

CDFW Climate College: Lecture #5

Go Big or Go Home: Collaborative Partnerships in a Changing Climate



Diana Craig
U.S. Forest Service



Emily Young
San Diego Foundation



January 15, 1:30-2:30



Don't Forget!

- Climate College project – be a part of the Awards ceremony with the Director!
 - Submit project title and type of proposal to climatechange@dfg.ca.gov by **February 1, 2013**
 - Final projects are due by **May 31, 2013**
 - More info online at www.dfg.ca.gov/Climate_and_Energy/Climate_Change/Climate_College/Project_Guidelines.aspx
- Participate in the online Climate and Sustainability Roundtable discussion forum

CDFW Climate College: Lecture #5

Go Big or Go Home: Collaborative Partnerships in a Changing Climate



Diana Craig
U.S. Forest Service



Emily Young
San Diego Foundation



January 15, 1:30-2:30



DFW Climate College – January 15, 2013

Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

California Department of Fish and Wildlife – Climate College

January 15, 2013

Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig

Deputy Director, Ecosystem Management Staff

Pacific Southwest Region

USDA Forest Service

Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

- ❑ **Why collaborative partnerships - How can collaborative partnerships help you?**
- ❑ **Examples**
 - **Large scale - California Landscape Conservation Cooperative**
 - **Regional scale - BAEEC**
 - **Local scale - Collaborative Forest Landscape Restoration Program**
- ❑ **Closing Thoughts**



Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

❑ Why collaborative partnerships - How can collaborative partnerships help you?

❑ Examples

- Large scale - California Landscape Conservation Cooperative
- Regional scale – BAEEC
- Local scale - Collaborative Forest Landscape Restoration Program



❑ Closing Thoughts

Go Big or Go Home: Collaborative Partnerships in a Changing Climate

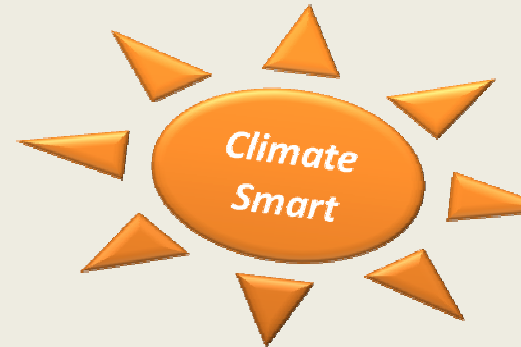
Diana Craig, USDA Forest Service

- Accelerates effective problem solving*
- Leverages resources*
- Improves communication*
- Facilitates broad support and understanding*
- Helps lead to an “all lands approach”*

***Together,
we can do more!***



Climate Smart Conservation Key Principles & Examples



1. Focus on future
2. Ecosystem context
3. Adaptive, flexible management
4. Prioritize actions
5. **Collaborate & communicate across sectors**

Adapted from: Draft Principles for CA Resources Agency Adaptation Update 2012; NWF Climate Smart Conservation Adaptation Principles 2011; CSIRO's Climate change impacts on Australia's biodiversity conservation & protected areas, Sept 2012 Update

COLLABORATE & COMMUNICATE ACROSS SECTORS

➤ establish/ expand non-traditional alliances to accelerate effective problem solving

- *(e.g., between/among public & private resource managers, scientists, decision-makers);*

➤ share knowledge openly & actively

➤ regularly and clearly communicate to the public on the science as well as range of solutions- convey hope;

➤ engage local communities to instill conservation ethic for long term success.



Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

❑ Why collaborative partnerships - How can collaborative partnerships help you?

