

Balancing Water

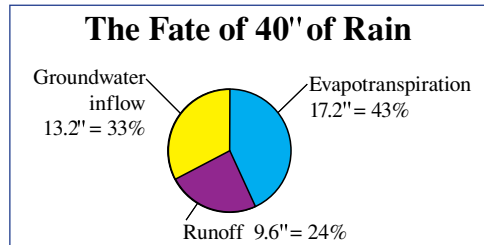


Rain!

Vashon-Maury Island gets an average of 40" of rain annually. You may have noticed that the west side of the Island, with its droopy moss-covered cedar, seems wetter than the east side with its dry groves of madrone. It's not in your imagination – there's a ten inch difference in rainfall as you move from the west side (45") to the east side (35") of the Island.



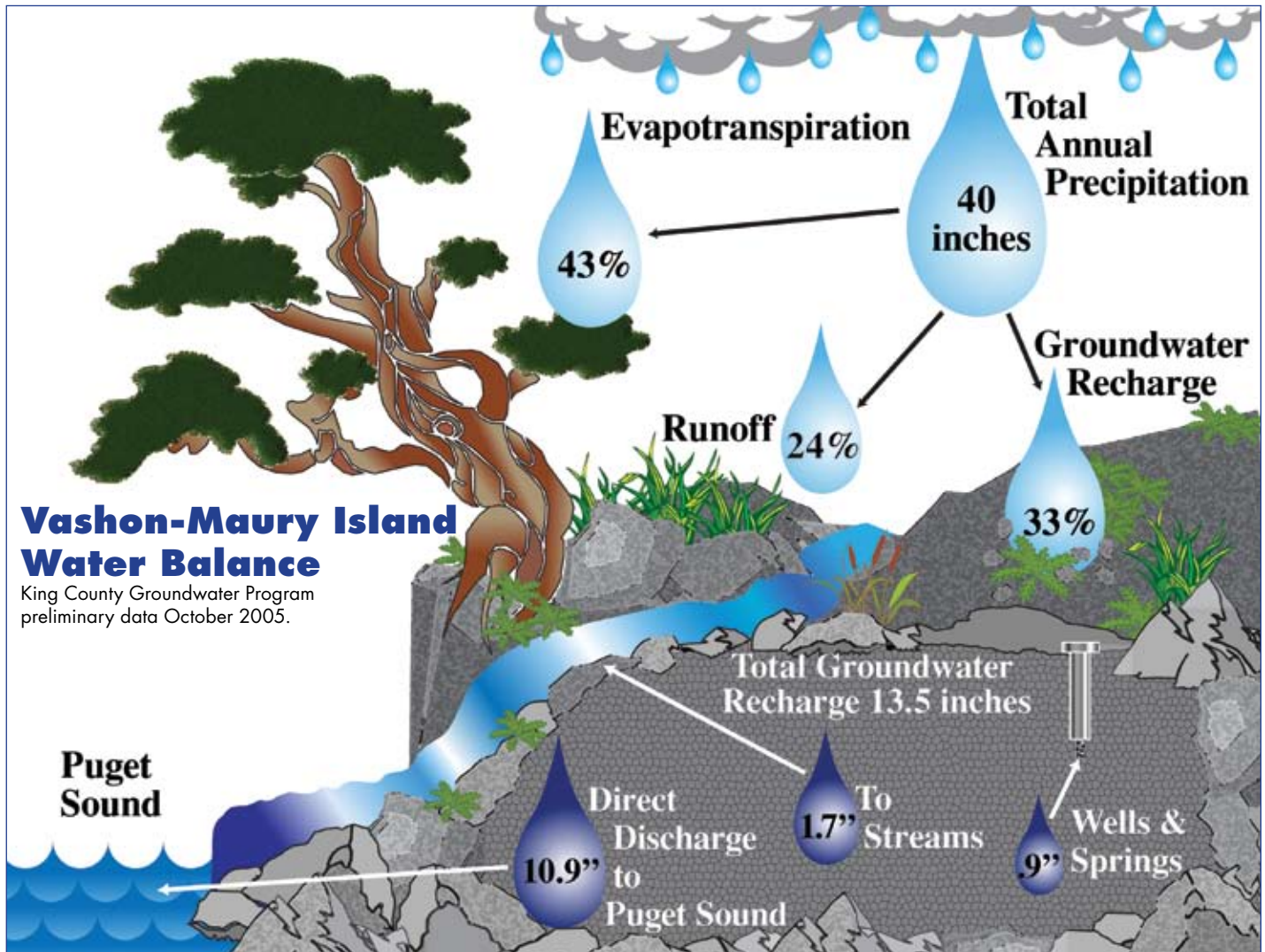
Fate of Rain Drops



The pie chart above depicts the fate of Vashon-Maury Island's annual precipitation. Most of it returns to the atmosphere through "evapotranspiration" which means that it evaporates or is taken up by plant roots. Only 33% (13.2 inches) recharges groundwater.

