

City of Calgary--New Flood Mapping--Brief Comments

From Wim Veldman [REDACTED]

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To Davis, Sandra <sandra.davis@calgary.ca>; Frigo, Frank <frank.frigo@calgary.ca>

Sandy and Frank:

These are my personal comments. As you know I have presented detailed assessments for various projects and submitted my views when the first post 2013 flood maps were issued.

In my opinion, **the new mapping is a step backwards** that will lead to increasing challenges for specific projects. Unless you are a consultant primarily interested in billable hours, not productive nor professionally satisfying.

My comments are not for economic reasons. In fact, I am on record as recommending a 1:200 flood criteria (see, CSCE Flood Mitigation Panel Discussion, February 20, 2014—in the News Section of my website www.wimveldman.com) and propose a criteria along the lines of "Fill shall be placed to the 1:100 year water level plus 1.0m or to the 1:200 year water level plus 0.3m whichever is greater" a standard I have applied successfully as per performances during the 2013 flood in Calgary.

You know my views on the **1.0m depth and 1.0 m/s** criteria to map floodways. Valid for undeveloped areas, provided the 2 values are multiplied (and matches, in the English system, my personal rule of 10 from day 1 re the safety of wading a river). However, irrelevant for developed areas. The irregular floodway boundaries on the proposed maps have no basis hydraulically and will lead to numerous discussions, time and frustrations. The original 1983 Bow and Elbow River provided "hydraulically smooth boundaries" while limiting the impact of developments on water levels. With the new depth and velocity criteria, are you prepared to state to Council that "in the future we will not permit developments such as Quarry Park and...and...for these reasons..."

Re the new **High Hazard Flood Fringe** category--confusing and in my opinion, not needed. Either the area is Flood Fringe, and thus can be developed if adequately flood proofed, or Floodway and thus should be left in its present state to convey the design flood. I don't know what I would do with this additional category.

Re the new **Protected Flood Fringe**. I need to review the maps further but for now my view is that if an area is adequately infilled, it is no different than a natural area at the same level which would not be "flagged". If an area is protected by a dike/berm/sheet piling—admittedly a different risk than total infilling-- again I question the need for flagging it, just as you do not flag the total areas protected by flood protection measures such as the SR1 Dam. What do developers, home owners, and insurance companies do with this category?

On a positive note, I complement the Province and the City for the excellent detail available from the mapping.



I am available to discuss this further with you at any time and to present my views to Council, if that opportunity is provided.

Take care.

Wim Veldman

