

**DIVISION SEVENTEEN – FLOODPLAIN MANAGEMENT WATER BODY PROVISIONS**  
**– SCHEDULE H****1701 FLOODPLAIN MANAGEMENT PROVISIONS**

The purpose of the floodplain management provisions is to reduce the risk of injury, loss of life, and damage to buildings and structures due to flooding. However, neither the Regional District nor the Province of British Columbia represent to any person that any building or structure, including a manufactured home, used, constructed, or located in accordance with the following provisions will not be damaged by flooding.

**1. Interpretation**

For the purposes of this Section, the following definitions shall apply:

- a. **ALLUVIAL FAN** means an alluvial deposit of a stream where it issues from a steep mountain valley, or at the junction of a tributary stream with the main stream
- b. **DESIGNATED FLOOD** means a flood, which may occur in any given year, of such magnitude as to equal a flood having a 200-year recurrence interval, based on a frequency analysis of unregulated historic flood records or by regional analysis where there is inadequate stream flow data available. Where a large watercourse or body of water is controlled by a major dam, the designated flood shall be set on a site specific basis;
- c. **DESIGNATED FLOOD LEVEL** means the observed or calculated elevation for the Designated Flood, which is used in the calculation of the Flood Construction Level;
- d. **FLOOD CONSTRUCTION LEVEL** means a Designated Flood Level plus Freeboard, or where a Designated Flood Level cannot be determined, a specified height above a Natural Boundary, Natural Ground Elevation, or any obstruction that could cause ponding;
- e. **FLOODPLAIN** means an area which is susceptible to flooding from an adjoining watercourse, lake, or other body of water and that which is designated in Section 1701.2. of this bylaw.
- f. **FLOODPLAIN SETBACK** means the required minimum distance from the Natural Boundary or other reference line of a watercourse, lake, or other body of water to any landfill or structural support required to elevate a floor system or pad above the Flood Construction Level, so as to maintain a floodway and allow for potential land erosion.

- 1701 1. g. **FLOODPLAIN WATERCOURSE** means any natural or man-made depression with well defined banks and a bed 0.6 m (1.968 feet) or more below the surrounding land serving to give direction to a current of water including rivers, creeks, springs, ravines, swamps and gulches, whether usually containing water or not.
- h. **FREEBOARD** means a vertical distance added to a Designated Flood Level, used to establish a Flood Construction Level.
- i. **G.S.C.** means Geodetic Survey of Canada datum.
- j. **HABITABLE AREA** means any space or room, including a manufactured home, that is or can be used for dwelling purposes, business, or the storage of goods which are susceptible to damage by floodwater.
- k. **MANUFACTURED HOME** means a single family dwelling built in an enclosed factory environment, in one or more sections, intended to be occupied in a place other than of its manufacture. Manufactured homes include **MOBILE HOMES** and **MODULAR HOMES** which are either completely self-contained dwelling units, or are incomplete dwelling units which are fastened together and completed on site. All new manufactured homes must be constructed to either the CAN/CSA Z240 (mobile home) standard, the National Building Code of Canada, or the Provincial Building Code where manufactured.
- l. **NATURAL BOUNDARY** means the visible high water mark of any lake, river, stream, or other body of water where the presence and action of the water are so common and usual and so long continued in all ordinary years as to mark upon the soil of the bed of the lake, river, stream, or other body of water a character distinct from that of the banks thereof, in respect to vegetation, as well as in respect to the nature of the soil itself, as defined in Section 1 of the Land Act, and also includes the edge of dormant side channels of any lake, river, stream, or other body of water, and marshes.
- m. **NATURAL GROUND ELEVATION** means the undisturbed ground elevation prior to site preparation.
- n. **PAD** means a paved surface on which blocks, posts, runners or strip footings are placed for the purpose of supporting a manufactured home, or a concrete pad for supporting a Habitable Area.
- o. **STANDARD DYKE** means a dyke built to a minimum crest elevation equal to the Flood Level or Flood Construction Level and meeting standards of design and construction approved by the Ministry of Water, Land and Air Protection and maintained by an ongoing authority such as a



1701 2. local government body.  
Floodplain Designation

The following land is designated as Floodplain:

- a. Land shown as Floodplain on Schedule "H.1", being the Floodplain maps attached to and forming part of this bylaw.
- b. Land lower than the Flood Construction Levels specified in Section 1701.3.a. of this bylaw.
- c. Land within the Floodplain Setbacks specified in Section 1701.3.b. of this bylaw.

