

Brace for dire floods, scientist warns

By [JONATHAN SHER](#), SUN MEDIA

The worst flood in London's history will be eclipsed as global warming causes the Thames River to breach its banks more often and severely, a scientist projects.

Slobodan Simonovic, who directs UWO's Institute for Catastrophic Loss Reduction, has completed a study of the Thames that predicts future floods will be worse than the great flood of 1937, which left thousands of Londoners homeless and a rescue worker dead.

"The study showed very clearly flooding is going to occur more frequently and the magnitude of the peaks will be more severe," Simonovic said. "The Upper Thames watershed is going to be seriously affected."

But while the climate is changing, the rules meant to limit flood damage have not.

Those rules, which limit river development, are based on past floods -- the 1937 flood the benchmark beyond which development is unfettered.

"If you are using historical information you are introducing an assumption the future will be the same as the past. But with climate change we know the future will not be the same," Simonovic said.

Rules in London bar development on land that floods once a century, allows flood-proofed buildings on land that floods once every 250 years and doesn't limit development beyond that 250-year line.

But with global warming, flood waters may sweep past that 250-year boundary.

"The 250-year line may not be sufficient," Simonovic said.

His finding comes at a critical time -- in coming weeks London city council is expected to consider:

- An application by Sifton Properties to build a five-storey office on Riverside Drive that has been rigorously opposed by neighbours and environmentalists.
- More stringent restrictions on development along the river that would prohibit most building within the 250-year boundary.

The failure to change rules to match the changing climate isn't London's alone -- it's Canada-wide, said Simonovic, who's been asked by Ontario officials to speak with them next week about the risks.

They should heed his concerns, says an official with the Upper Thames River Conservation Authority, which provided data the UWO engineer used in his study.

"We're 100 per cent behind what (Simonovic) is doing. We're encouraging the provincial government to use different ways to model flood plains and how we define those risks," said Jeff Brick, the conservation authority's co-ordinator of flood control and environmental protection.

Recent events along the Thames show what appear to be effects of climate change:

- In the past four summers in Stratford, that city has had three floods that were of the magnitude expected just once a century.

- Tavistock had a once-a-century flood last summer.
- In 2000, north of London, a July storm was close to the 250-year benchmark.

Simonovic's study predicts the worst flooding will occur in summer while flooding will lessen in spring because warm temperatures will keep the snow pack smaller.

Brick isn't convinced climate change will raise flood levels along the Thames, saying the bigger effect will be along tributaries. But he believes Simonovic is more likely right than wrong about the Thames.

And the problem isn't limited to land along the Thames.

Torrential summer rain could overwhelm London's storm water system, much as it did in Peterborough in 2004.

While Brick and Simonovic agree on the risk of climate change, their solutions differ.

Brick prefers the Ontario government take action.

While London could expand its flood zone, there are other ways to mitigate the risk, he said. The city could create more wetlands upstream to absorb more storm water.

Brick notes there are costs to expanding the flood zone as builders look elsewhere.

Simonovic says tradeoffs can't be measured unless the risks are better understood.