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Geoscience Bulletin Board – 23 November 2020 – compiled by Elaine J. Hanford

Fossil relative found in India reveals clues to evolutionary origins of horses

- <https://thehorse.com/194070/fossils-found-in-india-offer-clues-to-equid-evolution/>

Plans for seismic rebuild Great Hall at UBC Museum of Anthropology

- <https://www.reminetwork.com/articles/museum-of-anthropology-seismic/>

Magnetic properties of fault rocks provide clues to fault rupture & earthquakes

- <https://eos.org/editors-vox/new-insights-from-the-magnetic-properties-of-fault-rocks>
- Paper: <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2019RG000690>

Gravity waves created by storms have significant impacts on global & space weather

- <https://eos.org/research-spotlights/gravity-waves-leave-ripples-across-a-glowing-night-sky>

Theoretical model & lab experiments reflect importance of wind for fate of volcanic eruption columns

- <https://eos.org/editor-highlights/the-importance-of-wind-for-the-fate-of-volcanic-eruption-columns>
- Paper: <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2020JB020136>

Mantle tomography provided evidence of the gap that was occupied by the Resurrection Plate

- <https://eos.org/articles/the-resurrection-plate-is-dead-long-live-the-resurrection-plate>

Dead fish transport toxic mercury to deep ocean

- <https://www.ehn.org/mercury-in-deep-ocean-2648891044.html>

Newest climate models should not raise warming projections – hottest models not the most accurate

- <https://arstechnica.com/science/2020/11/newest-climate-models-shouldnt-raise-future-warming-projections/>
- Paper: <https://esd.copernicus.org/articles/11/995/2020/>

Lithospheric slab extending to 400 miles beneath northeastern China within mantle transition zone

- https://www.spacedaily.com/reports/Former_piece_of_Pacific_Ocean_floor_imaged_deep_beneath_China_999.html

Toward understanding tectonic plates and fractured volcanic activity in the Aleutian Islands

- https://www.spacedaily.com/reports/Piecing_together_the_Alaska_coastlines_fractured_volcanic_activity_999.html

Retreating Barry Arm Glacier may increase landslide threat & tsunami risk in Alaskan fjord

- https://www.terraviva.com/reports/Retreating_Glacier_Presents_Landslide_Threat_Tsunami_Risk_in_Alaskan_Fjord_999.html

Non-avian dinosaurs were not in decline prior to extinction 66 myo

- <http://www.sci-news.com/paleontology/non-avian-dinosaurs-not-decline-prior-extinction-09065.html>
- Paper: <https://royalsocietypublishing.org/doi/10.1098/rsos.201195>

Amphimedoa queenslandica – sea sponge from Great Barrier Reef reveal fundamental mechanism of evolution

- <http://www.sci-news.com/biology/animal-dna-enhancers-09057.html>

Ancestral Puebloans survived from ice melt in lava tubes in New Mexico

- <https://phys.org/news/2020-11-geoscientists-ancestral-puebloans-survived-ice.html>

Effect of volcanic eruptions on El Niño Southern Oscillation (ENSO) depends on timing and preceding oceanic conditions

- <https://phys.org/news/2020-11-volcanic-eruptions-effect-summer.html>
- Paper: <https://www.nature.com/articles/s43247-020-0013-y>

Catastrophic Mafia mega-slide along continental margin of Tanzania constrains onset of East African rifting

- <https://phys.org/news/2020-11-evidence-earth-biggest-underwater-landslides.html>
- Paper: <https://www.nature.com/articles/s41467-020-17267-5>

End-Triassic carbon isotope excursion is not from global-scale carbon cycle disruption

- <https://phys.org/news/2020-11-chemical-clues-prehistoric-microbes-rewrote.html>

Geoengineering to prevent “global warming” would likely be for naught

- <https://phys.org/news/2020-11-simulations-geoengineering-global-greenhouse-gasses.html>

Debating the existence of the supercontinent Pannotia

- <https://news.yale.edu/2020/11/18/pannotia-supercontinent-trial>

New postcards display geology of Wyoming

- <https://cowboystatedaily.com/2020/11/18/new-free-postcard-displays-wyomings-geological-wonders/>

Utah Geological Survey releases 2021 calendar

- <https://www.deseret.com/utah/2020/11/16/21570093/geological-survey-releases-its-2021-calendar-of-utah-geology>

