

KILEY LUKE DALEY

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Canadian Citizen and United States Permanent Resident

SCHOLARLY INTERESTS

Ecosystem Approaches to Health (i.e. One Health), Drinking Water and Sanitation, Indigenous Health, Arctic and Rural Regions, Human Health Risk Assessment, Participatory Research, Community Outreach

EDUCATION

Ph.D. in Environmental Studies and Public Health (Interdisciplinary), Dalhousie University, 2020

Master of Environmental Studies, Dalhousie University, 2013

Coursework in Social, Medical, and Biological Anthropology, University of New Brunswick, 2008-2010

Bachelor of Applied Management with First Class Honours, University of New Brunswick, 2004

SPECIALIZED TRAINING

Quantitative Microbial Risk Assessment, Michigan State University (Sponsored by United States National Institutes of Health), 2016

Population Intervention for Disease Prevention, University of Waterloo (Sponsored by Canadian Institutes for Health Research), 2014-2015

Ecosystem Approaches to Health, University of Northern British Columbia (Sponsored by Public Health Agency of Canada), 2013

RESEARCH EXPERIENCE

Associate, Climate Change Institute, University of Maine, 2021-Present

Research Associate, Margaret Chase Smith Policy Center, University of Maine, 2020-Present

Research Assistant, School of Public Health, University of Alberta, 2019-2020

Research Associate, Northern Wastewater Research Program, Centre for Water Resource Studies, Dalhousie University, 2010-2020

Human Health Analyst, Polar Knowledge Canada, Government of Canada, 2014-2016

SCHOLARSHIP

Peer-Reviewed Publications

1. **Daley K**, Jamieson R, Rainham D, Truelstrup Hansen L, Harper SL (In Review). Microbial risk assessment and mitigation options for wastewater treatment in Arctic Canada. *Microbial Risk Analysis*.
2. **Daley K**, Jamieson R, Rainham D, Truelstrup Hansen L, Harper SL (2019). Screening-level microbial risk assessment of acute gastrointestinal illness attributable to wastewater treatment systems in Nunavut, Canada. *Science of the Total Environment*, 657: 1253-1264.
3. **Daley K**, Jamieson R, Rainham D, Truelstrup Hansen L (2018). Wastewater treatment and public health in Nunavut: A microbial risk assessment framework for the Canadian Arctic. *Environmental Science and Pollution Research*, 25(33): 32860-32872.
4. **Daley K**, Truelstrup Hansen L, Jamieson R, Hayward J, Piorkowski G, Krkosek W, Gagnon G, Castleden H, MacNeil K, Poltarowicz J, Corriveau E, Jackson A, Lywood J, Huang Y (2018). Chemical and microbial characteristics of municipal drinking water supply systems in the Canadian Arctic. *Environmental Science and Pollution Research*, 25(33): 32926-32937.
5. **Daley K**, Castleden H, Jamieson R, Furgal C, Ell L (2015). Water systems, sanitation, and public health risks in remote communities: Inuit resident perspectives from the Canadian Arctic. *Social Science and Medicine*, 135: 124-135. Designated as one of the *Most Impactful Articles* of 2015.
6. **Daley K**, Castleden H, Jamieson R, Furgal C, Ell L (2014). Municipal water quantities and health in Nunavut households: An exploratory case study in Coral Harbour, Nunavut, Canada. *International Journal of Circumpolar Health*, 73: 23843.
7. Castleden H, **Daley K**, Sloan Morgan V, Sylvestre P (2013). Settlers unsettled: Using field schools and digital stories to transform geographies of ignorance about Indigenous Peoples in Canada. *Journal of Geography in Higher Education*, 37(4): 487-499.

Invited Book Chapter

1. Castleden H, **Daley K**, Sloan Morgan V, Sylvestre P (2019). Settlers unsettled: Using field schools and digital stories to transform geographies of ignorance about Indigenous Peoples in Canada. *Out There Learning: Critical Reflections on Off-Campus Study Programs*. D Curran, C Owens, H Thorson, E Vibert (Eds). Toronto, Ontario: University of Toronto Press.

Technical Reports

1. Sorg MH, **Daley K** (January 2021). *Maine drug death report, January-September 2020*. Prepared for the Maine Office of the Attorney General.
2. Sorg MH, **Daley K** (Weekly Series 2020-2021). *Maine suspected overdoses and suicides - Weekly totals and potential COVID-19 impact*. Prepared for the Maine Office of Behavior Health.

