isopod</td>
<td>Karst caves</td>
</tr>
<tr>
<td></td>
<td>Gilia longituba (SLV form)</td>
<td>Coastal prairie</td>
</tr>
</tbody>
</table>
Questions

What do you think?

– What focal species or OCEs could be dropped without affecting the strategy?
– What is missing for a comprehensive strategy
– Other feedback?
Questions to Consider when Adding Focal Species or OCEs

• Does it require **unique considerations** from the proposed conservation elements?
  
  – Different habitat requirements
  – Unique life history or ecology
  – Different conservation needs (habitat protection, restoration, management)

• Would the overall conservation strategy differ if we add it?

• Would a RCIS based on the existing conservation elements not be sufficiently detailed to support mitigation credit agreements?

• Can the new species or OCE replace an existing one and have a net benefit to the strategy?
Next Steps

Technical Advisor One-on-One Assistance (July)

Develop “Existing Conditions” Report (August)
  • Characterize the RCIS Area
  • Identify Conservation Elements

Stakeholder Review (September)

Develop Conservation Strategy (Fall)
  • Identify Pressures and Stressors
  • Develop Goals, Objectives, and Actions
More Information

For more information about the RCIS Program, go to https://wildlife.ca.gov/Conservation/Planning/Regional-Conservation

For more information about the Santa Cruz RCIS, please contact:

- Jim Robins, jrobins@alnus-eco.com
- Grace Blakeslee, gblakeslee@sccrtc.org
THANK YOU!