

DWR Climate News Digest

August 2016

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The information provided in the DWR Climate News Digest is a selected compilation of recent popular news articles, publications, and other information relevant to climate change and water management, and is 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

[The US Military on the Front Lines of Rising Seas](#) [Union of Concerned Scientists – 2016]

[The Price Tag of Being Young – Climate Change and Millennial’s Economic Future](#)

[NextGenClimate – August 2016]

Grants and Other Funding Opportunities

[Agriculture and food research initiative – Agriculture and natural resources science for climate variability and change challenge area](#)

[USDA/National Institute of Food and Agriculture – Closing Date November 17, 2016]

Agriculture/Food Production

[Botswana: Climate change challenge to food sustenance](#) [Daily News – August 7, 2016]

(“...total dependence on rain-fed agriculture and poor soil increases vulnerability of farming systems hence ways such as Climate Smart Agriculture (CSA) was an imperative for addressing impacts of climate change on issues of food security.”)

[Climate-smart beans offer hope to Uganda’s farmers](#) [Climate Home – August 19, 2016]

[Climate change has less impact on drought than previously expected](#)

[Science Daily – August 29, 2016] (*“Recent studies have estimated that more than 70 percent of our planet will experience more drought as carbon dioxide levels quadruple from pre-industrial levels over about the next 100 years. But when researchers account for changes in plants’ water needs, this falls to 37 percent, with bigger differences concentrated in certain regions.”*)

General Water Management

[Climate change is turning the water around us into a threat](#)

[Huffington Post – August 10, 2016] (*“It’s not just about climate or land use or agriculture...but this intersection between what humans are doing locally and what we’re doing globally is what’s coming back to bite us”*)

[Groundwater recharge in Upper Colorado River Basin may hold steady under climate change](#)

[USGS – August 15, 2016]

Extreme Weather Events

[Looking, quickly, for the fingerprints of climate change](#) [New York Times – August 1, 2016]

[La. Flooding – bad luck or a wake-up call?](#) [Greenwire – August 17, 2016]

[As Louisiana floods, measuring the climate change effect](#) [PhysOrg – August 18, 2016]

Sea-level Rise and other Ocean Impacts

[Volcanic eruptions can ‘mask the true effects of climate change’](#) [Wired – August 10, 2016]

“Satellite observations, which began in 1993, show that the rate of sea level rise has held fairly steady at about 3 millimeters per year. However, these records began soon after the eruption, which temporarily cooled the planet, causing sea levels to drop”

[‘The blob’: How marine heatwaves are causing unprecedented climate chaos](#)

[The Guardian – August 14, 2016]

[Sea ice strongly linked to climate change in past 90,000 years](#) [Science Daily – August 16, 2016]

Human Health Impacts

[Climate change and longer mosquito seasons are contributing to the spread of Zika](#)

[Think Progress – August 5, 2016]

[Climate change will claim 160,000 lives a year in India by 2050](#)

[India Climate Dialogue – August 8, 2016] (*“As many as 160,000 will die every year in India by 2050 due to decreased food production because of climate change, an Oxford University study has predicted.”*)

[Deadly bacteria spread across oceans as water temperatures rise](#)

[Scientific American – August 9, 2016]

[Climate change may mean more tainted shellfish](#) [WebMD – August 8, 2016]

[Seven ways climate change affects our health](#) [The Huffington Post – August 11, 2016]

[Climate change is a significant threat to public health, CMA members hear](#)

[The Globe and Mail – August 22, 2016] (*“...while climate change disproportionately affects developing countries, especially the poor and marginalized, even wealthy countries such as Canada are not immune from the devastation wrought by climate change”*)

[Climate change is thawing deadly diseases. Maybe now we'll address it?](#)

[The Guardian – August 24, 2016] (*“An anthrax outbreak in Russia came from a 75-year old caribou carcass thawing out.”*)