❑ Examples

➤ **Large scale - California Landscape Conservation Cooperative**

➤ Regional scale – BAECC

➤ Local scale - Collaborative Forest Landscape Restoration Program

❑ Closing Thoughts





California Landscape Conservation Cooperative

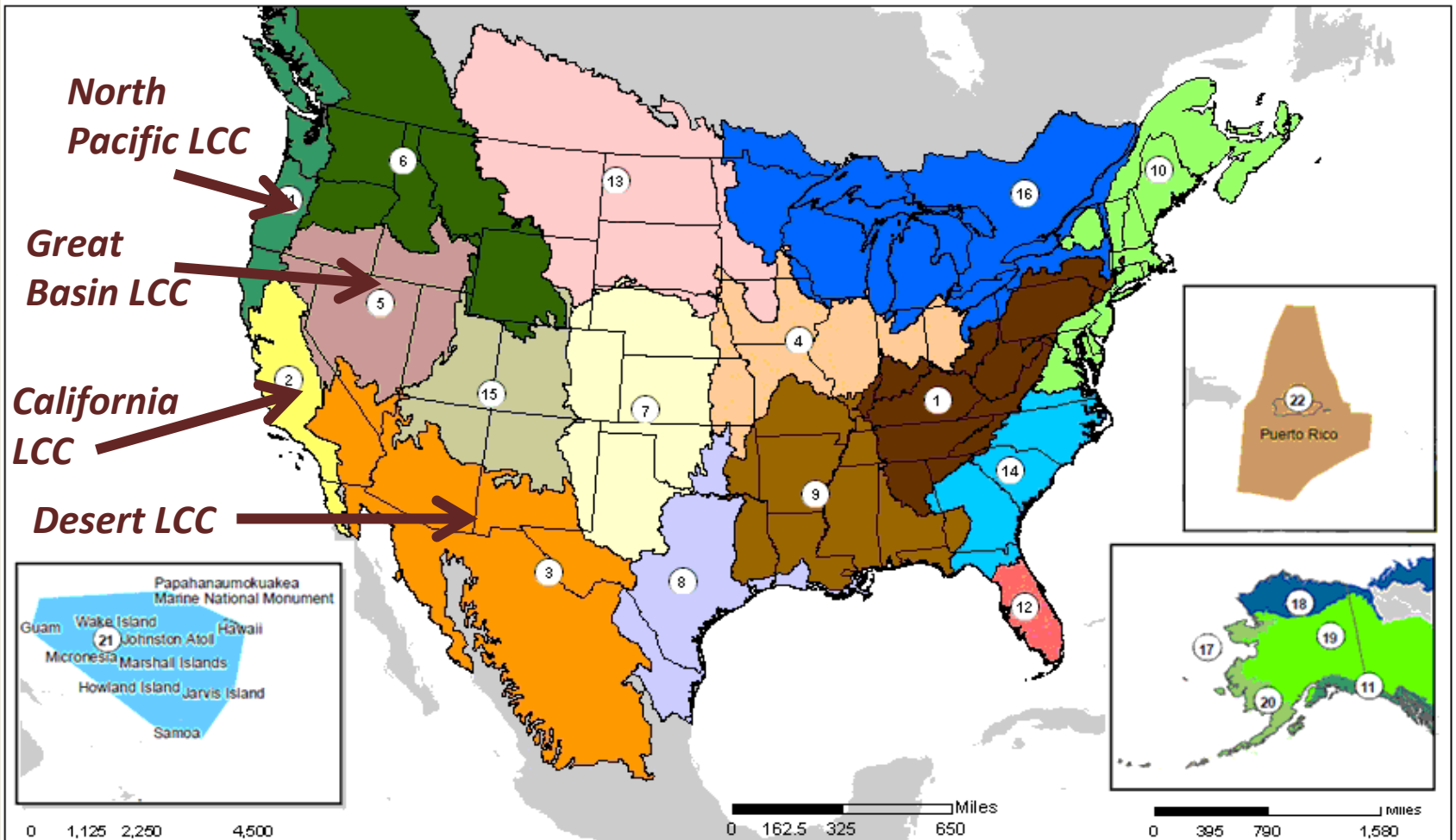
What are LCCs?

- Self-directed public-private partnerships that inform management actions
- Develop jointly established conservation objectives
- Provide science and technology support on a landscape scale
- Links science with conservation delivery



Sacramento National Wildlife Refuge

There are 22 LCCs, with 4 in California



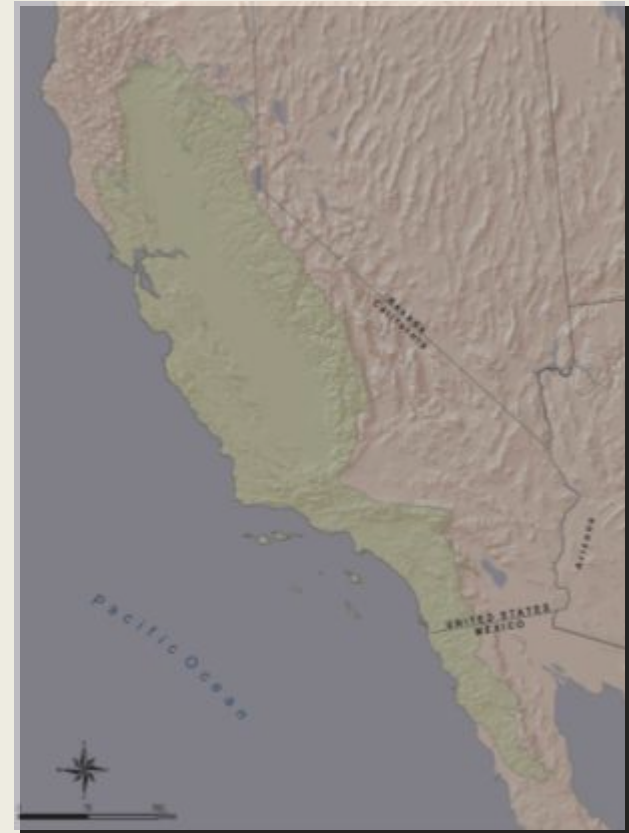
- | | | | |
|---|-----------------------------------|-------------------------------------|----------------------------------|
| 1. Appalachian | 7. Great Plains | 13. Plains and Prairie Potholes | 19. Northwestern Interior Forest |
| 2. California | 8. Gulf Coast Prairie | 14. South Atlantic | 20. Western Alaska |
| 3. Desert | 9. Gulf Coastal Plains and Ozarks | 15. Southern Rockies | 21. Pacific Islands |
| 4. Eastern Tallgrass Prairie and Big Rivers | 10. North Atlantic | 16. Upper Midwest and Great Lakes | 22. Caribbean |
| 5. Great Basin | 11. North Pacific | 17. Aleutian and Bering Sea Islands | Unclassified |
| 6. Great Northern | 12. Peninsular Florida | 18. Arctic | |



California Landscape Conservation Cooperative

What is the CA LCC?

- A science-management partnership bringing together scientists and natural resource managers
- Provides relevant information to support sustainable ecosystems
- Crosses jurisdictional, political and management boundaries





California Landscape Conservation Cooperative

What the CA LCC is not

- Does not supplant existing conservation partnerships. It builds on and fosters existing partnerships.
- Does not purchase property or fund restoration. It provides enhanced scientific tools for smart decision-making.
- Is non-regulatory. Partners participate on a volunteer basis.



Delta tidal marsh



California Landscape Conservation Cooperative

CA LCC Goals

- Foster collaboration and integration of science and management.
- Support development of technical products for natural resource management.
- Facilitate information acquisition, interpretation, translation, exchange and availability.
- Communicate information within and outside the LCC Community.





