

SANTA CRUZ COUNTY REGIONAL CONSERVATION INVESTMENT STRATEGY

Stakeholder Meeting

December 4, 2020



**Jodi McGraw
Consulting**



WELCOME



RCIS Stakeholders' - Inner Animals



Meeting Agenda



Environmental Setting



Conservation Elements



Conservation Planning Framework



Next Steps



Environmental Setting

Environmental Setting

- Set the stage for conservation planning
- Synthesize existing information (data, plans, etc.)
- Available for review and feedback
 - RTC RCIS Website
<https://sccrtc.org/funding-planning/environmental/rcis/>
 - Comments accepted through December 23

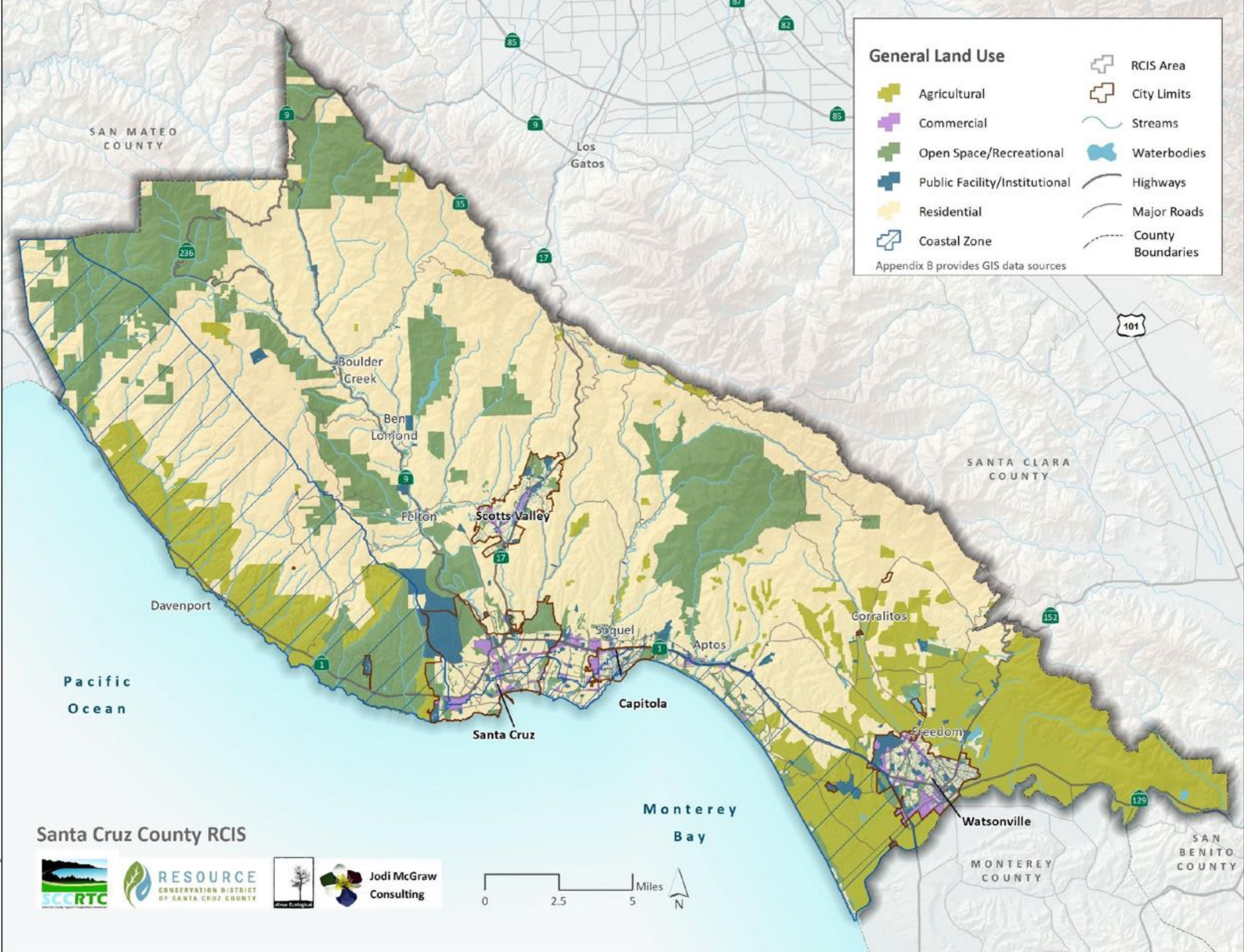




Environmental Setting Report

- Overview
 - Land Use
 - Existing Conservation Plans
 - Natural Environment
 - Ecoregions
 - Aquatic Systems
 - Natural Communities
 - Conservation Elements
 - Selection approach and criteria
 - Lists and brief descriptions
-

