USFWS Climate Change Efforts

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SPECIAL REPORT GLOBAL WARMING

BE WORRIED.
BE VERY
WORRIED.

Climate change isn’t some vague future problem—it’s already damaging the planet at an alarming pace. Here’s how it affects you, your kids and their kids as well.

EARTH AT THE TIPPING POINT
HOW IT THREATENS YOUR HEALTH
HOW CHINA & INDIA CAN HELP
SAVE THE WORLD—OR DESTROY IT
THE CLIMATE CRUSADERS

Rapidly Melting Sea Ice

Since 1979, more than 20% of the Polar Ice Cap has melted away.
Major Climate Change Effects

- Extreme weather patterns (wetter/drier)
- Decreased snow pack
- Water cycles altered (early spring, temp increase)
- More frequent and intense wildfires
- Range shifts in ecosystems/habitats
- Invasive species outbreaks
- Sea level rise (habitat loss, flooding)
- Ocean acidification
USFWS Climate Change Strategic Plan

http://www.fws.gov/home/climatechange/
comment period ended November 30
Climate Change Strategic Plan

- Focused in three areas
  - Adaptation – reduce impacts
  - Mitigation – reduce levels of greenhouse gases
  - Engagement – reaching out
- Identifies priority strategies and actions
- Adopts SHC or landscape conservation approach
- Introduces concept of Landscape Conservation Cooperatives
- National and Regional Climate Teams
- Science Applications Program
Landscape Conservation Cooperatives

- Applied science partnership focused on a defined geographic area
- Provide scientific and technical expertise to understand climate change and other major system stressors
- Serve as a national network for shared science capacity to support natural resource managers
- Inform strategic efforts at landscape scales to be used in conservation planning and delivery
Preliminary LCC Concepts

- Science partnerships within a geographic area
  - State, Provincial, and Federal agencies, Tribes, NGOs, Universities
- Rely on and support existing partnerships
- Guided by a Steering Committee
  - Provide management direction and identify priorities
- LCC Coordinator/Science Coordinator
- Shared science capacity
  - Science, technology, data management
- All species and all habitats
- Leverage funding and expertise
- Link science with natural resource managers’ needs
LCC Process

**Landscape Conservation Cooperative**

- **Core science capacity**
  - Applies technical elements of adaptive management framework, such as Strategic Habitat Conservation
  - Develops products to inform on the ground conservation delivery

- **Steering Committee**
  - Directs science capacity towards conservation priorities across landscape
  - Leads respective implementation capacity as per collective priorities

- **Resource managers**
  - Works with science capacity to refine science and decision support needs
  - Ensures on the ground conservation delivery consistent with respective missions
Science Capacity

- DOI Climate Science Center (PNW)
- USGS Science Centers (FRESC and NoRock)
- USFS - PNW Research Station/WWETAC
- NOAA Climate Service
- University of Washington Climate Impacts Group (CIG)
- Oregon Climate Change Research Institute (OCCRI)
  - Regional Integrated Science and Assessments (RISA) for the Northwest
- 5-year grant to Idaho Universities
  - National Science Foundation - EPSCoR
- Pacific Institute for Climate Solutions in British Columbia
What will LCCs Do?

- Identify and address scientific information needs
- Facilitate better understanding of habitat response and species distribution to ecological process changes
- Inform landscape-scale conservation and management decisions
- Forum for sharing information and resources
LCC Geographic Framework

- 22 LCCs
- 8 initiated in FY2010
Potential LCC Outcomes

- Maps of sensitive species and habitats
- Down-scaling of regional climate change models to local communities/populations
- Potential range shifts of native and invasive species
- Vulnerability assessments for species and habitats
- Potential refugia and priorities for land acquisition
- Potential corridors linking present and future habitat
- Convergence of climate and non-climate stressors
- Inventory and monitoring strategies
- Data sharing
Pacific Region LCCs

FY2010
- Pacific Islands
- Great Northern

FY2011
- North Pacific
- Great Basin
North Pacific LCC

Includes:
- Alaska
- Washington
- Oregon
- California
- British Columbia

- Extends over 2,200 mi. (3,500 km) from north to south
- Approx. 204,000 sq. mi. (530,000 sq. km.)
- Ocean boundary not defined
North Pacific LCC

Protected Lands

Identified on Map:
• Over 82,000 sq. miles (approx. 213,000 sq. km) of U.S. Federal lands

Not Shown on Map:
• Additional State, Provincial, Canadian Federal, Tribal, and NGO lands
Northern Pacific LCC

- Early initiation in FY2010
- Potential Partners
  - U.S. State and Federal Agencies
  - Canada Federal and Provincial Agencies
  - Tribes, First Nations
  - NGOs (e.g., TNC, NWF, Defenders)
  - Partnerships (e.g., PCJV, PSP)
Northern Pacific LCC – Next Steps

- Webinars in May
- Additional dialog with partners
- Meeting with State wildlife agencies
- Summer planning meetings with all potential partners
- Identifying management or conservation questions
- Identifying science needs
- Planning Information gap analysis
Climate change is greatest challenge in the history of conservation
Primary function of LCCs is providing and sharing science support for resource managers
CESU can support science capacity needs