

# ENVIRONMENTAL HEALTH RESEARCH SCAN

## WITH COVID-19 SECTIONS

### VOL 5 (10) OCTOBER 2022



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#### *Environmental Health (EH) Research Scan: Aims and Scope*

NCCEH's EH Research Scan aims to expand awareness of topics in environmental health, in line with [NCCEH's vision](#) to be the indispensable online resource for environmental health practitioners and policy-makers across Canada. This research scan is not peer reviewed; it does not cover all research, news, and information, and NCCEH is not responsible for the accuracy of the content from media or databases. Not all links are open access; some are abstract links where paid journal subscription is required.

**COVID-19 Publications** are listed in the sections above and there are also **COVID-19 Additional Topics**.

## EDITOR PICKS

### Pandemic experiences with manual ventilation and CO2 sensing in schools [evidence review]

Angela Eykelbosh, Knowledge Translation Scientist, NCCEH

*“The purpose of this review is to help public health professionals, educators, and school administrators understand whether manual ventilation protocols are effective as an emergency measure in schools, especially over the cold winter months, and whether CO<sub>2</sub> sensors further improved ventilation behaviour.”*



### The health impacts of drought in Canada [topic page]

Leah Rosenkrantz, Knowledge Translation Scientist, NCCEH

*“The resources presented below provide information for monitoring and forecasting drought across Canada, as well as the connection between drought and human health. Finally, adaptation strategies for drought are also highlighted.”*



### We don't need a better rat trap: reconceptualizing municipal rat management [webinar]

Michael Joseph Lee, School of Population and Public Health, UBC and Environmental Health Services, BCCDC, Canadian Wildlife Health Cooperative

*“This webinar will present a project designed to understand the state of municipal rat management with a view towards providing recommendations for cities seeking to develop or improve their own rat management strategies.”*



### Climate change and opportunistic pathogens (OPs) in the built environment. [webinar], Oct 26, 12-1 PT

Juliette O'Keefe, Knowledge Translation Scientist, National Collaborating Centre for Environmental Health

*“This presentation explores some of the ways that climate change could influence the occurrence of and exposure to OPs in our urban centres, and some of the measures that can be taken to reduce the risks.”*

*Environmental Health Review [paper](#) – October 13, 2022*



### Putting environmental health equity on the map [webinar]

Jeffrey Brook, Scientific Director and Nominated Principal Investigator, CANUE, Co-Director, HealthyDesign.City and Dany Doiron, Managing Director, CANUE, Co-Director, HealthDesign.City [Recording from September 22, 2022]

*“This webinar will present HealthyPlan.City, a new pan-Canadian tool that combines land surface temperature and tree canopy cover data with socio-demographic data to show areas of ‘equity priority’ where higher proportions of vulnerable populations (older adults, children, low-income individuals, visible minority individuals, and people who live alone) and hotter temperatures coincide.”*



## Supporting foodborne outbreak investigations: a review of the use of whole genome sequencing and emerging technologies [evidence review]

Ken Diplock, Professor, Conestoga College

*“This paper is the first in a series that provides guidance for the collaborative investigation of foodborne outbreaks. The focus of this first document is a review of WGS and other emerging technologies in foodborne outbreak investigations.”*



NCCEH eNews (Sep 2022): Red tides and health risks for recreational water users; more... [eNews]  
National Collaborating Centre for Environmental Health



# ENVIRONMENTAL HEALTH RESEARCH SCAN

## SELECTED PUBLICATIONS

1. Eykelbosh A. **Pandemic experiences with manual ventilation and CO2 sensing in schools [evidence review]**. 2022 Oct 12. Available from: <https://ncceh.ca/documents/pandemic-experiences-manual-ventilation-and-co2-sensing-schools>.
2. Henderson SB, Lamothe F, Yao J, Plante C, Donaldson S, Stranberg R, et al. **Improving attribution of extreme heat deaths through interagency cooperation**. Can J Public Health. 2022;113(5):698-702. Available from: <https://link.springer.com/article/10.17269/s41997-022-00672-2>.
3. Khan SM, Gomes J, Nicol A-M. **Residents’ perception and worldview about radon control policy in Canada: A pro-equity social justice lens**. Frontiers in Public Health. 2022;10. Available from: <https://www.frontiersin.org/articles/10.3389/fpubh.2022.946652>.
4. Michelle Eliot speaks with Sarah Henderson. **Wildfire smoke and breathing issues [podcast]**. BC Today. 2022 09 11. Available from: <https://podcasts.apple.com/dk/podcast/wildfire-smoke-and-breathing-issues-pierre-poilievre/id352379198?i=1000579245083&l=da>.
5. National Collaborating Centre for Environmental Health. **September research scan with COVID-19 sections [blog]**. Vancouver, BC: NCCEH; 2022 Sep 21. Available from: <https://ncceh.ca/content/blog/september-research-scan-covid-19-sections-1>.
6. National Collaborating Centre for Environmental Health. **NCCEH eNews (Sep 2022) : Red tides and health risks for recreational water users; more...** Vancouver, BC: NCCEH; 2022 Sep 22. Available from: <https://tinyurl.com/3brnm83f>.
7. O’Keeffe J. **Climate change and opportunistic pathogens (OPs) in the built environment**. Environ Health Rev. 2022 10 16;65(3):69-76. Available from: <https://pubs.ciphi.ca/doi/abs/10.5864/d2022-016>.
8. O’Keeffe J. **Climate change and opportunistic pathogens (OPs) in the built environment [webinar]**. Vancouver, BC: National Collaborating Centre for Environmental Health; 2022 10 26 Oct 26. Available from: <https://ncceh.ca/content/ncceh-environmental-health-seminar-series>.