Remote monitoring tool may help predict geological movement & groundwater flow in old coalfields

- <https://www.sciencedaily.com/releases/2020/11/201116112934.htm>

USGS evaluating western North Slope oil & gas potential

- <https://www.petroleumnews.com/pntruncate/814786692.shtml>

Anticipating the next major rupture of the Alpine Fault on the South Island of New Zealand

- <https://www.nzherald.co.nz/nz/what-will-an-alpine-fault-quake-feel-like/JPCM5HA2VVZCWUXQGSJ3B2IVEI/>

Calls for protection of important geological sites in India

- <https://www.thehindu.com/society/history-and-culture/saving-the-precious-geo-heritage-sites-of-visakhapatnam/article33117808.ece>

Using AI to identify fossil pollen specimens

- <https://www.neoshodailynews.com/news/20201116/researchers-apply-machine-learning-to-study-fossil-pollen>

East African Rift System slowly breaking away with Madagascar splitting into pieces

- <https://www.sciencedaily.com/releases/2020/11/201113124038.htm>

Visitors to Yellowstone are probably safe from volcanic super-eruption

- <https://www.dispatch.com/story/opinion/2020/11/15/geology-yellowstone-visitors-not-likely-hit-super-volcano/6251181002/>

Mineral Processing – Part 1 – Sampling / Analysis & Comminution

- <https://www.geologyforinvestors.com/mineral-processing-part-1/>

Carbon-rich somewhat fatty compounds in deep-sea rock may reflect origins of life

- <https://www.sciencetimes.com/articles/28233/20201116/chinese-scientists-discover-material-rock-exhibit-origin-life.htm>

Retrospective on 1983 disaster at Slide Mountain – NOTE: based on my field investigation in 1983 - small avalanche (mostly snow/ice and some rock) displaced small irrigation reservoir water that triggered overtopping of second reservoir dam (no dam failures) to create debris flood that scoured down canyon then across alluvial fan before dissipating velocity & energy – as predicted by delineated geologic hazards map

- <https://mynews4.com/news/knowning-nevada/knowning-nevada-the-disaster-at-slide-mountain>

Some alpine glaciers in the Tetons did not completely melt during early Holocene warm period – continuous 10,000-year record

- <https://phys.org/news/2020-11-glaciers-tetons-survived-early-holocene.html>
- Paper: <https://advances.sciencemag.org/content/6/47/eabc7661>

Exploration success at Tierra De Oro Project in Chile to identify gold & copper targets

- <https://www.miningmagazine.com/exploration/news/1399652/windfall-geotek-ai-exploration-success-at-tierra-de-oro>

The universal geometry of geology

- <https://www.quantamagazine.org/geometry-reveals-how-the-world-is-assembled-from-cubes-20201119/>

Investigating mammal evolution & subduction dynamics to explain how land mammals migrated to Caribbean Islands

- <https://eos.org/science-updates/by-land-or-sea-how-did-mammals-get-to-the-caribbean-islands>

Next phase to investigate thermal & coupled hydro-chemical-biological response in subsurface related to geothermal energy development in Cheshire

- <https://www.geplus.co.uk/news/ground-investigations-to-start-for-cheshire-geoenergy-observatory-19-11-2020/?tkn=1>

Research expedition will investigate Taal Volcano

- <https://www.rappler.com/environment/up-ust-scientists-to-conduct-research-expedition-to-taal-volcano>

Japan NUMO has begun initial stage of assessing suitability of areas in Hokkaido Prefecture for final disposal facility for high-level radioactive waste

- <https://www.world-nuclear-news.org/Articles/Studies-begin-for-Japanese-high-level-waste-reposi>

Cape Ann Earthquake M>6.0 in 1755 was strongest recorded EQ in Massachusetts

- <https://www.masslive.com/capecod/2020/11/strongest-recorded-earthquake-in-massachusetts-occurred-on-this-date-in-1755-with-a-magnitude-greater-than-60.html>

Video of exception intense eruption of Stromboli Volcano in Italy

- <https://www.smithsonianmag.com/smart-news/large-eruption-italys-stromboli-volcano-180976325/>

Argaga – major rockfall on La Gomera on 14 Nov 2020 (videos)

