

A GUIDE FOR TRIBAL LEADERS ON U.S. CLIMATE CHANGE PROGRAMS

There are a growing number of government and non-government agencies and programs addressing climate change for communities and landscapes across the United States. It is critical that there is information available on the types of programs, funding and assistance available to American Indian Tribes and Alaska Native communities seeking to address climate change.

This guide summarizes key U.S. government programs addressing climate change, opportunities for tribal engagement and contacts for each agency. In addition to its immediate value to tribes and their partners, this information will provide important groundwork for research on understanding and improving the tribal consultation processes in the context of climate change.

This document also begins to include tribal, academic and non-governmental agencies and programs to assist tribes in addressing climate change, though the list is by no means fully comprehensive at this point. This document is a work in progress and will be updated frequently. If you would like to edit the information for an organization included in the document or submit information for additional organizations, please contact Kathy Lynn at kathy@uoregon.edu

This document is a publication developed through the Tribal Climate Change Project, a collaborative project between the University of Oregon Environmental Studies Program and the USDA Forest Service Pacific Northwest Research Station. The project is aimed at understanding of the needs, lessons learned, and opportunities, American Indian tribes have in planning for the physical effects of climate change and reducing greenhouse gas emissions and provide information to inform resource management decision-making in the context of climate change. **More information on the tribal climate change project can be found at:** <http://tribalclimate.uoregon.edu/>.

Contacts:

Ellen Donoghue, Social Scientist
Goods Service and Values Program
USDA Forest Service, Pacific Northwest Research
Station
edonoghue@fs.fed.us
503-808-2018

Kathy Lynn, Adjunct Research Assistant
Tribal Climate Change Project Coordinator
University of Oregon Environmental Studies Program
kathy@uoregon.edu
541-346-5777

Many of the resources included in this guide are referenced in greater detail in the PEW Center on Global Climate Change's document [Climate Change Adaptation: What Federal Agencies are Doing](http://www.pewclimate.org/publications/report/climate-change-adaptation-what-federal-agencies-are-doing).
www.pewclimate.org/publications/report/climate-change-adaptation-what-federal-agencies-are-doing

A GUIDE FOR TRIBAL LEADERS ON U.S. CLIMATE CHANGE PROGRAMS

TABLE OF CONTENTS

FEDERAL AGENCIES AND PROGRAMS ADDRESSING CLIMATE CHANGE

US Global Change Research Program	4
Council on Environmental Quality	4
Environmental Protection Agency	4
Department of Agriculture (USDA)	4
USDA Climate Change Program Office	4
Economic Research Service	4
USDA Energy Programs	5
Farm Service Agency	5
Forest Service	5
National Agricultural Library - Natural Resources and Environment Information:	5
Natural Resources Conservation Service	5
National Institute for Food and Agriculture – Biobased Products and Processing	6
Rural Development	6
Department of Commerce	6
Economic Development Administration	6
National Oceanic & Atmospheric Administration	6
NOAA’s Office of Oceanic and Atmospheric Research	7
NOAA’s National Marine and Fisheries Service	7
NOAA’s Office of Ocean and Coastal Resource Management	7
Department of Defense	8
Army Corps of Engineers	8
Department of Energy (DOE)	8
Bonneville Power Administration	8
Office of Energy Efficiency and Renewable Energy	8
Office of Environmental Management	8
National Laboratories	8
The Office of Indian Energy Policy and Programs	9
Department of Health and Human Services	9
Center for Disease Control (CDC) Climate Change and Public Health Program	9
Indian Health Services	9
National Institute of Environmental Health Sciences	9
Department of Homeland Security (DHS)	9
Federal Emergency Management Agency	9
Department of the Interior	10
Bureau of Indian Affairs	10
Bureau of Land Management	10
Bureau of Reclamation	10
U.S. Fish & Wildlife Service	11
U.S. Geological Survey	11
National Park Service	11
Tribal Energy and Environmental Information Clearinghouse	11
Department of Justice	12
Office of Tribal Justice	12

TRIBAL ORGANIZATIONS AND PROGRAMS

American Indian Alaska Native Climate Change Working Group	12
Columbia River Intertribal Fish Commission	12
Honoring Our Natural Resources	12
Intertribal Timber Council Research Sub-Committee	12
National Congress of American Indians	13
Native American Fish & Wildlife Society	13
National Tribal Environmental Council	13
NASA Tribal College and Universities Program: Preparing Indian Country for Climate Change Through Technology, Education and Research	13

ACADEMIC AND NON-GOVERNMENTAL CLIMATE CHANGE PROGRAMS

Alaska Conservation Solutions 13
EcoAdapt/Climate Adaptation Knowledge Exchange 13
Institute for Tribal Environmental Professionals - Tribal Climate Change Program 14
National Wildlife Federation 14
Native Communities and Climate Change Web-based Database - Center for Energy & Environmental Security, University of Colorado
Law School 14
University of Washington Climate Impacts Group 14

TRIBAL CLIMATE CHANGE PROFILES

Climate Change and the Coquille Indian Tribe: Planning for the Effects of Climate Change and Reducing Greenhouse Gas Emissions .. 15
Indigenous Perspectives on Climate Change 15
Leech Lake Green Team 15
Lummi Nation: Pursuing Clean Renewable Energy 15
Nez Perce Tribe: Carbon Sequestration Program 15
Pueblo of Jemez: Leading the Way to a Renewable Future 15
Relocation of Alaska Native Villages 16
Swinomish Climate Change Initiative: At the Forefront of Planning for Climate Change 16

