

Water Resources

Water resources come in many forms, but the three main categories are saltwater, groundwater, and surface water.

Surface Water Resources

Surface water resources are the most commonly used method of supplying water to various regions. This classification primarily includes rivers, lakes, streams, reservoirs, and wetlands—all of which contain freshwater rather than saltwater. These sources are easiest to filter, so they produce the highest-quality drinking water for the general public. Plus, another reason we mostly use these resources is their accessibility—many people live near large lakes or streams from which they can easily extract water. Surface water is therefore the most reasonable option for providing homes and businesses with the resources they need to function.

However, people commonly use rivers and lakes for recreational activities such as swimming and fishing; these places also play a part in the industrial manufacturing processes. As such, water from these sources requires extensive sterilization before it's ready for consumption and use.

What is surface water used for?

The main uses of surface water include drinking water and other public uses, irrigation uses, and for use by the thermoelectric-power industry to cool electricity-generating equipment.

Importance of Fresh Surface Water:

These fresh surface waters sustain ecological systems and provide habitat for many plant and animal species. They also support a myriad of human uses, including drinking water, irrigation, wastewater treatment, livestock, industrial uses, hydropower, and recreation.

Is surface water renewable?

Renewable water resources include all surface water and groundwater resources that are renewed on a yearly basis without consideration of the capacity to harvest and use this resource.

Groundwater Resources

there's a larger source of water underneath your feet than there is in all the rivers and lakes combined. However, we rarely get to tap into these sources due to how difficult they are to reach. Groundwater fills the cracks in bedrock and sand beneath the surface, making contaminants tedious to filter out in large quantities. These sources also saturate the soil and contain so much sediment that the water must undergo a thorough filtration process to even become drinkable. So, while groundwater is the main source of plant hydration, it's not often a sustainable option for people. Fortunately, we aren't completely cut off from groundwater sources—many of them feed some of our surface water supplies through underground springs.

The importance of groundwater for human beings:

Groundwater is a prime natural resource on Earth. It not only supports all types of life forms to exist on the Earth but also helps in the growth of human civilization. It quenches thirst and fulfills all the household demands. Groundwater is used for irrigation purposes. Irrigation accounts for the largest use of groundwater in the United States.

Is groundwater drinkable?

Generally, both groundwater and surface water can provide safe drinking water, as long as the sources are not polluted and the water is sufficiently treated. ... Through wells, groundwater can be tapped where it is needed, whereas surface waters are concentrated in lakes and streams.

What is the difference between surface water and groundwater:

groundwater is considered to be underground water. On the other hand, surface water is freshwater that exists above ground. Most of the groundwater contained in the earth is situated within half a mile or less from the surface.

Saltwater Resources

It's common knowledge that our oceans make up over 70 percent of the planet. However, the salty, abrasive nature of this water makes using it for any of our current processes extremely difficult. The amount of salt present in ocean water makes it impossible for us to safely drink it in large enough quantities to survive. This is why we dominantly rely on freshwater sources to supply us with the water we need to drink. Fortunately, recent advances in filtration technology have yielded more effective ways to dilute saltwater and remove the acidity that prevents us from using it. Still, desalination plants are low in number due to the amount of energy this filtration process requires. Further evolution of these tools will make the process more sustainable and easier to repeat.

Water pollution

Water pollution can come from several different sources. If the pollution comes from a single source, such as an oil spill, it is called point-source pollution. If the pollution comes from many sources, it is called nonpoint-source pollution. Most types of pollution affect the immediate area surrounding the source. Sometimes the pollution may affect the environment hundreds of miles away from the source, such as nuclear waste, this is called transboundary pollution.

Water pollution is the contamination of water bodies, usually as a result of human activities. Water bodies include for example lakes, rivers, oceans, aquifers, and groundwater. Water pollution results when contaminants are introduced into the natural environment.

Water pollution can cause water to become toxic to humans and the environment. Water is an essential resource for all life on Earth. If a water source becomes contaminated due to pollution, it can lead to health issues in humans, such as cancer or cardiovascular conditions.

Types of Water Pollution:

- 1- Chemical pollution.
- 2- Groundwater pollution.
- 3- Microbiological pollution.
- 4- Nutrient pollution.
- 5- Oxygen-depletion pollution.
- 6- Surface water pollution.

DANGERS OF WATER POLLUTION

- 1- Dangers on human health.
- 2- Dangers to our Economy.
- 3- Dangers to our Environment.