- <https://blogs.agu.org/landslideblog/2020/11/18/argaga-1/>

Petrovite – new fumarolic sulfate mineral discovered in Great Tolbachik fissure eruption on Kamchatka Peninsula

- <https://www.sciencealert.com/scientists-discover-exotic-new-mineral-forged-in-the-furnace-of-a-russian-volcano>

Major breccia pipe with extensive silver polymetallic mineralization & high-grade gold-bismuth zone in Southern Bolivia

- <https://www.globenewswire.com/news-release/2020/11/18/2129059/0/en/Eloro-Resources-Discovers-Major-Breccia-Pipe-with-Extensive-Silver-Polymetallic-Mineralization-and-a-High-Grade-Gold-Bismuth-Zone-in-the-Iska-Iska-Property-Potosi-Department-Southe.html>



Environmental Science Bulletin Board – 23 November 2020 – compiled by Elaine J. Hanford

A disaster in the making? Bradford-on-Avon outlaws killing of rats

- <https://currently.att.yahoo.com/news/britains-first-rat-killing-ban-174749568.html>

Moral and ethical issues abound: putting human genes into monkey fetuses

- <https://finance.yahoo.com/news/uh-oh-scientists-used-human-195500103.html>

Lawsuit filed for use of unapproved chemical in community drinking water

- <https://www.yahoo.com/news/environmental-injustice-residents-sue-town-172942740.html>

Almost 200 potential queens identified in Asian giant hornet nest in Washington State

- <https://www.nbcnews.com/news/animal-news/murder-hornet-nest-had-potential-spawn-almost-200-queens-washington-n1247302>

Warnings signs were mostly ignored but social media has left us isolated, scared & tribal

- <https://theconversation.com/the-matrix-is-already-here-social-media-promised-to-connect-us-but-left-us-isolated-scared-and-tribal-148799>

Scientific method does not leave room for taking sides during election which undermines public trust

- <https://theconversation.com/when-scientific-journals-take-sides-during-an-election-the-publics-trust-in-science-takes-a-hit-149351>

Prototype of mechanical tree farm may be built in 2021 in Arizona to suck CO2 out of the atmosphere

- <https://www.statepress.com/article/2020/10/spbiztech-the-worlds-first-mechanical-tree-is-to-be-built-at-asu-by-next-year>

In Mississippi vs Tennessee, Judge rules that Mississippi does not own groundwater – but water is NOT infinite

- http://www.desototimes.com/news/mississippi-doesnt-own-groundwater-judge-rules/article_91cbd362-250f-11eb-8156-c7735c82b5d8.html

Plans for new “green” highway connecting Oslo & Trondheim in Norway – estimated cost €558 million

- <https://www.worldhighways.com/feature/norways-new-green-highway-route>

Zoning amendments & conditional use permit approved for 1,066-acre solar farm in North Adelanto, CA

- <https://www.vvdailypress.com/story/news/2020/11/15/baldy-mesa-solar-project-gains-approval-for-development-in-north-adelanto/6299567002/>

Illegal toxic waste dump of roofing shingles called “Shingle Mountain” in south Dallas, Texas

- <https://www.msn.com/en-us/news/us/shingle-mountain-how-a-pile-of-toxic-waste-was-dumped-in-a-community-of-color/ar-BB1b44B6>

How the Colt revolver helped “win” the West

- <https://finance.yahoo.com/news/colt-single-action-army-revolver-154700480.html>

Standard unit system is needed for strength of cannabis

- <https://www.yahoo.com/news/cannabis-given-standard-unit-ratings-161400290.html>

The “nocebo” effect of drugs

- <https://www.yahoo.com/news/statins-symptoms-mostly-caused-nocebo-185722022.html>

US Army COE suspended permit for \$9.4B plastics complex in Louisiana – to examine alternate sites

- <https://apnews.com/article/technology-environment-courts-louisiana-a8d7e5860441fc144e0c582ed1e3c343>

US Army COE released draft EIS for massive pumps to drain Mississippi River Delta floodwaters

- <https://apnews.com/article/technology-wetlands-floods-mississippi-river-environment-6f39fcba60133ab787614d7f5589d28c>
- Links to Draft EIS: <https://www.mvk.usace.army.mil/Missions/Programs-and-Project-Management/Project-Management/Yazoo-Backwater-Report/>
- Draft EIS: <https://www.mvk.usace.army.mil/Missions/Programs-and-Project-Management/Project-Management/Yazoo-Backwater-Report/FileId/299705/>

