

WINTER ICE

...Graham Saunders



Ice formation in early winter on lakes and rivers has always been welcomed in the Northwest. It allowed short cuts for transportation and sometimes access to locations impractical to reach in other seasons.

Journals of Hudson's Bay Company trading posts had notes and dates about first ice formation, when ice was safe to use and other remarks about ice conditions. Ice formation on Thunder Bay connected Silver Islet on Sibley Peninsula (the Sleeping Giant) with The Lakehead, now known as Thunder Bay. In the 1870s and early 1880s, there was even regular mail service by sleigh and dog team in the winter months.

Modern times have brought variations of the above. A network of winter roads facilitates the delivery of goods and construction materials as far north as Hudson and James Bay. However, milder winters, notably in the last decade, have delayed formation of ice thick enough to permit large vehicles to cross some lakes and streams.

A few people at various locations continue the tradition of keeping ice records. A group of people at Amethyst Harbour have wagers on the date that uninterrupted ice will be in place between their homes and cliffs on the other side. Losers have a chance to recover in the spring with a prediction of the final day with ice visible.

Ice formation in Lake Superior generally begins in sheltered and shallow bays in November. It extends from shorelines as water temperatures decline. In the 20th century, monthly ice cover during severe and mild winters ranged between 87 per cent and 17 per cent.

DOES SUPERIOR EVER FREEZE ENTIRELY?

Occasionally, during extremely cold winters, media reports appear of “Lake Superior frozen from shore to shore”. On rare occasions with calm winds in the morning a skim of ice could be present on open water. However, during such reports in March 1996, I observed from a plane over the lake some areas of wave activity.

Consistent observations of mid-lake ice cover are sparse prior to the 1960s. Satellite records from 1973 to the present suggest that total ice coverage, if and when it occurs, is present for only a matter of days.

Ice puts a lid on evaporation. Major evaporation occurs from Lake Superior during the fall to mid-winter as cold, dry west and northwest winds blow over the relatively warm lake waters. Average water temperatures are 7° to 9° C (45° to 48° F) in early November. This is often at least 20 degrees warmer than airflow immediately above. This is unlike smaller lakes in the region where evaporation rates are highest in summer and complete ice coverage takes place in the fall.

Ice usually begins to break up in March but may not be completely melted on some sheltered shorelines until May.

Researchers Jay Austin and Steven Colman, of the Great Lakes Observatory in Duluth, Minnesota in articles and interviews earlier this year noted that ice cover influences several processes of Lake Superior. They attributed part of a rapid summer warming trend in Lake Superior to later formation, declines in duration and extent of ice in recent decades.

The decline of ice also directly influences the water balance of Lake Superior with massive losses of water due to increased evaporation, especially from November to January.

LESS SNOW, MORE SKATING.

Winter ice on lakes and rivers has provided a convenient venue for skating and other recreation for generations. Often it was not so convenient, because each snowfall would require snow removal or, with Lake Superior, patience until winds perhaps blew the snow somewhere else.

Cities like Winnipeg, Quebec City and Thunder Bay used to assume that a white Christmas would happen every year. David Phillips, author of the Environment Canada Weather Trivia placed these cities, and others, in the 100 percent category for this to take place.

The rules for Thunder Bay changed in 1999 with only traces of snow visible. Winter snow cover began in late January in 2003 and another late starter took place last winter with March as a modest snow month.

Last winter some daring souls skated across Thunder Bay, almost to the Sleeping Giant. It was not an attempt to re-establish the mail run to Silver Islet but, in any case, open water had provided the ultimate veto!