3. Centre for Water Resources Studies, Dalhousie University including **Daley K** (March 2018). *Regulations for the discharge of non-sewage effluents to municipal wastewater facilities in the Northwest Territories*. Prepared for the Mackenzie Valley Land and Water Board.
4. Jamieson R, Greenwood M, **Daley K**, Hayward J (October 2016). *Proposed revisions to regulatory criteria for risk assessment of municipal wastewater treatment systems in Nunavut*. Prepared for the Department of Community and Government Services, Government of Nunavut.
5. Borel K, **Daley K**, Gonzalez R, Henderson M, Robson A (August 2016). *Wastewater reuse in the United States Army: A case study for greywater reuse on forward operating bases*. Prepared for the Center for Advancing Microbial Risk Assessment. <https://qmrawiki.org/resources/case-studies>.
6. Truelstrup Hansen L, MacNeil K, **Daley K**, Poltarowicz J, Jamieson R (July 2015). *Drinking water quality: Source to tap monitoring in Coral Harbour, Nunavut*. Prepared for the Department of Community and Government Services, Government of Nunavut.
7. Truelstrup Hansen L, MacNeil K, **Daley K**, Poltarowicz J, Jamieson R (July 2015). *Drinking water quality: Source to tap monitoring in Iqaluit, Nunavut*. Prepared for the Department of Community and Government Services, Government of Nunavut.
8. Truelstrup Hansen L, MacNeil K, **Daley K**, Poltarowicz J, Jamieson R (July 2015). *Drinking water quality: Source to tap monitoring in Pangnirtung, Nunavut*. Prepared for the Department of Community and Government Services, Government of Nunavut.
9. Truelstrup Hansen L, MacNeil K, **Daley K**, Poltarowicz J, Jamieson R (July 2015). *Drinking water quality: Source to tap monitoring in Pond Inlet, Nunavut*. Prepared for the Department of Community and Government Services, Government of Nunavut.
10. Hayward J, **Daley K**, Centre for Water Resources Studies (March 2013). *Community report: Technical wastewater treatment and water related community health research in Coral Harbour, Nunavut*. Prepared for the Hamlet of Coral Harbour, Nunavut.
11. **Daley K**, Hayward J (September 2012). *“Go with the Flow” event summary: A science and water education workshop for Coral Harbour, Nunavut youth*. Prepared for the Hamlet of Coral Harbour, Nunavut and community partners.

Policy Briefs

1. **Daley K** (June 2016). Alternatives and renewable energy in the North: Community-driven initiatives. *Polar Leads* 1(4). Polar Knowledge Canada.
2. **Daley K** (May 2016). Wastewater management: Northern solutions for Northern conditions. *Polar Leads* 1(2). Polar Knowledge Canada.
3. **Daley K** (April 2016). Meeting the Northern housing challenge. *Polar Leads* 1(1). Polar Knowledge Canada.
4. **Daley K** (December 2014). Arctic caribou contaminant monitoring provides important recommendations to inform Northern dietary choices. *Sustaining Arctic Observing Networks Canada Results Bulletin* 1(2). Polar Knowledge Canada.

5. **Daley K** (November 2014). Circumpolar working group assessing emerging climate-sensitive infectious diseases. *Sustaining Arctic Observing Networks Canada Results Bulletin* 1(1). Polar Knowledge Canada.

Invited Presentations

1. **Daley K** (March 2021) *Water, sanitation, and Inuit health in Nunavut, Canada*. 28th Annual Harold W. Borns Jr. Symposium, Climate Change Institute, University of Maine. Orono, Maine.
2. **Daley K** (November 2020). *Water, sanitation, and health in the Arctic: Research and community engagement*. UMaine Arctic Fall 2020 Seminar Series, University of Maine. Orono, Maine.
3. **Daley K** (September 2019). *Wastewater treatment in Nunavut: Health risks and mitigation options*. Water Treatment in Northern Environments Workshop, Institute National de la Recherche Scientifique. Québec City, Québec.
4. **Daley K** (September 2018). *Human health risk assessment of gastrointestinal illness attributable to arctic wastewater treatment systems: A component of the Nunavut wastewater research program*. Water Treatment in Northern Environments Workshop, Institute National de la Recherche Scientifique. Québec City, Québec.

