



PART D: DEVELOPMENT PERMIT AREA GUIDELINES

20. Riparian Areas & Marine Shorelines Environmental DPA

The areas included on Figure 18 include environmentally sensitive areas in or around lakes, streams, ponds, wetlands, and the sea. Riparian areas are those areas adjacent to aquatic systems that contribute to the proper functioning condition of the aquatic system and are distinctly marked on the map presented in Figure 18. The following design guidelines are intended to complement a site adapted planning approach to minimize ecosystem disturbance and protect open space and wildlife corridors.

20.1 Riparian Area Guidelines

- a. Require a report for all riparian areas from a Qualified Professional identifying environmentally valuable resources and wildlife values other than fish, including but not limited to amphibians and wildlife corridors. The report will identify measures to protect, enhance and restore ecosystem values and the Proper Functioning Condition of the watercourse or waterbody and riparian area. This report must:
 - i. Identify environmentally valuable resources and wildlife values other than fish, including, but not limited to, amphibians and wildlife corridors; and
 - ii. Identify measures to protect, enhance and restore ecosystem values and the Proper Functioning Condition of the watercourse or waterbody and riparian area.
- b. For water bodies which contain fish or are connected to fish habitat, as defined by the Riparian Areas Regulation (RAR), a detailed assessment report must be prepared by a Qualified Professional, in accordance with the RAR in support of a development permit

for development within 30 m of the water body. Colwood Creek, Millstream Creek, Latoria Creek, Selleck Creek, Bee Creek, Lookout Brook and Joe's Creek are known to have fish present. A single report may be prepared which covers both RAR and City requirements. In compliance with the provincial requirements, the RAR report must:

- i. Clearly identify the width of the streamside protection and enhancement area (SPEA) to be protected, and measures necessary to protect the integrity and function of the SPEA;
- ii. Include an explanatory plan or reference plan prepared by a BC Land Surveyor which delineates the identified streamside protection and enhancement area;
- iii. Include measures to protect the root zones of trees within the SPEA and along the SPEA boundary, and protect the trees from windthrow. A report from a qualified professional (e.g. Professional Forester, ISA Certified Arborist) will be required as part of the RAR report if the Qualified Professional does not have such expertise;
- iv. Be prepared in accordance with the joint EGBC/ABC FP/CAB professional practice guidelines titled "Legislated Riparian Assessments in BC" as amended from time to time;
- v. Protect water quality and natural systems by leaving stream banks intact and not altering slopes and vegetation;
- vi. Provide leave strips of adequate width, a minimum of 30 metres (100 feet) adjacent to watercourse and foreshore to be maintained in a natural state; and
- vii. If the subject property is adjacent to a ravine, steep slope or other known hazard area, including those shown in Figure 19, provide a report certified by a geotechnical professional or professional engineer, that identifies any natural hazards along watercourses or waterbodies (including groundwater discharge), as part of the RAR report.

A Riparian Area Regulation (RAR) report may not be required where a prior RAR report has been done within the previous two years. Such reports are only valid if the site conditions have not changed and the proposed development remains substantively unchanged. If a suitable report is available, the proponent will be required to provide a letter from a Qualified Professional confirming that site conditions (existing and proposed) have not changed with respect to the impact on the riparian area and to provide a detailed Riparian Management Report.