Land Use

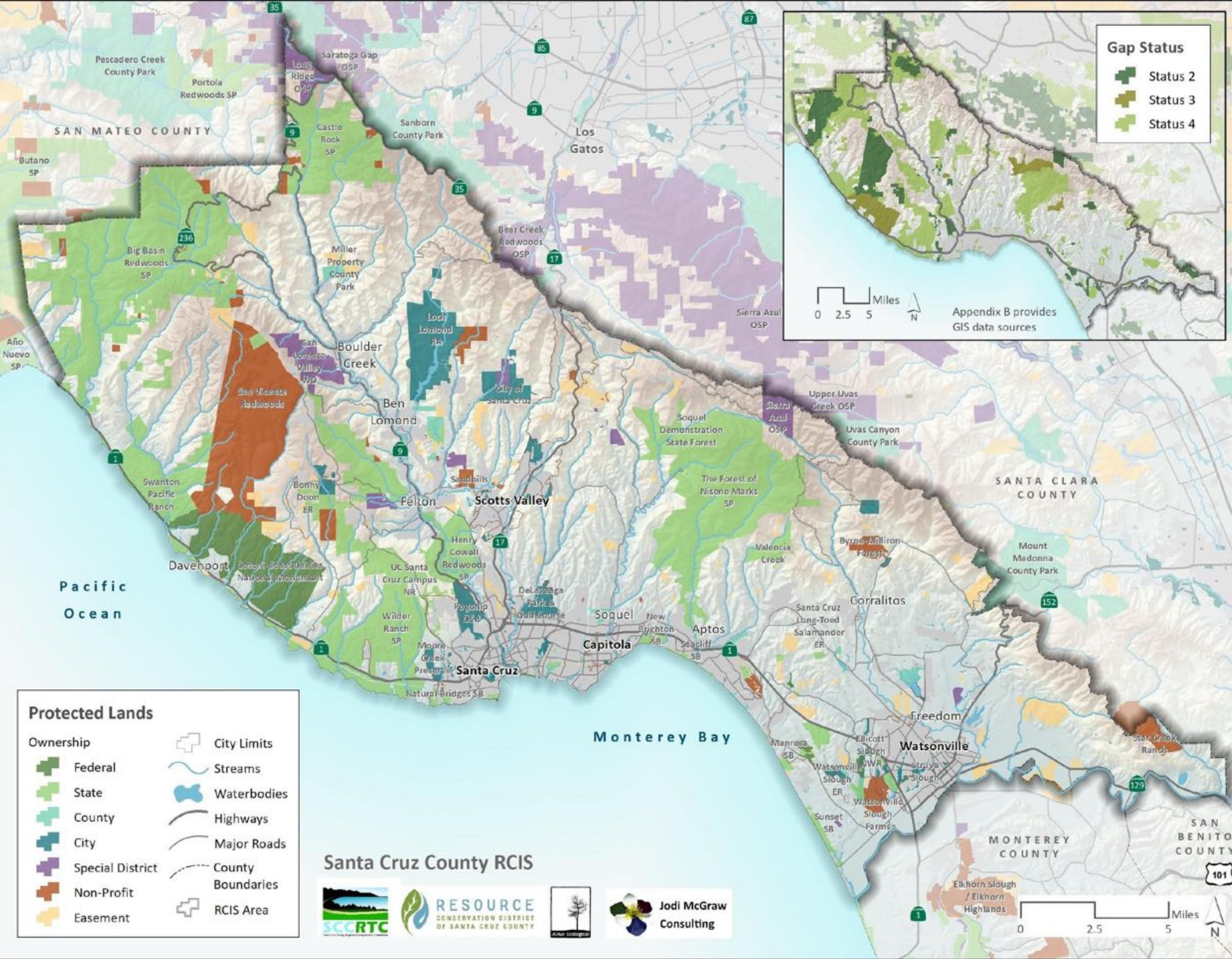


Santa Cruz County RCIS





Existing Protected Lands



Existing Plans

Regional/Statewide

- State Wildlife Action Plan
- Conservation Lands Network (2.0)
- 20 Recovery Plans for Federally listed species

Local

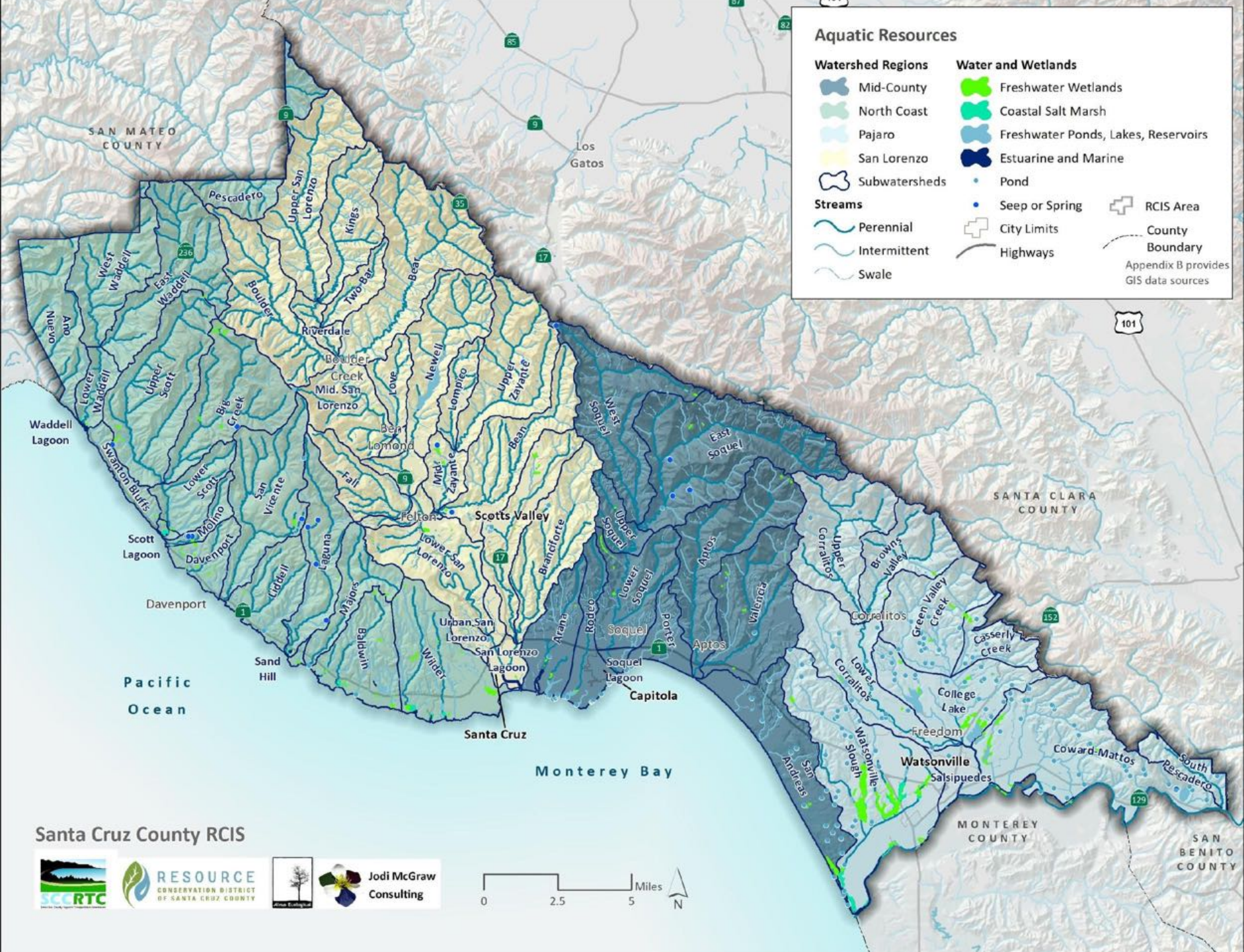
- Conservation Blueprint for Santa Cruz County
- Sandhills Conservation and Management Plan
- Conceptual Area Protection Plans (CAPPS)
 - Santa Cruz Mountains Redwoods, Santa Cruz Mountains Linkages, Sandhills, Long-Toed Salamander, Watsonville Wetlands
- Healthy Lands and Healthy Economies
- Watershed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

