

This Liposn O'Shea Legal Group Power Point Presentation is not intended to create unnecessary hysteria or panic. We are just looking for answers to legitimate water flow questions which concern our clients and the folks in East Palestine and surrounding areas.



What About Sulfur Run?

Where are all of the chemicals from Sulfur Run going?

Sulfur Run flow west (in blue) – ends in Leslie Run near EP Park?



Where Sulfur Run was at the site of the derailment - North Side of Tracks Where Derailment Started



More Photos of the eastward flow of Sulfur Run by the tracks and all the pumps and waste containers, etc. NS is placing there.



2/25/23 Photos of Sulfur Run (@476 Taggart) and the Big Blue Toxic Holding Tanks pumping and holding water - Everywhere.



More Photos and Videos of What is Happening to Sulfur Run off Taggart



More Photos off Taggart – They are pumping something in or out of Sulfur Run

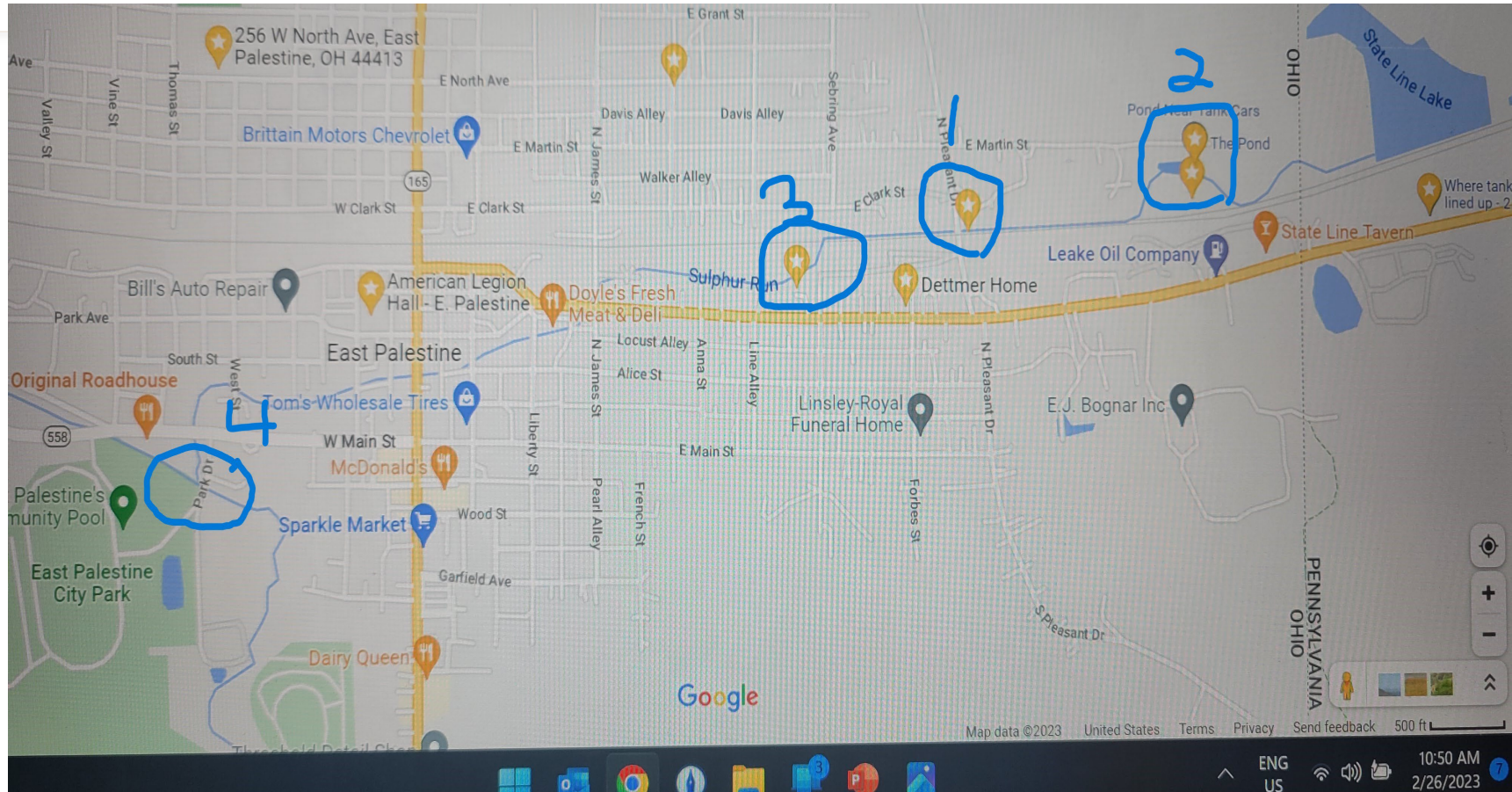


Tanker trucks coming in from PA side to where train tanker cars are located – what are they hauling or dropping?

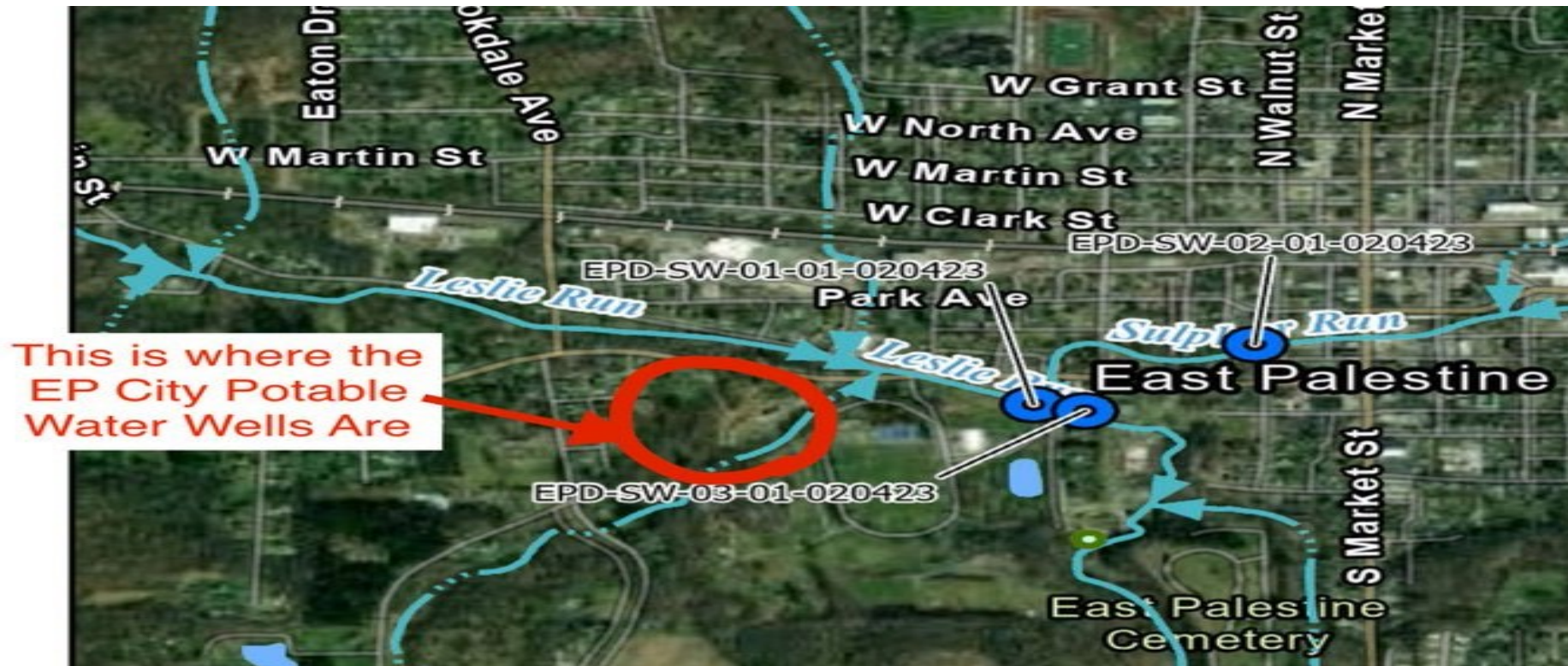


Path of Sulfur Run – to the Park and Leslie Run – Near the 5 City Water Wells

1. = Where derailment started – right next to Sulfur Run
2. = Where tanker Cars are now – near Pond and Sulfur Run
3. = Where NS is treating and pumping on Sulfur Run off @ 476 Taggart
4. = Where Sulfur Runs Meets Leslie Run – by the Park – EPA is there now – Why?

