

DISTRICT OF VANDERHOOF
FLOOD PLAIN MANAGEMENT
BYLAW NO. 1174, 2017

A Bylaw to establish flood plain management procedures and regulations for buildings and structures in flood prone areas

WHEREAS pursuant to Section 524 of the *Local Government Act*, the Council of the District of Vanderhoof is authorized to enact a flood plain management bylaw where it considers flooding may occur on land;

AND WHEREAS the District of Vanderhoof is in possession of the Vanderhoof Flood Mitigation Study which includes maps and other documents that identify areas, which may be subject to flooding;

AND WHEREAS the District of Vanderhoof has had flood plain management regulations in place for flood prone lands since 1979;

AND WHEREAS there is a need to review and update these regulations to reflect current water levels indicated in the study;

NOW THEREFORE the Council of the District of Vanderhoof, in open meeting assembled, enacts as follows:

1. TITLE

This Bylaw may be cited as the “District of Vanderhoof Flood Plain Management Bylaw No. 1174, 2017.”

2. ADMINISTRATION

2.1 The Building Official or other person appointed by Council shall administer this Bylaw.

2.2 This Bylaw shall apply to all lands within the District of Vanderhoof municipal boundaries.

2.3 This Bylaw includes as Schedule ‘A’ the following report produced by Northwest Hydrolic Consultants (NHC);

2.3.1 District of Vanderhoof “Vanderhoof Flood Mitigation Study, 2009” and associated maps, which are attached hereto and form part of this Bylaw.

2.4 Setbacks and elevations shall be measured from, and with respect to, the body of water which is adjacent to the subject building or structure.

2.5 The building inspector, or such person appointed by Council may require that a British Columbia Land Surveyor’s certificate be required to verify compliance with the flood construction levels and floodplain setbacks specified in Section 5. The cost of verification shall be assumed by the land owner.

3. DEFINITIONS

For the purposes of this Bylaw, the following definitions apply:

ALLUVIAL FAN means the alluvial deposit of a stream where it issues from a steep mountain valley or gorge upon a plain or at the junction of a tributary stream with the main stream.

BUILDING means any structure used or intended for supporting or sheltering any use or occupancy.

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 the flow of a large watercourse is controlled by a major dam, the designated flood shall be set on a site specific basis.

DESIGNATED FLOOD LEVEL means the observed or calculated elevation for the Designated Flood and is used in the calculation of the Flood Construction Level.

FLOOD CONSTRUCTION LEVEL means the Designated Flood Level plus the allowance for freeboard and is used to establish the elevation of the underside of a wooden floor system or top of a concrete slab for habitable buildings. In the case of a manufactured home, the ground level or top of a concrete or asphalt pad, on which it is located, shall be no lower than the above-described elevation. It also establishes the minimum crest level of a Standard Dike. Where the Designated Flood Level cannot be determined or where there are overriding factors, an assessed height above the Natural Boundary of the water body or above the natural ground elevation may be used.

FLOODPROOFING means the alteration of land or structures either physically or in use to reduce or eliminate flood damage and includes the use of elevation and/or building setbacks from water bodies to maintain a floodway and to allow for potential erosion.

FREEBOARD means a vertical distance added to the Designated Flood Level and is used to establish the Flood Construction Level.

HABITABLE AREA means any room or space within a building or structure, which is or can be used for human occupancy, commercial sales, or storage of goods, possessions or equipment (including furnaces) that would be subject to damage if flooded.

HEAVY INDUSTRY includes such uses as manufacturing or processing of wood and paper products, metal, heavy electrical, non-metallic mineral products, petroleum and coal products, industrial chemicals and by-products and allied products.

LIGHT OR SERVICE INDUSTRY includes such uses as assembly, fabricating, light manufacturing, warehousing, wholesaling and food processing.

MANUFACTURED HOME means a structure manufactured as a unit, intended to be occupied in a place other than at its manufacturer, and designed as a dwelling unit, and includes mobile homes and specifically excludes recreation vehicles.

NATURAL BOUNDARY means the visible high watermark 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. In addition, the natural boundary includes the best estimate of the edge of dormant or old side channels and marsh areas.

PAD means a paved surface on which blocks, posts, runners or strip footings are placed for the purpose of supporting a manufactured home or unit.

SETBACK means a withdrawal of a building or landfill from the Natural Boundary or other reference line to maintain a floodway and to allow for potential land erosion.

STANDARD DIKES means those built to a minimum crest elevation equal to the Flood Construction Level and meeting standards of design and construction approved by the Ministry of Environment and maintained by an ongoing authority such as a local government body.

STRUCTURE means a construction or portion thereof of any kind, whether fixed to, supported by or sunk into the land or water, specifically including retaining structures of any size directly connected to a building or other structure but specifically excluding all other retaining structures such as landscaping, fences and paving.

WATERCOURSE means any natural or man-made depression with well-defined banks and a bed 0.6 metres or more below the surrounding land serving to give direction to a current of water at least six (6) months of the year or having a drainage area of 2 square kilometres or more upstream of the point of consideration.

4. FLOODPLAIN DESIGNATION

The following lands are designated as floodplain:

- 4.1 All lands lying within the Designated Floodplain Limit as shown on Schedule 'A', attached to and forming part of this Bylaw.
- 4.2 All other lands which are below the Flood Construction Levels specified in Section 5.1 of this Bylaw or which are within the Floodplain Setbacks specified in Section 5.2 of this Bylaw.

