

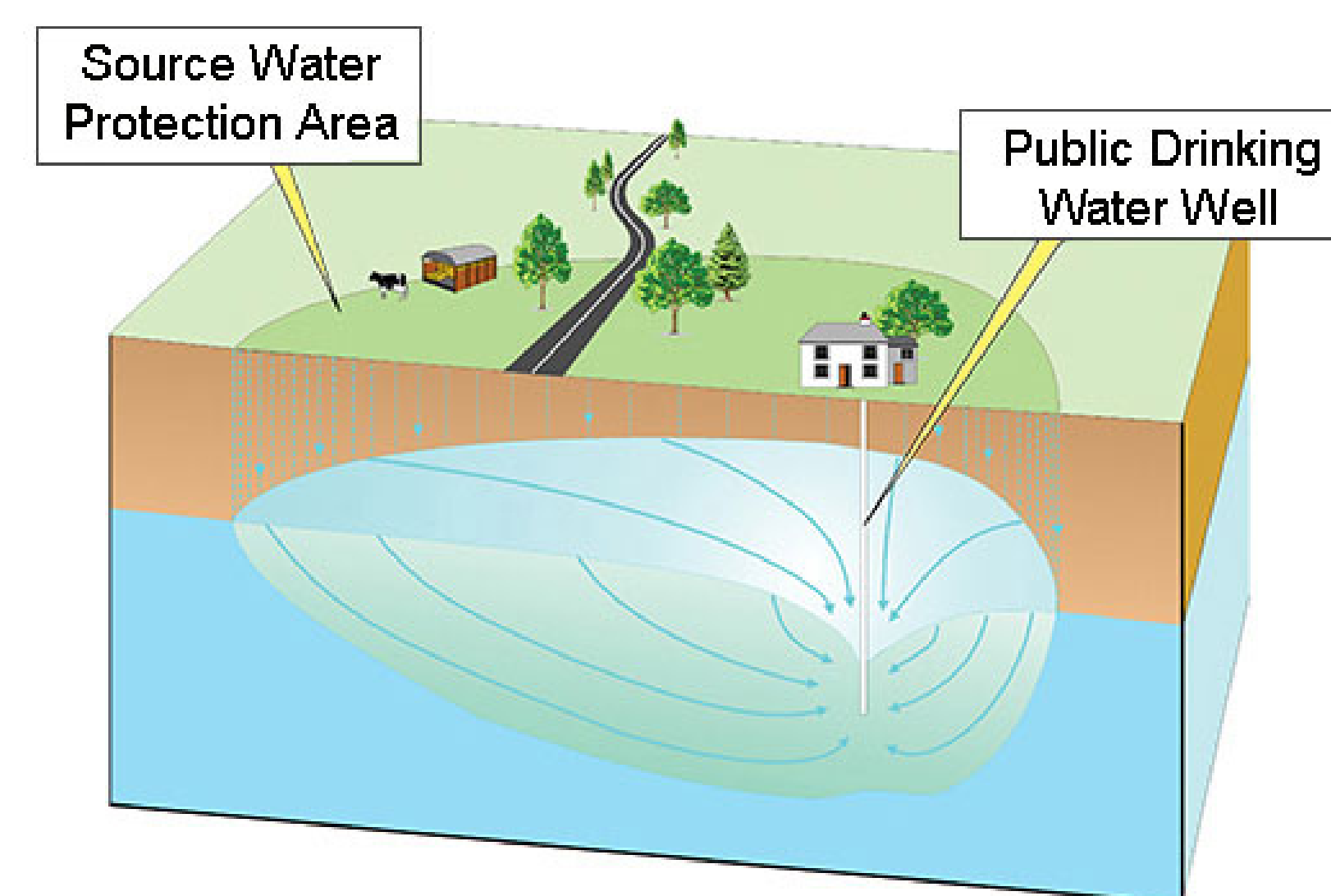
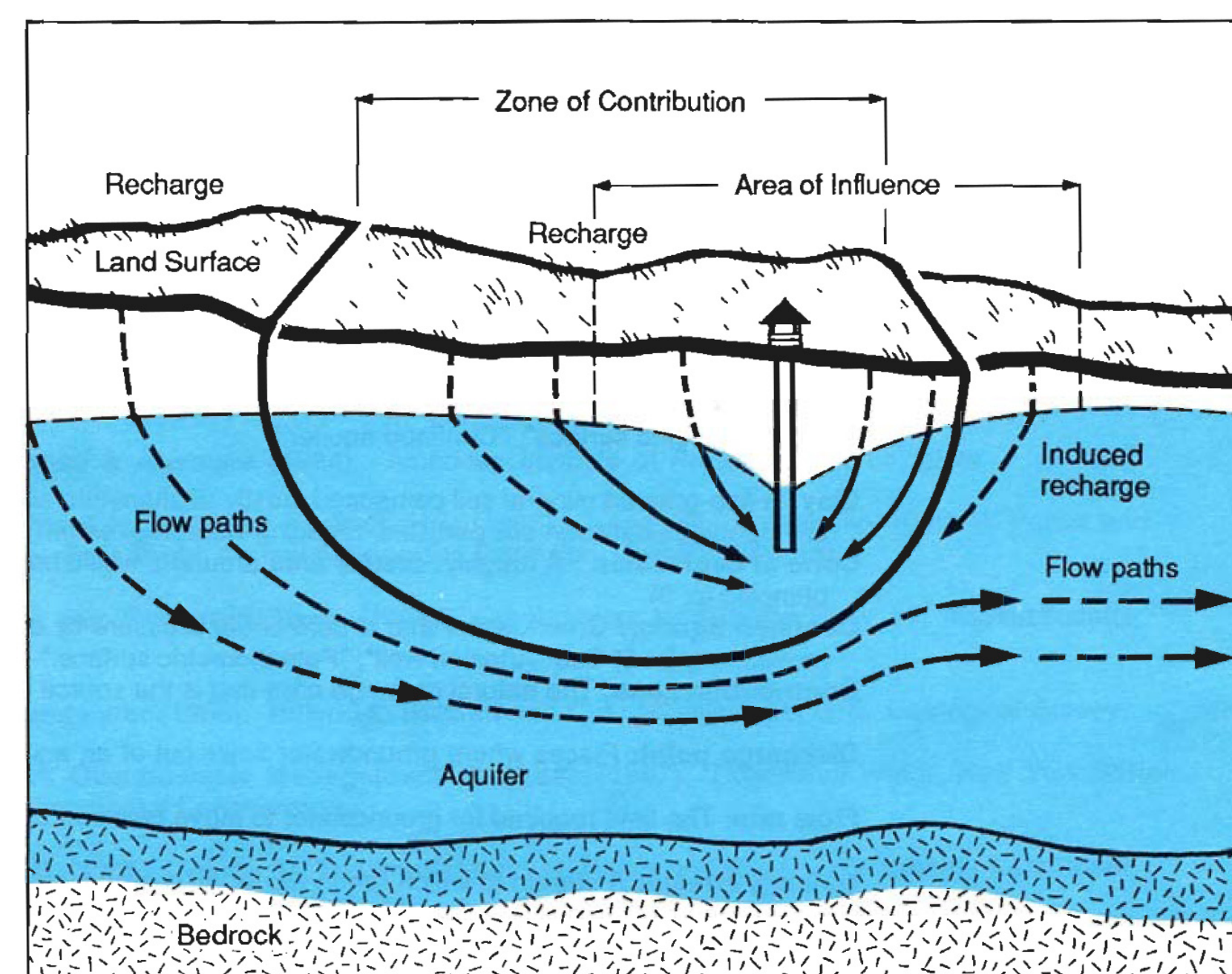
CRITICAL AQUIFER RECHARGE AREAS

