https://westerngazette.ca/culture/how-flooding-could-impact-london-in-the-next-80-years/article_4d94d54a-a16e-11ec-8233-1f603a8627cd.html

How flooding could impact London in the next 80 years

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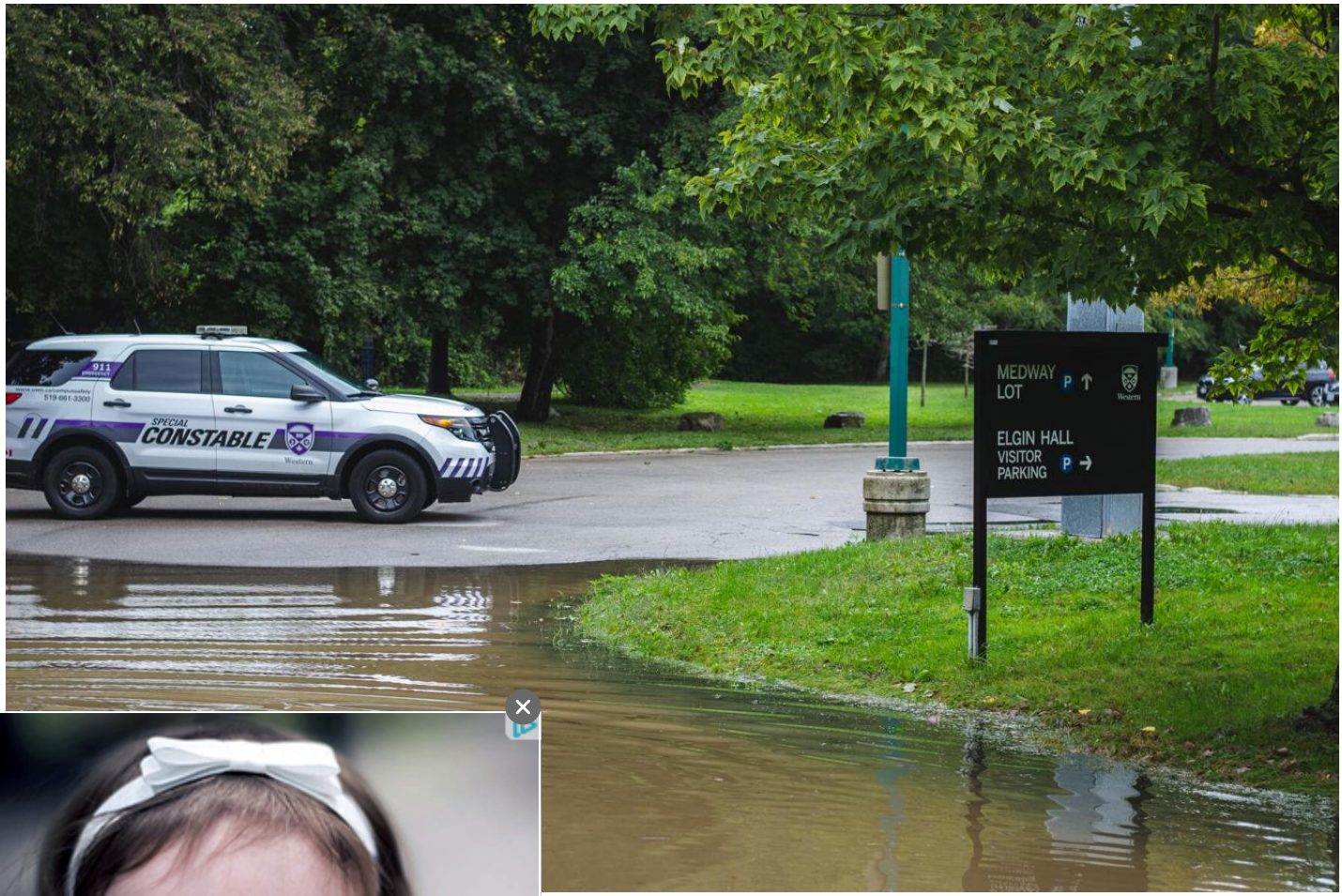
Mar 11, 2022



g lot, Sept. 23 2021

ıry is still fresh in Professor Slobodan Simonovic's mind.

Simonovic, a Western University professor emeritus in the department of civil and environmental engineering, taught at the University of Manitoba during the 1997 Red River Flood. The flood, now called “the flood of the century”, forced almost 25,000 residents to flee their homes and cost Manitobans an estimated $500 million in damages.

“Disturbance like a very large flood is a life-changing experience,” says Simonovic. “I can tell you those two weeks changed my professional life and personal life.”

Simonovic has now created the first Canada-wide flood-impact map — a tool that visualizes how flooding could impact the country in the next 80 years.

The frequency of floods is changing in London and Simonovic says what has been called a 100-year flood — a flood that has a one in 100 chance of occurring each year — is now 30 times more likely.

The current river levels in London lie around 1.9 metres, but a 100-year flood would raise the Thames River level in downtown London to 6.2 metres. Simonovic’s map predicts that from the years 2060 to 2100, the 100-year flood depth will be 7.6 metres.

Climate change makes flooding heavier and more frequent. Warm air temperatures mean a high concentration of water vapour in the atmosphere, which supplies water for rainfall. So, when river channels fail to accommodate massive amounts of rain, floods spill over the riverbanks.

Simonovic says that there hasn’t been any serious flooding in London in recent decades — a benefit of the city’s existing flood protection infrastructure, like the Fanshawe Dam and London Dyke System.

Jean-Claude Aubin, operations leader of Western Special Constable Service, notes the most vulnerable areas to flooding on campus include the Medway, Talbot and Chemistry parking lots.

hames River Conservation Authority to monitor flooding on Gazette. “Western receives potential flood alerts from ecific to campus.”

oaches 231.6 metres above sea level.

rsity’s worst campus flooding in recent history.

The Medway, Talbot and Chemistry parking lots were underwater. Water entered the first floor of Elgin Hall and items had to be moved from students' rooms to avoid flood damages. Western's tennis bubble was surrounded by water and was in its worst condition in 40 years. Talbot College, Westminster Hall, Delaware Hall and the Staging Building were identified as high-risk facilities and monitored by Campus Police, but there was no large-scale damage to campus.

Western asked that vehicles in the Medway, Talbot and Chemistry parking lots be temporarily moved due to rising flood waters after heavy rainfall last September.

Simonovic isn't worried when some low-lying places like Gibbons Park, Harris Park and campus parking lots are flooded because these areas have already been designed to be used for water collection in case of high flows.

"In spite of the fact that we have already the protection in place, some additional activities are required if we would like to minimize the potential damage," says Simonovic.

Engineers Canada found the failures of water resource infrastructure caused by climate change are pervasive in Canada. Simonovic then analyzed the vulnerability of London's infrastructure in his 2011 study.

An important observation from the study was that London's five wastewater treatment plants are all located in the floodplains.

"If the flood comes, there is a potential that these very expensive facilities may be flooded and may not be able to serve their purpose," says Simonovic.

The city of Merritt, B.C. was forced to evacuate in November 2021 after the city's wastewater treatment plant flooded. The water was contaminated and had no place to go, leaving 7,000 wers or flush toilets.

rojects that up to 30 per cent of Canada, including low-lying be underwater within the next 80 years. Flood depths could mate policies were discontinued.

something like flooding exercise is essential in Canada,"

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