



## Fact Sheet

# Septic Systems and Groundwater Quality Issues in Southern Deschutes County near Sunriver and La Pine

## Summary

The Oregon Department of Environmental Quality, the U.S. Geological Survey and Deschutes County have determined that groundwater in the Sunriver and La Pine area is vulnerable to nitrate contamination from septic systems. Private groundwater wells are the primary drinking water source for most properties in this area that have septic systems. This fact sheet explains the current conditions and the potential impacts on land development in the region.

## Background

Nitrate loading from septic systems is a concern near La Pine and Sunriver, and generally in southern Deschutes and northern Klamath counties. The area has porous, volcanic soil and many shallow groundwater aquifers, both of which allow the potential for contamination. These local conditions are unusual, as other parts of the state have finer silt and clay-like soils that form protective layers and limit impacts to groundwater.

Testing and research indicate most of the contamination in this region comes from septic systems. This means nutrients from septic systems are seeping into the groundwater that is used as a primary drinking water source. Find more information in this 2007 [report from the U.S. Geological Survey](https://pubs.usgs.gov/sir/2007/5237/pdf/sir20075237.pdf).<sup>1</sup>

## Land Development Implications

Shallow depth to groundwater and groundwater contamination pose challenges to developing some parcels in southern Deschutes County near Sunriver and La Pine. Not all parcels are suitable for septic systems. The most common reason for septic system site evaluation denial is the depth to the seasonally high water table (usually occurring after springtime snow melt). Oregon regulations require that the water table is at least 24 inches below the ground surface throughout the year, and a minimum 24-inch separation is maintained between a water table and the bottom of a septic system's sand filter. Adequate separation to the groundwater is necessary to ensure proper treatment of wastewater and function of the septic system. Even with a proposed septic design capable of producing high quality effluent before discharging into the soil, treatment may not sufficiently minimize or eliminate nutrients and pathogens from the wastewater.

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<sup>1</sup> <https://pubs.usgs.gov/sir/2007/5237/pdf/sir20075237.pdf>

## Health and Environmental Concerns

Many private drinking water wells in the Sunriver and La Pine area tap into groundwater aquifers that are vulnerable to nitrate contamination from septic systems. Drinking water that has high levels of nitrate can cause serious health effects, particularly for infants and pregnant women. Learn more about [health effects of nitrate](#) from the Oregon Health Authority.

Elevated nitrate levels also have environmental impacts. Groundwater connects with surface water and contaminants in groundwater can make their way into lakes, rivers and streams. Nitrate can increase algae growth in waterways, which can be harmful to fish and aquatic life. Groundwater in the Sunriver and La Pine area generally flows very slowly toward the Deschutes and Little Deschutes rivers.

## More Information

Learn more about septic system resources and regulations at <https://ordeq.org/septic>

## Alternate Formats

DEQ can provide documents in an alternate format or in a language other than English upon request. Call DEQ at 800-452-4011 or email [deqinfo@deq.state.or.us](mailto:deqinfo@deq.state.or.us).