FEDERAL AGENCIES AND PROGRAMS ADDRESSING CLIMATE CHANGE

US Global Change Research Program

The U.S. Global Change Research Program (USGCRP) coordinates and integrates federal research on changes in the global environment and their implications for society. Thirteen federal government Departments and Agencies participate in the USGCRP, which was known as the U.S. Climate Change Science Program from 2002 through 2008. The mission of the USCRP is to build a knowledge base that informs human responses to climate and global change through coordinated and integrated federal programs of research, education, communication, and decision support. <http://www.globalchange.gov/>

Council on Environmental Quality

The White House Council on Environmental Quality (CEQ) works on developing environmental policies and initiatives, and the CEQ's chair serves as the principal environmental policy adviser to the President. The CEQ is engaged in several initiatives related to climate change adaptation, including co-chairing the Climate Change Adaptation Task Force, which released a report outlining climate-change related recommendations to President Obama in October 2010. The report identified prioritizing climate-vulnerable peoples as one of the guiding principles for public and private decision makers. <http://www.whitehouse.gov/administration/eop/ceq>

Environmental Protection Agency

The Environmental Protection Agency (EPA) has a number of relevant programs that relate to tribes and climate change. The Indian Environmental General Assistance Program provides grants to federally recognized tribes for planning, developing, and establishing environmental programs on tribal lands, as well as for developing and implementing solid and hazardous waste programs. The Tribal Communities page is a resource for tribal communities interested in implementing climate change mitigation and energy management projects. The overall goal of the Climate Showcase Communities program is to create replicable models of cost-effective and persistent greenhouse gas reductions that will catalyze broader local and tribal government actions to stabilize the climate and improve environmental, economic, health, and social conditions. EPA encourages replication of the Climate Showcase Community models across the country to promote the creation of sustainable climate management programs that are not only the foundation for stabilizing the climate, but also help create jobs, improve people's health, and fulfill other local government priorities.

- Indian Environmental General Assistance Program: <http://www.epa.gov/aieo/gap.htm>
- Tribal Communities: <http://www.epa.gov/statelocalclimate/tribal/index.html>
- Climate Showcase Communities: <http://www.epa.gov/statelocalclimate/local/showcase/index.html>
- Regional Tribal Contacts: <http://www.epa.gov/indian/contactinfo/index.htm>

Department of Agriculture (USDA)

USDA Climate Change Program Office

The Climate Change Program Office (CCPO) functions as the Department-wide coordinator of agriculture, rural and forestry-related global change program and policy issues facing USDA. The CCPO is responsible for coordinating activities with other Federal agencies, interacting with the legislative branch on climate change issues affecting agriculture and forestry, and representing USDA on U.S. delegations to international climate change discussions. http://www.usda.gov/oce/climate_change/

Economic Research Service

The Economic Research Service (ERS) conducts research programs to inform public and private decision making on economic and policy issues. ERS climate change research is underway to estimate the likely responses of farmers to carbon storage policies and to assess the likely impacts of policies on the carbon balance, land and water use, and agricultural markets. <http://www.ers.usda.gov/Briefing/GlobalClimate/>

USDA Energy Programs

USDA has many programs to assist farmers, rural residents, and the nation to respond to energy-related issues and opportunities. These range from basic scientific research to the development and commercialization of new technologies. They include outreach and education, technical assistance programs, financial support for infrastructure, and the adoption of energy-saving products by USDA itself. From more efficient farming techniques, wind farms, and ethanol plants to biochemical and genomics research, USDA is deeply involved in and committed to the nation's quest for energy security. <http://www.energymatrix.usda.gov/> and <http://www.usda.gov/wps/portal/usda/usdahome?navid=ENERGY>

Farm Service Agency

The Farmer Service Agency's (FSA) Environmental and Cultural Resource Compliance program is tasked with ensuring the implementation of FSA's programs meet all application environmental culture resource review requirements. The FSA's Conservation Reserve Enhancement Program Partnerships is a voluntary land retirement program that helps agricultural producers protect environmentally sensitive land, decrease erosion, restore wildlife habitat, and safeguard ground and surface water. Finally, the Biomass Crop Assistance Program provides financial assistance to owners and operators of agricultural and non-industrial private forest land who wish to establish biomass feedstocks.

- Environmental and Cultural Resource Compliance: <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=ecrc&topic=landing>
- Conservation Reserve Enhancement Program Partnerships: <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=copr&topic=cep>
- Biomass Crop Assistance: <http://www.fsa.usda.gov/FSA/webapp?area=home&subject=ener&topic=bcap>

Forest Service

The Forest Service (FS) has a number of inter-related programs to help forests, grasslands and humans mitigate and adapt to global climate change. An overview of FS programs related to climate change is available on the Climate Change Emphasis Area link below, which includes the FS' Roadmap for Responding to Climate Change, the Climate Change Resource Center, and Climate Change Research and Development. The Climate Change Advisor's Office leads FS efforts to manage forests and watershed in the face of climate change, represent the agency in climate change matters with partners, and coordinate climate change activities and communication within the agency. The FS' Office of Tribal Relations is tasked with facilitating consistency and effectiveness in FS program delivery to Tribes, and to institutionalize long-term consultative and collaborative relationships with tribal governments through new policy and direction.

