



AQUIFER RECHARGE AREAS

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A 2012 Critical Areas Update Fact Sheet

WHAT IS AN AQUIFER RECHARGE AREA?

Virtually all of the drinking water in Thurston County comes from ground water aquifers – underground layers of coarse cobbles and gravel that contain space where water collects. Aquifers not only supply our drinking water, they also flow underground to feed rivers, streams and wetlands.

The term “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. Toxic substances and fertilizers have already contaminated portions of Thurston County aquifers and water in those areas is no longer suitable for consumption. Typical pollutants include petroleum products from automobiles and other machinery, fertilizers, and inadequately treated animal and human wastes.



CRITICAL AQUIFER RECHARGE AREAS AND WELLHEAD PROTECTION AREAS

In order to protect drinking water supplies, Thurston County designates certain areas of the county as “Critical Aquifer Recharge Areas” (CARAs) and/or “Wellhead Protection Areas.”

Critical Aquifer Recharge Areas are areas in Thurston County that overlie significant ground water resources and are particularly susceptible to ground water contamination should pollutants be released on the surface or in the shallow subsurface (such as from a leaking fuel tank, a landfill, or pesticides on a golf course). Significant ground water resources include those used by public water wells as well as sole-source aquifers.

Critical Aquifer Recharge Areas are mapped based on the geology and physical characteristics of the soils in Thurston County, depth to groundwater, and known aquifers and active groundwater supplies. CARAs are classified into three categories (numbered I, II and III based on their sensitivity to contamination, with Category I being the most critical and Category III the least.

Areas of the county that do not fall into any of the three classifications are thought to have low potential for contamination of groundwater and a low dependence on local ground water.

Currently there are four categories. The county is proposing to remove Category IV, the least sensitive areas, from the Critical Areas Ordinance. The term “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.

The potential amendments seek to safeguard our drinking water supplies and maintain the delicate balance and connection of ground water resources, rivers, streams and wetlands.

HOW DO I KNOW IF I HAVE AN AQUIFER RECHARGE AREA ON MY PROPERTY?

Approximate locations of some critical areas in Thurston County are available in the Resource Stewardship Permit Assistance Center and may also be shown on Thurston County's GeoData website: www.geodata.org. It is important to note that maps are intended to be used as a guide and do not provide a definitive designation. You may call the Thurston County Permit Assistance Center at (360) 786-5490 or visit the Permit Assistance Center in Building 1 of the Thurston County courthouse complex, 2000 Lakeridge Drive S.W. in Olympia. The Permit Assistance Center is open from 8 a.m. to 12:30, Monday through Friday.

Thurston County also offers a critical area review service whereby a staff member will visit a property to help identify critical areas and the possible buildable area before a property owner submits a permit application. This service, subject to fees, helps property owners develop better site plans. A more rigorous environmental review of the site plan itself is conducted during the permit-review process.

IMPORTANT THINGS TO KNOW

- The potential amendments would set standards for development in Critical Aquifer Recharge Areas (CARAs) and Wellhead Protection Areas.
- Like the existing ordinance, the potential amendments would focus mostly on activities that involve using, handling or storing larger quantities of hazardous materials. For example, the amendments would apply to any activity that involves the accumulation of more than 220 pounds of corrosive or toxic chemicals – which is more than the typical residence would use.
- Standards would generally require commercial-permit applicants to supply a ground-water impact analysis from a hydrogeologist; submit and enact a hazardous materials management plan; use Best Management Practices when applying fertilizer or other chemicals to the ground; and provide secondary containment when storing chemicals. “Secondary containment” generally means adding one more layer of protection to capture spills and leaks before they end up in the soil or down the drain.
- 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.
- For new subdivisions, the potential amendments would require developers to submit a hydrologic report demonstrating that any on-site sewage system would not degrade the quantity or quality of ground water. The amendments would also require developers to submit a management plan that shows how lawns and landscaping will be managed to reduce the potential for pesticides and fertilizers to pollute ground water.

BEST AVAILABLE SCIENCE

The potential amendments are based on scientific information that is already deemed Best Available Science by the state and federal governments, Growth Management Hearings boards, courts, and other western Washington counties. A list of sources is posted on the “Critical Areas Update” link of www.thurstonplanning.org.

CONTACT INFORMATION

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