Across the entire State of Florida, stormwater & coastal flooding are competing problems

- <https://www.metropolismag.com/homepage/can-we-learn-to-design-with-water/>

San Jacinto River flood relief projects may receive state funding

- <https://www.houstonchronicle.com/neighborhood/kingwood/news/article/SJRA-to-learn-fate-of-five-regional-flood-relief-15727462.php>

A step closer to demolition of four massive hydroelectric dams on lower Klamath River

- <https://www.yahoo.com/news/apnewsbreak-deal-revives-plan-largest-213326069.html>
- <https://www.redding.com/story/news/2020/11/17/klamath-river-dams-deal-revives-plan-largest-u-s-dam-demolition/6332540002/>

Only known white giraffe fitted with GPS tracking device to help protect against poachers

- <https://www.bbc.com/news/world-africa-54980914>

Proposed Flint, Michigan, water lawsuit settlement totals about \$641M

- <https://apnews.com/article/lawsuits-environment-flint-us-news-michigan-97d81fb2999a3680e5aec3baff5291a8>

New graduate program at Virginia Tech – Disaster Resilience & Risk Management (DRRM)

- <https://wvva.com/2020/11/17/putting-natural-disasters-under-a-microscope/>
- DRRM: <https://www.drrm.fralinlifesci.vt.edu/index.php>

Workshops explore environmental, social & political scenarios in preparation for new Colorado River water management guidelines

- <https://eos.org/scientific-disciplines/natural-hazards>

Secondhand clothing sales are booming

- <https://theconversation.com/secondhand-clothing-sales-are-booming-and-may-help-solve-the-sustainability-crisis-in-the-fashion-industry-148403>
- Resale Report: <https://www.thredup.com/resale/>

Visualizing the biggest threats to biodiversity – global & regional – climate change is not among the top 4

- <https://www.visualcapitalist.com/biggest-threats-to-earths-biodiversity/>
- Living Planet Report: <https://www.zsl.org/sites/default/files/LPR%202020%20Full%20report.pdf>

Air pollution in New Delhi is hazardous – what are they doing? Setting off fireworks spewing noxious gas

- <https://www.npr.org/sections/goatsandsoda/2020/11/12/934097578/fireworks-of-diwali-spark-worries-about-pollution-and-coronavirus-cases>

More batteries for electronics, vehicles & large-scale storage systems mean looming toxic e-waste crisis

- <https://theconversation.com/designing-batteries-for-easier-recycling-could-avert-a-looming-e-waste-crisis-146065>

Do we need for single-use tableware even if it biodegrades fairly quickly?

- <https://www.treehugger.com/tableware-biodegrades-60-days-5087203>

Recovery of landscape at Whiskeytown National Recreation Area 2 years after Carr Fire in California

- <https://www.nationalparkstraveler.org/2020/11/rebirth-and-recovery-whiskeytown>

Exploring Saguaro National Park

- <https://www.nationalparkstraveler.org/2020/11/three-days-saguaro-national-park>

Researchers trying to determine why some mature sequoia in National Parks have died

- <https://www.nationalparkstraveler.org/2020/11/why-are-mature-sequoias-dying-kings-canyon-sequoia-and-yosemite-national-parks>

New technique for forecasting movement of apex predators using transnational genetic monitoring

- https://www.terraily.com/reports/New_technique_helps_scientists_forecast_movement_of_apex_predators_999.html
- Paper: <https://www.pnas.org/content/pnas/early/2020/11/10/2011383117.full.pdf>

People migrating from rural to urban areas eat less bushmeat

- https://www.seeddaily.com/reports/People_in_developing_countries_eat_less_bushmeat_as_they_migrate_from_rural_to_urban_areas_999.html

Conservation of tropical peatland may slow rate of zoonotic diseases

- https://www.terraily.com/reports/Peatland_conservation_may_prevent_new_diseases_from_jumping_to_humans_999.html

Migratory species of birds and mammals may live fast and die young

- https://www.terraily.com/reports/Migratory_species_live_fast_die_young_study_999.html
- Paper: <https://www.nature.com/articles/s41467-020-19256-0>