- Climate Change Emphasis Area Overview: <http://www.fs.fed.us/climatechange/>
- Office of the Climate Change Advisor: <http://www.fs.fed.us/climatechange/climate-update.shtml>
- Climate Change Resource Center: <http://www.fs.fed.us/ccrc/>
- Climate Change Research: <http://www.fs.fed.us/research/climate/>
- Office of Tribal Relations Regional Contact Information: <http://www.fs.fed.us/spf/tribalrelations/regional/index.shtml>

National Agricultural Library - Natural Resources and Environment Information:

The National Agricultural Library is one of four national libraries of the United States. The Natural Resource and Environment page on the National Agricultural Library website provides information on meteorological and climatological issues related to agriculture. Includes such topics as weather data, atmospheric sciences, and natural disasters. http://riley.nal.usda.gov/nal_display/index.php?info_center=8&tax_level=1&tax_subject=6

Natural Resources Conservation Service

The Natural Resources Conservation Service (NRCS) helps private landowners conserve natural resources. A new Global Climate Change webpage puts focus on NRCS programs related to climate change, including the Conservation Innovation Grants program, which awards competitive grants to stimulate the development and

adoption of innovative conservation approaches and technologies. Many other tribal-related programs can be found on the Global Climate Change website below. Additionally, the NRCS implements an extensive joint outreach effort with the Intertribal Agriculture Council (IAC) to increase awareness of USDA services available to American Indian and Alaska Native communities. NRCS assistance includes, but is not limited to, all of the following: Conservation planning on cropland, assistance to apply rangeland management and improvement practices, irrigation water development, brush control, erosion control structures, and wetlands restoration.

- Global Climate Change Website: http://soils.usda.gov/survey/global_climate_change.html
- Guide to NRCS Native American and Alaskan Native Programs: <http://www.usda.gov/news/pubs/indians/charter2.htm>

National Institute for Food and Agriculture – Biobased Products and Processing

The 2008 Farm Bill defines a biobased product as a commercial or industrial product, other than food or feed that consists primarily of raw agricultural materials, wastes or forestry materials. NIFA is addressing the challenges of the emerging biobased industry with programs that support research, development, demonstration, and pre-commercialization activities.

<http://www.nifa.usda.gov/biobasedproductsprocessing.cfm>

Rural Development

Rural Development (RD) offers a wide variety of financial and technical assistance programs coupled with National Office, State Office and local staff to help improve the quality of life for tribal communities. In 2010, Congress legislatively mandated approximately \$50 million across RD's programs specifically for federally recognized tribes and tribal colleges. RD also offers support to rural tribal communities to capitalize on climate change business opportunities, including financial support for rural renewable energy and energy efficiency.

- American Indian and Alaska Native Website: www.rurdev.usda.gov/AI_ANHome.html
- American Indian and Alaska Native Local Coordinator Contact Information: www.rurdev.usda.gov/AI_ANCoordinators.html
- Energy Programs: www.rurdev.usda.gov/Energy.html
- Business and Cooperative Programs: www.rurdev.usda.gov/LP_Subject_BusinessAndCooperativeAssistance.html
- Rural Utilities Programs: www.rurdev.usda.gov/Utilities_Assistance.html
- Housing and Community Facilities Programs: www.rurdev.usda.gov/LP_Subject_HousingAndCommunityAssistance.html

Department of Commerce

Economic Development Administration

The Economic Development Administration's (EDA) Global Climate Change Mitigation Incentive Fund (GCCMIF) was established to strengthen the linkages between economic development and environmental quality. The purpose and mission of the GCCMIF is to finance projects that foster economic development by advancing the green economy in distressed communities. The GCCMIF supports projects that create jobs through, and increase private capital investment in, efforts to limit the nation's dependence on fossil fuels, enhance energy efficiency, curb greenhouse gas emissions and protect natural systems.

- GCCMIF: http://www.eda.gov/PDF/GCCMIF_%20OnePager_External%20081409.pdf
- Regional Contact Information: <http://www.eda.gov/AboutEDA/Regions.xml>

National Oceanic & Atmospheric Administration

The National Oceanic & Atmospheric Administration (NOAA) is a national leader on the Intergovernmental Panel on Climate Change (IPCC). The Climate Program Office manages NOAA funding of high-priority climate science. The newly reorganized Climate Service will allow NOAA to provide a reliable and authoritative source for climate data, information, and decision support services and to more effectively coordinate with other agencies and

partners. NOAA's American Indian Program provides advice and guidance on matters affecting the employment, advancement, retention and external participation of Native Americans in all NOAA programs and activities.

- NOAA website: <http://www.noaa.gov/>
- Climate Service: <http://www.climate.gov/#climateWatch> and <http://www.noaa.gov/climate.html>
- American Indian Program: http://www.eeo.noaa.gov/special_emphasis_programs/american_indian/

NOAA's Office of Oceanic and Atmospheric Research.

The Office of Oceanic and Atmospheric Research (OAR) or "NOAA Research" provides the research foundation for understanding the complex systems that support our planet. NOAA Research provides better forecasts, earlier warnings for natural disasters and a greater understanding of the Earth. Our role is to provide unbiased science to better manage the environment, nationally and globally.

- NOAA Climate Research Page: <http://www.research.noaa.gov/climate/>
- Climate Program: http://www.cpo.noaa.gov/cpo/index.jsp?pg=/.cpo_pa/cpo_pa_index.jsp&pa=all

NOAA's National Marine and Fisheries Service

The National Marine and Fisheries Service (NMFS) Species Recovery Grants to Tribes Program supports tribally led recovery efforts that directly benefit eligible species under NMFS or joint NMFS-U.S. Fish and Wildlife Service jurisdiction. Recovery efforts supported by the program may involve management, research, outreach activities, and any combination thereof.

- Species Recovery Grants to Tribes Program: <http://www.nmfs.noaa.gov/pr/conservation/tribes.htm>
- Co-management agreements: <http://www.fakr.noaa.gov/protectedresources/comangement.htm>

NOAA's Office of Ocean and Coastal Resource Management

The Office of Ocean and Coastal Resource Management (OCRM) provides national leadership to state and territory coastal programs and estuarine research reserves to keep America's coasts healthy and resilient.

