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## Engineers warned New York about Sandy-style flood threat

5 November 2012 By Bryan Betts



New York under water, after Superstorm Sandy

Top US civil engineers warned of the dangers to New York City from a huge storm-surge at a conference in 2009, only to have their recommendations for Thames-style tidal barriers largely ignored.

Participants in the seminar – ironically held in New York City itself, and including speakers from the NYC Office of Emergency Management and the US Army Corps of Engineers – saw detailed warnings that a devastating storm-surge in the region was all-but inevitable. These included computer simulations of the threat and detailed engineering designs for flood defences, according to the papers from the conference, which were published earlier this year.

Other organisations, such as the Storm Surge Research Group at the State University of New York, had been recommending barriers for even longer and some engineers and scientists involved in the area now say there are parallels with the years of unheeded alarms before Hurricane Katrina hit New Orleans in 2005.

The biggest problems look to be funding – the necessary several miles of barriers would probably end up costing several tens of billion dollars – and the glacial speed of city bureaucracy.

According to reports in the New York Times, the city hired a Dutch expert in 2009 to assess flood

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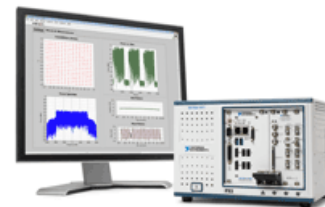
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risks and protection in the aftermath of Tropical Storm Irene, and is looking into a number of possible counter-measures. However, the paper also quoted city mayor Michael Bloomberg pooh-poohing the idea as recently as Thursday last week.

"I don't think there's any practical way to build barriers in the oceans," he said. "Even if you spent a fortune, it's not clear to me that you would get much value for it."

Of course, even if barrier construction had started in 2009 it is unlikely it would have been complete by now. The much shorter Thames Barrier took around eight years to complete, for example, while the 9km Oosterscheldekering (Eastern Scheldt storm surge barrier) in the Netherlands took 11 years.

Current estimates for the cost of Hurricane Sandy to the US economy from organisations such as risk modeller Eqecat I are running around \$50bn, although given the extortionate cost of constructing infrastructure in Manhattan, the final bill for fixing the physical damage element – initially estimated at \$10bn – could end up much higher.

In addition, many such estimates include only private losses and not costs covered by the Government, which could add twice as much again to the total bill, according to Federal Emergency Management Agency experts.

**Further information:**

<http://cedb.asce.org/cgi/WWWdisplay.cgi?295999>

<http://stormy.msrc.sunysb.edu/sbss-publications.htm#PRESENTATIONS>



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