



OTTAWA RIVER FLOOD PLAIN INFORMATION SHEET

Further to the Public Information Session on the Ottawa River Flood Plain that was hosted by the Township of Laurentian Valley, the purpose of this information sheet is to provide some written clarification on the policies in the Official Plan of the Township of Laurentian Valley and Comprehensive Zoning By-law 08-04-391 of the Township of Laurentian Valley.

HISTORY OF FLOOD PLAIN POLICIES IN THE TOWNSHIP OF LAURENTIAN VALLEY

The elevations currently contained in the Township Zoning By-law are based on the “Canada/Ontario Flood Damage Reduction Program Floodline Mapping Report for Pembroke Township Ottawa River/Allumette Lake” prepared by Water Planning and Management Branch Inland Waters Directorate Environment Canada, September 1991.

A copy of this report is available for viewing at the Township Municipal Office. The elevations as recommended in the 1991 report were first brought forward into the planning documents that affected lands in the (former) Township of Pembroke, through an amendment to Comprehensive Zoning By-law 635-02-91 of the (former) Township of Pembroke passed on May 14, 1996 (By-law 748-05-96). These same elevations and flood plain requirements were carried forward in the Official Plan for the Township of Laurentian Valley adopted by Council on July 23, 2002, approved by the County of Renfrew with modifications on June 30, 2004 and by the Ontario Municipal Board by oral decision December 10, 2004. These policies were also implemented in the current Comprehensive Zoning By-law 08-04-391 of the Township of Laurentian Valley passed on April 9, 2008.

Prior to the amendment in 1996, similar provisions were in place, however, the elevations were actually higher than those required now. The previous policies were required to be incorporated into the Official Plan for the (former) Township of Pembroke that was approved by Council on September 5, 1989 and approved by the Ministry of Municipal Affairs with modifications on January 21, 1991. During the same time frame, the Township of Pembroke adopted an interim control by-law on September 26, 1989 that was extended to continue to be in effect until the implementing Zoning By-law 635-02-91 of the (former) Township of Pembroke was passed.

Lands that were within the geographic Township of Alice were governed by the provisions of Comprehensive Zoning By-law 92-19 of the (former) Township of Alice and Fraser passed by Council on September 8, 1992. The elevations included in that by-law were slightly higher than what is required in the current Comprehensive Zoning By-law 08-04-391, as the flood plain design elevation was calculated by adding 0.3 metres to the elevation for the edge of the flood plain (flood fringe). These provisions implemented the policies that were put in place in the Official Plan for the (former) Township of Alice and Fraser that was approved by Council on January 8, 1990 and partially approved by the Ministry of Municipal Affairs and Housing with modifications on July 5, 1991.

The previous Comprehensive Zoning By-law for the Township of Alice and Fraser, By-law 81-522 was amended by By-law 86-23 of the (former) Township of Alice and Fraser passed on August 11, 1996, in order to include provisions in the Zoning By-law which were similar to what was carried forward into and expanded upon in By-law 92-19.

OFFICIAL PLAN OF THE TOWNSHIP OF LAURENTIAN VALLEY

Section 2.2(17) of the Official Plan contains policies related to the regulation and control of development within the Ottawa River Flood Plain. Lands along the Ottawa River within the Township of Laurentian Valley are subject to flooding by the 1 in 100 year flood and are considered to be within the **flood plain** of the Ottawa River.

The Official Plan policies provide for a two zone approach to be used to regulate development within the flood plain of the Ottawa River. With the **two zone approach** it has been determined that certain areas of the flood plain are considered less hazardous for development if within those areas the development is subject to flood proofing. This **outer zone or portion of the flood plain is referred to as the flood fringe** which is defined as that portion of the flood plain where some development may be permitted subject to appropriate **floodproofing**. The **floodway is the inner zone or portion of the flood plain** and is defined as that portion of the flood plain where the depth and velocity of flooding is considered to be such that it poses a potential threat to life and/or property and therefore is the area where development is prohibited. New development including filling and construction activities are not permitted in the floodway because the buildings and additional fill act as obstructions to the normal flow path of flood waters and could increase flood levels upstream.

The Official Plan policies further identifies the elevations of the floodway and the flood plain design elevations for the sections of the Ottawa River where the elevations have been identified and provided to the Township by the Ministry of Natural Resources and the Ministry of Municipal Affairs. These policies have then been implemented through the Comprehensive Zoning By-law which is the tool under the Planning Act that the Township uses to regulate development.

