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Geoscience Bulletin Board – 29 April 2019 – compiled by Elaine J. Hanford

Data mining California earthquakes using new computational method

- <http://www.digitaljournal.com/tech-and-science/science/data-mining-reveals-clues-behind-california-earthquakes/article/548003>

Passaic River Basin in New Jersey was a proglacial lake and is now prone to flooding

- <https://www.northjersey.com/story/news/environment/2018/08/14/route-46-flooding-little-falls-passaic-river-prehistoric-lake/984954002/>

Voids from old mines found beneath transmission line project in Wyoming

- <https://torringtontelegram.com/article/large-voids-found-below-transmission-line-project>

Effects of simulated ground motions during M9.0 EQ in Pacific Northwest

- <https://phys.org/news/2019-04-concrete-wall-larger-major-seattle.html>

Explanation of why Pangaea broke apart

- <http://mentalfloss.com/article/581214/what-caused-pangea-to-break-apart>

Minerals in alpine rivers reflect upstream landslide activity

- <https://phys.org/news/2019-04-minerals-mountain-rivers-story-landslide.html>

Eclogitic diamonds formed in mantle originate from oceanic crust – diamonds are a geologists best friend

- https://www.eurekalert.org/pub_releases/2019-04/uoa-ed042419.php
- <https://phys.org/news/2019-04-diamonds-reveal-continent-stabilized-key.html>

Mapping seafloor of Salish Sea in the Pacific Northwest details features of Devils Mountain Fault Zone & newly mapped Skipjack Island Fault Zone

- https://www.eurekalert.org/pub_releases/2019-04/ssoa-ssm042419.php

Holocene aeolian stratigraphic sequences & geomorphology of desert belt in northern China

- https://www.eurekalert.org/pub_releases/2019-04/scp-hco042319.php

Polar wandering during Late Jurassic?

- <https://eos.org/editor-highlights/extraordinary-polar-wander-during-the-late-jurassic>

Applying principal component analysis in seismology to reveal 3-D crustal structure

- https://www.eurekalert.org/pub_releases/2019-04/scp-nao042419.php

Planetary geology: the lunar surface (megaregolith) is fractured

- <https://www.space.com/impacts-cracked-the-moon.html>

Explaining unpredictable “geomagnetic jerks” that abruptly accelerate evolution of magnetic field

- <https://www.sciencedaily.com/releases/2019/04/190422112806.htm>

Tracing 3,000-year record of monsoons using ostracod shells at bottom of Lake Nakaumi in SW Japan

- <https://www.sciencedaily.com/releases/2019/04/190425104136.htm>

Callichimaera perplexa - 95 myo chimera species will force rethinking the definition of a crab

- <https://www.sciencedaily.com/releases/2019/04/190424153732.htm>

New ankylosaurus discovered in Texas – 18-ft long cross between horny toad & armadillo with a club tail – assembling the skeleton

- https://start.att.net/news/read/article/fox_news-new_spikearmored_dinosaur_discovered_in_texas-rfoxnews/category/news+
- <https://www.foxnews.com/science/new-spike-armored-dinosaur-texas>

“Earth Science Emporium” highlights the importance of geology

- http://www.calaverasenterprise.com/business/article_982af78c-61f3-11e9-a133-5b5e113bf7dd.html

Rethinking the origins of methane

- <http://blogs.discovermagazine.com/d-brief/2019/04/22/scientists-find-unusual-sources-of-methane/#.XMMzQ3dFyUk>

CSUB geology professor awarded for distinguished service by AAPG

- <https://www.turnto23.com/news/local-news/csub-emeritus-geology-professor-receives-prestigious-award>

Strain rates calculated from GPS data show South Iceland Seismic Zone is rapidly deforming

- <https://eos.org/research-spotlights/a-new-way-of-visualizing-icelands-crustal-deformation>

Book Review: “Another Primordial Day - Paleo Metal Diaries” - geologic fossils & heavy metal music

