

Toxicology News Monthly Bulletin (BCTOX) April and May - 2017

1. List of contents

2. BC Toxicology Picture of the Month

Contents

1. Lis	t of contents
2. BC	Toxicology Picture of the Month49
3. Ab	out Us50
4.	Distribution of toxicological news in this issue 50
5.	Editor's Summary 51
6.	Toxic Spills/Dumps
7.	Pesticide (Insecticides, glyphosate) 53
8.	Mold, Asbestos 53
9.	Fire, smoking, allergy53
10.	Air high exposure53
11.	Air temperature and pollution54
12.	International, Canada and BC major events 55
13.	BC Politics 56
14.	[Drinking] water high exposure 57
15.	Food high exposure57
16.	Food recalls 57
17.	Soil high exposure 58
18.	Acute toxicity & occupational58
19.	Chronic toxicity & occupational58
20.	Forests 58
21.	Marine biotoxins 59
22.	Fentanyl high exposure60
23.	Selected BC related toxicology articles 62
24.	Meetings 62
25.	Other conferences 62
26.	Toxicology jobs in BC 62
27.	Other 62



Jeremy Hunka @JeremyHunka 22n

More than 200 have already gathered to honour loved ones lost in the BC #overdose #cnsis, interfaith memorial service starts at 530, p.c taitler.com/41/Hb5C4xF

Vigil brings 500 people to Vancouver church to honour fentanyl victims. Peter Elliott, Dean of Christ Church Cathedral, said it was an opportunity for affected families to come together in an environment where they could mourn with others who understood their loss (May 19). CTVNews



A 50-foot sunken boat caused fuel spill in Fraser River (March 24). Global News



3. About Us

Aims and Scope:

BC Toxicology News Monthly Bulletin (BCTOX) aims to popularise the knowledge of toxicology and expand utility of the awareness of Toxicology News in British Columbia, Canada. It tries to engage health professionals with online published toxicology news and publicly available information. BCTOX mainly focuses on adapting or summarizing toxicology relevant news in BC. The Bulletin accepts and welcomes contribution of professionals and public as long as they meet BCTOX standards.

This bulletin is not official and nor peer reviewed. It does not cover all the news, and is not responsible for the accuracy of the news from media. It is, however, BC related, informative, handpicked and fun reading it.

How to access the original news items? If you click on the link related to each one of the provided news, it would take you to the original site of the news.

Publication Frequency: BCTOX is published monthly in English by Reza Afshari.

Provided information in $\underline{\tt GRAY}$ is not related to the current issue, but could be of interest.

ISSN: 2560-645X

Policies:

Open Access Policy: This bulletin provides open access to all its content.

Fee: BCTOX is free-of-charge for readers and contributors.

Copyright Statement:

BCTOX's content is currently prepared by Reza Afshari. The bulletin retain the copyright of their articles and will be able to archive preprint, post-print, and publisher's versions.

Archiving. Digital Archiving: In addition to indexing database this Bulletin utilizes digital archive as well as hard copies to guarantee long-term preservation and restoration.

Contact Us:

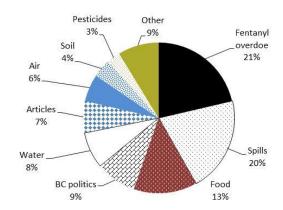
BC Toxicology News Monthly Bulletin could be reached at 109-811, West 7th Avenue, Vancouver, V5Z 1C2.

Tel: 604 999 6185 E-mail: <u>Reza.Afshari@bccdc.ca</u> <u>BCTOX@yahoo.com</u>

To contribute to the next issues, provide your opinion or report a mistake, please email to Reza.Afshari@bccdc.ca
Feedbacks would be appreciated.

--- If this bulletin is not of interest to you, let us know please not to fill up your mailbox in future.

4. Distribution of toxicological news in this issue



Toxicology news in this month was still focused on Fentanyl overdose followed by spills, food recall and soil high exposure (7%).

Housekeeping notice:

For logistical reasons, April and May issues are merged and released together.



5. Editor's Summary

Similar to previous months, BC toxicology news in April and May were dominated by fentanyl overdoses and deaths. However, as Election Day approached major parties were expressing their views on overdose crises as well as environmental issues. Spills, past exposure to asbestos, and lead in drinking water were also discussed.

Spills including small sized ones were reported more frequently [however, the number seems to be below reality, if compared to Alberta]. On one occasion, a sunken tug in Shuswap Lake spilled 4,000 litres of gasoline and 12,500 litres of diesel into a flooded field near the river.

Certain initiatives were recently taken in the province which seems to be promising with regards to illegal dumping such as (i) the City of Nanaimo has launched a free smartphone app, that allows people to report civic problems from illegal dumping to potholes, (ii) an Okanagan group puts up trail cameras to catch illegal dumpers, and (iii) 1200 people volunteered as garbage collectors needed for local Spring Clean-up in Prince George. [Benchmarking and modifying these activities could be of interest.]