## INDIGENOUS ENVIRONMENTAL HEALTH

1. Huyser KR, Yellow Horse AJ, Collins KA, Fischer J, Jessome MG, Ronayne ET, et al. **Understanding the Associations among Social Vulnerabilities, Indigenous Peoples, and COVID-19 Cases within Canadian Health Regions.** *Int J Environ Res Public Health.* 2022;19(19):12409. Available from: <https://www.mdpi.com/1660-4601/19/19/12409>.
2. Macfarlane R, Charles-Norris KA, Warren SK, Mahendra A, Butler AJ, Hayes K, et al. **Two-Eyed Seeing: Seeking Indigenous Knowledge to strengthen climate change adaptation planning in public health.** *Environ Health Rev.* 2022;65(3):77-82. Available from: <https://pubs.ciphi.ca/doi/abs/10.5864/d2022-017>.
3. O'Malley J. **Climate Change Comes for the Freezers, a Key Tool for Alaska Natives.** *New York Times.* 2022 Oct 4. Available from: <https://www.nytimes.com/2022/10/04/dining/climate-change-freezers-alaska-natives.html#:~:text=the%20main%20story-,Climate%20Change%20Comes%20for%20the%20Freezers%2C%20a%20Key%20Tool%20for,store%20their%20traditional%20subsistence%20foods>.
4. Perreault K, Dufresne P, Potvin L, Riva M. **Housing as a determinant of Inuit mental health: associations between improved housing measures and decline in psychological distress after rehousing in Nunavut and Nunavik.** *Can J Public Health.* 2022. Available from: <https://doi.org/10.17269/s41997-022-00701-0>.

## AGRICULTURAL OPERATIONS

1. Wyer KE, Kelleghan DB, Blanes-Vidal V, Schaubberger G, Curran TP. **Ammonia emissions from agriculture and their contribution to fine particulate matter: A review of implications for human health.** *J Environ Manage.* 2022;323:116285. Available from: <https://www.sciencedirect.com/science/article/pii/S0301479722018588>.

## BIOLOGICAL AGENTS

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## BUILT ENVIRONMENT

1. Astell-Burt T, Hartig T, Putra IGNE, Walsan R, Dendup T, Feng X. **Green space and loneliness: A systematic review with theoretical and methodological guidance for future research.** *Sci Total Environ.* 2022;847:157521. Available from: <https://www.sciencedirect.com/science/article/pii/S0048969722046198>.
2. Becker S, von Schneidemesser D, Caseiro A, Götting K, Schmitz S, von Schneidemesser E. **Pop-up cycling infrastructure as a niche innovation for sustainable transportation in European cities: An inter- and transdisciplinary case study of Berlin.** *Sustainable Cities and Society.* 2022;87:104168. Available from: <https://www.sciencedirect.com/science/article/pii/S2210670722004814>.
3. Biswal BK, Bolan N, Zhu Y-G, Balasubramanian R. **Nature-based Systems (Nbs) for mitigation of stormwater and air pollution in urban areas: A review.** *Resources, Conservation & Recycling.* 2022;186. Available from: <https://doi.org/10.1016/j.resconrec.2022.106578>.
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5. Frehlich L, Christie CD, Ronksley PE, Turin TC, Doyle-Baker P, McCormack GR. **The neighbourhood built environment and health-related fitness: a narrative systematic review.** *Int J Behav Nutr Phys Act.* 2022;19(1):1-19. Available from: <https://ijbnpa.biomedcentral.com/articles/10.1186/s12966-022-01359-0>.
6. Kiely B, Croke A, O'Shea M, Boland F, O'Shea E, Connolly D, et al. **Effect of social prescribing link workers on health outcomes and costs for adults in primary care and community settings: a systematic review.** *BMJ Open.* 2022;12(10):e062951. Available from: <https://bmjopen.bmj.com/content/bmjopen/12/10/e062951.full.pdf>.
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8. National Academies of Sciences Engineering Medicine, Transportation Research Board, Sandt L. **E-Scooter Safety: Issues and Solutions.** Washington, DC: The National Academies Press; 2022. Available from: <https://doi.org/10.17226/26756>.
9. Perrotta K. **Best Practices for Active Travel and Health Equity in Small Towns in British Columbia.** Ottawa, ON: Canadian Public Health Association; 2022. Available from: <https://www.cpha.ca/best-practices-active-travel-and-health-equity-small-towns-british-columbia>.
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## CHEMICAL AGENTS – METALS, GENERAL

