

Chapter 11, Section 2: Water Use and Management  
**DAY TWO**

**Water Use and Management**

- A shortage of clean, fresh water is one of the world's \_\_\_\_\_ environmental problems.
- According to the World Health Organization, more than \_\_\_\_\_ people lack access to a clean, reliable source of fresh water.

**Global Water Use**

- There are three major uses for water:  
\_\_\_\_\_.

**Global Water Use**

- Most of the fresh water used worldwide is used to \_\_\_\_\_.
- Industry accounts for about \_\_\_\_\_ of the water used in the world, with the highest percent occurring in \_\_\_\_\_.
- About \_\_\_\_\_ of water is used by households.

**Residential Water Use**

- There are striking differences in residential water use throughout the world.
  - For example, the average person in the United States uses about \_\_\_\_\_ of water a day.
  - But in India, the average person uses only \_\_\_\_\_ of water every day.
- In the U.S., only about half of residential water use is for activities inside the home, such as drinking and cooking. The remainder of the water used residentially is used for activities outside the home such as watering lawns.

**Water Treatment**

- Most water must first be made potable.
  - \_\_\_\_\_ means suitable for drinking.
- Water treatment removes elements such as \_\_\_\_\_, which are poisonous to humans even in low concentrations.

**Water Treatment**

- A \_\_\_\_\_ is a virus, microorganism, or other substance that causes disease.
- Pathogens are found in water contaminated by \_\_\_\_\_, but can be removed with water treatment.
- There are several methods of treating water to make it potable. A common method includes both \_\_\_\_\_.

**Industrial Water Use**

- Industry accounts for \_\_\_\_\_ of water used in the world. Water is used to manufacture goods, to dispose of wastes, and to generate power.

## Industrial Water Use

- Most of the water that is used in industry is used to \_\_\_\_\_ power plants.
- Power-plant cooling systems usually \_\_\_\_\_ from a surface water source such as a river or a lake, carry the water through pipes in a \_\_\_\_\_, and then \_\_\_\_\_ the water back into the source.

## Agricultural Water Use

- Agriculture accounts for \_\_\_\_\_ of the water used in the world. Plants require a lot of water to grow, and as much as 80 percent of the water used in agriculture evaporates.

## Irrigation

- \_\_\_\_\_ is a method of providing plants with water from sources other than direct precipitation.
- In the U.S., \_\_\_\_\_ sprinklers are the most common form of irrigation.
- However, this method is \_\_\_\_\_ because nearly half the water evaporates and never reaches the plant roots.

## Water Management Projects

- Water management projects, such as \_\_\_\_\_, are designed to meet these needs.
- Water management projects can have various goals, such as
  - bringing in water to make a dry area \_\_\_\_\_
  - creating a \_\_\_\_\_ for drinking water,
  - \_\_\_\_\_, which then allows people to live and grow crops in desert areas.

## Dams and Reservoirs

- A \_\_\_\_\_ is a structure that is built across a river to control a river's flow.
- A \_\_\_\_\_ is an artificial body of water that usually forms behind a dam.
  - Water from a reservoir can be used for \_\_\_\_\_.
- Hydroelectric dams use the power of flowing water to turn a \_\_\_\_\_ that generates electrical energy.
- About \_\_\_\_\_ of the world electrical energy is generated using this method.

## Water Conservation

- \_\_\_\_\_ is one way that we can help ensure that everyone will have enough water at a reasonable price.

## Water Conservation in Agriculture

- Most of the water loss in agriculture comes from \_\_\_\_\_, so technologies that reduce these problems go a long way toward conserving water.
- \_\_\_\_\_ offer a promising step toward conservation.

- They deliver small amounts of water directly to plant roots by using

\_\_\_\_\_.

### **Water Conservation in Industry**

- In industry today, the most widely used water conservation practices involve the

\_\_\_\_\_.

### **Water Conservation at Home**

- Water-saving technology, such as \_\_\_\_\_, can also help reduce household water use.
- Another way some people conserve water outside the home is by \_\_\_\_\_, or designing a landscape that requires minimal water use.

### **Solutions for the Future**

- In some places, conservation alone is not enough to prevent water shortages, and as populations grow other sources of fresh water need to be developed.
- Two possible solutions are:
  - \_\_\_\_\_
  - \_\_\_\_\_

### **Desalination**

- \_\_\_\_\_ is the process of removing salt from ocean water.

### **Transporting Water**

- Because \_\_\_\_\_ of the Earth's fresh water is frozen in icecaps, icebergs are another potential freshwater source.