

Welcome to the **NOVEMBER 2011** edition of the WDFW Climate News Digest. Here you will find highlights of climate change news, events and resources for WDFW staff. Feedback or suggestions for items to include in future editions are much appreciated – please send them along!

WHAT'S HAPPENING AT WDFW?

Selected projects, agency resources and initiatives

Climate Science Summaries

In July 2011, WDFW released a set of climate science summaries for four major ecological systems: [Freshwater and Riparian](#), [Aridlands and Shrubsteppe](#), [Forests and Western Prairies](#), and [Marine and Coastal systems](#). WDFW scientists collaborated with National Wildlife Federation staff to assemble existing scientific literature on observed and projected climate impacts for each of these major systems in Washington. The original intent of the documents were to inform development of the Statewide Integrated Climate Response Strategy, required by the Washington State Climate Leadership Act. However, after this time there was interest in making the documents widely available to staff within the agency and others who might find the information of use. *Note that these documents differ from the two climate science summaries produced by the North Pacific Landscape Conservation Cooperative (profiled in last month's digest) in that they are Washington- specific .*

ALSO – I have a small number of hard copies of each of these documents – let me know if you would like one or more and I will get them to you. While supplies last!

UPCOMING EVENTS

Phenology 2012 Conference

This second interdisciplinary international conference will be held at the University of Wisconsin-Milwaukee, 10-13 September 2012. This conference aims to bring together experts from around the world in all sub-fields of phenology and related disciplines. The overall theme of the conference is "Future Climate and the Living Earth." Conference Subthemes include climatic drivers and constraints of phenological change, communicating phenology through education, outreach, and training, observing and modeling phenologies, phenological perspectives on climate change, species migrations, invasions, range shifts, and synchronies. www.phenology2012.uwm.edu.

Conference products will include a set of peer-reviewed scientific papers in a special issue of the International Journal of Biometeorology.

CLIMATE SCIENCE NEWS

The Skagit Climate Science Consortium

A new climate impacts research consortium has been established in the Skagit River basin (Washington) to support climate science and decision support needs in the Skagit valley. [The Skagit Climate Consortium](#), or SC2, is a multidisciplinary group of research scientists from federal, tribal, municipal, university, and non-governmental organizations working in the Skagit basin (see [members](#)). SC2 was established to help facilitate research on climate change impacts in the Skagit basin, ensure that research is integrated closely with the concerns and needs of Skagit communities, and improve the communication and availability of climate-related research information relevant to the Skagit basin.

Research Paper: Climate change effects on stream and river temperatures across the northwest U.S. from 1980–2009 and implications for salmonid fishes

The research objective was to evaluate how climate change might be affecting temperatures across a broad set of rivers. To do that they assembled 18 available temperature time-series from sites on regulated and unregulated streams in the Northwest to describe historical trends from 1980–2009, and assess thermal consistency between the two stream categories. Despite serious deficiencies in the stream temperature monitoring record, results suggest many streams in the northwest U.S. are exhibiting a regionally coherent response to climate forcing. More extensive monitoring efforts are needed as are techniques for short-term sensitivity analysis and reconstructing historical temperature trends so that spatial and temporal patterns of warming can be better understood. Continuation of warming trends this century will increasingly stress important regional salmon and trout resources and hamper efforts to recover these species, so comprehensive vulnerability assessments are needed to provide strategic frameworks for prioritizing conservation efforts. The paper can be found at the link: [Climate change effects on stream and river temperatures](#).

RESOURCES

Climate-Aquatics Blog

USFS is sponsoring a climate aquatics blog in order to provide a means for the field biologists, hydrologists, students, managers, and researchers to more broadly and rapidly discuss topical issues associated with aquatic ecosystems and climate change. Messages periodically posted to this blog will highlight peer-reviewed research and science tools that may be useful in addressing this global phenomenon. A forum for group discussions of these tools and new scientific findings has been set up as a Google Group ([instructions for joining](#)). Click the link to join or to see text of original Blog posts, supporting graphics, and peer-reviewed articles.

POLICY AND MANAGEMENT NEWS

State of Massachusetts Releases Report: *Massachusetts Climate Change Adaptation Report, September, 2011*

This report, prepared by the Massachusetts Office of Energy and Environmental Affairs and the Massachusetts Climate Change Adaptation Advisory Committee, is the first broad overview of climate change as it affects Massachusetts, the impacts of this change, vulnerabilities of multiple sectors ranging from natural resources, infrastructure, public health, and the economy. It also provides an analysis of potential strategies. To read the report, please visit:

http://www.mass.gov/?pageID=eoeaterminal&L=3&L0=Home&L1=Air,+Water+%26+Climate+Change&L2=Climate+Change&sid=Eoeea&b=terminalcontent&f=eea_energy_cca-report&csid=Eoeea.

Wetlands Carbon Blog

Restore America's Estuaries (RAE) announced that it has launched a **Wetlands Carbon Blog** (www.estuaries.org/blog.html) dedicated to exploring the role coastal wetlands play in sequestering greenhouse gases and disseminating the latest news and research behind national and international "Blue Carbon" efforts. While it is well known that forest ecosystems store large amounts of greenhouse gas carbon-known popularly as "Green Carbon"-promising new research is focusing on so-called "Blue Carbon" in coastal wetland ecosystems such as estuaries, mangroves, seagrasses, and salt marshes. Recent findings suggest that coastal wetlands may sequester and store carbon at rates three to five

times greater than temperate forests, making them efficient-and perhaps essential-carbon "sinks" as global temperatures and sea levels rise in response to increasing amounts of greenhouse gases in the Earth's atmosphere. Carbon dioxide, nitrous oxide and methane are among the most potent greenhouse gases (GHG), which contribute to global warming by trapping heat in the atmosphere.

Senators Introduce Climate Change Adaptation Bill

On November 16th, Senators Sheldon Whitehouse (D-RI) and Max Baucus (D-MT) introduced the "Safeguarding America's Future and Environment (SAFE) Act" (S. 1881), which would establish a National Resources Climate Change Adaptation Panel composed of the heads of Federal agencies or departments with jurisdiction over natural resources of the United States, including: NOAA, Forest Service, Park Service, Fish and Wildlife Service, BLM, USGS, Reclamation, Indian Affairs, EPA, Corps of Engineers, CEQ, and FEMA. The panel would be charged with the development and implementation of a National Resources Adaptation Strategy. The bill would also require that Federal agencies with representation on the Panel complete a natural resources adaptation plan and authorize funding to incentivize state adaptation plans. The full text of the bill is not yet available online. To learn more, see the official [press release](#):

Progress Report of the Interagency Climate Change Adaptation Task Force

This report, produced by the [Interagency Climate Change Adaptation Task Force](#), provides an update on actions in key areas of Federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks. [Click here to read the full 2011 report.](#)

NATIONAL ACTION PLAN: Priorities for Managing Freshwater Resources in a Changing Climate

On June 2, 2011, the Council on Environmental Quality (CEQ) released a draft "*National Action Plan: Priorities for Managing Freshwater Resources in a Changing Climate*," for public review and comment. In October, CEQ announced the final *Action Plan* that responds to public input. This final Plan will be the foundation for Federal agency efforts to manage freshwater resources as the climate changes. It is designed to help freshwater resource managers assure adequate water supplies, safeguard water quality and aquatic ecosystems, and protect human life, health and property. [Click here to read the full *Managing Freshwater Action Plan*.](#)

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