

## Decisions about protection of the active floodplain and associated wetlands on the Salmon River delta will leave a legacy for future generations.

The following information has been provided without prejudice, as a brief overview of the science and regulations pertaining to development within BC watersheds and the Salmon River. Some material has been condensed from government websites and you are encouraged to research the Riparian Areas Regulation and associated methodologies at:

[http://www.bclaws.ca/Recon/document/freeside/--%20f%20--/fish%20protection%20act%20%20sbc%201997%20%20c.%2021/05\\_regulations/10\\_376\\_2004.xml](http://www.bclaws.ca/Recon/document/freeside/--%20f%20--/fish%20protection%20act%20%20sbc%201997%20%20c.%2021/05_regulations/10_376_2004.xml)  
[http://www.env.gov.bc.ca/habitat/fish\\_protection\\_act/riparian/riparian\\_areas.html](http://www.env.gov.bc.ca/habitat/fish_protection_act/riparian/riparian_areas.html)

The proposed development site is on a floodplain which has unique and extraordinarily valuable, ecological characteristics due to its proximity to Shuswap Lake, Salmon River, the river delta, forested floodplain communities, shrubby to non-forested wetland communities, and connectivity to the entire 200 kilometer upstream watershed. This is a provincially as well as a nationally significant ecosystem. The potential negative impacts of development on the floodplain would unfortunately extend far beyond its footprint and the property boundary.

Beyond the existing impacted areas of landfill, the floodplain and wetland complex of the delta supports the vegetation and animals which collectively provide critical habitat and ecological functions for the benefit of all, including waterfowl, wildlife, water quality and people – values that First Nations People have appreciated and held strongly as part of their culture for generations. The entire floodplain area is also worthy of protection due to First Nations right to title, traditional practices and archeological considerations.

The Riparian Areas Regulation (RAR) provides the opportunity to protect the habitats and the life process these habitats provide to **FISH**. Natural features, functions, and conditions is defined in section 1(1) 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 multi-canopied 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 Salmon River is a **stream** according to RAR and a **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, brook;
- (c) a ditch, spring or wetland that is connected by surface flow to something referred to in paragraph (a) or (b);”

**Side channels, intermittent streams, seasonally wetted contiguous areas** are included by the definition of a stream **which includes active floodplains and wetlands connected to streams**.

The **Streamside Protection and Enhancement Area (SPEA)** begins from the **High Water Mark** which means the visible high water mark of a stream and includes the **active floodplain**. Seasonally inundated channels (e.g. side channels and back channels) are included in the **active floodplain**. Active floodplain means an area of land that supports floodplain plant species and is a) **adjacent to a stream that may be subject to temporary, frequent or seasonal inundation once every five years**. Where stream channels and their banks are distinct this may be fairly easy. It is important to note that the RAR methodologies document recognizes **in flatter areas, identifying the high water mark in the active floodplain can be more challenging**.

Through the “professional reliance model” RAR places the provincial authority along with the Federal Fisheries Act into the hands of the developer’s **Qualified Environmental Professionals (QEPs)**. The QEPs are to assess the site and identify measures required to protect the features, functions and conditions of the site -- but only as it relates to **fish habitat** and not to the other critical qualities or values of the greater ecosystem. RAR does not directly consider the species at risk (Black Cottonwood – Snowberry – Rose Site Association, Western Screech-owl, Western Grebe, Lewis's Woodpecker, Great Blue Heron, and many more) that depend on this land as a functioning healthy and productive ecosystem.

The determination of fish habitat and what is required to protect the features, functions and conditions of this habitat is disputed on the Salmon River floodplain. The discussion surrounds the complex spring runoff interactions between the river and the highly variable lake elevations on a very low-gradient delta, with relatively low river bank levees. The regulations require a protected area to be measured from the furthest extent of the active floodplain; resulting in protection of the entire active floodplain and the cottonwood community.

RAR itself is not enforceable. RAR relies on other acts and powers such as those in local government bylaws (tree protection, soil preservation and watercourse protection) that have various powers and applicability depending on their wording. **Local government** must be willing to make the decisions necessary to protect natural areas of significance, to protect features, functions, conditions and habitats with very high value to First Nations, the environment, waterfowl, wildlife, water quality and society in general.

WA:TER is developing a detailed and scientifically rigorous position to ensure the RAR regulations are fully and accurately applied to protect the integrity and the complex functions of the river floodplain and the greater delta ecosystem. In addition, the potential impacts of the proposed development to deflect stream flow to the west onto First Nations lands are of concern, because the impact on adjacent and downstream lands could unfold over the course of the next one hundred years and possibly beyond. Any follow-up attempts to fix river deflection and erosion due to the proposed development will invariably involve channelization using rip rap and geotextile, which will simply energize the main channel causing further downstream erosion problems as well as unwanted sediment load transfer, including associated agricultural pollution in the form of lake eutrophication elements (Nitrogen & Phosphorus). The existing natural floodplain acts to filter sediment and harmful polluting nutrients, rather than allowing these problems to be transferred further into the delta and Salmon Arm Bay where they will be far more destructive.

**We ask City Council to be informed and to embrace the opportunity to protect the Salmon River floodplain in order to prevent tragic losses and potential expensive liabilities. In doing so, City Council should recognize the need to protect the floodplain, as set out in Salmon Arm's Official Community Plan and zoning bylaws.**