

# ENVIRONMENTAL HEALTH RESEARCH SCAN

## WITH COVID-19 SECTIONS

### VOL 5 (8) AUGUST 2021



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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. "We focus on health risks associated with the physical environment and identify evidence-based interventions to mitigate those risks." This review is not official or 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. How to access the items? Click on the link related to each entry and it should take you to the item. 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** at the end of this issue.

## EDITOR PICKS

### COVID-19 and indoor air: Risk mitigating measures and future-proofing [blog]

Juliette O’Keeffe (right), Angela Eykelbosh, Knowledge Translation Scientists, NCCEH



*“A re-examination of the indoor environment is needed to plan ahead for the emergence of new variants of the SARS-CoV-2 virus, and to understand ongoing risks if endemic COVID-19 persists in the longer term, alongside other respiratory pathogens”... more*

### Product highlight: US CDC Shigella prevention and control toolkit [blog]

Tina Chen, Knowledge Translation Scientist, NCCEH



*“In March 2021, the US Centre for Disease Control published a [toolkit to provide guidance](#) in Shigella outbreak investigations, transmission mitigation strategies, and sample communications resources for the public... The toolkit provides detailed sanitation and hygiene guidance to public health officials”... more*

### Protecting the health of Canadians and Canadian workers on our warming planet [webinar]

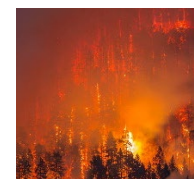
Glen P Kenny, Professor, University of Ottawa, and University Research Chair in Human Environmental Physiology



*“The two components of this presentation include the effects of heat stress in vulnerable populations (the elderly and patients with chronic disease) and the effects of heat stress in our aging work force”... more*

### Wildfire smoke and health [topic page]

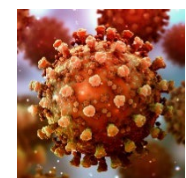
National Collaborating Centre for Environmental Health



*“The resources assembled here are intended to assist public health practitioners, decision-makers, and the public by providing guidance regarding public health impacts, community preparedness, risk communication and response to wildfires and wildfire smoke”... more*

### Environmental health resources for the COVID-19 pandemic [topic page] National Collaborating Centre for Environmental Health

*This topic page has been created to promote key COVID-19 resources to environmental health practitioners and related professions.*



## ENVIRONMENTAL HEALTH RESEARCH SCAN

### SELECTED PUBLICATIONS

#### NCCEH

1. Chen T. Product highlight: US CDC Shigella prevention and control toolkit [blog]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 Jul 6. Available from: <https://ncceh.ca/content/blog/product-highlight-us-cdc-shigella-prevention-and-control-toolkit>.
2. National Collaborating Centre for Environmental Health. Extreme heat (revised) [topic page]. Vancouver, BC: NCCEH; 2021 Jun 29. Available from: <https://ncceh.ca/environmental-health-in-canada/health-agency-projects/extreme-heat>.
3. National Collaborating Centre for Environmental Health. Wildfire smoke and health (revised) [topic page]. Vancouver, BC: NCCEH; 2021 Jul 14; Available from: <http://www.ncceh.ca/environmental-health-in-canada/health-agency-projects/wildfire-smoke-and-health>.
4. National Collaborating Centre for Environmental Health. Environmental health resources for the COVID-19 pandemic - updated [topic page]. Vancouver, BC: National Collaborating Center for Environmental Health; 2021 Jul 13. Available from: <https://ncceh.ca/environmental-health-in-canada/health-agency-projects/environmental-health-resources-covid-19>.
5. National Collaborating Centre for Environmental Health. July research scan with COVID-19 sections [blog]. Vancouver, BC: NCCEH; 2021 Jul 13. Available from: [https://ncceh.ca/content/blog/july-research-scan-covid-19-sections?\\_ga=2.20029304.1379908597.1626556089-1954772642.1612110344](https://ncceh.ca/content/blog/july-research-scan-covid-19-sections?_ga=2.20029304.1379908597.1626556089-1954772642.1612110344).
6. National Collaborating Centre for Environmental Health. NCCEH eNews (Jul 2021): Protecting the health of Canadians and Canadian workers on our warming planet; more... Vancouver, BC: NCCEH; 2021 Jul 15. Available from: <https://tinyurl.com/dfby5jpi>.
7. O’Keeffe J, Eykelbosh A. COVID-19 and indoor air: Risk mitigating measures and future-proofing [blog]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 07 06 Jul 6. Available from: <https://ncceh.ca/content/blog/covid-19-and-indoor-air-risk-mitigating-measures-and-future-proofing>.

