

Fraser River Sediment Management Program

Background Information

Each year approximately 230,000 m³ of sediment are washed down from the Coastal Mountains by the fast flowing waters of the Fraser River. As the river enters the lower Fraser Valley, the grade of the river bed flattens out causing the velocity of the water to become insufficient to carry the heavier material. Sediment settles out onto the bed of the river forming large gravel bars and even islands. Interestingly, while sediment enters the river at Hope absolutely none leaves past Mission. Traditionally, the river meandered across the flood plain. When enough sediment was deposited in a certain area, the river simply changed its direction. However, diking has forever changed the nature of the river, confining it to one path. The sediment settling on the river bottom raises the river bed in relation to the top of the dikes reducing the conveyance capacity of the river and increasing the risk of flooding.

In 2007, recognizing that sediment management is an important component of an integrated flood protection strategy, the Province tasked Emergency Management BC (EMBC) with the Fraser River Sediment Management Program. EMBC has the lead on this file to help protect the public against the threat of flood. The Fraser River Sediment Management Program has the oversight of a Technical and Management Committee made up of members from various federal and provincial agencies: Fisheries and Oceans Canada (DFO), Transport Canada (TC), Ministry of Forests, Lands and Natural Resource Operations (FLNRO), Ministry of Environment (MoE), and EMBC.

Sediment removal locations are carefully chosen to provide hydraulic benefit while protecting fish and fish habitat. Many factors are looked at during site selection including river hydraulics, adjacent erosion, height and strength of local dikes, fish use (including spawning and juvenile rearing areas), First Nations concerns regarding erosion of property and protection of traditional fishing areas, and site accessibility. Each of these potential sites must receive permits from DFO, FLNRO, TC, local governments and the Ministry of Energy and Mines. EMBC conducts before, during and after environmental assessments of each site which includes:

- Geomorphic assessment
- Site surveys
- Habitat mapping
- Sediment sampling
- Habitat hydraulic monitoring
- Benthic invertebrate sampling

Additionally, professional biology consultants are on site at each approved sediment removal location monitoring the work. These independent consultants report directly to the Province and have the ability to stop work at any site where they have environmental concerns. While no individual sediment

removal project is large enough to have a significant effect on the flood risk, annual removals of accumulating sediment may assist in the maintenance of the existing flood profile.

As information becomes available regarding potential sediment removal it will be posted on this website.