California Landscape Conservation Cooperative

Science Delivery

- **Funded more than 25 collaborative science projects in last three years**
- **CA LCC funding leveraged partner contributions twice over to provide relevant and applied science to natural resource managers**



USFWS Bay Checkerspot Butterfly



California Landscape Conservation Cooperative

Project Example

The screenshot shows the Cal WeedMapper website in a browser window. The address bar displays <http://weedmapper.calflora.org>. The navigation menu includes links for home, maps, regions, how to, spatial data, plant profiles, about, and contact. The main header features a green and white grid pattern with a stylized plant icon and the text "Cal WeedMapper BETA".

Map the Spread
CalWeedMapper provides a dynamic tool for mapping invasive plant distribution at the landscape level using expert knowledge. Learn more about how to use the maps >>

Submit Spatial Data
Contribute your GIS or observation data to Calflora for plant occurrences. Learn more about submitting spatial data and how our systems work together >>

News and Events

- ▶ Planning regional strategy with CalWeedMapper
- ▶ Interested in an online training on CalWeedMapper?
- ▶ 21st Annual Cal-IPC

CalWeedMapper enables natural resource managers, scientists and others to:

- ✓ Create maps and reports of invasive plant distribution
- ✓ Identify management opportunities in a county, WMA or region
- ✓ Update species distribution data

go to maps >>



California Landscape Conservation Cooperative

Project Example

Climate Commons

- <http://climate.calcommons.org/>
- On-line clearinghouse for data sources and services
- Access to tools – hosting and download apps
- Creates an online environment for communication



California Landscape Conservation Cooperative

Climate Commons

The screenshot shows the California Climate Commons website. At the top, there is a navigation bar with tabs for Home, Datasets, Documents, Web Resources, CA LCC Projects, Articles, Forums, and Hosted Datasets. Below the navigation bar is a search box labeled "Search the Commons" and a "User login" section with fields for "Username" and "Password". The main content area features a "Welcome to the California Climate Commons" heading, followed by a paragraph describing the Commons as a point of access to climate change data and resources. Below this is a list of resources: Datasets (spatial and other types of data), Documents (journal articles, reports, and manuscripts), Web Resources (websites that offer tools and services), and Projects (CA LCC-funded climate change research projects). To the right, there is a sidebar with a logo for the California Landscape Conservation Cooperative and a "Featured Project: Modeling Sea-Level Rise in San Francisco Bay Estuary" section with a small image.

DFW Climate College – January 15, 2013

Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

Current CA LCC Project - Climate Adaptation Project for the Sierra Nevada



Photos: Sierra Forest Legacy

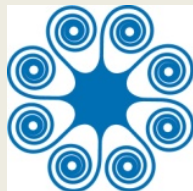


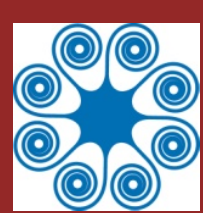
Project Objectives

1. Assess the vulnerability of a suite of focal resources to climate change;
2. Use spatial analysis and expert input to prioritize conservation areas or actions; and
3. Identify implementable management responses to climate change in the Sierra Nevada.



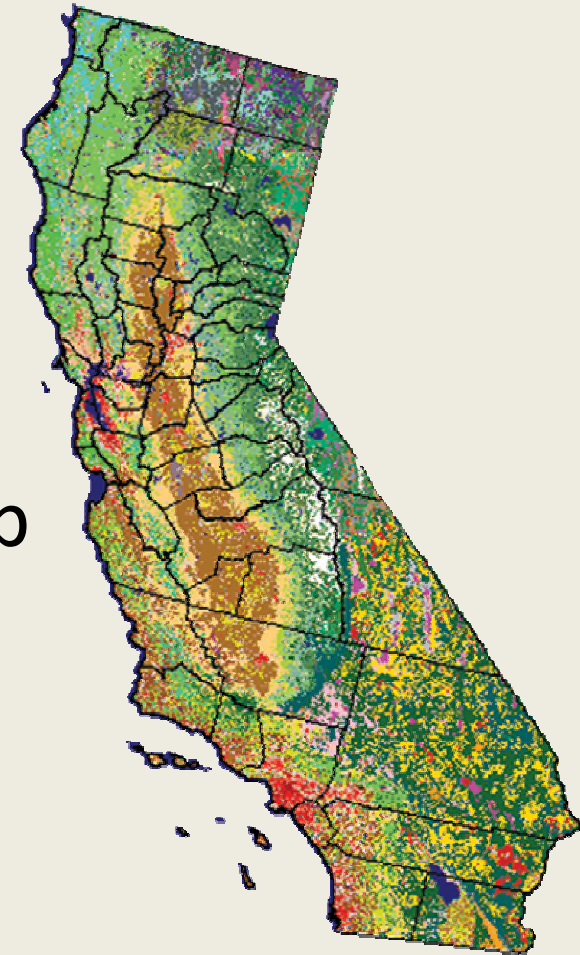
Photo: Jonny Armstrong





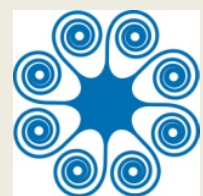
Work Plan

1. Convene committees
2. Select focal resources
3. Vulnerability assessment workshop
4. Spatial analysis
5. Adaptation planning workshop
6. Finalize products



Work Plan – Steps 1 & 2

1. Convene science and stakeholder committees
2. Develop common list of focal resources
 - FS developed initial list
 - TACCIMO compared list to existing FS management plans
 - Stakeholder Advisory Committee to revise focal resource list



Work Plan – Step 3

3. Vulnerability Assessment Workshop (March 5-7, 2013)

A. PRE-WORKSHOP

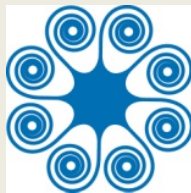
- TACCIMO – lit review of sensitivity, adaptive capacity for focal resources
- TACCIMO, Geos Institute – downscaled climate data (exposure)