### RECENT PREVIOUS WEBINARS and GUIDANCE

1. Fumerton R, Western S. Visual tools and processes for engaging intersectoral partners on the health impacts of resource development [webinar]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 Apr 29. Available from: <https://ncceh.ca/content/webinar-recording-visual-tools-and-processes-engaging-intersectoral-partners-health-impacts>.
2. Kenny GP. Protecting the health of Canadians and Canadian workers on our warming planet [webinar]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 Jul 28. Available from: <https://ncceh.ca/content/ncceh-environmental-health-seminar-series>.
3. O’Keeffe J. Choral Canada webinar - We can sing safely! [webinar]. Vancouver, BC: NCCEH; 2020 Jun 17. Available from: <https://ncceh.ca/events/choral-canada-webinar-we-can-sing-safely>.
4. O’Keeffe J. Masking during the COVID-19 pandemic – An update of the evidence [guidance document]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 Jun

16. Available from: <https://ncceh.ca/documents/guide/masking-during-covid-19-pandemic-update-evidence>.
5. Sanchez J, Tustin J. Environmental factors associated with freshwater recreational water quality in Toronto and Niagara [webinar]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 Apr 1. Available from: <https://ncceh.ca/content/webinar-recording-environmental-factors-associated-freshwater-recreational-water-quality>.
6. Warren S, Charles-Norris K-A. Climate-health adaptation planning: Two approaches, one shared learning journey [webinar]. Vancouver, BC: National Collaborating Centre for Environmental Health; 2021 Jun 24. Available from: <https://ncceh.ca/content/webinar-recording-climate-health-adaptation-planning-two-approaches-one-shared-learning>.

#### OTHER

1. Canadian Public Health Association. CPHA Newsletter: Cannabis update. Ottawa, ON: CPHA; 2021 07 17 Jun 17. Available from: <https://us15.campaign-archive.com/?u=ac6347556b51136691c29ea0c&id=97697ff7f5&e=f03854e1e7>.

#### INDIGENOUS ENVIRONMENTAL HEALTH

1. Che TQ, Hickey GM. Assessing the potential for collaborative governance to support cumulative effects assessment in the Indigenous Cree territory of Eeyou Istchee, Canada. *J Environ Manage.* 2021;298:113444. Available from: <https://doi.org/10.1016/j.jenvman.2021.113444>.
2. Djuric M. Cowessess unveils new solar project, aiming to become greenest First Nation in Canada. Regina, SK: CBC Saskatchewan; 2021 Jul 14. Available from: [https://www.cbc.ca/news/canada/saskatchewan/cowessess-first-nation-solar-energy-1.6102512?ct=t\(RSS\\_EMAIL\\_CAMPAIGN\)](https://www.cbc.ca/news/canada/saskatchewan/cowessess-first-nation-solar-energy-1.6102512?ct=t(RSS_EMAIL_CAMPAIGN)).
3. First Nations Health Authority. Printable wildfire resources for communities. West Vancouver, BC: FNHA; 2021 Jul. Available from: <https://www.fnha.ca/Documents/FNHA-Printable-Wildfire-Resources-for-Communities-2021.pdf>.
4. Kao J. First Nations communities disproportionately threatened by wildfires: study. Narwhal. 2021 Aug 10. Available from: [https://thenarwhal.ca/wildfires-first-nations-forests-2021-study/?utm\\_source=ActiveCampaign&utm\\_medium=email&utm\\_content=Top+news%3A&utm\\_campaign=ATF+Daily](https://thenarwhal.ca/wildfires-first-nations-forests-2021-study/?utm_source=ActiveCampaign&utm_medium=email&utm_content=Top+news%3A&utm_campaign=ATF+Daily).
5. National Collaborating Centre for Indigenous Health. Updates on COVID-19. Prince George, BC: University of Northern British Columbia; 2021 [updated Jul]; Available from: [https://www.nccih.ca/485/NCCIH\\_in\\_the\\_News.nccih?id=450](https://www.nccih.ca/485/NCCIH_in_the_News.nccih?id=450).
6. Nishima-Miller J. Indigenous-led impact assessment: approaches, requirements, and degrees of control: University of British Columbia; 2021. Available from: <https://open.library.ubc.ca/soa/cIRcle/collections/ubctheses/24/items/1.0397493>.
7. Savage S, Williamson B. Indigenous perspectives of disaster preparedness. Canberra, ACT: Australian National University, Centre for Aboriginal Economic Policy Research; 2021 Jul 26. Available from: <https://knowledge.aidr.org.au/media/8828/recovery-matters-indigenous-perspectives-disaster-recovery-slides-web.pdf>.