- Estuary Habitat Restoration Project Funding: <http://www.era.noaa.gov/information/funding.html>
- Coastal Management Climate Activities: http://coastalmanagement.noaa.gov/issues/climate_activities.html,
- Hazards and Climate Adaptation: <http://csc.noaa.gov/climate/>,
- Native Cultures and the Maritime Heritage Program: <http://sanctuaries.noaa.gov/maritime/cultures.html>

National Integrated Drought Information System

The National Integrated Drought Information System (NIDIS) Act of 2006 (Public Law 109-430) was introduced in the U.S. Congress and subsequently signed by the President in 2006. The goal of NIDIS is to improve the nation's capacity to proactively manage drought-related risks, by providing those affected with the best available information and tools to assess the potential impacts of drought, and to better prepare for and mitigate the effects of drought. NIDIS is an interagency and interstate effort to establish a national drought early warning information system and incorporates numerous federal agencies, Native Nations, emergency managers and planners, six Regional Climate Centers, Regional Integrated Sciences and Assessments (RISA), state climatologists, and local NOAA Weather Forecast Offices. Currently NIDIS is engaging in a long-term commitment to providing tribes with drought information and resources needed to better monitor and respond to inter-annual drought conditions and long-term climate change. NIDIS is currently initializing efforts in the Four Corners region of the Southwest by prototyping and implementing a drought early warning information system that is unique to the regional climate and drought vulnerabilities and needs. In the case of the Four Corners, NIDIS aims to assist tribes in capacity building and monitoring efforts as effective response mechanisms.

- NIDIS Homepage: <http://www.drought.gov/>
- NIDIS Four Corners Tribal Resources: http://www.drought.gov/portal/server.pt/community/four_corners_tribal_lands

Department of Defense

Army Corps of Engineers

The mission of the Army Corps of Engineers' (ACoE) Responses to Climate Change Program is to develop, implement, and assess adjustments or changes in operations and decision environments to enhance resilience or reduce vulnerability of ACoE projects, systems, and programs to observed or expected changes in climate. The Interagency Workgroup on Climate Change and Water Resources was formed between the ACoE, Bureau of Reclamation, US Geological Survey, and National Oceanic & Atmospheric Administration to evaluate how climate change consideration can be incorporated into activities related to the Nation's water resources. The ACoE has worked with tribes on many projects, and its guiding principles for working with tribes are accessible at the link below.

- Responses to Climate Change Program: <http://www.corpsclimate.us/about.cfm>
- Interagency Workgroup on Climate Change and Water Resources: <http://corpsclimate.us/interagencyact.cfm>
- Tribal Policy Principles: http://www.usace.army.mil/CECW/TribalIssues/Pages/tribal_policy.aspx
- Tribal Issues Website: <http://usace.army.mil/CECW/TribalIssues/Pages/ArticleTemplate.aspx>

Department of Energy (DOE)

Bonneville Power Administration

The Bonneville Power Administration (BPA) is a federal agency that supplies power to the Pacific Northwest. In 2008, the BPA published a climate change initial roadmap, which describes efforts to integrate greenhouse gas considerations into agency decision making, complete a greenhouse gas inventory, and to support energy efficiency, renewable development and climate-friendly business practices. The BPA's Tribal Affairs Office was established in order to ensure BPA understanding and respect for tribal values and resources. The Tribal Affairs Office's main program is to support tribal youth education in the forms of student-internships and scholarships.

- Roadmap: http://www.bpa.gov/corporate/pubs/Climate_Change_2008_Initial_Roadmap_final.pdf
- Tribal Affairs Office: http://www.bpa.gov/corporate/about_bpa/tribes/

Office of Energy Efficiency and Renewable Energy

The Office of Energy Efficiency and Renewable Energy's (EERE) Tribal Energy Program provides financial and technical assistance to tribes to evaluate and develop their renewable energy resources and reduce their energy consumption through efficiency and weatherization. The program fosters government-to-government partnerships that empower tribal leaders to make informed decisions about energy choices and bring renewable energy and energy efficiency options to tribal lands.

- Tribal Energy Program: <http://apps1.eere.energy.gov/tribalenergy/>

Office of Environmental Management

The Office of Environmental Management (EM) is involved in the cleanup of nuclear waste at nationwide sites and facilities. The waste, a result of the production of nuclear weapons, has affected sovereign Tribal nations located near these facilities.

- Tribal Programs: <http://www.em.doe.gov/tribalpages/initiatives.aspx>

National Laboratories

The Department of Energy oversees a number of national laboratories, which work to develop new technologies, many of which are researching climate change. A number of student internships are available in these labs through the Office of Energy Efficiency and Renewable Energy Tribal Energy Program. Examples of the internships are included below:

- Sandia National Laboratories Tribal Energy Activity: <http://photovoltaics.sandia.gov/tribalenergy.htm>

- Argonne National Laboratory Energy Resource Development Tribal Internship Program: http://www.dep.anl.gov/p_undergrad/TribalInternships/

The Office of Indian Energy Policy and Programs

The Office of Indian Energy Policy and Programs (OIEPP) is charged by Congress to direct, foster, coordinate, and implement energy planning, education, management, and programs that assist tribes with energy development, capacity building, energy infrastructure, energy costs, and electrification of Indian lands and homes.

- Homepage: <http://www.energy.gov/indianenergy/index.htm>

Department of Health and Human Services

Center for Disease Control (CDC) Climate Change and Public Health Program

The Center for Disease Control's Climate Change Program leads efforts to prevent and adapt to the anticipated health impacts associated with climate change. The Program seeks to identify populations most vulnerable to these impacts, anticipate future trends, assures that systems are in place to detect and respond to emerging health threats, and takes steps to assure that these health risks can be managed now and in the future. The program has 3 core functions: 1) To translate climate change science to inform states, local health departments and communities; 2) To create decision support tools to build capacity to prepare for climate change; and 3) To serve as a credible leader in planning for the public health impacts of climate change.

<http://www.cdc.gov/climatechange/>

Indian Health Services

The Indian Health Service (IHS) is responsible for providing medical and public health services to members of federally recognized Tribes and Alaska Natives. The IHS does not specifically target climate change, but tribal health is expected to be affected by climate change, and a link to those expectations is provided below.

