LIMNOLOGY 3

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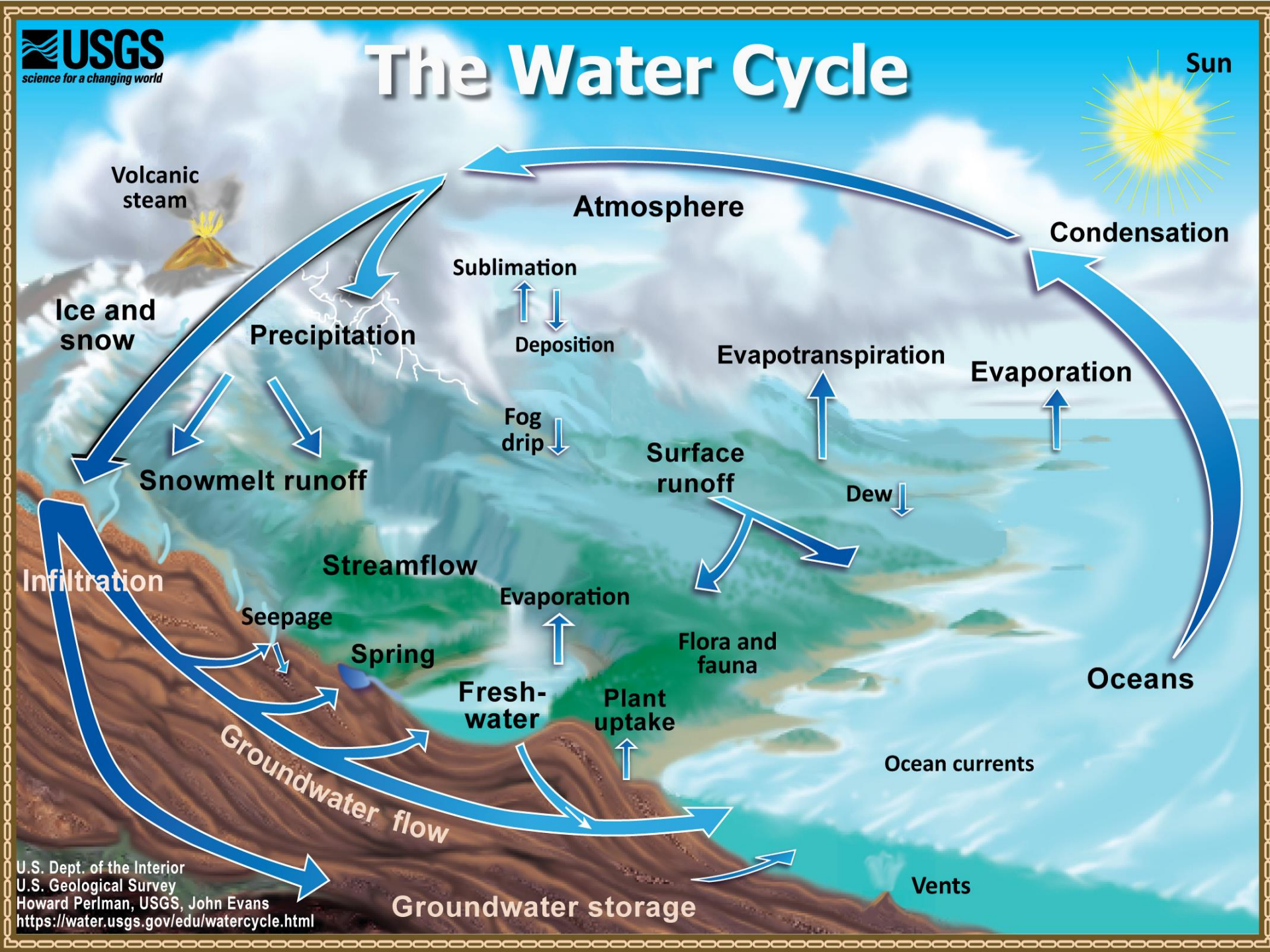
USGS
science for a changing world
The Water Cycle
Sun
Volcanic steam
Atmosphere
Condensation
Sublimation
Deposition
Ice and snow
Precipitation
Evapotranspiration
Evaporation
Fog drip
Surface runoff
Dew
Snowmelt runoff
Infiltration
Streamflow
Evaporation
Seepage
Spring
Flora and fauna
Fresh-water
Plant uptake
Oceans
Groundwater flow
Ocean currents
Vents
Groundwater storage
U.S. Dept. of the Interior
U.S. Geological Survey
Howard Perlman, USGS, John Evans
https://water.usgs.gov/edu/watercycle.html

Water Cycle

- Precipitation
- Evaporation
- Surface and ground waters

Tektonic lakes

- Lakes formed by large scale crustal movements separating water bodies from the sea, e.g. the Aral and Caspian Seas. Lakes formed in rift valleys by earth faulting, folding or tilting, such as the African Rift lakes and Lake Baikal, Russia. Lakes in this category may be exceptionally old.
- Tectonic lakes Due to the warping (simple deformation), subsidence (sliding downwards), bending and fracturing (splitting) of the earth's crust, tectonic depressions occur. (We have studied all these terms in previous posts)
- Such depressions give rise to lakes of immense sizes and depths.
- For example, the present day Lake Baikal originated 25 million years ago

Tectonic lakes Turkey: Salt lake, Eğridir, Kovada, İznik, Beyşehir, Burdur, Apolyont, Manyas, Akşehir, Eber

Lakes Formed by Volcanic Activity Crater and caldera lakes

- During a volcanic explosion the top of the cone may be blown off leaving behind a natural hollow called a crater.
- This may be enlarged by subsidence into a caldera.
- In dormant or extinct volcanoes, rain falls straight into the crater or caldera which has no superficial outlet and forms a crater or caldera lake.
- Examples: **Nemrut lake**
- **Others are Lava-blocked lakes and Lakes due to subsidence of a volcanic land surface.**


Nemrut-Muş


Meke-Konya