

# Fast Facts: UPRR groundwater contamination and the Trainsong Neighborhood

## ***How is the Trainsong neighborhood affected by contamination from the Union Pacific Railyard?***

The groundwater near the rail yard is contaminated with low levels of the chemicals trichloroethylene and tetrachloroethylene, also known as TCE and PCE; and to a lesser extent arsenic, cis-1,2-dichloroethene, 1,1-dichloroethane, 1,4-dioxane and chloroform. This contamination affects the groundwater beneath parts of the Trainsong and River Road neighborhoods at low concentrations. PCE and TCE are the primary concern of DEQ due to their concentrations and toxicity.

## ***How/when did the contamination happen?***

The rail yard has been in operation for more than a century. Over time, the chemicals used in maintenance and repair operations contaminated the ground water beneath the locomotive maintenance areas. This groundwater has since moved beneath nearby residential areas. The contamination was first discovered in 1996, and state officials have been working to investigate and clean-up the contamination since then.

## ***What are these chemicals, and how can they affect people's health?***

The main contaminants in groundwater beneath Trainsong are trichloroethylene and tetrachloroethylene, also known as TCE and PCE. At high levels, these chemicals can cause damage to the central nervous system, immune system, kidneys and liver, as well as cause an increased risk for certain types of cancer.

## ***Are people in Trainsong being exposed to this contamination?***

All of the homes in the Trainsong neighborhood are connected to the EWEB city water supply, which is not affected by the contamination. Therefore, people in the neighborhood are not being exposed through their drinking water or home water supply, assuming they use city water for these purposes.

People in the Trainsong neighborhood could be exposed to the contaminated groundwater if they use well water for irrigation. Oregon Public Health Division officials have concluded that the contamination is at low enough levels that it will not pose health risks if people use well water for gardening, hosing off surfaces, or other outdoor uses. Water from irrigation wells in this neighborhood may not be safe for drinking, cooking, or in-home uses.

In a very limited area of Trainsong near Haig Street and Bethel Drive, the concentrations are slightly higher, and may exceed our irrigation screening values. However in this area no one is currently using well water for irrigation. DEQ will continue to track groundwater

use in the area and make sure people are not using well water with concentrations above the screening levels.

***What about soil contamination?***

DEQ is unaware of any soil contamination in the Trainsong or River Road neighborhoods associated with the rail yard. The low levels of solvents in groundwater in some areas are not expected to contaminate the soil above it.

***What about the Vapor Intrusion?***

Some homes in the Trainsong neighborhood were studied to see if vapor intrusion was taking place. Vapor intrusion occurs when chemical vapors move up from contaminated groundwater, through the soil, and into crawlspaces, basements, and indoor areas of a home.

By 2007 DEQ became concerned about the levels of solvents in the soil gas beneath some homes in the Trainsong area, and required UPRR to install vapor barriers beneath 8 homes we felt could be affected.

Between 2007 and 2011 concentrations of solvents in soil gas decreased dramatically due to the groundwater cleanup conducted nearby on the rail yard. After reviewing the study results in 2010, the Oregon Public Health Division and DEQ concluded that the indoor air of these homes is not currently affected by vapor intrusion.

In 2011 DEQ no longer requires the vapor barriers beneath any of the homes because soil vapor concentrations decreased dramatically and remain below screening levels. We continue to monitor groundwater concentrations on the rail yard and in Trainsong. If concentrations should rise, we could require additional soil vapor monitoring, but this is not expected because of the effectiveness of the groundwater cleanup actions.

***What is DEQ doing about the contamination?***

DEQ required Union Pacific Railroad (UPRR) to conduct a large-scale investigation of the problem, which is complete. In 2006 UPRR conducted groundwater cleanup in the locomotive maintenance area of the yard. This cleanup action has had a lasting effect of reducing the concentrations of solvent chemicals in groundwater beneath the rail yard and beneath the adjacent Trainsong and River Road neighborhoods. This cleanup should continue to help lower chemical concentrations in the groundwater beneath the neighborhoods over time.

DEQ will determine what final remedial action plan is needed for the rail yard contamination later this year. Residents will have an opportunity to review and comment on DEQ's recommended final remedy.

DEQ will continue to require that that Trainsong and River Road neighbors remain protected against the contamination from the rail yard – now and for the long term.

### ***What can we do?***

DEQ and Oregon Public Health officials continue to recommend that residents in the area with contaminated wells should limit their use of those wells to outdoor purposes only and not drink or use the water for cooking, cleaning or other in-home uses. If you use well water for uses other than irrigation and outdoor uses, let the DEQ know.

## **Contacts**

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### ***DEQ Project Website***

<http://www.deq.state.or.us/lq/cu/wr/uprreugene/>

### ***Oregon Public Health Authority Project Manager***

*(for questions about health effects related to contamination)*

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### ***Oregon Public Health Authority Project Website***

<http://public.health.oregon.gov/healthyenvironments/environmentalexposures/hazardoussites/environmentalhealthassessment/pages/uprrsite.aspx>  
(or there is a link on DEQ website)