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## Geoscience Bulletin Board – 3 December 2018 – compiled by Elaine J. Hanford

Interpreting an apparent weakening of the Atlantic Meridional Overturning Circulation

- <a href="http://www.spacedaily.com/reports/Ocean\_circulation\_in\_North\_Atlantic\_at\_its\_weakest\_999">http://www.spacedaily.com/reports/Ocean\_circulation\_in\_North\_Atlantic\_at\_its\_weakest\_999</a>
  <a href="http://www.spacedaily.com/reports/Ocean\_circulation\_in\_North\_Atlantic\_at\_its\_weakest\_999">http://www.spacedaily.com/reports/Ocean\_circulation\_in\_North\_Atlantic\_at\_its\_weakest\_999</a>
  <a href="http://www.spacedaily.com/reports/Ocean\_circulation\_in\_North\_Atlantic\_at\_its\_weakest\_999">http://www.spacedaily.com/reports/Ocean\_circulation\_in\_North\_Atlantic\_at\_its\_weakest\_999</a>
  <a href="http://www.spacedaily.com/reports/Ocean\_circulation\_in\_North\_Atlantic\_at\_its\_weakest\_999">http://www.spacedaily.com/reports/Ocean\_circulation\_in\_North\_Atlantic\_at\_its\_weakest\_999</a>
- https://www.forbes.com/sites/trevornace/2018/11/27/global-ocean-circulation-keeps-slowingdown-heres-what-it-means/#59ed2a916720

Atlantic Ocean slowly became a part of global oceanic circulation

• <a href="http://www.spacedaily.com/reports/How\_the\_Atlantic\_Ocean\_became\_part\_of\_the\_global\_ci-rculation">http://www.spacedaily.com/reports/How\_the\_Atlantic\_Ocean\_became\_part\_of\_the\_global\_ci-rculation</a> a climatic tipping point 999.html

Sunset Crater and the San Francisco volcanic field were active about 1,000 years ago

• http://www.spacedaily.com/reports/Sunset crater San Francisco volcanic field 999.html

Caldera cycles in the Phlegraean Fields near Naples, Italy

http://www.terradaily.com/reports/The final stage before a big bang 999.html

Oxygen-producing photosynthesis could have occurred on Earth 3.5B years ago

• https://www.sciencedaily.com/releases/2018/11/181127131552.htm

Powerful volcanic eruption occurred on Deception Island 3,980 years ago – comparable to 1815 Tambora eruption

https://www.sciencedaily.com/releases/2018/11/181126105503.htm

Whatever happened to the Siberian unicorn?

https://www.technology.org/2018/11/27/climate-change-wiped-out-the-siberian-unicorn/

### North & South Island of New Zealand slowly getting closer together

• <a href="https://www.livescience.com/64175-earthquake-pushed-new-zealand-islands-closer.html">https://www.livescience.com/64175-earthquake-pushed-new-zealand-islands-closer.html</a>

#### What is the lifespan of impact craters on the surface of the Moon?

• <a href="https://sciencetrends.com/small-impact-craters-of-the-moon-how-long-is-their-life-on-the-lunar-surface/">https://sciencetrends.com/small-impact-craters-of-the-moon-how-long-is-their-life-on-the-lunar-surface/</a>

# New natural gas production fields in Gulf of Mexico could reverse declines in production

 https://www.technology.org/2018/11/27/new-projects-expected-to-reverse-gulf-of-mexiconatural-gas-production-declines/

# Lisowicia bojani – newly discovered Triassic mammal cousin weighed about 9 tons

• <a href="https://www.sciencemag.org/news/2018/11/giant-time-dinosaurs-ancient-mammal-cousin-looked-cross-between-rhino-and-turtle">https://www.sciencemag.org/news/2018/11/giant-time-dinosaurs-ancient-mammal-cousin-looked-cross-between-rhino-and-turtle</a>

### GEER Report on the 2018 landslide & floods of Kerala, India

http://www.geerassociation.org/administrator/components/com\_geer\_reports/geerfiles/GEER
 2018 August Kerala Flood Report V1.pdf

# 35<sup>th</sup> year of observations of the North Cascade Range

 https://blogs.agu.org/fromaglaciersperspective/2018/11/19/35th-annual-field-observations-ofnorth-cascade-glaciers/

# Leaning Tower of Pisa tilt has reduced by about 1.5 inches

 https://www.smithsonianmag.com/smart-news/leaning-tower-pisa-has-gotten-little-straighter-180970882/