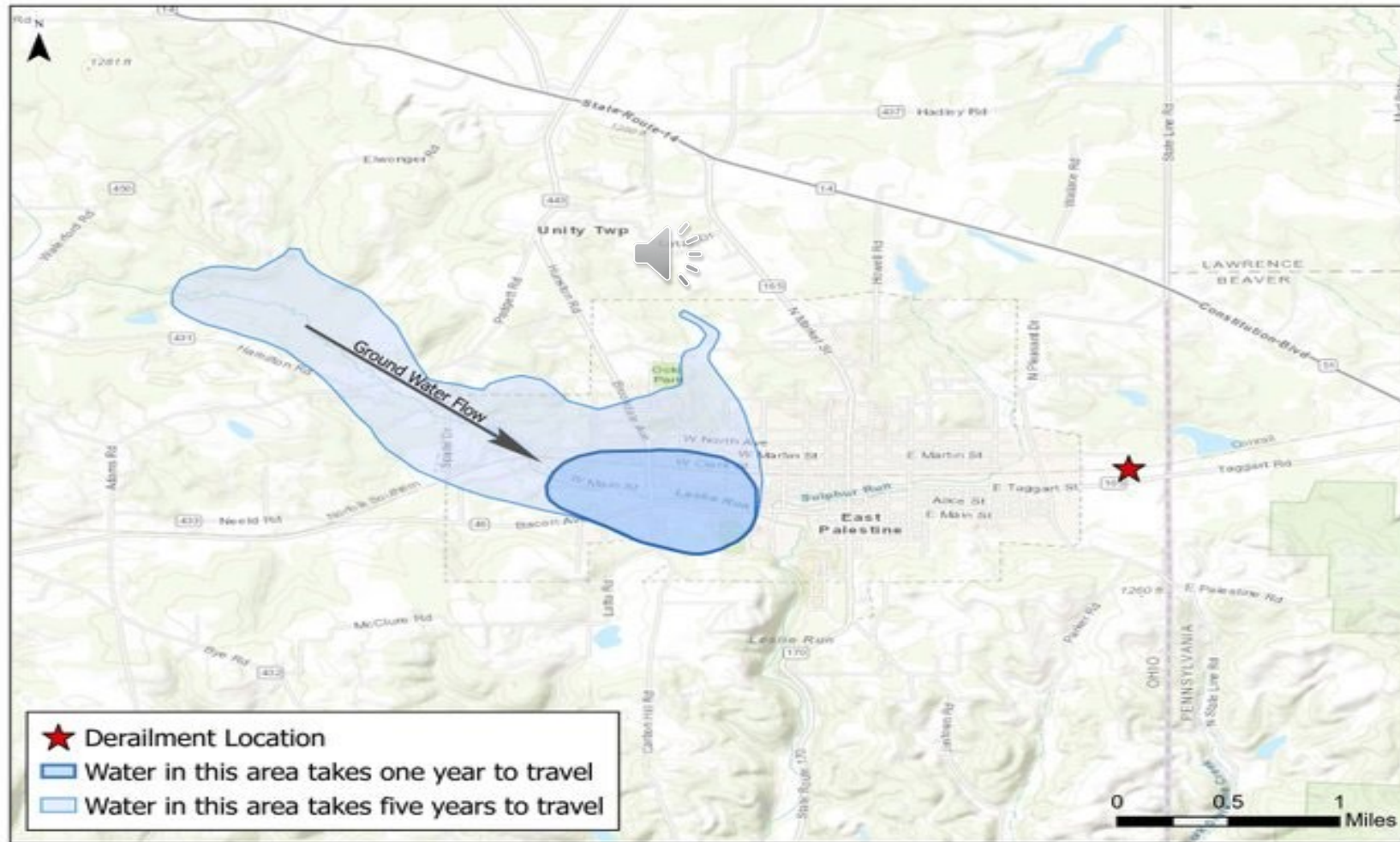


Where the EP Water Wells are primarily located – Why is EPA at the Park?



