

This is a very simplified illustration of how public water utilities work in our area: drinking water, stormwater, and wastewater; how water gets to your faucet; where it goes when you're done with it; and what happens to the rain when it falls on the ground.

It's all part of the public water system that our water utilities manage every day.

This information brought to you by:



Working Together to Protect and Conserve our Drinking Water

Proud Members:



Clackamas River Water



City of Oregon City
City of West Linn

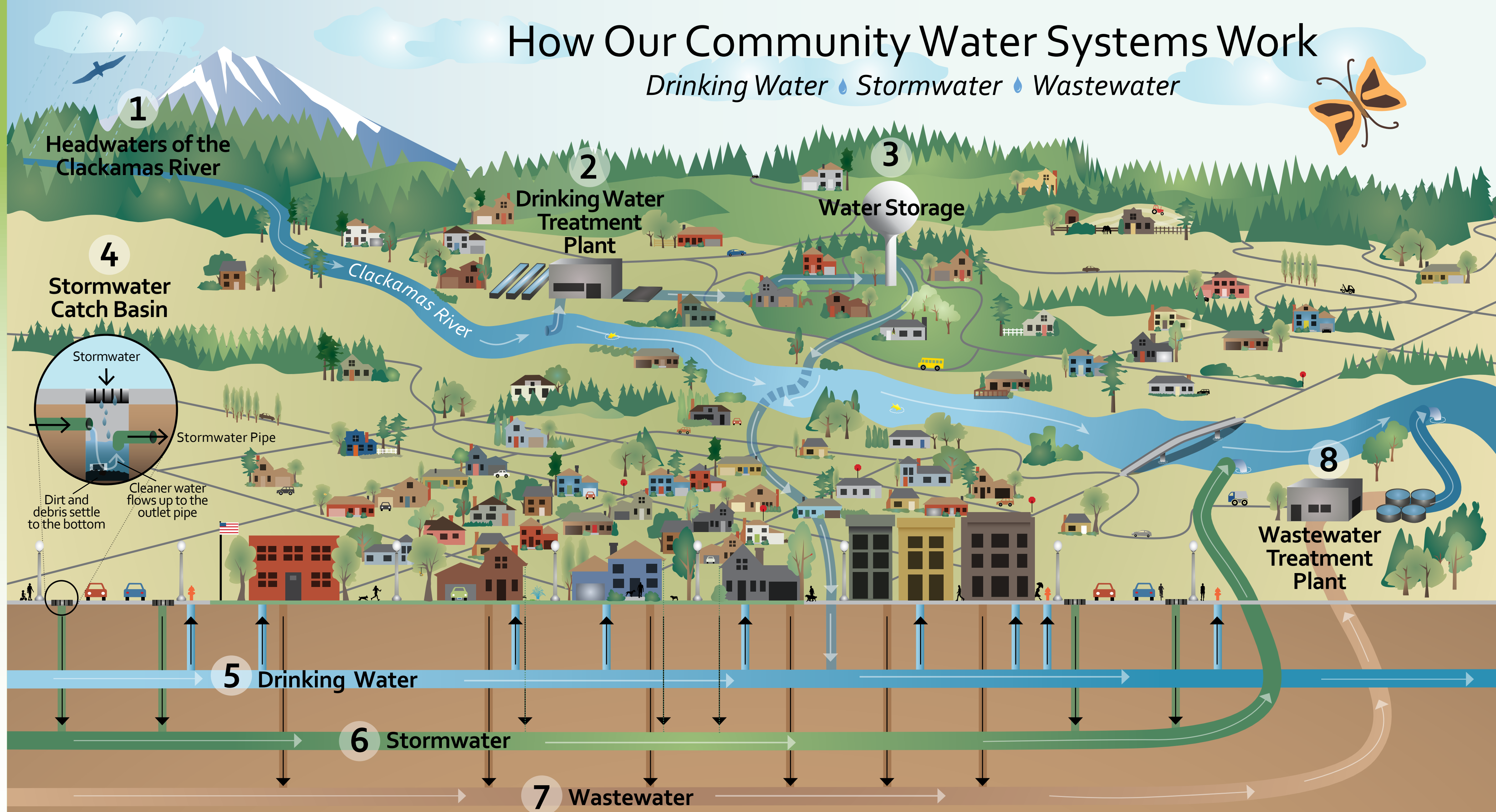


City of Happy Valley
City of Damascus



How Our Community Water Systems Work

Drinking Water • Stormwater • Wastewater



Follow the 8 Steps Our Water Takes

1 Headwaters of the Clackamas River

The Clackamas River begins in the Cascade Mountains near Mount Hood. It flows 83 miles and drops 6,000 feet to its confluence with the Willamette River near Oregon City and Gladstone. Its watershed is nearly 940 square miles! The river is a high quality drinking water source to the residents of unincorporated Clackamas County (Clackamas River Water), unincorporated Oak Grove and Jennings Lodge (Oak Lodge Water District), Cities of Oregon City and West Linn (South Fork Water Board), cities of Damascus and Happy Valley (Sunrise Water Authority), and the Cities of Estacada, Gladstone and Lake Oswego, and will soon be serving the City of Tigard.

2 Drinking Water Treatment Plant

This is where the water from the Clackamas River is filtered and treated so it is safe to drink. There are 5 different drinking water treatment plants along the Clackamas River which supply water to almost 300,000 customers in north Clackamas County.

3 Drinking Water Storage

Tanks or reservoirs provide storage of drinking water equal to or greater than our community's average water demand for a single day. Water in the reservoirs is also stored for emergencies such as fire control and power outages. Water reservoirs are elevated or located up in the hills to provide adequate water pressure because they rely on gravity to pull the water into the water distribution system. Each foot of height provides 0.43 PSI (pounds per square inch) of pressure.

4 Stormwater Catch Basin

A stormwater catch basin is an underground concrete structure typically fitted with a slotted grate. It collects stormwater runoff and routes it through underground pipes, allowing sediment and debris to settle. Also known as a storm drain or curb inlet, it can be a round structure (older) or a rectangular box (newer). It is used when connected pipes are less than 18 inches in diameter. The depth from the grate to the bottom of the pipe is usually less than 5 feet.

5 Drinking Water Distribution System

The basic function of a water distribution system is to transport the finished drinking water from the treatment plant to the reservoir and on to the customer. Most distribution systems have the same basic components: pipes, reservoirs, valves, pumps, fire hydrants, service connections, and meters, that deliver drinking water and meet fire protection needs. Public water providers depend on distribution systems to provide an uninterrupted supply of pressurized, safe drinking water.

6 Stormwater Collection System

Stormwater runoff is generated when rain flows over impervious surfaces (paved streets, parking lots, and rooftops), where it accumulates debris, chemicals, sediment, and other pollutants that can adversely affect rivers and streams. The stormwater runoff that does not soak into the ground either flows untreated directly into local rivers and streams or is channeled into stormwater collection systems which eventually discharge to rivers and streams.

7 Wastewater or Sewer Collection System

The basic function of a wastewater collection system is to move used wastewater from our homes and buildings to the wastewater treatment plant. Most systems have the same basic components: pipes, pumps, and lift stations which transport wastewater from a lower to a higher elevation, in order to continue flowing by gravity to the treatment plant.

8 Wastewater Treatment Plant

Wastewater treatment is the process of removing contaminants from sewage. Wastewater treatment uses physical, chemical, and biological processes to remove contaminants and produce clean water (treated effluent) to be put back into a river or stream. Bio-solids are the nutrient rich organic materials that result from the wastewater treatment process. Under the right conditions, treated bio-solids are suitable for reuse, commonly as fertilizer.