## WHEN THE FRASER FLOODS

## Floods, Dykes, and Floodplains

River flats (floodplains) adjacent to the Fraser River and its tributaries have formed from repeated seasonal floods that spread silt-laden waters over large areas. These areas are now protected by long earthen ridges (dykes), built to prevent rivers from overtopping their banks. Floods along the Fraser River occur during early summer when warm rainy weather rapidly melts mountain snowpacks. Floods along smaller streams can occur at any time of the year, but are particularly common during torrential autumn rains. Coastal areas can be flooded by the sea when severe storms coincide with high winter tides.

Mt. Baker

Sumas Mtn.

Looking south
across Hatzic area in
the Fraser Valley during

the 1948 flood.

## **BIG FLOODS**

Over the last 100 years, the Fraser River has risen to flood heights more than 25 times. Serious flooding of the lower Fraser Valley in June 1948 caused more than \$20 million damage (1948 dollars). Since then, governments have spent \$160 million building and improving dykes along the Fraser River, allowing more than \$13 billion worth of new development on the floodplain behind the dykes.

Levels reached by various Fraser River floods marked on a cabin near Hatzic.

## SO WHAT CAN BE DONE? Floodwaters can be confined to river

channels by constructing dykes. Dams built for hydro-electric power generation also regulate river flows during periods of high runoff. Zoning by-laws, subdivision regulations, and building codes discourage development on floodplains and encourage other uses of these areas. Finally, buildings can be designed to withstand floods or can be placed on gravel platforms above flood level.

Catastrophic dyke break near Hatzic, 1948.

Vector of the second of the

Dykes have been improved to prevent disastrous flooding like that in 1948. Lake Vancouver New Westminster Fraser Hatzic Mission **Richmond** Surrey Langley 6 Ladner Abbotsford \_ **AREAS FLOODED, 1948 DYKES, 1995** 

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