Human Use Of Water Now & In The Future: How to Make an Impact

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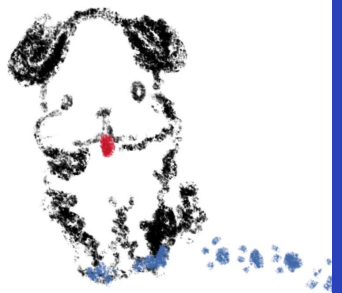


What is a water footprint?

A water footprint is an environmental indicator that measures the overall amount of water being used to produce total goods and services consumed by the individual/community.
Similar to the carbon footprint, water footprir is usually measured in liters/cubic meters.)

The water footprint aim is to spread awareness about a rational use of water, especially since we are in short supply due to population increase and climate change.

Food is an example of a commodity that produces multiple liters of water to make each day.
FAO (Food and Agriculture Organization) data shows that the water footprint for food accounts for nearly 70% of water usage at a global level.

All food has a water footprint, but especially different type of meats have a higher water footprint than most foods.
(EX. An apple has approx. a water footprint of 70 liters. While a kilogram of beef can have up to 15,000 liters of a water footprint.

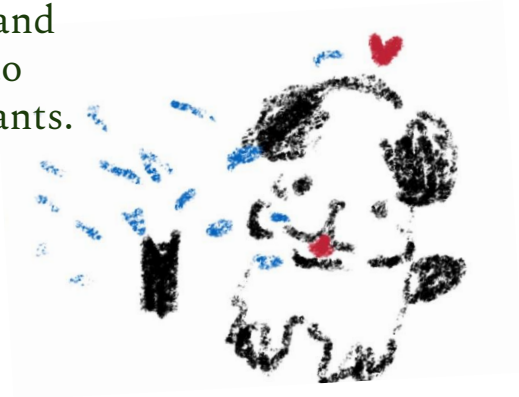
The four methods of agricultural irrigation

1) Sprinkler irrigation, one of the most commonly used irrigation systems. Found on lawns, farms, landscapes..etc. One of the smallest yet effective ways of agricultural irrigation.

2) Surface irrigation, where water is applied and distributed over the soil surface by gravity. This has been the most common form of irrigation used.

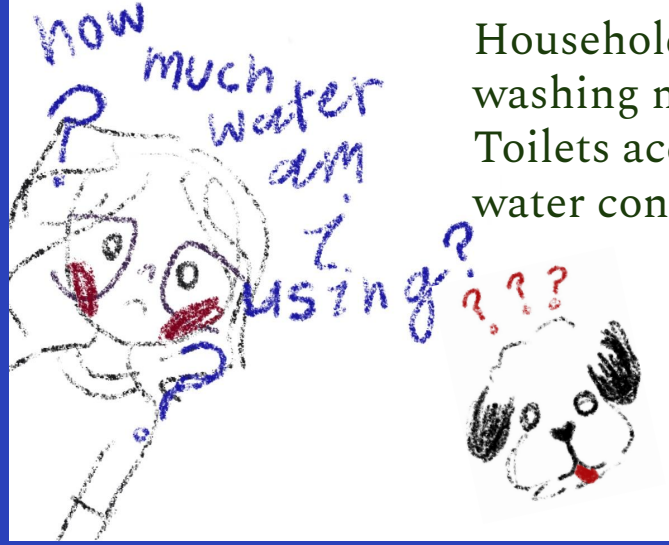
3) Micro-irrigation, which is an irrigation method with lower water pressure and flow, allowing the water to be absorbed into slow-percolation soils, minimizing runoff.

4) Drip irrigation, a type of micro-irrigation which potentially helps save water and nutrients by allowing water to drip slowly to the roots of plants.



Major industrial/household uses of water

Industrial water is used for fabricating, processing, washing, diluting, cooling, and transporting a product. Some industries that use large amounts of water produce such commodities as food, paper, chemicals, refined petroleum, or primary metals.