HCPs (no NCCPs)

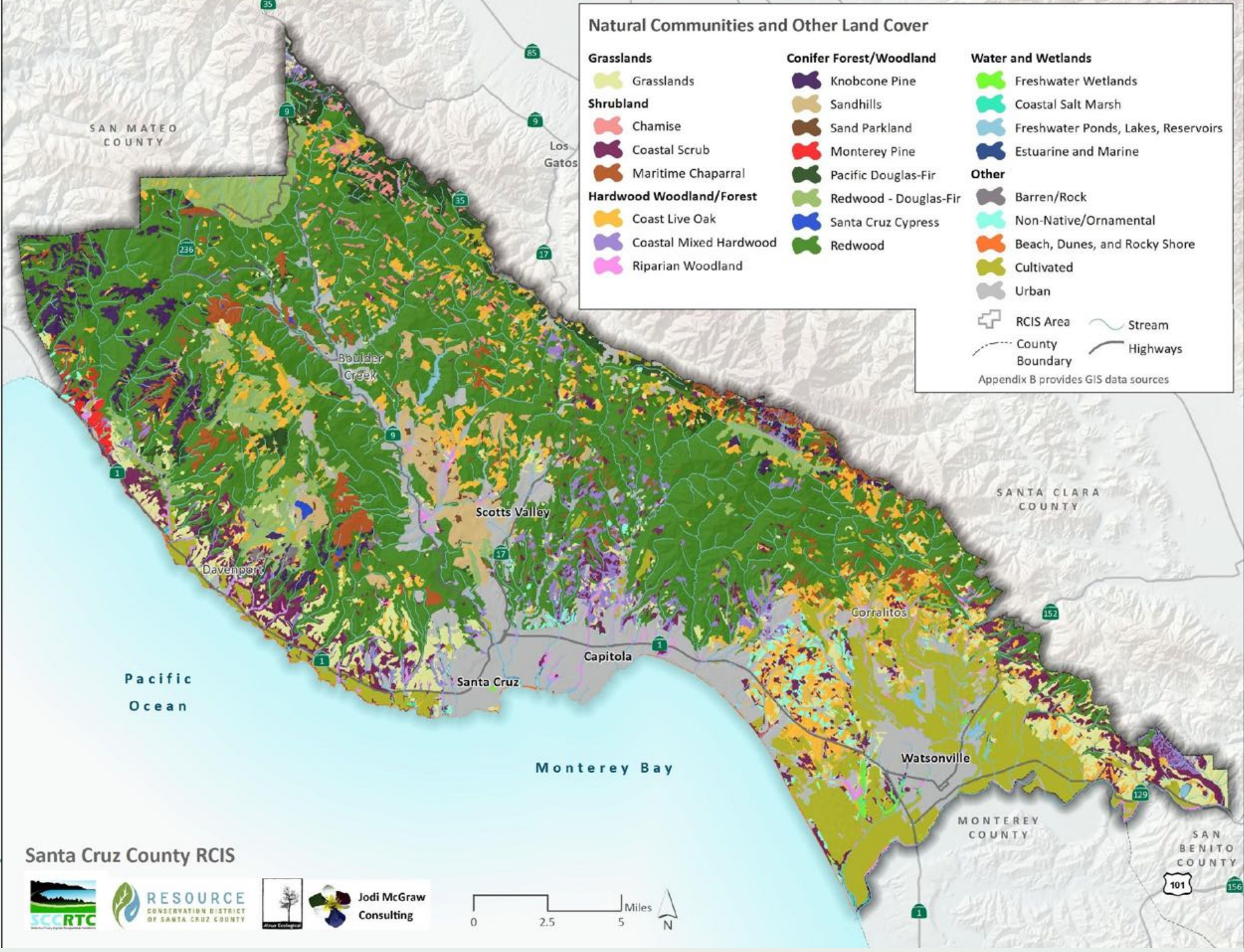
- Draft City of Santa Cruz Aquatic HCP
- Draft City of Santa Cruz Terrestrial HCP
- Interim Programmatic HCP for Mount Hermon June beetle and Ben Lomond spineflower
- Integrated Regional Water Management Plan
- PG&E Vegetation Management HCP
- Project specific HCPs
 - 13 Mount Hermon June beetle
 - 4 California red-legged frog
 - 1 Santa Cruz tarplant
 - 1 Santa Cruz long-toed salamander



