

Appendix A1^{1 2}

Freshwater and Fish Habitat Development Permit Area

1.0 PURPOSE

The Freshwater and Fish Habitat Development Permit Area is designated a development permit area for the protection of the natural environment, its ecosystems and biological diversity, and protection of development from hazardous conditions pursuant to Section 488(1)(a) and (b) of the *Local Government Act*.

2.0 AREA

The Freshwater and Fish Habitat Development Permit Area is shown on Map No. 3, and applies to the riparian assessment areas of mapped and unmapped streams subject to the *Riparian Areas Regulation* (RAR) of the *Riparian Areas Protection Act*, as well as all other mapped lakes, wetlands, ponds and watercourses not subject to the RAR. Specifically, the Development Permit Area is defined as follows:

1. All mapped and unmapped riparian assessment areas as defined in the RAR as follows:
 - a) for a stream, a 30 metre strip on both sides of the stream measured from the high water mark;
 - b) for a ravine less than 60 metres wide, a strip on both sides of the stream measured from the high water mark to a point that is 30 metres beyond the top of the ravine bank; and
 - c) for a ravine 60 metres wide or greater, a strip on both sides of the stream measured from the high water mark to a point that is 10 metres beyond the top of the ravine bank.
2. All mapped watercourses, lakes, wetlands, and ponds, that are not subject to the RAR; 15 metres as measured from the natural boundary or top of ravine bank, whichever is greater. This includes estuarine areas (areas of tidal influence) of all watercourses and streams. For clarity, in estuarine areas the Marine Coast Development Permit Area also applies.

The following definitions are used for the purpose of defining the development permit area as above:

'ravine' means a narrow, steep-sided valley that is commonly eroded by running water and has a slope grade greater than 3:1.

'stream' includes any of the following that provides fish habitat:

- a) a watercourse, whether it usually contains water or not;
- b) a pond, lake, river, creek or brook; and
- c) a ditch, spring or wetland that is connected by surface flow to something referred to in paragraph a) or b).

'top of the 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.

¹ Bylaw No. 1152.03 adopted January 23, 2007

² Bylaw No. 1152.05 adopted December 4, 2018

3.0 JUSTIFICATION

Freshwater and riparian ecosystems perform a number of valuable services to humans, plants and animals alike. They support a diversity of plants and animals, provide important refuges and migration routes for birds and wildlife, and support fish life processes. Vegetation in riparian areas moderates the volume and rate of water flowing through the watershed contributing to effective rainwater management and stabilizes stream banks by holding soil in place. Plant root systems enhance the soil's ability to absorb water by making it more porous. This allows water to be stored and released slowly into the watercourse, reducing erosion and flooding. Soils also filter impurities and sediment from runoff water, improving water quality in the stream channel.

Riparian vegetation provides food and shelter for fish. Shade from trees within the riparian area regulates water temperatures within the stream, which is critical for salmon, trout and other fish species that need cool water to survive. Logs and other woody debris fall into streams from the riparian area, influencing stream channel morphology, dissipating the stream's natural erosive energy and providing habitat for a diverse range of species. Erosion of banks and steep slopes can also pose a hazard to development, and maintaining and enhancing natural features and vegetation and siting buildings and structure appropriately, can reduce this hazard.

Land use practices including land clearing, road building, construction of buildings and structures, and location of wastewater disposal systems in or near riparian areas can jeopardize these habitats and water quality. Protection of riparian vegetation and watercourses is therefore necessary to protect the natural environment, ecosystems and biological diversity of the Plan Area. Land use practices can also change the hydraulic flow of a stream and create or exacerbate a flooding hazard.

Furthermore, the Province of British Columbia's *Riparian Areas Protection Act*, requires that local governments establish regulations to protect riparian areas, and not allow development to proceed until the requirements of the RAR are met.

The objectives of this development permit area are:

1. To protect freshwater ecosystems to maintain their natural habitat and environmental quality.
2. To restore freshwater ecosystems to improve their natural habitat and environmental and hazard mitigation quality if they have been previously degraded.
3. To protect riparian areas from development so that the areas can provide natural features, functions and conditions that support fish life processes.
4. To protect development from flood and slope hazard.