Conference Presentations

1. **Daley K** (November 2019). *Northern wastewater treatment: Assessing health risks and mitigation options*. Northern Territories Water and Waste Association Annual Conference. Iqaluit, Nunavut.
2. **Daley K**, Jamieson R, Rainham D, Truelstrup Hansen L, Harper SL (November 2019). *Arctic wastewater treatment: Associated microbial health risks and mitigation options* (Poster). Dalhousie University Arctic Research Symposium. Halifax, Nova Scotia.
3. **Daley K**, Jamieson R, Rainham D, Truelstrup Hansen L, Harper SL (December 2017). *Assessing exposure pathways and human health risks attributable to wastewater treatment practices in the Canadian Arctic*. ArcticNet Annual Scientific Meeting. Québec City, Québec.
4. **Daley K**, Jamieson R, Rainham D, Truelstrup Hansen L, Harper SL (June 2016). *Wastewater treatment and public health in remote arctic communities: Exposure pathways and risk assessment*. Canadian Association of Geographers Conference. Halifax, Nova Scotia.
5. **Daley K**, Jamieson R, Rainham D, Castleden H, Truelstrup Hansen L, Harper SL, Furgal C, Ell L (April 2016). *The social context of drinking water, sanitation and public health in the Nunavut, Canada*. International Conference on Sanitation in Cold Climate Regions. Sisimiut, Greenland.
6. **Daley K**, Jamieson R, Rainham D, Truelstrup Hansen L, Harper SL (October 2015). *Exposure pathways and human health risks associated with wastewater treatment in Nunavut communities*. Workshop: Are Canadian Wastewater Treatment Plants Impacting the Persistence of Antibiotic Resistant Bacteria? Halifax, Nova Scotia.

7. **Daley K**, Jamieson R, Rainham D, Truelstrup Hansen L (December 2014). *Assessing exposure pathways and human health risks related to wastewater treatment in Inuit communities* (Poster). ArcticNet Annual Scientific Meeting. Ottawa, Ontario.
8. **Daley K** (July 2014). *Human health risk assessment of wastewater treatment systems in remote arctic communities: Proposal development*. Annual Gathering of Graduate Students, Indigenous Health Research. Burnaby, British Columbia.
9. **Daley K**, Castleden H, Jamieson R, Furgal C, Ell L (December 2013). *Understanding municipal water and health relationships in Nunavut households: A community case study in Coral Harbour, Nunavut*. ArcticNet Annual Scientific Meeting. Halifax, Nova Scotia.
10. **Daley K**, MacNeil K, Truelstrup Hansen L, Piorkowski G, Jamieson R, Castleden H, Centre for Water Resources Studies (November 2013). *Nunavut drinking water systems: An overview of the Dalhousie University 'Nunavut Drinking Water Research Program'*. Northern Territories Water and Waste Association Annual Conference. Iqaluit, Nunavut.
11. Castleden H, **Daley K**, Jamieson R, Furgal C, Ell L (August 2013). *A community perspective of drinking water, wastewater treatment and public health in Coral Harbour, Nunavut*. Canadian Association of Geographers Conference. St. John's, Newfoundland.
12. **Daley K**, Castleden H, Jamieson R, Furgal C (October 2012). *Understanding the water and health relationship in Nunavut households: A community case study in Coral Harbour*. Atlantic Division of the Canadian Association of Geographers Conference. Halifax, Nova Scotia.
13. **Daley K**, Castleden H, Jamieson R, Furgal C (April 2012). *Understanding water and health connections in Coral Harbour, Nunavut, Canada* (Poster). International Polar Year Conference. Montréal, Québec.
14. Hayward J, **Daley K**, Castleden H, Lam B, Krkosek W, Jamieson R (November 2011). *Nunavut wastewater research - A case study of Coral Harbour, Nunavut*. Northern Territories Water and Wastewater Association Annual Conference. Iqaluit, Nunavut.
15. Maheu A, **Daley K**, Swaruk J (April 2011). *Proposed implementation of Canadian Council of Ministers of the Environment wastewater guidelines in Nunavut*. Canadian Water Network Student and Young Professionals Workshop. Halifax, Nova Scotia.

