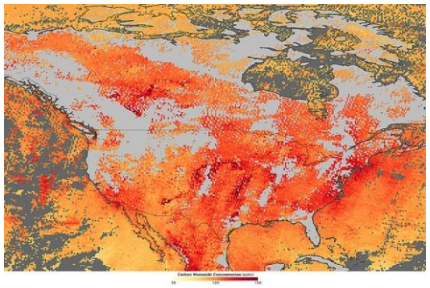
Groundwater Pollution and Depletion

Pollution

Pollution: Irrigation water can carry toxic pesticides and fertilizers from agricultural fields and bring these substances into the ground. Water from landfills does the same. Underground storage tanks containing gasoline may also leak and get into groundwater. Rocks and minerals are able to filter out some pollutants but not all. If a pollutant enters an aquifer, contamination spreads out inch by inch and continues in the direction the water is moving in.



As you can see from the figure, much of the water reserves in the United States are contaminated, with red regions indicating heavy water pollution.

Study Tip

About 25% of usable groundwater and 45% of municipal groundwater is polluted. More than 90% of wells in Florida have been closed down due to contamination.

Leaking tanks cause gasoline to seep into the ground and pollute groundwater.

Depletion

Groundwater overuse for agriculture leads to saltwater intrusion and subsidence. Subsidence can occur beneath structures and can cause property destruction. **Saltwater intrusion** is when salt water enters the aquifer, making groundwater less useful for irrigation and drinking.

When too much groundwater is used, saltwater intrusion occurs, as in this photo. The water shown here is no longer good for human use anymore.

Concept Check

- How does pollution of groundwater occur?
- What is subsidence? Saltwater intrusion? What causes these two events?