Aquatic Resources



Natural Communities and other Land Cover





Please provide
feedback on the
Environmental
Setting by
December 23



CONSERVATION ELEMENTS: Approach

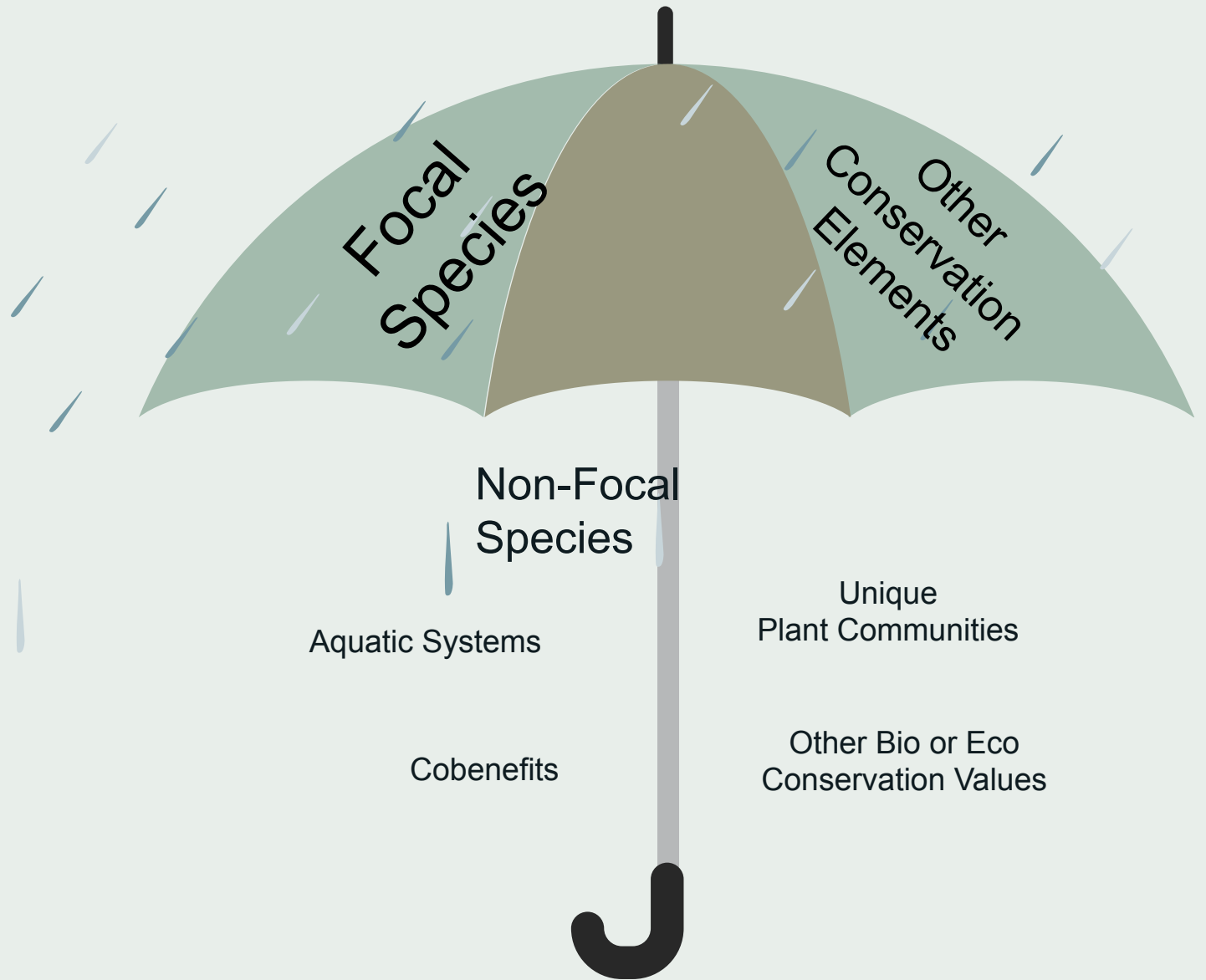
RCIS Conservation Element Definitions

- **Focal Species**: 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**: 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.

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Conservation Elements



*Feedback
from
Stakeholders
& Technical
Advisors...
and lots of internal
discussion!*

In a nutshell:

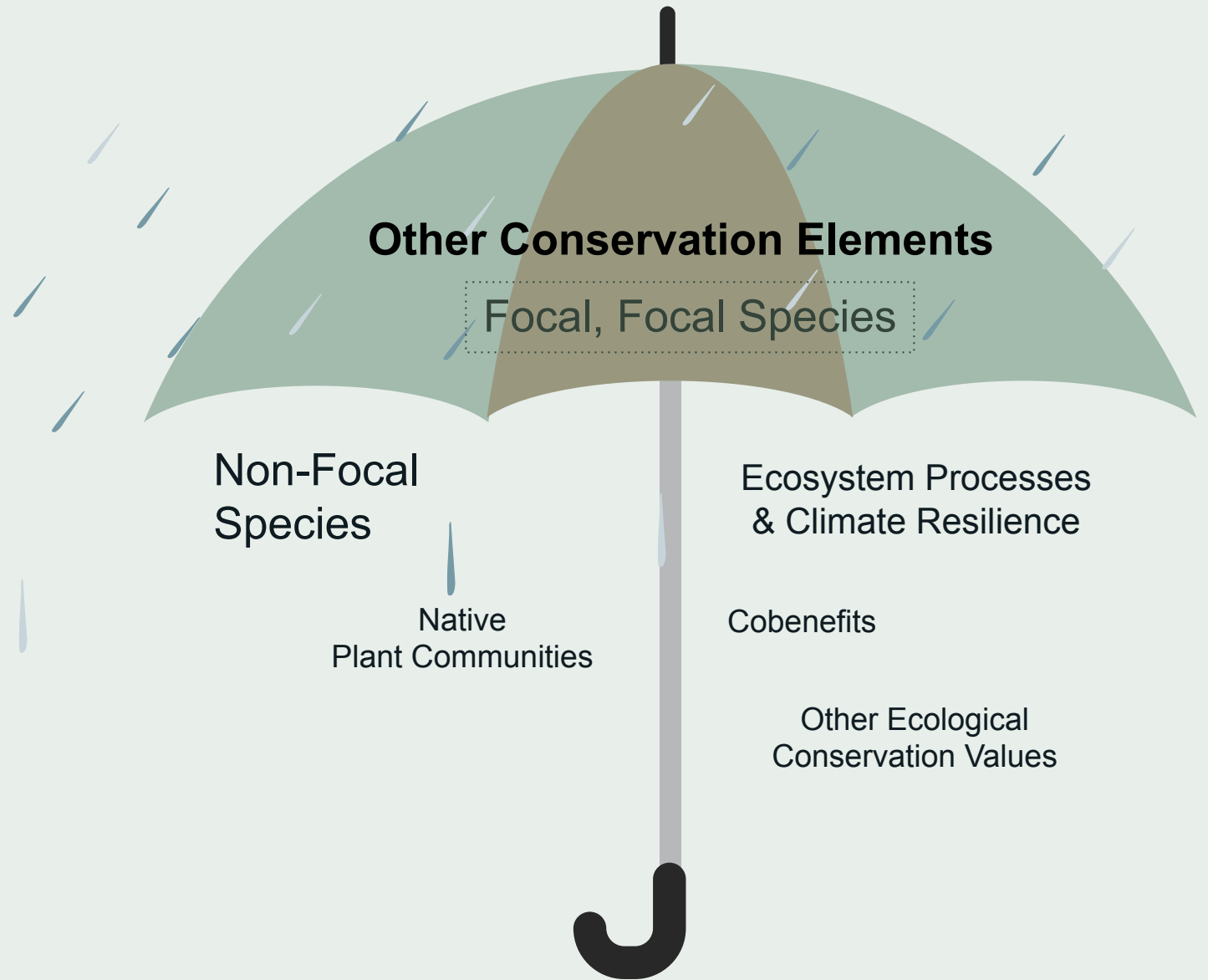
RCIS is regional – opportunity to move well beyond species focused conservation and think about **the entire landscape, the natural communities** within the landscape AND **the ecological processes** that sustain the landscape.

Conservation of species is wholly dependent on the integrity of natural communities and the ecological processes that sustain them.

