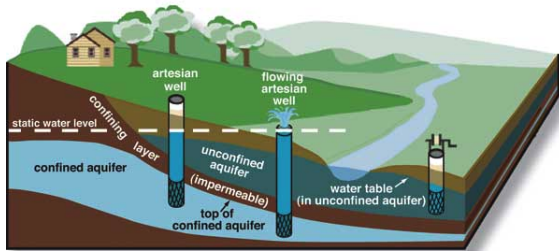


Did you know you are standing on your water?

Things to know about Bainbridge Island's groundwater and how to protect it

All the water coming out of your faucet that you use for drinking, cooking, bathing, watering your plants, etc. comes from our Island's aquifers.



source: Kansas Geological Survey Public Information Circular 23

An **aquifer** is a layer of rock, often loose rock like sand or gravel, underground where there is enough space between the grains to hold a lot of water- enough for us to pump out of the ground and use.

Bainbridge Island gets most of its water from **6 primary aquifers**:

- 1. The Perched Aquifers**– About 4% of our wells use these aquifers, which are more than 200 feet above sea level.
- 2. Semi-Perched Aquifers**– About 25% of our wells use aquifers between 100 above and 20 feet below sea level.
- 3. Sea Level Aquifers** – This aquifer extends from 40 feet above to 230 feet below sea level and is the most widely used, with about half our island's wells depending on this aquifer.
- 4. Glaciomarine Aquifers** - Wells in this aquifer typically pulling water from between 400 and 760 feet below sea level. About 2% of Island wells tap this aquifer.
- 5 Fletcher Bay Aquifer (FBA)** – This e FBA is the deepest identified aquifer on Bainbridge Island at about 690 to 1,000 feet below sea level. Although only 1 percent of wells on Bainbridge Island use this aquifer, those wells include large systems that provide approximately 30 percent of the water we use.
- 6. Bedrock Aquifers** –Less than 1 percent of wells are completed in the bedrock aquifers on the south end of Bainbridge Island. Unlike the other aquifers, bedrock aquifers store water in joints and cracks in the bedrock, not between grains of sediment. Therefore, these aquifers are not as productive.

Our plants and wildlife also depend on Bainbridge Island's groundwater: All of our year-round streams and wetlands on Bainbridge depend on groundwater to keep them going during the dry summer months. These streams in turn support an abundance of plants and wildlife on the Island, including at least seven streams on our Island that have resident salmon or trout.

It is up to all of us to protect our groundwater supply by:

- 1. Using and conserving it as a limited resource:** We get so much rain, it seems like we'd never run out of water. However, about half the rain that falls on Bainbridge runs off the surface or is intercepted by plants before it ever gets to our aquifers. Deeper recharge more slowly because water needs to make its way down there. And in the summer, we get the least rain but use our groundwater the most, adding seasonal demand that can deplete the aquifer more quickly during those months. Water may seem abundant here, but groundwater recharges slowly, and we need to make sure we use it sustainably
- 2. Keeping pollutants out of the drain and the ground:** The chemicals we use around our houses or that go down our drains, road runoff, car washing- all these things can get into our surface water and groundwater. Shallow aquifers are particularly vulnerable to pollutants because they are closer to the surface where chemicals are released.



Additional Source of information:

The City's Groundwater Management Program: http://www.ci.bainbridge-isl.wa.us/groundwater_management_program2.aspx. The City is working with the US Geological Survey on a comprehensive groundwater model, due out this summer or fall. The model will provide information about the nature and extent of our aquifers, how future land use on Bainbridge may influence our groundwater supplies, and provide a tool that can help us better manage our groundwater resources.

Check out **Kitsap County's Solid Waste** program for more information on safe storage and disposal of chemicals and wastes at <http://www.kitsapgov.com/sw/>

Groundwater Assessment in Washington State:

<http://www.ecy.wa.gov/programs/eap/groundwater/index.html> Our state's Department of Ecology website devoted to groundwater resources- lots of information including links to many other state and federal groundwater studies and information

US Environmental Protection Agency's Office of Groundwater and Drinking Water: <http://www.epa.gov/safewater/> provides lots of valuable information on protecting and conserving groundwater, drinking water standards, and a whole section targeted specifically at kids! (see the "Kids stuff with Thirstin" link on their page).

Brought to you by the Bainbridge Island Watershed Council www.biwatershedcouncil.org