3. Floodplain Specifications

a. Flood Construction Levels:

The following elevations are specified as Flood Construction Levels, EXCEPT THAT WHERE MORE THAN ONE (1) FLOOD CONSTRUCTION LEVEL IS APPLICABLE, THE HIGHER ELEVATION SHALL BE THE FLOOD CONSTRUCTION LEVEL:

- i. the Flood Construction Level for a specific property, as determined by interpolation from those Flood Construction Levels shown on Land shown as Floodplain on Schedule "H.1", being the Floodplain maps attached to and forming part of this bylaw; or
- ii. 351.1 m (1,152 feet) GSC datum for land adjacent to Mara Lake; or
- iii. 393.2 m (1,290 feet) GSC datum for land adjacent to Kalamalka Lake; or
- iv. 343.66 m (1,127.5 feet) GSC datum for land adjacent to Okanagan Lake; or
- v. 604.72 m (1,983.99 feet) GSC datum for land adjacent to Sugar Lake; or
- vi. 3 m (9.842 feet) above the Natural Boundary of Mabel Lake and the Shuswap River between Shuswap Falls and Sugar Lake; or
- vii. 1.5 m (4.921 feet) above the Natural Boundary of any other watercourse, lake, marsh, or pond.

- 1701 3. a. Notwithstanding the Flood Construction Level requirements cited herein the following types of developments are hereby exempted from the requirements, in respect to the Flood Construction Level provisions of this section:
- A renovation of an existing building or structure that does not involve an addition thereto;
  - An addition to a building or structure that would increase the size of the building or structure by less than 25 percent of the floor area existing at the date of adoption of this bylaw provided that the degree of conformity regarding setbacks is not increased;
  - That portion of a building or structure to be used as a carport, garage or entrance foyer;
  - Farm buildings other than dwelling units and closed-sided livestock housing;
  - Hot water tanks and furnaces behind Standard Dykes;
  - Closed-sided livestock housing behind Standard Dykes;
  - Heavy Industry behind Standard Dykes;
  - On-loading and off-loading facilities associated with water-oriented industry and portable sawmills;
  - Farm dwelling units provided that they are located on parcels 8 hectares or greater in size that are located within the Agricultural Land Reserve, provided that they are located with the underside of a wooden floor system or the top of the Pad of any Habitable Area (or in the case of a Manufactured Home or Unit the top of Pad or the ground surface on which it is located) no lower than 1 metre above the Natural Ground Elevation taken at any point on the perimeter of the building, or no lower than the Flood Construction Levels specified herein whichever is lesser;
  - Closed-sided livestock housing not behind Standard Dykes provided that they are located with the underside of a wooden floor system or the top of the Pad (or in the case of a Manufactured Home or Unit, the top of Pad or the ground surface on which it is located) no lower than 1 metre above the Natural Ground Elevation taken at any point on the perimeter of the building, or no lower than the Flood Construction Levels specified herein whichever is the lesser;
  - Industrial uses, other than main electrical switchgear, provided that they are located with the underside of a wooden floor system or the top of the Pad (or in the case of a Manufactured Home or Unit, the top of Pad or the ground surface on which it is located) no lower than 1 metre above the Natural Ground Elevation taken at any point on the perimeter of the building, or no lower than the Flood Construction Levels specified herein minus freeboard. Main electrical switchgear shall be no lower than the Flood Construction Level.

1701 3. b. Floodplain Setbacks:

The following distances are specified as Floodplain Setbacks, EXCEPT THAT WHERE MORE THAN ONE (1) FLOODPLAIN SETBACK IS APPLICABLE, THE WIDER DISTANCE SHALL BE THE FLOODPLAIN SETBACK.

- i. 30 m (98.42 feet) from the Natural Boundary of Ashton Creek, Bessette Creek, Cherry Creek, Duteau Creek, Ferry Creek, Kettle River, Kingfisher Creek, Monashee Creek, Shuswap River, Tsuis Creek and Wap Creek; or
- ii. 15 m (49.21 feet) from the Natural Boundary of any other watercourse; or
- iii. 15 m (49.21 feet) from the Natural Boundary of Kalamalka Lake, Mabel Lake, Mara Lake and Okanagan Lake; or
- iv. 15 m (49.21 feet) from the 601.72 metre (1974 feet) GSC datum contour adjacent to Sugar Lake; or
- v. 15 m (49.21 feet) from the Natural Boundary of any other lake, marsh, or pond; or
- vi. 15 m (49.21 feet) from any Standard Dyke right-of-way, or structure for flood protection or seepage control.

4. General Provisions

- a. The underside of any floor system, or the top of any pad supporting any space or room, including a manufactured home, that is used for dwelling purposes, business, or the storage of goods which are susceptible to damage by floodwater shall be above the Flood Construction Level specified in Section 1701.3.a. above.
- b. Any landfill required to support a floor system or pad shall not extend within any setback from a watercourse or body of water specified in this bylaw.
- c. Structural support or compacted landfill or a combination of both may be used to elevate the underside of the floor system or the top of the pad above the Flood Construction Level. Where landfill is used, the face of the landfill slope shall be protected against erosion from flood flows, wave action, ice, and other debris.