### 15-carat HPHT synthetic diamond

 https://www.gia.edu/gems-gemology/summer-2018-labnotes-15-carat-hpht-syntheticdiamond

#### Massive ilmenite project enters final permitting stage in Greenland

- <a href="http://www.mining.com/bluejay-mining-enters-final-permitting-stages-massive-ilmenite-project-greenland/">http://www.mining.com/bluejay-mining-enters-final-permitting-stages-massive-ilmenite-project-greenland/</a>
- https://www.titanium.gl/announcements/dundas-permitting-update/
- Ilmenite: <a href="https://geology.com/minerals/ilmenite.shtml">https://geology.com/minerals/ilmenite.shtml</a>

## Data from 50-year old seismometers on the Moon providing data for new insights

 https://spectrum.ieee.org/tech-talk/aerospace/space-flight/old-lunar-data-gets-new-life-withhelp-from-seismologists

# Ground collapse confirmed following 2017 North Korea nuclear test

https://www.upi.com/Top News/World-News/2018/11/28/5641543395598/?sl=1

How geology made America great as a result of continental collision

https://www.forbes.com/sites/davidbressan/2018/11/28/how-geology-made-america-great/#5cb843cb5b74

Characterizing & tracing the history of a new African meteorite from Madagascar

https://www.sciencedaily.com/releases/2018/11/181127111028.htm

Perspective of one geologist on the origins of Half Dome in Yosemite

- http://discovermagazine.com/2018/dec/eyewitness-to-geology
- Paper: https://www.nature.com/articles/s41467-017-02728-1

New algorithm identifies & tracks explosive volcanic ash plumes

• <a href="https://www.sciencenews.org/article/algorithm-volcanic-ash-clouds-airplanes">https://www.sciencenews.org/article/algorithm-volcanic-ash-clouds-airplanes</a>

Newest Mars mission may transform the science of Interplanetary Geology

https://www.theatlantic.com/science/archive/2018/11/insight-lander-mars-nasa/576622/

Construction has added significant weight to London, England

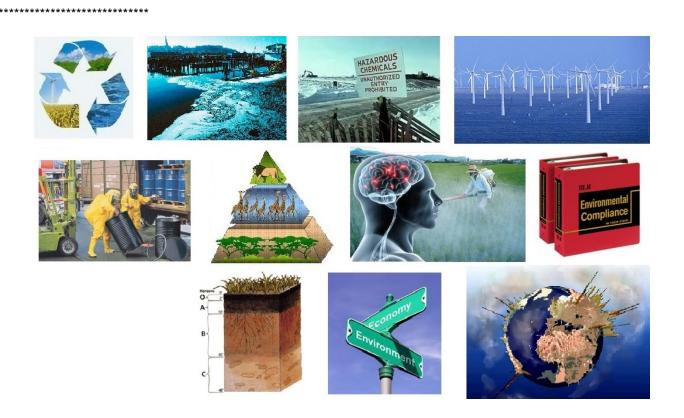
• <a href="https://www.forbes.com/sites/lauriewinkless/2018/11/27/london-has-been-putting-on-weight-thanks-to-construction/#65c6911228a3">https://www.forbes.com/sites/lauriewinkless/2018/11/27/london-has-been-putting-on-weight-thanks-to-construction/#65c6911228a3</a>

Groundbreaking set for new geothermal energy project in Saskatchewan, Canada

<a href="http://www.hydrogenfuelnews.com/canadian-geothermal-power-project-to-break-ground-in-saskatchewan/8536446/">http://www.hydrogenfuelnews.com/canadian-geothermal-power-project-to-break-ground-in-saskatchewan/8536446/</a>

Lee cloud captured in image of volcano Arsia Mons on Mars – 950 miles in length

https://www.space.com/42535-mysterious-cloud-over-mars-volcano.html



# Environmental Science Bulletin Board – 3 December 2018 – compiled by Elaine J. Hanford

"Camp Fire" is now fully contained thanks to rains & snow on Thanksgiving – but work remains

- https://www.apnews.com/66e6718c51d947cdbd9b7ccfb283fdf7
- <a href="https://www.npr.org/2018/11/27/671074763/88-dead-203-still-unaccounted-for-after-camp-fire-contained">https://www.npr.org/2018/11/27/671074763/88-dead-203-still-unaccounted-for-after-camp-fire-contained</a>