### General

1. Chatzigianni M, Pavlou P, Siamidi A, Vlachou M, Varvaresou A, Papageorgiou S. **Environmental impacts due to the use of sunscreen products: a mini-review.** Ecotoxicology. 2022. Available from: <https://doi.org/10.1007/s10646-022-02592-w>.
2. Health Canada. **Certain lots of Bed Head TIGI, Dove and Tresemmé Dry Shampoo products recalled due to detection of benzene** Ottawa, ON: Health Canada; 2022 Oct 18. Available from: <https://recalls-rappels.canada.ca/en/alert-recall/certain-lots-bed-head-tigi-dove-and-tresemme-dry-shampoo-products-recalled-due>.

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4. Wang X, Nag R, Brunton NP, Siddique MAB, Harrison SM, Monahan FJ, et al. **Human health risk assessment of bisphenol A (BPA) through meat products.** Environ Res. 2022;213. Available from: <https://doi.org/10.1016/j.envres.2022.113734>.
5. Zuccaro P, Thompson DC, de Boer J, Watterson A, Wang Q, Tang S, et al. **Artificial turf and crumb rubber infill: An international policy review concerning the current state of regulations.** Environmental Challenges. 2022;9:100620. Available from: <https://www.sciencedirect.com/science/article/pii/S2667010022001767>.

## CHEMICAL AGENTS – PESTICIDES

## CHEMICAL AGENTS – SHALE GAS

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## CHILDREN'S ENVIRONMENTAL HEALTH

1. Armstrong-Carter E, Fuligni AJ, Wu X, Gonzales N, Telzer EH. **A 28-day, 2-year study reveals that adolescents are more fatigued and distressed on days with greater NO<sub>2</sub> and CO air pollution.** Sci Rep. 2022;12(1):17015. Available from: <https://doi.org/10.1038/s41598-022-20602-z>.
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3. Malacarne D, Handakas E, Robinson O, Pineda E, Saez M, Chatzi L, et al. **The built environment as determinant of childhood obesity: A systematic literature review.** Obes Rev. 2022;23(S1):e13385. Available from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/obr.13385>.
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## CLIMATE CHANGE

1. Adrienne Arsht-Rockefeller Foundation Resilience Center (Arsht-Rock). **Hot Cities, Chilled Economies. Impacts of Extreme Heat on Global Cities.** Washington, DC: Adrienne Arsht-Rockefeller Foundation Resilience Center; 2022. Available from: <https://onebillionresilient.org/hot-cities-chilled-economies/>.
2. Ahmadsreza Shirvani D. **Climate Change Risk Reduction in Cultural Landscapes: Insights from Cinque Terre and Waterloo.** Land use policy. 2022;pp. 106359--2022. Available from: <http://dx.doi.org/10.1016/j.landusepol.2022.106359>.
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16. Wortzel JR, Lee J, Benoit L, Rubano A, Pinsky EG. **Perspectives on Climate Change and Pediatric Mental Health: a Qualitative Analysis of Interviews with Researchers in the Field.** *Academic psychiatry.* 2022. Available from: <https://link.springer.com/article/10.1007/s40596-022-01707-z>.

## COMMUNICABLE AND INFECTIOUS DISEASES

See **Covid 19 subsections** in this issue and in the [COVID-19 Additional Topics and Guidance](#) section at the end of this issue (e.g., Occupational Guidance, Transit, Transmission)

## DRINKING WATER

1. Indigenous Services Canada. **Achieving clean drinking water in First Nations communities.** Ottawa, ON: Government of Canada; 2022 [updated Oct 10]; Available from: <https://www.sac-isc.gc.ca/eng/1614385724108/1614385746844>.

## EMERGENCY PREPAREDNESS

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## ENVIRONMENTAL HEALTH SURVEILLANCE

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## ENVIRONMENTAL PLANNING

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## FOOD

### Safety

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## COVID-19 ADDITIONAL TOPICS & GUIDANCE



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## GUIDANCE (for ‘Occupational Guidance’ – see separate topic heading)

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