

Appendix A: Definitions

Adaptive Capacity. The ability of systems, organizations, and individuals to (1) adjust to actual, or potential, adverse changes and events; (2) take advantage of existing and emerging opportunities that support essential functions or relationships; or (3) cope with adverse consequences, mitigate damages, and recover from system failures. Adaptive capacity is an indicator of how well a system will adjust to, or recover from, external changes, or large perturbations (e.g., severe floods or droughts). See also “resilience.”

Agricultural water use efficiency. The ratio of the amount of water required to sustain agricultural productivity to the total applied water. Efficiency is increased through the application of less water to achieve the same beneficial productivity, or by achieving more productivity while applying the same amount of water.

Annual Peak Flow. The maximum instantaneous discharge from a stream. It is the highest annual discharge and includes both groundwater contributions and direct runoff.

Anthropogenic. Of human origin or resulting from human activity.

Aquifer. A geologic formation, group of formations, or part of a formation, that contains saturated and permeable material capable of transmitting water in sufficient quantity to supply wells, or springs, and that contains water that is similar throughout in characteristics, such as potentiometric head, chemistry, and temperature.

Available groundwater storage capacity. The volume of a groundwater basin that is unsaturated and capable of storing groundwater.

Average annual runoff. The average value of total annual runoff volume calculated for a selected period of record, at a specified location, or area.

Beneficial use. As part of the nine regional water quality control boards’ basin planning efforts, up to 25 water-quality beneficial use categories for water have been identified for human and instream uses.

Biosolids. Wastewater treatment residuals, not including material removed during preliminary treatment, treated to levels that allow agronomic use in accordance with federal law.

Catchment. The area of land that catches and collects water above a reservoir, or other storage structure.

Climate change. Changes in long-term average temperature, precipitation, wind, or other variables in a specific region.

Consumed Water. Water that does not return to the system for other uses.

Contaminant. Any substance, or property, preventing the use of, or reducing the usability of, water for ordinary purposes, such as drinking, preparing food, bathing, washing, recreation, and cooling. Any solute or cause of change in physical properties that renders water unfit for a given use. (Generally considered synonymous with pollutant.)

Domestic Well. A water supply well used to serve no more than three residences for the purpose of supplying water for drinking, culinary, or household uses, and which is not used as a public water supply.

Green Infrastructure. A subset of natural infrastructure. It mimics natural systems at the neighborhood, or site scale, and can be part of an integrated approach to addressing water management challenges in residential, municipal, and industrial developments. Examples of green infrastructure include eco-roofs, green street swales, and neighborhood natural areas that filter sediment and other pollutants carried by stormwater runoff.

Hydrologic Cycle. The general pattern of water movement by evaporation from sea to atmosphere, by precipitation onto land, and by return to sea under influence of gravity.

Integrated. To make whole by bringing all parts together.

Integrated Pest Management. Integrated Pest Management (IPM) is a sustainable, science-based, decision-making process that combines biological, cultural, physical, and chemical tools to identify, manage, and reduce risk from pests and pest management tools and strategies in a way that minimizes overall economic, health and environmental risks (National IPM Roadmap Definition, updated in 2018).

Integrated Water Resource Management (a.k.a. One Water). An approach, or process, to managing water that holistically assesses the planning and management of water supply, wastewater, and stormwater systems, focusing on the water cycle as a single connected system while promoting coordinated development and management of water, land, and related resources to maximize the economic and social benefits while minimizing impacts to the environment (American Planning Association 2020).

Natural Infrastructure. The strategic use of natural lands, such as forests and wetlands, and working lands, such as farms and ranches, to meet infrastructure needs. Natural infrastructure can also mimic natural systems to achieve outcomes. Natural infrastructure can be more cost-effective than built infrastructure, and frequently provide a broader suite of environmental, economic, and community benefits.

Permeability. The ability of material to transmit fluid, usually described in units of gallons per day per square foot of cross-section area. It is related to the effectiveness with which pore spaces transmit fluids.