- https://www.eurekalert.org/pub_releases/2019-04/lu-gpr042319.php

29,000-year-old eruption of Campi Flegrei in Italy

- <https://phys.org/news/2019-04-mysterious-eruption-campi-flegrei-caldera.html>

Collision 50 myo of Indian Subcontinent with Asia had far-reaching effects

- <https://phys.org/news/2019-04-geoscientists-fallout-collision-world.html>

Deep-ocean creatures survive in environment of “feast or famine” energy fluxes

- <https://phys.org/news/2019-04-deep-ocean-creatures-feast-or-famine-energy-fluxes.html>

Very short 33-year record shows increased wind speeds and consequent wave heights in Southern Ocean

- <https://phys.org/news/2019-04-year-ocean-heights.html>

Searching for the very first sediments eroded from the Himalayas into the Bay of Bengal

- <https://eos.org/features/the-search-for-the-severed-head-of-the-himalayas>

Microbes & volcanoes influence geological processes

- <https://www.natureworldnews.com/articles/40825/20190425/study-microbes-could-influence-earths-geological-processes-as-much-as-volcanoes.htm>

Maritime resources provides updates on gold projects in Newfoundland

- <https://www.geologyforinvestors.com/maritime-provides-update-on-newfoundland-projects/>

Perspective: Franconia Notch would be excellent field trip for any “Rocks for Jocks” geology course

- https://www.newburyportnews.com/opinion/columns/sargent-s-view-undergrad-geology-on-the-hoof/article_0762ec11-51f6-5d0e-956f-248bc39a27b9.html

Summary of Flat Slab Subduction workshop

- <https://eos.org/meeting-reports/linking-observations-and-modeling-of-flat-slab-subduction>

Wally Broecker (1931-2019) “Grandfather of Climate Science”

- <https://www.npr.org/2019/02/18/695797869/grandfather-of-climate-science-wallace-broecker-dies-at-87>

Slow-slip seismic event off North Island, New Zealand, coast is spreading southward

- <https://www.newshub.co.nz/home/new-zealand/2019/04/massive-east-coast-seismic-rupture-heading-south-likely-triggering-more-earthquakes.html>

Another study links EQs to fracking in the central and eastern US

- https://www.eurekalert.org/pub_releases/2019-04/ssoa-sle042519.php

Isostatic adjustment, marine glacier “grounding line” & sea level

- <https://arstechnica.com/science/2019/04/springy-bedrock-could-reduce-sea-level-rise-but-not-any-time-soon/>

Synopsis of the major extinction events on Earth

- <https://news.cgtn.com/news/3d3d774e7a676a4d34457a6333566d54/index.html>

Two high-quality gas hydrate reservoirs confirmed on North Slope of Alaska

- <https://www.usgs.gov/news/test-well-confirms-two-gas-hydrate-reservoirs-alaska-north-slope>

Simbakubwa kutokaafrika – “Big Lion from Africa” – Early Miocene carnivore in Kenya

- <http://www.sci-news.com/paleontology/simbakubwa-kutokaafrika-07108.html>

New species of 90 myo Hadrosauroid dinosaur discovered in Mongolia

- <http://www.sci-news.com/paleontology/new-dinosaur-species-mongolia-gobihadros-mongoliensis-07105.html>

Nearly 196,000 marine virus species identified during expedition

- <http://www.sci-news.com/biology/marine-viruses-07133.html>

New perspective on how ocean “pumps” impact climate over time

- <https://www.technology.org/2019/04/26/new-view-of-how-ocean-pumps-impact-climate-change/>

Mudslides in notoriously dangerous but highly-lucrative jade mining industry in Myanmar

- http://www.terradaily.com/reports/Rescuers_battle_to_find_dozens_killed_in_Myanmar_mud_slide_999.html