B. WORKSHOP

- Basic vulnerability assessment training
- Identify management decisions
- Use expert elicitation process to assess vulnerability of focal resources

C. POST-WORKSHOP

- VA products (narratives, scores, climate impacts maps) will be posted online
- Workshop support page for all materials



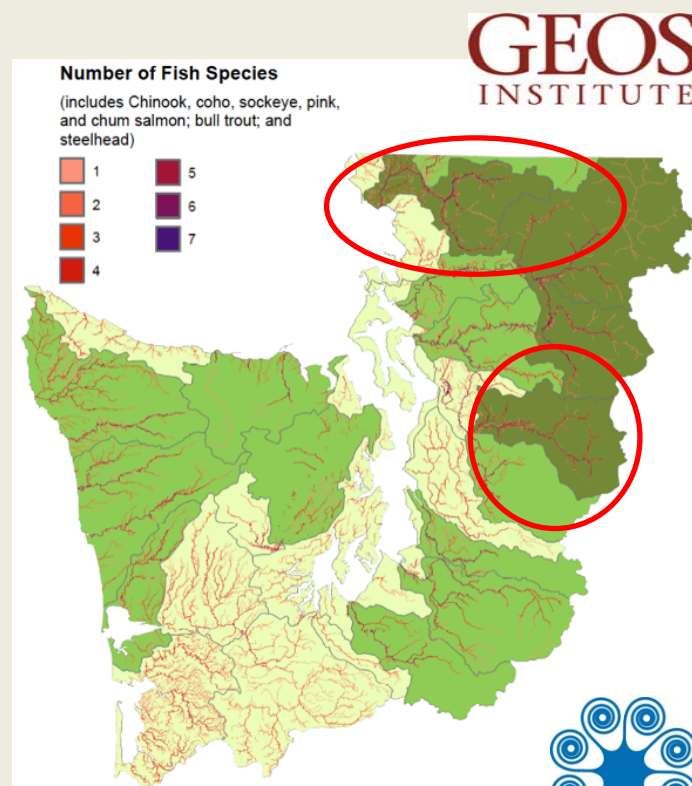
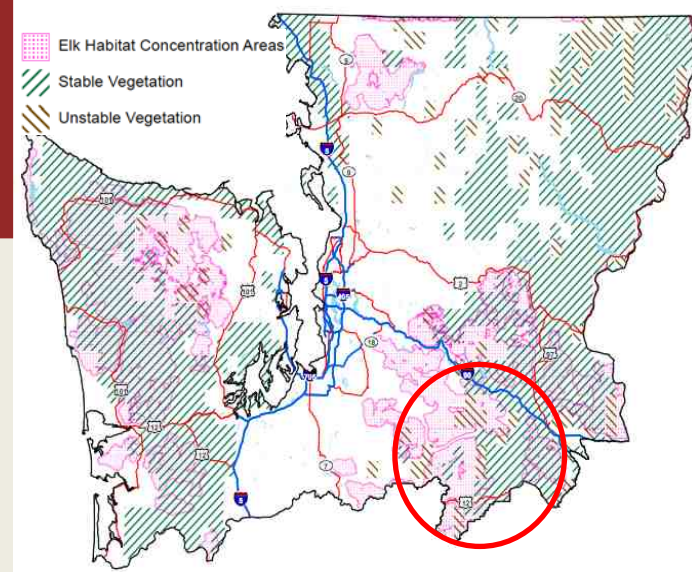
Work Plan – Steps 4 & 5

4. Spatial Analysis

- CBI to create maps intended to facilitate the development of adaptation approaches

5. Adaptation Planning Workshop (May 2013)

- Review VA and spatial analysis results
- Provide basic adaptation training
- Develop adaptation strategies and prioritize areas or actions
- Identify approaches that extend across boundaries as well as complementary action opportunities



Work Plan – Step 6

6. Finalize Products

- Online resource of vulnerability assessment findings
 - Narratives, scores, peer-reviewed resources
- Comparative maps (digital, pdf)
- Online resource of adaptation strategies for focal resources and the region
- Workshop support pages
 - Presentations, handouts, worksheets, etc.

Photo: Jonny Armstrong



Products will be available online (through CA LCC, EcoAdapt, Data Basin)



Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

❑ Why collaborative partnerships - How can collaborative partnerships help you?

❑ Examples

➤ Large scale - California Landscape Conservation Cooperative

➤ **Regional scale – BAEEC**

➤ Local scale - Collaborative Forest Landscape Restoration Program

❑ Closing Thoughts



Example: Bay Area Ecosystems Climate Change Consortium



or BAECCC www.baeccc.org

Bringing together scientists,
natural resource managers
and planners to sustain
nature's benefits in the face of
accelerating climate change

- NOAA Gulf of the Farallones and Cordell Bank National Marine Sanctuaries
- NOAA Coastal Services Center
 - US Fish & Wildlife Service
- PRBO Conservation Science
 - US Geological Survey
 - CA Coastal Conservancy
- CA Dept of Fish and Game
 - National Park Service
 - Bay Conservation and Development Commission
 - SF Bay Joint Venture
 - SF Estuary Partnership
 - Upland Goals Project
- Bay Area Open Space Council

Project Example: Preparing for SLR & Extreme Storms Along SF Bay Area's Outer Coast & SF Bay

Funded by NOAA SARP and NPS

Project Leads



- USGS constructing seamless digital elevation model
- PRBO developing web-based tool and interactive maps
- GFNMS managing team and leading stakeholder participation

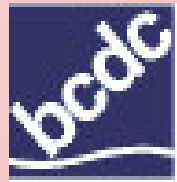
Project Objectives

- Assess vulnerabilities to SLR & increased storm intensity and stakeholder information needs from Point San Pedro to Point Reyes.
- Map vulnerabilities at the scale necessary for management.
- Conduct workshops and communicate the findings in accessible, user-friendly formats to apply to local adaptation and response strategies.

