

Groundwater Conditions in Residential Roxana, Illinois

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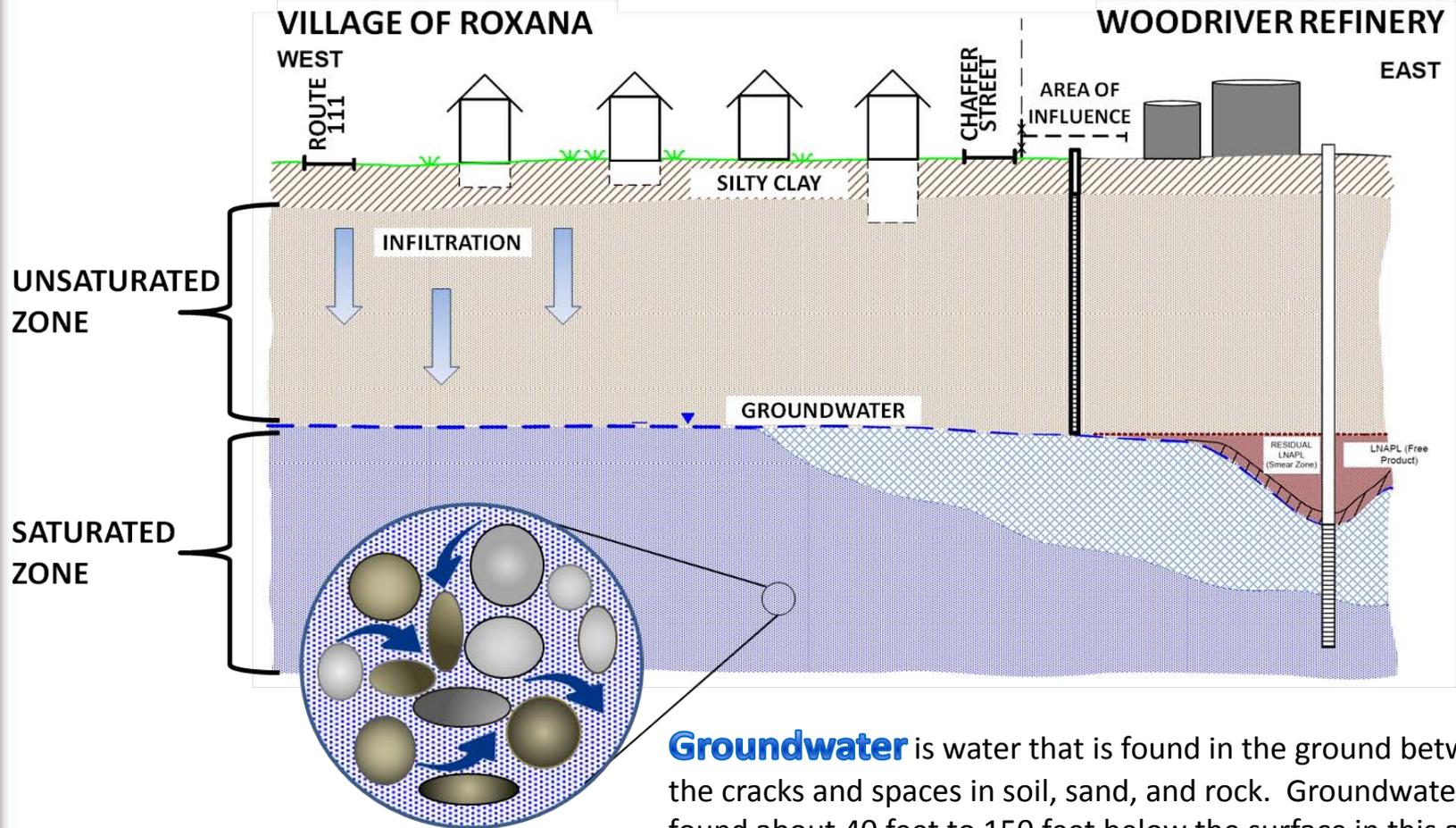
Bureau of Land

Permits Section

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Groundwater Defined



The graphic was created by **URS** and has been modified for purposes of this presentation.

Groundwater is water that is found in the ground between the cracks and spaces in soil, sand, and rock. Groundwater is found about 40 feet to 150 feet below the surface in this area, and is the aquifer being investigated.

What about water in my basement? Water that comes into a basement in a home in Roxana is not from groundwater of the contaminated aquifer. This water would come from rainfall.

What about my drinking water?

