

Tanjot Grewal, Bruce Fellow 2024-25



Tanjot is a student in the Masters of Public Policy and Administration program at Toronto Metropolitan University who is passionate about using her strong science and interdisciplinary background to improve freshwater policy in Canada. With a Master of Applied Science degree in Environmental Applied Science & Management from Toronto Metropolitan University and an Honours Bachelor of Science in Chemical Biology from McMaster University and a Co-op placement at the Canada Centre for Inland Waters, Tanjot has conducted research on chemical regulations and contaminants of emerging concern in Canada.

Some of her previous research published in a co-authored article in the *Journal of Environmental Science, Processes and Impacts* has focused on producing evidence of the need for policy action on PMTs and the regulatory gaps at the federal level in Canada. After taking courses on environmental policy, water policy, and completing a policy analysis paper on toxic substance policies in the European Union, she decided her goal was to deepen her knowledge about water policy and enrol in the MPPA program at TMU.

As a water leader Tanjot is also actively involved in water protection work. She has been working with Credit Valley Conservation since 2015 and founded a volunteer organization called the Youth Water Advocate Initiative, where her primary objective is to empower the next generation of young people and newcomers in environmental conservation efforts to advocate and act for clean freshwater. She has personally raised almost \$10K to create opportunities for young adults to be mentored by environmental professionals and participate in stewardship programs in watersheds and natural spaces in their communities. She has developed partnerships with Credit Valley Conservation Authority, Water for the World (W4TW), Swim Drink Fish (SDF), and Ecosource to lead these opportunities for youth. Her work on this initiative has been recognized by the David Suzuki Foundation, Ocean Wise, and Credit Valley Conservation (CVC). She has also served as a Vice-President and Member for the Student and Young Professional (SYP) Committee of the Canadian Water Network and led a session at the 2022 Water Canada Summit to raise awareness about PMT substances. She also wrote a blog post in the Water Canada magazine titled: *There's More than Microplastics in our Water*.

Her Masters' research in the MPPA program will focus on Ontario's water policy framework related to PMTs and the need to modernize federal and Ontario policies given new scientific evidence. Using illustrative cases, such as new science related to water pollution from tire wear evident in water, her goal is to conduct policy analysis and generate policy recommendations related to water policies and regulations in Ontario and Canada. She also hopes to learn more about water policy through a Co-op placement as part of her MPPA program of studies.

Tanjot's career goal is to leverage her strong technical background, develop new knowledge and policy analysis skills, hone her policy communication skills, and build on her volunteer partnerships to pursue a career as a water policy advisor and future water policy leader in government. The Bruce Fellowship provides Tanjot with the support necessary to enhance the scope and policy impact of her research.

Wyatt Weatherson, Bruce Fellow 2024-25



Wyatt is a 1st year PhD student in the Environmental Applied Science and Management program. He holds an undergraduate degree from the department of Geography, Geomatics and the Environment from the University of Toronto. He completed his Master's in Environmental Applied Science and Management at Toronto Metropolitan University (TMU), focused on chloride pollution in watersheds. His Master's research, involvement in several science and policy-focused research projects, and appreciation for aquatic environments led him to pursue his PhD focused on protecting freshwater from excess winter road salt application.

Wyatt's Master's research focused on quantifying exceedances of federal chloride water quality guidelines in streams across Hamilton, Ontario to understand the risks presented by the winter application of chloride-based deicers (road salts), which have been commonly used in Canada and Ontario since the 1940s. Science indicates road salt finds its way to freshwater systems, threatening aquatic ecosystem health, reducing species diversity, corroding infrastructure, and posing risks to drinking water, particularly groundwater sources. Wyatt's research is part of a growing body of scientific evidence that road salts cause salinization of our rivers, wetlands, lakes and groundwater that regularly exceed Canadian federal water quality guidelines, even months after road salting has ended for the year. His research supports the need to focus on policy analysis, recommendations, innovation and action to find solutions to excess road salt application.

While the Canadian government has taken strides to mitigate excess application of road salt in Canada, chiefly in the form of the *Code of Practice for the Environmental Management of Road Salts*, efforts have been limited to voluntary frameworks and recommended best management practices for municipalities managing public roads. Science indicates this voluntary policy instrument for municipalities is not sufficient and does not cover private companies responsible for maintaining parking lots, which account for up to 50% of paved area applications in urban areas. Canadian winter maintenance contractors face costs legal claims and rising insurance costs that act as barriers to road salt policy change required to protect freshwater across Canada.

Wyatt's doctoral research focuses on innovative policy instruments to address this source of water pollution. His research to date indicates that limited liability legislation, successfully adopted in 2013 in New Hampshire, United States, and tested through a court challenge in 2023, may be a valuable policy innovation for consideration in Canada. As a Bruce Fellow, his research will focus on a comparative policy analysis between the Ontario and New Hampshire provincial/state policies and contexts to identify key policy lessons and provide recommendations and considerations for the implementation of limited liability legislation in Ontario and other jurisdictions across Canada for both public and private winter road maintenance operators.

To date, Wyatt has published his research in *ACS ES&T Water* and the *Journal of Great Lakes Research*, produced three technical policy reports, and presented at several national environment and water conferences. Outside of his research, Wyatt is an avid kayaker and is currently serving as the 2024-2025 President of the Urban Water Student Leadership Committee. Support as a Bruce Fellow allows Wyatt to focus on policy analysis related to this important water quality issue and communicate his research to freshwater policy makers in Canada.