CRS Report: USGS Stream gaging Network: Overview & Issues for Congress

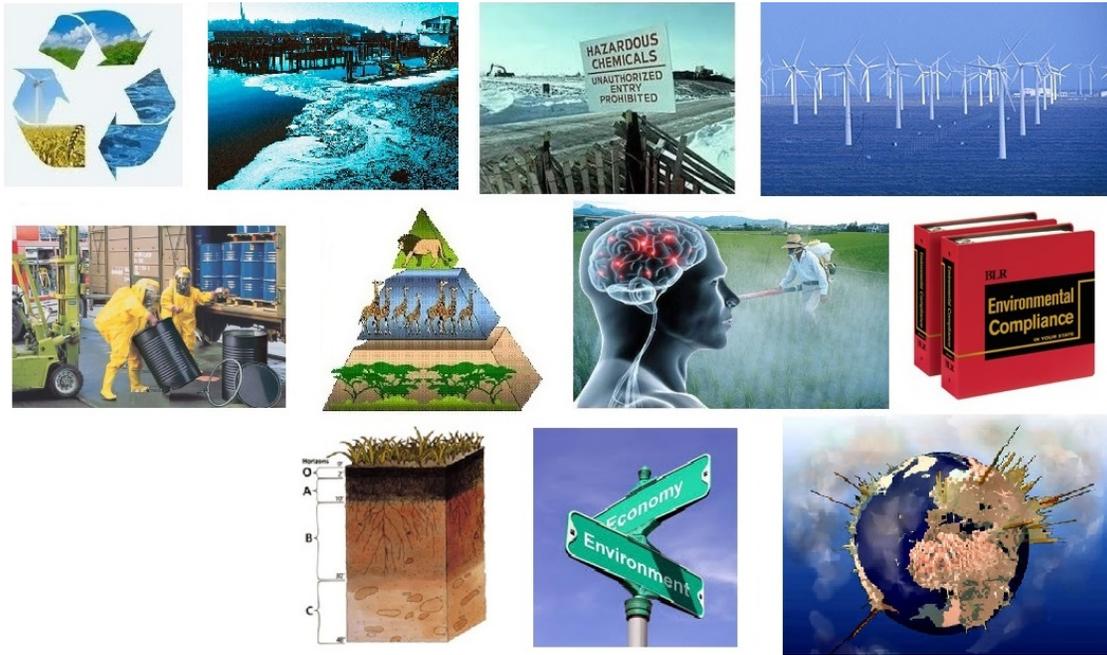
- <https://crsreports.congress.gov/product/pdf/R/R45695>

Book Review: Mining Inventors & Innovations through History 1869-2019

- <https://www.iom3.org/news/2019/apr/26/mining-inventors-and-innovations-through-history>

1,758-carat black diamond weighing 352 grams discovered in Botswana

- <https://en.israelidiamond.co.il/news/mining/lucara-largest-stones/>
- <https://www.bloomberg.com/news/articles/2019-04-25/second-biggest-diamond-in-history-found-but-it-s-not-that-great>



Environmental Science Bulletin Board – 29 April 2019 – compiled by Elaine J. Hanford

After 5 years, a review of the Flint, Michigan, water crisis that has lasted 110 years

- <https://www.msn.com/en-us/health/health-news/five-years-on-the-flint-water-crisis-is-nowhere-near-over/ar-BBWh4Vb>

50-state study describes how individual Americans value wildlife

- <https://www.sciencedaily.com/releases/2019/04/190425143640.htm>

First instance of *Triatoma sanguisuga* “kissing bug” human confirmed in Delaware – can transmit Chagas disease

- <https://www.msn.com/en-us/health/health-news/cdc-blood-sucking-kissing-bug-confirmed-in-delaware/ar-BBWf9Re>

Good things have happened since the first Earth Day & photos of life (good & bad) on Earth

- <https://news.nationalgeographic.com/2016/04/160422-earth-day-46-facts-environment/>
- <https://www.nationalgeographic.com/environment/2019/04/50-beautiful-photos-of-earth/>

Deforestation and land-use change to agriculture threatens Mayan beehives in the Yucatan – Mexican government permitted Monsanto to sell genetically modified soybeans

- <https://www.nationalgeographic.com/environment/2019/04/unlikely-feud-beekeepers-mennonites-simmers-mexico/>

Gorongosa National Park wildlife in Mozambique is rebounding following the civil war

- <https://www.nationalgeographic.com/magazine/2019/05/mozambique-gorongosa-national-park-wildlife-rebound/>

Planting a garden? Seven good things to do!

