DFG Climate College: Lecture #1

Guest Speakers

Chuck Bonham, DFG

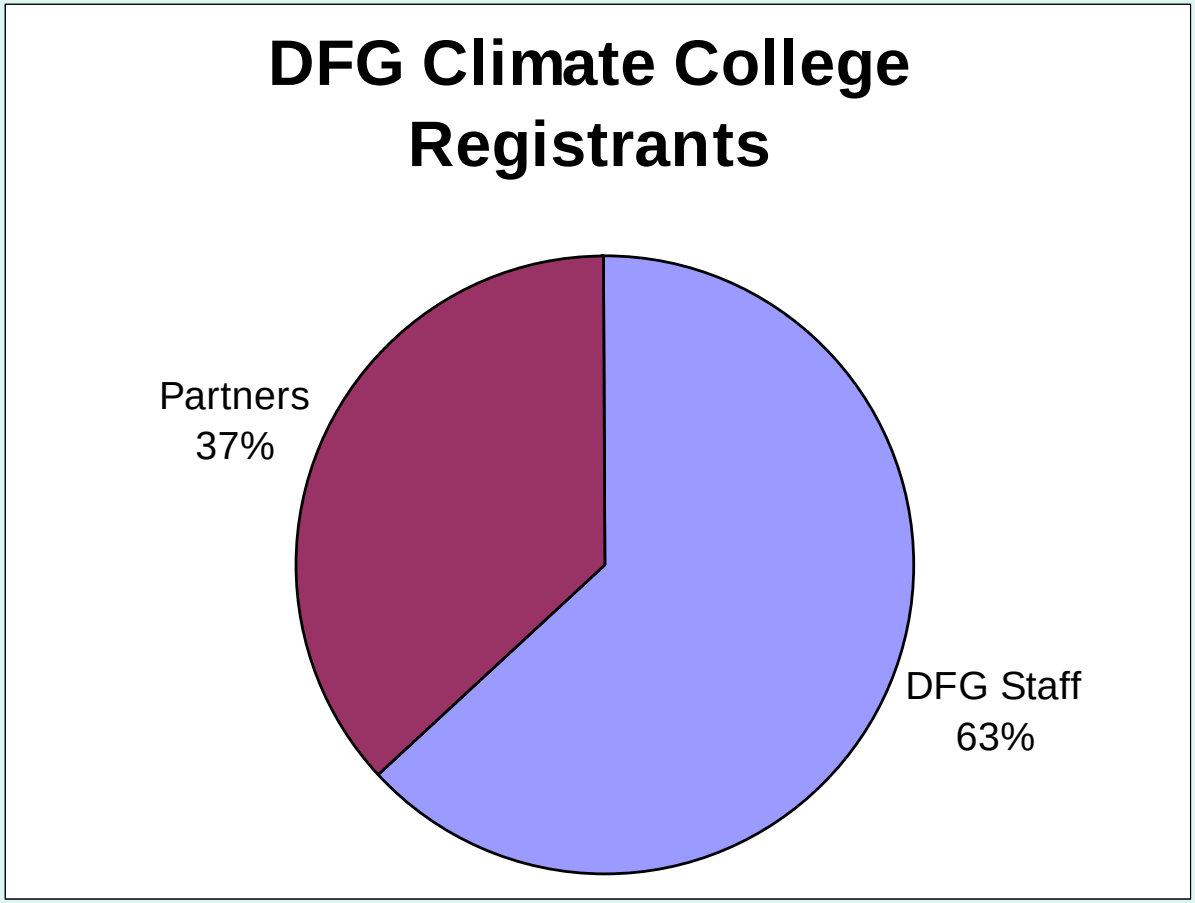
Cliff Rechtschaffen, Governor's Office

Ken Alex, Governor's Office

Amber Pairis, DFG

DFG Climate College Welcome!!

- Goal: Build a climate community at DFG that includes our partners
- Provides a foundation of climate change knowledge for ALL staff
- Promotes networking across branches/regions AND with our partners
- New approach to training that will evolve over time - where we go next is up to you