Consider using OCEs as the lens through which to develop meaningful and enduring conservation.



Conservation Elements – Santa Cruz County RCIS approach



OCE Focused RCIS- Why?

Foundational: Ecosystems or natural communities are the foundation upon which proposed focal, non-focal, and other species conservation depends.

Resilient: Understanding climate change and the impact of other disturbances (i.e. floods, fires, drought, debris flows, etc.) on species is really about understanding how ecosystems/natural communities respond to change.

Action Oriented: When we do mitigation or implement conservation actions for a species or suite of species, in real terms we are protecting, restoring, connecting, and enhancing ecosystems, ecosystem processes, and/or natural communities.

Meaningful: Long-term conservation for species of interest (focal or non-focal) is contingent upon conserving the ecosystems, landscapes, corridors, and processes that sustain them.

Consistent: This approach is consistent with

- the existing concepts embedded in CDFW's Natural Communities Conservation Plans,
- the statewide and federal approach toward mitigation (connectivity, processes, redundancy)
- other state agency mandates including SWRCB/RWQCB's protection of waters of the state and wetlands & Commission's concept of ESHA





CONSERVATION ELEMENTS

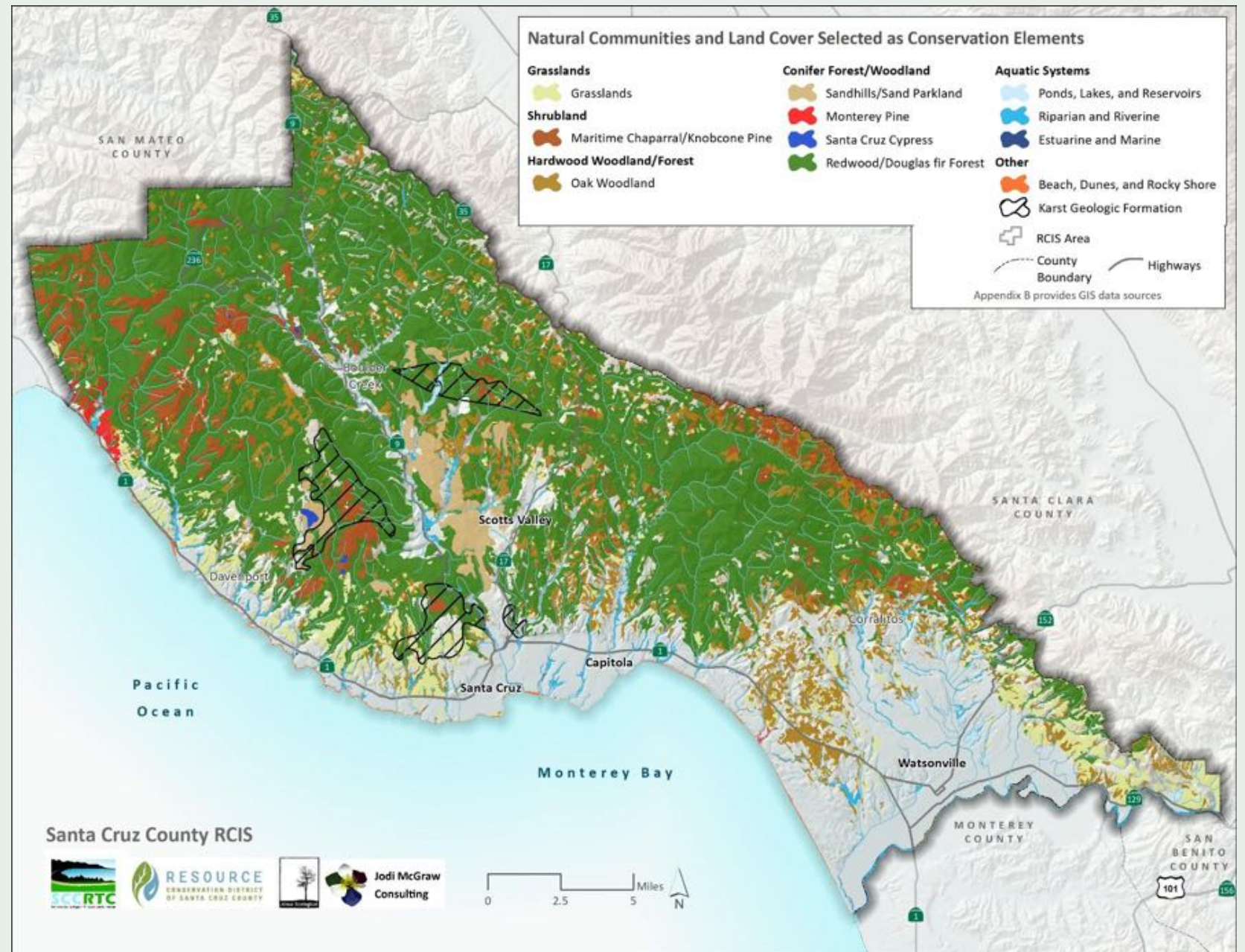
Natural Communities and Other Conservation Elements

Criteria:

