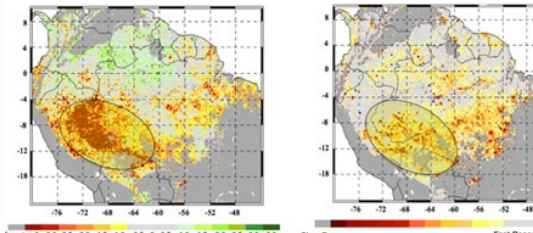


# Earth - Climate

by TidewaterCurrent

Part of Environment

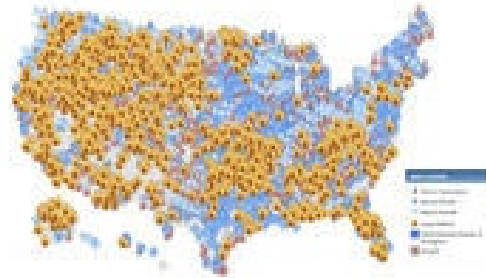


## Climate change hurting Amazon rainforest warns Nasa

rtcc



**TidewaterCurrent** "Large areas of the Amazon rainforest appear to be deteriorating as a result of drought due to climate change, new research from Nasa reveals."  
January 21, 2013



## New climate report: Changes ahead for Hampton Roads

dailypress



**TidewaterCurrent** 1.20.13 -  
"According to local experts and a comprehensive National Climate Assessment (NCA) released Monday by a federal advisory committee, for Hampton Roads and the rest of the country such changes aren't coming — they're here."  
January 20, 2013



## New Star Island: A Green Architectural Paradise

designbuildsource.com.au



**TidewaterCurrent** Residents of the Maldives are looking to reshape their future as climate refugees into that of climate innovators. A floating eco development is being planned. Dutch architects came up with the design that will also be constructed by Dutch engineers.

January 19, 2013



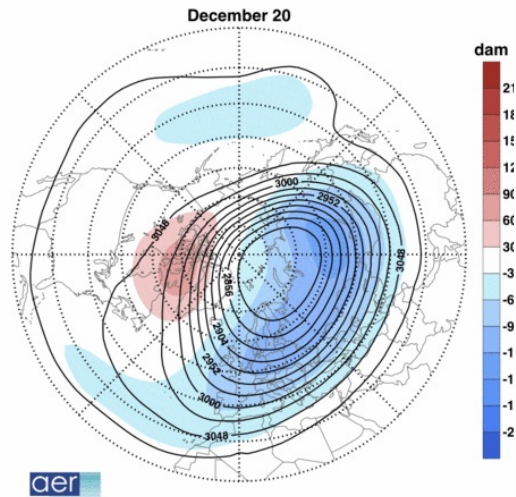
## In the eastern US, spring flowers keep pace with warming climate

sciencedaily



**TidewaterCurrent** "Using the meticulous phenological records of two iconic American naturalists, Henry David Thoreau and Aldo Leopold, scientists have demonstrated that native plants in the eastern United States are flowering as much as a month earlier in response to a warming climate."

January 17, 2013



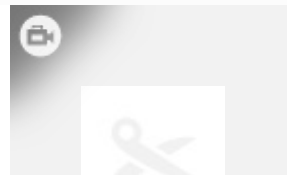
## Stratospheric Phenomenon Is Bringing Frigid Cold to U.S | Climate Central

climatecentral



**TidewaterCurrent** "During the ongoing stratospheric warming event, the polar vortex split in two, allowing polar air to spill out from the Arctic, as if a refrigerator door were suddenly opened."

January 19, 2013



## Welcome to Rain Square, where the answer to rising flooding is: let it flow

guardian.co.uk



**TidewaterCurrent** Recurrent flooding is forcing Brits to consider amphibious architecture. Article features a floating Home on the Thames (video included) and the potential of flooding low lying areas to create lagoons as well as the development of rain squares and flood parks.

January 15, 2013



## Best Beach Resorts Could Vanish

news.yahoo



**TidewaterCurrent** 1.18.13 - "That's the prediction of coastal expert Andrew Cooper, a professor at the University of Ulster in Ireland, who said that the usual way of replenishing a beach, by adding sand to it, will not keep up with the sea's rapid rise....Some well-known examples are Benidorm, Torremolinos (Spain); Cannes (France); West Palm Beach, Fla.; Atlantic City, N.J, Myrtle Beach, S.C., Virginia Beach, Va.; Cancun (Mexico); and the most rapidly developed of all coastal resort cities, Dubai (United Arab Emirates). "

January 20, 2013



## Dominion & Legislators: VA wants wind & solar power

chesapeakeclimate



**TidewaterCurrent** "Dominion Power, Virginia's largest electricity-provider, is ripping us off. Company executives got the Virginia government to award it a "renewable energy" bonus of \$76 million—even though the company hasn't built any wind or solar power here. ...Please use the form to tell Dominion and the General Assembly that you want wind and solar power in Virginia,"

January 15, 2013



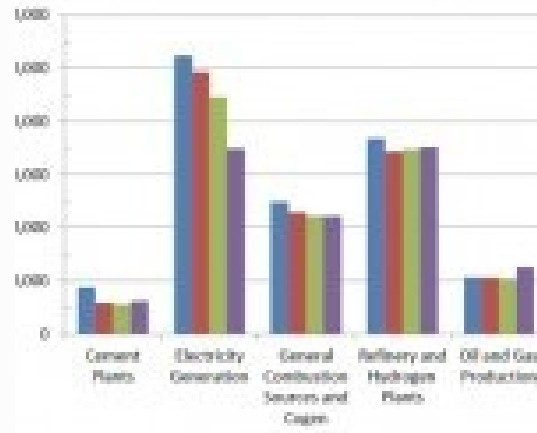
## Introducing Britain's first amphibious house that rises with water to escape a flood

dailymail.co.uk



**TidewaterCurrent** Floating home being built on the Thames that can withstand recurrent flooding. "When the river bursts its banks – an event expected once in every 20 years – the water pressure will unlock the home from the dock and allow it to float up to the water level." More floating architecture here:  
<http://tidewatercurrent.com/fall2012/features.html#adapting>  
 January 15, 2013

## Facility Sector Emissions Comparison: 2008 to 2011 (non-biomass + biomass + process emissions)



## California Cuts GHGs for Third Year

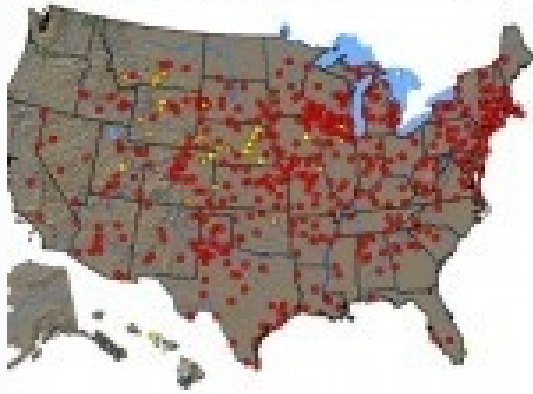
environmentalleader



**TidewaterCurrent** 1.15.13 - "Emissions from electricity generation — which until 2011 had been California's single biggest GHG source — saw the most significant reductions in 2011, falling 22 percent compared to 2010 levels, from 44.6 million tons of CO<sub>2</sub>e to 34.9 million tons of CO<sub>2</sub>e."  
 January 15, 2013



## Selected Annual Climate Records for 2012



These data are preliminary. A more complete set of data will be available later in the year. For more information, visit [www.noaa.gov](http://www.noaa.gov).  
 May 2012: National Weather Service, Office of  
 Management, Planning, and Information Systems  
 January 15, 2013

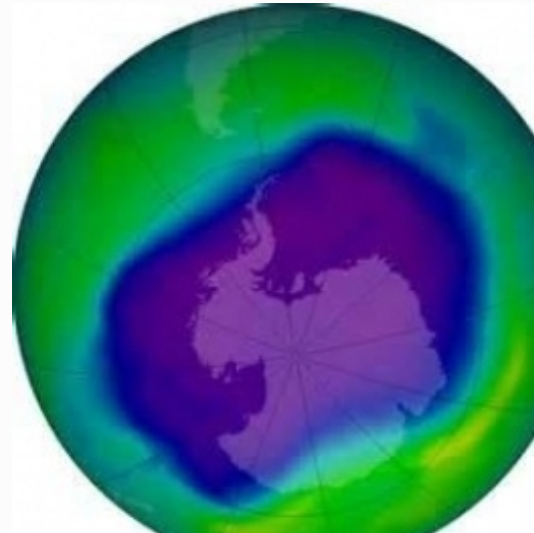
## Climate Change Threatens 10 Degree Rise, Submerged Cities

environmentalleader



**TidewaterCurrent** "rising waters caused by climate change are expected to swallow up shorelines in the Seattle area, according to a projection by Seattle Public Utilities....Other US states and cities with vulnerable shores, such as New York, have proposed a number of changes to protect the coastlines from future superstorms. A draft report prepared by the NYS 2100 commission suggests the state consider storm surge barriers to protect New York Harbor and recommends adding "green infrastructure" features to the state's industrial shoreline."

January 15, 2013



## Ozone Destruction New Cause - ENN: Environmental News Network -- Know Your Environment

enn



**TidewaterCurrent** 1.14.13 - Ozone, a greenhouse gas in the lower atmosphere, is being destroyed in a chemical process occurring over the tropical Atlantic. In the process methane, also a greenhouse gas, is being destroyed. The previously unknown process initiated by the release of bromine and iodine from sea water, is potentially good news as it appears that more greenhouse gases are being destroyed than thought. It also could be a global process which needs more study and will need to be incorporated into climate models.