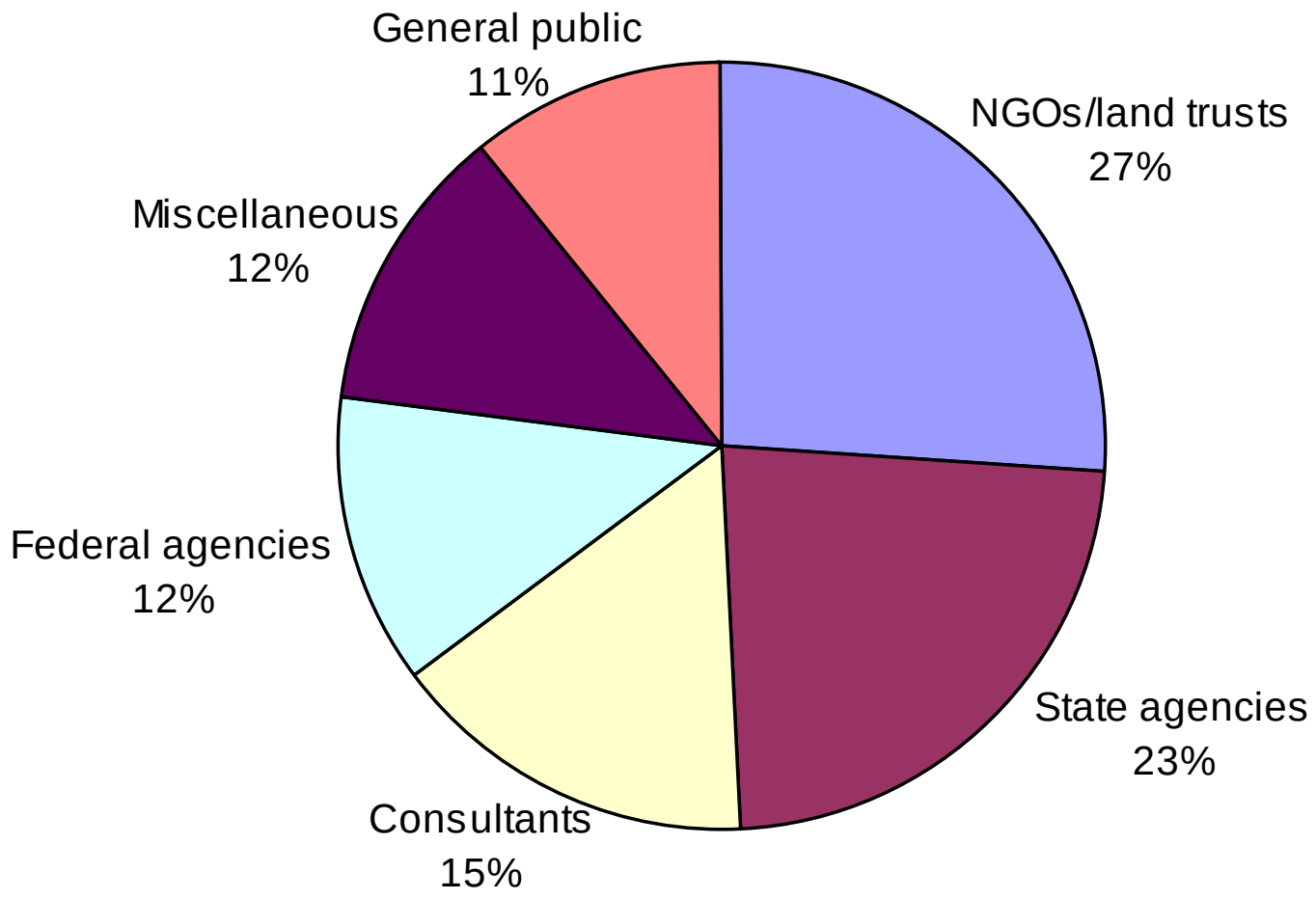


176 registered

- 111 DFG
- 65 partners

- +75% registered for full 10 month course
- DFG: All regions equally represented
- DFG: 15 Branches/Programs—All Divisions represented

Partner Participation



Miscellaneous Category: Representatives from CA Universities, professional scientific society, Tribal representation, local government, industry (utilities), journalist

Photo courtesy Meredith Osborne, DFG

California leading the way on climate action; where we go next is up to you!

Chuck Bonham, Director
CA Dept. of Fish and Game
September 18, 2012

Observed Climate Changes in California

- Annual average temperatures in CA increased by approximately 2 degrees Fahrenheit between 1900 and 2000
- Larger proportion of precipitation falling as rain instead of snow
- More frequent large wildfires in past several decades
- Sea level rise on average of 7 inches along the California coast
- The percent of annual runoff during spring snowmelt in the Sacramento River decreased by 10 percent over the past century

Sources: Our Changing Climate 2012, CAS 2012 Draft, Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future, 2012

Examples of Impacts on Biological Systems

- Spring snowmelt from the Sierra Nevada to the Sacramento River has declined over the past century.
- Sea levels measured at stations in San Francisco and La Jolla have been rising.
- Tree deaths in the Sierra Nevada have increased with rising temperatures.
- The lower edge of the conifer-dominated forests in the Sierra Nevada has been retreating upslope over the past 60 years.
- The spring and fall arrivals of some migratory birds are changing.
- Butterflies in the Central Valley have been arriving earlier in the spring over the past four decades.