Tribal Impacts & Traditional Ecological Knowledge

[US tribes work with scientists against climate change](#) [Aljazeera – August 7, 2016] (*“Combining science and indigenous knowledge, this US research group seeks new ways to adapt to climate change.”*)

[Climate change prompts Shishmaref, Alaska, to vote for mainland move](#)

[CBS News – August 18, 2016] (*“Residents of a tiny island village in Alaska that has been ravaged by erosion blamed on climate change have voted to move to the mainland, but there likely isn't enough money for the impoverished community of just 600 people to follow through on the decision.”*)

[Culture and science merge in environmental research for Crow](#)

[Environmental Health News – August 23, 2016]

Wildlife and Ecosystem Impacts

[Flows of the future – How will climate change affect steamflows in the Pacific Northwest?](#)

[US Forest Service – July 2016]

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[Drought, climate change slow growth of Douglas fir forests](#) [OPB – August 9, 2016]

[Climate change is not the ‘biggest killer’ of biodiversity](#) [Huffington Post – August 10, 2016]

(“...age-old human activities, including logging, hunting, and farming, continue to pose a greater and more urgent threat”; Note that climate change is known to be a ‘threat multiplier’)

[How climate change will hurt humanity’s closest cousins](#) [Science Daily – August 10, 2016]

(“Our research shows that climate change may be one of the biggest emerging threats to primates, compounding existing pressures from deforestation, hunting and the exotic pet trade.”)

[Climate change hits Africa’s oldest lake hard](#) [NT News.au – August 15, 2016]

[Birds sing to their eggs, and this song might help their babies survive climate change](#)

[Smithsonian – August 18, 2016] *(“Embryonic learning – things birds pick up from their parents while still in the egg – may play a bigger role than imagined”)*

[Uprooted: How climate change may kick off an artificial migration of trees](#)

[The Verge – August 22, 2016]

[Interactive map shows where animals will move under climate change](#)

[PhysOrg – August 29, 2016] *(“The visualization draws upon flow models from electronic circuit theory, taking inspiration from existing visualizations of wind flow across the U.S.”)*

[The small, furry pika is losing its habitat to climate change](#) [Popular Science – August 30, 2016]

Greenhouse Gas Mitigation

[New “bionic” leaf is roughly 10 times more efficient than natural photosynthesis](#)

[Scientific American – August 1, 2016]

[This tiny town has found a new way to cut GHGs](#) [ClimateWire – August 10, 2016]

[Indonesia’s mangroves can protect the climate – study](#) [ClimateWire – August 15, 2016]

[Clean Power Plan: Utility experts urge state lawmakers to continue planning](#)

[E&E Publishing – August 15, 2016] *(“...analysis suggests that industry trends are likely to make Clean Power Plan compliance relatively inexpensive; cost increases are likely to be on the order of 0.1 percent to 1 percent”)*

[**New hope for climate change: Electric cars could reduce greenhouse gas emissions**](#)

[Nature World News – August 18, 2016]

Climate Adaptation

[**Vietnamese rice farmers finding gains from climate change**](#) [ClimateWire – August 11, 2016]

(“As global warming has caused saltwater intrusion into their rice fields, the farmers have found that alternative rice cultivation with shrimp hatcheries could increase their profit margins.”)

[**Managing climate change refugia to protect wildlife**](#)

[University of Massachusetts, Amherst – August 10, 2016]

[**Architecture students, faculty design floating cities in response to climate change**](#)

[PhysOrg – August 12, 2016]

[**A new strategy for climate change? Retreat**](#) [Bloomberg – August 22, 2016]

International Planning

[**Australia orders climate change U-turn at peak science body**](#) [Reuters – August 3, 2016]

[**Cities rush to measure climate footprint after Paris deal**](#) [Reuters – August 4, 2016]

[**Climate change threatens nation’s agriculture**](#) [Japan Times – August 6, 2016]

