

**09– 12 – 2024**

**News:** Lake–Effect Snow

- Recently, parts of upstate New York, Pennsylvania, Ohio, and Michigan, situated along the Great Lakes of North America, witnessed "lake-effect snow."

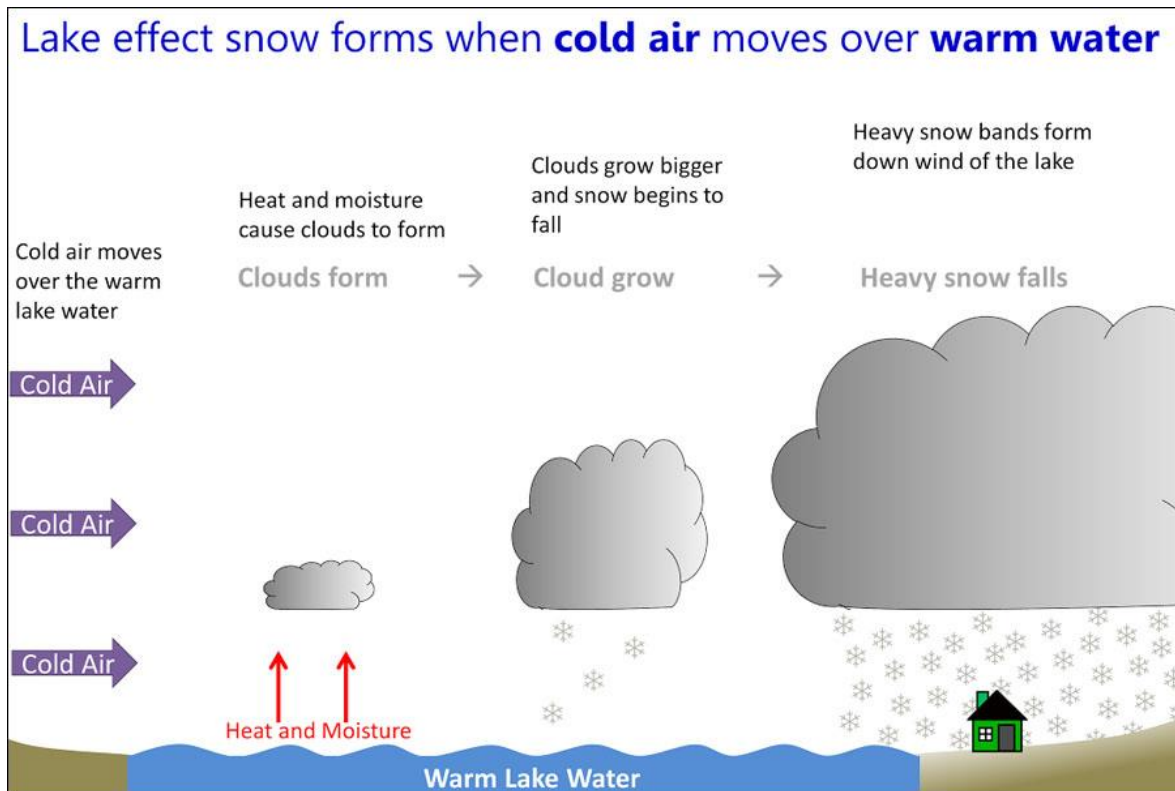
## **Lake–Effect Snow**

- Lake–Effect Snow is a **localized weather phenomenon characterized by heavy snowfall that occurs near large bodies of water, such as the Great Lakes in North America.**
- It typically **happens during colder months when cold air passes over relatively warmer lake surfaces**, resulting in intense and narrow bands of snowfall.

### **Mechanism of Formation**

- **Cold Air Movement:** **Cold air often from Canada flows over the unfrozen, warmer waters of the Great Lakes in North America.**
- The lakes **transfer heat and moisture to the cold air at the surface.**
- **Cloud Formation:** The **warm, moist air rises, cools rapidly in the colder atmosphere above, and condenses to form clouds.**

- **Snowfall:** These clouds develop into narrow bands that produce intense snowfall, often at rates of 2–3 inches or more per hour.



## Great Lakes of North America

- The Great Lakes of North America, consisting of Superior, Michigan, Huron, Erie, and Ontario (from west to east), are among the most significant freshwater ecosystems in the world.
- Hydrologically, Michigan and Huron are a single body of water joined at the Straits of Mackinac.

- **Geography and Scope:** The Great Lakes basin encompasses large parts of two nations, the United States and Canada. Except for Lake Michigan, the Great Lakes form a natural border between Canada and the United States.
- Because of their sea-like characteristics, such as rolling waves, sustained winds, strong currents, great depths, and distant horizons, the five Great Lakes have long been called inland seas.
- The lakes connect to the Atlantic Ocean via the Saint Lawrence River, and to the Mississippi River basin through the Illinois Waterway.
- **Global Significance:** The American Great Lakes account for 21% of the Earth's surface freshwater. They are also the largest group of fresh water lakes on Earth by total area and second only to Lake Baikal in Siberia by volume.

## **Lake Superior**

- Lake Superior is the largest freshwater lake by area in the world.
- It is the 3<sup>rd</sup> largest freshwater lake by volume in the world.
- Lake Superior is situated at the extreme end of northwest end of Great lake Chain covering the Canadian province of Ontario to US states Wisconsin, Minnesota and Michigan Upper Peninsula.
- Many islands such as Slate Island, Isle Royale, Michipicoten island are located within this lake.

## Lake Huron

- Lake Huron is the **third largest freshwater lake in the world.**
- This lake is situated in **east of Lake Michigan-Huron passing through US to Canada province of Ontario.**
- World **largest freshwater island Manitoulin Island is located in this lake.**

## Lake Michigan

- Lake Michigan **covers the western part of Michigan-Huron and located entirely within the boundaries of US.**
- The **Strait of Mackinac connects Lake Michigan with Lake Huron.**

## Lake Erie

- This **shallow water lake is covers the area of Canadian province of Ontario and Us states of Michigan, Ohio, Pennsylvania and New York.**
- The **largest island in this lake is Pelee Island.**
- The **industrial economy around the shore depends on water transportation.**

- Due to intense pollution of this lake in 1960, many resorts and beaches around this lake has been closed.