January 14, 2013

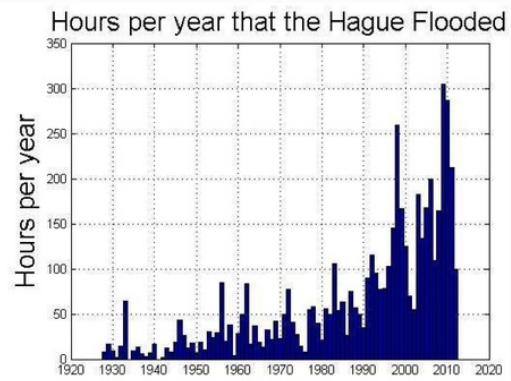


## Explained in 90 Seconds: What the @#% Is Climate Change Doing to El Niño?

motherjones



**TidewaterCurrent** Warming climate appears to be increasing severity of El Nino events.  
January 11, 2013



## Climate Progress: Virginia, Maryland and Delaware Investigate Sea Level Rise Solutions - Tidewater Current | Winter 2013

tidewatercurrent



**TidewaterCurrent** 3 Mid- Atlantic states are beginning to address the threat of rising seas and recurrent inundation episodes.  
January 12, 2013



## 2012 Was Hottest Year Ever in U.S.

nytimes



**TidewaterCurrent** "The numbers are in: 2012, the year of a surreal March heat wave, a severe drought in the Corn Belt and a huge storm that caused broad devastation in the Middle Atlantic States, turns out to have been the hottest year ever recorded in the contiguous United States."  
January 11, 2013



## Federal Advisory Committee Draft Climate Assessment Report Released for Public Review

[ncadac.globalchange.gov](http://ncadac.globalchange.gov)



**TidewaterCurrent** "To simply access and read the draft report, please download the chapters below. However, if you would like to submit comments on the report as part of the public process, you will need to enter the "review and comment system" and register with your name and e-mail address and agree to the terms. All comments must be submitted through the review and comment system." Comments accepted between Jan 14 and April 12.  
January 12, 2013



## Effects of climate change will be felt more deeply in decades ahead, draft report says

[washingtonpost](http://www.washingtonpost.com)



**TidewaterCurrent** 1.11.13 - "The country is hotter than it used to be, rainfall is becoming both more intense and more erratic, and rising seas and storm surges threaten U.S. coasts. The draft of the third National Climate Assessment warns that with the current rate of global carbon emissions, these impacts will intensify in the coming decades." Author notes that "Virginia Beach ranks among the nation's "most vulnerable port cities," according to the assessment, after Miami, the New York City area, New Orleans and Tampa-St. Petersburg."  
January 12, 2013



## Climate change on the coast: Buyer-beware option considered

delawareonline



**TidewaterCurrent** Delaware -

"Committee wants public to consider expanding disclosure rules for selling properties vulnerable to sea-level rise... Sea-level rise disclosure is not a new idea. In Florida, a state task force has suggested a full disclosure law to let buyers in coastal areas know about erosion rates, storm history and sea-level rise. In Maryland, a working group has suggested a sea-level rise disclosure and advisory for properties at risk. A South Carolina committee recommended disclosure so property owners understand the perils of developing or buying land beyond the state's oceanfront setback line. In North Carolina, legislation was proposed to require a flood and storm risk disclosure, but it failed amid concerns about an already depressed real estate market."

January 11, 2013

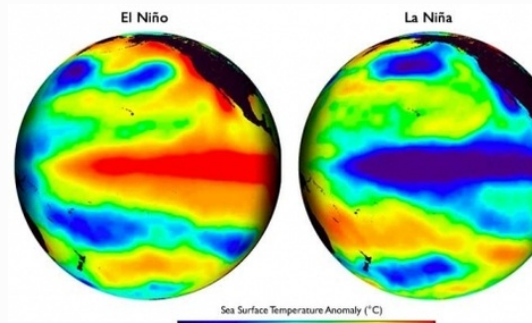


## Natural relationship between carbon dioxide concentrations and sea level documented

sciencedaily



**TidewaterCurrent** Looking at the geological record, scientists find that sea levels associated with CO2 concentrations of 400-450 ppm (where it is hoped to be stabilized) were 9 meters higher than today. January 3, 2013



## Global Warming-El Nino Link Stronger but Still Not Proven | Climate Central

climatecentral



**TidewaterCurrent** 1.3.13 - "a report published Thursday in Science says that both phases of ENSO have become more intense over the past century, suggesting that as warming continues, ENSO may become increasingly volatile." January 4, 2013



## Rotterdam Climate Proof projects on the map

rotterdamclimateinitiative.nl



**TidewaterCurrent** "Rotterdam has come up with a remarkable invention to provide for additional water storage in this densely built-up city: water plazas. Most of the time, these water plazas will serve as marvellous children's playgrounds or sports fields."

January 3, 2013



## House Republican Marks Climate Change As Top Priority In Farewell Speech

cleantechnica



**TidewaterCurrent** "In his farewell address on Tuesday, an outgoing Republican from California, David Dreier, listed climate change as a top problem facing the US."

January 5, 2013



## Maryland is Taking Action to Prepare for Rising Seas

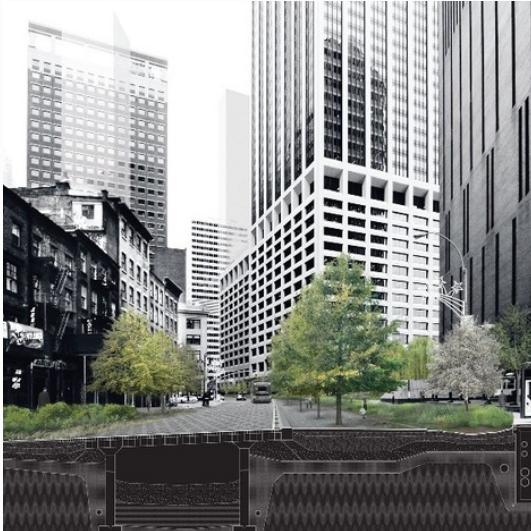
switchboard.nrdc



**TidewaterCurrent** 1.4.13 - "O'Malley signed the Climate Change and Coast Smart Construction Executive Order, which will help to reduce flooding risks to state buildings and public infrastructure in coastal areas."

January 9, 2013





## Plan to secure Manhattan from flooding leans on nature

marketplace



**TidewaterCurrent** "Builders, landscape architects, urban planners -- they've all been throwing out proposals for how to shield the famous island from devastating floods in the future. ...Architecture Research Office in Manhattan. Stephen Cassell is a partner there and his firm has proposed a unique redesign....redesigning how the city infrastructure works. We'd take all the pipes and electrical wires and everything in the street and put them in water-proof vaults under the sidewalk and then make the street bed absorptive -- that would basically absorb water and then channel it back out to the edge of the island," says Cassell."

January 3, 2013



## Audubon's annual Christmas bird counts tell scientists how birds are changing with climate

washingtonpost



**TidewaterCurrent** 12.22.12 - With the bird count occurring simultaneously across the country, changes in populations and migration patterns are discovered.

December 23, 2012



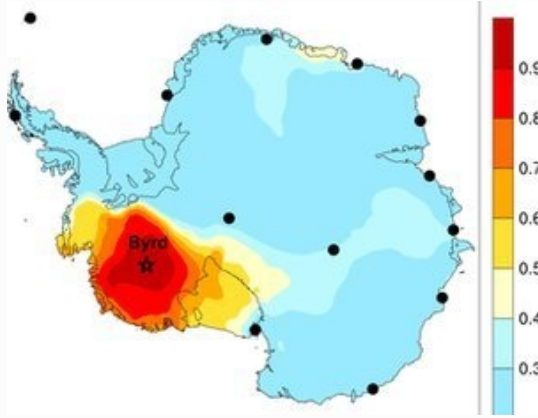
## Oregon Gets 10-Year Clean Energy Plan

sustainablebusiness



**TidewaterCurrent** "The comprehensive energy strategy is focused on cutting greenhouse gases, energy efficiency, renewable energy and clean transportation....As in California, Oregon will meet all new electricity demands through energy efficiency, and will remove financial and regulatory barriers that get in the way of increasing renewable energy."

December 24, 2012



## Antarctic warming concern rises

bbc.co.uk



**TidewaterCurrent** Data analyzed by US scientists from Byrd Station indicates rapid warming of the western Antarctic. A new analysis of temperature records indicates that the Western Antarctic Ice Sheet is warming nearly twice as fast as previously thought.

December 24, 2012



## Seattle Mayor Calls For Divesting City Pension Funds From Fossil Fuels

thinkprogress



**TidewaterCurrent** 12.23.12 - This will send a big message. Also "In the last month, groups on 192 university and college campuses have organized campaigns to pull their schools' endowments out of the fossil fuel industry"

December 24, 2012



## Kerry expected to elevate climate change as secretary of state

latimes



**TidewaterCurrent** "Although Obama didn't mention climate change when he announced Kerry's nomination, many saw a signal that it would raise the issue's prominence in Obama's second term."

December 26, 2012



## How rapid climate change helped humans to evolve: Our ancestors 'had to adapt quickly to changing habitats'

dailymail.co.uk



**TidewaterCurrent** Could rapid climate change stimulate human evolution? Let's hope so, it may have in the past. Penn State and Rutgers researchers believe that periodic and rapid shifts in climate helped humans evolve. Forced to adapt to changing conditions in just generations may have increased brain size and cognition. There is evidence that tool use was first established within an episode of changing climate.

January 2, 2013



## Is nuclear power necessary for solving climate change?

guardian.co.uk



**TidewaterCurrent** Meeting the challenge of reducing greenhouse gases will be particularly difficult without nuclear power. Author provides a good analysis of this energy conundrum.

December 22, 2012



## When the ice melts, the Earth spews fire

geomar.de



**TidewaterCurrent** 12.19.12- Researchers from Harvard and GEOMAR Helmholtz Centre for Ocean Research find evidence that climate affects volcanic activity. By studying the geologic record found in core samples, " periods of high volcanic activity followed fast, global temperature increases and associated rapid ice melting."

December 20, 2012



## Report: US Ecosystems More Stressed Than Ever

voanews



**TidewaterCurrent** The report released by National Wildlife Federation and the Cary Institute of Ecosystem Studies indicates that natural ecosystems are under great stress as a result of climate change.

December 22, 2012





## Two Thirds Of The World's Top Corporations Have Set Emissions Reduction Targets Or Renewable Energy Goals

thinkprogress



**TidewaterCurrent** "According to a new analysis from Ceres, WWF, and Calvert Investments, 68 percent of companies in the Global 100 list have set targets to lower global warming pollution or purchase clean energy. In addition, 58 percent of companies in the Fortune 100 list have set similar targets."

December 15, 2012



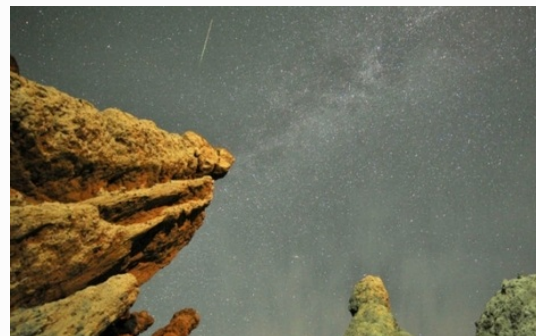
## Entire Microbe Communities Live Up in the Clouds

blogs.smithsonianmag



**TidewaterCurrent** "Riding the storms, the microbes can cross the Pacific Ocean in just over a week. "When the wind blows," says Scharf, the population of Asiatic microbes in the continental U.S. climbs. "This means that there is real mixing of species going on, a microbial pollution that may have consequences for all manner of things, including local ecosystem function and even disease." "

December 18, 2012



## White Wolf: Geminid Meteor Shower Live Stream

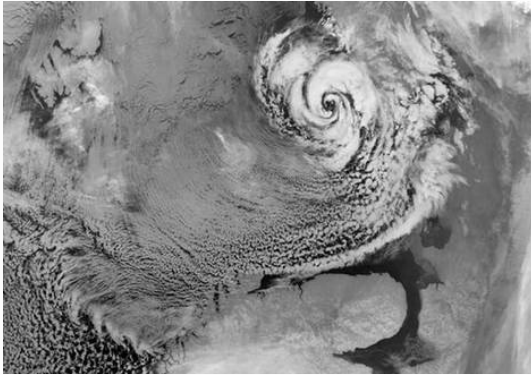
whitewolfpack



**TidewaterCurrent** "The Geminid meteor shower is scheduled to appear during the night sky between Dec. 13 and Dec. 14."