COMPREHENSIVE ZONING BY-LAW 08-04-391

The Official Plan policies are mirrored in the regulations contained in the Comprehensive Zoning By-law which must be adhered to when undertaking any development in the Township. The requirements of the Zoning By-law are also considered “applicable law” under the Building Code and therefore all building permits issued must be in compliance with the Zoning By-law. The following section includes some excerpts from the Zoning By-law 08-04-391 that are provided for ease of reference, however, should you be contemplating a development, you are directed to contact Township Staff to ensure that reference is made to the most current version of the zoning by-law and any applicable amendments.

In interpreting the zoning by-law provisions, there are specific definitions of the terms used which must be referred to. The definitions that are related to the flood plain regulations are as follows:

Excerpts from Section 2.0 Definitions of Zoning By-law 08-04-391

“2.72 **FLOOD** means a temporary rise in the water level resulting in the inundation of areas adjacent to a watercourse not ordinarily covered by water.

- 2.72.1 **FLOOD FRINGE** means the outer portion of the flood plain, where the two zone approach applies, between the floodway and the edge of the flood plain being the limits of the flooding hazard. Depths and velocities of flooding are generally less severe in the flood fringe than those experienced in the floodway.
- 2.72.2 **FLOOD PLAIN** means the area of land within a watershed which is or may be subject to inundation during a flooding event. This area shall be calculated as being the area that would be flooded with an expected average frequency of once in one hundred years. Lands subject to flooding shall have a corresponding meaning.
- 2.72.3 **FLOOD PLAIN DESIGN ELEVATION** means the elevation established under this By-law, below which all buildings must be floodproofed. This elevation shall be calculated based on the flood plain determined for the watershed.
- 2.72.4 **FLOODPROOFED** refers to the measures taken as part of the basic design and/or construction of buildings, structures or properties, to ensure that a structure or building is safe from the effects of flooding and/or to reduce or flooding hazards. Floodproofing shall include the following: no building openings of any kind, including windows, doors, vents, etc., shall be

permitted below the flood plain design elevation; incoming power service metering equipment, electrical appliances shall not be erected below the flood plain design elevation, notwithstanding this restriction does not apply to electrical wall units equipped with ground fault plugs; heating, ventilation, plumbing, sanitary sewer, sanitary and water systems shall be designed to consider flood vulnerability; sanitary sewer and storm water drainage systems having openings below the flood plain design elevation shall have automatic back-flow preventers; water supply systems shall be designed to prevent possible contamination from flood water; gas and/or oil fired furnaces shall be provided with float operated automatic control valves to shut off fuel in the event of flooding; sanitary sewer or septic systems shall be designed to prevent sewage discharge and resulting health hazards during flood conditions. Foundations shall be of cast-in-place concrete construction, designed by a professional engineer. The interior foundation wall shall be unfinished to the flood plain design elevation. Basements shall not be permitted to contain habitable space, nor shall they be permitted to be used for the storage of hazardous materials that are buoyant, flammable, explosive or toxic. A separate electrical circuit shall be required to be provided for a submersible sump pump, and the operating switch shall be located at the head of the stairs. Backfill should generally be graded away from the foundation at a slope not exceeding 1 in 30 (ratio of height to distance), for a distance of 4.572 metres (15 feet), after which it can be increased to a 1 in 4 slope down to original grade.

- 2.72.5 **FLOODWAY** means the portion of the flood plain where development and site alteration would cause a danger to public health and safety and property damage. Where the one zone approach is applied, the floodway is the entire contiguous flood plain. Where the two zone concept is applied the floodway is the contiguous inner portion of the flood plain, representing that area required for the safe passage of flood flow and/or that area where flood depths and/or velocities are considered to such that they pose a potential threat to life and/or property damage. Where the two zone approach applies, the outer portion of the flood plain is called the flood fringe.”