Household items that use large amounts of water, are toilets, washing machines, showers, sprinklers etc.
Toilets account for nearly 30 percent of an average home's indoor water consumption.

The importance of water ownership & water conservation

Water ownership, also commonly known as water rights, are the legal rights of property owners to access and use bodies of water to the lands they own. There are different types of water rights based on the specific forms of water that border or exist on a property. (EX. Riparian rights: a type of water rights which gives landowners access to flowing bodies of water such as rivers and streams. These specific rights are protected by property law. As every individual depends on water for livelihood, we must learn how to keep our limited supply of water pure and away from pollution.

Conserving water helps preserve groundwater, which is important for plants, animals and people. The conservation of water keeps water pure by using our supply wisely. Fresh water is a limited resource, making water conservation an important factor for the environment.

Water Conservation Programs

Any summary of water conservation programs in California must be understood as temporary. The state is constantly revising and strengthening its water use and conservation strategies.

The Los Angeles Department of Water and Power has long been at the forefront of state water conservation, investing over $100 million in water conservation programs in the last decade.
LA Programs/Enforcements:
Prohibitions on using water on any hard surface, such as hosing dirt off a sidewalk

Lawns may only be watered before 10 am or after 5 pm between April 1 and September 30, and before 11 am or after 3 pm from October 1 to March 31.

Etc.. Etc.. Etc..

The EPA (United States Environmental Protection Agency
has ultimately tried to reduce the water footprint by monitoring water meters and tracking use, eliminating single-pass cooling, optimizing cooling tower efficiency, minimizing or eliminating landscape irrigation.. Etc.


DEBATE!


is there a way to resolve the CALIFORNIA CRISIS?
(DEBATE!)

Is There a Way to Resolve the California Water Wars?

Although agriculture in California has been an economic success, it has increased competition among the state's residents for water. Nearly two-thirds of those residents live in southern California, where residential and business demand for water has exceeded the locally available supply. As the state's population continues to grow at about 1 percent per year, demand for water will also grow

Water is a critical input for agricultural production and plays an important role in food security. Irrigated agriculture represents 20 percent of the total cultivated land and contributes 40 percent of the total food produced worldwide. Irrigated agriculture is, on average, at least twice as productive per unit of land as rainfed agriculture, thereby allowing for more production intensification/crop diversification.

Is There a Way to Resolve the California Water Wars?

Using free-market forces to determine water value.

Free market economy promotes the production and sale of goods and services, with little to no control or involvement from any central government agency.
The advantage of a free market economy is that it can both reward and perpetuate innovation and hard work. Yet, the free-market is inherently more risky and thus tend to favor those who start out with more capital and resources. You wouldn't want to risk using free-market forces to determine a water value with such a significant and substantial resource.

Is There a Way to Resolve the California Water Wars?

Social Justice:

Water has a multitude of attractions to people, such as transport, power, recreation, and industrial and domestic supply. These challenges include the provision of a safe and reliable water supply throughout the world. The global issue of “safe water,” and access to that water is the main focus and concern as a social justice issue. An example can be the worldwide concern about obtaining clean and reliable sources of water. Access to clean water is a social justice issue that could be solved by addressing the greater structural issues that cause inequality.

Consideration of continuous water flow through various states and nations.

Waters of the United States: (adjacent wetlands which are regulated as “waters of the United States” because they are “inseparably bound up” with navigable waters and have “significant effects on water quality and the aquatic ecosystem”)

In order to better protect our nation’s vital water resources that support public health, environmental protection, agricultural activity, and economic growth, The Environmental Protection Agency and U.S. Army Corps of Engineers..etc.. remain committed to crafting a durable definition of “waters of the United States” that is informed by diverse perspectives and based on an inclusive foundation.

If we can put more effort into more beneficial research toward this, it would profit the flow of water throughout the states a substantial way.

The future of water availability will depend on how we resolve issues of water ownership, how we improve water conservation, and—as world population grows—how we develop new water-saving technologies.