Roxana Community Water Supply

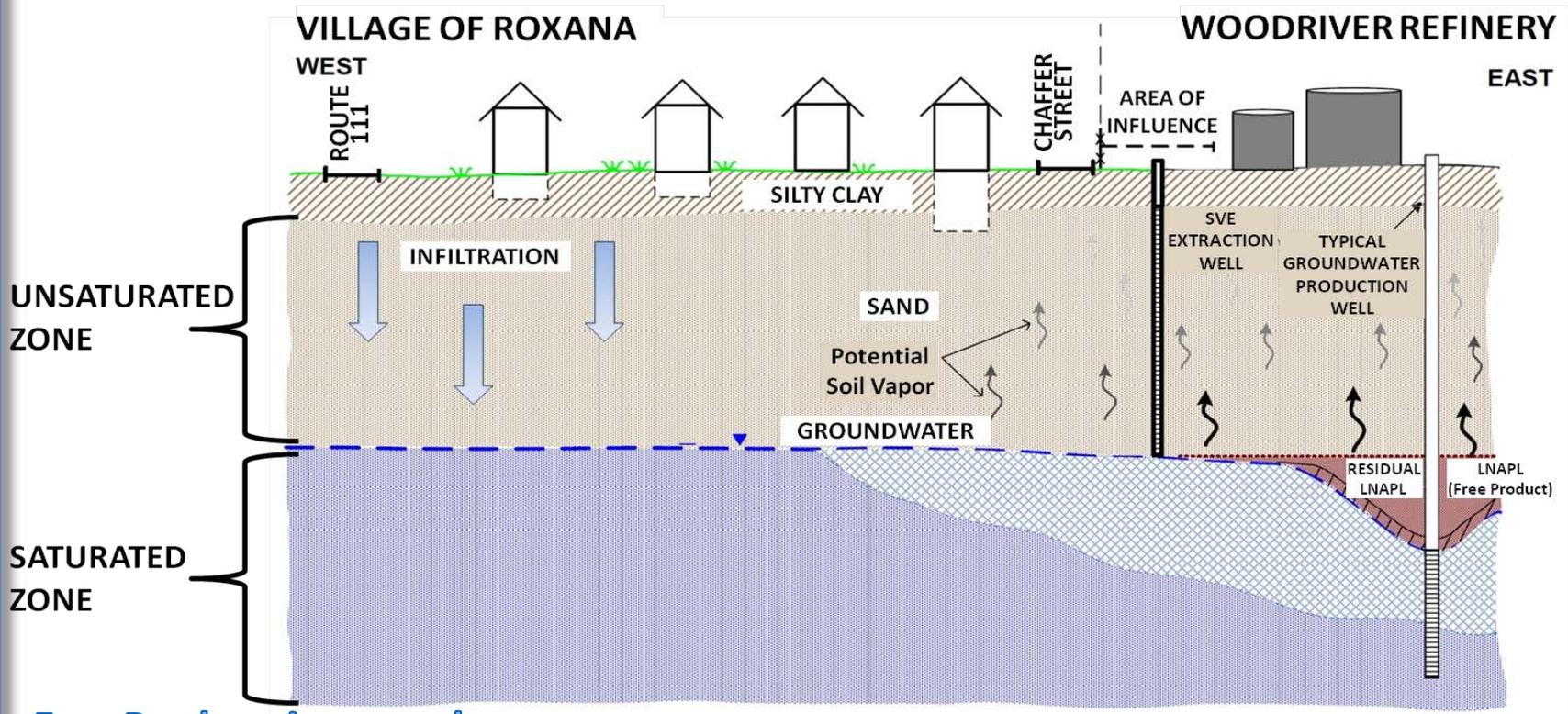
WOOD RIVER REFINERY IN RELATION TO ROXANA COMMUNITY WATER SUPPLY



No private water supply wells have been identified within 2500 feet of the investigation area.