The specific Ottawa River Flood Plain elevations in Zoning By-law 08-04-391 are as follows:

“3.11 **FLOOD PLAINS**
Ottawa River

- (a) **For the lands affected by the flood plain of the Ottawa River and located on Lower Allumette Lake, between the Pembroke Township/Westmeath Township boundary and Lot 6, Concession IV, in the geographic Township of Pembroke, (excluding lands fronting on Hazley Bay), the following provision shall apply:**
- (i) **No building permits shall be issued for new development, including additions or enlargements, within the flood fringe of the Ottawa River unless floodproofed to the flood plain design elevation of 112.5 metres GSC datum. An elevation survey prepared by an Ontario Land Surveyor should accompany all applications for building permit.**
- (ii) **No development, with the exception of boat docking or launching facilities or flood or erosion control structures, shall be located on lands below the floodway elevation of 111.5 metres GSC datum.** The placing or removal of fill originating on the site or elsewhere, shall not be permitted in the floodway except where such fill is intended for flood or erosion control or works which are normally associated with watercourse protection works or bank stabilization projects as approved by the Ministry of Natural Resources.

- (b) **For the lands affected by the flood plain of the Ottawa River and located either between Lot 6, Concession IV, in the geographic Township of Pembroke and the Pembroke Township/Alice Township boundary, or fronting on Hazley Bay, the following provisions shall apply:**
- (i) **No building permits shall be issued for new development, including additions or enlargements, within the flood fringe of the Ottawa River unless floodproofed to the flood plain design elevation of 113.9 metres GSC datum. An elevation survey prepared by an Ontario Land Surveyor should accompany all applications for building permit.**
 - (ii) **No development, with the exception of boat docking or launching facilities or flood or erosion control structures, shall be located on lands below the floodway elevation of 112.9 metres GSC datum.** The placing or removal of fill originating on the site or elsewhere, shall not be permitted in the floodway except where such fill is intended for flood or erosion control or works which are normally associated with watercourse protection works or bank stabilization projects as approved by the Ministry of Natural Resources.
- (c) **For the lands affected by the flood plain of the Ottawa River and located at the eastern end of Allumette Lake including the western shoreline of Cotnam Island and Morrison Island the following provisions shall apply:**
- (i) **No building permits shall be issued for new development, including additions or enlargements, within the flood fringe of the Ottawa River unless floodproofed to the flood plain design elevation of 114.2 metres GSC datum. An elevation survey prepared by an Ontario Land Surveyor should accompany all applications for building permit.**
 - (ii) **No development, with the exception of boat docking or launching facilities or flood or erosion control structures, shall be located on lands below the floodway elevation of 113.2 metres GSC datum.** The placing or removal of fill originating on the site or elsewhere, shall not be permitted in the floodway except where such fill is intended for flood or erosion control or works which are normally associated with watercourse protection works or bank stabilization projects as approved by the Ministry of Natural Resources.
- (d) **For the lands affected by the flood plain of the Ottawa River in the connecting channel between Allumette Lake and Lower Allumette Lake, specific elevations which are dependent on the location of a development, must be used for proposals.”**

CONTINUATION OF EXISTING LEGAL USES

Legal Non-Conforming Provisions

The Comprehensive Zoning By-law also contains provisions that recognize the rights related to the continuation of uses, buildings or structures that legally existed prior to the establishment of zoning by-law provisions that would prohibit or restrict the use and/or the location of the building or structure. In this regard, a legal non-conforming use is permitted as long as it continues to exist, however, any additions or expansion to a legal non-conforming use or structure must meet all the requirements of the zoning by-law. As a result, if the all the lands within a subject property where there is an existing cottage are located below the floodway elevation, then no additions or expansions would be permitted to that existing building and/or no new buildings would be permitted. There is a provision in the Zoning By-law that does permit the reconstruction of an existing legal non-conforming building in the event that such a building were destroyed by fire, flood, wind or earthquake, provided that the height, volume and size of the building is not increased. It should be noted that there is also a time limit on how long after the damage occurs that you must commence

the reconstruction. For ease of reference, relevant excerpts from the zoning by-law are included as follows:

Excerpts from Section 3.0 General Provisions of Zoning By-law 08-04-391

“3.16 NON-CONFORMING USES

(b) Continuation of Existing Uses

Nothing in this By-law shall prevent the use of any land, building or structure for any purpose prohibited by the By-law if such land, building or structure was lawfully used for such purpose on the day of passing of the By-law, so long as it continues to be used for that purpose.

(c) Repair of Existing Buildings and Structures

If a non-conforming building or structure should be damaged by fire, flood, wind or earthquake, nothing in this By-law shall prevent such a building from being restored and strengthened to a safe condition, provided the height, size and volume are not increased and provided that reconstruction or restoration is commenced within twelve months and completed within twenty-four months of the date on which the damage took place.”