Source: Indicators of Climate Change in California

DFG's Vision for Confronting Climate Change

CLIMATE SCIENCE PROGRAM
Conservation Today for a Better Tomorrow
California Department of Fish and Game

ensuring scientific quality and visibility
SCIENCE Institute

GOING GREEN
California Department of Fish and Game

Why a Climate Course?

Goal: Build a community within DFG and with our partners around climate change.

- Leadership
- Partnership
- Commitment

DFG: Part of a larger vision for responding to climate change

The Great Seal

Ken Alex, Governor’s Office

Cliff Rechtschaffen, Governor’s Office

Climate College!

Governor Brown on Climate Change

- “Leaders and officials from Washington all the way throughout the Pacific Rim seem to have forgotten about global warming, but global warming hasn't forgotten about us. The crisis continues to mount. This is not a time for business as usual, there is too much at stake.” (Sept 13, 2011)

- “July was the hottest month on record. It's clear from extreme weather, fires, floods that climate change is with us. This means we must change too. (Aug 9, 2012)

Governor's Climate Initiatives

- 33% Renewables & Beyond
- Energy Efficiency
- Energy Storage
- Clean Cars & Electric Vehicles
- AB 32 & Cap and Trade
- Update to Adaptation Policy
- Sustainable Land Use Policies

California Climate Change Center Third Assessment (2012)

- During the last 35 years, the Sierra Nevada range has witnessed both the wettest and the driest years on record of more than 100 years
- Temperatures in CA will rise by 4.6 to 8.1 degrees by 2100.
- Heat waves will be more frequent, hotter, and longer.
- Wildfire risk will increase significantly-- the number of large fires & estimated burn areas will increase 3x over historical levels.
- Because of sea level rise, as early as 2050, today's 100-year storm could occur once every year.

Approaching a state shift in Earth's Biosphere (Barnosky, et al, Nature 7 June 12)

- Biological Systems can shift rapidly from an existing state to a radically different state
- Present day forcing mechanisms: human population growth and resource consumption; habitat transformation and fragmentation; energy production and consumption; and climate change
- Primarily human driven

What is DRECP?

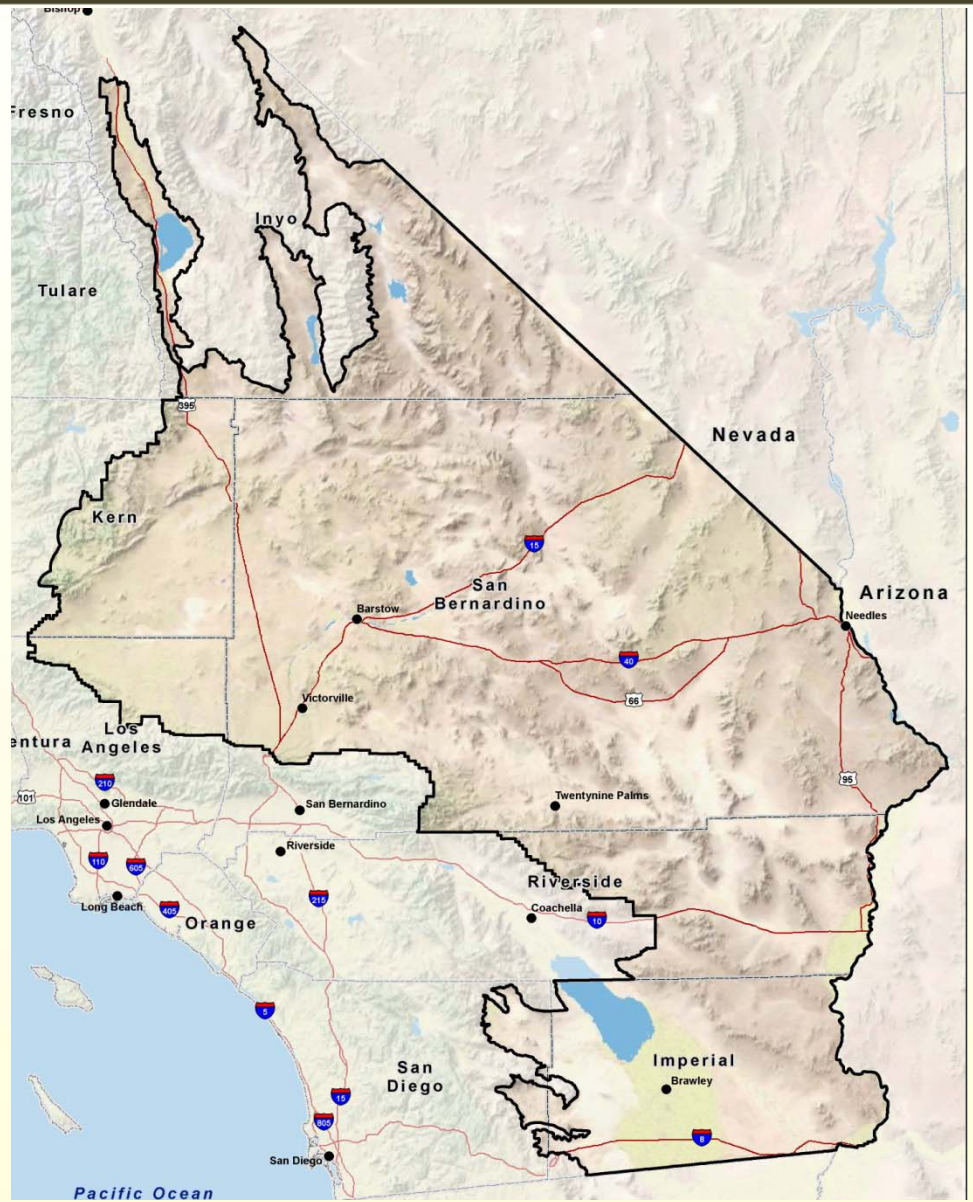
DESERT RENEWABLE ENERGY CONSERVATION PLAN

