General and Department of Interior Climate Adaptation Programs and Tools:

The following are programs or tools used by the DOI Bureaus and offices to prepare for or address climate change.

Administration Climate Policy

- Executive Order 13514, 13653 (NEW)
- President's Climate Action Plan

Department of Interior:

Policy:

- Manual- 523 DM1 Climate Change Adaptation 12/20/2012- requires Department managers of management of water, lands, natural and cultural resources, and infrastructure to mainstream climate adaption considerations into policies, planning, programs, and operations.
- Climate Adaptation Plan – High level strategic document indicating how Bureaus are considering climate adaptation and preparing for impacts to their mission and operations. Living document currently under revision (final due June 30, 2014). Version 1 available at: http://www.doi.gov/greening/sustainability_plan/upload/DOI_Climate_Adaptation_Plan_for_FY2013_for_release.pdf

Bureau of Reclamation:

WaterSMART Program(www.usbr.gov/watersmart), which has a number of activities including WaterSMART Water and Energy Efficiency Grants, Basin Studies, our involvement within the Landscape Conservation Cooperatives, West Wide Climate Risk Assessments, to name some.

Research and Development Office's Climate Change and Variability (CCV) Research Activity www.usbr.gov/research/climate/program.html designed to improve knowledge, methods, and tools in the area of Climate Change and Variability which includes: Collaborative research, Annual calls for CCV proposals from Reclamation principal investigators through the Science and Technology Program, External research.

Bureau of Indian Affairs:

Internal Policy:

- Policy to mainstream climate adaptation throughout the Bureau.
- Regional Directors committed to review policy to remove barriers and to develop action plan to mainstream climate adaptation considerations throughout the Bureau by end of FY14.

Tribal support:

- Tribal grant program to support tribal adaptation planning, vulnerability assessments, indicator monitoring, and travel support for technical sessions and training. Current grant period deadline 4/30/14, additional opportunities to follow this fiscal year.

National Park Service:

Internal policy

- NPS Climate Change Action Plan 2012-2014 (http://www.nps.gov/orgs/ccrp/upload/NPS_CCActionPlan.pdf)
- Climate Change Response Strategy (http://www.nps.gov/orgs/ccrp/upload/NPS_CCRS.pdf) 2010
- Green Parks Plan (http://www.nps.gov/subjects/climatechange/upload/Green_Parks_Plan.pdf)

Tools and resources:

- Climate Leadership in Parks (CLIP) Tool (http://www.nps.gov/climatefriendlyparks/CLIPtool/) Through a partnership with the EPA, the NPS developed the Climate Leadership in Parks (CLIP) tool to help parks measure and strategize to reduce their carbon footprints.
- Under development: Climate change and the tool they are developing to assess impact on facilities.
- Scenario Planning Handbook (http://www.nps.gov/subjects/climatechange/upload/CCScenariosHandbookJuly2013.pdf) The National Park Service uses scenario planning as a tool to prepare for the long-range impacts of climate change on natural and cultural resources. The process involves using current climate change projections to develop possible climate and ecological futures. Managers work through a variety of options for the future and develop responses and action plans to be used in each situation.

Bureau of Land Management:

Tools and Resources:

- Rapid Ecoregional Assessments: Climate change and other widespread environmental influences are affecting the western landscapes that are managed, in part, by the BLM. In response, the BLM has launched fourteen Rapid Ecoregional Assessments (REAs) since 2010 to improve the understanding of the existing condition of these landscapes, and how conditions may be altered by ongoing environmental changes and land use demands. (http://www.blm.gov/wo/st/en/prog/more/Landscape_Approach/reas.html)

Fish and Wildlife Service:

Internal Policy and Guidance

- A new Service Manual chapter on Climate Change Adaptation (056 FW 1) has been issued that establishes initial Service policy and staff responsibilities on climate change adaptation, stepped down from the Departmental policy (http://www.fws.gov/policy/056fw1.pdf).
- A National Climate Team consisting of point people from the Regions and Programs helps establish CC priorities, develop tools and resources for achieving those priorities, and communicate to the field.