OTHER APPLICABLE RESTRICTIONS ON DEVELOPMENT NEAR THE OTTAWA RIVER

Section 3.26 (e) of Comprehensive Zoning By-law 08-04-391 states that “No development, including the erection of buildings or structures, including septic systems, nor the placing or removal of fill of any kind, whether it originates on site or elsewhere, shall be permitted within thirty (30) metres of the high water mark of a waterbody, except where such structures or fill are intended for flood or erosion control or are for accessory boat docks and/or boat launching facilities.” In this regard, where properties are impacted by both the 30 metre water setback and the flood plain of the Ottawa River, development is subject to the greater of these requirements, for example if the edge of the floodway is closer to the high water mark than 30 metres, any new development would still have to meet the 30 metre setback from the high water mark.

As a reminder, there are other public bodies that may have to be consulted for approval of development near the water. In this regard, any dredging, filling or alteration of the shoreline of any watercourse or waterbody is not permitted without the approval of the Township and/or the Ministry of Natural Resources, Ontario Power Generation and the Federal Department of Fisheries and Oceans, where applicable. The Ministry of Natural Resources issues approvals (i.e., Work Permits) for the construction of structures along shore lands, where ‘shore lands’ refers to land covered or seasonally inundated by water of the lake, river, stream, or pond. MNR and the federal Department of Fisheries and Oceans must be consulted prior to construction works proposed on shorelands.

GENERAL FACTS ON APPROACHES TO FLOOD RISKS

The following excerpt is taken from the Environment Canada website available at: www.ec.gc.ca/Water/en/manage/flood/e_origin.htm accessed August 2008, and provides some information on the origin of the Flood Damage Reduction Program.

“Under the Canadian constitution, flood plain management essentially falls under the jurisdiction of the provinces, as they are primarily responsible for water resources and land use matters.

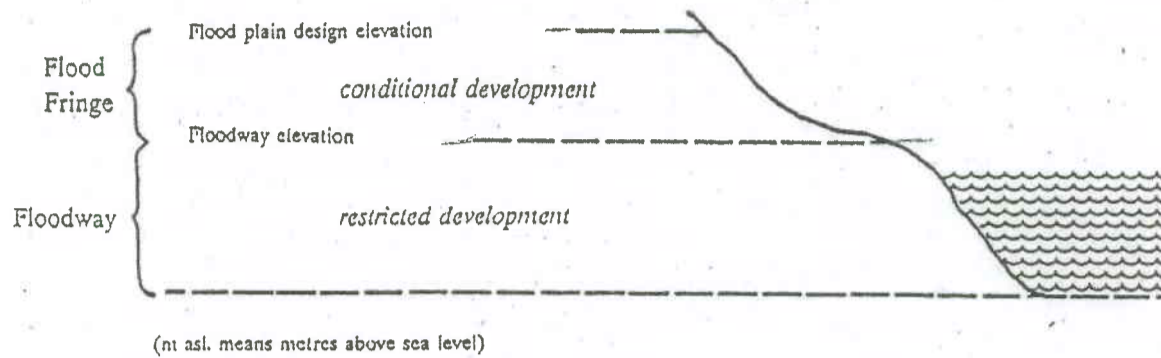
The objective of the federal government is to reduce major disruptions to regional economies and to reduce disaster assistance payments. Traditionally this had been achieved by building structural measures to control flooding. In the 1950s, 1960s, 1970s, and to a lesser extent in the 1980s, the federal government allocated millions of dollars, in conjunction with the provinces, to build dams and dykes.

Although providing some benefits, the overall cost-effectiveness of this approach was questionable, since the escalating trend of increased flood assistance payments continued. Projects of this kind are expensive to build and maintain and they are no sure guarantee against disaster. Dykes and dams can be overtopped and channel capacities exceeded making the inevitable flood worse. Structural measures often inspire a false sense of security, thereby encouraging further development in flood prone areas. Moreover this

approach, as well as disaster assistance payments, has the general public paying for the benefit of the few who choose to live in known flood risk areas.

Extensive flood damages across Canada in the early 1970s clearly demonstrated that a new approach to reducing flood damage was needed. These flood events were the catalyst for the federal government to initiate the national Flood Damage Reduction Program (FDRP) in 1975 under the Canada Water Act. It represented a significant change in approach from an ad hoc structural response to flooding to a more comprehensive approach focussing on prevention and non-structural measures.”

ILLUSTRATION OF TWO-ZONE FLOOD PLAIN



NOTE: The above illustration is for clarification and convenience only and does not form part of this By-law.