

## **Strengthening the Resilience of the Canadian Water Sector**

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Public Safety Canada (PS) describes Critical infrastructure as ‘...processes, systems, facilities, technologies, networks, assets and services essential to the health, safety, security or economic well-being of Canadians and the effective functioning of government. Critical infrastructure can be stand-alone or interconnected and interdependent within and across provinces, territories and national borders. Disruptions of critical infrastructure could result in catastrophic loss of life, adverse economic effects and significant harm to public confidence’<sup>1</sup>.

Events such as increased frequency of cyberattacks, and natural disasters like Hurricane Katrina in 2005 and the Calgary Flood in 2013, highlight the vulnerability of critical infrastructure to man-made and natural hazards. These events have challenged the way we think about risk, threats and resilience.

Critical infrastructure such as water, wastewater and storm water systems are critical to the health of our citizens, to the protection of our environment and to the economic capacity of our nation. A unified and collaborative tool such as a National Risk Profile and an assessment of emerging trends and theories is a much needed catalyst to move the water sector as a whole forward to becoming more secure and resilient.

In a series of announcements made in July 2015, the Government of Canada announced 24 innovative science and technology projects to enhance public safety and security in Canada. The projects were announced as part of a \$12 million investment funded through the third Call for Proposals under the Canadian Safety and Security Program (CSSP), a federal program led by Defence Research and Development Canada's Centre for Security Science, in partnership with PS.

One of these projects, entitled “Strengthening the Resilience of the Canadian Water Sector”, aims to develop and conduct a National Survey of the Water Sector to create a National Risk Profile for the water sector that can be used collaboratively by the Canadian Water and Wastewater Association (CWWA) and PS. This will enable the CWWA and the Water Security and Emergency Management Committee to identify strengths and weaknesses in the sector and foster collaboration between utilities to share strengths and to minimize weaknesses.

In partnership with the Critical Infrastructure Protection (CIP) Initiative at Dalhousie University, the research study will be conducted using quantitative and qualitative methods to assess the state of preparedness of the water sector and make recommendations for concrete measures that could be taken to enhance resilience. The goal is to identify policies and practices that water utilities can adopt in the short and medium term to ensure a safer, more secure and resilient water supply for all Canadians.

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<sup>1</sup> <http://www.publicsafety.gc.ca/cnt/ntnl-scrct/crtcl-nfrstrctr/index-en.aspx>