8. Sylliboy JR, Latimer M, Marshall EA, MacLeod E. Communities take the lead: exploring Indigenous health research practices through Two-Eyed Seeing & kinship. *Int J Circumpolar Health*. 2021;80(1):1929755-. Available from: <https://pubmed.ncbi.nlm.nih.gov/34061729>

## AGRICULTURAL OPERATIONS

1. Leck S. Toronto's booming urban farms aid food security and reduce carbon emissions. *National Observer*. 2021 Jul 19. Available from: [https://www.nationalobserver.com/2021/07/19/toronto-urban-farms-aid-food-security-reduce-carbon-emissions?ct=t\(RSS\\_EMAIL\\_CAMPAIGN\)](https://www.nationalobserver.com/2021/07/19/toronto-urban-farms-aid-food-security-reduce-carbon-emissions?ct=t(RSS_EMAIL_CAMPAIGN)).

## BIOLOGICAL AGENTS

### BUILT ENVIRONMENT

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2. Infrastructure Canada. Active transportation. Ottawa, ON: Government of Canada; 2021 [updated Jul 28]; Available from: <https://www.infrastructure.gc.ca/trans/active-actif-eng.html>.
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7. Mahmoud M, Abdul Rahman. SMARTer Growth : a suite of neighborhood design evaluation tools to help sustain a desired quality of life : a case study city of Kelowna. Vancouver, BC: University of British Columbia; 2021. Available from: <https://open.library.ubc.ca/soa/cIRcle/collections/ubctheses/24/items/1.0401118>.
8. Richards J. The built environment gets back to its roots. *The Business Journals*. 2021 Aug 15. Available from: <https://www.bizjournals.com/bizjournals/news/2021/08/15/the-built-environment-gets-back-to-its-roots.html>.
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11. Williamson E, Juniper N. The difficult task of measuring social value in the built environment. 2021 [Aug 1]; Available from: <https://thefifthestate.com.au/innovation/design/the-difficult-task-of-measuring-social-value-in-the-built-environment/>.
12. Zhang R, Zhang C-Q, Rhodes RE. The pathways linking objectively-measured greenspace exposure and mental health: A systematic review of observational studies. *Environ Res.* 2021 Jul;198:111233. Available from: <https://www.sciencedirect.com/science/article/pii/S0013935121005272>.

## CHEMICAL AGENTS – METALS, NANOPARTICLES, MICROPLASTICS, GENERAL

### General

1. California Environmental Protection Agency. Proposed public health goals for perfluorooctanoic acid and perfluorooctane sulfonic acid in drinking water Sacramento, CA: California, EPA; 2021 July. Available from: <https://oehha.ca.gov/media/downloads/crn/pfoapfosphgdraft061021.pdf>.
2. De-la-Torre GE, Pizarro-Ortega CI, Dioses-Salinas DC, Ammendolia J, Okoffo ED. Investigating the current status of COVID-19 related plastics and their potential impact on human health. *Current Opinion in Toxicology.* 2021 Aug. Available from: <https://www.sciencedirect.com/science/article/pii/S2468202021000371>.
3. Martínez-Esquivias F, Guzmán-Flores JM, Pérez-Larios A, González Silva N, Becerra-Ruiz JS. A review of the antimicrobial activity of selenium nanoparticles. *J Nanosci Nanotechnol.* 2021;21(11):5383-98. Available from: <https://doi.org/10.1166/jnn.2021.19471>.
4. Schmidt CW. Manganese intake in babies: Drinking water plus formula can cause high exposures. *Environ Health Perspect.* 2021;129(7):074002. Available from: <https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP9786>.
5. Sobko K. Schools are still unaware of dangers of mercury-tainted gym floors, advocates say. North Jersey. 2021 Aug 8. Available from: [https://www.northjersey.com/story/news/2021/08/08/mercury-tainted-rubber-gym-floors-pose-risk-new-jersey-schools/5427764001/?utm\\_source=ActiveCampaign&utm\\_medium=email&utm\\_content=Top+news%3A&utm\\_campaign=ATF+Daily](https://www.northjersey.com/story/news/2021/08/08/mercury-tainted-rubber-gym-floors-pose-risk-new-jersey-schools/5427764001/?utm_source=ActiveCampaign&utm_medium=email&utm_content=Top+news%3A&utm_campaign=ATF+Daily).

