

DWR Climate News Digest

September 25th - November 15th, 2012

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The information provided herein is a selected compilation of recent popular news articles, publications, and other information relevant to climate change and water management. The links provided herein are intended to provide educational and thought-provoking material for water managers and water users.

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TOPICS [Find older items in the [Climate News Archive](#)]

Reports

[Turn Down the Heat - Why a 4°C Warmer World Must be Avoided](#)

[World Bank - November 18, 2012]

[Climate and Social Stress: Implications for Security Analysis](#) [National Research Council -

November 2012] *(This report, prepared at the request of the U.S. intelligence community, summarizes what is currently known about the security effects of climate perturbations. The report advises that American defense personnel 'start planning for natural disasters, sea level rise, drought, epidemics and the other consequences of climate change')*

[California's Water-Energy Nexus: Pathways to Implementation](#) [GEI consultants - October

2012] *(this white paper discusses actions that can be undertaken by California's water sector to help achieve the state's energy efficiency and environmental goals)*

[Too Late for Two Degrees? Low Carbon Economy Index 2012](#) [PriceWaterhouseCoopers -

November 2012] *(the global rate of decarbonization is much too low to avoid 2 degrees C warming; "to give ourselves a more than 50% chance of avoiding 2 degrees will require a six-fold improvement in our rate of decarbonization")*

[Americans' Global Warming Beliefs and Attitudes in September 2012](#) [Yale Project on Climate

Change Communication - October 18, 2012] *(seventy percent of Americans now recognize that global warming is occurring, the highest level since 2008, and 54% believe it is caused mostly by human activities)*

[**The Adaptation for Conservation Target \(ACT\) Framework: A Tool for Incorporating Climate Change into Natural Resource Management**](#) [Environmental Management - October 2012]

[**Scientific Guidelines for Designing Resilient Marine Protected Area Networks in a Changing Climate**](#) [Commission for Environmental Cooperation - October 2012]

[**Going to Extremes: Climate Change and the Increasing Risk of Weather Disasters**](#)
[Committee on Natural Resources and Committee on Energy and Commerce - September 25, 2012]

[**Climate Solutions for a Stronger America - A Guide for Engaging and Winning on Climate Change and Clean Energy**](#) [Breakthrough Strategies and Solutions - September 2012]

[**Climate Vulnerability Monitor 2010 - The State of the Climate Crisis**](#) [DARA - September 2012]

Published Literature

[**Response of snow-dependent hydrologic extremes to continued global warming**](#)
[Nature Climate Change - November 2012] (*subscription req'd; abstract only*)

[**Significant contribution to climate warming from the permafrost carbon feedback**](#)
[Nature Geoscience - September 2012] (*abstract only, subs. required*)

[**Climate change may cause severe loss in the economic value of European forest land**](#)
[Nature Climate Change - September 2012] ("*...discussions on the consequences of biome shifts have concentrated on ecological issues. Here we show that forecasted changes in temperature and precipitation may have severe economic consequences*")

Grants and Other Funding Opportunities

[**WaterSMART: Water and Energy Efficiency Grants for 2013**](#) [U.S. Bureau of Reclamation via [Grants.gov](#) - ****Closing date January 17, 2013****]The objective of this Funding Opportunity Announcement (FOA) is to invite States, Indian tribes, irrigation districts, water districts, and other organizations with water or power delivery authority to leverage their money and resources by cost sharing with the Bureau of Reclamation (Reclamation) on projects that seek to conserve and use water more efficiently, increase the use of renewable energy and improve energy efficiency, benefit endangered and threatened species, facilitate water markets, or carry out other activities to address climate-related impacts on water or prevent any water-related crisis or conflict. Through this FOA, Reclamation also makes funding available for water management improvements that complement other ongoing efforts to address water supply sustainability. ...In addition, funding is available through this FOA for water delivery system improvements that will enable farmers to make additional on-farm improvements in the future, including improvements that may be eligible for Natural Resources Conservation Service (NRCS) funding. Water conservation, use of water markets, and improved efficiency are crucial elements of any plan to address western United States water issues. With leveraged water and energy efficiency grants, an important step will be taken towards increasing conservation for a more efficient use of water in the West.