Democratic Republic of Congo announces end of latest Ebola epidemic

- https://www.terraily.com/reports/DR_Congo_announces_end_of_latest_Ebola_epidemic_999.html

New maps document migrations of big game (ungulates) across Western US

- https://www.usgs.gov/news/new-maps-document-big-game-migrations-across-western-united-states?qt-news_science_products=1#qt-news_science_products
- Report: <https://pubs.usgs.gov/sir/2020/5101/sir20205101.pdf>

Invasive brown treesnake population found for first time on Cocos Island 1.5 miles off SW coast of Guam

- <https://www.usgs.gov/news/invasive-brown-treesnake-present-cocos-island-agencies-working-prevent-further-spread>

Abundance of prey species is key to avian diversity in urban environments

- <https://www.sciencedaily.com/releases/2020/11/201117113054.htm>
- Paper: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/ddi.13169>

Widespread contamination of rivers with two neurotoxic pesticides commonly used in pet products to control fleas – far exceeded safe limits

- <https://www.sciencedaily.com/releases/2020/11/201117085940.htm>

Funguschain Project - Mushroom cultivation produces 3X weight in waste

- <https://phys.org/news/2020-11-mushroom-cultivation-weight-burgers-fertiliser.html>
- Funguschain: <https://cordis.europa.eu/project/id/720720/reporting>

Surveillance of antibiotic resistance in watersheds in Puerto Rico after Hurricane Maria

- <https://phys.org/news/2020-11-antibiotic-resistance-genes-puerto-rican.html>

Oxidative potential is important when determining risk of particulate matter air pollution

- <https://phys.org/news/2020-11-particulate-air-pollution-poses-greatest.html>

Are telomere elongations the only thing limiting human lifespan in an exponentially growing 7.6B population?

- <https://news.theceomagazine.com/science/ageing-reversed-hyperbaric-oxygen-therapy/>

National Inventory Summary Report on land use across the US

- <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/newsroom/features/?cid=NRCSEPRD1698823>
- Download: <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/nri/results/?cid=stelprdb1041876>

So now we should worry about the GHG emissions from urban parks? – Oasis effect

- <https://asunow.asu.edu/20201116-oasis-effect-urban-parks-could-contribute-greenhouse-gas-emissions-asu-study-finds>

Humans destroying Nature has consequences – future disasters

- <https://www.straitstimes.com/asia/destroying-nature-and-its-consequences-inquirer>

CORONAVIRUS

Coronavirus COVID-19 statistics by country (click on USA to get State statistics)

- <https://www.worldometers.info/coronavirus/>
- <https://time.com/5800901/coronavirus-map/>
- interactive maps: <https://geodacenter.github.io/covid/map.html>

Understanding monoclonal antibodies

- <https://theconversation.com/what-monoclonal-antibodies-are-and-why-we-need-them-as-well-as-a-vaccine-149356>

Pandemic fatigue is real

- <https://theconversation.com/sick-of-covid-19-heres-why-you-might-have-pandemic-fatigue-148294>
- <https://theconversation.com/pro-mask-or-anti-mask-your-moral-beliefs-probably-predict-your-stance-148774>

Evolving timeline – still trying to “control” the virus

- <https://www.pharmaceutical-technology.com/news/coronavirus-a-timeline-of-how-the-deadly-outbreak-evolved/>

Political fallout after order to cull (i.e., slaughter) 17M mink in Denmark – “Cluster 5” variant likely eradicated since no new cases since 15 September

- <https://www.msn.com/en-us/news/world/danish-pm-taps-new-minister-after-mink-culling-fiasco/ar-BB1baEFs>
- <https://www.msn.com/en-us/news/world/denmark-says-corona-mink-mutation-most-likely-eradicated/ar-BB1baDdN>

Pfizer reports 95% efficacy of new vaccine

- <https://arstechnica.com/science/2020/11/pfizer-reports-final-vaccine-results-95-efficacy/>
- <https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-conclude-phase-3-study-covid-19-vaccine>

WHO cautions new vaccine will not save us from current surge

- <https://arstechnica.com/science/2020/11/more-good-covid-19-vaccine-news-but-it-wont-save-us/>

Airport screenings are “ineffective”

- <https://www.yahoo.com/lifestyle/the-cdc-covid-19-airport-screenings-ineffective-stay-safe-flying-151301994.html>

