**CHAPTER 15 REVIEW- Water**

Importance of Conserving Freshwater

* Only \_\_\_\_\_\_% of the Earth’s water is freshwater. Most of that is in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, ice caps, and in underground \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which means it is not readily available. That also means \_\_\_\_\_\_\_% is available for human use.
* List 3 reasons why water is important for the effective functioning of Earth’s systems.
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Rivers and Streams

* Flow of water: Rain 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Tributary vs. Watershed
* Shapes landforms
	+ Oxbow lake: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Flat valleys: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Floodplains: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		- Soil is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		- Biodiversity is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Wetlands

* Areas that combine freshwater with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Soil is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Biodiversity is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Describe some ecosystem services provided by wetlands.
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* How have humans altered wetlands? What are the ecosystem effects of this?

|  |  |
| --- | --- |
| **Type of Wetland** | **Characteristics** |
|  |  |
|  |  |
|  |  |

Lakes and Ponds

|  |  |  |  |
| --- | --- | --- | --- |
| **Zone** | **Location** | **Characteristics** | **Organisms** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

* Oligotrophic vs. Eutrophic
* How can lakes change from oligotrophic to eutrophic (and vice versa)?

Groundwater

* Groundwater makes up about \_\_\_\_\_\_% of the Earth’s freshwater supply, and is contained within reservoirs known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Label the following aquifer *(zone of saturation, zone of aeration, water table, recharge zone, confined, unconfined)*



* Which type of aquifer is easily recharged? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* How does groundwater become surface water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* How does surface water become groundwater? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* What is one initial indication of a falling water table in an ecosystem? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* What are two other effects of falling water table?
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Water Use

* Label the graph (include %) to show how water is used in the United States.
* Consumptive Use: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Non-consumptive Use: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Ex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Diversion of Water

* Water is diverted to suit our needs by \_\_\_\_\_\_\_\_\_\_\_\_\_, or any obstruction to block the flow water so it can be stored in a reservoir.

|  |  |
| --- | --- |
| **Benefits** | **Drawbacks** |
|  |  |

\*\* Removal of dams has restored \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ habitats.

* Describe/discuss how human activity impacted the ecology surrounding the Colorado River and Aral Sea.

Solutions to Freshwater Depletion

|  |  |  |  |
| --- | --- | --- | --- |
| **Desalination** | **Agricultural** | **Industrial** | **Residential** |
|  |  |  |  |

\*\* What is gray water? How can it be used to conserve water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Freshwater Pollution

|  |  |  |  |
| --- | --- | --- | --- |
| **Type** | **Causes** | **Effects on Organisms/Humans** | **Solutions** |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

* Point-source vs. Non-point-source (with examples)

Wastewater Treatment

* Septic system vs. municipal sewer system

WATER QUALITY TESTING

|  |  |  |
| --- | --- | --- |
| **Test** | **What is measured?** | **Implications of Stream/Water Quality** |
| *Physical Indicators* |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| *Chemical Indicators* |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
| *Biotic Indicators* |
|  |  |  |
|  |  |  |