Project Example: Climate Change Technical Update of 1999 Baylands Ecosystem Habitat Goals

Funded by State Coastal Conservancy

Project Partners include:



Project Objectives include:

- Provide updated habitat restoration and protection goals for next decade- including sites that can accommodate wetland transgression upslope.
- ID management strategies for more resilient marshes (e.g., improve sedimentation dynamics).
- ID long term science gaps and management needs to implement recommendations.
- Develop recommendations for “living shorelines”- using habitats to reduce shoreline erosion.

Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

- Why collaborative partnerships - How can collaborative partnerships help you

- **Examples**

- Large scale - California Landscape Conservation Cooperative
- Regional scale – BAEEC

- **Local scale - Collaborative Forest Landscape Restoration Program**

- Closing Thoughts



Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

- ❑ The purpose of the **Collaborative Forest Landscape Restoration Program** (CFLRP) is to encourage the collaborative, science-based ecosystem restoration of priority forest landscapes.
- ❑ The Collaborative Forest Landscape Restoration Program expands collaborative landscape partnerships to:
 - *encourage ecological, economic, and social sustainability;*
 - *leverage local resources with national and private resources;*
 - *facilitate the reduction of wildfire management costs, through re-establishing natural fire regimes and reducing the risk of uncharacteristic wildfire;*
 - *demonstrate the degree to which various ecological restoration techniques achieve ecological and watershed health objectives; and,*
 - *encourage utilization of forest restoration by-products to offset treatment costs, to benefit local rural economies, and to improve forest health.*



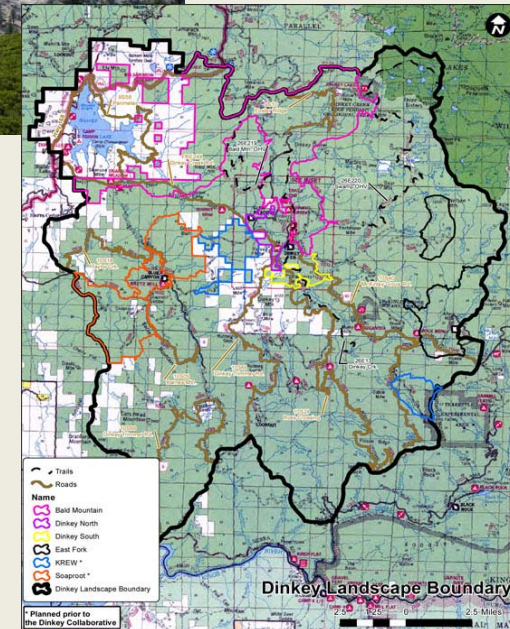
Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

EXAMPLE FROM CALIFORNIA: Dinkey Landscape Restoration Project

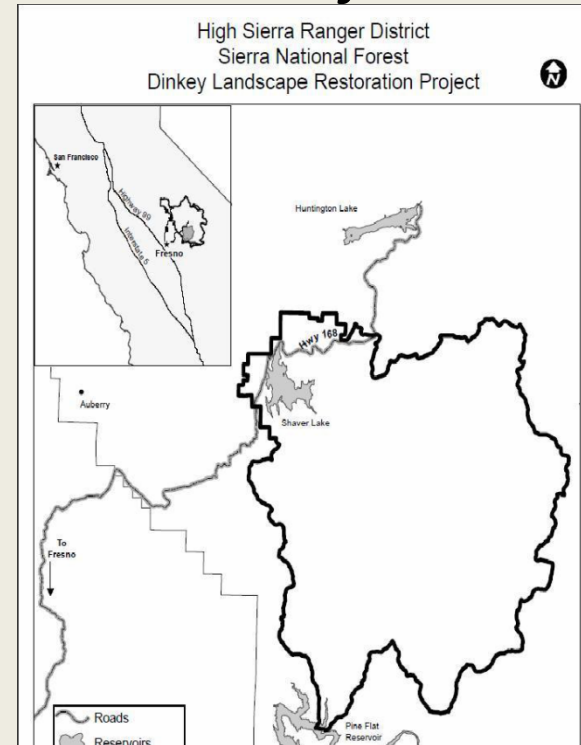
Partners:

- California Department of Fish and Game
- Center for Collaborative Policy
- Cold Springs Rancheria
- Defenders of Wildlife
- John Muir Project
- Highway 168 Fire Safe Council
- North Fork Mono Tribe
- San Joaquin Valley Air
- Pollution Control District
- Sierra Club
- Sierra Forest Legacy
- Sierra Forest Products
- Sierra Nevada Conservancy
- Southern California Edison
- The Wilderness Society
- U.S. Forest Service
- University of California, Merced
- Yosemite/Sequoia Resource Conservation and Development Council



Dinkey Collaborative Forest Landscape Restoration Project

- 154,000 acres in the southern Sierra Nevada (Fresno County, Sierra National Forest)
- Science-based ecological restoration strategy
- Restoration of key features of diverse, fire-adapted forests, including
 - heterogeneity at multiple scales,
 - reduced surface and ladder fuels,
 - terrestrial & aquatic habitats for sensitive species
- Fostering a landscape that is resilient to uncharacteristic wildfire, insect and disease, climate change, drought, invasive species, and air pollution.