Sea-level Rise and other Ocean Impacts

[Melting glaciers raise sea level](#) [Science Daily - November 14, 2012]

[Why seas are rising ahead of predictions: Estimates of rate of future sea-level rise may be too low](#) [Science Daily - November 1, 2012]

[Rising ocean temps threaten the ocean food chain](#) [Climate Central - October 25, 2012]

[Climate-changing methane 'rapidly destabilizing' off East Coast, study finds](#)
[US News - October 24, 2012]

[Global warming causing Antarctic ice to expand](#) [USA Today - October 11, 2012] (*shifts in wind patterns and the giant ozone hole over the Antarctic this time of year explain why the region is expanding even while Arctic sea ice reaches a record low*)

[Study: sea level rise is inevitable](#) [US News - October 1, 2012]

[Fish size to shrink due to climate change, study says](#) [Climate Central - October 1, 2012] (*a warmer ocean increases fish metabolic rate, requiring more oxygen, yet the warmer water holds less so their growth is limited*)

[Climate change: Can marine life adapt to more acidic seas?](#) [KQED - September 26, 2012] (*the oceans have become about 30% more acidic since the start of the Industrial Revolution due to the excess CO₂ in the atmosphere, and currently absorb about a million tons of carbon per hour*)

Agriculture/Food Production

[Agriculture and food production contribute up to 29 percent of global greenhouse gas emissions](#) [Science Daily - October 30, 2012]

[More greenhouse gas per grain of rice](#) [Trinity College Dublin - October 22, 2012] (*increased CO₂ and rising temperatures cause rice to release more methane for each kg of rice produced*)

[Zimbabwe: Climate change alters face of agriculture](#) [All Africa - October 22, 2012]

[Wet weather set to hit UK food prices](#) [BBC news - October 10, 2012]

[Valley farmers examine climate change issues](#) [Fresno Bee - September 27, 2012]

[Volatile weather creates dramatic changes for California farmers](#)
[Fresno Bee - September 27, 2012]

General Water Management

[California snowpack outlook grim for water](#) [SF Gate - November 12, 2012]

[Water supply in a warming world](#) [New York Times - November 12, 2012]

[Study offers new tool for incorporating water impacts into policy decisions](#)

[Science Daily - November 12, 2012]

[Stanford study: Climate change threatens freshwater source for billions](#)

[Stanford News - November 11, 2012]

Floods

[What if a superstorm strikes Sacramento? Flooding danger puts capital at risk of a disaster worse than Sandy](#) [Sacramento Bee - November 18, 2012]

[Already desperate, Haitian farmers are left hopeless after storm](#)

[New York Times - November 17, 2012]

[New views of Sandy flooding](#) [USA Today - November 16, 2012]

[Flood risk will rise with climate change, experts say](#) [Washington Post - November 15, 2012]

Drought

[Recent drought trends not so cut-and-dried](#) [Science - November 14, 2012] *(new research suggests that drought has not increased as much globally as the Palmer Drought Severity Index would predict)*

Water/Energy Nexus

[California's water-energy nexus studied in white paper](#) [ACWA - October 18, 2012]

Human Health Impacts

[Allergies from pollen projected to intensify with climate change](#)

[Scientific American - November 9, 2012]

Wildlife and Ecosystem Impacts

[Deforestation and its extreme effect on global warming](#)

[Scientific American - November 13, 2012]

[Climate change threatens pandas' bamboo buffet](#)

[Michigan State University - November 9, 2012]

[Walrus babies: Putting a face on climate change](#) [Huffington Post - October 23, 2012]

[Warming lakes: Effects of climate change seen on Lake Tahoe](#)

[National Geographic - October 17, 2012]

[Fish feces fight climate change](#) [Discovery News - October 12, 2012]

[As fishes migrate, their food might not follow](#) [Scientific American - September 26, 2012]

Greenhouse Gas Mitigation

[California tackles climate change, but will others follow?](#)

[National Geographic - November 16, 2012]

[Top 4 things to know about California's first ever carbon auction](#)

[Environmental Defense Fund - November 12, 2012]

[California set to auction off pollution permits](#) [CBS News - November 13, 2012]

[Scientists build the first all-carbon solar cell](#) [Science Daily - October 31, 2012]

[A rogue climate experiment outrages scientists](#) [CNBC - October 19, 2012]

[Visualizing every single carbon emission in your city](#) [Fast Coexist - October 16, 2012]

[New California laws set up framework for spending cap-and-trade revenue](#)

[Sacramento Bee - October 2, 2012]

Climate Adaptation

[Adapting suburbia to face up to climate change](#) [Phys Org - October 22, 2012]

International Planning

[No nation immune to climate change: World Bank](#) [Reuters - November 18, 2012] (*a [new report](#) by the World Bank highlights the devastating impacts a hotter world will have on world nations; the world's poorest countries will be hit hardest*)

[In China, new sustainable cities are rising from nothing](#) [Fast Company - November 16, 2012]