On April 28, Canada marked the national Day of Mourning for those killed and injured in work-related tragedies. Events and ceremonies in BC were announced at dayofmourning.bc.ca. WorkSafe BC acknowledged that past exposure to asbestos is still the leading cause of toxic exposure worker deaths in the province, and its incidence is not declining similar to work-related deaths due to injuries [the reason is probably related to the long interval between exposure to asbestos and developing cancer]. It was reported that in 2016, there were 144 work-related deaths in B.C. - 85 caused by occupational disease [mainly] from exposure to asbestos decades ago, and 59 that resulted from traumatic injury. It is also stated that asbestos studies can cost from \$3,000 to \$4,000 and noted it can add up to \$15,000 onto a demolition.

In May, potential problems with regards to mold were found in 51 units of a Kelowna mobile home park.

Environmental toxicology in BC also benefitted in May as it was announced that Vancouverites can now be fined \$500 for improperly discarding cigarettes [Fire related], and also carbon monoxide alarms will be mandatory for all residential buildings in Vancouver [with some exceptions]. Recently authorities have stated that lack of venting and carbon monoxide exposure was the cause of death of a family of four near Ashcroft.

While all parties are concerned about local toxicological issues, the BC election highlighted certain differences between BC Liberals, NDP and Green parties [The following issues were selected out of a number of media/online reports and do not cover all parties' views nor reflects the overall extensive plan of different parties with regards to local toxicology issues.] According to the media, the BC Liberals were in favour of the Kinder Morgan pipeline [under certain conditions] and the Site C Dam and opposed to carbon tax methane emission. This is in contrast with NDP and Green party positions. Both NDP and Green parties are in favour of reviewing the Water Sustainability Act, which was successfully passed in 2015 by the Liberals. In addition, the Greens approve implementing a zero emission vehicle standard in BC, a view which is apparently not shared by BC Liberals and the NDP. All three parties are deeply concerned on fentanyl overdose deaths. According to a report, the BC Liberals consider the issue "above politics", and are going to use the revenue from legalization of marijuana to pay for programs to help those addicted. Media

reported that both NDP and Green are willing to establish a Ministry of Mental Health and Addictions to improve the situation. The NDP emphasizes the importance of safe injection sites and enforcement to prevent fentanyl coming into the country. The Green Party suggests modelling successful programs from Europe. Both the NDP and Green parties put a heavy emphasis on early intervention....etc.

Water quality in schools has received media attention. Apparently, high lead levels in drinking water have been reported in Nanaimo. The BC Education Minister is moving to an annual program that tests the safety of school water.

Although not from BC, a new smartphone app called Harmful Nova Scotia Plants [mushrooms] have been developed that can help users identify which ones are poisonous.

The majority of food toxicology related to food recalls in May in BC was related to undeclared peanut, wheat, egg, soy and gluten allergens. High alcohol contents were also detected.

Domoic acid was not detected in any samples in March (BCTOX 2(3)2017), although few positive samples are reported in April and May and Shellfish samples, none of which were above the threshold. Saxitoxin, in very high values, have been reported in 2017 and intensified in May.

Reports show that the numbers of dead seabirds are increasing in southern California, which is blamed on Domoic acid. [It is plausible that a similar effect would occur in BC later this year.]

It is speculated that there are more than 120 tailings dams across BC, holding back a century of toxic mining detritus.

In May a new study was published on mobile measurement of methane emissions from natural gas developments in Northeastern BC raising the concerns from Hydraulic fracturing activities.

Although a decrease in opioid overdose deaths in BC in January and February was promising, 136 cases died in April which is almost twice the amount compared to the same month last year and 30% higher than March. In May, the concept of mandating someone to perform CPR on a fentanyl overdose case, and restrictions on other mode of addiction than just injections to be supervised in centres were challenged. A women-only overdose prevention site opened in Vancouver's Downtown Eastside. Drug tests at B.C. supervised injection site found 80% contained fentanyl.

In this month, it was noted that the higher doses of naloxone is needed to revive recent cases by some physicians. New fentanyl analogues including carfentanyl and acrylfentanyl were blamed for naloxone resistance.

A new initiative from BC, i.e. in site testing for fentanyl, seems to be promising to control overdoses. B.C. clients at Vancouver's Insite injection site were 10 times more likely to reduce their dose after a positive test, lead to reduce the chance of overdose by 1/4.

At the international level, the United States pulled out (expected on 1st June) of the Paris climate agreement, which would have negative impacts on environmental toxicology issues.



