Santa Cruz Mountains Climate Adaptation Project

Climate Change Adaptation Planning Workshop

December 1-2, 2020
Agenda

Workshop Series:

- Part 1. Dec 1st: Review vulnerability assessment results
- Part 2. Dec 2nd: Develop adaptation strategies

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>9:00</td>
<td>Welcome, project overview, introductions</td>
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<tr>
<td>9:30</td>
<td>Climate-driven trends in vegetation distribution</td>
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<tr>
<td>11:00</td>
<td>Break</td>
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<tr>
<td>11:10</td>
<td>Vulnerability assessment results for habitats and species</td>
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<tr>
<td>11:40</td>
<td>Identifying priorities for adaptation planning</td>
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<td>12:00</td>
<td>Adjourn</td>
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Santa Cruz Mountains
Climate Adaptation Project Overview

1. **Project Scoping Meeting (June 2019)**
   - Select natural resources of interest, define project boundary, identify climate variables and timeframes for spatial analysis

2. **Vulnerability Assessment (Fall 2019)**
   - Vulnerability Assessment Workshop: Oct 2019
   - Synthesize vulnerability information: 2020

3. **Spatial Analysis (Summer 2019-Summer 2020)**
   - Downscaled maps and trends for climatic and hydrologic variables, vegetation, and fire

4. **Adaptation Planning (Fall 2020)**
   - Two workshops (Midpen, SCMSN): Nov/Dec 2020
   - Synthesize adaptation information: Winter 2021

5. **Final climate vulnerability and adaptation products, spatial analysis (Spring 2021)**
Santa Cruz Mountains
Climate Adaptation Project Boundary
Climate Adaptation Framework

1. Define Goals and Identify Priorities
   - Identify ecosystems, habitats, species
   - Define project geography, climate variables

2. Assess Vulnerability to Climate Change
   - Sensitivity
   - Exposure
   - Adaptive capacity

3. Identify Adaptation Strategies and Actions
   - Decrease sensitivity, exposure
   - Increase adaptive capacity

4. Implement Adaptation Options
   - Changes in management, policy
   - Cooperation across organizations

5. Monitor, Review, Revise

From Glick et al. 2011 Scanning the Conservation Horizon
## Focal Resources List

### Habitats
- Coastal dunes, wet meadows, and prairie
- Coastal scrub
- Mixed grasslands
- Chaparral shrublands
- Oak woodlands
- Mixed evergreen/montane hardwood forests
- Coastal redwood forests
- Rivers, streams, and floodplains
- Freshwater marshes, wetlands, and ponds
- Seeps and springs

### Species/Species Groups
- American badger & western burrowing owl
- Bats
- Butterflies
- California red-legged frog & San Francisco garter snake
- Coyote brush
- Marbled murrelet
- Salamanders
- Salmonids
- Wide-ranging mammals
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5. Monitor, Review, Revise
1. Short synthesis report on climate data, vulnerability assessment trends, and adaptation options

2. Vulnerability-adaptation briefs for resources

3. Short report summarizing workshop proceedings

4. Print-ready maps and GIS layers
Introductions

• Name
• Brief description of site or habitat that you work on regularly and primary challenges
Next Up

Vulnerability assessment results!
## Identifying Adaptation Priorities

<table>
<thead>
<tr>
<th>Habitats</th>
<th>Activities/Topics</th>
<th>Sites/Projects</th>
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<tbody>
<tr>
<td>Coastal grasslands</td>
<td>Increased prevalence of SOD</td>
<td>Instream habitat/Riparian restoration projects</td>
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<tr>
<td>Redwoods</td>
<td>Nexus of wildfire risk and shifts in vegetation communities</td>
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<tr>
<td>Grasslands (badger, burrowing owl, connectivity)</td>
<td>Climatic water deficit</td>
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<td>Oak woodlands</td>
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<tr>
<td>Springs, seasonal ponds</td>
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Identifying Adaptation Priorities

SCENARIOS BY HABITAT

Oak woodlands
- warmer/wetter (increased SOD)
- hotter/drier (decreased SOD, recruitment)

Shrublands/grasslands
- wetter (increased coyote brush expansion)
- drier (reduced encroachment of coyote brush, possible expansion of mixed grasslands)

Wetlands/ponds
- warmer/wetter, including increases in extreme precipitation (longer hydroperiods, more flooding/landslides)
- hotter/drier (shorter hydroperiods, increased fire raises risk of post-fire landslides)

Rivers/streams
- warmer/wetter, including increases in extreme precipitation (increased flows and connectivity with floodplains, more flooding/landslides)
- hotter/drier (reduced flows and loss of connectivity, increased fire raises risk of post-fire landslides)

Mixed evergreen/montane hardwood forests
- Warmer/wetter (increased SOD and associated changes in species composition)
- Hotter/drier (decreased SOD, increased fire risk)

CLIMATE-READY NORTH BAY SCENARIOS
- Massive drought-induced oak-dieback
- Catastrophic fires on the landscape
- Wetter, warm future