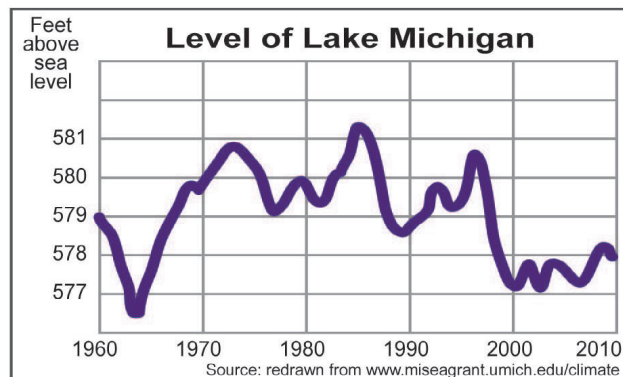


Name _____

Water Level in Lake Michigan

The level of water in a lake depends on the balance between four things:

1. How much rain and snow fall directly into the lake,
2. How much water evaporates from the surface of the lake,
3. How much water comes into the lake from rivers and groundwater springs, and
4. How much water goes out of the lake in rivers or groundwater seepage.



This graph shows the level of Lake Michigan for the last 50 years. Water level responds to changes in water surplus or water deficit. Surplus water makes rivers that flow into the lake. That raises the level of the lake. Higher water levels can push more water out of the Great Lakes through the Saint Lawrence River. At the same time, water is always evaporating from the lake. Evaporation depends on temperature - more water evaporates when the weather is hot.

The graph shows how lake levels go up and down in years with unusual surpluses or deficits.

What might happen if the climate changes? Scientists now think five things are likely:

- a. temperatures will go up (for reasons explained elsewhere in this set of lessons),
- b. precipitation in winter will go up,
- c. more winter precipitation will fall as rain, rather than snow,
- d. summer storms may get stronger, with more rain in a short time, but
- e. total rainfall in summer will go down, because there will be fewer storms.

1. Which of those changes could lead to **higher** lake levels? a b c d e
2. List some consequences of **higher** lake levels for people who live near the lake.

3. List some consequences of **lower** lake levels for people who live near the lake.

Different computer models have tried to balance the effects of higher temperature, wetter winters, drier summers, and stronger summer storms. Most models predict slightly lower lake level 50 years from now. Some models, however, say the lake level could go up as much as 3 feet. Others say the level could go down as much as 6 feet.