Prior Appropriation Doctrine. A method of allocating water rights whereby the first person to divert a quantity of water from a water source for a beneficial use has the right to continue to

use the appropriate quantity of water for that beneficial use. Subsequent persons can appropriate the remaining water for their own beneficial purposes, provided they do not interfere with the rights of prior appropriators. Oregon's Water Code is built on the prior appropriation doctrine and has been adapted to recognize instream rights that do not divert water.

Public Water System. A system for the provision to the public of piped water for human consumption, if such system has more than three service connections, or supplies water to a public or commercial establishment that operates a total of at least 60 days per year, and that is used by 10 or more individuals per day. Public water system also means a system for the provision to the public of water through constructed conveyances other than pipes to at least 15 service connections, or regularly serves at least 25 individuals daily at least 60 days of the year. A public water system is either a "Community Water System," a "Transient Non-Community Water System," a "Non-Transient Non-Community Water System" or a "State Regulated Water System."

Resilience. The capacity of a resource/natural or constructed system to adapt to and recover from changed conditions after a disturbance.

Senior Water Right. Under the prior appropriation doctrine, during times of shortage, older water rights are fulfilled before more recent (junior) rights are fulfilled.

Stormwater. Stormwater runoff is generated from rain and snowmelt events that flow over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not soak into the ground. The runoff picks up pollutants, such as trash, chemicals, oils, and dirt/sediment that can harm our rivers, streams, lakes, and coastal waters (EPA 2020). Stormwater systems include traditional gray infrastructure, such as storm sewers, as well as green, or nature-based infrastructure.

Surface Water. Water that collects on the surface of the ground in a stream, river, lake, or wetland.

Wastewater. Wastewater is water that has been used and must be treated before it is released into another body of water so that it does not pollute water sources. Wastewater comes from a variety of sources, including home use (toilets and drains), rainwater and runoff, and agricultural and industrial sources (Safe Drinking Water Foundation 2020).

Water Conservation. Water conservation includes strategies, policies, incentives, outreach, and regulations implemented to efficiently manage water resources to ensure sustainable water supplies for current and future demand. It addresses both indoor and outdoor water usage.

Water Cycle. The hydrologic cycle that describes the continuous movement of water on, above, and below the surface of the Earth.

Water Right. A right to the beneficial use of water that travels or collects in streams, rivers, lakes, ponds, or underground, including the allocation of the water to storage for future use. Water rights are property rights, but water right holders do not own the water itself, they possess the right to use it. Depending on the type of water law doctrine, they may be attached to ownership of the land, or they may exist as a separate property right. Water rights are restricted to use at a specific place, for a specific purpose, and in a specific quantity. Water rights are recognized for out-of-stream uses and instream uses.

Water Supply. Water for human use comes from two primary sources—surface water and groundwater. Water supply systems convey, store, treat, and distribute water. Understanding water use helps to evaluate the effects of future development on water supply sources, which also support ecosystem needs.

Well. Any artificial opening or artificially altered natural opening, however made, by which groundwater is sought, or through which groundwater flows under natural pressure, or is artificially withdrawn or injected. This definition shall not include a natural spring, or wells drilled for the purpose of exploration, or production of oil or gas. Prospecting, or exploration for geothermal resources as defined in ORS 522.005, or production of geothermal resources derived from a depth greater than 2,000 feet as defined in 522.055, is regulated by the Department of Geology and Mineral Industries.