[**Brazil senate approves Paris climate deal**](#) [Climate Home – August 11, 2016]

[**Australia aims to pave roads with solar**](#) [Energy and Environment News – August 15, 2016]

[**Carbon capture can drive a 21st century revival of British industry**](#)

[Telegraph – August 21, 2016]

[**China turns to free markets to tame fossil fuel pollution**](#) [Bloomberg – August 21, 2016]

[**Climate change and Indian agriculture**](#) [International Policy Digest – August 22, 2016]

(“Productivity of most crops decreases only marginally by 2020 but by 10 to 40 percent by 2100 due to increases in temperature, rainfall variability, and decreases in irrigation water”)

Legislative Updates

California climate change law: Extension of greenhouse gas goals OK'd by Assembly

[Mercury News – August 23, 2016] (*“SB 32 would establish in law a target the governor first laid out in an executive order that seeks to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030”*)

Communicating Climate Change

Images in climate change stories spur readers to action [PhysOrg – August 3, 2016] (*“We’re more likely to engage in environmentally friendly behaviors if we read media stories about climate change that include images of renewable energy.”*)

Six ways businesses view climate change [Green Biz – August 8, 2016] (*“We need to move away from thinking about ‘the’ business community and using essentially the same messaging to communicate with all private-sector decision-makers”*)

Climate scientists’ new hurdle: Overcoming climate change apathy [EOS – August 11, 2016] (*“Scientists now have to convince a new group: those who believe humans have altered the climate but don’t think anything can or should change”*)

It’s hard to talk about climate change. This storytelling project wants to make it easier.
[Vox – August 22, 2016]

Most Americans won’t act on climate. The news probably isn’t helping.
[Think Progress – August 23, 2016]

BLOGS/Commentary

Andrew Revkin on **“Seeking climate change clues in old pollen and mammoth dung”**
[Dot Earth – August 2, 2016]

George Monbiot on **“The climate crisis is already here – but no one’s telling us”**
[The Guardian – August 3, 2016] (*“The media turns us away from the issues that will determine the course of our lives, and towards topics of brain-melting irrelevance.”*)

Bill Blaikie on **“Faith and climate change in Canadian politics”**
[Huffington Post – August 6, 2016] (*United Church Minister and former Canadian Member of Parliament Bill Blaikie discusses the impact the Pope’s encyclical [Laudato Si](#) has had on young Canadian Catholics*)

The New York Times Editorial Board on “[Many countries will need help adapting to climate change](#)” [New York Times – August 8, 2016] (“Developing countries will not be able to make the investments needed to survive conditions brought on by global warming – nor should they have to do so alone, as a matter of fairness”)

Maryam Zaringhalam on “[My education in climate-denial jujitsu](#)”
[Scientific American – August 9, 2016] (“...don’t think for a minute they [majority leaders of the House Committee on Science, Space and Technology] aren’t listening to the experts. They are listening so they can retool our words and wield them against us”)

Maria Martinez on “[Indigenous peoples and climate change: 3 things to know](#)”
[NRDC – August 9, 2016] (“Although they comprise only four percent of the world’s population, indigenous communities hold legal rights to about one eighth of the world’s forests and utilize 22 percent of land surface. In doing so, they maintain 80 percent of the planet’s biodiversity in, or adjacent to, 85 percent of protected areas”)

Claus Makowka on “[Failing to address climate change hurts the poor](#)”
[Pittsburgh Post-Gazette – August 12, 2016]

Rick Salutin on “[Great debates: The theory of relativity vs. climate change](#)”
[The Star – August 12, 2016]

David Gelles on “[How producing clean power turned out to be a messy business](#)”
[New York Times – August 13, 2016]

Bill McKibbin on “[A world at war](#)” [The New Republic – August 15, 2016] (“We are under attack from climate change – and our only hope is to mobilize like we did in WWII”)

