

Susceptibility Analysis, Protective Strategies and Proposed Consumer Confidence Report Language for the Village of Willshire

Water Quality:

Water quality data collected to meet public water supply requirements provide a direct measurement for the presence of contamination in drinking water. Water quality data were evaluated using the drinking water compliance database available at the Ohio EPA. The available water quality data do not indicate that contamination has impacted the aquifer. Because sampling requirements are for treated water, the lack of water quality impacts is not a certain indication of the lack of contamination. This determination is limited by the sampling that is performed for the water system.

Susceptibility Analysis:

The aquifer that supplies the drinking water to the Village of Willshire has a low susceptibility to contamination. This determination was made based on the following reasons:

- < the limestone aquifer is present at an approximate depth of 42 feet and has a depth to water of 33 feet below the surface;
- < A 38 foot thick confining layer, composed of glacial drift deposits, exists which could act as a barrier between the ground surface; and the aquifer
- < and water quality results do not indicate that contamination has impacted the aquifer.

Consequently, the production aquifer is deep and is protected by the confined nature of the aquifer. However, existing potential contaminant sources suggests that there is a potential for contamination to impact the drinking water supply, especially by direct pathways through the confining layer.

Protection Strategies:

Within the development of its Protection Plan the Village of Willshire should rely on the identified potential contaminant sources outlined in the June 1999 Potential Pollution Source Inventory report, completed for the Village by Smith-Comeskey Ground Water Science, and integrate appropriate protective strategies that address the identified potential sources. Protective strategies that the Village of Willshire should consider while developing its protection plan include:

Unused water wells: (1) properly sealing unused, on-site wells; (2) ensuring proper construction of new wells; and (3) contacting the local health department about unused wells in the surrounding area.

Underground storage tanks: (1) using spill and overflow protection, (2) performing preventive maintenance on storage tank systems to detect potential leaks before they occur; and (3) using dry absorbent materials to clean up spills.

Leaking underground storage tanks: Consider checking the status of any required cleanup with the Bureau of Underground Storage Tank Regulations.

Aboveground storage tanks: (1) placing tanks in a paved area surrounded by a dike system to provide containment; (2) performing preventive maintenance on the storage tanks and piping systems to detect potential leaks before they occur; and (3) using dry absorbent materials to clean up spills.

Chemical storage: (1) moving chemical storage as far from wells as possible; (2) storing fuel, paints, and solvents in a protected, secure location away from drains; and (3) ensuring that lids are shut and caps are closed on all containers.

Agricultural chemicals: (1) avoiding mixing or loading agricultural chemicals near water wells; (2) mixing and loading chemicals and rinsing equipment on a containment pad; and (3) cleaning up spills, even small ones, immediately.

Cropland: (1) selecting pesticides that are labeled for the intended application site; (2) considering the location and condition of wells when applying pesticides or fertilizer; (3) taking measures to prevent spills while mixing and applying chemicals; and (4) considering the impact of weather and irrigation before application.