### 68 high-rises in San Francisco have potential flaws prone to crack in an EQ

- <a href="https://www.sfchronicle.com/science/article/68-SF-high-rises-crack-earthquake-which-ones-safe-13418917.php">https://www.sfchronicle.com/science/article/68-SF-high-rises-crack-earthquake-which-ones-safe-13418917.php</a>
- <a href="https://www.sfchronicle.com/bayarea/article/New-report-finds-overlooked-earthquake-13279765.php">https://www.sfchronicle.com/bayarea/article/New-report-finds-overlooked-earthquake-13279765.php</a>

An early Christmas present for global warming alarmists: Fourth National Climate Assessment – Volume II: Impacts, Risks & Adaptation in the US – 3 degrees warming by 2100?

- <a href="https://www.theatlantic.com/science/archive/2018/11/most-chilling-parts-2018-climate-assessment/576598/">https://www.theatlantic.com/science/archive/2018/11/most-chilling-parts-2018-climate-assessment/576598/</a>
- <a href="https://www.forbes.com/sites/marshallshepherd/2018/11/26/what-is-the-national-climate-assessment-and-where-did-it-come-from/#78ac10c93666">https://www.forbes.com/sites/marshallshepherd/2018/11/26/what-is-the-national-climate-assessment-and-where-did-it-come-from/#78ac10c93666</a>
- https://www.huffingtonpost.com/entry/trump-climateassessment us 5bf5b31fe4b0771fb6b57ccb
- Report: https://nca2018.globalchange.gov/
- http://www.terradaily.com/reports/Greenhouse\_gas\_levels\_in\_atmosphere\_hit\_new\_high\_U N\_999.html
- https://phys.org/news/2018-11-carbon-atmosphere-climate-catastrophe.html

## China issued new rules to tighten notification for cases of African Swine Fever

https://www.euronews.com/2018/11/21/china-cracks-down-on-african-swine-fever-reporting

#### Perspective: Key element of wind energy – useful lifespan of turbine is only 20 years

- <a href="https://www.powerlineblog.com/archives/2018/11/exposed-a-key-element-of-the-wind-energy-fraud.php">https://www.powerlineblog.com/archives/2018/11/exposed-a-key-element-of-the-wind-energy-fraud.php</a>
- <a href="https://arstechnica.com/science/2018/11/repowering-the-uks-oldest-wind-farms-could-boost-energy-generation-by-171/">https://arstechnica.com/science/2018/11/repowering-the-uks-oldest-wind-farms-could-boost-energy-generation-by-171/</a>

# Perspective: Should California allow more wind energy?

- https://www.sanluisobispo.com/opinion/editorials/article221979270.html
- https://www.nature.com/articles/d41586-018-07528-1

#### Goals of "Global Burden of Disease" are not being met

- https://www.npr.org/sections/goatsandsoda/2018/11/27/668233128/were-living-longer-but-a-medical-journal-sees-many-causes-for-alarm
- Paper: https://www.thelancet.com/pdfs/journals/lancet/PIIS0140-6736(18)32279-7.pdf

### Treatment trials launched amidst outbreak of Ebola in Democratic Republic of the Congo

• <a href="https://www.npr.org/2018/11/27/670913385/ebola-treatment-trials-launched-in-democratic-republic-of-the-congo-amid-outbrea">https://www.npr.org/2018/11/27/670913385/ebola-treatment-trials-launched-in-democratic-republic-of-the-congo-amid-outbrea</a>

NAFTA created an impending crisis in Mexico - illusory sustainability & water demands

• <a href="https://sese.asu.edu/about/news/article/3652">https://sese.asu.edu/about/news/article/3652</a>

Assessing the basis for identifying chemicals as toxic to the environment

• <a href="https://www.treehugger.com/clean-water/teflon-replacement-track-test-definition-hazardous-chemicals.html">https://www.treehugger.com/clean-water/teflon-replacement-track-test-definition-hazardous-chemicals.html</a>

You are what you eat: pesticide residues in the food supply

- https://www.ehn.org/when-safe-may-not-really-be-safe-2621578745.html
- https://www.fda.gov/NewsEvents/Newsroom/FDAInBrief/ucm622192.htm
- Report: <u>https://www.fda.gov/downloads/Food/FoodbornelllnessContaminants/Pesticides/UCM618373</u> <u>.pdf</u>

Antibiotic resistant bacteria in Puget Sound wildlife could also pose threat to humans