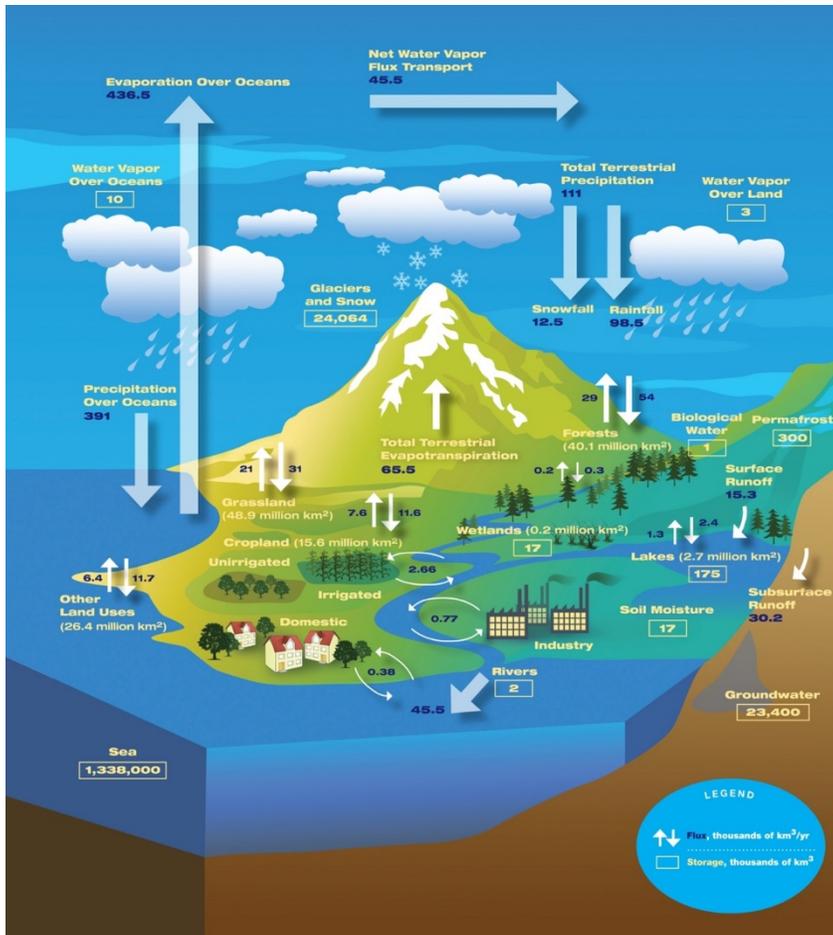


Figure A-1. Water cycle diagram. NASA/JPL Flickr (CC BY 2.0).

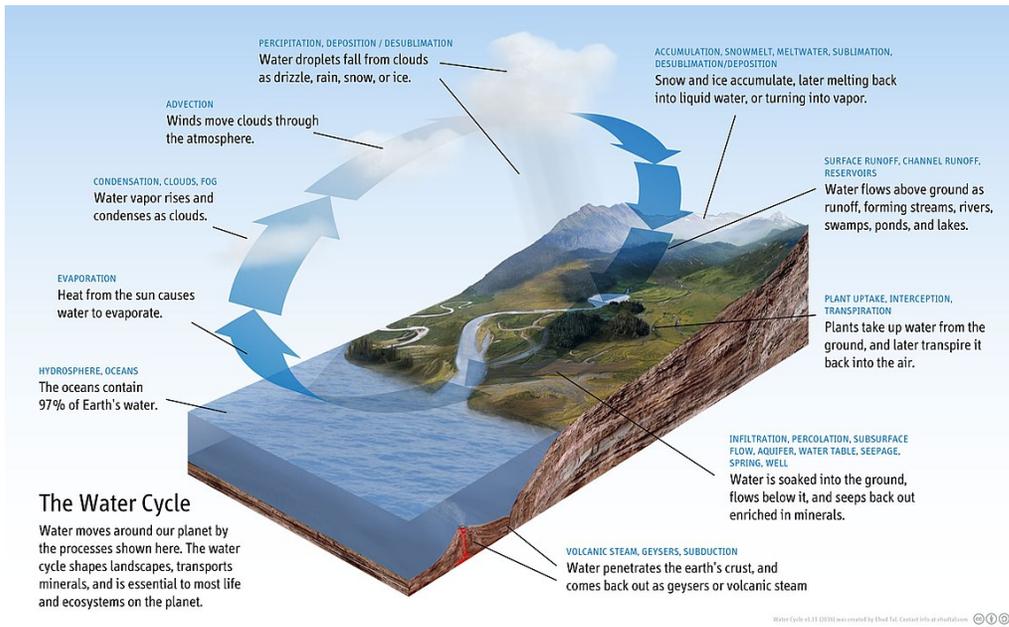


Figure A-2. Water Cycle diagram. Ehud Tal - Own work, CC BY-SA 4.0, <https://creativecommons.org/licenses/by-sa/4.0>.