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

Susceptibility Analysis:

The aquifer that supplies drinking water to the Village of Woodville's wellfield is susceptible to contamination. This determination was made because of the following reasons:

- A discontinuous till confining layer exists which could act as a barrier between the ground surface and the limestone aquifer. Till thickness varies locally and ranges from 30 feet to less than 5 feet thick;
- The limestone aquifer has a depth to water of 15-30 feet;
- The aquifer in the vicinity of Woodville is unconfined and exposed at the surface;
- The topography is relatively flat, allowing for a significant amount of precipitation to infiltrate into the ground instead of running off into streams or rivers;
- Significant potential contaminant sources exist within the protection area;

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, this 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.

Consequently, the likelihood for the aquifer that supplies the Village of Woodville's wellfield to be contaminated is high and it is critical that potential contaminant sources are handled carefully with the implementation of protective strategies.

Protection Strategies:

Protective strategies are activities that help protect a drinking water source from becoming contaminated. Implementing these activities can provide a number of long-term benefits, including protecting the health of the consumers; preserving water resources for future generations; avoiding the expense of cleaning up a contaminated water supply or finding alternative sources of water; and preserving or enhancing the economic value of the area by securing an abundant supply of clean water. Some protective strategies that the Village of Woodville may consider while developing its protection plan include:

General Recommendations: Education of the businesses in the area informing them that they are in a drinking water protection area can be very beneficial. Ohio EPA's Office of Pollution Prevention can visit businesses and provide recommendations on how they can modify their processes, materials and practices to generate less pollution in a cost-effective and technically feasible manner.

Oil and gas wells: Oil and gas wells in the drinking water source protection area are a primary potential contaminant source. Among the protection strategies that should be considered are: (1) contacting the Ohio Department of Natural Resources' Orphan Well Program about abandoned wells in the area; (2) installing safeguards such as dikes or berms against accidental releases at the storage area; and (3) inspecting storage tanks and piping systems to detect potential leaks and perform preventive maintenance.

Underground storage tanks: A primary on-site potential contaminant source is underground storage tanks. Among the protection strategies that should be considered are: (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.

Aboveground storage tanks: One of the primary potential contaminant sources is aboveground storage tanks. Among the protection strategies that should be considered are: (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.

Agricultural chemicals: One of the primary potential contaminant sources is agricultural chemical use. Among the protection strategies that should be considered are: (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.

Transportation: U.S. Route 20 has a high volume of auto and truck traffic. The Penn Central Railway Line also crosses through the protection area and has a high volume of rail traffic. The potential for spills is high. The Village of Woodville should consider contacting the local fire department and local emergency planning agency about the location of the drinking water source protection area, so that strategies can be developed to avoid spilled materials impacting the aquifer. The Village of Woodville should also post the telephone number of the local fire department near telephones. The Ohio Department of Transportation (ODOT) will erect and maintain road signs on state highways informing drivers that they are in a drinking water protection area. Please see the attached information regarding the signs.

Surface water bodies: A primary potential path for contamination of the aquifer is surface water bodies including the Portage River. Among the protection strategies that should be considered are: (1) leaving a buffer strip of grass or other vegetation around surface water bodies; (2) properly maintaining retention ponds; and (3) avoiding pesticides use in buffer strips around surface water bodies.