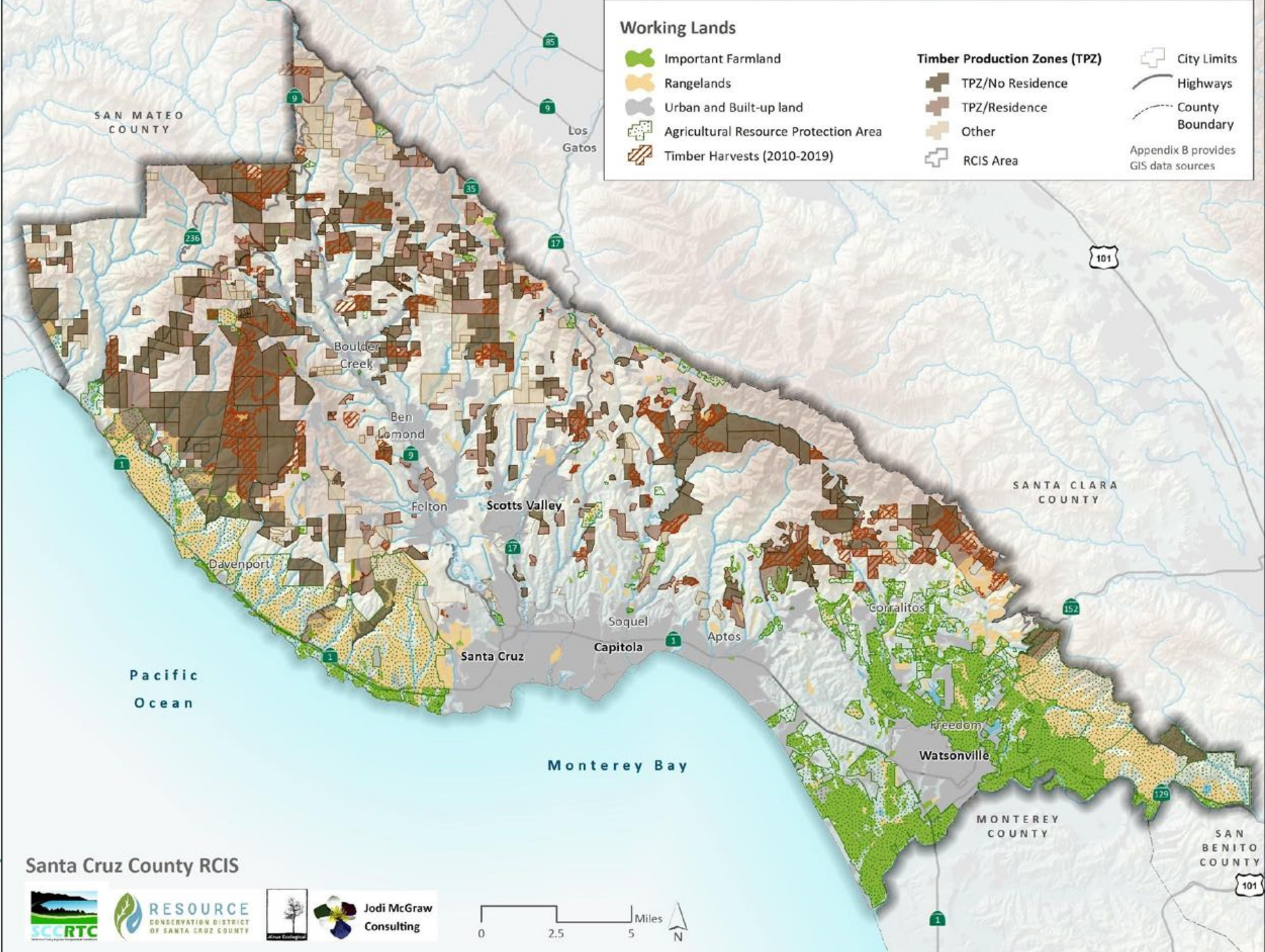
- Sensitive community/habitat
- Supports rare or listed species
- Widespread type that can contribute to a cohesive strategy (e.g., conserve common species, sustain ecosystem functions/ services)
- Address other conservation values

Other Conservation Element	Rare/Listed Species	Widespread	Other Conservation Values
Grasslands	X		
Maritime Chaparral/Knobcone Pine	X		
Sandhills/Sand Parkland	X		
Santa Cruz Cypress Forest	X		
Monterey Pine Forest	X		
Oak Woodland/Forest		X	
Redwood/Douglas-fir Forest		X	
Beach, Dunes, and Rocky Cliffs	X		
Karst Caves	X		
Rock Outcroppings	X		
Riparian and Riverine	X		
Estuarine (lagoons)	X		
Wetlands	X		
Ponds, Lakes and Reservoirs	X		
Connectivity			X
Working Lands			X

Natural Communities Selected as Conservation Elements



Working Lands



Habitat Connectivity



Focal Species

Considerations for Selection:

- State-listed under CESA or Federally listed under ESA
- Potential subject of mitigation credit agreements
- Taxonomic representation
- Locally unique or range limited
- Climate vulnerable
- Utilizes multiple community types

Common Name	Status
Santa Cruz tarplant (grassland)	FT, SE, CRPR 1B.1
Mount Hermon June beetle (sandhills)	FE
CCC coho salmon (riparian/riverine)	FE, SE
Santa Cruz long-toed salamander (ponds, oak woodlands)	FE, SE, SFP
Western pond turtle (riparian/riverine and adjacent uplands)	FSC, SSC
marbled murrelet (redwood forest)	FT, SE
mountain lion (connectivity, most upland)	SC

Table 2-13

Non-Focal Species

Criteria:

- Listed (or candidate/proposed) under FESA, CESA, or Fully Protected (FGC § 3511, 4700, 5050 and 5515)
- Not a focal species

Conservation Context:

- Not** “less important” than focal-species from a conservation perspective
- Can be included in a future MCA
- Conservation needs are addressed by strategies for focal species and/or natural communities (or other OCEs)

Species	Status
Ben Lomond spineflower	FE, CRPR 1B.1
Monterey spineflower	FT, CRPR 1B.2
Scotts Valley spineflower	FE, CRPR 1B.1
robust spineflower	FE, CRPR 1B.1
Santa Cruz cypress	FT, SE, , CRPR 1B.2
Santa Cruz wallflower	FE, SE, CRPR 1B.1
white-rayed pentachaeta	FE, SE, , CRPR 1B.1
Scotts Valley polygonum	FE, SE, , CRPR 1B.1
Pacific Grove clover	SR, 1B.1
Santa Francisco popcorn flower	SE, 1B.1
Monarch butterfly	<i>Proposed FE</i>
Ohlone tiger beetle	FE
Zayante band-winged grasshopper	FE
Western bumble bee	SC
tidewater goby	FE, SSC
CCC/SCCC steelhead - central California coast DPS	FT
California tiger salamander	FT, ST
Foothill yellow-legged frog	ST, SSC
California red-legged frog	FT, SSC
San Francisco garter snake	FE, SE, FP
Tricolored blackbird	ST, SSC
Golden eagle	FP
Swainson's hawk	ST
Western snowy plover	FT, SSC
White-tailed kite	FP
American peregrine falcon	FD, SD, FP
Bald eagle	FD, SE, FP
California brown pelican	FD, SE, FP
ringed-tailed cat	FP

Table 2-14

Co-Benefited Species

Criteria:

- Special status or rare species
- Not listed (under CESA or ESA)
- Not a focal or a non-focal species
- Unlikely to require compensatory mitigation or be covered under a future MCA

156 Species

- 75 plants
- 25 invertebrates
- 5 fish
- 3 amphibians
- 5 reptiles
- 29 birds
- 15 mammals

See Table 2-15 of Environmental Setting

Conservation Element Summary

Conservation Element	What is it?	Number	Can MCA Credits be Developed?
Other Conservation Element	Sensitive or widespread communities + connectivity and working lands	16	Yes, (CDFW) regulated systems <ul style="list-style-type: none"> • Waters • Wetlands
Focal Species	ESA or CESA protection, representative of taxonomic groups and communities, are likely to require MCAs	7	Yes; all 7
Non-Focal Species	Listed (or candidate) under CESA/FP and/or ESA that are not focal species	29	Yes, provided ecological needs met by strategies for focal species and/or OCE
Co-Benefited Species	Special-status or rare species that are not focal or non-focal species	156	No

Questions or Feedback on the Conservation Elements?

