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EDUCATION

M.A.Sc. Civil Engineering (Coastal/Water resources), University of Ottawa, 2013.

B.A.Sc. Civil Engineering, University of Ottawa, 2010.

PROFILE

Mr. Provan is a coastal engineer with over 10 years of experience in civil engineering hydraulics. Mitchel is a specialist in the application of physical and numerical modelling to investigate and develop solutions for a wide variety of problems in rivers, estuaries, oceans, and coastal regions. Mitchel has been responsible for numerous modelling studies to help optimize and validate the engineering design of hydraulic structures, coastal structures, nature-based solutions, waterfront developments, as well as marine renewable energy technologies.

As the Team Leader of NRC's Coastal and River Systems research team, Mitchel manages a team of engineers and researchers conducting applied research in coastal and riverine engineering.

PROFESSIONAL RECORD

2016-present Research Council Officer, National Research Council of Canada's Ocean, Coastal, and River Engineering Research Center, Ottawa, Ontario, Canada.

2014-2016 Junior Water Resource Engineer, Robinson Consultants, Ottawa, Ontario, Canada.

2012-2013 Coastal Engineering Student, National Research Council of Canada's Ocean, Coastal, and River Engineering Research Center, Ottawa, Ontario, Canada.

SELECTED PUBLICATIONS

Cornett, A., Ghodoosipour, B., **Provan, M.,** Murphy, E., Shantz, M. (under review). Numerical Study of Wave-Driven Flooding on Lake Ontario. *Journal of Great Lakes Research.*

Provan, M., Rahman, J., Murphy, E. (2024). Full-scale Experiments on Wave Transmission and Stability of Oyster Shell-Filled Bag berms. *Coastal Engineering*.

Provan, M., Murphy, E., Rahman, A., Morris, E., Matfin, A. (2023). Experimental study of wave and sediment interactions with edge treatment features on a living dyke. *Proceedings of Coastal Sediments 2023*.

Vouk, I., Ferguson, S., Murphy, E., Pilechi, A., **Provan, M.** (2022). Towards guidance on effective use of nature-based approaches to flood and erosion risk management in Canadian river basins. *Proceedings of IAHR RiverFlow 2022.*

Ferguson, S., **Provan M.**, Murphy, E., Berube, D., Desrosiers, M., Robichaud, A., Kim, J. (2021). Assessing numerical model skill at simulating coastal flooding using field observations of deposited debris and photographic evidence. *Water*, 14, 589.

Kim, J., Murphy, E., Nistor, I., Ferguson, S., **Provan, M.** (2021). Numerical Analysis of Storm Surges on Canada's Western Arctic Coastline. *Journal of Marine Science and Engineering*. 9:326.

Provan, M., Ferguson, S., and Murphy, E. (2021). Storm Surge Contributions to Flood Hazards on Canada's Atlantic Coast. *Journal of Flood Risk Management*, 15, e12800.

Vouk, I., Pilechi, V., **Provan, M**., Murphy, E. (2021). Nature-Based Solutions for Coastal and Riverine Flood and Erosion Risk Management. *Canadian Standards Association*.

Provan, M. Logan, S., Nistor, I., Cornett, A., Drouin, A. (2018). Field and numerical investigations of the morpho-hydrodynamic processes of the tidal inlet at Shippagan Gully, New Brunswick, Canada. *Coastal Engineering Journal*, 60:4, 400-422, DOI:10.1080/21664250.2018.1492235