• <a href="https://www.kuow.org/stories/superbacteria-showing-up-in-puget-sound-wildlife-from-orcas-to-otters">https://www.kuow.org/stories/superbacteria-showing-up-in-puget-sound-wildlife-from-orcas-to-otters</a>

The role of soil in the global carbon cycle

• <a href="http://www.spacedaily.com/reports/Six\_feet\_under\_a\_new\_approach\_to\_global\_warming\_99">http://www.spacedaily.com/reports/Six\_feet\_under\_a\_new\_approach\_to\_global\_warming\_99</a>
9.html

Population of Monarch butterflies has declined 80% since 2005

• <a href="http://www.wlrn.org/post/monarch-butterfly-population-down-80-2005-researchers-say-there-s-still-hope">http://www.wlrn.org/post/monarch-butterfly-population-down-80-2005-researchers-say-there-s-still-hope</a>

When should US EPA issue certificate of completion for Hudson River PCB dredging project?

• <a href="https://www.dailyfreeman.com/news/local-news/too-soon-for-hudson-river-dredging-to-be-deemed-complete/article\_a54c1d5e-f18e-11e8-aeb5-3ba9877c0237.html">https://www.dailyfreeman.com/news/local-news/too-soon-for-hudson-river-dredging-to-be-deemed-complete/article\_a54c1d5e-f18e-11e8-aeb5-3ba9877c0237.html</a>

Pilot project releasing millions of genetically modified mosquitoes to eliminate diseases did not work

• <a href="https://edmontonjournal.com/news/world/millions-of-genetically-modified-mosquitoes-released-in-scheme-to-get-rid-of-diseases-like-malaria-it-didnt-work/wcm/7fb111e5-09f8-4154-8e4d-b6bc7db0d96c">https://edmontonjournal.com/news/world/millions-of-genetically-modified-mosquitoes-released-in-scheme-to-get-rid-of-diseases-like-malaria-it-didnt-work/wcm/7fb111e5-09f8-4154-8e4d-b6bc7db0d96c</a>

Book Review: "The Poison Squad" relates development of food safety laws

• <a href="https://arstechnica.com/science/2018/11/meet-the-father-of-the-fda-a-fearless-crusader-for-food-safety/">https://arstechnica.com/science/2018/11/meet-the-father-of-the-fda-a-fearless-crusader-for-food-safety/</a>

Persistence of pesticides threaten European soils & agriculture

https://www.sciencedaily.com/releases/2018/11/181126134257.htm

USDA to invest \$449M+ in innovative water management system in Sacramento Valley, California

• <a href="https://www.usda.gov/media/press-releases/2018/11/27/usda-invests-innovative-management-california-water-supply">https://www.usda.gov/media/press-releases/2018/11/27/usda-invests-innovative-management-california-water-supply</a>

Plans for mega-dams on Santa Cruz River in Argentina put environment at risk

• <a href="https://www.worldwildlife.org/stories/plans-for-mega-dams-put-argentina-s-santa-cruz-river-its-wildlife-local-livelihoods-and-perito-moreno-glacier-at-risk">https://www.worldwildlife.org/stories/plans-for-mega-dams-put-argentina-s-santa-cruz-river-its-wildlife-local-livelihoods-and-perito-moreno-glacier-at-risk</a>

Ancient dental plaque reveals how much human microbiome has changed

• <a href="https://arstechnica.com/science/2018/11/medieval-dental-plaque-sheds-light-on-how-our-microbiomes-have-changed/">https://arstechnica.com/science/2018/11/medieval-dental-plaque-sheds-light-on-how-our-microbiomes-have-changed/</a>

Is it possible to have "commons" with the "tragedy" – sharing resources under certain conditions

https://phys.org/news/2018-11-people-sustainably-resources-conditions.html

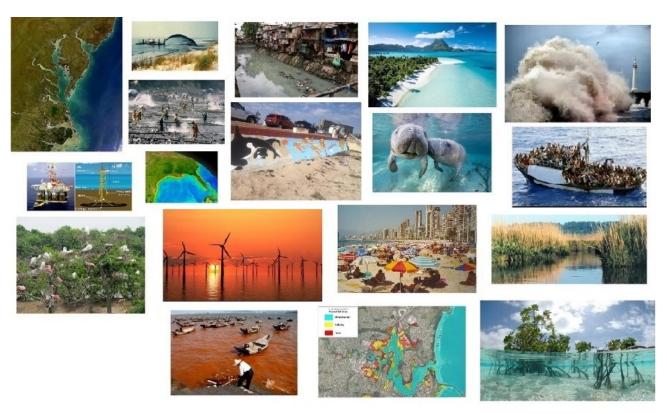
### Fertile soil is becoming a rarity

http://www.earthisland.org/journal/index.php/articles/entry/will-work-for-dirt

#### FSAP publishes Joint Strategic Plan

https://www.aphis.usda.gov/about\_aphis/downloads/aphis-strategic-plan.pdf

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Coastal Zone Management Bulletin Board – 3 December 2018 – compiled by Elaine J. Hanford

