

Suggested Articles for CHEM 301 Case Studies - 2018

Concerns grow about grey water in Canada's Arctic

Colette Derworiz,

The Canadian Press

August 26, 2018

INUVIK, N.W.T. -- A traditional hunter in the Northwest Territories says he used to welcome the cruise ships coming into the Beaufort Sea in Canada's Arctic. But Hans Lennie from Inuvik says that's changing.

https://beta.ctvnews.ca/national/canada/2018/8/26/1_4068418.html

New England Seal Die-Off Could be Linked to Chemical Pollution

Olivia Rosane

EcoWatch

Aug. 20, 2018

Researchers think a mysterious die-off of seals along the Maine coast could be linked to chemical pollution, the Portland Press Herald reported Sunday.

<https://www.ecowatch.com/maine-seal-deaths-chemical-pollution-2597535052.amp.html>

Tons of Plastic Trash Enter the Great Lakes Every Year – Where Does It Go?

Matthew J. Hoffman

Aug. 20, 2018

Awareness is rising worldwide about the scourge of ocean plastic pollution, from Earth Day 2018 events to the cover of National Geographic magazine.

<https://www.ecowatch.com/plastic-trash-great-lakes-2597475590.html>

'A warning': Acid pollution threatens ecosystems in Alberta and Saskatchewan, study says

CBC News

July 25, 2018

'If we continue to emit at this level, there will be ecosystem damage'

<https://www.cbc.ca/amp/1.4761165>

Interface with Water Key to Pollutant Removal

American Institute of Physics

Jul 18, 2018

In response to rising water scarcity, leading Argonne National Laboratory researcher Seth Darling describes the most advanced research innovations that could address global clean water accessibility.

<https://www.technologynetworks.com/applied-sciences/news/interface-with-water-key-to-pollutant-removal-306409>

Toxic Border Pollution Sickens U.S. Border Patrol Agents

Adam Hammell & Dana Williams

Jun. 08, 2018

The pungent, salty air that emerged over South Bay communities last February was not a familiar whiff of wrack decomposing on our favorite beaches.

<https://www.ecowatch.com/toxic-border-pollution-san-diego-2576326278.amp.html>

In desert trials, next-generation water harvester delivers fresh water from air

June 8, 2018

University of California – Berkeley

Last October, a University of California, Berkeley, team headed down to the Arizona desert, plopped their newest prototype water harvester into the backyard of a tract home and started sucking water out of the air without any power other than sunlight.

<https://phys.org/news/2018-06-trials-next-generation-harvester-fresh-air.amp>

Types of Pollution: Have You Considered Pharmaceutical Waste?

Karen Steward

Feb 02, 2018

Hyderabad is one of the world's largest bulk drug manufacturing locales, supplying the world with vital pharmaceuticals and providing the local populous with much needed jobs – but at what price?

<https://www.technologynetworks.com/applied-sciences/articles/types-of-pollution-have-you-considered-pharmaceutical-waste-297177>

Mackenzie Pulp Mill fined \$900,000 for leaking effluent into B.C. lake

The Canadian Press

Apr 21, 2018

Environment and Climate Change Canada says the company pleaded guilty Friday to depositing a deleterious substance into water frequented by fish, in violation of the pollution-prevention provisions of the Fisheries Act.

<https://www.cbc.ca/news/canada/british-columbia/mackenzie-pulp-mill-fined-900-000-for-leaking-effluent-into-b-c-lake-1.4630253>

What's GenX still doing in the water downstream of a Chemours plant?

Cheryl Hogue

C&EN, February 12, 2018 | Volume 96 Issue 7

Despite efforts to prevent the industrial fluoroether from getting into North Carolina drinking water, it's still present. Scientists are racing to find out why

<https://cen.acs.org/articles/96/i7/whats-genx-still-doing-in-the-water-downstream-of-a-chemours-plant.html>

Toxic Stormwater Kills and Debilitates Salmon

Feb 14, 2018 | Original Story from **Eric Sorensen** for Washington State University.

Washington State University researchers have found that salmon face a double whammy when they swim in the stormwater runoff of urban roadways.

<https://www.technologynetworks.com/applied-sciences/news/toxic-stormwater-kills-and-debilitates-salmon-297476>

Sunscreen a new suspect in slow dying of Cowichan River

Stephen Hume / Vancouver Sun

JULY 22, 2018

COWICHAN LAKE — On soft, early summer mornings, Joe Saysell would get himself a cup of tea, settle back in his deck chair outside the small house he built for his wife, Gail, and enjoy nature's free light show.