GRANTS AND AWARDS

Seed Grant (\$24,989; Co-Principal Investigator). *A Pilot Study of Household Water Insecurity and Human Health in the Arctic*. UMaine Arctic, Submitted May 2021 (In Review)

Seed Grant (\$24,996; Co-Principal Investigator). *Participatory Approach to Foster Arctic Food and Water Security in a Changing Climate*. UMaine Arctic, Submitted May 2021 (In Review)

Seed Grant (\$22,818; Principal Investigator). *The UMaine IoM Environmental Health Catalyst Project: Water and Vector-Borne Disease Risks Associated with Treatment Wetlands*. UMaine Institute of Medicine, Submitted May 2021 (In Review)

Student Scholar (Non-Monetary), Healthy Populations Institute, Dalhousie University, 2015-2020

Research Stipend (\$201,000), Northern Wastewater Research Program, Dalhousie University, 2010-2020

Northern Scientific Training Program Grant (\$2,500), Canadian Polar Commission, 2018-2019

Ph.D. Scholarship (\$33,600), Faculty of Graduate Studies, Dalhousie University, 2015-2018

Nova Scotia Graduate Scholarship (\$15,000), Dalhousie University, 2016-2017

Travel Award (\$2,500), International Conference on Sanitation in Cold Climate Regions, Technical University of Denmark, Sisimiut, Greenland, 2016

Research Fellowship (\$20,000), Population Intervention for Chronic Disease Prevention, Canadian Institutes for Health Research, 2014-2015

Northern Scientific Training Program Grant (\$7,500), Aboriginal Affairs and Northern Development Canada, 2011-2015

Travel Award (\$1,500), Institute of Aboriginal Peoples' Health Annual Gathering of Graduate Students, Canadian Institutes of Health Research, 2014

Ph.D. Scholarship (\$40,000), Nasivvik Centre for Inuit Health and Changing Environments, Institute of Aboriginal Peoples' Health, Canadian Institutes of Health Research, 2012-2014

TEACHING AND MENTORING

Instructor of Record for *Critical Issues in Ecology and Environmental Sciences* (EES 489), University of Maine, Fall 2021

Instructor of Record for *One Health and the Environment Convergent Practice* (EES 598), University of Maine, Fall 2021

Mentor and Professional Development Instructor for *Accelerating New Environmental Workskills* Research Experiences for Undergraduates Program (Sponsored by National Science Foundation), University of Maine, Summer 2021

Guest Lecturer in *One Health Science and Policy* (EES 590), University of Maine, November 2020

Teaching Assistant in the School for Resource and Environmental Studies, Dalhousie University, 2010

SERVICE

Service to Profession and University

Service in Reviewing Papers: Australian and New Zealand Journal of Public Health; Environment International; Environmental Challenges; Environmental Science and Pollution Research; International Journal of Environmental Health Research; Social Science and Medicine

UMaine Arctic Steering Committee, Beginning Summer 2021

Poster Session Committee for the UMaine Climate Change Institute 50th Anniversary Celebration, 2021

Student Symposium Judge, Center for Undergraduate Research, University of Maine, 2021

Planning Committee for Research Retreat, Population Intervention for Chronic Disease Prevention,
Canadian Institutes for Health Research, 2015

Session Chair (Community Adaptation and Vulnerability), ArcticNet Annual Scientific Meeting, 2013

Public Service

Advised local governments on water-health issues in Nunavut, Canada, 2010-2020

Organized youth science camps and school presentations in Nunavut, Canada, 2010-2020

TRADE MAGAZINE AND MEDIA MENTIONS

Northern Territories Water and Waste Association Trade Magazine (November 2020). *Water quantity and health in Coral Harbour households.*

Environmental Science and Engineering Magazine (February 2016). *Water and wastewater treatment challenges in Canada's North.*

CBC News North (April 2014). *In Coral Harbour, overcrowded homes run out of water.*

Coral Harbour, Nunavut Community Radio (March 2012). *Water and community health.*

PROFESSIONAL MEMBERSHIPS

Association for Polar Early Career Scientists

Community of Practice in Ecosystem Approaches to Health

Maine Water Environment Association

Northern Territories Water and Waste Association

NON-ACADEMIC EXPERIENCE

Program Lead, College of Extended Learning, University of New Brunswick, 2006-2010

Management Associate, The North West Company in Gjoa Haven and Taloyoak, Nunavut, 2004-2006