Dinkey Collaborative Forest Landscape Restoration Project

➤ Restoration treatments are collaboratively developed to achieve multiple goals:

- reduce hazardous fuels
- retain and promote large tree and denning/nesting structures needed by Pacific fisher and California spotted owl
- promote stand and landscape heterogeneity
- provide sufficient natural regeneration of shade-intolerant tree species for the creation of future fire-adapted forests

➤ Provide current and future habitat for sensitive wildlife species by fostering ecosystem resilience, resistance, and adaptation to future wildfires and accelerated climate change impacts.



Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

❑ Why collaborative partnerships - How can collaborative partnerships help you?

❑ Examples

➤ Large scale - California Landscape Conservation Cooperative

➤ Regional scale – BAECC

➤ Local scale - Collaborative Forest Landscape Restoration Program



❑ **Closing Thoughts**

Go Big or Go Home: Collaborative Partnerships in a Changing Climate

Diana Craig, USDA Forest Service

- ❑ *Accelerates effective problem solving*
- ❑ *Leverages resources*
- ❑ *Improves communication*
- ❑ *Facilitates broad support and understanding*
- ❑ *Helps lead to an “all lands approach”*

***Together,
we can do more!***





The San Diego Foundation's *Climate Initiative*





Climate Initiative

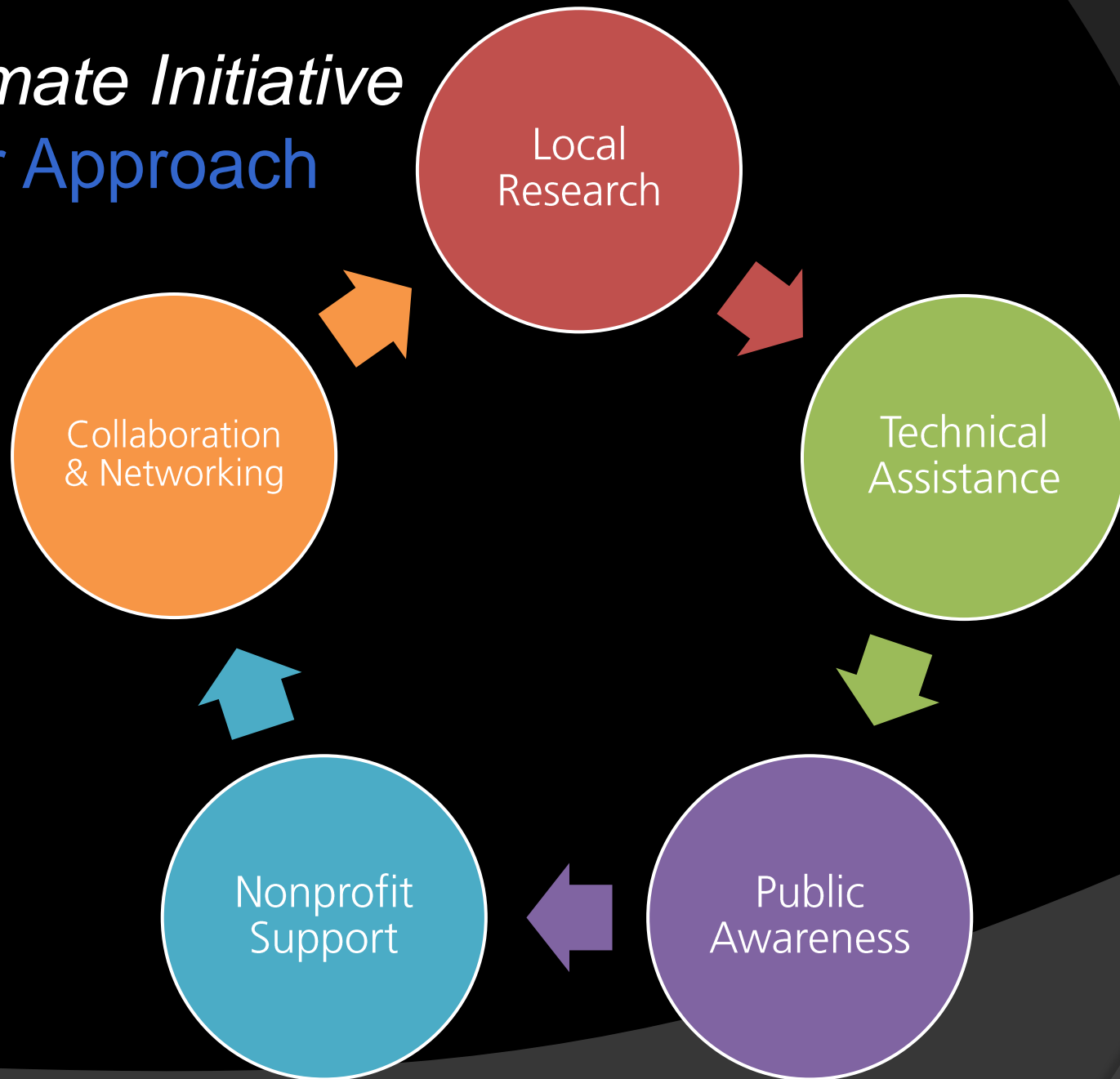
Our Advisors

Lisa Bicker, *Climate Initiative Chair*
David Engel, *Climate Initiative Vice-Chair*
Scott Anders, *USD Energy Policy Initiative Center*
Bill Anderson, *City of San Diego*
Risa Baron, *San Diego Gas and Electric*
Frank Belock, *SD County Water Authority*
Laurie Berman, *Caltrans*
Lisa Bicker, *CleanTECH San Diego*
Lisa Briggs, *Sempra Energy*
Jason Foster, *SD County Water Authority*
Gary Gallegos, *SANDAG*
Molly Gavin, *Qualcomm*
Judy Forrester, *Bank of America*
Jill Gravender, *SAIC*
Ben Haddad, *California Strategies*
Andy Hamilton, *Air Pollution Control District*