6. Toxic Spills/Dumps

Incident/ report date	Description	Source
2017-05-17	Enderby Fuel Truck Spill. All of the gas and diesel left in the tanks has been pumped off and removed from the site. A rainbow sheen was noted outside two layers of boom in the flooded field, downhill from the incident site. Another sorbent boom was placed on the outside of the present booms to contain the escaped sheen.	BC GOV
2017-05-16	Sunken Tug in Shuswap Lake.	BC GOV
	Spill 4,090 litres of gasoline and 12,500 litres of diesel into a flooded field near the river, according to an Interior Health release.	<u>INFO</u>
2017-05-09	Pharmacists in British Columbia helped residents safely destroy 88.7 tonnes of expired or unused medications in 2016, reports the Health Product Stewardship Association (HPSA) which manages the Medications Return Program in the province.	CNW
2017-05-06	The City of Nanaimo has launched a free smartphone app, Nanaimo Recycles, that'll send reminders before collection days, alert residents to any emergency preventing pick up, and allows people to report civic problems from illegal dumping to potholes.	NANAIMONEW SB
2017-05-05	Okanagan group puts up trail cameras to catch illegal dumpers	<u>CBCNEWS</u>
	'Our group speaks for all the wildlife out there that's sick of walking on broken glass, people's garbage	
2017-05-04	Environmental lawsuit against province over jet fuel spill approved by B.C. court	<u>CBCNEWS</u>
	35,000 litres of jet fuel spilled into the Slocan River water system in 2013	
2017-04-29	1200 people volunteered as garbage collectors needed for local Spring Clean-up. REAPS Prince George is holding its annual Spring Clean-up (weekend), collecting garbage and waste across town in an effort to make the city better.	MYPRINCEGEO RGENOW
2017-04-21	Johnson Street shut down after 'suspicious' package dumped in garbage	
2017-04-20	Water samples were taken on three separate days after gear oil spilled from the Kootenay Lake Ferry	<u>CHEK</u>
2017-04-19	Nanaimo Curling Rink Incident. The discharge resulted from the draining of a chiller (refrigerator) which activated their low level alarm, leading to the evacuation.	BC GOV
2017-04-19	If you would like to get involved with cleaning up the Okanagan forests please contact OFTF or check out the app. To report an illegal dumpsite please e-mail info@rdos.bc.ca or call 1-866-566-3867 (1-866-5 NO DUMP).	BCLOCALNEWS
2017-04-17	Health officials urge caution after ferry spills 400 lit gear oil into Kootenay Lake. Kootenay Balfour Ferry (2017-04-15).	CTVNEWS BCGOV
2017-04-16	Absorbent pads and a boom are being used to contain and mop up the oil. There doesn't appear to be any drinking water intakes in the area, but people should avoid swimming or letting their pets in the water there. The ferry is expected to be out of service for at least another month. The B.C. Ministry of Environment said that rain Saturday night also helped flush some of the oil out of the lake.	<u>CBCNEWS</u>
2017-04-13	Food and garbage can lure bears. Bears can become dependent on human food. (Spring and after hibernating)	SQUAMISHCHIEF
2017-04-10	Selkirk Vessel Fire, Victoria	BC GOV
2017-04-07	Motor Vehicle Incident near Elkford. The estimated volume spilled to the ditch is 5,000 - 6,000 L of diesel fuel.	BC GOV
2017-04-03	Lemon Creek class action suit can precede, court says, an incident in 2013 when a tanker truck overturned into Lemon Creek, spilling 33,000 litres of jet fuel. The fuel spill forced the evacuation of thousands of residents in the Slocan Valley. The law firm representing 2,500 residents says it's the first such environmental lawsuit certified by the court against the province of B.C.	NELSON STAR
2017-04-07	B.C. Election 2017: NDP, Greens, Liberals agree mining is important, but must protect environment.	<u>VAN SUN</u>
2017-04-05	Clean-up underway after 1,000 litres of bio diesel spills at B.C. fish farm off Vancouver Island's north coast (from a fuel tank at an Atlantic salmon aquaculture site in Echo Bay, about 70 kilometres east of Port Hardy). The spill is a threat to more than 50 beaches where First Nations in the area often gather clams. Although controversial, it took seven hours from the time the spill was detected for responders other than those working for the fish farm to arrive.	<u>VAN SUN</u>
2017-04-24	40 to 50-foot sunken boat causes fuel spill in Fraser River.	<u>GLOBALNEWS</u>
2017-04-14	Teck says no damage to tailings facility after 850,000 litre pipeline spill. The Highland Valley Copper mine has had a number of serious incidents lately, union claims (April 08)	CBCNEWS



7. Pesticide (Insecticides, glyphosate)

Incident/ report date	Description	Source
2017-05-19	Aircraft over Elk Lake and Bear Hill Regional Park applied the first spraying of pesticides meant to eradicate invasive gypsy moths.	TIMES COLONIST
2017-05-17	Consumer demand for organic still growing.	MAPLE RIDGE-PITT
2017-05-17	Raising fish in containers on land is eco-friendly [pesticide exposure should be lower]. The next step is growing vegetables in the same water.	BC BUSINESS

