

## Water Quality Index for Manitoba Rivers – 1992-2018

In 2001, the Canadian Council for Ministers of the Environment (CCME) developed the CCME Water Quality Index, a useful tool used extensively by Manitoba and other provinces and territories to summarize large, complex water quality datasets and communicate water quality changes to the public. Water quality data are integrated into an index which compares a number of important water quality parameters against established standards, objectives, or guidelines which protect water uses including for drinking, recreation, irrigation, livestock watering, and aquatic life. The Index incorporates three elements including scope - the number of parameters not meeting water quality guidelines; frequency - the number of times these guidelines are not met; and amplitude - the amount by which the guidelines are not met. When compared over time, it provides a useful indicator of how water quality may be changing in lakes, rivers and streams, whether conditions are deteriorating or improving and which parameters are changing. The Water Quality Index is calculated on an annual basis for each waterbody and produces a number between 0 (poor water quality) to 100 (excellent water quality) that is indicative of overall water quality.

### CCME WQI Categories

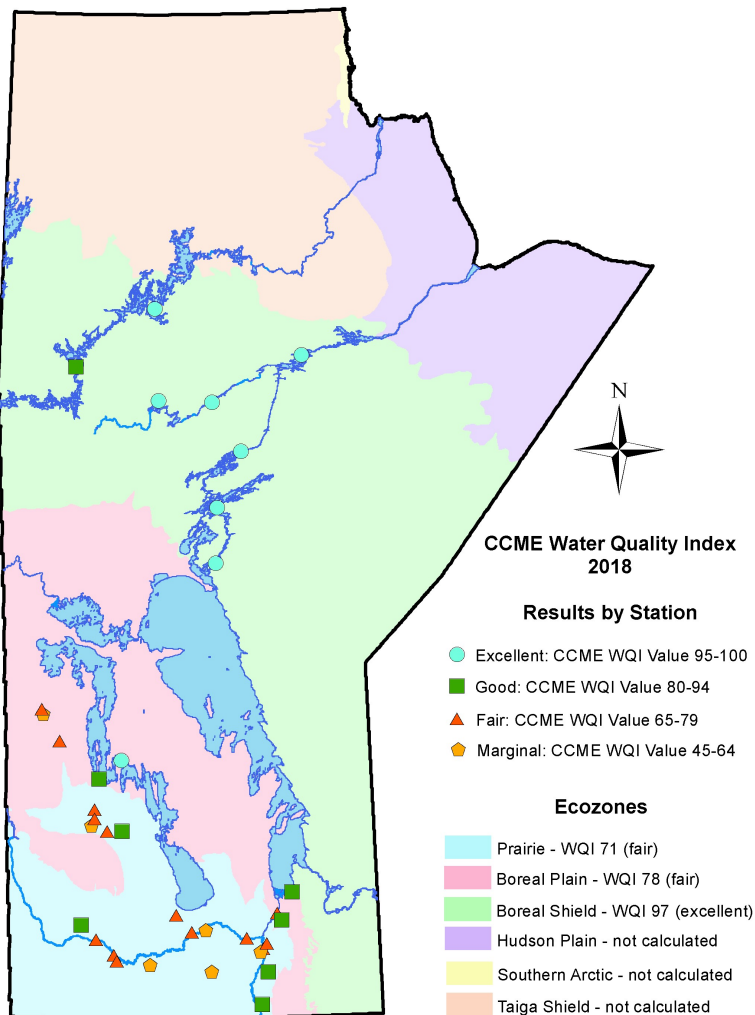
**Excellent:** (CCME WQI Value 95-100) - water quality is protected with a virtual absence of threat or impairment; conditions very close to natural or pristine levels. These index values can only be obtained if all measurements are within objectives virtually all of the time.

**Good:** (CCME WQI Value 80-94) - water quality is protected with only a minor degree of threat or impairment; conditions rarely depart from natural or desirable levels.

**Fair:** (CCME WQI Value 65-79) - water quality is usually protected but occasionally threatened or impaired; conditions sometimes depart from natural or desirable levels.

**Marginal:** (CCME WQI Value 45-64) - water quality is frequently threatened or impaired; conditions often depart from natural or desirable levels.