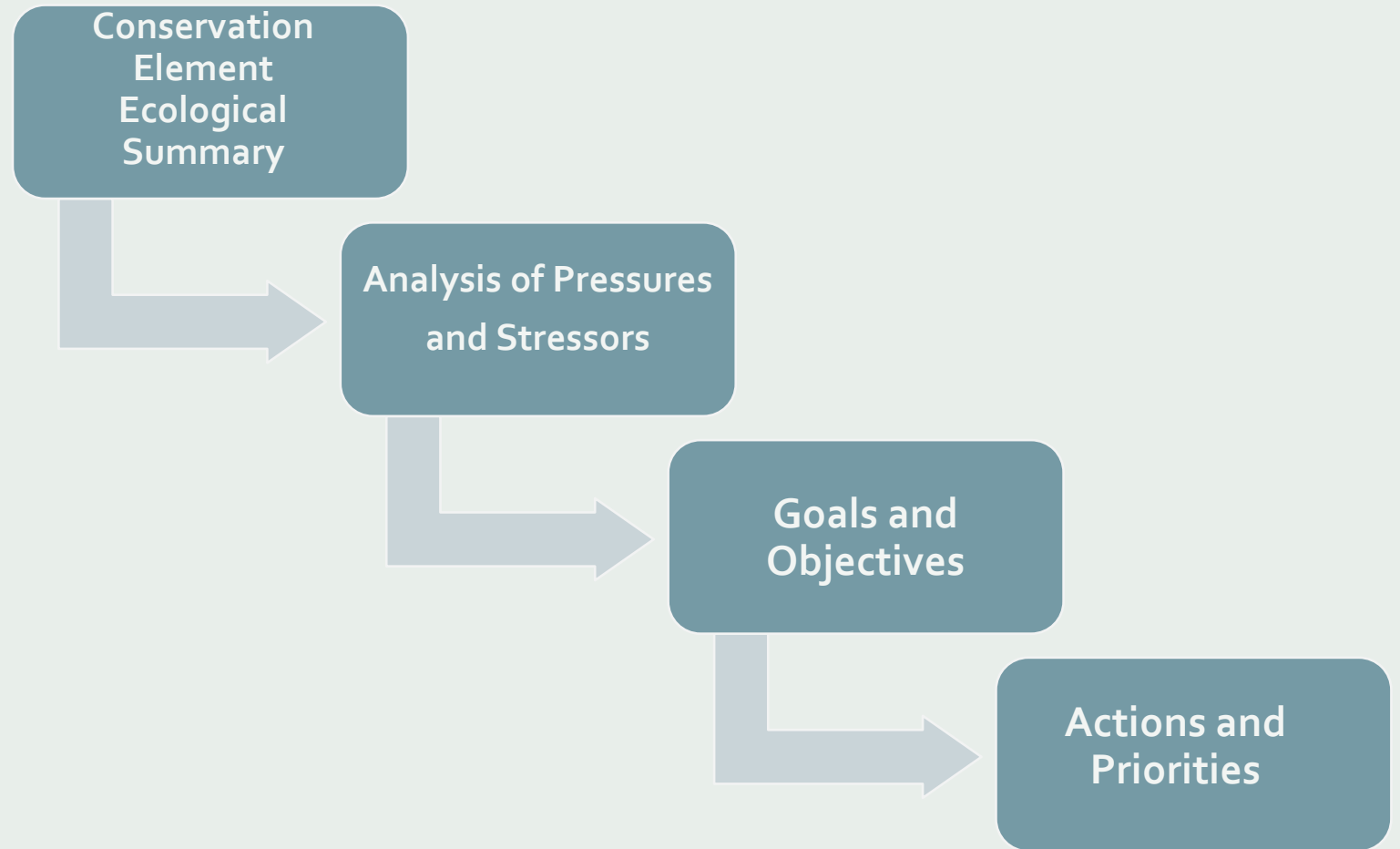




CONSERVATION PLANNING FRAMEWORK



Conservation Planning Framework and Steps



Planning Approach

- Plan around OCEs with species nested under
 - Systems approach
 - Supplemental analysis for species, where needed
- Use tables to 'pivot' through the analysis
 - Other Conservation Elements by species
 - Pressures and stressors by OCE
 - Pressures by species
 - Goals and Objectives
 - Actions and Priorities



SANTA CRUZ SANDHILLS EXAMPLE

List of Species in the OCE

Other Conservation Element	Focal	Non-Focal Species	Co-Benefited Species
Sandhills	Mount Hermon June beetle	Zayante band-winged grasshopper Ben Lomond wallflower Ben Lomond spineflower	Santa Cruz monkeyflower Northern curly-leaved monardella sandhills beachwort Palmer's live forever sandhills poppy Bentham's ponderosa pine sandhills everlasting sandhills melittid bee sandhills metopia sandhills scorpion Antioch sphecid wasp Santa Cruz rainbeetle sandhills flesh-fly sandhills Jerusalem cricket sandhills robberfly Blainville's horned lizard California whiptail California nightsnake California mountain kingsnake Santa Cruz kangaroo rat

Pressures by Stressors

Pressure	Stressors
Development (residential, commercial, public infrastructure)	<ul style="list-style-type: none"> • Reduction in habitat • Fragmentation of habitat • Degradation of habitat (by promoting invasive species, introducing pollutants etc.)
Mining	<ul style="list-style-type: none"> • Reduction in habitat • Fragmentation of habitat • Degradation of habitat
Agriculture (e.g., vineyards)	<ul style="list-style-type: none"> • Reduction in habitat • Fragmentation of habitat • Degradation of habitat (by promoting invasive species, introducing pollutants etc.)
Fire Exclusion	<ul style="list-style-type: none"> • Unnatural succession in the absence of fire can eliminate, fragment, or degrade habitat for species adapted to earlier successional conditions • Fire exclusion can promote wildfires outside of the natural range of variation of the natural fire regime, including less frequent, larger, more intense fires, including canopy fires rather than ground fires.
Recreation	<ul style="list-style-type: none"> • Habitat loss, fragmentation, and degradation due to <ul style="list-style-type: none"> ○ Soil disturbance ○ Erosion on steep slopes ○ Promoting the invasive and spread of exotic plants ○ Promoting spread of pathogens • Direct trampling of rare plants and animals
...	...