### BPA

1. Ponsonby A-L, Symeonides C, Saffery R, Mueller JF, O’Hely M, Sly PD, et al. Prenatal phthalate exposure, oxidative stress-related genetic vulnerability and early life neurodevelopment: A birth cohort study. *Neurotoxicology.* 2020 2020/09/01/;80:20-8. Available from: <https://www.sciencedirect.com/science/article/pii/S0161813X20300863>.
2. Walkerton Clean Water Centre. PFAS In Water Systems: A Canadian Perspective. Walkerton, ON: WCWC; 2021 Jul. Available from: <https://wccw.ca/pfas-in-water-systems-a-canadian-perspective/>.
3. Walkerton Clean Water Centre. Per- & Polyfluoroalkyl Substances (PFAS, PFOA & PFOS). Walkerton, ON: WCWC; 2021 Mar. Available from: <https://wccw.ca/per-polyfluoroalkyl-substances-pfas-pfoa-pfos/>.

## CHEMICAL AGENTS – PESTICIDES

1. Benbrook C, Perry MJ, Belpoggi F, Landrigan PJ, Perro M, Mandrioli D, et al. Commentary: Novel strategies and new tools to curtail the health effects of pesticides. *Environ Health.* 2021 Aug;20(1):87. Available from: <https://doi.org/10.1186/s12940-021-00773-4>.

## CHEMICAL AGENTS – SHALE GAS

1. Willis MD, Hill EL, Boslett A, Kile ML, Carozza SE, Hystad P. Associations between Residential Proximity to Oil and Gas Drilling and Term Birth Weight and Small-for-Gestational-Age Infants in Texas: A Difference-in-Differences Analysis. *Environ Health Perspect.* 2021;129(7):077002. Available from: <https://ehp.niehs.nih.gov/doi/abs/10.1289/EHP7678>.

## CHILDREN’S ENVIRONMENTAL HEALTH

1. American College of Obstetricians and Gynecologists. Reducing Prenatal Exposure to Toxic Environmental Agents. Committee opinion Number 832: American College of Obstetricians and Gynecologists; 2021 Jul. Available from: <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2021/07/reducing-prenatal-exposure-to-toxic-environmental-agents>.
2. British Columbia Centre for Disease Control COVID-19 Young Adult Task Force. Impacts of the COVID-19 Pandemic on the Health and Well-Being of Young Adults in British Columbia. Vancouver, BC: BCCDC; 2021 Jul. Available from: [http://www.bccdc.ca/Health-Professionals-Site/Documents/COVID-Impacts/BCCDC\\_COVID-19\\_Young\\_Adult\\_Health\\_Well-being\\_Report.pdf](http://www.bccdc.ca/Health-Professionals-Site/Documents/COVID-Impacts/BCCDC_COVID-19_Young_Adult_Health_Well-being_Report.pdf).
3. Hayes K, Barocas T, Levy S. Channeling Children’s Environmental Concerns Into Empowerment. Woodbridge, ON: Earth Rangers; 2021. Available from: <http://earthrangers.com/public/content/wildwire/Anxious-for-Action-Channeling-Childrens-Environmental-Concerns-Into-Empowerment.pdf>.
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5. Margolis AE, Ramphal B, Pagliaccio D, Banker S, Selmanovic E, Thomas LV, et al. Prenatal exposure to air pollution is associated with childhood inhibitory control and adolescent academic achievement. *Environ Res.* 2021 Nov;202:111570. Available from: <https://www.sciencedirect.com/science/article/pii/S0013935121008641>.
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7. Yu H, Hu L-W, Zhou Y, Qian Z, Schootman M, LeBaige MH, et al. Association between eye-level greenness and lung function in urban Chinese children. *Environ Res.* 2021 Nov;202:111641. Available from: <https://www.sciencedirect.com/science/article/pii/S001393512100935X>.