Fate of Groundwater

As our streams meander towards Puget Sound, they contribute an additional .3 inches to groundwater making a total of 13.5 inches of groundwater recharge annually. Preliminary estimates indicate that less than 7% (.9") of our groundwater is captured in wells and springs for drinking water or irrigation. 12.5% (1.7") discharges into streams which is an important factor in keeping many of our streams flowing in the dry summer months. By far the most common fate of groundwater, over 80% (10.9"), is to seep out the side of the Island directly into Puget Sound.



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Sole-Source Aquifer

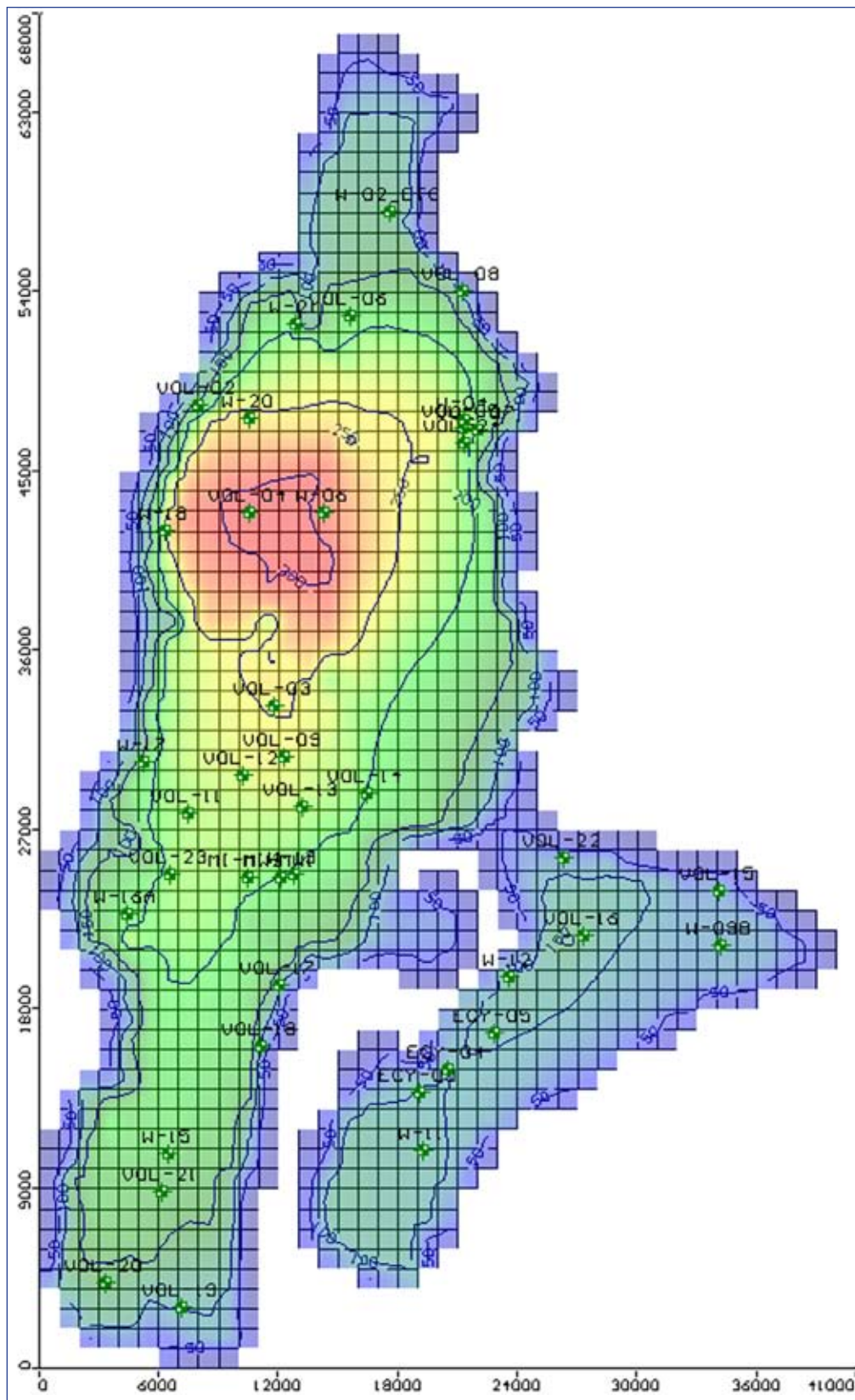
Vashon-Maury Island was designated a sole-source aquifer by the U.S. Environmental Protection Agency in 1994. This



simply means that we do not have an alternative source of drinking water. Our aquifers are replenished solely by the water that falls on the Island.

Groundwater Keeps on Moving

Groundwater is not a river or lake; instead it is the water that fills the spaces between the grains of sand and gravel beneath our feet. The diagram to the left illustrates the elevation of groundwater, also known as the “water table,” above sea level. The red area is the highest elevation of groundwater (about 300 feet above sea level) on the Island: think of it as an underground mountain of water. Groundwater will move towards lower elevations, namely Puget Sound. Since we don't see it, we rarely think about the fact that groundwater is moving beneath our property or that our landuse decisions can actually affect our neighbors' drinking water.



What's an Island Without Water?



As Island residents, it's important to be aware of

how our actions on the landscape are reflected in



the water around us: in the water we drink, our streams and our own salt water moat.