- <https://www.care2.com/greenliving/7-ways-to-make-your-garden-more-earth-friendly.html>

Plaque commemorates 1884 Great English earthquake disaster in Colchester – M4.6

- <https://www.gazette-news.co.uk/news/17582709.plaque-to-remember-colchester-earthquake-disaster-of-1884/>

AFAD report “Disaster Management in Turkey and Natural Disaster-Related Statistics”

- <https://www.turkishminute.com/2019/04/21/some-87000-killed-in-210-major-earthquakes-in-turkey-in-117-years-report/>

Every day is Earth Day at USGS – the premier Earth science agency

- <https://www.usgs.gov/news/every-day-earth-day-usgs>

Wyoming approves portion of 1,175-km high voltage direct current (HVDC) transmission line project

- <https://www.compelo.com/energy/news/transwest-receives-project-permit/>

28 hippopotamuses found dead in Gibe Sheleko National Park in Ethiopia – species is vulnerable

- <https://www.msn.com/en-us/news/world/at-least-28-hippos-found-dead-in-ethiopias-national-park/ar-BBWdcrw>

Another death due to fall in Grand Canyon National Park – woman walking off trail fell 200 feet

- <https://news.yahoo.com/another-grand-canyon-visitor-dies-fall-edge-010427061.html>

Update: African Swine Fever – China now consider AFS-positive - Global forum attendees - vaccine

- <https://www.porkbusiness.com/article/china-confirms-african-swine-fever-hainan-island>
- <http://kticradio.com/agricultural/african-swine-fever-conquering-asia-moving-in-south-africa-smoldering-in-eu/>
- <https://ipolitics.ca/2019/04/24/china-u-s-to-attend-global-forum-on-african-swine-fever-says-canada/>
- <https://www.nature.com/articles/d41586-019-01269-5>

Using porous pavement and tiles can reduce runoff but is 3-4X more expensive than regular pavement

- https://www.kctv5.com/news/new-construction-techniques-weather-storm-reduce-runoff/article_f12adb4a-6554-11e9-aa88-bf11c5003237.html

While the battle for water in California rages on – mining of groundwater continues

- https://www.kctv5.com/news/new-construction-techniques-weather-storm-reduce-runoff/article_f12adb4a-6554-11e9-aa88-bf11c5003237.html

GEER Report examined failure of levees in 2015 Midwest floods – have they learned the right lessons?

- <https://www.news.iastate.edu/news/2019/04/22/levees>
- Report:
http://www.geerassociation.org/administrator/components/com_geer_reports/geerfiles/GEER_Preliminary_Report_Midwest_Floods.pdf

Comparison: Paper bags, plastic bags & re-useable cloth bags

- <https://www.care2.com/greenliving/wait-reusable-cotton-bags-are-bad-for-the-environment.html>

Bayer (who now owns Monsanto) appealing \$78M verdict on glyphosate caused cancer

- <https://www.msn.com/en-us/money/companies/bayer-asks-appeals-court-to-throw-out-dollar78-million-roundup-verdict/ar-BBWfzHe>

NYC leaders call for ban on Monsanto glyphosate-based herbicides and other pesticides in public places

- <https://www.ehn.org/monsantos-herbicide-defense-falling-on-deaf-ears-as-nyc-leaders-join-calls-for-ban-2634974362.html>

56+ tons of ground beef recalled in *E. coli* outbreak spanning 10 states

- https://start.att.net/news/read/article/usa_today_more_than_56_tons_of_ground_beef_recalled_in_e_col-rgannett/category/news

Slamming “reckless tourists” for taking selfies on edge of active volcano Mount Agung

- <https://www.dailymail.co.uk/news/article-6953963/Reckless-tourists-slammed-taking-smiling-selfies-sitting-edge-VOLCANO.html>

Orientation of cracks in building after an EQ reflect likelihood that building will fail

- <https://www.gmanetwork.com/news/scitech/science/692261/vertical-horizontal-or-diagonal-cracks-after-an-earthquake-here-s-what-rsquo-s-dangerous/story/>

DNA from medieval Crusader skeletons reflects biodiversity among humans

- <https://arstechnica.com/science/2019/04/dna-from-medieval-crusader-skeletons-suggests-surprising-diversity/>

When it comes to plastics, can we live in a circular economy?

