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Title: THE WATER CYCLE AND THE CLIMATE.

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Abstract: Water is a flow resource. It hangs in the air, it soaks into the ground, or it gathers as seas, lakes, or rivers. When water comes into contact with dry air, some of it evaporates and becomes water vapor. The moisture may stay in the air as humidity, or it may cool to form clouds, fog, or mist. This is important in the Great Lakes because they have large surface areas from which water can evaporate. Moisture also gets into the air from their forests, feeder lakes, and rivers. Weather systems also bring their moisture over lakes. (Copyright applies to all Abstracts)

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THE WATER CYCLE AND THE CLIMATE

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This is important in the Great Lakes because they have large surface areas from which water can evaporate. Moisture also gets into the air from their forests, feeder lakes, and rivers.

Weather systems also bring their moisture over the lakes. Most of this moisture then falls as rain, sleet, hail, or snow on the lakes or on the surrounding land, and the cycle can begin again. In fact, the lakes can create their own climates.

In summer, warm, humid air sometimes flows up from the Gulf of Mexico, over the warm land and then over the cool lakes. As it passes over the water, the lower layer of air is cooled. This cooler, moist air stays trapped below the layer of warmer air above. When this happens, the southern regions of the lakes have some warm, humid days and nights, and occasional summer thunderstorms.

During the summer, the lake waters warm up. They warm up the cold winds of autumn and winter as they blow across the surface of the water. This helps to make these seasons a little milder.

In the late fall, cold air masses flowing down from the Arctic collide with warm air flowing in from the south. The mixing of the two air masses can create fierce storms. The

November storm of 1913, which destroyed or damaged over 70 ships and killed nearly 250 sailors, is a famous example of such a storm.

Until the lakes freeze over in winter, very cold winds blow across the water, usually from the northwest, and pick up a lot of moisture. They then drop it as snow when they reach the southeast side of the lake. This is called lake effect snow.

Again in spring, warm and cold air masses clash and cause strong storms. Spring comes a little late because the lakes are still cold from the winter and they help to cool the land around them.

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Storm clouds gather over the lake.



A satellite image showing winds from the northwest causing snow streamers

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By Harry Beckett

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**Source:** Waterways to the Great Lakes