- IHS regional contacts: <http://www.ihs.gov/index.cfm?module=AreaOffices>
- Climate change and tribal health: <http://www.usgcrp.gov/usgcrp/nacc/education/native/native-edu-4.htm>

National Institute of Environmental Health Sciences

The National Institute of Environmental Health Sciences (NIEHS) is a member of the Interagency Working Group on Climate Change and Health (IWCGGH). The IWCGGH is an effort to develop a strategic plan for basic and applied research on the human health of effects of climate change for use by federal agencies and institutes with a human and environmental health mission. The aim of this project is to look at all aspects of the health implications of climate change. The Environmental Health Perspectives Journal is a peer-reviewed open access journal that contains articles on climate change, health, and Native Americans

- Climate Change and Human Health: <http://www.niehs.nih.gov/about/od/programs/climatechange/index.cfm>
- Environmental Health Perspectives article on Climate Change, Health, and Native American Perspectives: <http://ehp03.niehs.nih.gov/article/info:doi%2F10.1289%2Fehp.118-a64>

Department of Homeland Security (DHS)

Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) works to prepare for, protect against, respond to, recover from, and mitigate all hazards. FEMA established the National Flood Insurance Program Reform Working Group to identify and analyze options for the future of the flood insurance program. FEMA provides a number of grants related to disasters, hazards, and non-hazards that tribes are eligible for. FEMA also offers tribal training for increasing preparedness for disasters.

- National Flood Insurance Program Reform Working Group: http://www.fema.gov/business/nfip/nfip_reform.shtm
- Tribal activity: <http://www.fema.gov/government/tribal/index.shtm>

Department of the Interior

The Department of the Interior's (DOI) Climate Change Adaptation Initiative (CCAI) is an effort to gain effective and broad collaboration to determine the causes, formulate solutions, and implement changes to reduce or reverse climate impacts to lands, waters, natural and cultural resources. The initiative is chaired by the DOI's Climate Change Response Council, and its efforts will focus on developing two types of research agencies: eight Climate Science Centers, and 21 Land Conservation Cooperatives. The Climate Science Centers will synthesize and integrate climate change impact data and develop tools that the Department's managers and partners can use when managing the Department's land, water, fish and wildlife, and cultural heritage resources. The Land Conservation Cooperatives will work interactively with their relevant Regional Climate Science Centers and help coordinate land management adaptation efforts in their regions.

- Climate Science Centers: <http://www.doi.gov/whatwedo/climate/strategy/CSC-Map.cfm>
- Climate Change Adaptation Initiative in 2011: <http://www.doi.gov/budget/2011/11Hilites/DH011.pdf>
- Landscape Conservation Cooperatives: <http://www.doi.gov/lcc/index.cfm>

Bureau of Indian Affairs

The Bureau of Indian Affairs (BIA) is addressing climate change through participation in two of the DOI's initiatives: the CCAI, and the New Energy Frontier Initiative. As a part of the CCAI, the BIA will support the Northwest Landscape Conservation Cooperative. Even though tribes may not receive direct funding for climate change adaptation, tribes may be able to shape research, science priorities, and policy direction to address critical concerns such as water rights and treaty rights. The DOI's New Energy Frontier Initiative will supply \$1 million for grants to tribes to evaluate and develop renewable energy resources on their trust lands.

- Regional Contacts: <http://www.bia.gov/groups/webteam/documents/interactiveresource/idc-002651.swf>
- BIA Organizational Structure: <http://www.bia.gov/WhoWeAre/index.htm>

Bureau of Land Management

The Bureau of Land Management (BLM) is addressing climate change in three ways: the DOI's CCAI, a proposed landscape approach to land management, and Rapid Eco-regional Assessments (REAs). As a part of the DOI's CCAI, the BLM will participate in LCCs and develop climate change adaptation strategies based on assessments of conditions. The proposed landscape approach aims to better understand new environmental challenges that transcend traditional management boundaries, while the REAs will consist of scientific assessments to improve understanding of existing landscapes and how they might be affected in the future. The BLM also offers tribal consultation, which is meant to identify the cultural values, the religious beliefs, the traditional practices, and the legal rights of Native American people, which could be affected by BLM actions on Federal lands

- Climate Change Initiatives: <http://www.blm.gov/wo/st/en/prog/more/climatechange.html>
- Tribal Consultation: http://www.blm.gov/wo/st/en/prog/more/CRM/tribal_consultation.html
- Tribal Liaisons: http://www.blm.gov/wo/st/en/prog/more/CRM/tribal_consultation/tribal_liasons.html

Bureau of Reclamation

The Bureau of Reclamation (BR) is a water management agency with numerous programs that help the Western States, Native American Tribes and others meet new water needs and balance the multitude of competing uses of water in the West. As a part of the DOI's Climate Change Adaptation Initiative, the BR will assess climate change impacts and water shortages through its Basin Study program. The BR is also a member of the Climate Change and Western Water Group, a coordinated federal interagency R&D workgroup to support Western water management and adaptation strategies in response to climate change. The BR's Native American Affairs Office and Program is the BR's policy lead for all Native American issues

- Basin Study Program: <http://www.usbr.gov/WaterSMART/basin.html>
- Climate Change & Western Water Group: <http://www.esrl.noaa.gov/psd/workshops/mwwcc/>
- Native American Affairs Office and Program: <http://www.usbr.gov/native/>

U.S. Fish & Wildlife Service

The U.S. Fish & Wildlife Service's (FWS) Climate Change Strategy establishes a basic framework within which the Service will work as part of the larger conservation community to help ensure the sustainability of fish, wildlife, plants and habitats in the face of accelerating climate change. The FWS maintains a climate change website with access to six regional climate change, resource, and information. The Climate Change Learning Center provides information on upcoming and archived webinars, courses, workshops and other training opportunities offered through the FWS National Conservation Training Center. The Office of the Native American Liaison offers tribal grants for the development and implementation of programs that benefit wildlife and their habitat, including species of Native American cultural or traditional importance and that are not hunted or fished.