**Poor:** (CCME WQI Value 0-44) - water quality is almost always threatened or impaired; conditions usually depart from natural or desirable levels.

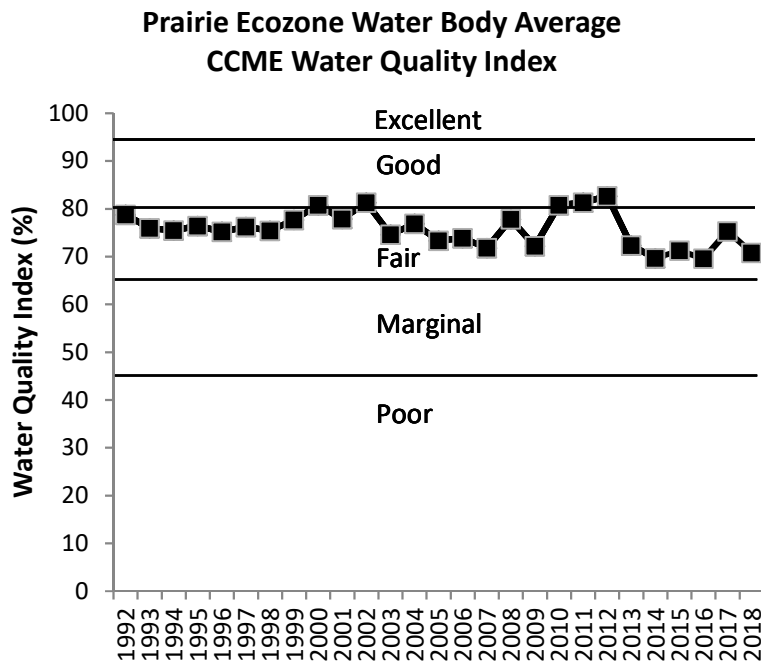


Water quality parameters were tested at many Manitoba rivers, streams and lakes since the early 1970s. The Water Quality Index was calculated for 36 stations since 1992. The latest data available is for 2018:

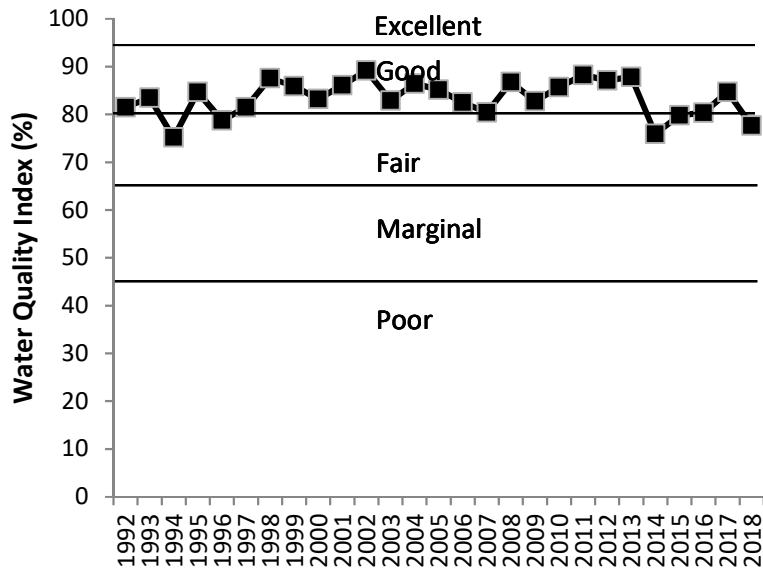
- Within the Prairie Ecozone, the CCME Water Quality Index Value was 71 or of “fair” quality.
- Within the Boreal Plains, the CCME Water Quality Index Value was 78 or of “fair” quality.
- Within the Boreal Shield Ecozone, the CCME Water Quality Index Value was 97 or of “excellent” quality.

The Water Quality Index in Manitoba has remained stable since 1992 (see graphs below).

### CCME Water Quality Index for Manitoba – Annual Averages by Ecozone



**Boreal Plains Ecozone Water Body Average  
CCME Water Quality Index**



**Boreal Shield Ecozone Water Body Average  
CCME Water Quality Index**