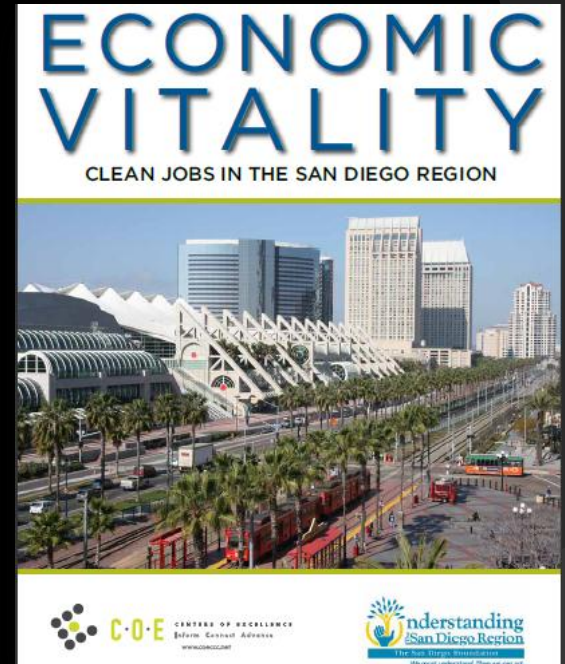
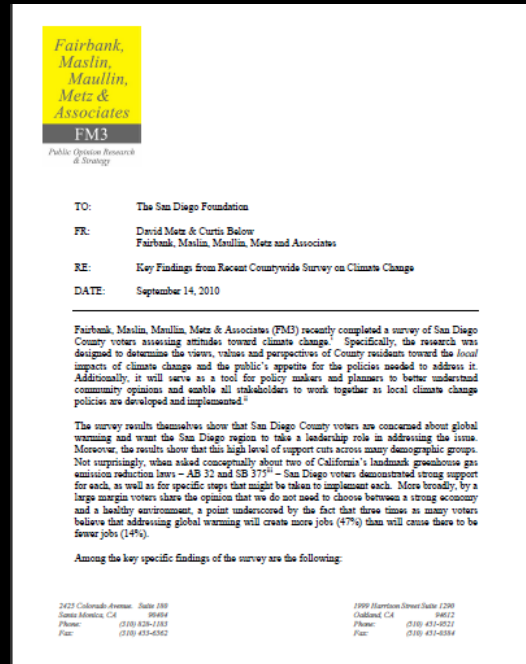
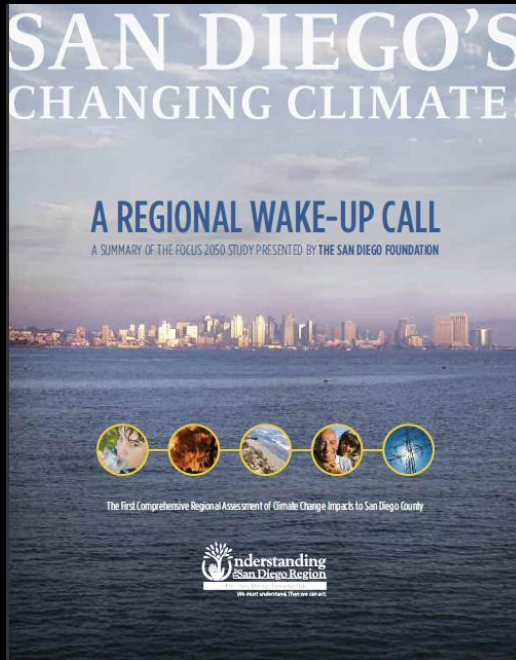
Brian Holland, *ICLEI-Local Governments for Sustainability*
David Hauser, *City of Carlsbad*
Lisa Hildebrand, *City of Carlsbad*
Robert Kard, *Air Pollution Control District*
Debra Kelley, *American Lung Association*
Bob Leiter, *Consultant to SANDAG*
Andrew Martin, *SANDAG*
Andrew McAllister, *Center for Sustainable Energy*
Michael Meacham, *City of Chula Vista*
Devon Muto, *County of San Diego*
Patricia McCoy, *Imperial Beach City Council (retired)*
Linda Pratt, *City of San Diego*
Jim Sandoval, *City of Chula Vista*
Cheryll Stewart, *SD County Water Authority*
Muggs Stoll, *SANDAG*