December 13, 2012





## Here's a different spin on effects of Arctic cyclones

msnbc.msn



**TidewaterCurrent** The climate in Europe could cool as a result of global change. Current climate models do not factor in "Arctic hurricanes" or polar lows, which are responsible for about 5% the heat transferred from the equator to the poles and warm Europe - "As the frigid air from one of these storms moves over the comparatively warmer water, the water cools and sinks. This sinking helps power the Gulf Stream, and more broadly, the global ocean conveyor belt,...The storms "intensify the circulation of the ocean and are partly responsible for keeping Europe warm,"

December 19, 2012



## EarthFix · Study: Climate Changes Hurts Winter Tourism · Oregon Public Broadcasting

earthfix.opb



**TidewaterCurrent** 12.6.12 - A new study by researchers at the University of New Hampshire says these mild winters and poor ski seasons are becoming more common.

December 9, 2012



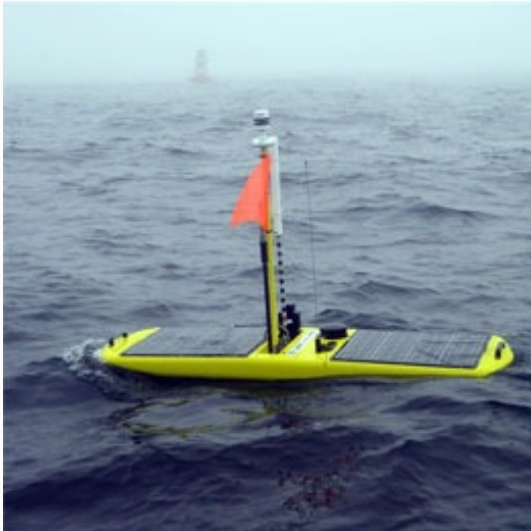
## Protection from rising sea levels would cost \$9.5 billion

news1130



**TidewaterCurrent** 12.11.12 - "The cost of protecting Metro Vancouver from rising sea levels has been estimated at \$9.5 billion. That number is from a new report titled 'Cost of Adaption - Sea Dikes and Alternative Strategies.'"

December 12, 2012



## Robot Glider Detects Rogue Waves and Other Ocean Anomalies Missed by Satellites: Scientific American

scientificamerican



**TidewaterCurrent** "The wave-powered sub Papa Mau not only set a record while crossing the Pacific Ocean autonomously, it also studied rogue waves and other marine phenomena invisible to eyes in the sky"

December 11, 2012



## The World Wants a Solution to Climate Change: Here It Is

theenergycollective

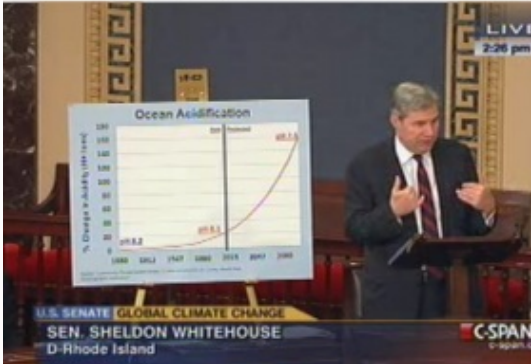


**TidewaterCurrent** 12.10.12 - "A new analysis by ECOFYS and commissioned by Philips for the United Nations Climate Change Conference estimates that energy efficiency can generate over a third of the emissions reductions we need by 2020. An ACEEE analysis found that in the United States the potential savings are even greater. Meanwhile, vast amounts of energy are wasted through outdated and inefficient practices while the greenhouse gases emitted by fossil fuels used to power these practices continue to billow into the sky."

December 10, 2012

#CLIMATECLIFF

**"We are changing Earth far, far faster  
than any recorded geologic shift, ever**



## Over 10,000 Americans Tell Congress To Stop Pushing Us Over The Climate Cliff

thinkprogress



**TidewaterCurrent** 12.14.12 - "The leaders of the "fiscal cliff" debate claim their stances are based on their sober-minded obligations to our children and grandchildren, even as they shirk their true responsibility to confront the fossil fuel industry, whose rogue behavior threatens the very existence of future generations."  
December 15, 2012



## Consumers can buy trees as gifts to protect clean water, combat climate change, and create a more resilient future

vt-digger



**TidewaterCurrent** Vermont - Great program. Clearwaterund.org is offering gift trees that will be planted and maintained along critical waterway buffer zones.  
December 6, 2012



## Smoke from Arctic wildfires may have caused Greenland's record thaw

guardian.co.uk



**TidewaterCurrent** 12.7.12 - "Satellite images suggest soot particles settled over ice sheet making it absorb more heat during last year's extreme melting"  
December 7, 2012



## Balmy November Virtually Assures 2012 to Be Hottest Year | Climate Central

climatecentral



**TidewaterCurrent** "November was also drier than normal, capping the 12th driest 11-month January-November period on record. "  
December 8, 2012



## Doha's most progressive country on climate change? Wales

guardian.co.uk



**TidewaterCurrent** 12.6.12 - Leading the UK in renewable energy "Wales will become the first country in the world to make it legally binding for all public bodies, from health trusts to libraries and schools, to take account of the environment and social issues when they make a decision." The sustainable development bill should be delivered in just under a year, says Griffiths, who is in Doha to meet other regional governments like Catalonia, Brittany and Quebec, as well as UN agencies. "It would be a legal first," he says. "A country may be small but it can be smart and far-sighted."

December 6, 2012





## New Observatories Will Warn Public about "Atmospheric River" Floods: Scientific American

scientificamerican



**TidewaterCurrent** 12.4.12 - "An \$11-million weather sensor network being installed in California will give officials more time to prepare for onslaughts of Pacific storms" Sensors are also being put in place to measure soil moisture, which helps determine potential flooding so officials can make important decisions like whether a dam should be opened or closed. Data generated from this new monitoring system will be made available online for public use.

December 5, 2012



## Sea levels will rise by up to 2 metres... and it's unstoppable > Trends > Research - Click Green

clickgreen.org.uk



**TidewaterCurrent** 12.6.12 - "The report is published by NOAA's Climate Program Office in collaboration with twelve contributing authors from ten different federal and academic science institutions—including NOAA, NASA, the U.S. Geological Survey, the Scripps Institution of Oceanography, the U.S. Department of Defense, the U.S. Army Corps of Engineers, Columbia University, the University of Maryland, the University of Florida, and the South Florida Water Management District....Scientists have very high confidence (greater than 90% chance) that global mean sea level will rise at least 8 inches (0.2 meter) and no more than 6.6 feet (2.0 meters) by 2100."

December 6, 2012





## After Sandy, climate change gets more attention

delmarvanow



**TidewaterCurrent** 11.25.12 - Wallops (Eastern Shore), VA- NASA, US FWS (and more) sponsor Science on the Shore event focusing on sea level rise preparation. Speakers from EPA, Wetlands Watch discussed the science and potential impacts of sea level rise.

November 27, 2012



## Greenland and Antarctica 'have lost 4tn tonnes of ice' in 20 years

guardian.co.uk



**TidewaterCurrent** 11.29.12 - " East Antarctica is gaining some ice, the satellite data shows, but west Antarctica and the Antarctic peninsula is losing twice as much, meaning overall the sheet is melting....The study shows the melting of the two giant ice sheets has caused the seas to rise by more than 11mm in 20 years. It also found Greenland is losing ice mass at five times the rate of the early 1990s."

November 29, 2012



## Fossil-Fuel Subsidies of Rich Nations Five Times Climate Aid

businessweek



**TidewaterCurrent** 12.3.12 - "In 2011, 22 industrialized nations paid \$58.7 billion in subsidies to the oil, coal and gas industries and to consumers of the fuels, compared with climate-aid flows of \$11.2 billion, according to calculations by the Washington-based group....Eliminating the subsidies would reduce incentives to pollute and help rich nations meet their pledge to provide \$100 billion a year in climate aid by 2020, said Stephen Kretzmann, the founder of Oil Change International."

December 3, 2012



## America's carbon tax offers a lesson to the rest of the planet on fighting climate change

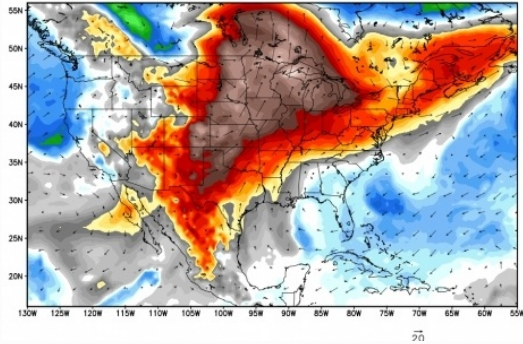
guardian.co.uk



**TidewaterCurrent** 12.1.12 - "a carbon tax could be a way of avoiding a steep rise in income tax and save cuts to Medicare, Medicaid and social security, the prospect that haunts Washington as the 2 January deadline for a budget deal looms. It is estimated that a tax of \$20 per ton of carbon emitted from 2013, with an increase of 4% per annum, will raise \$1.25tn in the next decade and reduce emissions by 14% below 2006 levels....The most surprising fact in this hushed debate is that the ultra-conservative American Enterprise Institute is prepared to contemplate the idea and Grover Norquist, president of Americans for Tax Reform, has murmured that a carbon tax would not violate his principles."

December 2, 2012

ECMWF 850 hPa Temperature Anomaly [°C] and Wind Vectors [knots]  
Init: 12Z28NOV2012 -- [120] hr --> Valid Mon 12Z03DEC2012



## 'Atmospheric River' Aims At West Coast; Warmup in Plains | Climate Central

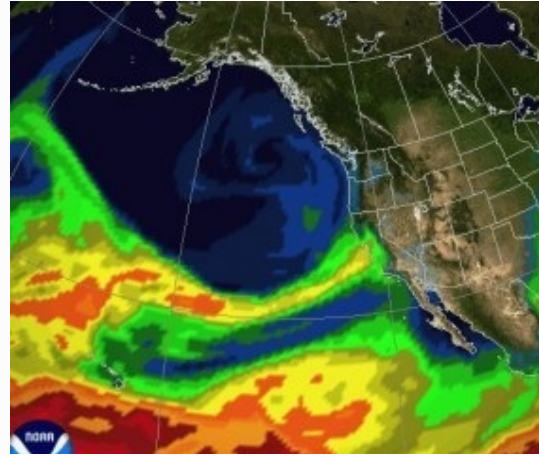
climatecentral



**TidewaterCurrent** 11.28.12 -

"Atmospheric river events are quite common, although as the planet continues to warm, and more moisture is added to the atmosphere through evaporation, they are expected to carry even more water vapor with them." As a result of this phenomena, "Computer model projections show highs may approach 70 degrees in Oklahoma City and Little Rock, Ark., on Friday, with the warm air spreading into Chicago and Detroit as well. The warmth will aggravate longstanding drought conditions across the Plains, where some locations are likely to set records for the driest November since recordkeeping began in the late 19th century."