- Climate Change Strategy: <http://www.fws.gov/home/climatechange/response.html>
- Regional Climate Change Information: <http://www.fws.gov/pacific/Climatechange/index.html>
- Climate Change Learning Center: http://training.fws.gov/CSP/Resources/csp_climate_change_series/index.htm
- Tribal Wildlife Grant Program: <http://www.fws.gov/nativeamerican/grants.html>
- Regional Native American Liaisons: <http://www.fws.gov/nativeamerican/regions.html>

U.S. Geological Survey

The U.S. Geological Survey (USGS) has a number of research programs that explore the effects of climate change on the Nation's resources, including Carbon Sequestration, the Climate Effects Network, and the National Climate Change and Wildlife Science Center. The USGS also oversees the eight Climate Science Centers under the DOI's Climate Change Adaptation Initiative. The USGS Office of Tribal Relations provides technical training geospatial information, hydrology, wildlife diseases, and also offers a small number of summer internships.

- Climate and Land Use Change Research Programs: http://www.usgs.gov/climate_landuse/
- Office of Tribal Relations: <http://www.usgs.gov/indian/>
- Tribal Liaison Contact Information: <http://www.usgs.gov/indian/contacts.html>

National Park Service

The National Park Service (NPS) has two programs and one initiative that address climate change. The Climate Change Response Program provides basic science information on the effects of climate change, and describes the approach the NPS plans to take to manage uncertainty and potential impacts to NPS parks. The Inventory and Monitoring Program works to inventory the natural resources under NPS stewardship, and monitor park ecosystems to better understand their nature and provide reference points for comparison with other, altered environments. The NPS' Climate Change Response Strategy details long and short-term actions in three major areas: mitigation, adaptation, and public communication. The NPS Tribal Preservation Program assists Indian tribes in preserving their historic properties and cultural traditions by offering annual project grants.

- Climate Change Response Program: <http://www.nature.nps.gov/climatechange/>
- Climate Change Response Strategy: http://www.nature.nps.gov/climatechange/docs/NPS_CCRS.pdf
- Tribal Preservation Program: <http://www.nps.gov/hps/tribal/index.htm>
- National Park Service Regional Contacts: <http://www.nps.gov/aboutus/contactinformation.htm>

Tribal Energy and Environmental Information Clearinghouse

The Tribal Energy and Environmental Information Clearinghouse (TEEIC) is an activity funded by the Office of Indian Energy and Economic Development (OIEED) to Argonne National Laboratory. TEEIC provides information about the environmental effects of energy development on tribal lands. The site includes information about energy resource development and associated environmental impacts and mitigation measures; guidance for

conducting site-specific environmental assessments and developing monitoring programs; information about applicable federal laws and regulations; and federal and tribal points of contact. <http://teeic.anl.gov/>

Department of Justice

Office of Tribal Justice

The Office of Tribal Justice (OTJ) is the primary point of contact for the Department of Justice with federally recognized Native American tribes, and advises the Department on legal and policy matters pertaining to Native Americans. The OTJ offers a number of funding opportunities meant to improve the crime-fighting and criminal justice administrative capabilities of tribal governments. <http://www.tribaljusticeandsafety.gov/grants.html>

TRIBAL ORGANIZATIONS AND PROGRAMS

American Indian Alaska Native Climate Change Working Group

The American Indian Alaska Native Climate Change Working Group (AI/AN CCWP) was formed through a coalition of tribal colleges to prepare future generations of American Indian and Alaska Native earth science professionals, and to ensure that indigenous knowledge is valued and incorporated into research and education. The group is committed to seeing the linkages between tribes, Tribal Colleges and Universities, federal agencies and NGOs strengthened. <http://aianclimatechange.com/index.html> and <http://www.haskell.edu/climate/about.html>

Columbia River Intertribal Fish Commission

The Columbia River Inter-Tribal Fish Commission and its member tribes are aggressively addressing climate change and its effects on tribal fisheries and water resources, as well as other natural and cultural resources. There is an important need for the tribes to prepare for, mitigate and adapt natural resource programs and policies to manage the effects of climate change. CRITFC is supporting these efforts through collaboration, coordination and development of science and technology (i.e. conducting technical research on climate change impacts on tribal lands), and development and coordination of tribal mitigation and adaptation strategies and actions in state, federal and other venues. <http://www.critfc.org/wana/climate.html>

Honoring Our Natural Resources

Honoring Our Natural Resources (ONR) is an alliance of intertribal organizations and tribes committed to develop and advance a national tribal natural resources strategy. ONR brings together a unique blend of expertise to support the capacity of tribes to use, protect, restore, and enhance the natural resources that are central to the well-being of their communities. ONR is open to all tribes, organizations, and individuals that support the mission, attainment of the goals, and work towards the vision.

<http://www.ournaturalresources.org/>

Intertribal Timber Council Research Sub-Committee

Established in 1976, the Intertribal Timber Council (ITC) is a nonprofit nation-wide consortium of Indian Tribes, Alaska Native Corporations, and individuals dedicated to improving the management of natural resources of importance to Native American communities. The ITC works cooperatively with the Bureau of Indian Affairs (BIA), private industry, and academia to explore issues and identify practical strategies and initiatives to promote social, economic and ecological values while protecting and utilizing forests, soil, water, and wildlife. Over 60 tribes and Alaska Native Corporations currently belong to the ITC. The purpose of the ITC Research Sub-Committee shall be to develop recommendations, for consideration by the Operations Committee, regarding research plans, priorities and initiatives to improve natural resource and fire management and increase social/economic benefits.