Women in small island states exposed to high levels of mercury from power plants & artisanal gold mining

- https://news.mongabay.com/2018/11/women-in-small-island-states-exposed-to-high-levelsof-mercury-study/
- Report: https://ipen.org/sites/default/files/documents/ipen-mercury-sids-v1 5-en-web.pdf

Nuclear waste graveyard in Kara Sea is now home to influx of snow crabs

• <a href="https://thebarentsobserver.com/en/ecology/2018/11/arctic-crab-invasion-comes-nuclear-waste-graveyard">https://thebarentsobserver.com/en/ecology/2018/11/arctic-crab-invasion-comes-nuclear-waste-graveyard</a>

Coastal zone management in the Virgin Islands – historic overview

• https://stjohnsource.com/2018/11/05/czm-no-easy-solution-to-protecting-coastal-waters/

Updated hydrographic information in Jamaica

• <a href="https://www.hellenicshippingnews.com/marine-interests-in-jamaica-set-to-benefit-from-updated-hydrographic-information/">https://www.hellenicshippingnews.com/marine-interests-in-jamaica-set-to-benefit-from-updated-hydrographic-information/</a>

Call for protecting a vanishing shoreline in Connecticut

<a href="https://www.ctpost.com/politics/article/Connecticut-s-vanishing-shoreline-One-storm-13424766.php">https://www.ctpost.com/politics/article/Connecticut-s-vanishing-shoreline-One-storm-13424766.php</a>

A new methodology for calculating biological productivity in coastal waters

<a href="https://eos.org/research-spotlights/tool-to-capture-marine-biological-activity-gets-coastal-upgrade">https://eos.org/research-spotlights/tool-to-capture-marine-biological-activity-gets-coastal-upgrade</a>

Virginia alters state building code to require stronger & safer construction for coastal homes

 https://www.washingtonpost.com/local/new-state-building-code-could-alter-coastalneighborhoods/2018/11/28/ae573d9c-f2ed-11e8-99c2cfca6fcf610c story.html?utm term=.501e2419f12c

Project intended to slow coastal erosion on north shore of Oahu is damaged by winter waves

<a href="https://www.hawaiinewsnow.com/2018/11/28/powerful-winter-waves-damage-project-aimed-slowing-coastal-erosion/">https://www.hawaiinewsnow.com/2018/11/28/powerful-winter-waves-damage-project-aimed-slowing-coastal-erosion/</a>

Considering a wall to protect Tangier Island in Chesapeake Bay

https://www.dw.com/en/can-a-wall-protect-tangier-island-from-rising-seas/a-46056726

Concrete structure uncovered on Sullivan's Island may be coastal defense turret "Panama"

• <a href="https://wpde.com/news/local/concrete-structure-uncovered-on-sullivans-island-believed-to-be-coastal-defense-turret">https://wpde.com/news/local/concrete-structure-uncovered-on-sullivans-island-believed-to-be-coastal-defense-turret</a>

Promoting coastal rowing as a spectator sport

• <a href="https://www.scmp.com/sport/hong-kong/article/2175018/testing-waters-coastal-rowing-can-find-mass-appeal-spectator-sport">https://www.scmp.com/sport/hong-kong/article/2175018/testing-waters-coastal-rowing-can-find-mass-appeal-spectator-sport</a>

Plan for repaving Highway 80 on Tybee Island following flood waters

 https://www.wsav.com/top-stories/tybee-leaders-address-repaving-project-after-coastalflooding-closes-hwy-80/1619435954

Different ways to respond to potential coastal flooding in Southern California

• <a href="https://www.sandiegouniontribune.com/news/columnists/michael-smolens/sd-me-smolens-sea-level-rise-20181125-story.html">https://www.sandiegouniontribune.com/news/columnists/michael-smolens/sd-me-smolens-sea-level-rise-20181125-story.html</a>