November 29, 2012



## Mysterious Atmospheric River Soaks California, Where Megaflood May Be Overdue | Observations, Scientific American Blog Network

blogs.scientificamerican



**TidewaterCurrent** 11.30.12 -

Atmospheric river phenomena expected to bring torrential rain and flooding in Northern CA (similar to recent conditions in the UK). "An atmospheric river is a narrow conveyor belt of vapor about a mile high that extends thousands of miles from out at sea and can carry as much water as 15 Mississippi Rivers. It strikes as a series of storms that arrive for days or weeks on end. Each storm can dump inches of rain or feet of snow. For more details, see this feature story that Scientific American has just published, written by two experts on these storms."

December 1, 2012



## Timeline: How the World Found Out about Global Warming: Scientific American

scientificamerican



**TidewaterCurrent** Timely overview of science and policy as nations meet this week in oil state to discuss climate change. Note, the US never formally ratified the first global warming treaty: the Kyoto Protocol.  
November 26, 2012



## Rising Seas, Vanishing Coastlines

nytimes



**TidewaterCurrent** 11.24.12 - "More than six million Americans live on land less than five feet above the local high tide. (Searchable maps and analyses are available at SurgingSeas.org for every low-lying coastal community in the contiguous United States.) Worse, rising seas raise the launching pad for storm surge, the thick wall of water that the wind can drive ahead of a storm"

November 26, 2012



## Adapting the Built Environment for Sea Level Rise - Tidewater Current | Fall 2012

tidewatercurrent



**TidewaterCurrent** Amphibious and floating homes could become more widespread in the future.  
November 26, 2012



## What Happens If the Mississippi Runs Dry? : Discovery News

news.discovery



**TidewaterCurrent** 11.26.12 - "The Mississippi River may soon be too shallow for barge shipping, which could hurt international trade and cause increases in domestic energy and food costs. Switching to other shipping methods could increase pollution. However, there may be a bright side: drought and reduced traffic on the desiccated rivers may benefit wildlife in the long run."

November 26, 2012



## Climate skeptic group works to reverse renewable energy mandates

washingtonpost



**TidewaterCurrent** 11.24.12 - The Electricity Freedom Act is being pushed by the Heartland Institute and a group of legislators that participate in the American Legislative Council to repeal state renewable energy portfolio standards. "The Heartland Institute received \$736,500 from Exxon Mobil between 1998 and 2006, according to the group's spokesman Jim Lakely, and \$25,000 in 2011 from foundations affiliated with Charles G. Koch and David H. Koch, whose firm Koch Industries has substantial oil and energy holdings."

November 27, 2012





## VIMS prof studying 'middle ground' sea-level change

vagazette



**TidewaterCurrent** 11.26.12 - Gloucester, VA - "Intra-seasonal variability, which Brubaker says takes place over 10-90 days and can add or detract a foot or more from the predicted tide, is likely due to shifts in oceanic currents and large-scale movements of water masses along the coast....You can't help but notice that the spikes in the duration of high-water events seem to correspond to the very strong El Niño event in 1997-98, and again in 2009-10, which is the next biggest El Niño peak,...Brubaker's research has also found that peaking levels will have the greatest affects in the mid-Chesapeake Bay, where the tidal range is lowest. That could affect how flood-prone an area is."

November 27, 2012



## The Big Apple's Mayor Makes A Very Scary Video : NPR

npr



**TidewaterCurrent** Graphic display of 1 year of CO2 emissions in NYC.  
November 21, 2012

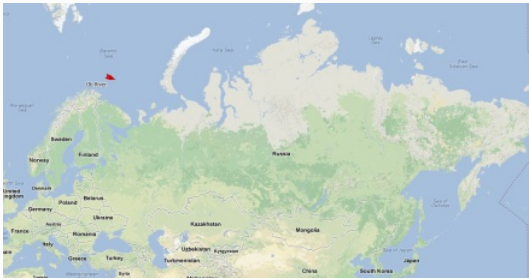


## Jetty protecting Tangier Island harbor to be built

hamptonroads



**TidewaterCurrent** 11.20.12 - Without help this island would suffer inundation.  
November 20, 2012



## For the first time, a fossil fuel tanker is navigating the Arctic

grist



**TidewaterCurrent** 11.26.12 - Massive LNG carrier making voyage from Norway to Japan via the Arctic instead of the a much longer route around Asia. "The owners [of the Ob River] say that changing climate conditions and a volatile gas market make the Arctic transit profitable."

November 26, 2012



## Did climate change controversy cause UVA's sacking of Teresa Sullivan?

guardian.co.uk

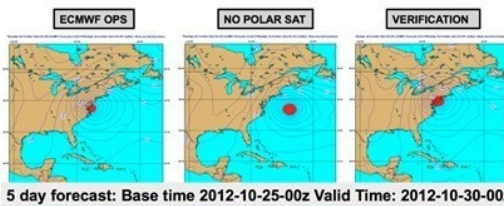


**TidewaterCurrent** Interesting read in the UK's Guardian. The author speculates that "ClimateGate" may be behind Sullivan's ouster. "By the time of her ouster, Sullivan had spent nearly \$600,000 in UVA funds to defend the university against litigation that many described as a politically-motivated witch-hunt and an attack on academic freedom."

November 20, 2012

## Forecast skill **without** polar satellites

Forecasts of Mean Sea Level Pressure, **5 days in advance** of the 30<sup>th</sup> October 2012 for the landfall of **Hurricane Sandy**. Forecasts from an assimilation system **with no polar satellites** fails to predict the correct landfall of the storm that caused widespread damage and loss of life to the US east coast.



## Without polar satellites, forecast for Superstorm Sandy would have suffered European analysis finds

washingtonpost



**TidewaterCurrent** 11.21.12 - "later this decade, a gap in these polar-orbiting satellites is foreseen" Without pertinent data provided by these satellites, accurate forecasting will likely be affected.

November 23, 2012



## Should the Former OPEC President Really Head a UN Climate Summit?

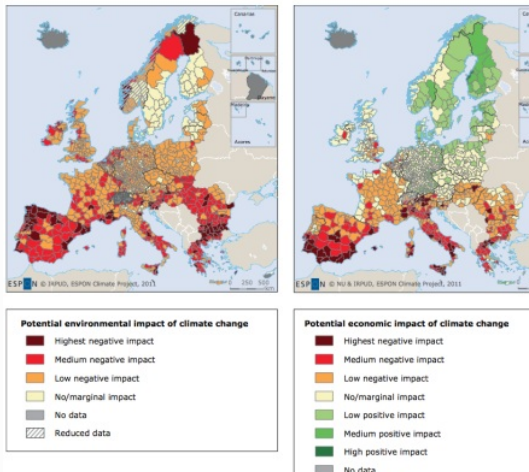
treehugger



**TidewaterCurrent** 11.16.12 - UN climate talks begin the 26th of this month in Qatar.

November 19, 2012

Map 5.4 Potential environmental and economic impact of climate change



## The 16 scariest maps from the E.U.'s massive new climate change report

grist



**TidewaterCurrent** 11.21.12 - Brief, yet informative and insightful analysis of the European Environment Agency's just released 300 page report on climate change effects. Includes link to the full report.  
November 23, 2012



## Futurity.org – Water may dwindle as snowpack depletes

futurity



**TidewaterCurrent** Stanford research published in the journal Nature Climate Change finds that the western US has experienced extremely low snow years which in the long term effects water availability for agriculture and even hydroelectric production.  
November 20, 2012



## How Dutch innovations could prevent Sandy-type flooding in New York

nydailynews



**TidewaterCurrent** Barriers and Floating homes - Dutch ideas for dealing the sea level rise in NYC - - See more in Sustainable Design - Green Building and in particular this snip: <http://snip.it/snips/361783>  
November 20, 2012





## Creating Better Climate Policy: Linking Carbon Taxes to Investments in Clean Energy - Forbes

forbes



**TidewaterCurrent** 11.16.12 -  
According to a report by the Brookings  
Institution, price based forced  
reductions in carbon emissions are  
not enough, investments need to be  
made in clean energy and they  
propose that carbon taxes be used for  
that purpose.  
November 17, 2012



## Sandy's damage to wildlife refuges adds to questions about federal spending

washingtonpost



**TidewaterCurrent** Wildlife refuges  
from the Outer Banks to Maine,  
including Chincoteague suffered  
tremendous damage from Sandy and  
continue to be on the front line of  
damage caused by sea level rise. The  
repair costs tremendous and  
"according to a report being released  
Monday by the Cooperative Alliance for  
Refuge Enhancement (CARE), a  
coalition of groups from the National  
Rifle Association to Defenders of  
Wildlife plans to cut the Interior  
Department's budget for refuges by  
10 percent."  
November 20, 2012



## Netherlands Sets Model of Flood Prevention

nytimes



**TidewaterCurrent** 11.14.12 - "Dutch thinking had shifted and now puts a priority on methods "to enlarge defenses in a natural way." The state is investing in a plan called Room for Rivers, which aims to ease flooding by giving waterways space to move and even overflow. Last year, the country spent around \$100 million to dump 706 million cubic feet of sand off the coast north of Rotterdam to promote the formation of protective sandbars." Also highlighted is : The Dutch "way of thinking is completely different from the U.S.," where disaster relief generally takes precedence over disaster avoidance, said Wim Kuijken, the Dutch government's senior official for overall water control policy. "The U.S. is excellent at disaster management," but "working to avoid disaster is completely different from working after a disaster."

November 15, 2012



## The Rising Tide: Research and Planning - Tidewater Current | Fall 2012

tidewatercurrent



**TidewaterCurrent** 9.23.12 - Analysis indicates that sea level rise is accelerating in the mid-Atlantic. November 14, 2012



## With 'fiscal cliff' looming, carbon tax getting closer look

washingtonpost

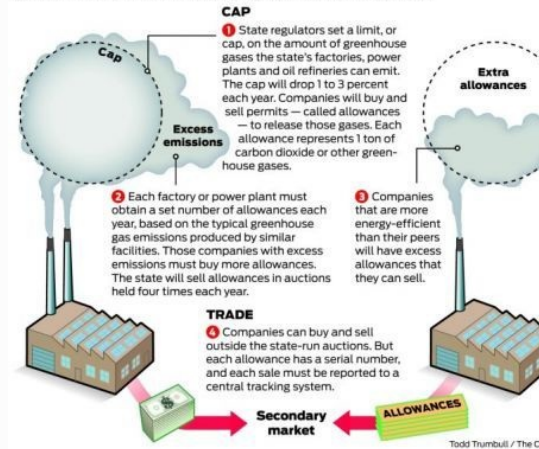


**TidewaterCurrent** 11.9.12 - "A relatively moderate-sized carbon tax could raise \$1.25 trillion over the next decade, a huge chunk of the money needed to bring the federal budget deficit under control" November 13, 2012



### Inside California's cap-and-trade system

Cap-and-trade systems use market forces to cut pollution. On Wednesday, California will launch America's first large-scale cap-and-trade market to control the greenhouse gases that cause global warming. If it works, it could one day become a model for the rest of the nation.