<https://www.timescolonist.com/islander/sunscreen-a-new-suspect-in-slow-dying-of-cowichan-river-1.23375231>

Hot summer resulted in blue-green algal blooms on Ontario lakes

Sep 01, 2018 by **Gisele Winton Sarvis**, Midland Mirror

Water temperatures appear to have had bigger effect than previously thought

<https://www.simcoe.com/news-story/8868075-hot-summer-resulted-in-blue-green-algal-blooms-on-ontario-lakes/>

A Toxic Algal Bloom Is Spreading in Florida's Waterways

Brigit Katz, smithsonian.com

July 10, 2018

The bloom started last month in Lake Okeechobee, but has quickly spread to waterways on both coasts

<https://www.smithsonianmag.com/smart-news/toxic-algal-bloom-spreading-floridas-waterways-180969586/>

Toxic Algae Blooms in Lake Erie Could Become the New Normal

Plans to reduce fertilizer runoff may not be enough to counter the blooms when climate change is taken into account

<https://www.smithsonianmag.com/smart-news/toxic-algae-blooms-lake-erie-could-become-new-normal-180957582/#1FmACxX3UEIHLc8S.99>

Gulf of Oman now world's largest oxygen-depleted 'dead zone'

CBC News · May 02, 2018

U.K. researcher says area where marine life has difficulty surviving is worse than expected

<https://www.cbc.ca/news/technology/gulf-of-oman-marine-dead-zone-1.4645018>

What's the Chemical Behind West Virginia's River Spill?

JANUARY 11, 2014

BRIAN CLARK HOWARD, NATIONAL GEOGRAPHIC

Spill in the Elk River brings a "do not drink" advisory.

<https://news.nationalgeographic.com/news/2014/01/140110-4-methylcyclohexane-methanol-chemical-spill-west-virginia-science/>

Ocean acidification to hit levels not seen in 14 million years

July 23, 2018

Julia Short, Cardiff University

New research led by Cardiff University has shown that under a 'business-as-usual' scenario of carbon dioxide (CO₂) emissions, ocean acidification is likely to hit unprecedented levels.

<https://phys.org/news/2018-07-ocean-acidification-million-years.html>

Tugboat carrying up to 22,000 litres of fuel capsizes in Fraser River

CTV Vancouver

August 14, 2018

A tugboat that capsized in the Fraser River overnight just south of Vancouver won't be pulled out of the water until Wednesday, but crews are working to limit the amount of fuel leaking out in the meantime.

<https://bc.ctvnews.ca/tugboat-carrying-up-to-22-000-litres-of-fuel-capsizes-in-fraser-river-1.4052468>

Years after oil spills, money still owed to Vancouver, aquarium and Heiltsuk Nation

The Canadian Press

Apr 20, 2018

'Polluter pay' laws have yet to pay up for city, aquarium and Central Coast nation

<https://www.cbc.ca/news/canada/british-columbia/oil-spill-pay-bc-coast-1.4629073>

Fracking can contaminate rivers and lakes with radioactive material, study finds

Stream sediments were found to be so radioactive they were nearly at the level that would require disposal in a specialist facility in some US states

Ian Johnston Independent UK

12 July 2017

<https://www.independent.co.uk/news/science/fracking-dangers-environment-water-damage-radiation-contamination-study-risks-a7837991.html>

New U.S. fracking report uncertain on risk to drinking water

Matthew Daly · The Associated Press
Dec 13, 2016

Study says process poses risk to drinking water in some circumstances, but no definitive statement of risk

<https://www.cbc.ca/news/canada/new-brunswick/epa-study-fracking-drinking-water-1.3894879>

Alberta's energy regulator ignoring own rules on tailings ponds: critics

Bob Weber - The Canadian Press
July 01, 2018

'The Alberta Energy Regulator is simply ignoring its own directive'

<https://www.cbc.ca/news/canada/edmonton/alberta-s-energy-regulator-oilsands-tailings-ponds-1.4730489>

Arsenic in drinking water threatens up to 60 million in Pakistan

Giorgia Guglielmi
Aug. 23, 2017

It has been called the largest mass poisoning in history. After wells were drilled in Bangladesh and the rest of the Indian subcontinent in the 1970s, millions of people have been exposed to arsenic in drinking water.

<http://www.sciencemag.org/news/2017/08/arsenic-drinking-water-threatens-60-million-pakistan>

Ontario 'completely committed' to mercury cleanup at Grassy Narrows

JAYME POISSON and DAVID BRUSER

Mon., Feb. 13, 2017

Nearly five decades after mercury was dumped in the river upstream from their home, the people of Grassy Narrows First Nation have received a clear provincial commitment to clean up the potent neurotoxin that has been making them sick.

<https://www.thestar.com/news/canada/2017/02/13/ontario-completely-committed-to-mercury-cleanup-at-grassy-narrows.html>

How Lead Ended Up In Flint's Tap Water

Michael Torrice

C&EN, Volume 94 Issue 7 | pp. 26-29

Without effective treatment steps to control corrosion, Flint's water leached high levels of lead from the city's pipes

<https://cen.acs.org/articles/94/i7/Lead-Ended-Flints-Tap-Water.html>

Bitumen floats longer than expected, Natural Resources Canada research shows

DERRICK PENNER

February 9, 2018

To the question of whether diluted bitumen sinks or floats when it hits water, the short answer is it floats, most of the time, according to a growing body of research being compiled by Natural Resources Canada scientists.

<https://vancouver.sun.com/news/local-news/bitumen-floats-longer-than-expected-natural-resources-canada-research-shows>

The battle over when and how to clean up oilsands tailing ponds is escalating

KEVIN ORLAND, BLOOMBERG

January 16, 2018

Amid the bogs and forests of northern Alberta, in the heart of the oilpatch, lie some of the largest waste dumps of the global energy business.

<https://calgaryherald.com/business/energy/the-battle-over-when-and-how-to-clean-up-oilsands-tailing-ponds-is-escalating>