8. Mold, Asbestos

Incident/ report date	Description	Source
2017-05-21	Mould, potential problems found in 51 units of Kelowna mobile home park	GLOBAL NEWS
2017-05	World nations failed to add chrysotile, or white asbestos, to a list of dangerous substances that would have prevented the export of the product without the consent of the importing country.	LEXOLOGY
2017-04-14	One CHBA member said asbestos studies can cost from \$3,000 to \$4,000 and noted it can add up to \$15,000 onto a demolition.	MERRITTHERALD
	Asbestos is the leading cause of [toxicology related] worker deaths in province, according to WorkSafe BC.	

9. Fire, smoking, allergy

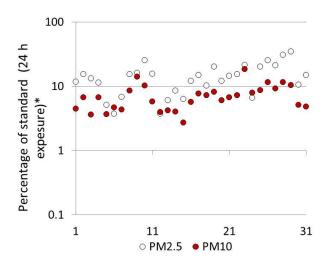
Incident/ report date	Description	Source
2017-05-17	Vancouverites can now be fined \$500 for improperly discarding cigarettes [Fire related]/ Carbon monoxide alarms will now be mandatory for all residential buildings in Vancouver. An exception will exist for homes with no fuel-fired appliances and no attached garage.	GLOBAL NEWS
2017-04-03	Carbon monoxide detectors to be required in all Island homes by next year (provincial fire marshal Dave Rossiter).	CBCNEWS

10. Air high exposure

Incident/ report date	Description	Area Location		
2017-04-28	B.C. Councillors in K	amloops	have called on experts (medical health officer Kamran Golmohammadi and air quality meteorologist Ralph Adams) to advise them on any health effects of a controversial gold and copper mine proposed for the outskirts of the city.	<u>VERNON</u> <u>MORING STAR</u>



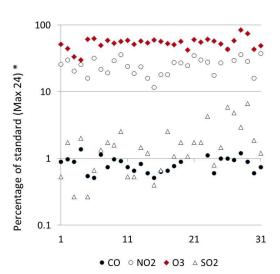
11. Air temperature and pollution



Air pollution (Particulate matters; ° 2.5 and • 10 µg/m³)
Percentage of average 24 h exposure and acceptable levels (EPA) for 24 h exposure.

Vancouver-Airport - 2017-05.

Data obtained from the Ministry of Environment.



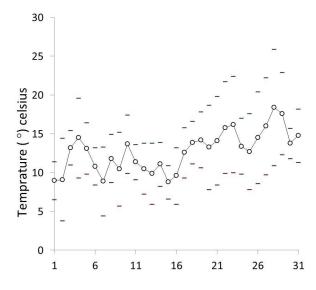
Air pollution

Percentage of Max 1 h exposure per day and acceptable levels for 1 hour exposure (EPA).

Vancouver-Airport - 2017-05.

Data obtained from the Ministry of Environment.

* This graph is incorporating the average daily standard and certain EPA values. It should be treated with causian.



- Max Temp - Min Temp - Mean Temp

Air temperature (C), Vancouver international airport, 2017-05 Data obtained from $\underline{\text{Government of Canada}}$

Average temperature increased by more than 3.3 $^{\circ\,\text{C}}$

^{*} This graph is incorporating the average daily standard and certain EPA values. It should be treated with causian.





12. International, Canada and BC major events

Global; Garbage/Damp





A portion of the 91-metre dump collapsed following a fire incident as the residents celebrated the traditional Sri Lankan New Year, burying dozens (31 deaths reported) of residential buildings and trapping many people in Meetotamulla area in Kolonnawa, Seri Lanka. [House was built on the damp) (telangantoday)

Day of Mourning



Dead seabirds (Domoic acid (?) related]



Attendees at Vancouver's Day of Mourning Ceremony place roses at the Workers' Memorial Sanctuary in honour of those who died on the job or from work-related illness. 2017 <u>Journal of commerce</u>

This dead pelican washed up on a beach in Monterey bay during the toxic algal bloom in May 2015. Researchers do not know exactly why the pelican died, but its stomach contained extremely high concentrations of domoic acid. Credit: Kim Fulton-Bennett © 2015 MBARI Science daily



13. BC Politics

B.C. Election: Where do party leaders stand? [The following issues are selected out of a number of media/online reports and do not cover all parties' views nor reflects the overall extensive plan of different parities with regards to local toxicology issues.]