This graphic was created by
Illinois EPA

Free Product Versus Dissolved Groundwater Contamination

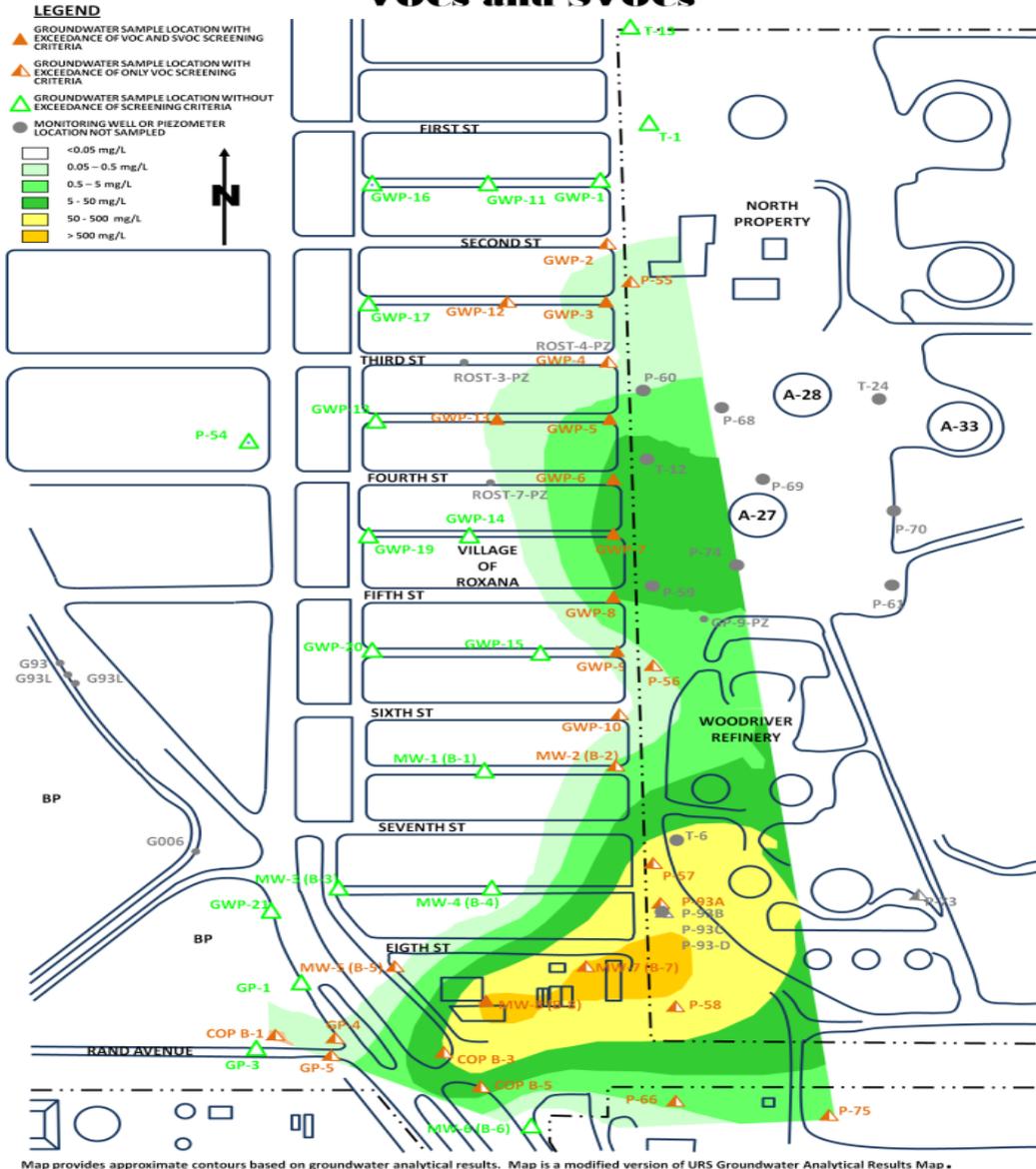


Free Product in groundwater is petroleum product that can be measured; these products are lighter than groundwater so they will be found floating near the top of the groundwater.

Dissolved Groundwater Contamination means that some of the product has mixed with the groundwater and now is part of the groundwater.

Example: Puddles in parking lots will sometimes have a rainbow sheen (“product”), and some of the product has mixed (“dissolved”) in with the water.

Estimated Groundwater Results Summary VOCs and SVOCs



Where is the dissolved groundwater contamination?

The approximate extent of measured dissolved contamination is shown here. The monitoring wells are sampled quarterly.

Two different sources have been found in these investigations. The benzene plume is in the south, and a mixed hydrocarbon plume is farther north.

What is the IEPA requiring?

Groundwater Pumping and Free Product Removal has been conducted for over 20 years at the Refinery, and regulations require it to continue until the groundwater quality is restored.

The initial goal of the investigation was to determine how far the contamination extends - - Now the focus is to remove contamination from under the Village.

The IEPA letter dated June 16, 2011 requires a proposal for an additional removal system --for both free product and contaminated groundwater along the west fenceline and at the Roxana Public Works Yard area for more aggressive removal of contaminants.

The proposal is due within 60 days.