WHAT ARE AQUIFER RECHARGE AREAS AND WELLHEAD PROTECTION AREAS?

Most of the drinking water in Thurston County comes from groundwater in local aquifers. Olympia, Tumwater, Lacey, Thurston County and private utilities operate wells for public water utilities throughout the county.

“Aquifer recharge area” refers to places where water infiltrates into the ground and replenishes the aquifers. As the water seeps into the aquifers, contaminants from aboveground activities can go along for the ride. There are areas in Thurston County where aquifers have been contaminated by toxic substances, nitrates and bacteria.

“Wellhead protection area” refers to an area that surrounds a well or spring where pollution can trickle down through the soil and contaminate underground drinking water that supplies that well. In Thurston County, these areas are divided into 1-year, 5-year, and 10-year time-of-travel zones. These time-of-travel zones represent the time it takes a drop of water (or contaminant) to reach the water well.



HISTORICAL OCCURRENCES

During routine water testing, the City of Tumwater found unacceptable levels of trichloroethylene, an industrial solvent, in city wells. Three of the city’s wells were immediately taken out of service – equaling approximately 25% of Tumwater’s water supply. The area was declared a Superfund site by the U.S. Environmental Protection Agency (EPA). The researchers found the most likely cause was improper waste disposal by gas stations, a testing lab, and a dry cleaner.

Tumwater drilled two new wells to ensure an adequate water supply for residents. It has cost taxpayers, businesses, and ratepayers close to \$4 million to clean up the solvent and provide new water supplies.

CONSIDERATIONS FOR THE CRITICAL AREAS ORDINANCE

- Thurston County designates certain areas of the county as “Critical Aquifer Recharge Areas” (CARAs) and/or “Wellhead Protection Areas” in order to protect drinking water supplies. The Critical Areas Ordinance helps to guide development and allowed uses in these areas.
- Critical Aquifer Recharge Areas are mapped based on the geology and physical characteristics of the soils in Thurston County, depth to ground water, and known aquifers and active groundwater supplies.
- Critical Aquifer Recharge Areas are classified into four categories (numbered I, II, III and IV) based on their sensitivity to contamination, with Category I being the most critical and Category IV the least. In Category I Critical Aquifer Recharge Areas, the use, handling or storage of high quantities of hazardous materials would be prohibited altogether within a 1-year time of travel zone.
- Areas of the county that do not fall into top three classifications are thought to have low potential for the contamination of groundwater.