

# Census of Environment: Renewable freshwater for selected drainage regions and ecoprovinces, 1971 to 2019

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The availability of water in the environment varies across different regions of the country and by season and year. Tracking water yield—an estimate of renewable water supply—provides information to help understand water demand for human use and ecosystem needs against the available water supply.

## Renewable freshwater is generated unevenly across Canada

The most renewable freshwater was generated on the West Coast. From 1971 to 2019, the average annual water yield in the Pacific Coastal drainage region was 508.8 km<sup>3</sup>, which is equivalent to 1.5 m<sup>3</sup>/m<sup>2</sup>. This amount is approximately equivalent to the volume of water held in Lake Erie.

Renewable freshwater supply was lowest in the Prairies, with an average of 8.7 km<sup>3</sup> (or 0.05 m<sup>3</sup>/m<sup>2</sup>) produced annually in the Assiniboine–Red drainage region.

In the Great Lakes drainage region, home to the largest number of people in the country, the average annual water yield was 141.1 km<sup>3</sup> (or 0.44 m<sup>3</sup>/m<sup>2</sup>). For perspective, [households and industries in Canada used 36.1 km<sup>3</sup> of water](#) in 2019.

## Seasonal variability is highest in the Prairies

Freshwater production varies by season across the country. As a result, water is not always available during periods of peak demand, which are typically in the summer. In the Great Lakes drainage region, the largest volume of water yield is generated in April, followed by a smaller peak in November. In the Columbia and the Peace–Athabasca drainage regions, most of the water yield is typically generated in June. In the Assiniboine–Red drainage region, median spring water production accounts for more than three-quarters of the total annual water yield.



**Table 1**  
**Average annual water yield for selected drainage regions, 1971 to 2019**

	Average from 1971 to 2019	Average from 1971 to 2019
	cubic kilometres	cubic metres per square metre
Pacific Coastal	508.8	1.52
Fraser-Lower Mainland	130.3	0.56
Columbia	67.7	0.78
Peace-Athabasca	98.1	0.20
North Saskatchewan	10.5	0.07
South Saskatchewan	10.0	0.06
Assiniboine-Red	8.7	0.05
Great Lakes	141.1	0.44
Ottawa	65.3	0.45
St. Lawrence	73.4	0.62
North Shore-Gaspé	290.7	0.79
Saint John-St. Croix	30.5	0.73
Maritime Coastal	105.9	0.87
Newfoundland (Island)	127.7	1.15

Source(s): Table [38-10-0283-01](#).

### Note to readers

Statistics Canada's new [Census of Environment program](#) reports on ecosystems in Canada to help Canadians make evidence-based decisions to protect, rehabilitate, enhance and sustain our environment. It follows the internationally accepted environmental-economic accounting standard for producing information on ecosystems' extent, their condition and the services they provide.

New estimates of water yield are now available for the years 2015 to 2019 in [table 38-10-0283-01](#), [table 38-10-0003-01](#), [table 38-10-0091-01](#) and [table 38-10-0095-01](#). These updates allow Canadians to analyze historical long-term patterns in annual and monthly water yield and compare geographical distribution of renewable freshwater across Canada from 1971 to 2019.

These tables provide an annual time series and long-term (1971 to 2019) median, minimum and maximum monthly water yield data, by drainage region ([Standard Drainage Area Classification](#)) and ecoprovince ([Ecological Land Classification 2017](#)).

Water yield estimates are derived from data on the monthly volume of unregulated flows in Canada's rivers and streams. Although water yield provides an estimate of renewable freshwater, it also includes a volume of water that is not renewable (e.g., melt water from receding glaciers).

For more information on water yield, see the article "[Freshwater in Canada](#)," in *Human Activity and the Environment (16-201-X)*, and "[The Water Yield for Canada As a Thirty-year Average \(1971 to 2000\): Concepts, Methodology and Initial Results](#)," as part of the *Environment Accounts and Statistics Analytical and Technical Paper Series (16-001-M)*.

**Available tables:** [38-10-0003-01](#), [38-10-0091-01](#), [38-10-0095-01](#) and [38-10-0283-01](#).

**Definitions, data sources and methods:** survey numbers [5114](#) and [5331](#).

For more information, or to enquire about the concepts, methods or data quality of this release, contact us (toll-free 1-800-263-1136; 514-283-8300; [infostats@statcan.gc.ca](mailto:infostats@statcan.gc.ca)) or Media Relations ([statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca](mailto:statcan.mediahotline-ligneinfomedias.statcan@statcan.gc.ca)).