<http://www.itcnet.org/>

National Congress of American Indians

The National Congress of American Indians (NCAI) provides national leadership on issues facing tribal communities throughout the United States. To do so, the NCAI addresses a broad range of policy matters on behalf of American Indian and Alaska Native tribal governments. The NCAI has also presented papers to the US Congress on tribal priorities for US senate climate legislation. These papers were meant to influence climate policy and by sharing tribal views on clean energy, energy efficiency, reducing global warming pollution, and transitioning to a clean energy economy. <http://www.ncai.org/Climate-Change.433.0.html>

Native American Environmental Protection Coalition

The Native American Environmental Protection Coalition (NAEPC) is a tribally formed, directed and guided organization that is devoted to strengthening Tribal Sovereignty and building tribal capacity for environmental resources and programs. The mission of NAEPC is to provide technical assistance, environmental education, professional training, information networking and inter-tribal coordination to its member tribes and when possible to non-member tribes. NAEPC offers a website that houses a library of information collected from a variety of sources including national and international on climate change as it applies to indigenous and tribal people. The digital library can be located at www.naepc.com/forum2/index.php

Native American Fish & Wildlife Society

The Native American Fish & Wildlife Society (NAFWS) is a national tribal organization established informally during the early 1980's. NAFWS was incorporated in 1983 to develop a national communications network for the exchange of information and management techniques related to self-determined tribal fish and wildlife management. <http://www.nafws.org/>

National Tribal Environmental Council

The National Tribal Environmental Council (NTEC) is dedicated to working with and assisting tribes in the protection and preservation of the reservation environment. NTEC has programs that include training drinking water operators, advancing air quality management policies and programs, and providing tribal technical resources for addressing pesticide issues and concerns. NTEC's membership is open to any federally recognized tribe throughout the United States, and currently has 186 member tribes. <http://www.ntec.org/>

NASA Tribal College and Universities Program: Preparing Indian Country for Climate Change Through Technology, Education and Research

The focus of this project is to address this disparity and assist the Tribes in preparing for climate change impacts. To accomplish this, Tribal Colleges and Universities (TCUs), in partnership with Kiksapa, Consulting, LLC, will focus NASA resources toward building TCU infrastructure. Specifically, this partnership will focus on climate change education and training in geospatial technology through NASA Research Experiences for Undergraduates (REU's), which serve as summer intern and externships. <http://www.kiksapa.com/Nasatribal.html>

ACADEMIC AND NON-GOVERNMENTAL CLIMATE CHANGE PROGRAMS

Alaska Conservation Solutions

Alaska Conservation Solutions is a program of Alaska Center for the Environment. Alaska Conservation Solutions was founded in 2005 to draw attention to the pervasive consequences of climate change in Alaska, and also to pursue solutions to the problem. The major goal of Alaska Conservation Solutions is to publicize Alaska's climate change plight and work on remedies. Armed with information, we must act now to reduce carbon dioxide and methane emissions. There is so much at stake. <http://www.alaskaconservationsolutions.org>

EcoAdapt/Climate Adaptation Knowledge Exchange

EcoAdapt's mission is to create a robust future in the face of climate change. EcoAdapt brings together diverse players in the conservation, policy, science, and development communities to reshape conservation and

resource management in response to rapid climate change. <http://www.ecoadapt.org/>. EcoAdapt also runs the Climate Adaptation Knowledge Exchange (CAKE), which is a joint project with Island Press aimed at building a shared knowledge base for managing natural systems in the face of rapid climate change. www.cakex.org/

Institute for Tribal Environmental Professionals - Tribal Climate Change Program

The Institute for Tribal Environmental Professionals (ITEP) was established in 1992 with a vision to assist Indian Tribes in the management of their environmental resources through effective training and education programs. ITEP offers training to tribal environmental professionals to build their capacity to address climate change issues and coordinates the Tribes & Climate Change website and newsletter. Climate change affects all peoples, but tribes have been particularly hard-hit by the impacts of atmospheric warming and the myriad changes it brings. It isn't just Alaska Natives who experience these changes; tribal members living close to the land in the lower 48 states are also seeing dramatic changes in the world around them. From fishing impacts in the Northwest to severe water depletion in the Southwest to heightened storm events along the Gulf Coast and Eastern seaboard, tribal communities see the impacts every day, and they've long since moved past the mindset of regarding climate change as a "theory." ITEP's Tribes and Climate Change website includes profiles by region of various tribes and organizations that deal with, and attempt to respond to, climate change and its impacts.

<http://www4.nau.edu/tribalclimatechange/tribes/index.asp>

- ITEP homepage: <http://www4.nau.edu/itep/climatechange/>
- Tribes & Climate Change website: <http://www4.nau.edu/tribalclimatechange/>

National Wildlife Federation

The National Wildlife Federation's (NWF) Tribal Lands Conservation Program is working with tribal partners to collaborate on climate change solutions. The NWF's partnerships with tribes on climate change include meetings and workshops, policy development, natural resource management planning and monitoring, and the formation of an Intertribal Climate Coalition. The NWF is also seeking tribal input on its reports on Climate Change Effects on Marine and Freshwater Ecosystems in the North Pacific. <http://www.tribalclimate.org/>

- NWF Contact Information: <http://www.tribalclimate.org/contactus.htm>

Native Communities and Climate Change Web-based Database - Center for Energy & Environmental Security, University of Colorado Law School

With funding from Western Water Assessment and the National Integrated Drought Information System (NIDIS), this Project is developing an on-line database for Indian tribes and organizations working with tribal communities to obtain relevant climate change adaptation information. The web-based database currently contains 300+ documents focused on climate change science and impacts, planning, policy, tools, and examples to help inform tribal adaptation and natural resource strategies. The website also contains an interactive map of relevant activities and links to individuals and organizations working on tribal adaptation efforts. Colorado Law will formally launch the website on June 30, 2011

at www.tribesandclimatechange.org. Feedback is welcomed and can be directed to Daniel Cordalis (dcordalis@gmail.com) and Julie Teel (julie.teel@colorado.edu).

