FREQUENTLY ASKED QUESTIONS ABOUT SEPARATION DISTANCES BETWEEN WATER WELLS ON FARMS AND SOURCES OF CONTAMINATION

August, 2003

Earlier this year, groundwater protection, farm operations, state and federal farm programs, and state law in relation to water wells became a subject of much discussion in the agricultural community. The following questions and answers are intended to assist people in understanding the Michigan Safe Drinking Water Act, Michigan Public Health Code, and resource protection for farm wells in Michigan.

1. What types of farm water wells are regulated by the State of Michigan?

Public and private water wells are regulated by the State of Michigan. Grade A dairy farm wells where the water is used for the milkhouse or milking parlor and wells connected to a potable plumbing system where employees have access to well water for consumption are considered public wells. They are regulated under the Safe Drinking Water Act; generally being Type III public wells. All other water wells, including irrigation, animal watering, or any other well that serves only one owner, are considered private and are regulated under the Public Health Code.

2. How long have these laws been effect?

The current Michigan Safe Drinking Water Act went into effect in 1976. Grade A dairy wells have been considered to be public wells since 1954. Use of water for the cleaning and the sanitation of food contact surfaces where the food is consumed by the public makes the water use in Grade A dairies public.

3. Why are isolation distances from pollution sources important?

Though other factors are also important, a large isolation distance helps in keeping the drinking water supply (in your well) safe. When a pollution source is located further from a well, there is less potential for contamination. Contaminants that may be introduced into wells from farming operations include pesticides, nitrates, and various bacteria.

4. What about the 800 foot isolation distance I've heard about?

The Michigan Safe Drinking Water Act requires a minimum isolation distance of 800 feet for major sources of contamination from Type III public wells. The potential to have an especially serious contamination problem in case of a failure of containment is what defines a major source of contamination. Toxic materials, such as pesticides and other chemicals or especially large amounts of less dangerous contaminant sources, such as animal manure storages or landfills, are considered major sources of contamination.

5. What are the regulations concerning isolation distances for private wells in relation to animal manure storages?

The Michigan Public Health Code requires a minimum isolation distance of 150 feet for major sources of contamination from private wells. A deviation from the required isolation distance may be granted by the local public health agency when issuing a well construction permit. The deviation may be granted for a well being constructed where existing or planned storage facilities are considered.

6. What are the regulations concerning isolation distances for Type III public wells in relation to animal manure storages?

The Michigan Safe Drinking Water Act requires a minimum isolation distance of 800 feet for major sources of contamination from Type III public wells. A deviation from the required isolation distance may be granted by the local public health agency when issuing a well construction permit. The deviation may be granted by the local public health agency for a well being constructed where existing or planned storage facilities are considered.

Another option for a reduced isolation distance is use of the well isolation distance reduction protocol developed by DEQ in cooperation with NRCS and MDA. This protocol allows reduced isolation distances based a series of "well protection factors". These factors include ground water flow direction, type of liner, well pump capacity, soils, and other factors that indicate a well is "protected". The maximum practical distance from the contamination source to the well should be used.

7. Why the difference in isolation distances between public and private wells? Are the people drinking from the public wells more important?

A safe drinking water supply for everyone is considered of equal importance regardless of well type. The area where groundwater is drawn becomes larger when greater volumes of water are withdrawn from a well. A "normal" private well may supply water for one household and draw about 1000 gallons of water per day from the ground. In general, a public water supply may draw 10 to 100 times more water per day from the ground. The isolation distance requirement difference is due overall to the potential of a higher yield well to draw water from a much larger surrounding area.

8. If there is a "major source of contamination", is there also a "minor source of contamination" addressed in the Public Health Code and Safe Drinking Water Act?

They are known as potential sources of contamination. These include single household septic tanks and drainfields, drywells, small animal yards along with many others. The standard isolation distances for these and other potential sources of contamination are 50 feet for private wells and 75 feet for Type III public wells.

9. What are the regulations concerning isolation distances for private wells in relation to on farm chemical storage?

The Michigan Public Health Code requires a minimum isolation distance of 150 feet to chemical storages unless deviation from the required isolation distance is granted by the local public health agency that permits the well. The deviation may be granted for a well constructed where existing or planned storage facilities are considered.

10. What are the regulations concerning isolation distances for Type III public wells in relation to on farm chemical storage?

The Michigan Safe Drinking Water Act lists chemical storage as an example of a major source of contamination. A minimum isolation distance of 800 feet is required unless deviation from the required isolation distance is granted by the local public health agency that permits the well or the requirements of the well isolation distance reduction protocol developed by DEQ in cooperation with NRCS and MDA are followed. The well isolation distance reduction protocol allows chemical storage to be placed within 75 feet of the well if an approved secondary containment is constructed. If other well protection factors are considered without secondary containment, a reduction to 200 feet is possible. NRCS practice standards require a minimum of 150 feet of isolation distance from chemical storage facilities for all wells.

11. What are the regulations concerning isolation distances for private wells in relation to on farm fuel storage?

Fuel storage in containers less than 1100 gallons is required to be located at least 50 feet from a private well. Fuel storage in containers larger than 1100 gallons without secondary containment is required to be located at least 300 feet from a private well. Fuel storage in containers larger than 1100 gallons with secondary containment is required to be located at least 50 feet from a private well.

12. What are the regulations concerning isolation distances for Type III public wells in relation to on farm fuel storage?

Fuel tanks are considered major sources of contamination for Type III public wells and therefore require a standard isolation distance of 800 feet. A deviation from the required isolation distance may be granted by the local public health agency when issuing a well construction permit. Another option for a reduced isolation distance is the well isolation distance reduction protocol developed by DEQ in cooperation with NRCS and MDA. This protocol allows a reduced isolation distance of 75 feet if secondary containment is constructed. Use of dual wall tanks satisfies the requirement of secondary containment.

13. How does my well affect my USDA Farm Bill Program Participation?

USDA is required by law to follow state and federal laws in providing both financial and technical assistance to the public. All assistance provided will meet state and federal law to the best of our knowledge. USDA will not provide assistance that will result in any well becoming "illegal". One of the purposes of USDA Farm Bill Programs is to help farmers meet environmental regulations.

14. How does the well isolation distance affect my MAEAP verification?

All farm wells must meet the state isolation distance requirements or meet the isolation distance reduction protocol developed by DEQ in cooperation with NRCS and MDA, to be verified under the Farmstead System.

15. Where can I find out about the well isolation distance reduction protocol?

NRCS, Michigan Groundwater Stewardship Program Technicians, and the local health agencies are being trained in the well isolation distance reduction protocol this summer. If you are applying for assistance for NRCS, MEAEP, or other programs, you may obtain assistance through the agency that administers the program.