Margaret Hetherman on “[Are we feeling collective grief over climate change?](#)”
[Scientific American – August 16, 2016]

The White House on “[Addressing climate change and unleashing innovation with cleaner trucks](#)” [The White House – August 16, 2016]

Piers Sellers on “[Space, climate change, and the real meaning of theory](#)”
[New Yorker – August 17, 2016] (Piers Sellers is the Deputy Director of the Sciences and Exploration Directorate and Acting Director of the Earth Sciences Division at NASA)

Additional Items of Interest

Expanding Antarctic sea ice linked to natural variability [National Center for Atmospheric Research – July 2016] (*“Compared to the Arctic, global warming causes only weak Antarctic sea ice loss, which is why the IPO [Interdecadal Pacific Oscillation] can have such a striking effect in the Antarctic...There is no comparable natural variability in the Arctic that competes with global warming.”*)

Retiring Dr. Drought tells politicians climate change is science, not religion

[Lincoln Journal Star – August 2, 2016]

Fact Sheet: White House Council on Environmental Quality releases final guidance on considering climate change in environmental reviews [The White House – August 2, 2016]

International report confirms Earth is hot and getting hotter

[National Oceanic and Atmospheric Administration – August 2, 2016] (*“An annual State of the Climate report [based on contributions from more than 450 scientists from 62 countries around the world] has confirmed that 2015 surpassed 2014 as the warmest year on record since at least the mid-to-late 19th century”*)

White House tells agencies to consider climate change effects of projects

[Scientific American – August 3, 2016] (*“Released yesterday by the White House Council on Environmental Quality (CEQ), the finalized guidance recommends that agencies both calculate direct and indirect greenhouse gas emissions of a project and assess how climate change might affect a project.”*)

People really do pay attention to climate change – when Leonardo DiCaprio talks about it

[Washington Post – August 5, 2016] (*“A single speech, at a very opportunistic time, at the Oscar ceremony, resulted in the largest increase in public engagement with climate change ever.”*)

Global climate deal likely to enter into force in 2016: study [Reuters – August 5, 2016]

Rio Olympics Opening Ceremony reminds world that climate change is very real

[Think Progress – August 6, 2016]

Scientists warn world will miss key climate target [The Guardian – August 6, 2016] (*“Leading climate scientists have warned that the Earth is perilously close to breaking through a 1.5C upper limit for global warming, only eight months after the target was set.”*)

[Rejection of experts spreads from Brexit to climate change with ‘Clexit’](#)

[The Guardian – August 8, 2016]

[Can we help the losers in climate change](#) [Technology Review – August 8, 2016] (*“The demise of the coal industry should start a discussion of how we will respond to the economic upheaval caused by global warming.”*)

[Is the oil industry dying?](#) [Pacific Standard – August 10, 2016] (*“The peak oil controversy stages a comeback as the industry confronts a future of high costs – and low prices”*)

[Unprecedented federal court ruling elevates environmental justice over demands of industry](#)

[Fusion – August 10, 2016] (*A ruling from the 7th Circuit U.S. Court of Appeals “...validated the way the Obama administration measures the social cost of carbon (SCC), a decision that could have wide-ranging impacts on the future of the energy industry and the way the United States addresses environmental justice.”*)

[Climate change may be doubted by some, but now it’s the law](#) [Bloomberg – August 11, 2016] (*“A federal appeals court in Chicago gave a thumbs-up this week to an obscure regulatory practice that helps the U.S. government account for projected costs of climate change”*)

[Can today’s EVs make a dent in climate change?](#) [MIT News – August 15, 2016] (*“Researchers at MIT have just completed the most comprehensive study yet to address this hotly debated question, and have reached a clear conclusion: Yes, they can.”*)

[In 70 years, the Earth could be too hot for the summer Olympics](#)

[Think Progress – August 15, 2016]

[What the oil industry wants in a California climate change deal](#)

[Capital Public Radio – August 15, 2016]