### Cap and trade - how it works

sfgate



**TidewaterCurrent** A national program could be modeled after California's system.

November 15, 2012



### Poles apart: satellites reveal why Antarctic sea ice grows as Arctic melts

guardian.co.uk



**TidewaterCurrent** 11.11.12 - "The mystery of the expansion of sea ice around Antarctica, at the same time as global warming is melting swaths of Arctic sea ice, has been solved using data from US military satellites. Two decades of measurements show that changing wind patterns around Antarctica have caused a small increase in sea ice, the result of cold winds off the continent blowing ice away from the coastline."

November 12, 2012



## Rising Sea Level May Trigger Groundwater Floods | Climate Central

climatecentral



**TidewaterCurrent** 11.11.12 - "In a report released Sunday in Nature Climate Change, Kolja Rotzoll and Charles Fletcher predict that in some areas, freshwater bubbling up from underground could more than double the flooding caused by intruding seas alone. "If the underground water table is already close to the surface, it's going to come out," Rotzoll said."

November 14, 2012



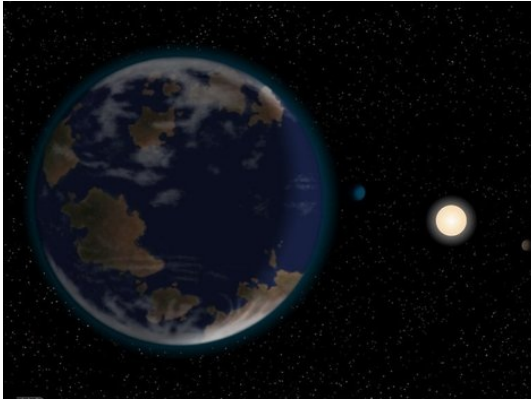
## Students Press the Case for Oysters as New York's Surge Protector

dotearth.blogs.nytimes



**TidewaterCurrent** 11.12.12 - From the students at New York Harbor School: "Oyster reefs act as wave attenuators and benthic stabilizers. We grow our oysters in our hatchery and then move them when they are big enough to our nurseries under our Ecodock on Governors Island and in the Brooklyn Navy Yard. Once the oysters are big enough we put them on reefs in the harbor to test if they can sustain life and biodiversity. For thousands of years oysters protected coastal regions from strong waves and storms. If we bring oysters back to New York Harbor we restore the life that was once here and make our city more resilient to rising water levels and warming oceans." Video included.

November 12, 2012



## New-Found Planet Could Have A Climate Just Like Earth

businessinsider



**TidewaterCurrent** 11.9.12 - "the exoplanet receives enough energy from its star that its climate and atmosphere could be similar to Earth."

November 9, 2012



## Analysis of 2011 quake suggests seismic risk in the eastern United States may be higher than previously thought.

nature



**TidewaterCurrent** 11.7.12 - "Centered roughly 130 kilometres south-southwest of the US capital, near the town of Mineral, Virginia, the 23 August 2011 quake was the strongest to strike the eastern United States since 1897" ... "Not only was it felt by more Americans than any previous tremor, it triggered landslides over a wider area than any other recorded quake anywhere in the world,"

November 8, 2012



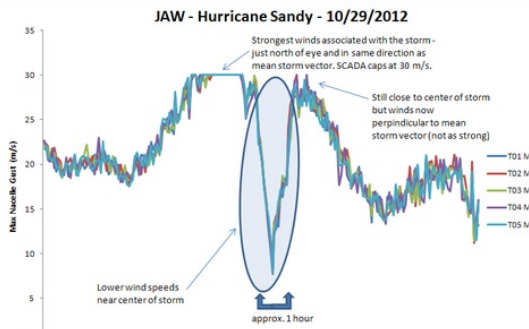
## Protection From The Sea Is Possible, But Expensive : NPR

npr



**TidewaterCurrent** 11.7.12 - "Tide gauges show the relative water level around Norfolk is more than 14 inches higher than it was in 1930. And the rate of sea level rise is increasing, especially between North Carolina and Boston." Elevating streets has helped flooding but is expensive. Some homes have also been elevated. And the City of Norfolk is investigating a flood wall.

November 8, 2012



## Sandy is Gone, Wind Power is On - CleanEnergy Footprints

[blog.cleanenergy](http://blog.cleanenergy)



**TidewaterCurrent** "Thus far, it appears that no wind turbines suffered catastrophic failure because of Sandy. ...The Atlantic City Utility Authority's five-turbine wind farm, the JerseyAtlantic Wind project (JAW), also survived Sandy. Those turbines are just two miles from the beach – and a lot of the casino hotels actually get tourists requesting turbine-view rooms. Those touristy turbines also drew Sandy's eye – literally. Here's a graphic of wind speeds from the JAW wind turbines – notice that huge 1 hour drop? Yeah, that's Sandy's eye passing right over the city. "

November 8, 2012



## Climate Change Faster Than Predicted: Scientific American

[scientificamerican](http://scientificamerican)



**TidewaterCurrent** 11.9.12 - NCAR research published in Science magazine suggests that CO2 levels may have more impact on climate than previously thought. "Temperatures are likely to go up to the high side of current projections, as is [atmospheric] water vapor,...To the extent those environmental impacts influence events like [Superstorm] Sandy, expect the impacts to be on the high side."

November 10, 2012





Carlos Ayala

## North Carolina Sea Level Rise Accelerating, Researchers Report

huffingtonpost



**TidewaterCurrent** 11.8.12 - Charlotte, NC - At Geological Society of America's Annual Meeting this week, accelerated rates of sea level rise in NC and the entire mid Atlantic were discussed. ODU researcher Tal Ezer and Larry Atkinson are quoted. Noted: "An internal study by the Hunting Ingalls shipyard in Newport News, Va., the sole builder of nuclear-powered aircraft carriers, found that squalls capable of bringing threatening storm surges near its facility have become more common. These storms once occurred every 80 years; now they are likely to happen every two years, Atkinson said." November 9, 2012



## Coastal cities seek protections against superstorms

washingtonpost



**TidewaterCurrent** 11.4.12 - From dikes to wetland buffer areas, coastal cities across the country are exploring ideas to mitigate storm damage fueled by sea level rise. November 7, 2012



## Caribbean sardine collapse linked to climate change

guardian.co.uk



**TidewaterCurrent** 11.7.12 - Changes in regional wind and seawater circulation patterns are responsible for reduced plankton levels in the Caribbean, which in part contributed to the collapse of the sardine fishery. November 7, 2012



## Cuba's Two Wind Farms Survive Hurricane Sandy - Forbes

forbes



**TidewaterCurrent** 11.6.12 - "Both of those wind farms were hit by hurricane Sandy with wind speeds of up to 110 miles per hour and neither of them had any major damage and continued to provide electricity for the local grid."

November 7, 2012



## Protecting New York City, Before Next Time

nytimes



**TidewaterCurrent** 11.3.12 - Using nature to combat rising sea levels are among ideas proposed to protect resources. The author notes that "less intrusive forms of so-called soft infrastructure might prove more effective in sheltering the city than mammoth Venetian sea walls." Engineered green spaces and wetlands, oyster reefs and porous pavement are discussed.

November 4, 2012



## NOAA Overflight Captures a Changed East Coast: Scientific American

scientificamerican



**TidewaterCurrent** NOAA before and after images of areas hardest hit by Sandy.

November 6, 2012



## Robot Wave Glider Survives Hurricane Sandy at Sea

technewsdaily



**TidewaterCurrent** 11.1.12 - 100 miles off the coast of NJ, the wave powered ocean surveying drone, weathered the hurricane just fine.

November 3, 2012



## Stop Looking For Oil: Writer-Activist Challenges Geologists

ouramazingplanet



**TidewaterCurrent** At the annual meeting of the Geological Society of America this week in Charlotte, which is sponsored by the likes of Exxon, Chevron and Subaru, activist Bill McKibben recommended that geologists take on global warming rather than focusing on locating more fossil fuel deposits. He spoke about his organization's efforts to replace fossil fuels with renewable energy and in the end received a standing ovation.

November 6, 2012



## The 20 Cities That Are Most Exposed To Rising Sea Levels

businessinsider



**TidewaterCurrent** 10.31.12 - Virginia Beach makes the list at #19, New Orleans #10, New York #3 and Miami #1.

November 1, 2012



## Virginia's Wayne Powell: An Environmental Profile in Courage

huffingtonpost



**TidewaterCurrent** Powell is running against Cantor for the 7th district seat in Congress. Rather than drilling for oil off of Virginia's coasts, he wants to see wind farms. In this interview, the retired Army colonel turned attorney's pro environmental stance is highlighted. If you vote in the 7th district, please read.

November 4, 2012



## A vote for a president to lead on climate change

guardian.co.uk



**TidewaterCurrent** 11.1.12 - Michael Bloomberg, Mayor NYC: "Our climate is changing. And while the increase in extreme weather we have experienced in New York City and around the world may or may not be the result of it, the risk that it might be - given this week's devastation - should compel all elected leaders to take immediate action.""

November 2, 2012

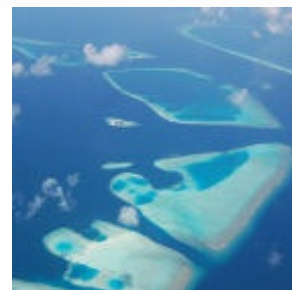


## Mayor Bloomberg and Governor Cuomo Admit to Relationship Between Sandy and Climate Change

inhabitat



**TidewaterCurrent** 10.31.12 - "On Tuesday, the two discussed the probability of preparing Manhattan and other areas not just for flooding, but for other climate change-related crises in the future. Solutions like levees, storm surge barriers and other expensive preventative measures were brought to the table, " October 31, 2012



## Climate change mitigation 'far cheaper than inaction' - SciDev.Net

scidev



**TidewaterCurrent** Link included to report released at UN General Assembly. October 29, 2012





## Could This Plug Have Prevented Subway Flooding? : Discovery News

news.discovery



**TidewaterCurrent** 11.2.12 - "The Department of Homeland Security (DHS) created the 32-by-16-foot inflatable plug prototype to thwart terrorist attacks in the underground tunnels. It inflates like a balloon, and if it were used in a flooding event, it would keep up to 35,000 gallons of water from getting in and over-taking the pumps."

November 2, 2012



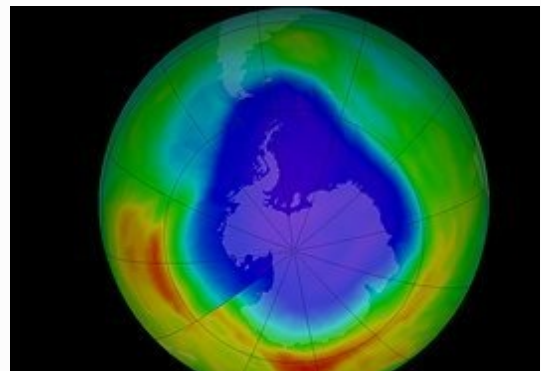
## WATCH: Julianne Moore's Climate Change PSA

ecorazzi



**TidewaterCurrent** "This is the first time since the 1980's that climate change was not mentioned during the presidential debates. Watch the video below and click here to tell President Obama and Mitt Romney that climate change can't wait. We need to fight it now."

