



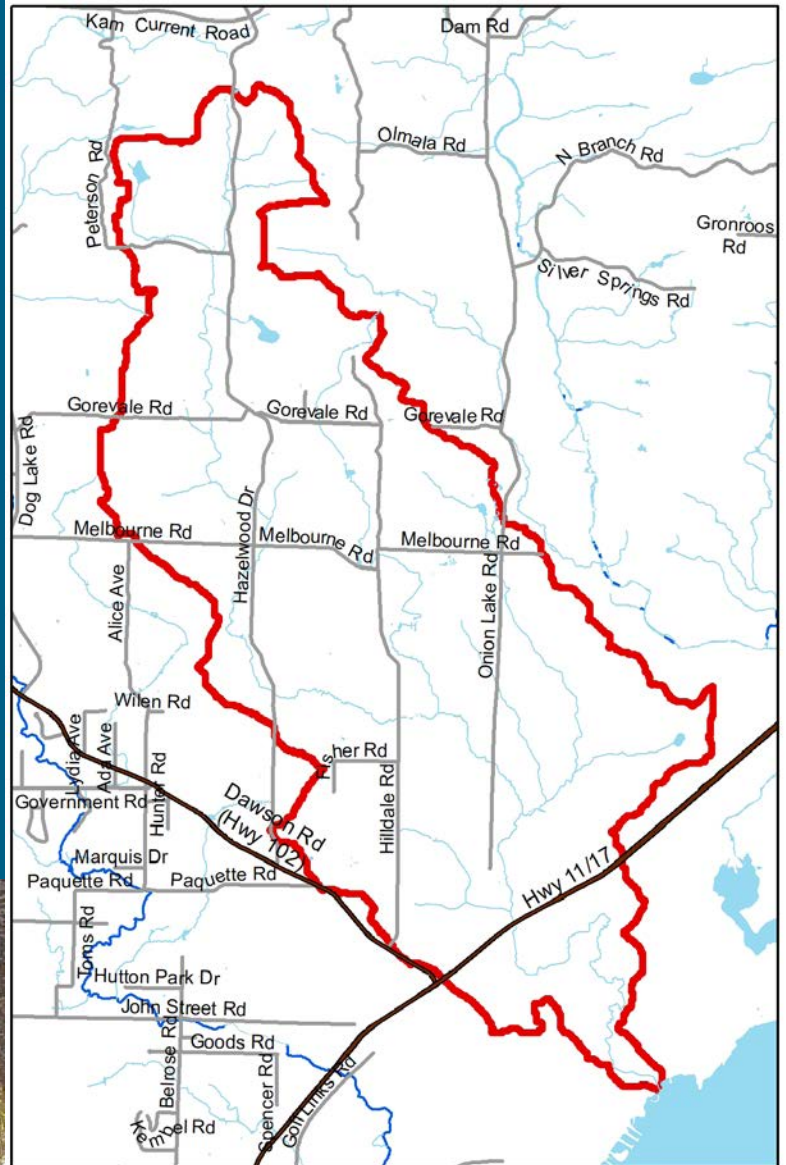
MCVICAR CREEK FLOODPLAIN

July, 2017

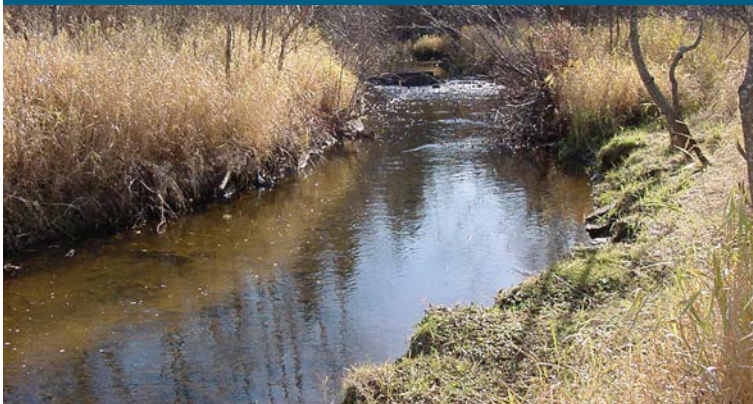
McVicar Creek is a meandering, shallow banked, fast flowing watercourse that flows from the northern limits of the City of Thunder Bay discharging into Lake Superior near Marina Park. The lower watershed was heavily developed from the mid 1950's to the mid 1970's, with some development located within the floodplain of McVicar Creek. This development was completed prior to any floodplain management in Ontario. In 1974, regulations were put into place, which are administered by the Lakehead Region Conservation Authority (LRCA) that regulates development in floodplains. In general, new development in the floodplain is not permitted.

McVicar Creek reacts very quickly to rainfall and is considered to be very "peaky"; velocity and water level can change very rapidly.

Watershed Size	46.4 square kilometres
Length of Creek	18.7 kilometres
Channel Slope	2.7% near headwaters 0.6% near outlet to Lake Superior
Average Channel Width	2.5 - 3.0 metres
Average Bank Height	1.0 metre
Thermal Regime	Cold Water
Streamflow Gauge/ Precipitation Gauge Location (1985 to present)	Briarwood Drive
Flow at Streamflow Gauge Location during Regional Storm	63.1 cubic metres per second
Flow at Lake Superior during Regional Storm	148.4 cubic metres per second
Highest Recorded Instantaneous Flow at Gauge Site	June 2008 Approximately 40 cubic metres per second



McVicar Creek Watershed



McVicar Creek Flood Damage Centres

Floodplain mapping studies were completed in 1978 and updated in 1995 on McVicar Creek to determine the Regulated Floodplain. The floodplain is considered to be the area of or next to a watercourse that is under water during a flooding event. Maps have been prepared and are available from the Conservation Authority that detail the floodplain and flood elevation along McVicar Creek.

It is estimated that in excess of 50 homes are built in the Regional Floodplain of McVicar Creek. Some of these homes have their lowest opening lower than the Regional Flood elevation which means that flood waters will be higher than the lowest door or window. Homes located in the floodplain are considered to be located within Flood Damage Centres. These areas will flood during the Regional Storm and may need to be evacuated. Some areas may flood during flood events that are more frequent than the Regional Storm.

The Lakehead Region Conservation Authority monitors local conditions and administers the Flood Warning System for the City of Thunder Bay. Flood Warning Messages are issued during flood events. The City of Thunder Bay through their Emergency Management Plan will have established procedures during flooding events and will coordinate any necessary evacuations.

Streets with residential development in the Floodplain of McVicar Creek include:

Beaver Avenue	Hilldale Road
Belton Street	Lancaster Avenue
Blanchard Street	Onion Lake Road
Clayte Street	Primrose Street
Crescent Avenue	Pringle Street
Elgin Street	Theresa Street
Hartviksen Street	Wardrope Avenue
Hazelwood Drive	

Residents living in Flood Damage Centres should pay attention to local flooding conditions in their area and be on alert for flood messaging.

Definitions:

Flood Damage Centres: Areas that have residential dwellings located in areas that are prone to flood.

Regulated Floodplain: The main stream/river channel plus the area of land adjacent to the river or stream that is flooded (i.e. under water). The regulated floodplain on McVicar Creek is calculated using the Regional Storm.

Regional Storm: Storm that occurred in Timmins, Ontario in 1961 in which 193 millimetres of rain fell in 12 hours. In most cases the Regional Storm exceeds the 100-year storm.

100-Year Storm: Storm that on average should occur every 100 years; however, has a 1% chance of occurring or being exceeded in any given year.