## CLIMATE CHANGE

1. Buse CG, Poland B, Wong J, Haluza-Delay R. ‘We’re all brave pioneers on this road’: a Bourdieusian analysis of field creation for public health adaptation to climate change in Ontario, Canada. *Crit Public Health.* 2021 Jan;31(1):90-100. Available from: <https://doi.org/10.1080/09581596.2019.1682123>.
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2021 07 02. Available from: <https://www.canada.ca/content/dam/hc-sc/documents/services/sun-safety/extreme-heat-covid-19/eh-covid-en.pdf>.

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6. Swanson D, Murphy D, Temmer J, Scaletta T. Advancing the Climate Resilience of Canadian Infrastructure: A review of literature to inform the way forward. Winnipeg, MB: International Institute for Sustainable Research; 2021 Jul. Available from: <https://www.iisd.org/system/files/2021-07/climate-resilience-canadian-infrastructure-en.pdf>.

## 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)

1. Groves HE, Piché-Renaud P-P, Peci A, Farrar DS, Buckrell S, Bancej C, et al. The impact of the COVID-19 pandemic on influenza, respiratory syncytial virus, and other seasonal respiratory virus circulation in Canada: A population-based study. *The Lancet Regional Health – Americas*. 2021. Available from: <https://doi.org/10.1016/j.lana.2021.100015>.

## DRINKING WATER

1. Hamilton KA, Kuppravalli A, Heida A, Joshi S, Haas CN, Verhougstraete M, et al. Legionnaires' disease in dental offices: Quantifying aerosol risks to dental workers and patients. *J Occup Environ Hyg*. 2021;1-16. Available from: <https://doi.org/10.1080/15459624.2021.1939878>.
2. Wu J, Hilborn ED, Schaeffer BA, Urquhart E, Coffey MM, Lin CJ, et al. Acute health effects associated with satellite-determined cyanobacterial blooms in a drinking water source in Massachusetts. *Environ Health*. 2021;20(1):83. Available from: <https://doi.org/10.1186/s12940-021-00755-6>.

## EMERGENCY PREPAREDNESS

1. Brauer M. Wildfires are here to stay. How to protect against smoky skies. Vancouver, BC: University of British Columbia, Faculty of Medicine; 2021 Jul. Available from: <https://www.med.ubc.ca/news/wildfires-are-here-to-stay-how-to-protect-against-smoky-skies/>.
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8. Savage S, Williamson B. Indigenous perspectives of disaster preparedness. Canberra, ACT: Australian National University, Centre for Aboriginal Economic Policy Research; 2021 Jul 26. Available from: <https://knowledge.aidr.org.au/media/8828/recovery-matters-indigenous-perspectives-disaster-recovery-slides-web.pdf>.
9. US Bureau of Reclamation. Addressing drought portal. Washington, DC 2021 [updated Jul 29]; Available from: <https://www.usbr.gov/addressing-drought/index.html>
10. US Centers for Disease Control and Prevention. Private Wells After a Wildfire. Atlanta, GA: US CDC; 2021 [updated Jun 14]; Available from: <https://www.cdc.gov/nceh/ehs/water/private-wells/after-a-wildfire.html>.
11. US Centers for Disease Control and Prevention. CDC's Interim Guidance for General Population Disaster Shelters During the COVID-19 Pandemic. Atlanta, GA: US CDC; 2021 Aug 4. Available from: <https://www.cdc.gov/coronavirus/2019-ncov/php/eh-practitioners/general-population-disaster-shelters.html>.

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## COVID-19 ADDITIONAL TOPICS & GUIDANCE



### CONTENTS

- [GUIDANCE](#) (cleaning, face masks, hand hygiene, more)
- [HOMELESS, VULNERABLE POPULATIONS, HOUSING](#)
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