

## **GRAND RIVER CONSERVATION AUTHORITY**

**REPORT NO.** CW-05-08-41

**DATE:** May 12, 2008

**TO:** Committee of the Whole (Planning and Operations)

**SUBJECT:** Revised Flood Plain and Candidate Two Zone Policy for Fergus

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### **Recommendation:**

That the Grand River Conservation Authority complete and release the revised flood plain mapping for the Irvine River to Shand Dam for public review and comment;

And that the Grand River Conservation Authority use the revised flood plain information, with any required modifications identified through the review for administration of Ontario Regulation 150/06 and as a basis for input to Planning Act applications in this area;

And that the Grand River Conservation Authority continue discussions on the application of a Two Zone Policy Area for Fergus with the County of Wellington and the Township of Centre Wellington;

And that the areas where development can safely occur, and that are appropriately designated and zoned within Fergus be treated as a candidate Two Zone Policy Area for the purpose of administering permits under Ontario Regulation 150/06 on an interim basis until a decision on the Two Zone policy Area is reached.

### **Summary:**

The Grand River Conservation Authority had updated flood flows for the Grand River downstream of Shand Dam in 1998. Updates to the floodplain mapping between along the Grand River between Shand Dam and Irvine River have commenced. In discussion with local municipalities the potential for application of a Two Zone Policy area has been identified as appropriate.

### **Report:**

The Grand River Conservation Authority approved revised flood flows for use in administration of the Conservation Authorities Act Regulation in June 1998 as part of a comprehensive hydrology study of the Grand River watershed. It was recommended that these revised flows be used in updates of floodline mapping and in administration of Conservation Authority regulations.

Regulatory flood flows along the Grand River from Shand Dam to Irvine River through Elora and Fergus were determined to be 1114 cubic metres per second which represents an increase of approximately 40% over previous study in the 1970's. The increase was due in part to more realistic reservoir operation assumptions. The revised flood flows have been applied on a site specific basis since their approval in 1998, however this comprehensive update was initiated based on a number of considerations in consultation with the affected municipalities including: availability of updated topographic mapping through study reach, required updates to hydraulic modelling, and receipt of development applications which would be affected by the updated flows.

Grand River Conservation Authority staff have commenced an update to the floodplain mapping including field survey of bridges and dams, updating existing hydraulic computer modelling, and plotting floodlines on updated orthoimagery and contour mapping. The increase in flood flows generally results in increased flood elevations and floodplain area under Regional Storm flow conditions. As part of the study reach includes the urban area in Fergus, the consideration of Two Zone Floodplain Policy application was considered appropriate in consultation with municipal partners. Update of the hydraulic analysis included technical work required for consideration in developing floodway – flood fringe in the downtown portion of Fergus between Tower and Scotland Streets. Technical criteria for flood fringe areas include provision of safe access, feasibility of floodproofing, impact on upstream and downstream floodplain areas, and municipal administrative capacity.

The Grand River Conservation Authority would be applying this information through its regulatory process, and seeking conforming policies with municipal partners. In discussion with staff at the Township of Centre Wellington and the County of Wellington, this may have implications for future Official Plan and Zoning By-laws, and implementation of the work would include incorporation of information into municipal planning documents. As the development of the policy can take some time, it is suggested that the reach be considered a candidate two zone area for consideration of permits within the area where development is agreed to, and would meet all required technical criteria including safe access and floodproofing. Further discussion with the municipality and province will refine the potential fringe areas before undertaking a public review and commenting process. This public process is intended to be co-ordinated with the municipal process so that a complete understanding of the technical and policy application can be considered through the Official Plan and Zoning By-law amendment process, including public comments.

**FINANCIAL IMPLICATIONS:**

Not applicable

**OTHER DEPARTMENT CONSIDERATIONS:**

Not Applicable

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