The graph on how EP obtains its water through the aquifers and the wells

East Palestine Ground Water Source



The 2019 Drinking Water Assessment for EP – Indicates that the system is very venerable and has a “*high susceptibility to contamination.*” ■

DRINKING WATER SOURCE ASSESSMENT
for the Village of East Palestine
PWS ID #OH1500912



July 2002
Revised December 2019

INTRODUCTION. The 1996 Amendments to the Safe Drinking Water Act establish a program for states to assess the drinking water source for all public water systems. Ohio's Source Water Assessment and Protection Program is designed to help public water systems protect their sources of drinking water from becoming contaminated. This assessment:

- identifies the drinking water source protection area, based on the area that supplies water to the well(s),
- inventories the potential contaminant sources in the area,
- evaluates the susceptibility of the drinking water source to contamination, and
- recommends protective strategies.

The purpose of the assessment is to provide information that the Village of East Palestine can use to help protect its source of drinking water from contamination.

SYSTEM DESCRIPTION & GEOLOGY. The Village of East Palestine is a community public water system serving 4721 people in East Palestine, Ohio. This system operates 5 wells that pump approximately 400,000 gallons of water per day from a sand and gravel aquifer (water-rich zone) within the Little Beaver Creek Outwash/Kame aquifer system. Details on the drinking water wells is included in Table 1. The aquifer is covered by 0 feet of low-permeability material, which provides no protection from contamination. Depth to water in this aquifer is 30 to 62 feet below the ground surface

Soils in the area are silty loams which are moderately well to somewhat poorly drained, meaning that much of the rainfall and snowmelt

will infiltrate into the soil, instead of running off or ponding. The topography is generally minimally sloping with an average relief of 0-2 percent. Ground water in this area is replenished by the gradual flow of water underground from higher to lower elevations and by approximately 7-10 inches per year of precipitation that infiltrates through the soil. At the Village of East Palestine wellfield, ground water flows generally toward the northeast towards the Leslie Run valley, based on a water table elevation map completed by the Ohio Department of Natural Resources.

PROTECTION AREA. The drinking water source protection area for the Village of East Palestine wells is illustrated in Figure 1. This figure shows two areas, one inside the other. The "inner management zone" is the area that provides ground water to Village of East Palestine's wells within one year of pumping. A chemical spill in this zone poses a greater threat to the drinking water, so this area warrants more stringent protection. The "source water protection area" is the additional area that contributes water when the wells are pumped for five years. Together, they comprise the drinking water source protection area.

Method Selection

An analytic element model computer program called GFLOW (Ground water FLOW) was used to determine the areal extent of the protection area. Protection areas based on computer modeling can be significantly more credible than those produced by simpler methods, especially in areas with complex geology. The time and effort required to develop a computer model are warranted when the wellfield is located in a complex hydrogeologic setting, and the hydrogeologic data needed to run the program are available for the area. Both criteria were met for

SUSCEPTIBILITY ANALYSIS. This assessment indicates that the Village of East Palestine's source of drinking water has a ***high susceptibility to contamination because of:***

- the lack of a protective ***layer of clay***
- the presence of significant ***potential contaminant sources*** in the protection area.

This susceptibility means that under currently existing conditions, ***the likelihood of the aquifer becoming contaminated is relatively high.*** This likelihood can be minimized by implementing appropriate protective measures.

Need to find out (now from the EPA or NS):

THIS IS **NOT** INTENDED TO CREATE UNREASONABLE HYSTERIA OR PANIC – THESE ARE JUST IMPORTANT QUESTIONS TO ASK AT THIS POINT.

1. **How long after derailment did toxins flow into Sulfur Run and surrounding waterways and ponds (before NS did anything)?**
2. **How much of the toxins made their way to the connection to Leslie Run (which flows south to Negley and Calcutta and East Liverpool)?**
3. **Have any of the toxins already made their way into the 5 wells that serve the City?**
4. **How long will it take for the toxins to further enter the wells?**