The fate of Chinese journalists who reported from Wuhan – held in detention, arrested & missing

- <https://news.yahoo.com/coronavirus-chinese-citizen-journalist-faces-051245315.html>

Suspects charged with stealing & laundering \$16M in aid

- https://www.huffpost.com/entry/7-charged-in-alleged-ppp-scam_n_5fb51c92c5b664958c7c7e23

Immunity may last years or even decades

- <https://www.msn.com/en-us/health/medical/immunity-to-the-coronavirus-may-last-years-new-data-hint/ar-BB1b6dwt>
- Paper: <https://www.biorxiv.org/content/10.1101/2020.11.15.383323v1.full.pdf>



Coastal Zone Management Bulletin Board – 23 November 2020 – compiled by Elaine J. Hanford

Sea slugs scour seagrass by the seashore

- <https://www.kqed.org/science/1970711/sea-hares-scrub-seagrass-by-the-seashore>

20-year draft master plan for Port of Fort Pierce – marine & reef-restoration center

- <https://www.tcpalm.com/story/news/2020/11/12/port-fort-pierce-see-reef-restoration-center-and-more/6249555002/>

Lawsuit filed against North Carolina State regulators over management of fisheries

- <https://www.coastalreview.org/2020/11/lawsuit-filed-over-fisheries-management/>

Jacksonville adopts ordinance to clean up abandoned & derelict vessels (ADVs) in waterways

- <https://www.coastalreview.org/2020/11/jacksonville-adopts-derelict-vessel-ordinance/>

Ribbon cutting for Starkey Gap Trail & Anclote Trail makes debut in Pasco County, Florida

- <https://www.tampabay.com/news/pasco/2020/11/13/the-prettiest-trail-in-the-county-pascos-coastal-anclote-trail-makes-its-debut/>

In Gaza, citizens take coastal walks to relieve stress of “double confinement”

- <https://news.yahoo.com/gazans-coastal-walks-escape-double-030917680.html>

North Carolina EMC considers enacting temporary rules to protect wetlands

- <https://www.coastalreview.org/2020/11/temporary-rules-needed-to-protect-wetlands/>

Residents of Native village of Shishmaref to relocate following coastal storm erosion

- <https://www.ktoo.org/2020/11/09/weekend-storms-pummel-arctic-coastal-villages/>

Fire at abandoned building along Oakland Estuary – cause under investigation

- <https://abc7news.com/oakland-fire-coast-guard-island-massive-in-union-point-park/7927017/>

Following heavy rains blackwater swamps drain into Winyah Bay estuary in South Carolina

- <https://earthobservatory.nasa.gov/images/147517/stained-winyah-bay>

75-acre solar farm approved for Waterford, Connecticut, near Niantic River Estuary – found no “substantial adverse environmental effect” from runoff, erosion and pollution

- <https://ctexaminer.com/2020/11/11/solar-farm-approved-for-75-acre-parcel-in-waterford/>

Isipingo Beach Estuary suffers significant fish kill – nauseating sewer stench in the air – dumping ground for commercial & municipal wastes for decades

- <https://risingsunchatsworth.co.za/166955/hundreds-of-fish-killed-in-isipingo-beach-estuary/>

US District Court orders evaluation of US Army COE controlled discharges from Lake Okeechobee

- https://www.keysnews.com/news/state/corps-to-study-impacts-of-lake-o-releases/article_e425e306-1f96-11eb-a358-bb592e4c7bc5.html
- <http://www.floridapoliticalreview.com/lake-okeechobee-discharges-continue/>

Warnings posted as wastewater dumped into Napier Estuary over 57 hours

- <https://www.stuff.co.nz/national/123377931/fiftyseven-hours-worth-of-wastewater-dumped-into-napier-estuary>

Perspective: CVRD needs to reassess Cowichan Estuary plan in British Columbia

- <https://www.cowichanvalleycitizen.com/opinion/cvrd-needs-to-reassess-cowichan-estuary-plan-and-more/>

Part 3: How flushing the toilet affect Belongil Estuary in Australia

- Part 3: <https://www.echo.net.au/2020/11/how-does-your-toilet-flush-affect-the-belongil-estuary/>
- Part 1 increasing sewage capacity: <https://www.echo.net.au/2020/10/future-of-the-belongil-and-the-stealthy-increase-in-sewage-capacity/>
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