Tools and Resources:

- A very large and growing climate change training program at NCTC that is being used by many agencies.
- The Service uses the NOAA Sea-level Affecting Marshes (SLAMM) model for assessing the potential impacts of seal level rise on our coastal refuges.
- The CLIR (Climate Leadership in Refuges) model is in development to account for and manage carbon emissions on our Refuges and, perhaps, our other facilities.

- The Service helped develop basic guidebooks for such things vulnerability assessments, climate smart conservation, and downscaling for biological planning.

Inter-agency Efforts:

- The Service has made a major contribution to coordinated interagency efforts to support climate preparedness and resilience through its work to help lead development of the National Fish, Wildlife, and Plants Climate Adaptation Strategy (Strategy). The Strategy was published in 2013 and involved representatives from 15 federal agencies, ten states, and two inter-tribal commissions. It is currently the only adaptation strategy in the United States that was developed collaboratively by all relevant levels of government.
- Landscape Conservation Cooperatives: The Service has been a leader in the Department's work to establish and support the Landscape Conservation Cooperatives (LCCs), public-private partnerships composed of states, tribes, federal agencies, non-governmental organizations, universities and others. LCCs are vital to the Service's ability to develop and implement robust adaptation strategies for fish and wildlife in collaboration with federal, state, local, and private partners. LCCs help align large-scale federal conservation efforts such as climate change adaptation planning to ensure federal efforts complement each other, and lead to more efficient and coordinated management across jurisdictions.

US Geological Survey

Climate Science Centers

The eight Department of the Interior Climate Science Centers (http://www.doi.gov/csc/index.cfm ; managed by the U.S. Geological Survey's National Climate Change and Wildlife Science Center) supply natural and cultural resource managers with the tools and information they need to develop and execute management strategies that address the impacts of climate change.

Several Tribal groups are represented as CSC Consortia members, and Tribal and indigenous community leaders and staff also participate in CSC Strategic Advisory Committees and Science Implementation Panels. CSCs have made grants to Tribes to document the effects of climate change on natural and cultural resources and continuously look for opportunities to support tribal/indigenous climate science research projects. The CSCs have also conducted and attended many conferences, meetings, and training classes with tribal leaders, staff members, and students to conduct outreach and engagement and to better understand the impacts of climate change on Tribal and indigenous communities.

Tools and Resources

The USGS undertakes scientific research, monitoring, remote sensing, modeling, synthesis, and forecasting to address the effects of climate and land use change on the Nation's resources. The resulting research and products are provided as the scientific foundation upon which policymakers, natural resource managers, and the public make informed decisions about the management of natural resources on which they and others depend.
http://www.usgs.gov/climate_landuse/

Examples:

- **Downscaled Climate Geo Data Portal**- This innovative portal provides simplified access to a growing catalog of climate projections. The Geo Data Portal (GDP) enables users to select from among multiple projections, convert projections to the appropriate format, and access only needed portions of datasets too large for many users to manage. **http://cida.usgs.gov/climate/gdp/**

- **Derived Downscaled Climate Projection Portal**: Most large-scale projections of future climate focus on simple measures of temperature and precipitation. This new companion to the Geo Data Portal provides access to variables likely to be of more direct interest to managers and users, such as number of frost free days, number of days below 32 degrees F, number of days with measurable rain, etc.. **http://cida.usgs.gov/climate/derivative/**

Other Resources:

Institute for Tribal Environmental Professionals: Resource Guide:
The Institute for Tribal Environmental Professionals provides training, assistance and educational resources to tribes on climate change issues (EPA supported). Including a resource list
http://www4.nau.edu/itep/climatechange/index.asp

Oregon State- Tribal Climate Change Project: A collaborative project between the University of Oregon and the USDA Forest Service Pacific Northwest Research Station. NW tribal focus. Resources, monthly calls, links, training. http://tribalclimate.uoregon.edu/

Assoc of Fish and Wildlife Agencies:
Resource Guide to Federal Climate Adaptation Programs for State Fish & Wildlife Agencies
http://www.aswm.org/pdf_lib/resource_guide_to_federal_climate_adaptation_programs.pdf