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EPA Climate Change and Water News is a bi-weekly newsletter from the U.S. Environmental Protection Agency (EPA) Office of Water that covers climate change and water-related news from EPA, other U.S. Federal agencies, and partners. To learn more about climate change impacts on water resources, visit our website at: http://www2.epa.gov/climate-change-water-sector*.*

EPA News

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EPA News

EPA Releases New Report on Green Infrastructure and Climate Change

As different parts of the country become drier, wetter or hotter, community leaders and citizens are looking to green infrastructure to improve their community's resiliency to the effects of climate change. In 2015, EPA convened charrettes, or intensive planning sessions, in four cities to demonstrate how this type of planning could be applied to communities dealing with a range of challenges. Each city's charrette focused on different issues based on the most pressing climate change impacts they were facing and their current level of green infrastructure implementation. This new publication summarizes those issues and the recommendations developed by each charrette.
Read the Full Report.

EPA Kicks Off Fifth Annual Campus RainWorks Challenge

The Campus RainWorks Challenge asks student teams to design innovative green infrastructure for their campus. This year teams will incorporate climate resiliency and consider community engagement in their green infrastructure designs for stormwater management. EPA is calling for college and university students to form teams with a faculty advisor and compete in either the master plan or demonstration project categories. Registration will be open from September 1-30, 2016. Entries are due December 16, 2016.

View the Press Release.
Learn More.

Federal News

New Climate Projections Aim to Better Represent Extreme Events

The U.S. Geological Survey released a next-generation climate modeling dataset with improved local-scale climate projections from northern Mexico to southern Canada. The dataset uses a new downscaling method known as Local Constructed Analogs to estimate finer-scale climate details from coarse-resolution CMIP5 models by using a high-resolution historical observation dataset. Investigations of changes in intensity and frequency of extreme weather conditions are also provided.

Access the Dataset.
Learn More.

Fourth National Climate Assessment Author Nominations and Technical Inputs

Nominations for regional and sectoral chapter lead authors, and contributing authors with relevant subject matter expertise, for the Fourth National Climate Assessment (NCA4) are now open. Technical inputs on sectoral, regional, and cross-cutting topics, which will serve as part of the foundation for NCA4 can also be submitted at this time. Author Nominations Due: September 30, 2016. Scientific and Technical Inputs Due: January 15, 2017**.**

Nominate an Author and Provide Technical Input.
Register for an Upcoming Webinar.
Learn More.

Shifting Sport Fish Populations Under Climate Change

Warming water temperatures will likely mean fewer walleye and more largemouth bass in Wisconsin lakes, according to a new publication in *Global Change Biology*. The researchers supported by the National Climate Change and Wildlife Science Center, predicted future habitat suitability for walleye and largemouth bass in over 2,100 lakes, identifying where walleye populations might be resilient to future changes and a good target for management action.

View the Press Release.
Check Out the Data Visualization.
Learn More.

Other News

Atmospheric River Landfall-Latitude Changes in Future Climate Simulations

A recently published study examined climate simulations of atmospheric rivers in the North Pacific and the North Atlantic using version 4 of the Community Climate System Model. The study found that the atmospheric rivers along the west coast of the U.S. are projected to move toward the equator and experience increased rainfall intensity and the projected landfall to be more dependent upon eddy-driven jets and seasons.

Read the Full Article.

Fish Adjusting Body Defenses to Deal with Acidification

A recently published study examined the natural ability of fish to adapt to changes in ocean acidification. Spiny damselfish are capable of adapting to higher CO_2 levels as part of the genetic mechanisms

organizing their circadian clocks. This natural ability is driven by the need to accommodate the diurnal variation in ocean CO_2 levels that occurs with the inactivity of photosynthesizing organisms at night.
Read the Full Article.

Urban Stream Quality Assessment Model

A recently published report focuses on the effect of landscape alteration and climate change on total suspended solids (TSS), total phosphorus (TP) and temperature in catchment areas of the Puget Sound. Preliminary results suggest urbanization will have a greater effect than climate change on the magnitude and seasonal variability of streamflow. Water temperature will be more sensitive to climate warming scenarios. Future urbanization and climate change are predicted to significantly increase annual mean streamflow, water temperature, TSS load, and TP load.
Read the Full Report.

Rising Tides: Designing Resilient Amenities for Coastal Cities

Market demand is the best driver for innovation, and many are making a case that the intrinsic economic value of resilient design will help drive its acceptance. The collision of forces between the need for resilience and the cost of it is producing sparks of creativity, particularly in the area of waterfront and storm-related planning. Far from a defensive role, resilience can be part of a project's marketing strategy and mission.
Learn More.

Review of the Significance of Dissolved Methane on Wastewater Treatment

A recently published article discusses the need for energy efficient domestic wastewater (DWW) treatment that is increasing annually with population growth and expanding global energy demand. A model for estimating energy consumption associated with membrane-based dissolved methane recovery predicts that recovered dissolved and headspace methane may provide all the energy required for operation of an anaerobic system treating DWW at cold temperatures.
Read the Full Article.

Successful Simulation of the Pineapple Express

A publication in the *Geophysical Research Letters* synthesizes the ability of the Community Climate System Model (CCSM4) to capture the Pineapple Express, an atmospheric river that originates in the deep tropics and extends poleward along the west coast of North America. Recent analysis of the CCSM4 high-resolution ensemble simulations shows accurate capture of the spatial and temporal climatology. Further analysis of these simulations indicates a significant increase in storm duration and intensity of precipitation associated with landfall of the atmospheric river.
Read the Full Article.

Upcoming Events

See a calendar of climate change and water-related training, conferences, and webinars.

This newsletter is produced by the U.S. Environmental Protection Agency, Office of Water (EPA). For questions related to the newsletter, or to submit an item, email the editor at water_climate_change@epa.gov.

For past issues of EPA Climate Change and Water News, as well as further information on climate change impacts on water resources, visit: http://www2.epa.gov/climate-change-water-sector