[Climate change is the greatest threat to future business](#) [Business Standard – August 15, 2016]

[July 2016 was the world’s hottest month since records began](#)

[The Guardian – August 15, 2016]

[These photos show how hard climate change has hit Greenland](#) [Time – August 15, 2016]

[What climate change skeptics aren’t getting about science](#) [Wired – August 17, 2016]

[Climate changes where the Olympics can be held](#)

[Bulletin of the Atomic Scientists – August 18, 2016] (*“Using climate projections and International Olympic Committee (IOC) guidelines, the researchers estimate that by 2085, only 33 cities in the Northern hemisphere will have the appropriate climate to host the Summer Olympic Games. Cities considered too risky to hold the games include 2020 host Tokyo and 2024 candidates Budapest, Paris, Rome, and Los Angeles.”*)

[Should we be having kids in the age of climate change?](#) [NPR – August 18, 2016]

[Climate change helps drive ethnically divided societies into armed conflict](#)

[Truth Dig – August 18, 2016] (*“There have been repeated warnings that, without concerted international action, global temperatures driven by rising greenhouse gas emissions could rise to make life almost intolerable in regions already increasingly insecure.”*)

[After scorching heat, Earth likely to get respite in 2017](#) [Reuters – August 17, 2016]

[How the National Parks are playing the game of ‘what if’ to prepare for climate change](#)

[Smithsonian – August 22, 2016] (*“Scenario planning allows situations to be explored that you might not explore, because they seem implausible”*)

[Human-induced climate change began earlier than previously thought](#)

[The Guardian – August 24, 2016] (*“Signs of warming appear as early as 1830 say researchers, whose analysis will help build accurate baseline of temperature before influence of human activity”*)

[Changing opinions on climate change, from a CNN meteorologist](#) [CNN – August 25, 2016]

[Just 90 companies are to blame for most climate change, this ‘carbon accountant’ says](#)

[Science – August 25, 2016]

[The ‘Social Cost of Carbon’ is the most historic climate change decision yet](#)

[The Daily Beast – August 29, 2016] (The Social Cost of Carbon has been upheld in a ruling on Zero Zone v. Department of Energy at \$36 per ton)

[NASA: Earth is warming at a pace ‘unprecedented in 1,000 years’](#)

[The Guardian – August 30, 2016]

[167 tiny maps tell the major story of climate change](#) [Climate Central – August 31, 2016]

(“Alone, they each tell the story of whether a year was mostly hot or mostly cold or mostly average. Together, they show unequivocally how much our planet has warmed since the 1850’s, including the rapid rise over the past three decades”)

[Study assesses climate change vulnerability in urban America](#) [PhysOrg – August 31, 2016]

