

**Information Note #3:****Riparian Assessment Areas and Assessment Reports**

*This Information Note is a guide only. It is not a substitute for the federal Fisheries Act, the provincial Riparian Areas Regulation, or local government bylaws..*

The *Fish Protection Act* directs local governments to protect their riparian areas. For the purpose of the Riparian Areas Regulation, riparian areas are defined as “streamside protection and enhancement areas.” The Regulation defines the streamside protection and enhancement area (SPEA).<sup>1</sup> Other familiar terms for SPEAs are “stream buffers” or “leave strips.”

Additional specific areas that the Regulation describes are the “riparian assessment area”<sup>2</sup> (see Figure 1) adjacent to “streams.” The riparian assessment area is the area where the assessment occurs to determine the SPEA and measures. The definition of “stream”<sup>3</sup> includes a watercourse, whether it usually contains water or not, a pond, lake, river, creek, or brook; and a ditch, spring or wetland that is connected by surface flow to a watercourse, pond, lake, river, creek, or brook that provides fish habitat. Streams can be enclosed in ravines<sup>4</sup> or on active floodplains.<sup>5</sup>

The Riparian Areas Regulation requires a development applicant with a project (that is, one proposed within the assessment area) to follow the assessment methodology (see the Schedule to the Regulation) and to

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<sup>1</sup> *Streamside protection and enhancement area* is defined in section 1(1) of the Regulation as being an area adjacent to a stream that links aquatic to terrestrial ecosystems and includes both the existing and potential riparian area vegetation and the existing and potential adjacent upland vegetation that exerts an influence on the stream and, the size of which is determined according to this regulation on the basis of an assessment report provided by a qualified environmental professional in respect of a development proposal.

<sup>2</sup> *Riparian assessment area* is defined in section 1(1) of the Regulation means (a) for a stream, the 30-m strip on both sides of the stream, measured from the high water mark, (b) for a ravine less than 60 m wide, a strip on both sides of the stream measured from the high water mark to a point that is 30 m beyond the top of the ravine bank, and (c) for a ravine 60 m wide or greater, a strip on both sides of the stream measured from the high water mark to a point that is 10 m beyond the top of the ravine bank.

<sup>11</sup> *Stream* is defined in section 1(1) of the Regulation as including 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, or (c) a ditch, spring, or wetland that is connected by surface flow to something referred to in paragraph (a) or (b).

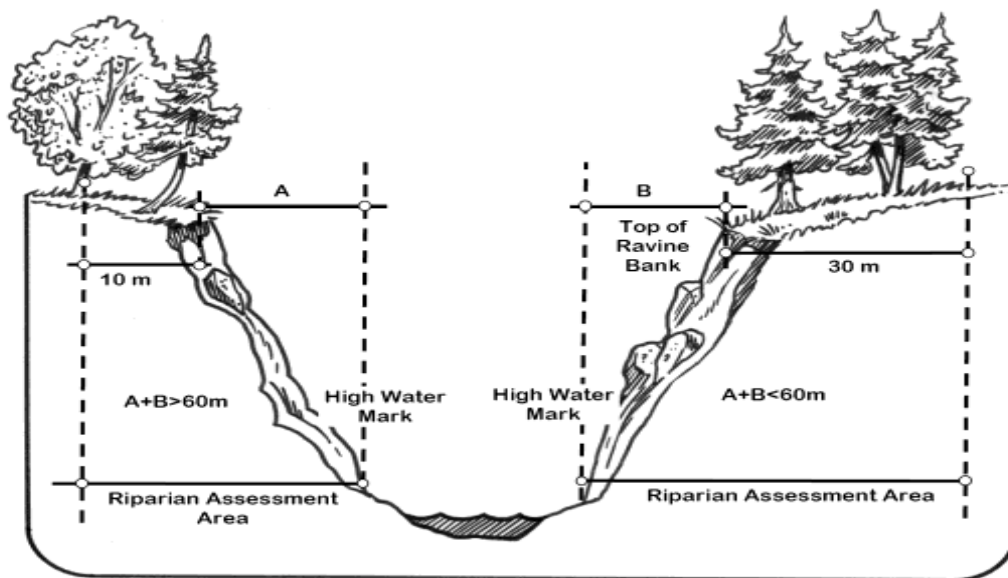
<sup>4</sup> *Ravine* is defined in section 1(1) of the Regulation as being a narrow, steep sided valley that is commonly eroded by running water and has a slope grade greater than 3:1.

<sup>5</sup> *Active floodplain* is defined in section 1(1) of the Regulation as being an area that supports floodplain plant species and is (a) adjacent to a stream that may be subject to temporary, frequent or seasonal inundation, or (b) within a boundary that is indicated by the visible high water mark.

complete an Assessment Report.<sup>6</sup> The assessment is used to determine the appropriate SPEA width and the “measures” required to protect and maintain the integrity of the SPEA. Measures are included within the setback result from the simple assessment option, but must be specifically designed when using the detailed assessment option. Measures that must be addressed by the Assessment Report when conducting a detailed assessment include:

- removal of hazard trees
- windthrow
- slope stability
- drip zone and rooting strength
- encroachment
- sediment and erosion control measures
- floodplain concerns
- on-site stormwater management

An Assessment Report contains the results of a Riparian Assessment and is filed electronically with the Provincial Government. The, Assessment Methodology, Assessment Forms, Assessment Forms Guide: Access to the Notification System, Notification System Guide, and supporting materials for reporting can be found on the *Riparian Areas Regulation* website.