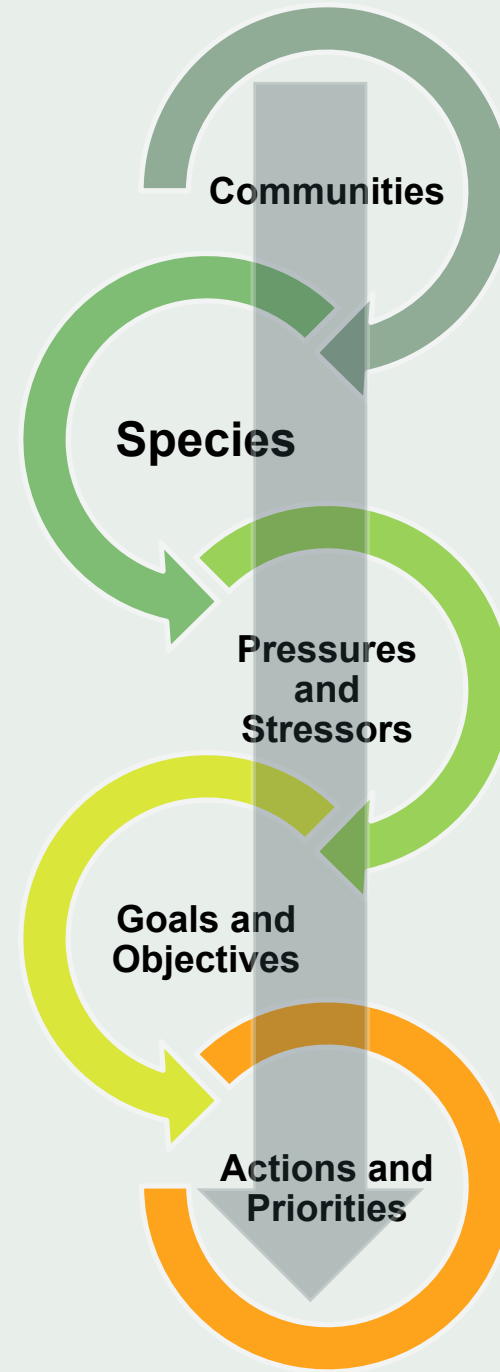
Pressures by Species

Pressure	Mount Hermon June beetle	Zayante bandwinged grasshopper	Ben Lomond Wallflower	Ben Lomond spineflower
Development	X	X	X	X
Mining	X	X	X	X
Agriculture (e.g., vineyards)	X	X	X	X
Fire Exclusion		X	X	X
Recreation	X	X	X	X
Invasive Plants	X	X	X	X
Climate Change	X	X	X	X

Goals, Objectives, Actions, and Priorities

Actions		Priorities	
SAND 1.1.1: Protect, through fee title or conservation easement, properties, with an emphasis on those with high conservation value due to high biodiversity, habitat for rare species, and adjacency to existing protected lands.		<ul style="list-style-type: none">• Prioritize properties featuring sand parkland and Sandhills chaparral assemblages, which primarily support the rare species and diverse assemblages of locally unique species.• Prioritize properties identified as a priority (Score 6 - 10) in the Sandhills CAPP (...)• ...	
	land use (e.g., mining, development, or agriculture).	sandhills community structure...	protected sandhills habitat. <ul style="list-style-type: none">• ...
	SAND 1-3: Enhance the natural community structure and species composition of native sandhills communities where it has been degraded by anthropogenic factors.	SAND 1.3.1: Use fire and vegetation management treatments that mimic fire's beneficial effects (i.e., fire surrogates) to manage Sandhills habitat within the range of variation of the natural fire regime...	<ul style="list-style-type: none">• Prioritize habitat that is senescent or is otherwise in a late seral stage due to absence of fire.• Prioritize habitat where creating early successional conditions can promote populations of rare species ...• ...
		SAND 1.3.2: Enhance sandhills habitat that has been degraded by erosion, recreation, dense exotic plants, or other factors ...	<ul style="list-style-type: none">• Prioritize habitat where enhancement can expand rare species populations.• Prioritize habitat adjacent to intact habitat, to expand it while reducing the risk of future habitat degradation (e.g., by exotic plant spread).• ...

Thru Line from Communities to Priorities



Conservation Framework Input

- Pressures and stressors
 - What are they?
 - What information can inform them?
- Goals, Objectives, Actions and Priorities
 - What should they be (approaches or specifics)?
 - What information can inform them?



Questions or
Feedback on the
Planning
Framework?



Actions by Stresses by Species

Actions	Threats (Pressures and/or Stressors)	Santa Cruz Wallflower	Mount Hermon June beetle	Zayante band-winged grasshopper	Ben Lomond spineflower
SAND 1.1.1: Protect, through fee title or conservation easement, properties, with an emphasis on those with high conservation value due to high biodiversity, habitat for rare species, and adjacency to existing protected lands.	Habitat loss, fragmentation, and degradation due to development, mining, and agriculture	X	X	X	X
SAND 1.2.1: Restore habitat that has been degraded by prior land use that has altered soil conditions, to recreate native plant sandhills community structure...	Habitat loss, fragmentation, and degradation due to development, mining, and agriculture	X	X	X	X
SAND 1.3.1: Use fire and vegetation management treatments that mimic fire's beneficial effects (i.e., fire surrogates) to manage Sandhills habitat within the range of variation of the natural fire regime...	Habitat loss, fragmentation, and degradation due to development, mining, and agriculture	X	X	X	X
SAND 1.3.2: Enhance sandhills habitat that has been degraded by erosion, recreation, dense exotic plants, or other factors ...	Invasive Plants Recreation	X	X	X	X

Next Steps

Feedback on Environmental Setting (by December 23, 2020)

RCIS First Public Meeting (January 2021)

Develop Conservation Strategy with Technical Advisor Input
(January – March 2021)

- Analyze Pressures and Stressors
- Develop Goals and Objectives
- Identify Actions and Priorities





THANK YOU!