A. Environment toxicology issues (thanks to Lorraine McIntyre) 1 & 2

	BC Liberals	NDP	Green
Kinder Morgan pipeline Apply carbon tax to methane emission from oil and gas production?	Approve Oppose	Oppose Approve	Oppose Approve
Site C Dam LNG / Fracking	Approve Approve 3 plants and begin construction by 2020	Review Review (BC assessment) Partner with First Nations Appoint a scientific panel to ensure gas is produced safely	Oppose No specific mention, but Andrew Weaver is quoted as saying "their (Liberal) outdated, enthrallment with gigantic, environmentally damaging projects is breath-taking"
Implement a zero emission vehicle standard in BC	Oppose	Oppose	Approve
Fish Farms	Increase domestic production and exports	Implement Cohen commission, keep farm sites out of salmon migration routes	Make a climate resilience plan with industrial sectors
	Create a research centre	Incentives for closed containment	
Water	Passed the Water Sustainability Act 2015	Improve drinking water quality in BC communities Review Act, ensure high volume water users are paying fees	Develop resilient water infrastructure Review Act, water allocation and licensing Data gathering, collaborative planning

B. Overdose crisis

Based on	GLOBAL NEWS (May 04)	
Dasca on	GEODITE HETTS (ITILY 01)	

BC Liberals

- As a mother she is deeply concerned about the crisis, which she considers to be "above politics." BC Liberals leader Christy Clark said
- The Liberals have promised to set aside future revenue from legalization of marijuana to pay for programs to help those addicted to opioids/other drugs.
- The party will use the additional \$10 million provided by the federal government to continue to prevent overdose deaths.

BC NDP

- John Horgan promised to improve mental health and addictions services by creating a Ministry of Mental Health and Addictions, implementing an "ask
 once, get help fast" approach, re-opening facilities at Riverview, supporting students in the school system and taking action to address the overdose
 crisis.
- Emphasized the importance of safe injection sites and enforcement to make sure fentanyl, a potent opioid that has played a major role in the growing overdose crisis, is not coming into the country.
- It is sitting in an envelope somewhere waiting for action," said Horgan. "We need to take action now.

BC Green Party

- Andrew Weaver said an ounce of prevention is worth a pound of cure.
- "Problems develop if you don't have the services available when children are young," To develop an immediate response to the fentanyl crisis based
 on successful programs in Europe that invest in treatment on demand, drug substitution, early-winning monitoring systems and coordinated response.
- The party plans to establish a ministry responsible for mental health and addictions.



14. [Drinking] water high exposure

Incident/ report date	Description	Source
2017-05-24	Nanaimo school district parents request more water filtration systems	NNAIMONEWS BULLETIN
2017-05-24	B.C. water and wastewater sector facing labour shortage. According to the BC Water and Waste Water Sector Workforce Profile, because of retirements, attrition and sector growth, 3,320 new employees are required between 2015 and 2025	J OF COMMERCE
2017-05-12	Flooding raises water quality concerns in B.C. Interior. //You can always be more secure by boiling water if you're concerned in any way if it's very turbid or there's some signs it doesn't look good, yeah, definitely"	<u>CBCNEWS</u>
2017-05-11	City of Prince George hosting open house during BC Water Week. "Prince George has a high water consumption rate. Residential water consumption in the city was 588 litres per person per day in 2015 and that's a really high number compared to the rest of the other parts of the country and province"	MYPRINCEGEO RGENOW
2017-05-15	Stage 1 water restrictions begin in Metro Vancouver on May 15. Anyone caught breaking the rules could be fined $$250$	GLOBALNEWS
2017-05-02	Nanaimo-Ladysmith school district, SD68 finds lead in water of two Ladysmith schools	<u>LADYSMITHCHRO</u>
2017-04-18	Dangerous levels of lead found in water at Nanaimo schools	<u>CTVNEWS</u>
2017-04-18	Education Minister Mike Bernier. B.C. is moving to an annual program that tests the safety of school water/	<u>VAN SUN</u>
	Dr Perry Kendall, who helped push the issue in Greater Victoria more than 20 years ago, he was surprised to hear about the issue [lead in drinking water] again.	

15. Food high exposure

Incident/ report date	Descripti	on	Source
2017-05-23	California	Man dies after being sickened in apparent botulism outbreak	BROWNGROUPDEM
2017-05-12		Leaf rust epidemic (HONDURAS) that is caused by a fungus, Hemileia vastatrix, and causes coffee leaf rust; the industry's worst fear since outbreaks this year	DAILYCOFFEENEWS
2017-04-26	across Verdun	Posters have been set up in warning residents that someone in the area may be trying to poison cats. Tins of cat food, possibly laced with a rat poison-like substance, were allegedly found between 3rd and 4th avenues, and Verdun and Wellington streets.	GLOBALNEWS
2017-03-27	Nova Scotia	A new smartphone app called Harmful Nova Scotia Plants can help users identify which plants are poisonous	<u>CBCNEWS</u>