- Planning Agreement Signed in May 2010
- Natural Community Conservation Plan (NCCP) complies with CA NCCP Act
- Habitat Conservation Plan (HCP) complies with the Federal Endangered Species Act
- Focused only on renewable energy and related transmission projects within the California Deserts

DRECP Plan Area

DESERT RENEWABLE ENERGY CONSERVATION PLAN

- Mojave & Colorado Desert Eco-regions
- Counties include:
  - Imperial
  - Inyo
  - Kern
  - Los Angeles
  - Riverside
  - San Bernardino
  - San Diego
- ~ 22.587.000 acres



Proposed Covered Activities

- Construction, development, operation, maintenance and decommissioning of renewable energy and related electric transmission projects within the Plan area:
  - High-voltage Transmission Facilities
  - Solar (Photovoltaic and Thermal)
  - Wind
  - Geothermal
  - DRECP Conservation Actions

Proposed Covered Species

- Specific plants and animals for which conservation, mitigation and long-term management are provided and "take" is authorized for covered animals
- List is being developed by REAT agencies with input from applicants, public, Stakeholder Committee & Independent Science Advisors
- To date, initial analysis suggests covering approximately 90 species
- List will remain under development until the Final Plan is approved

DRECP Will …

DESERT RENEWABLE ENERGY CONSERVATION PLAN

- **Provide permits**. USFWS & CDFG issue 30-50 yr permits to plan participants for covered species.

- **Streamline, standardize, and create predictable process** for endangered species permits, creating greater regulatory and economic certainty.

- **Pre-define mitigation.** Provide large-scale habitat/ species conservation in areas of high biological value—avoid project-by-project approach.

DRECP Will …

DESERT RENEWABLE ENERGY CONSERVATION PLAN

- **Facilitate California Renewables Portfolio Standard (RPS)** and enable long-term renewable energy development beyond 2020

- **Create science-based monitoring and adaptive management** program to maintain and enhance conservation areas.

- **May provide funding opportunities.** Approved HCP/NCCP's are eligible for state and federal funding which can be used for conservation in the desert.

Denier Website Response

- As a former resident years ago, I can say I am extremely glad I no longer live there and do not have to see my tax dollars being squandered on things like this…I drove from LA to Crescent City and the scenery was great, but the people appeared to have their spirit broken.

- The science is a fraud. You know it but being part of the 1% (elite progressive lying leaders) you are willing to use it to promote your agenda. Honesty and Liberty be damned.

- Let's just say that you and Governor Moonbeam must have been high for the last few years as it has been well proven that the global warming books were "cooked" by academics wanting to push their agenda.

Questions?

Photo courtesy Meredith Osborne, DFG

DFG Climate College: Lecture #2

Ellie Cohen

PRBO Conservation Science

October 15, 1:30-2:30

Climate 101; understanding the basics of climate science and what we can do about it