October 29, 2012



## Satellite finds ozone hole still shrinking ↻ News in Science (ABC Science)

abc.net.au



**TidewaterCurrent** 10.25.12 - Second smallest hole observed in 2 decades. Scientist attribute a warmer winter/spring in the Antarctic (not necessarily the international ban on CFCs) for the small size.

October 25, 2012



## Rising Ocean Temps Threaten the Ocean Food Chain | Climate Central

climatecentral



**TidewaterCurrent** 10.25.12 - Michigan State research reported in Science Magazine indicates that phytoplankton, the foundation of the marine food chain, grow more slowly in warmer water.  
October 26, 2012



## Adapting the Built Environment for Sea Level Rise - Tidewater Current | Fall 2012

tidewatercurrent



**TidewaterCurrent** "Rather than retreating from inundation prone low elevations, the solution, in some situations, may be to look for ways to make accommodations to the built environment. Amphibious or floating architecture or aquatecture is one potential coping strategy."  
October 29, 2012



## Bay crater may extend into Isle of Wight County

hamptonroads



**TidewaterCurrent** 10.24.12 - "The impact crater lies under the Chesapeake Bay and Eastern Shore, as well as parts of Hampton Roads and the peninsulas. It was created some 35 million years ago by a meteor smashing into what was then a shallow sea."  
October 24, 2012



## Hurricane Sandy Spins Up Climate Discussion: Scientific American

scientificamerican



**TidewaterCurrent** 10.30.12 - Nature magazine looks at the science behind the storm and while, climate change cannot be necessarily blamed for this storm, forecasters expect stronger events related to warming seas. "Earlier this month, a team at the Beijing Normal University in China found that big storm surges have increased in frequency since 1923, and that large-scale events are roughly twice as likely in warmer years than in colder ones"

October 31, 2012



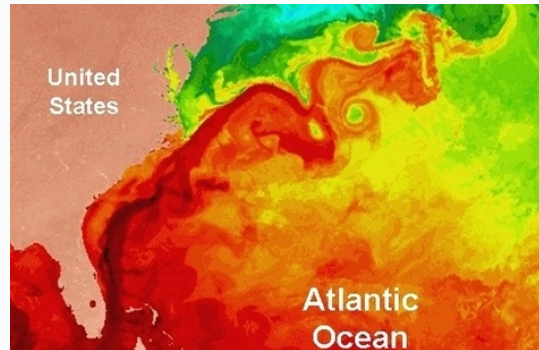
## Some of the world's most fascinating sci-fi islands

gulfnews



**TidewaterCurrent** 10.25.12 - Needing space to expand, Hong Kong and UAE have already created islands in the sea. With rising sea levels, there are literally going to be "climate refugees" and developing floating or stilted communities is one adaptation strategy.

October 25, 2012



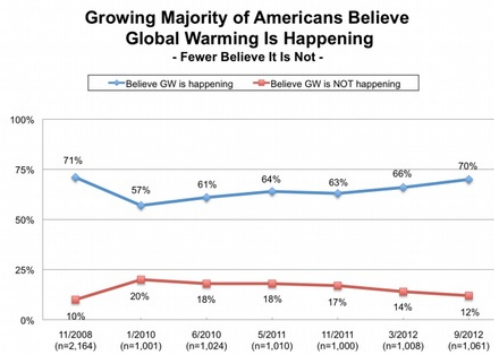
## Climate-changing methane 'rapidly destabilizing' off East Coast, study finds

usnews.nbcnews



**TidewaterCurrent** 10.24.12 - Southern Methodist University scientists warn that huge frozen oceanic deposits of the extremely potent greenhouse gas are likely to be released along the East Coast due a warming of ocean currents.

October 25, 2012



Do you think global warming is happening?  
Base: Americans 18+.

## New Poll: Americans Believe Global Warming is Real and Threatens Their Families

switchboard.nrdc



**TidewaterCurrent** 10.24.12 - "The Yale-George Mason analysis also said that for the first time since 2008, more than half of Americans (54%) believe global warming is caused mostly by human activities, up eight points just since March. Those who contend it is caused mostly by natural changes in the environment declined from 37percent to 30 percent – the lowest level since the survey began."  
October 25, 2012



## EU 'Will Over-Deliver' on Kyoto Emissions Targets, Agency Says

greatenergychallengeblog



**TidewaterCurrent** 10.24.12 - "The EU has committed to reducing emissions by 20 percent between 1990 and 2020. So far, it has achieved a drop of 16.5 percent and is on track to meet the full goal. " The US signed but never ratified the treaty.  
October 25, 2012





## Oyster Reefs Could Combat Warming - Coastal Review Online

nccoast



**TidewaterCurrent** "Reefs in messy, organic-rich matrix trend toward a carbon sink designation – even factoring in oysters' carbon dioxide resp...Additionally, the research findings show that salt marsh fringing reefs facilitate localized seaward expansion of the adjacent carbon blue salt marsh habitat"

October 25, 2012



## Climate of Doubt – FRONTLINE

pbs



**TidewaterCurrent** 10.23.12 - Documentary airing tonight on PBS Frontline looks at the organized effort to shift public opinion about climate change.  
October 23, 2012



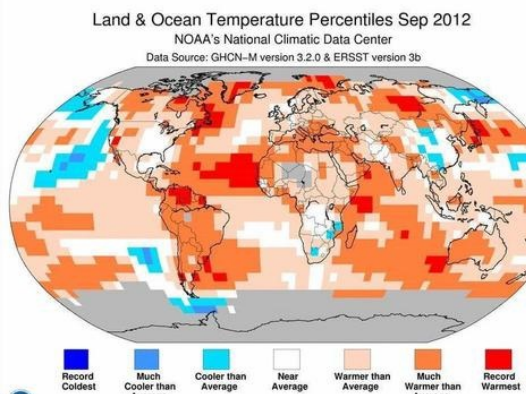
## Aquifer drain 'caused earthquake'

bbc.co.uk



**TidewaterCurrent** 10.22.12 - "The study highlights how human activity such as drainage or borehole drilling can have far-reaching seismic effects."  
October 22, 2012





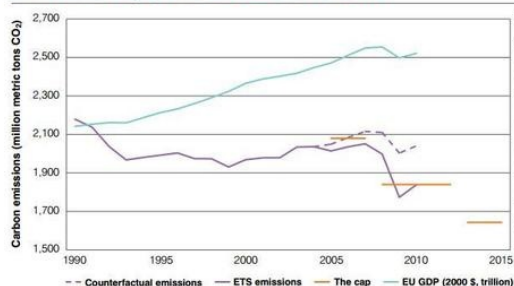
## NOAA: Around World, September Tied Record For Warmest Temperatures : NPR

npr



**TidewaterCurrent**  
October 20, 2012

FIGURE 1  
EU ETS sector emissions (million metric tons CO<sub>2</sub>), emissions caps, and EU GDP, 1990-2015



Note: Even assuming an emissions growth rate 1% less than the growth in GDP (represented by the dotted business-as-usual line), the data suggest that the ETS has succeeded in reducing emissions beyond what would be expected from the recession alone. ETS sector emissions declined a further 1.8% in 2011, according to recent estimates, while GDP increased approximately 1.4%. However, verified 2011 emissions data will not be available until mid-2013, and thus the graph does not depict the likely drop in 2011 emissions.

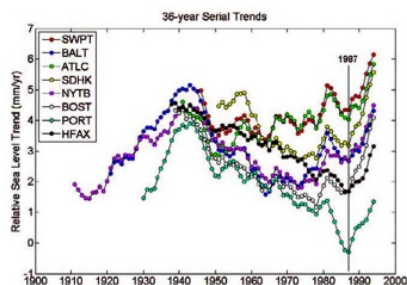
Source: GDP data: World Bank. EU emissions: A. Denny Ellerman, "The EU ETS Path to the Future or Dead-end?" presentation, Sept. 5, 2011, available at [www.denvyellerman.com/pubs/2011/09/05/abstracts/ellerman.pdf](http://www.denvyellerman.com/pubs/2011/09/05/abstracts/ellerman.pdf); European Environment Agency.

## What we can learn from Europe's cap-and-trade system

washingtonpost



**TidewaterCurrent** Just released study of Europe's cap and trade program to reduce greenhouse gas emissions indicates the program is successful. Emissions are down while GDP is up. CAIs launching a cap and trade program in 2013  
October 18, 2012



## Study confirms sea-level rise is accelerating along NE U.S. coast

vims.edu



**TidewaterCurrent** 10.15.12 - VIMS study published in the Journal of Coastal Research confirms USGS and ODU studies that find accelerating rates of sea-level rise along the US East Coast. See more here:  
<http://tidewatercurrent.com/fall2012/features.html>  
October 19, 2012

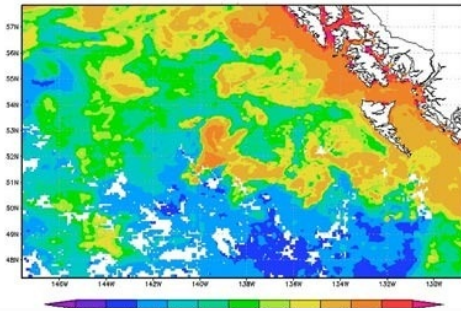


## Norway to double carbon tax on oil industry

guardian.co.uk



**TidewaterCurrent** 10.11.12 - "Norway is to double carbon tax on its North Sea oil industry and set up a £1bn fund to help combat the damaging impacts of climate change in the developing world."  
October 15, 2012



## World's biggest geoengineering experiment 'violates' UN rules

guardian.co.uk



**TidewaterCurrent** 10.15.12 - Very Scary - Californian Russ George dumped iron into the ocean for fertilization to spawn a plankton bloom and reduce CO2. "The dump took place from a fishing boat in an eddy 200 nautical miles west of the islands of Haida Gwaii, one of the world's most celebrated, diverse ecosystems, where George convinced the local council of an indigenous village to establish the Haida Salmon Restoration Corporation to channel more than \$1m of its own funds into the project." October 18, 2012



## California Governor Signs 19 Renewable Energy Bills Into Law

treehugger



**TidewaterCurrent** Climate and energy security policy has kept electricity consumption static in the and state encouraged renewable development. September 29, 2012



## New Way to Capture Carbon: More Forests

designbuildsource.com.au



**TidewaterCurrent** 9.26.12 - "Wood for Good spokesperson David Hopkins says increasing forest cover is cheaper, more efficient and more effective than any other method of carbon capture and storage, and that the role of forests in tackling climate change cannot be understated." October 1, 2012



## Sea Level Rising Toward Washington and Other Cities

abcnews.go



**TidewaterCurrent** 10.14.12 - Good overview of sea level rise science and adaptation strategies. Author notes that "...accommodating rising water by elevating or redesigning structures, enhancing wetlands, or adding sand from elsewhere to beaches (the latter is not a permanent solution, and can encourage development in vulnerable locations)" are potential coping strategies.