**Figure 1.** Riparian assessment area: a strip 30 m wide on both sides of a stream is measured from the high water mark, or, for a ravine that is less than 60 m wide, from the top of the ravine to a spot 30 m beyond the top of the ravine, or for a ravine that is more than 60 m wide, a strip that is 10 m wide from the top of the ravine.

<sup>6</sup> *Assessment Report* is defined in section 1(1) of the Regulation as a report prepared in accordance with the assessment methods to assess the potential impact of a proposed development in a riparian assessment area and which is certified for the purposes of this regulation by a qualified environmental professional (QEP).

Two assessments options are available to the proponent to determine the applicable SPEA width:

1. Undertake a “simple assessment,” based on certain stream characteristics – fish-bearing, nature of stream flows and the status of streamside vegetation. In the simple assessment the SPEA incorporates the measures.
2. Undertake a “detailed assessment” to determine the SPEA width based on a site specific assessment of the features, functions and conditions of the riparian area. In a detailed assessment the SPEA does not include the measures. The measures must be established in addition to the SPEA determination in order to maintain the integrity of the SPEA.

The Assessment Report must be prepared by a Qualified Environmental Professional (QEP) (or group of professionals) who understands the interaction of the various natural features, functions and conditions<sup>7</sup> provided within a riparian area. Specific experts may be called upon to provide their respective expertise on site characteristics that may require specific attention, particularly in the development of “measures.” For example, highly unstable channels may need assessment by a fluvial geomorphologist to help define the appropriate SPEA measures that will assist in maintaining the various features, functions and conditions of the riparian area. In addition, a fisheries biologist may be required to determine fish presence or absence.

The Assessment Report is the document used to support the development application and to notify both DFO and the Provincial Government of the development. This report must be prepared and signed by the QEPs and integrate the results of the riparian assessment with the characteristics of the proposed development. Guidelines for undertaking the assessment report can be found on the *Riparian Areas Regulation* website: <https://www2.gov.bc.ca/gov/topic.page?id=FB284A0570084959BEBF55B9D4D4AEC2>

QEPs must, under section 4(2)(a) of the Regulation, certify in the Assessment Report that they are qualified to carry out the assessment; that

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<sup>7</sup> *Natural features, functions, and conditions* is defined in section 1(1) of the Regulation as including but not being limited to the following: (a) large organic debris that falls into the stream or streamside area, including logs, snags, and root wads; (b) areas for channel migration, including active floodplains; (c) side channels, intermittent streams, seasonally wetted areas and floodplains; (d) the multicanopied forest and groundcover adjacent to streams that (i) moderate water temperatures, (ii) provide a source of food, nutrients and organic matter to streams, (iii) establish root matrices that stabilize soils and stream banks, thereby minimizing erosion, and (iv) buffer streams from sedimentation and pollution in surface runoff; (e) a natural source of stream bed substrates; (f) permeable surfaces that permit infiltration to moderate water volume, timing and velocity and maintain sustained water flows in streams, especially during low flow periods.

the assessment methods under the Regulation have been followed; and that, in their professional opinion:

- (i) if the development is implemented as proposed, or
- (ii) if the streamside protection and enhancement areas identified in the report are protected from the development, and if the developer implements the measures identified in the report to protect the integrity of those areas from the effects of the development,

then there will be no harmful alteration, disruption or destruction of natural features, functions and conditions that support fish life processes in the riparian assessment area.

#### **Treatment of ravines**

The Riparian Areas Regulation assessment methods identify exactly how much riparian vegetation is required to maintain the features, functions and conditions for fish. Although the result may be a SPEA that does not reach the top of the ravine bank, this should not be interpreted as welcoming development within ravines.

It is important that ravines be protected to ensure they protect the integrity of the SPEA. As well, the area should be assessed to ensure it is safe for its intended use. The consequences of ravine bank failure are often close to catastrophic with respect to riparian fish habitat. Because sediment discharges and hard engineering solutions to address bank erosion have significant and long-term effects on riparian fish habitat, they are to be actively avoided. The assessment methodology requires a QEP who is a geotechnical expert to develop measures for proposed development around ravines. The geotechnical expert will evaluate the stability of the ravine bank, the proposed use and identify a setback from the top of the ravine bank to ensure the long term stability of the ravine. The measures and recommendation of the geotechnical expert will be more specific to the site conditions.

Where the SPEA does not include the entire ravine, the use of hard engineering to cut down the height of the ravine to expand developable area is strongly discouraged. This activity is considered to pose a significant risk to fisheries resources and to the integrity of the SPEA.