[Egypt: Arab youth call governments to take action against climate change](#)

[AllAfrica - November 12, 2012]

[Rio shift on climate change](#) [Sydney Morning Herald - September 29, 2012] (*Rio Tinto, one of the world's major producers of coal, has revised their language on climate change to now acknowledge that human activities "are contributing to climate change and that avoiding human-caused changes to the climate is an important international goal"*)

[Ghana: Government committed to tackling climate change issues](#)

[AllAfrica - September 28, 2012]

Climate Change Modeling

[Computer models of Earth's climate change confirmed on Mars](#) [Reuters - October 16, 2012]

Legislative Updates

[Ninth circuit affirms dismissal of climate change lawsuit brought by Alaskan native village](#)

[Marten Law - October 12, 2012]

BLOGS/Commentary

Jeremy Grantham on "[Be persuasive. Be brave. Be arrested \(if necessary\)](#)"

[Nature - November 14, 2012]

Tom Zeller Jr. on "[Amid climate change inaction in Washington, activist urges Americans to 'do the math'](#)" [Huffington Post - November 16, 2012] [*Bill McKibben's math shows that there is more carbon in the world's reserves (2,795 GT) than we can afford to burn (only 565 GT) to have a reasonable chance of staying below the 2 degree C target scientists say is critical for maintaining human societies as we know them*]

Andrew Cuomo on "[We will lead on climate change](#)"

[New York Daily News - November 15, 2012]

Bill Chameides on "[On U.S. greenhouse gas emissions and cognitive dissonance](#)"

[Scientific American - November 14, 2012]

Cass Sunstein on "[Climate change: Lessons from Ronald Reagan](#)"

[New York Times - November 10, 2012]

Kevin Kennedy on "[3 climate change action items for the second Obama administration](#)"

[World Resources Institute (WRI) Insights - November 9, 2012] (*near-term action items are identified for the newly elected U.S. President who stated in his acceptance speech: "We want our children to live in an America that isn't burdened by debt, that isn't weakened by inequality, that isn't threatened by the destructive power of a warming planet."*)

Kate from Climatesight on "[Permafrost projections](#)" [Climatesight - October 2, 2012]

Tom Bell on "[Our survival depends on fighting climate change](#)"

[High Country Times - September 28, 2012] (*an 88-year old World War II veteran makes his case that "we have to face this crisis as if we were at war, because, unfortunately, that is the bitter truth"*)

[Additional Items of Interest](#)

[website] Climate Modeling 101 [National Academy of Sciences - November 2012] (*"This site is a primer on how models work. Information is based on expert consensus reports from the National Research Council's Board on Atmospheric Sciences and Climate"*)

[Climate change documented in 'Chasing Ice' film](#) [USA Today - November 12, 2012] (*former global warming skeptic James Balog risked his life to capture images from a melting Arctic, Greenland, Iceland, and other sites in his new film for National Geographic*)

[Experts warn climate change could threaten national security](#) [RedOrbit - November 11, 2012]

[Alaska's methane hydrate resource sparks debate over energy and climate change](#)

[Huffington Post - November 11, 2012]

[Barack Obama stokes expectations of climate change action in second term](#)

[Guardian - November 7, 2012]

[fact sheet] [Climate change and Hurricane Sandy](#) [Center for Climate and Energy Solutions - October 2012]

[Climate conflict: Warmer world could be more violent](#) [USA Today - October 23, 2012]

[Last presidential debate marks first time in 24 years that climate change went unmentioned](#)

[Scientific American - October 23, 2012]

[video] [Climate of Doubt](#) [PBS/Frontline - October 23, 2012] (*Frontline explores the shift in public opinion on climate change and the groups behind the information that led to the shift*)

[How climate change disappeared from the climate debates](#)

[Washington Post - October 18, 2012]

[North America most affected by increase in weather-related natural catastrophes](#)

[Munich RE press release - October 17, 2012]

[An illustrated guide to the science of global warming impacts: How we know inaction is the greatest threat humanity faces](#) [Climate Progress - October 14, 2012]

[Finally, a more exciting design for wind power](#) [Fast CoExist - October 12, 2012] (*could the Windstrument be the next generation of turbines?*)

[Climate change research gets a petascale computer](#) [Computerworld - October 16, 2012]

[Earth's carbon sink downsized](#) [Nature - October 1, 2012] (*the capacity of land plants to absorb excess CO₂ is limited by availability of soil nutrients such as nitrogen, reducing plants capacity to serve as a 'sink' for carbon*)

[As Arctic melts, Inuit face tensions with outside world](#)