5. FLOODPLAIN SPECIFICATIONS

5.1 Flood Construction Levels

The following elevations are specified as Flood Construction Levels, except where more than one Flood Construction Level is applicable, the higher elevation shall be the specified Flood Construction Level:

- 5.1.1 Within those areas designated in Section 4.1 of this Bylaw, the specified Flood Construction Levels shall be interpolated from the "200-year frequency Flood Level" identified on Schedule 'A' attached to this Bylaw;

or,

- 5.1.2 Where floodplain mapping is not available, 1.5 meters above the Natural Boundary of Stony Creek, Murray Creek, Knight Creek, Neuco Creek, Martens Creek and any other watercourse, lake, marsh or pond.

5.2 Floodplain Setbacks

The following distances are specified as Floodplain Setbacks, except where more than one Floodplain Setback is applicable, the greater distance shall be the Floodplain Setback:

- 5.2.1 30.0 meters from the natural boundary of Nechako River and Stony Creek;

- 5.2.2 15.0 meters from the natural boundary of Murray Creek, Knight Creek, Neuco Creek, Martens Creek and other water courses;
- 5.2.3 7.5 meters from the natural boundary of a lake, marsh or pond; and
- 5.2.4 7.5 meters from any dike right of way, or structure for flood protection or seepage control.

6. FLOODPLAIN REGULATIONS

6.1 Pursuant to Section 524 of the *Local Government Act*:

- 6.1.1 No building, manufactured home or unit, modular home or structure or any part thereof shall be constructed, reconstructed, moved, extended or located with the underside of a wooden floor system or top of a concrete slab of any area used for habitation, business, or storage of goods damageable by floodwaters, or in the case of a manufactured home or unit the ground level or top of the pad on which it is located, lower than the Flood Construction Level specified in Section 5.1 of this Bylaw.
 - 6.1.2 No landfill or structural support required to support a floor system or pad, shall be constructed, reconstructed, moved, extended or located within any Floodplain Setback specified in Section 5.2 of this Bylaw.
 - 6.1.3 Unless specifically provided for elsewhere in this bylaw no area below the Flood Construction Level shall be used for the installation of furnaces, major electrical switchgear, or other fixed equipment susceptible to damage by floodwater.
- 6.2 The required elevation specified in Section 5.1 may be achieved by structural elevation of the said habitable, business or storage area or by adequately compacted landfill on which any building is to be constructed or manufactured home or unit located, or by a combination of both structural elevation and landfill. No area below the required elevation shall be used for the installation of furnaces or other fixed equipment susceptible to damage by floodwater.
- 6.3 Where landfill is used to achieve the required elevation specified in Section 5.1 above, no portion of the landfill slope shall be closer than the setback distances specified in Section 5.2 from the Natural Boundary, or the inboard toe of any structure for flood protection or seepage control, or the inboard side of any dike right of way, and the face of the landfill slope shall be adequately protected against erosion from flood flows, wave action, ice or other debris.
- 6.4 Where a manufactured home or unit is located on, and secured to, a poured-in-place concrete perimeter footing, the Flood Construction Level shall apply to the top of the footing wall.

7. GENERAL EXEMPTIONS

Section 6.1.1 of this Bylaw shall not apply to:

- 7.1. The renovation of an existing building or structure that does not involve an addition thereto;

- 7.2 An addition to a building or structure that would increase the size of the building or structure by less than 25 percent of the finished floor area of the first story existing at the date of adoption of this Bylaw. Such additions must not increase the degree of nonconformity with respect to a floodplain setback required by Section 6.1.2;
- 7.3 That portion of a building or structure to be used solely for the parking or storage of vehicles as in a carport or garage, or as an entryway;
- 7.4 Domestic greenhouses;
- 7.5 Farm buildings other than dwelling units and closed sided livestock housing;
- 7.6 Closed sided livestock housing behind Standard Dikes as approved by the Inspector of Dikes and, if not behind a Standard Dike, provided they are located with the underside of the wooden floor system or the top of the pad (or in the case of a manufactured home the top of the pad or the ground surface on which it is located) no lower than 1.0 meters above the natural ground elevation taken at any point on the perimeter of the building;
- 7.7 Light or heavy industrial development including fixed equipment (other than main electrical switchgear) provided it is located with the underside of a wooden floor system or the top of the pad (or in the case of a manufactured home the top of the pad or the ground surface on which it is located) no lower than the Flood Construction Level minus freeboard. Main electrical switchgear shall be no lower than the Flood Construction Level;
- 7.8 Heavy industry behind Standard Dikes;
- 7.9 On loading and off loading facilities associated with water oriented industry and portable sawmills. Main electrical switchgear shall be placed above the Flood Construction Level;
- 7.10 Publicly owned and operated open sided recreation shelters and stands which do not have fixtures which are susceptible to damage by flood waters.

8. SITE SPECIFIC EXEMPTIONS

Application by property owners to the District of Vanderhoof for site specific exemptions to this Bylaw pursuant to Section 524 (7) of the Local Government Act shall be in the form prescribed in the District of Vanderhoof Development Procedures Bylaw No. 996, 2006.

READ A FIRST TIME this _____ day of _____, 2017.

READ A SECOND TIME this _____ day of _____, 2017.

READ A THIRD TIME this _____ day of _____, 2017.

ADOPTED this _____ day of _____, 2017.

MAYOR

CORPORATE OFFICER