

# Alberta seeks current estimate of future flood costs before committing to mitigation projects

BY MATT MCCLURE, CALGARY HERALD JUNE 24, 2014



The Alberta government expects a new estimate of the cost of future floods, which hasn't been done in nearly three decades, to be available by fall.

**Photograph by:** Herald files, Canadian Press

The province will gather current estimates of what damages Calgary would suffer from major floods before deciding whether to commit money to a nearly \$1 billion wish list of mitigation projects to protect vulnerable communities.

In the wake of a recent consultant's report that called for a "robust economic appraisal" before spending any dollars on flood defences, the Alberta government has announced it will update damage assessments for the city that were last done nearly three decades ago.

An expert on damage estimates called the government's six-month timeline for reports on 60 floodplains around the province "very unrealistic," but a spokesman for Alberta Environment and Sustainable Resource Development said the department is confident a revised figure for Calgary will be available by the fall.

"We need to get an accurate estimate for the type and value of the infrastructure that would be protected by certain mitigation options, and you can't do that with a 1986 study," Jason Penner said.

“You need the reality of 2014.”

The recent report by AMEC Environment and Infrastructure said a case can probably be made to spend upwards of \$200 million to protect Calgary from flooding.

But estimates of the combined costs of a proposed dry dam and off stream storage on the Elbow River are \$485 million for construction and maintenance over their 100-year life. The figure does not include money for land acquisition.

Calgary has also looked at building a \$470-million tunnel beneath the city that would divert water from the Elbow River that would otherwise flood low-lying communities downstream of the Glenmore Dam.

A 1987 report estimated damages from a major flood along the Elbow River at \$70 million in today's dollars, but Penner said significant development has been allowed in the floodplain during the intervening years that is not reflected in that study.

“Much of our inventories of infrastructure are quite dated,” he said.

“The 2013 floods changed a lot our priorities here . . . and we're moving forward with it now.”

Where flood mapping was done prior to the 1990s, the AMEC report said the new hazard assessments should use light detection and ranging technology (LiDAR) to more accurately pinpoint areas at risk and decide what level of flood defence to build.

“There is a ‘sweet spot’ that must be achieved between standard of protection, damage avoided and cost,” the report said.

“The optimum may not be necessarily be the worst event on record or even the one per cent probability flood.”

More than 30 firms have downloaded the request for proposal documents and the successful bidder is expected to be selected in late July. Penner had no estimate of the cost of the project.

In addition to damage curves with estimates of average annual loss from flooding for given communities, the project calls for a rapid damage assessment model that could be used in the aftermath of disasters.

Slobodan Simonovic, a geographer at the University of Western Ontario who has done similar assessments of the risk to Winnipeg from the Red River, said the studies are critical to making wise policy decisions on flood risk reduction, and too complex to complete in just six months.

“I am kind of skeptical that serious work can be done in this period,” Simonovic said in an email interview.

“Unfortunately, in Canada this is only done in reactive mode, usually following a large and devastating flood.”

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