- c. In general, no part of a SPEA may extend on to a newly-created private residential lot. In special circumstances, the City may allow SPEAs on private lots with the registration of a covenant and/or provision of right-of-way access for municipal maintenance.
- d. City issuance of a development permit is subject to notification from the Province that a copy of the assessment report with the proper certifications has been submitted to the Riparian Area Regulation Notification System.
- e. A post-development assessment report must be provided by a Qualified Professional upon completion of the project, which certifies that the prescribed measures have been satisfactorily completed, before the security for ecological restoration and enhancement is returned to the applicant.
- f. The only activities permitted in riparian buffer areas are management of invasive species, ecological restoration/enhancement, wildfire interface treatments and modification of hazard trees, as approved by Colwood, or activities expressly authorized by the Province of BC.
- g. Trails may be permitted within the riparian buffer. Trails must be unpaved and must not result in the significant removal of native vegetation or disruption of wildlife, provided that the RAR applies to the waterbody.
- h. In alignment with the Water Sustainability Act, development permits issued with regard to road and driveway construction will ensure that:
 - i. watercourse crossings are located to minimize disturbance of riparian areas and streambanks;
 - ii. wherever possible, bridges are used instead of culverts for crossings of watercourses; and
 - iii. culverts are sited to allow unrestricted movement of fish and amphibians in both directions. Where desirable, culverts may be designed to encourage in-stream storage of water. Culverts that are sized to maintain natural width of watercourses such as arch or "D" shaped culverts shall be used in areas identified as fish and/or wildlife habitat,
- i. All stormwater or treated sewage effluent discharged into or through a riparian area must first be treated to prevent pollution from sediments, oils and greases, nutrients or other pollutants entering the water body or riparian area.
- j. Areas of land specified in the permit, in addition to the SPEA, must remain free of development, except in accordance with any conditions contained in the permit.

For projects that cannot meet the above riparian buffer requirements, the City will consider an alternative approval process. Consideration will be given to narrower riparian buffers only if the proponent can demonstrate a significant net ecological benefit and the maintenance of the watercourse and riparian buffer in a state of Proper Functioning Condition (PFC). Any applications to relocate or fill any portion of a watercourse or water body must first be approved by the Province of BC per the Water Sustainability Act, and Fisheries and Oceans Canada or other senior government agencies (as applicable). The City may impose terms and conditions requiring the applicant to take compensatory mitigation measures on the subject property or elsewhere in the watershed. This option will only be entertained where significant net ecological benefit can be demonstrated by a Qualified Professional to the satisfaction of the City. Compensatory mitigation measures must result in replacement habitat that achieves a state of PFC. Examples where such alternative consideration may be given include water bodies or watercourses with severely degraded ecological function where there would be significantly greater ecological benefit derived from applying resources to the restoration of habitat elsewhere in the watershed or elsewhere on the watercourse, or hardship cases where maintenance of the full riparian buffer would prohibit development of an existing lot per the current zoning.

20.2 Marine Shoreline Guidelines

For the purposes of this Development Permit Area, marine shoreline areas extend from the low tide mark to 11 m above sea level, where it is common to have a very high water table (or “perched water”).

- a. All marine shorelines have a permanent shoreline buffer not less than 30 m in width measured horizontally, upland from the present natural boundary, to be maintained in a natural or ecologically enhanced state.
- b. Hardening of shorelines is not supported.

Siting of permanent structures

- c. Buildings and structures must be located on the site in the areas that are the least environmentally sensitive to development.
- d. Permanent structures must be located upland of all areas subject to erosion or flooding over the building design life.
- e. All structures shall be at least 2 m above the highest elevation of the present natural boundary of the sea and the occupied portions of a building shall also meet the locally established flood construction levels where these are more stringent. On greenfield sites, or previously developed sites without fill, infilling of low-lying areas is not an acceptable approach to meeting the vertical elevation requirement.
- f. Permanent structures must be setback a minimum of 30 m horizontal distance from the present natural boundary (not the registered land title boundary).
- g. New structures, including docks, may not be located within the Esquimalt Lagoon Migratory Bird Sanctuary which includes 100 m from the present natural boundary of the Lagoon.
- h. Permanent structures located at the top of coastal banks or bluffs, where the toe of the bluff is exposed to coastal erosion under natural conditions, must be setback a horizontal distance equal to at least three times the vertical height of the bluff as measured horizontally from the toe of the bluff in addition to the 30 m setback outlined above, unless otherwise justified by an analysis conducted by a qualified professional with suitable experience in coastal erosion processes and in consideration of Provincial landslide assessment guidelines.
- i. Docks, walkways and piers must only be sited over areas with little or no vegetation. Grated surfaces must be used on structures placed over vegetative features to allow light penetration. Over-water structures in forage fish spawning areas will only be permitted in exceptional circumstances and only with prior approval from appropriate Federal and Provincial agencies. Treated wood is not a permitted building material.
- j. No new on-site sewage disposal systems are permitted in the Marine Shoreline DP area unless it is required to service existing dwellings.
- k. Prior to the issuance of a development permit, a professional engineer must certify that the proposed development, both during and after construction, will not be affected by, or contribute to, a high water table or ground water problems.