- <https://www.treehugger.com/plastic/how-plastics-industry-hijacking-circular-economy.html>
- Report: http://www.closedlooppartners.com/wp-content/uploads/2019/04/CLP_Circular_Supply_Chains_for_Plastics.pdf

Toward a better understanding of fluorinated pollutants (PFAS compounds)

- <https://www.npr.org/sections/health-shots/2019/04/22/708863848/scientists-dig-into-hard-questions-about-the-fluorinated-pollutants-known-as-pfa>
- <https://www.ehn.org/delay-in-regulating-pennsylvania-pfas-2633596363.html>

EU Parliament calls for all necessary action to protect human health & environment from endocrine-disrupting compounds

- <https://www.ehn.org/eu-parliament-on-endocrine-disrupting-compounds-act-now-2635005718.html>
- Resolution: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+TA+P8-TA-2019-0441+0+DOC+PDF+V0//EN>

“State of the Air 2019” says air quality in Pittsburgh, Pennsylvania, continues to decline

- <https://www.ehn.org/pittsburghs-air-quality-continues-to-decline-new-report-finds-2635280543.html>

- Interactive: <https://www.lung.org/our-initiatives/healthy-air/sota/>
- Report: <https://www.lung.org/assets/documents/healthy-air/state-of-the-air/sota-2019-full.pdf>

Testing bottled waters – some contain arsenic

- <https://arstechnica.com/science/2019/04/natural-bottled-water-has-natural-arsenic-contamination-testing-finds/>
- <https://www.consumerreports.org/water-quality/arsenic-in-some-bottled-water-brands-at-unsafe-levels/>

Animal rights groups sue State of Iowa challenging latest ag-gag law

- <https://wqad.com/2019/04/24/animal-rights-groups-sue-iowa-over-its-latest-ag-gag-law/>

Book Review: “Black Death at the Golden Gate: The Race to Save America from the Bubonic Plague”

- <https://www.nature.com/articles/d41586-019-01239-x>

Wildlife bridges over highways have significantly reduced wildlife-vehicle accidents worldwide

- <https://www.nationalgeographic.com/animals/2019/04/wildlife-overpasses-underpasses-make-animals-people-safer/>

Chemical spill of anhydrous ammonia sends 37 people to the hospital in Illinois

- https://start.att.net/news/read/article/cnn-chemical_spill_in_illinois_sends_more_than_30_peop-cnn2/category/news+

Quarantines at UCLA & Cal State-LA in California amid measles outbreak

- <https://finance.yahoo.com/news/quarantines-2-la-universities-amid-us-measles-outbreak-215854698.html>

“Eco-friendly” does not necessarily mean reduction of environmental impacts

- <https://www.constructionbusinessowner.com/green/green-building/18-green-building-innovations-employ-your-jobsites>

Perspective: Stop denying the risks of air pollution

- <https://www.nature.com/articles/d41586-019-01234-2>

Canadians debate: “to move or not to move” following two floods in two years

- http://www.spacedaily.com/reports/Canada_residents_split_to_move_or_not_after_two_floods_in_two_years_999.html



Coastal Zone Management Bulletin Board – 29 April 2019 – compiled by Elaine J. Hanford

USF&W wants to increase natural coastal flood protection in Connecticut

- <https://www.ctpost.com/local/article/Proposal-expands-coastal-flood-protection-blunts-13781467.php>

Most people would not change planned trip to Outer Banks due to coastal hazards

- <https://phys.org/news/2019-04-coastal-hazards-threaten-outer-banks.html>

Salt marsh might be best way to fight coastal erosion in East Anglia

- <https://www.sciencetimes.com/articles/20569/20190421/marsh-may-help-fight-coastal-erosion.htm>

Coastal access is a source of continuing controversy in California

- <https://www.santacruzsentinel.com/2019/04/15/coastal-access-battles-play-out-near-and-far-to-santa-cruz/>