[Yale Environment 360 - October 1, 2012]

[Can the world save lives and combat climate change?](#) [Scientific American - October 1, 2012]

[video] [A New Climate State: Arctic Sea Ice 2012](#)

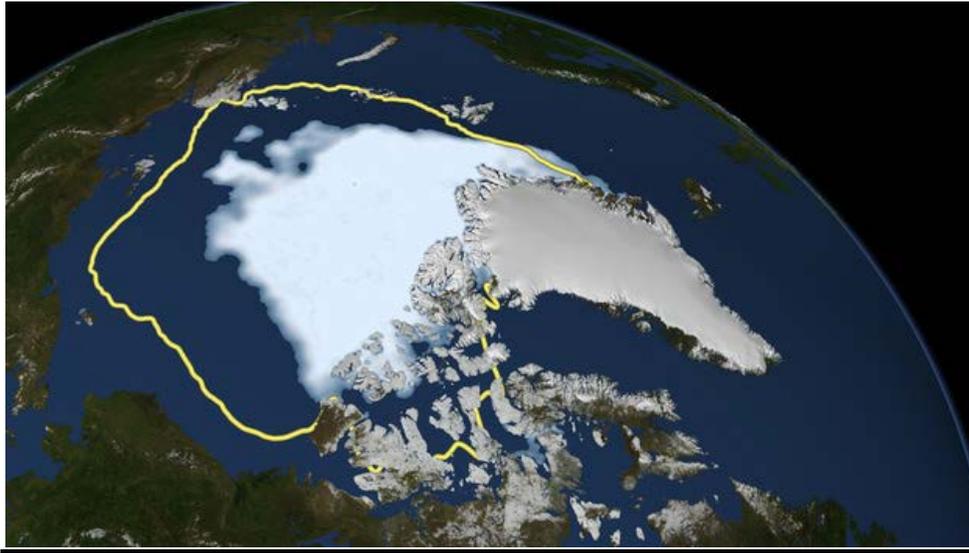
[Yale Forum on Climate Change & the Media - September 2012]

[Climate change reducing global GDP by \\$1.2 trillion](#)

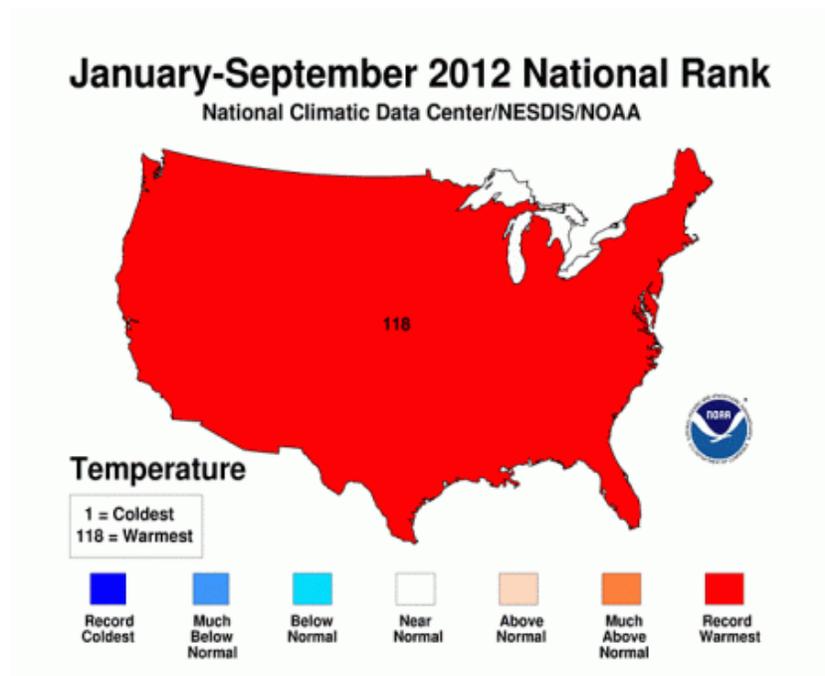
[Bloomberg Businessweek - September 26, 2012]

[An interview with 'the father of global warming'](#) [AAAS- August 16, 2012]

Images to Ponder



[his Sept. 16, 2012, image released by NASA shows the amount of summer sea ice in the Arctic, at center in white, and the 1979 to 2000 average extent for the day shown, with the yellow line. Scientists say sea ice in the Arctic shrank to an all-time low of 1.32 million square miles on Sept. 16, smashing old records for the critical climate indicator.](#)



The U.S. has had its warmest January-to-September period on record.

Credit: NOAA/NCDC.

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