October 15, 2012



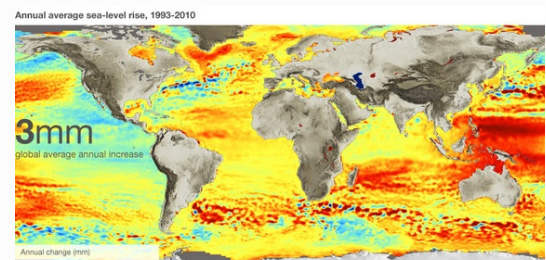
## Study shows small fish can play a big role in the coastal carbon cycle

vims.edu



**TidewaterCurrent** 10.9.12 - Researcher from Rutgers and the Virginia Institute of Marine Science find that productive forage fisheries serve as biological pumps moving carbon from the atmosphere and seawater to the ocean depths as fecal matter sinks.

October 11, 2012



## Satellites trace sea level change

bbc.co.uk



**TidewaterCurrent** 9.24.12 - Annual sea level rise 1993-2010

September 24, 2012





## Polls: Voters back clean energy, climate policies

usatoday



**TidewaterCurrent** 10.2.12 - "Romney, who as a presidential candidates has expressed doubts about the causes of climate change and has called for a broad expansion of fossil fuel drilling, mocked Obama's 2008 promise to slow the rise of the oceans and heal the planet."  
October 3, 2012



## Orrin Pilkey to discuss : Sea Level Rise, Eroding Beaches, and the Mathematical Models that Describe Them

tidewatercurrent



**TidewaterCurrent** Friday, September 28th 2012 - 3:30pm - 4:30pm VIMS - Watermen's Hall, Dominion Classroom, Andrews 3261375 Greate Road Gloucester Point, VA 23062  
September 26, 2012



## Adapting the Built Environment for Sea Level Rise - Tidewater Current | Fall 2012

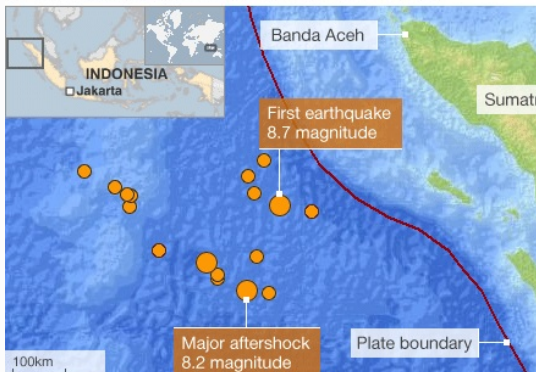
tidewatercurrent



**TidewaterCurrent** Amphibious and floating homes could become more widespread in the future.  
September 27, 2012



#### Earthquakes off Sumatran coast 11 April 2012



### Quakes point to seafloor break-up

bbc.co.uk



**TidewaterCurrent** 9.26.12 -

"Scientists give the assessment in this week's Nature journal. They say their analysis of the tremors - the biggest was a magnitude 8.7 - suggests major changes are taking place on the ocean floor that will eventually split the Indo-Australian plate in two."

September 28, 2012



### New Groups Make A Conservative Argument On Climate Change

wamu



**TidewaterCurrent** 9.26.12 -

Worthwhile read or listen -

Commentary on Republicans that support energy policies that address climate change. Bob Inglis, who lost his SC congressional seat notes that renewables are cheap by comparison if you consider their full costs. He proposes eliminating government incentives for renewable energy and no more subsidies for oil companies. And he would also impose a carbon tax on fossil fuels. He notes that we already pay hidden costs for our fossil fuel use, and claims that this "market distortion," leaves fossil fuel companies unaccountable.

September 28, 2012



### The Rising Tide: Research and Planning - Tidewater Current | Fall 2012

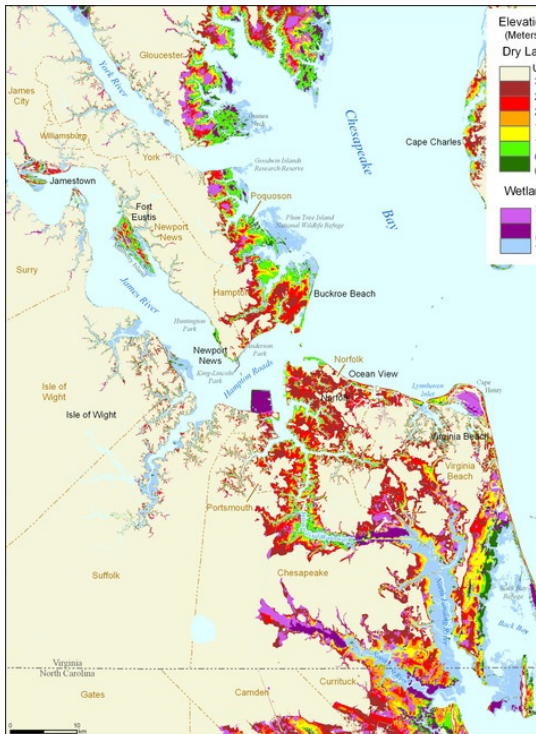
tidewatercurrent



**TidewaterCurrent** 9.23.12 - Analysis

indicates that sea level rise is accelerating in the mid-Atlantic.

September 24, 2012



## "Sea Level Rise and Inundation Workshop: What? So What? Now What." - Tidewater Current | Fall 2012

tidewatercurrent



**TidewaterCurrent** The half-day workshop will begin at 12:30 p.m. on Oct. 15. At the Ocean '12 Conference held at the Virginia Beach Convention Center  
September 26, 2012

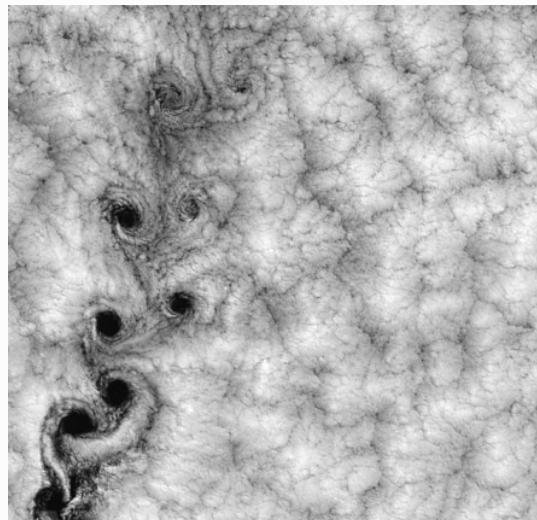


## On Va.'s 'wild' Eastern Shore, sea level rise has large impact

delmarvanow



**TidewaterCurrent**  
August 28, 2012



## These are probably the coolest-looking clouds you'll ever see

grist



**TidewaterCurrent**  
August 17, 2012



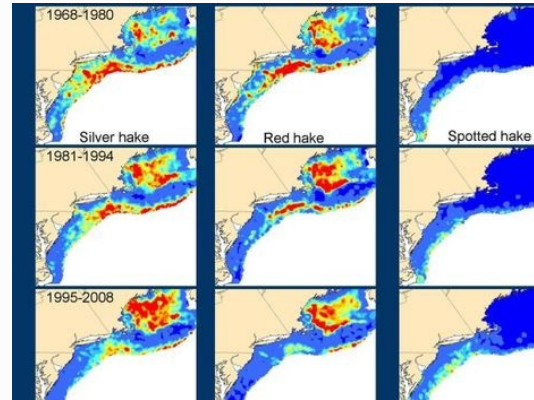
## Destroyed coastal habitats produce significant greenhouse gas

phys



**TidewaterCurrent** "Destruction of coastal habitats may release as much as 1 billion tons of carbon emissions into the atmosphere each year, 10 times higher than previously reported, according to a new Duke led study."

September 16, 2012



## Hottest Ever Water Temperatures Off East Coast All the Way Down to the Bottom of the Ocean

motherjones



**TidewaterCurrent** 9.18.12 - Temps in the Chesapeake Bay were 11 and 9 degrees above historical averages, respectively at the sea surface and the bay bottom. As a result of the warming, fish stock distribution are shifting.

September 19, 2012



## Researchers Suggest Stratosphere Affects Deep Seas - ENN: Environmental News Network

enn



**TidewaterCurrent** 9.23.12 - New research indicates changes in the polar vortex are connected to changes in deep sea circulation and climate.

September 24, 2012



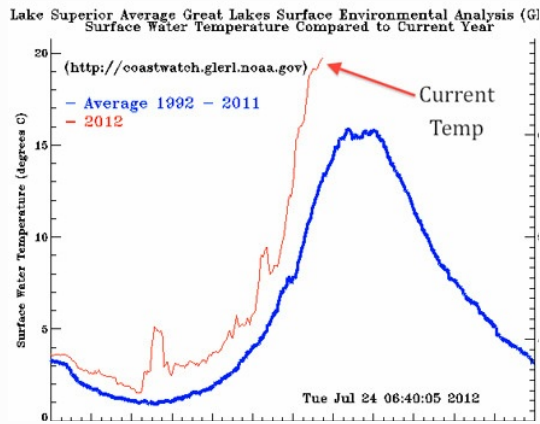
## Baffling Carolina bays no longer thriving in Virginia

www2.godanriver



**TidewaterCurrent**

July 31, 2012



**Lake Superior is so hot right now!**

grist



**TidewaterCurrent**  
July 25, 2012

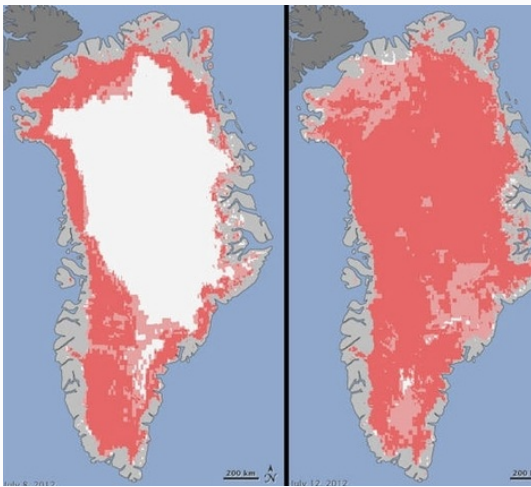


**Strong Storms Threaten Ozone Layer Over U.S., Study Says**

nytimes



**TidewaterCurrent 7.26.12** - Storms inject water vapor into the ozone layer which set off chemical reactions that destroy O<sub>3</sub>.  
July 29, 2012



**Satellites See Unprecedented Greenland Ice Sheet Surface Melt - NASA Science**

[science.nasa.gov](http://science.nasa.gov)