Images to Ponder

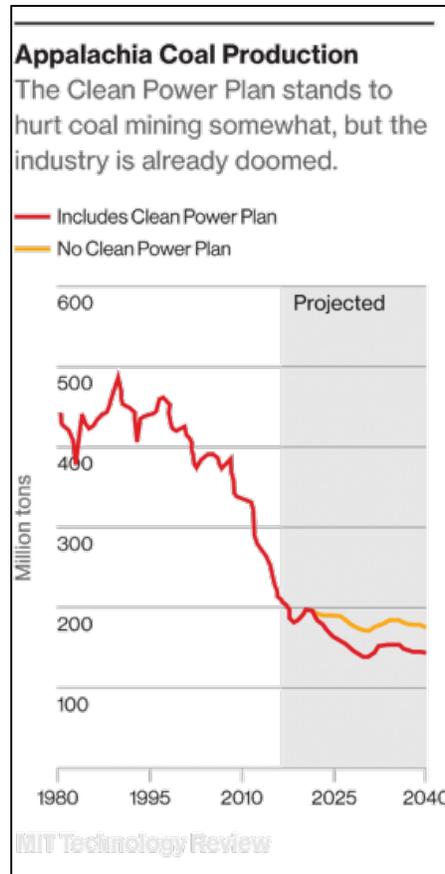


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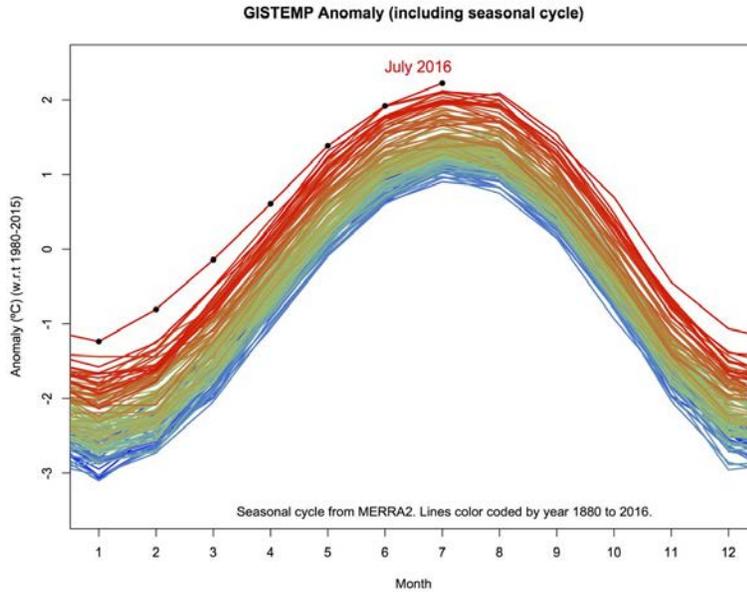


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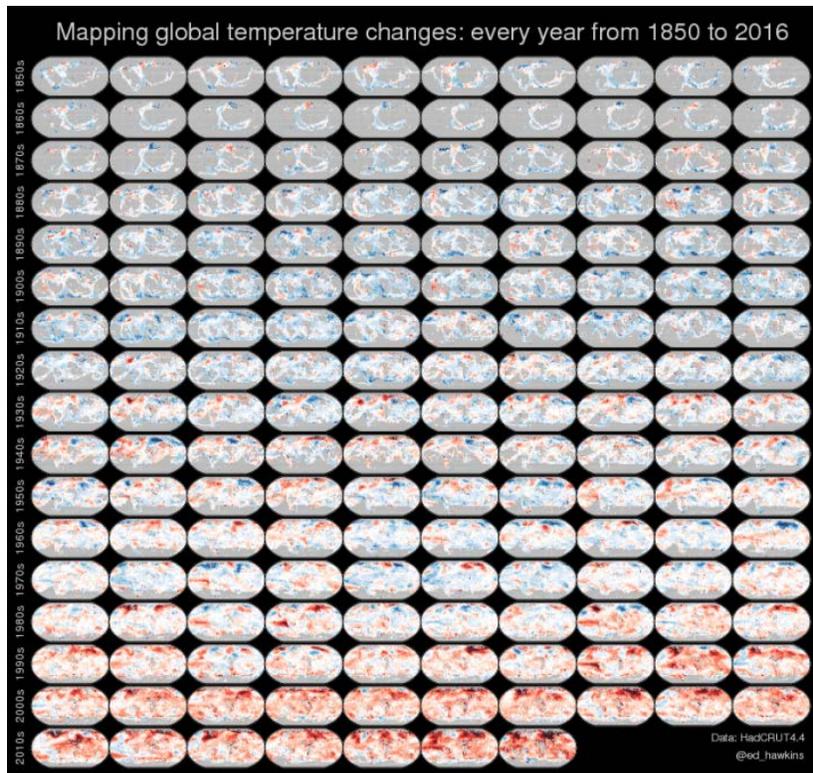


Image credit: <http://www.climatecentral.org/news/tiny-maps-climate-change-20652>

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