

Chapter 12 Section 3 Notes

pH – a measure of how acidic or basic a substance is
acidic if less than 7
basic if more than 7
neutral if 7

acid shock occurs most often in the spring; can be treated by adding powdered lime to the affected water

Acid precipitation decreases pH

What Causes Acid Precipitation

- gases from burning fossil fuels
- formed when sulfur or nitrogen oxides combine with water

How Acid Precipitation Affects Soils and Plants

- Acid precipitation changes the balance of soil chemistry
- acidification – an effect of acid precipitation on soil and water
- when the acidity of soil increases, some nutrients are dissolved and washed away
- aluminum is released by soil that is too acidic

Acid Precipitation and Aquatic Ecosystems

Acid precipitation causes:

- death of animals and plants
- lower reproduction rates
- suffocation of fish

An increase in the pH of a lake would most likely indicate that calcium carbonate has been released into the lake

International Conflict and Cooperation

- International agreements are necessary to control acid precipitation
- 1991 Canada – US Air Quality Agreement – addresses acid precipitation falling downwind of source; meant to reduce the acidic emission flowing across the Canada-US boundary

All of these have been linked to acid precipitation

- toxic metal poisoning
- respiratory problems
- damaged monuments by destroying the calcium carbonate in building materials
- decrease in a community's standard of living