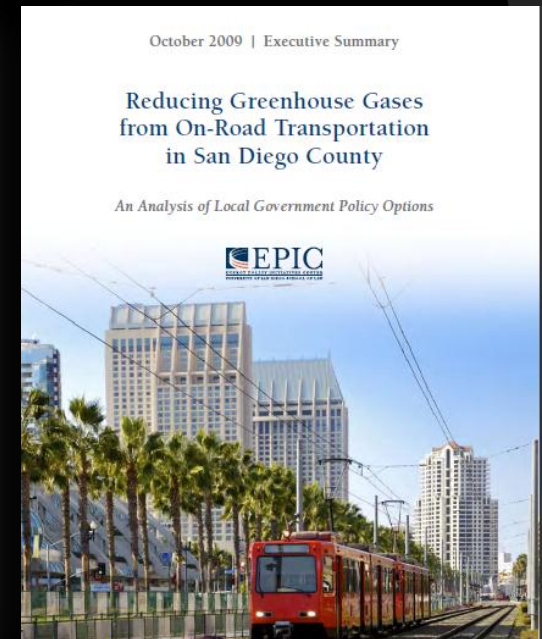
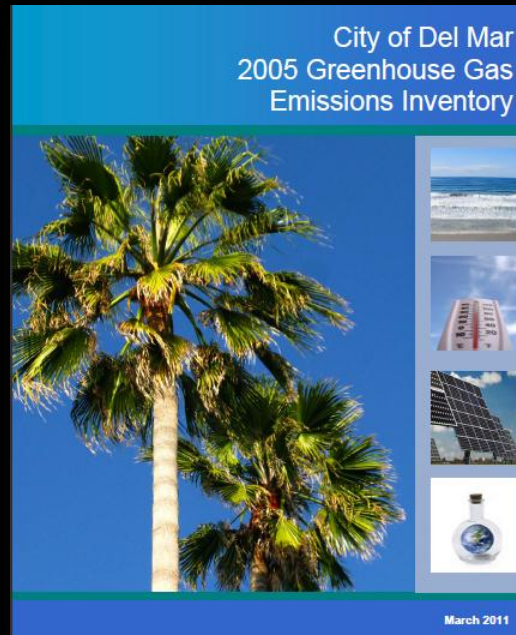
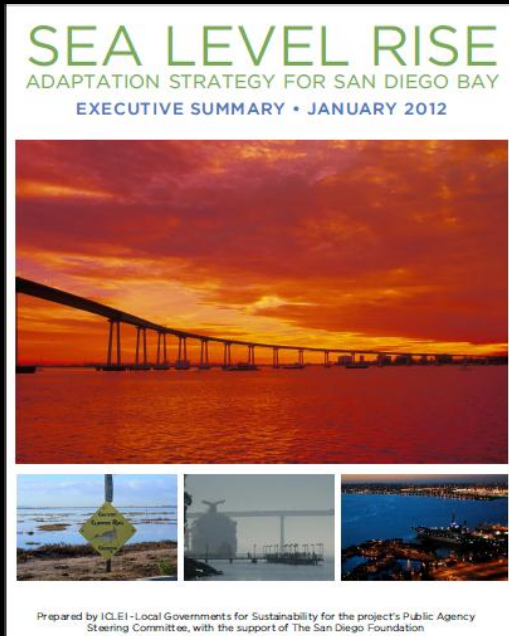
Climate Initiative Our Approach



The San Diego Foundation's *Climate Initiative* Research



The San Diego Foundation's *Climate Initiative* Technical Expertise



The San Diego Foundation's *Climate Initiative* Public Awareness

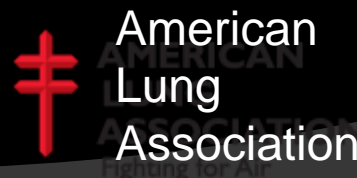
7 in 10 agree San Diego should take a leadership position in setting goals to reduce emissions

OUR
GREATER
SAN DIEGO
VISION

... SAN DIEGO REGIONAL
Climate Education Partnership
:



The San Diego Foundation's *Climate Initiative* Nonprofit Support



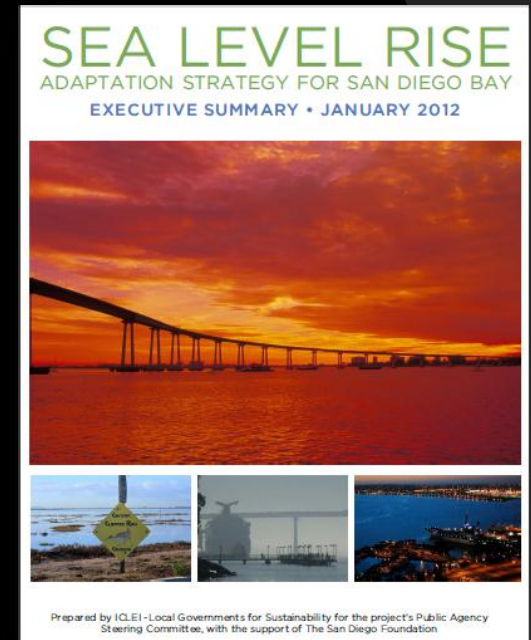
The San Diego Foundation's *Climate Initiative* Collaborations

Mitigation

- ◉ SDG&E Local Government Partnerships
- ◉ SANDAG Energy Roadmap Program
- ◉ CleanTECH San Diego Streetlight Working Group

Adaptation

- ◉ Sea Level Rise Adaptation Strategy for San Diego Bay
- ◉ San Diego County Water Authority and Scripps Institution of Oceanography



Climate Action Planning: 2006

Greenhouse Gas
Emissions Inventory

- 2 Local Governments Performed Inventories

Climate Action Plan

- 2 Local Governments with Adopted Climate Action Plans



Climate Action Planning: 2012

Greenhouse Gas
Emissions Inventory

- **19** Local Governments Performed Inventories

Climate Action Plan

- **9** Local Governments Working on or Adopted Climate Action Plans



Public Agencies

- ◎ **Port of San Diego:** *Climate Mitigation and Adaptation Plan*
- ◎ **San Diego County Water Authority:** *Climate Action Plan*
- ◎ **SANDAG:** *Regional Climate Action Strategy; Sustainable Communities Strategy*
- ◎ **Tijuana River National Estuarine Research Reserve:** *A vulnerability assessment and adaptation strategy*
- ◎ **US Navy Region Southwest**



Climate Initiative Partners

Bank of America



QUALCOMM®

THE KRESGE FOUNDATION



Beyster Family, Blasker-Miah Rose, Engel, Hattie Ettinger Conservation, Hervey Family and Orca Funds, as well as the Zell Family Foundation



The San Diego Foundation's *Climate Initiative*



www.sdfoundation.org/CivicLeadership/Programs/Environment/Climate.aspx



CDFW Climate College: Lecture #6



Doug Parsons
National Park Service

February 12, 2013
1:00 - 2:00PM

Climate Literacy and
Education