**TidewaterCurrent**  
July 29, 2012





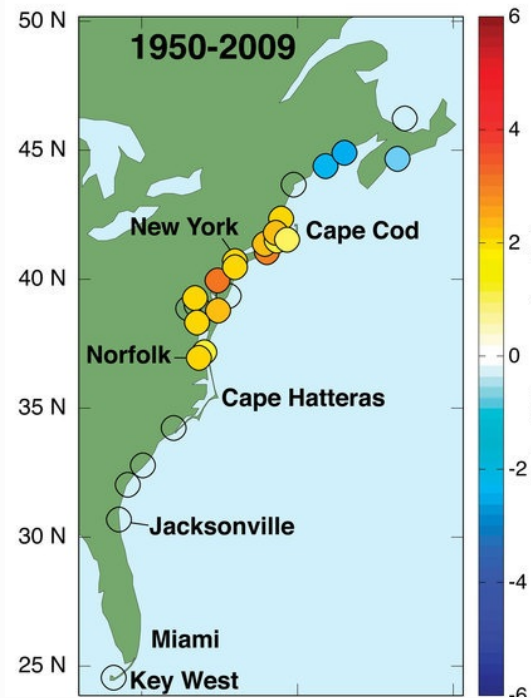
## China buries 40,000 tons of carbon emissions underground

ecoseed



**TidewaterCurrent** 8.10.12 -

Demonstration carbon capture and storage project in underground saline aquifers is touted by the World Resources Institute as an option, if safely deployed, to reduce greenhouse gases and climate change and that it could be used as a bridge to a sustainable future.  
August 10, 2012



## Study finds sea level rise accelerating along Atlantic coast

baltimoresun

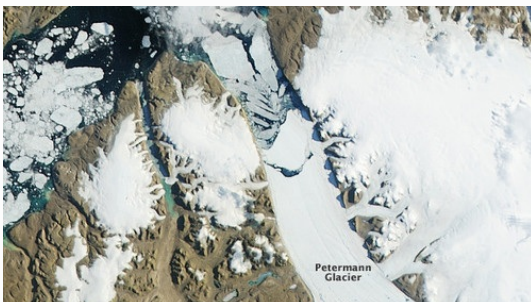


**TidewaterCurrent** 6.25.12 - The

largest rates in sea level rise in the study were found in Norfolk, VA where sea level has been rising 6 millimeters per year.

<http://www.baltimoresun.com/features/green/blog/bal-bmg-study-finds-sea-level-rising-faster-along-atlantic-coast-20120625,0,3214285.story>

July 29, 2012



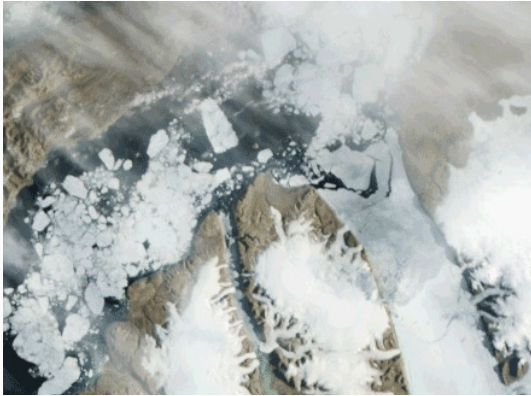
## Massive ice island breaks off Greenland glacier

news.blogs.cnn



**TidewaterCurrent**

July 18, 2012



## NASA: 'Unprecedented,' 'extraordinary' ice melt in Greenland

grist



**TidewaterCurrent** 7.24.12  
July 24, 2012



## Landsat at 40: Longest Continuous View of Earth From Space

ens-newswire



**TidewaterCurrent**  
July 24, 2012



## Tropical butterfly discovered in Quebec a sign of warming

news.yahoo



**TidewaterCurrent** 7.16.12 - Giant  
Swallowtail caterpillars indicate they  
are breeding in Canada, far north of  
their traditional breeding areas of  
South and Central America.  
July 18, 2012

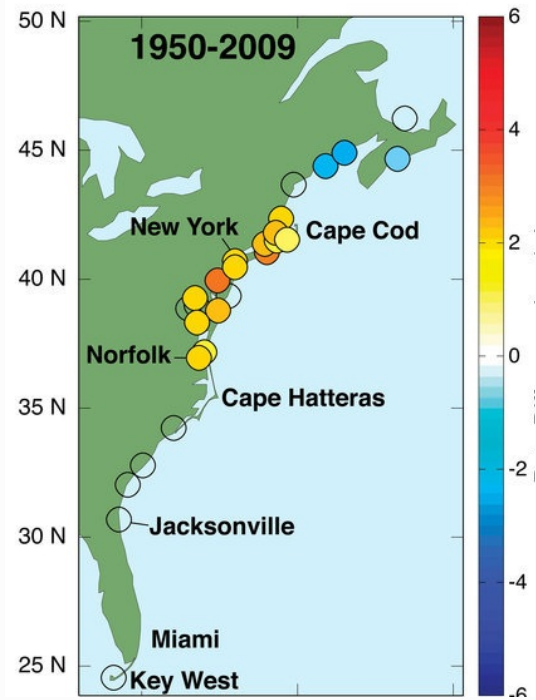


## Texas judge rules that the atmosphere is protected under the public trust doctrine

grist



**TidewaterCurrent** 7.10.12 - In a monumental decision, the Public Trust Doctrine is upheld in a petition seeking action on climate change filed by Our Children's Trust. The judge found that the atmosphere, like water resources, should be protected under the doctrine. The author notes that the decision is likely to be challenged.  
July 11, 2012



## Study finds sea level rise accelerating along Atlantic coast

baltimoresun



**TidewaterCurrent** 6.25.12 - The largest rates in sea level rise in the study were found in Norfolk, VA where sea level has been rising 6 millimeters per year.  
<http://www.baltimoresun.com/features/green/blog/bal-bmg-study-finds-sea-level-rising-faster-along-atlantic-coast-20120625,0,3214285.story>  
July 3, 2012

## March-May 2012 Statewide Ranks

National Climatic Data Center/NESDIS/NOAA

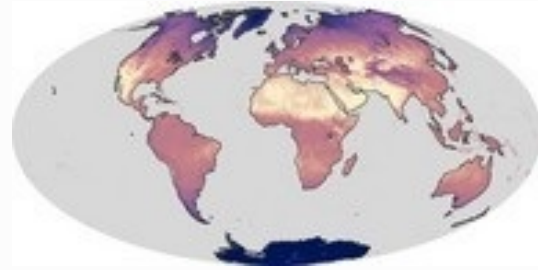


## U.S. experienced second warmest May, warmest spring on record, NOAA reports

sciencedaily



**TidewaterCurrent** The facts just keep coming. Will we prepare?  
June 8, 2012



## Los Angeles Joins Fight Against Climate Change

huffingtonpost



**TidewaterCurrent** 7.2.12 - 12 million people represented by two dozen municipalities including Boone, NC and Los Angeles have approved resolutions calling for action on global warming. While her in Virginia, our Attorney General, Ken Cuccinelli, challenged EPA's authority to act regarding GHG emissions under the Clean Air Act. Fortunately, the Court just upheld EPA's authority to act.  
July 3, 2012



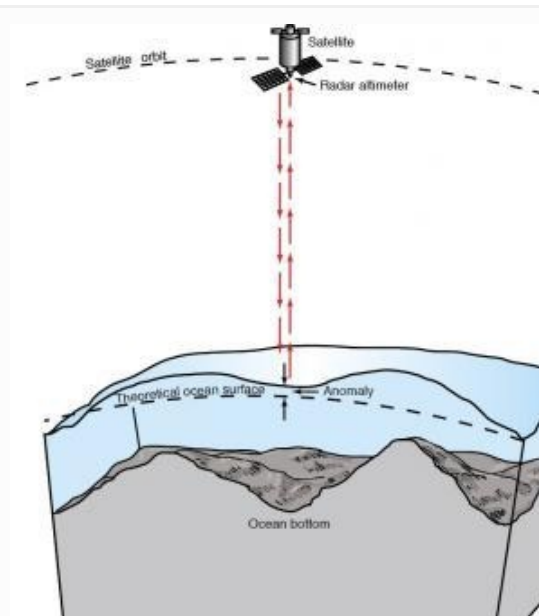
## Virginia Institute of Marine Science - Smith helps announce NASA discovery of unprecedented blooms of ocean life

vims.edu



**TidewaterCurrent** 6.7.12 - Scientists say it is "as dramatic and unexpected as finding a rainforest in the middle of a desert."  
[http://www.vims.edu/newsandevents/topstories/icescape\\_nasa\\_smith.php](http://www.vims.edu/newsandevents/topstories/icescape_nasa_smith.php)  
June 11, 2012





## Satellite maps ocean floor

upi



**TidewaterCurrent** CrySat launched to measure sea ice thickness is also producing data for mapping the seafloor. With more information on the solar system, the European satellite data will vastly improve our seafloor knowledge base.

June 8, 2012



## North Carolina to Enshrine Climate Denial Into Law

treehugger



**TidewaterCurrent** 6.13.12 - In North Carolina, state planners will only be able to use climate forecasts based on the historic record of warming, not models based on future predictions accepted by the science community at large. A humorous video link to the Colbert Report on the topic is included.

<http://www.treehugger.com/environmental-policy/north-carolina-enshrine-climate-denial-law.html>

June 14, 2012



## Unprecedented blooms of plant life discovered beneath Arctic ice

zeenews.india



**TidewaterCurrent**

June 8, 2012



## Virginia's dying marshes and climate change denial

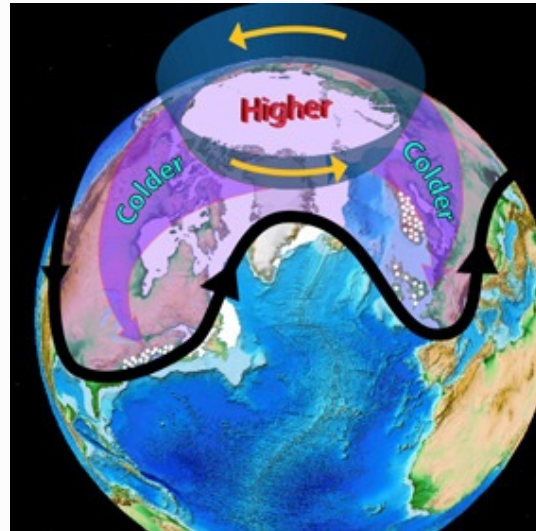
bbc.co.uk



**TidewaterCurrent** 6.5.12 - Very interesting read on the impact of rising sea level in Virginia from BBC news. A bipartisan effort is being made by the Lower House of Delegates to fund a comprehensive study on the economic impact of flooding, something that can be addressed by politicians as there is little political will to address global warming.

<http://www.bbc.co.uk/news/magazine-17915958>

June 14, 2012



## Arctic ice melt sets stage for cold weather

phys



**TidewaterCurrent** 6.6.12 - Very interesting piece highlighting the dynamics of global weather phenomena. While those of us on the East Coast enjoyed a very mild winter, Alaska and Europe suffered from extreme cold. A Cornell scientist explains that this was likely caused by the Negative Arctic Oscillation, which will occur more often as Arctic ice melts and Arctic waters warm weakening the polar vortex so colder air streams into lower latitudes. Meanwhile the La Nina in the Pacific influenced the East Coast mild conditions. <http://phys.org/news/2012-06-arctic-ice-stage-cold-weather.html>

June 6, 2012