Rising rents outpace teacher pay in coastal California coastal communities

- <https://edsources.org/2019/rising-rents-in-coastal-california-outpace-teacher-pay/611216>

Beach watchers wanted for coastal observation & seabird survey team (COASST) in Pacific Northwest

- https://www.chinookobserver.com/news/local/public-service-announcement-beachwatchers-wanted-for-coastal-observation-and-seabird/article_2f2eb7dc-622a-11e9-9ffd-7bf64bf91138.html

Digital Coast Act introduced into Congress – would authorize NOAA to map 95,000 miles of shoreline

- <https://www.ktva.com/story/40286288/murkowski-young-reintroduce-coastal-mapping-initiative>

Tracking the decline of barrier reef in Florida Keys

- <https://www.sciencemag.org/news/2019/04/scientists-track-florida-s-vanishing-barrier-reef>

Three coastal protection projects funded in Louisiana – worth spending \$58.5M?

- <https://www.kalb.com/content/news/Gov-Edwards-announces-final-funding-for-3-coastal-protection-projects-509008441.html>

SELC lawsuit filed against North Carolina DOT & FHA to challenge Mid-Currituck Bridge

- <https://www.coastalreview.org/2019/04/lawsuit-challenges-mid-currituck-bridge/>

It's all about the money when people buy property on coastal zones subject to storms & flooding – Texas coast sea level change due to faulting, subsidence & erosion – not due to “global warming”

- <https://www.houstonchronicle.com/news/houston-texas/texas/article/Study-Sea-level-rise-causes-Texas-coastal-13786803.php>
- <http://www.beg.utexas.edu/coastal/thscmp/support/SeaLevelRiseLesson.pdf>

Power of storm waves can move large boulders weighing upwards of 10 (metric) tons (video)

- <https://www.voanews.com/a/4889014.html>

1.2m data buoy platform to assist ORION research & monitoring for EU funded coastal erosion project

- <https://www.dredgingtoday.com/2019/04/26/osil-buoy-for-orion-coastal-erosion-project/>

Rat poison deaths becoming more common in Malibu, California, area – impacting other wildlife

- http://www.malibutimes.com/news/article_191c2b96-66d5-11e9-8610-177504a54e84.html

Perspective: is suing O&G companies to preserve wetlands enough? Or is it pointless?

- <https://nonprofitquarterly.org/2019/04/26/new-orleans-sues-oil-and-gas-companies-to-preserve-wetlands-but-is-that-enough/>
- https://www.theadvocate.com/baton_rouge/opinion/article_75060ee0-6059-11e9-9e4f-33d83a94e673.html

Offshore O&G drilling may be “on hold” due to legal challenges

- <https://www.dailypress.com/news/science/dp-nws-offshore-drilling-hold-20190425-story.html>

Federal Court rejects bid for exemption from Pacific Fracking Moratorium along California coast

- https://www.biologicaldiversity.org/news/press_releases/2019/california-offshore-fracking-04-24-2019.php
- https://www.noozhawk.com/article/judge_denies_oil_company_request_to_keep_fracking_at_platform_gilda

Bombay High Court quashed permissions to construct casting yard on Juhu Beach

- https://www.business-standard.com/article/pti-stories/hc-sets-aside-nod-given-for-msrdc-casting-yard-on-juhu-beach-119042600874_1.html

Red, White & Blue Beach – last private beach in Santa Cruz County, California, under sale contract

- <https://register-pajaronian.com/article/last-private-beach-nears-sale>

Coastal subsidence – couched in terms of “sea level rise” predicted to impact coastal species & habitat

- https://www.eurekalert.org/pub_releases/2019-04/uocf-usa042619.php

Contractors identified to develop plan for modernization of Port of Alaska

- <http://www.alaskajournal.com/2019-04-24/consultant-team-including-begich-tapped-port-alaska-review>

100s of dead dolphins wash up on Bay of Biscay coast after being caught in fishing nets

- <https://www.msn.com/en-us/news/world/hundreds-of-dead-dolphins-wash-up-on-french-coast/ar-BBWi3fA>