Conservation of Habitats and Marine Riparian Areas

- l. Development must ensure no net loss of critical or sensitive habitats located within the Marine Shoreline DP area. Any losses of existing critical or sensitive habitats must be offset with on-site compensation works. Off-site compensation for losses to existing critical or sensitive habitats cannot be used. All riparian or aquatic vegetation directly or indirectly lost through shoreline activities must be replaced with equivalent types, species and diversity of plants.
- m. Marine vegetation, especially kelp and eelgrass beds, must be protected by minimizing upslope generated sediment and not allowing structures or activities that require permanent or temporary anchoring in marine vegetated areas.
- n. Fill material is prohibited from being placed within 30 metres of the present natural boundary except as required for beach nourishment as prescribed by a coastal geomorphologist or coastal process engineer.
- o. Fill or protective works are not permitted in intertidal or subtidal areas with critical or sensitive habitats, including forage fish habitats, except fill introduced as forage fish habitat under the direction of a Qualified Professional and approved by Fisheries and Oceans Canada.
- p. Near shore construction activities must avoid and minimize area disturbed. Construction may only take place during prescribed timing windows for fish and other wildlife unless supervised by a Qualified Professional and approved by Provincial and Federal Authorities as required. Any construction in or near waterways must comply with provincial and federal legislation and regulations (including the Canada Fisheries Act, Navigation Protection Act, BC Fish Protection Act, and Water Sustainability Act).
- q. Structures, other than boardwalks designed to minimize trampling, roads, utility corridors and landscaping must not be located in marsh or wetland areas.
- r. Existing trees, downed logs, and vegetation should be retained wherever possible.
- s. Native vegetation, anchored logs and other soft shore approaches should be utilized to protect shorelines from erosion. Work below the present natural boundary requires prior approval from the Province.

- t. Trees containing the active nests of Great Blue Herons, eagles, osprey or other protected species must be retained and an adequately sized buffer to ensure the continued viability of the nest site must be provided. Where there are nest trees, ensure that construction takes place only during the timing windows specified for nesting and rearing birds, as identified by the Ministry of Environment. Refer to the Ministry of Environment “Develop with Care: Environmental Guidelines for Urban and Rural Land Development” and “Guidelines for Raptor Conservation for Urban and Rural Land Development in BC” for buffer distances and best practices.
- u. The development of docks and watercraft launching sites is not permitted in the Esquimalt Lagoon Migratory Bird Sanctuary.

Conservation of Coastal Sediment Processes

- v. Site development must be designed such that the need for shore protection works, other than soft shore methods, is not required over the life of the project or a 75-year cycle of natural erosion, whichever is greater, OR if shore protection works are required, then a design must be provided that will emulate natural sediment supply to the foreshore for a 75-year cycle of natural erosion or the life of the project (whichever is greater). The texture and size of the supplied material must be appropriate to the site (e.g. similar in size and form to that which would be generated by natural erosion). The design must be signed and sealed by a professional qualified to determine appropriate measures (normally a coastal geomorphologist or coastal process engineer).

In addition to the City’s guidelines, the following Provincial Government documents are resources available to help guide the development of environmentally sensitive areas:

- a. Land Development Guidelines for the Protection of Aquatic Habitat (published by Fisheries and Oceans Canada and the Ministry of Environment, Land and Parks, May, 1992);
- b. Develop with Care: Environmental Guidelines for Urban and Rural Land Development in British Columbia (Ministry of Environment, 2014); and

- c. Guidelines for Amphibian and Reptile Conservation During Urban and Rural Land Development in BC;
- d. Urban Ungulates Conflict Analysis;
- e. Guidelines for Raptor Conservation During Urban and Rural Land Development in BC;
- f. Standards and Best Practices for Instream Works (Ministry of Environment, March 2004); and
- g. Ministry of Environment timing windows for in-stream works.