16. Food recalls

Incident date	Food (Company / Firm)	Reason to recall	azard sification	Distribution/Link
2017-05-30	Thalassa brand Seafood & Fish Mix	Egg (Allergen)	1	POSSI-NATIONAL
2017-05-23	Various imported corn snacks	Undeclared peanut, wheat, gluten, egg and soy (Allergen)	1	ALBERTA, BC, ON
2017-05-12	Lupin may cause allergic reactions in peanut allergic consumers	Consumer Advisory		<u>CA-CFIA</u>
2017-05-11	Tiny Tummies brand Scarlett's Sweet Beets Blend Baby	Potential presence of whole pit or pit pieces	s 2	<u>BC</u>
2017-05-03	Update, Bombay Sapphire brand London Dry Gin	High alcohol content	2	<u>NATIONAL</u>
2017-05-02	Bombay Sapphire brand London Dry Gin	High alcohol content	2	POSSI-NATIONAL

CFIA Canadian Food Inspection Agency



17. Soil high exposure

		,	•	
Incident/ report date	Contaminant	Area	Report	Source
2017-05-30	Mercury	ON	Between 1962 and 1970, the Dryden paper plant, dumped 10 tonnes of mercury into the river. The mercury, contaminated the fish, which poisoned the people of Grassy Narrows and nearby Whitedog First Nation who live about 100 kilometres downstream. High levels of mercury in soil, fish and sediment today suggest the site is still leaking, about 50 years on. [Re clean up]]	THESTAR
2017-05-05	Cigarette butts	ВС	Vernon will be participating in the Canada wide initiative to clean up communities and raise awareness about the impact of cigarette butts.	BCLOCALNEWS
2017-04-27	Methane	ВС	Canada's Methane Leakage Massively Under-reported, Studies Find. New data shows 'fracking and LNG industry is a much dirtier industry than it is made out to be	THETYEE
2017-04-12	Tailings dams	ВС	There are more than 120 tailings dams across British Columbia today, holding back a century of toxic mining detritus. Unless this number can be reduced, an average of two B.C. dams are predicted to fail in each coming decade.	THETYEE
2017 <u>-03-</u> 12	Toluene, Xylene, Benzene Ethylbenzene	ВС	A Saanich family is living an almost unimaginable nightmare, thanks to contaminated soil left behind by the previous owners.	Global News

18. Acute toxicity & occupational

Incident date	Who	News	Distribution/Link
2017-04-10	The cause of carbon monoxide exposus system in the family's home according	are that left a family of four dead near Ashcroft, was e lack of a venting to B.C. Safety Authority.	<u>iNFO</u>

19. Chronic toxicity & occupational

		A	
Incident date	Who	Description	Source
2017-04-28	•	eaths in B.C. $-$ 85 caused by occupational disease from exposure to ted from traumatic injury, including 22 from motor-vehicle incident	
2017-04-28	,	ning across B.C. compared with occupation-related diseases, such as e according to WorkSafe B.C. spokeswoman Trish Chernecki.	s <u>VANSUN</u>
		nal Day of Mourning for those killed and injured in work-related ss B.C. can be found at <i>dayofmourning.bc.ca</i>	

20. Forests

Incident date	Who	Description	Source
2017-04&05	No news returned		

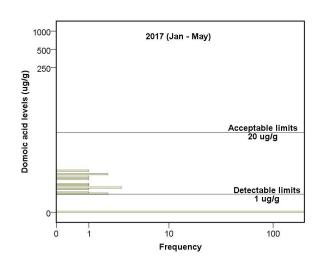


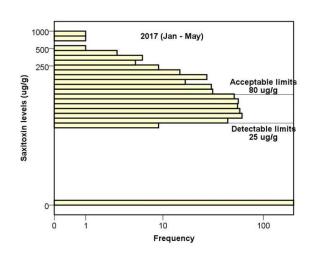
21. Marine biotoxins

Marine biotoxins (January to May 2017)

Domoic acid (ug/g) Amnesic shellfish poisoning SP

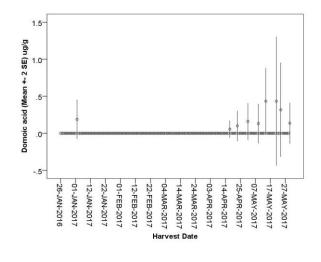
Saxitoxin (ugeq/100g)
Paralytic shellfish poisoning

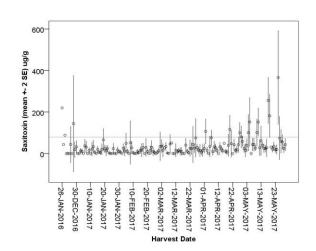




Histogram of concentrations Domoic acid among [shellfish] samples in BC (January to May 2017) (n=1373)

Histogram of Saxitoxin concentrations among [shellfish] samples in BC (January to May 2017) (n=1459)





