

13.1.1 Hazardous Lands Development Permit Area 1

(DPA 1 Flooding and Debris Flow Potential)

13.1.1.(a) Area

The area within 100 m (328 ft.) of Adams River, Corning Creek (a.k.a. Lee Creek), Hudson Creek, Onyx Creek, Ross Creek, Scotch Creek, and Seymour River is designated as Hazardous Lands DPA 1 (*Flooding and Debris Flow Potential*).

[Note: Due to limited detailed hazard mapping, the CSRD may require additional lands to be investigated if evidence exists of flooding and debris flow potential beyond the 100 m (328 ft) that may impact or be impacted by the proposed development.]

13.1.1.(b) Guidelines

To protect against the loss of life and to minimize property damage associated with flooding and debris flow events, the CSRD encourages low intensity uses, such as conservation (natural) areas, agriculture, park and open-space recreation, in flood susceptible lands.

Where flood and debris flow susceptible lands are required for development, the construction and siting of buildings and structures to be used for habitation, business or the storage of goods damageable by floodwaters shall be flood-proofed at a minimum to those standards specified by the Ministry of Environment's *Flood Hazard Area Land Use Management Guidelines*, or, if greater, to standards set out by a Qualified Professional registered with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC).

DPA's addressing Flooding and Debris Flow Potential shall be in accordance with the following:

- .1 Prior to construction of, addition to or alteration of a building or other structure or prior to subdivision approval, the applicant shall submit a report, prepared by a qualified professional registered with the APEGBC with experience in geotechnical engineering and preferably also with experience in hydraulic engineering. The report, which the Regional District will use to determine the conditions and requirements of the DP, must certify that the "land may be used safely for the use intended" as provided under the Local Government Act.
- .2 The report should include the following types of analysis and information:
 - i. site map showing area of investigation, including existing and proposed: buildings, structures, septic tank & field locations, drinking water sources and natural features;

- ii. inspections of up-stream channels and flood ways, including channel confinement and creek gradients;
 - iii. debris dams and characteristics, culverts;
 - iv. sources of alluvium (channels and eroded banks), protection of groundwater resources, and related hydrologic features, which are factors that may affect the field defined limit of flooding and related erosion and deposition, as well as the potential for debris torrents;
 - v. slope and stream profiles with documentation of slope stability, the limits and types of instability, should be indicated along with changes in stability that may be induced by forest clearing, and the mobilization and run out limits of debris in creeks; and
 - vi. comments regarding cut and fill slope stability with reference to required surface or subsurface drainage, culverts, and special reference to the stability of fills required for steep gully crossings should be provided
- .3 A Covenant may be registered on title identifying the hazard and remedial requirements as specified in the geotechnical or engineering reports for the benefit and safe use of future owners.