University of Washington Climate Impacts Group

The University of Washington Climate Impacts Group (UWCIG) studies the impacts of natural climate variability and global climate change, focusing mostly on the Pacific Northwest (PNW). The UWCIG has partnerships with PNW Native American tribal groups, engages in outreach efforts that include meetings, workshops, and webinars, presentations, consultations, and technical assistance, and is a source of scientific projections, impacts assessments, and tools and resources for climate change adaptation planning and vulnerability assessment.

- Outreach, Classes, and Seminars: <http://cses.washington.edu/cig/outreach/outreach.shtml>
- Data: <http://cses.washington.edu/data/data.shtml>
- Climate change planning tools: <http://cses.washington.edu/cig/fpt/fpt.shtml>

TRIBAL CLIMATE CHANGE PROFILES

This section includes summaries of innovative efforts among American Indian tribes and Alaska Native communities to address climate change adaptation and mitigation, as well as key climate change issues affecting tribes in different regions of the country.

Climate Change and the Coquille Indian Tribe: Planning for the Effects of Climate Change and Reducing Greenhouse Gas Emissions

In 2008, the Coquille Indian Tribe established a Climate Change Committee to engage tribal government, tribal members, and natural and cultural resource managers in the development of a Climate Change Action Plan. This profile highlights key concerns and potential climate change impacts to the Coquille Tribe, and initial tribal strategies to address climate change. <http://tribalclimate.uoregon.edu/tribal-profiles/coquille/> or www4.nau.edu/tribalclimatechange/tribes/northwest_coquille.asp.

Indigenous Perspectives on Climate Change

This profile features Northern California-based ecologist Dennis Martinez and his thoughts on the roles of Traditional Ecological Knowledge (TEK) and western science. For the past 40 years, Martinez has worked to facilitate dialogue incorporating both approaches to understanding the natural world. He has also been working with the Indigenous Peoples Climate Change Assessment (IPCCA), which is empowering local communities to do their own climate change assessments. www4.nau.edu/tribalclimatechange/tribes/traditional.asp

Leech Lake Green Team

The Leech Lake Band of Ojibwe, located in north-central Minnesota, formed a Green Team to help the tribe become a more sustainable community while also saving energy, resources, and money. The profile highlights several of the team's projects, including the installation of passive solar heaters in tribal homes. www4.nau.edu/tribalclimatechange/tribes/greatlakes

Lummi Nation: Pursuing Clean Renewable Energy

The Lummi Nation has launched a number of renewable energy projects to reduce its environmental impact and to contribute to its goal of energy self-sufficiency. These projects include conducting a wind energy development feasibility assessment, lighting a walking trail with solar LEDs, installing a geothermal heat pump system for a new administrative building, and developing a strategic energy plan to coordinate future efforts. This profile provides detailed information on the wind energy development feasibility assessment project and also examines the opportunities and motivation that inspired the Lummi Nation to explore the options for renewable energy on their tribal lands. <http://tribalclimate.uoregon.edu/the-lummi-nation-pursuing-clean-renewable-energy/> or http://www4.nau.edu/tribalclimatechange/tribes/northwest_lummi.asp.

Nez Perce Tribe: Carbon Sequestration Program

In the mid to late 1990's, the Nez Perce Forestry & Fire Management Division began developing a carbon offset strategy to market Carbon Sequestration Credits. This profile describes the tribe's initial trial afforestation project, and their strategies for reinvesting revenue from the sale of carbon to invest in additional afforestation projects, wildlife rehabilitation and forest development. <http://tribalclimate.uoregon.edu/tribal-profiles/nez-perce/> or www4.nau.edu/tribalclimatechange/tribes/northwest_nezperce.asp

Pueblo of Jemez: Leading the Way to a Renewable Future

The Pueblo of Jemez in New Mexico is engaged in several renewable energy projects, including developing a four-megawatt solar power plant, exploring the feasibility of developing its geothermal resources, and designing a biomass boiler for its visitor center that will use waste from forest thinning projects. The tribe is also providing education and training to its youth and community members about renewable energy. www4.nau.edu/tribalclimatechange/tribes/southwest_jemez.asp

Relocation of Alaska Native Villages

As temperatures across the Arctic rise at twice the global average, the impacts of climate change in Alaska are already being felt (IPCC 2007). Alaska Natives are among the most impacted in this region, and, according to the Government Accountability Office in 2004, flooding and erosion affected 86% of Alaska Native villages to some extent, and by 2009, the GAO reported that flooding and erosion imminently threatened thirty-one villages. This profile examines the challenges of relocation and offers examples from three Alaska Native villages working to protect their people, culture and natural resources. <http://tribalclimate.uoregon.edu/tribal-profiles/relocation-of-alaska-native-villages/> or http://www4.nau.edu/tribalclimatechange/tribes/ak_inupiaq_AkRelocation.asp.

Swinomish Climate Change Initiative: At the Forefront of Planning for Climate Change

In 2007, the Swinomish Tribe passed a climate change proclamation in response to growing concerns about potential impacts of climate change on the Swinomish Indian Reservation. This profile highlights the projected climate change impacts on the tribe, the tribe's planning process for the impact assessment and action plan development, as well as key partners and project successes and challenges.

<http://tribalclimate.uoregon.edu/tribal-profiles/swinomish/> or www4.nau.edu/tribalclimatechange/tribes/northwest_swinomish.asp