Mean (± SEM) concentrations of Domoic acid (ug/g) among [shellfish] samples in BC (January to May 2017) (n=1373)

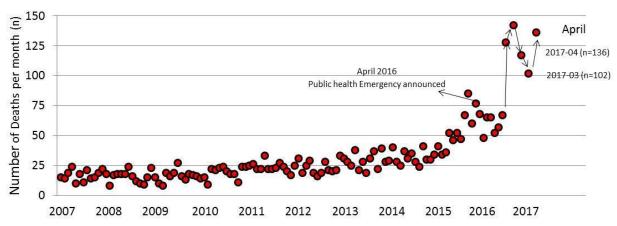
Mean (± SEM) concentrations of Saxitoxin (ug/100g) among [shellfish] samples in BC (January to May 2017) (n=1459)

Domoic acid concentrations were negative in winter 2017, but detectable cases were reported in April and May, all of which were below 20 ug/g regulatory limits. Saxitoxin levels were detected throughout the winter and spring, many of which were above 80 ug/100g regulatory limits. Very high concentrations are reported in May. The concentrations of undetected samples were considered to be zero in these graphs. Data obtained from CFIA.

DSP



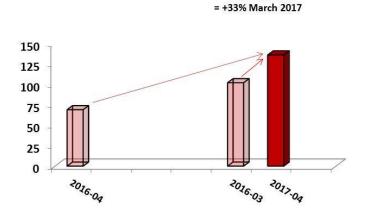




Fentanyl overdose induced deaths per month in BC (2007 to April 2017)

April 2017

= + 97% April 2016



The number of opioid overdose deaths in April 2017 was 97% higher than April last year and 33% higher than last month.

Incident/ report date	Who	No of samples/Results	Source
2017-05-27	Dr. Perry Kendall	All [not just injections] modes of consumption can be dangerous and should be supervised, so it's incomprehensible to me that there would currently be this restriction	INFONEWS
		Health Canada approves new supervised consumption sites in B.C	
2017-05-03	Gavin Hayes,	A director with the Canadian arm of the Association of Public Safety Communications Officials, whose organization represents people in the 911 industry. "We cannot mandate someone to perform CPR"	HUFFPOST
2017-05-26	Dr Jane Buxton	We are aware that some people are still re-using needles and sharing needles," says the centre's medical lead for harm reduction, Jane Buxton. Stigma and shame can discourage drug users from accessing their local needle exchange.//	MACLEAN'S
		Vancouver's opioid crisis can be measured in discarded needles. B.C.'s illicit-drug users are going through 15 million needles a year, and a lot wind up in alleys, parks and playgrounds.	





2016			
2017-05-24	Vancouver mayor Gregor Robertson	Vancouver hosts public forum focused on opioid crisis. [& Dr. Patricia Daly]	<u>NEWS1130</u>
2017-05-19			<u>CBCNEWS</u>
		Women-only overdose prevention site opens in Vancouver's Downtown Eastside. SisterSpace at 135 Dunlevy Street can accommodate up to 15 women at a time in a monitored and safe space	
2017-05-19	Andrea Woo	Opioid crisis being overlooked in B.C. election as death toll spikes.// Both the NDP and Green parties put a heavy emphasis on early intervention. The Greens say they would spend \$80-million over three years on youth mental health and related initiatives.	GLOBAL & MAIL
2017-05-19	Dr Paul Hasselback	The innovating drug industry is the reason why things aren't getting better in spite of services being provided i.e. fentanyl, followed by January of last year 3-Methylfentanyl and in November carfentanil hitting the streets.	NANAIMO NEWS BULLETIN
2017-05-17	Dr. Richard Stanwick	"He has heard of some cases in local emergency rooms in which operators have had to use five to six doses of naloxone, rather than the one or two it normally takes to revive someone who has overdosed on fentanyl." There is the possibility of some form of fentanyl being mixed in with drugs.	VICTORIA NEWS
2017-05-17	Dr. Del Dorscheid, St. Paul's Hospital	We will lose an entire generation to fentanyl crisis. He alleged that the province's strategy as "almost without purpose".	GLOBAL NEWS
2017-05-15	Health Minister Sarah Hoffman	Alberta looks into do-it-yourself fentanyl tests after positive results out of B.C. Clients at Vancouver's Insite injection site were 10 times more likely to reduce their dose after a positive test, lead to reduce the chance of overdose by 1/4.	EDMONTON JOURNAL
2017-05-16	Dr. Mark Lysyshyn, MHO - VCH	Drug tests at B.C. supervised injection site found 80% contained fentanyl	<u>CITY NEWS</u>
2017-04-25	Dr. Mark Tyndall	"I have yet to meet anyone who has stopped using drugs because they have been jailed or criminalized"	<u>CTVNEWS</u>
2017-04-14	Dr. Mark Tyndall	The response to the crisis included discussion about the need to open supervised consumption sites and consider prescription opiates, similar to what experts have pushed for as the fentanyl crisis continues to claim lives.	<u>INFONEWS</u>
2017-05-14	Dr. Mark Lysyshyn, MHO - VCH	Drug users who test their drugs and discover fentanyl are 10 times more likely to reduce their dose, raising the possibility that making such tests widely available could reduce overdoses.	THEGLOBAL&MAIL
2017-05-12	Staff Sgt. Conor King, VictoriaCity PoliceDep	Workshop details risk fentanyl poses to first responders on Vancouver Island.	BCLOCALNEWS
2017-05-08	Acting chief coroner Heather Jones	Coroner links five Yukon deaths to fentanyl	YUCONNEWS
2017-05-04	Woodside (Woodside)	Four people died of overdose fatality per day in B.C	VANSUN
2017-05-04	Dr. Perry Kendall	New fentanyl types make overdose response tougher. Multiple fentanyl analogues [Acrylfentanyl].	<u>CBCNEWS</u>
2017-05-03	Dr. Perry Kendall	At least 40 different fentanyl analogues created to intensify or prolong a user's high. Antidote concerns with new strains of fentanyl in B.C.	CTVNEW TIMESCOLONIST
		Acryl fentanyl promises a longer high and has started emerging in the United States, raising concerns because it's highly resistant to the Narcan antidote.	VANSUN
2017-05-03	One of the Red Cross official	Fentanyl a risk; first-aiders can say no to CPR	CTVNEWS
2017-05-01	B.C. First Nations	Fentanyl crisis disproportionately affecting their communities?	<u>CBCNEWS</u>