- 1701 4. d. The Flood Level or Flood Construction Level for any watercourse identified in Sections 1701.3.a. and b. above shall be taken perpendicular to the natural boundary of the watercourse at its highest perpendicular point.
- e. The Building Inspector, or such person appointed by the Board of the Regional District may require that a British Columbia Land Surveyor's certificate be required to verify compliance with the Floodplain Elevations and Setbacks specified in Sections 1701.3.a. and 1701.3.b. of this bylaw. The cost of verification shall be assumed by the land owner.
- f. *Pursuant to Section 910(5) of the Local Government Act, the Regional District of North Okanagan may grant exemptions from the application of floodplain setbacks and flood construction elevations provided that:*
- *The property owner submits a written request for an exemption to the Regional District of North Okanagan Board of Directors; and*
  - *The exemption is consistent with the Provincial Guidelines; or*
  - *A professional engineer or geoscientist, or other prescribed person, certifies that the property can be safely used for the intended use.*

(B/L 2141/07)

## 1702 RIPARIAN AREA REGULATION PROVISIONS

*The Riparian Area Regulations apply to all development related to residential, commercial and or industrial activities including removal, alteration, disruption or destruction of vegetation disturbance of soils construction or erection of buildings and structures, creation of non-structural impervious or semi-impervious surfaces, flood protection works, construction of roads, trails, docks, wharves, and bridge, provision and maintenance of sewer and water services, development of drainage systems, and development of utility corridors and subdivision as defined in Section 872 of the Local Government Act.*

### 1. Interpretation

*For the purposes of this Section, the following definitions shall apply:*

- a. *DEVELOPMENT means any of the following associated with or resulting from the local government regulation or approval of*

*residential, commercial or industrial activities to the extent that they are subject to local government powers under the Local Government Act:*

- a) removal, alteration, disruption or destruction of vegetation;*
- b) disturbance of soils;*
- c) construction or erection of buildings and structures;*
- d) creation of non-structural impervious or semi-impervious surfaces;*
- e) flood protection works;*
- f) construction of roads, trails, docks, wharves, and bridges;*
- g) provision and maintenance of sewer and water services;*
- h) development of drainage systems;*
- i) development of utility corridors;*
- j) subdivision as defined in Section 872 of the Local Government Act.*

- 1702 1. b. *HIGH WATER MARK means the high water mark or water level in a watercourse that is reached during annual flood events, as indicated by the presence of soil subject to the regulation inundation and/or vegetation that due to the frequent presence of water is distinctly different from the vegetation of adjacent upland areas.*
- c. *QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) means an applied scientist or technologist acting alone or together with another qualified environmental professional if the individual is registered and in good standing in BC with an appropriate professional organization constituted under and act, acting under that associations code of ethics and subject to disciplinary action by that association the individual's area of expertise is recognized in the assessment methods as one that is acceptable for the purpose of providing all or part of an assessment report in respect of that development proposal and the individual is acting within that individual's area of expertise.*
- d. *RIPARIAN ASSESSMENT AREA means the area within 30 metres of the high water mark of a riparian watercourse; within 30 metres of the top of the ravine bank in the case of a ravine less than 60 metres wide; and within 10 metres of the top of the ravine bank in the case of a wider ravine that link aquatic to terrestrial ecosystems and includes both existing and potential riparian vegetation and existing and potential upland vegetation that exerts an influence on the riparian watercourse.*
- e. *TOP OF RAVINE BANK means the first significant break in a ravine slope where the break occurs such that the grade beyond the break is flatter than 3:1 for a minimum distance of 15 metres measured perpendicularly from the break, and the break does not include a bench within the ravine that could be developed.*

*f. RIPARIAN WATERCOURSE means any natural or man-made depression with well defined banks serving to give direction to a current of water, including rivers, creeks, springs, ravines, swamps, and gulches and any of the following that provides fish habitat: a pond, lake, river, creek or brook, and; a ditch, spring or wetland that is connected by surface flow to a riparian watercourse.*

1702 2. a. *Riparian Area Setbacks*

*Development may not occur within the Riparian Assessment Area unless a lesser setback is determined by an assessment completed by a QEP under the Riparian Area Regulations or an approval is granted under the Riparian Area Regulation by the applicable provincial or federal agencies except subdivision as defined in Section 872 of the Local Government Act where no modifications are proposed within the Riparian Assessment Area and a Section 219 covenant has been registered on the title of the property restricting development within the Riparian Assessment Area and it has been deemed that a sufficient building envelope, suitable building site and sewage disposal area can be provided.*

*(B/L 2141/07)*