23. Selected BC related toxicology articles

Date	Author		Where
2017-05	Makey CM, Dix-Cooper L	Airborne precursors predict maternal serum perfluoroalkyl acid (PFAA) concentrations.	ENVIRON SCI TECHNOL. 2017 MAY 23.
2017-05	Hong KY, Henderson SB	Seasonal ambient particulate matter and population health outcomes among communities impacted by road dust in British Columbia, Canada.	J AIR WASTE MANAG ASSOC. 2017 MAY 12.
2017-05	Kerr T., et al	Supervised injection facilities in Canada: past, present, and future.	HARM REDUCT J. 2017 MAY 18;14(1):28.
2017-05	Boyd S., et al.	Telling our stories: heroin-assisted treatment and SNAP activism in the Downtown Eastside of Vancouver.	HARM REDUCT J. 2017 MAY 18;14(1):27.
2017-05	Boucher LM, Tyndall M.	Expanding conceptualizations of harm reduction: results from a qualitative community-based participatory research study with people who inject drugs.	HARM REDUCT J. 2017 MAY 12;14(1):18.
2017-05	Emmaline A D.	Mobile measurement of methane emissions from natural gas developments in Northeastern British Columbia, Canada	ATMOS. CHEM. PHYS. DISCUSS
2017-04	Hasselback P	Guest column: Overdose prevention sites save lives	LAKE COWICHAB GAZETTE

24. Meetings

Date	Title	Where
2017-05-25	<i>NCCEH</i> - eJournal Club - May 2017. The Geographic Distribution of Liver Cancer in Canada Does Not Associate with Cyanobacterial Toxin Exposure (Labine et al., 2015).	<u>Online</u>
2017-05-25	The Epidemiology of Airborne Pollutants and Autism, by Dr. Amy Kalkbrenner	<u>Online</u>

25. Other conferences

Date	Title Where	
2017-10-01/04	Canadian Ecotoxicity Workshop, 44th CEW 2017	<u>GUELPH</u>
2017-11-29 to 2017-12-01	The Society of Toxicology of Canada 49th Annual Symposium, Winter 2017 November 29–December 1, 2017	
2017-10-11/15	North American Congress of Clinical Toxicology (NACCT) Congress 2017	VANCOUVER

26. Toxicology jobs in BC

Date	Title	Where
2017-10-11/15	Scientific Director, Provincial Toxicology Centre	PHSA-VANCOUVER

27. Other

Incident/ report date	Who	Area Location	Description		Source
2017-05-31	Hundreds of dead	seabirds, sea lions wa	ash up in southern California (blamed on	Domoic acid)	HP CBS VCSTAR
2017-05-28			on members opposed to the expansion c y long march from Victoria to Burnaby Su	· ·	CTVNEWS
2017-05-22	Sea lion drags girl	into water in Richmon	nd, BC		CBCNEWS
2017-05-21	Over 50 cates wer the urine by the B	,	environment, with feces everywhere and	d high levels of ammonia from	KLOWNANOW
2017-05-17	US health agencie	s warn some lead pois	soning tests may not be accurate.		CTV US FDA
2017-05-13	Land use and clim	ate change could incre	ease flood frequency.		CBCNEWS