OKLAHOMA

Farm & Ranch*A*Syst

Worksheet 1

Assessing the Risk of Ground Water Contamination from Drinking Water Well Condition

Why should I be concerned?

About 95 percent of this country's rural residents use ground water to supply their drinking water and farmstead needs. Wells are designed to provide clean water. However, if improperly constructed and maintained, they can allow bacteria, pesticides, fertilizer, oil products, and other contaminants to pollute ground water. These contaminants can put family and livestock health at risk.

There are documented cases of well contamination from farmstead activities near drinking water wells. The condition of your well and its proximity to contaminant sources determines the risk it poses to the water you drink. A well with a cracked casing allows bacteria, nitrates, oil products, pesticides, and other contaminants to enter the well more easily. A spill of pesticides being mixed and loaded near the well could result in the contamination of your family's drinking water supply. Feedlots, animal yards, and waste storage areas could release large amounts of nitrate, thus contaminating your well.

Preventing well water contamination is very important. Once the ground water supplying your well is contaminated, it is very difficult to clean up. The only options may be to treat the water, drill a new well, or obtain water from another source. A contaminated well can also affect your neighbors' wells, posing a serious health threat to your family and neighbors.

The goal of the Oklahoma Farm & Ranch*A*Syst program is to help you protect the ground water that supplies your drinking water.

How will this worksheet help me protect my drinking water?

* It will take you step by step through your drinking water well condition and your management practices.
* It will rank your activities according to how they might affect the ground water that provides your drinking water.
* It will provide easy-to-understand rankings that will help you analyze the "risk level" of your drinking water well condition and your management practices.
* It will help determine which of your practices are reasonably safe and effective, and which practices might require modification to better protect your drinking water.

How do I complete the worksheet?

1. Use a pencil. You many want to make changes.
2. For each category that is appropriate to your farm or ranch, find the statement that best describes your conditions. (Leave blank categories that don't apply.)
3. Look to the right of the statement under "score" and circle 3, 2, or 1.
4. Add all circled scores to obtain the total score for the worksheet.
5. Using your total score and the ranges provided at the end of the worksheet, mark your risk rating in the appropriate box for low, moderate, or high risk.

It should take you about 15 to 30 minutes to complete this worksheet and determine your ranking.

Focus on the well that provides drinking water for your home or farm. If your have more than one drinking water well on your farmstead, fill out a worksheet for each one.

Your total score indicates the relative condition of your water well. Regardless of your ranking, take notice of any individual sections of the worksheet where your score was in one of the higher risk categories. Refer to the Oklahoma Farm & Ranch*A*Syst fact sheet for information on improvements that can be made in these areas.

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LOCATION OF THE WELL

SCORE (circle)

Well Position

Low Risk:	Upslope from all pollution sources. No surface water runoff reaches well. Surface water diverted from well.	1
Mod. Risk:	Upslope or at same elevation as most pollution sources. No surface water runoff reaches well.	2
High Risk:	Downslope from several pollution sources. Low area near casing. Surface water runoff from barnyard, livestock yard, pesticide and fertilizer mixing area, fuel storage, or farm dump reaches well.	3

Separation Distance

Low Risk:	Exceeds required minimum separation distance from all pollution sources.	1
Mod. Risk:	Meets required minimum separation distance from all pollution sources.	2
High Risk:	Does not meet required minimum separation distance from all pollution sources.	3

Well Depth

Low Risk:	Depth to static water level in the well is 120 feet or more.	1
Mod. Risk:	Depth to static water level in the well is between 50 feet and 120 feet.	2
High Risk:	Depth to static water level in the well is less than 50 feet.	3

CONDITION OF THE WELL

Casing and Well Cap

Low Risk:	No holes or cracks. Cap tightly secured. Screened vent.	1
Mod. Risk:	No defects visible. Well vented but not screened.	2
High Risk:	Holes or cracks visible.	3

Casing Depth and Surface Seal

Low Risk:	Cased to and set in impervious zone, with casing grouted full depth.	1
Mod Risk:	Cased and grouted 12 feet below water table.	2
High Risk:	Casing not grouted to water table.	3

Casing Height Above the Land Surface

Low Risk:	Greater than 12 inches above land surface.	1
Mod. Risk:	Between 8 inches and 12 inches above land surface.	2
High Risk:	Less than 8 inches above land surface.	3

CONDITION OF THE WELL (con't.)

SCORE (circle)

Well Age*

Low Risk:	Less than 20 years.	1
Mod. Risk:	Between 21 years and 50 years.	2
High Risk:	More than 50 years.	3

**Wells drilled between 1978 and 1983 may be of concern because many unlicensed drillers operated in the state during this time.*

Well Type

Low Risk:	Drilled well.	1
Mod Risk:	---	---
High Risk:	Dug well, driven-point (sand-point) well.	3

MANAGEMENT

Backflow Prevention

Low Risk:	Anti-backflow devices installed on all faucets with hose connections. No cross-connections between water supplies.	1
Mod. Risk:	Anti-backflow devices installed on some faucets with hose connections.	2
High Risk:	No anti-backflow devices. Air gap not maintained. Cross connections between water supplies.	3

Unused Well

Low Risk:	No unused wells, or abandoned wells are properly plugged.	1
Mod. Risk	Unused well in field, not capped or plugged.	2
High Risk:	Unused well near farm or ranch house. Not capped or plugged.	3

Water Testing

Low Risk:	Recently tested. Bacteria, nitrate, and other tests meet drinking water standards.	1
Mod. Risk:	Bacteria, nitrate, and other tests occasionally below drinking water standards.	2
High Risk:	Bacteria, nitrate, and other tests usually do not meet standards.	3

TOTAL SCORE: ☐

Check the appropriate overall risk category for your well based on your total score.

☐ **Low Risk** (11-15) ☐ **Mod. Risk** (16-24) ☐ **High Risk** (25-33)

- **Low Risk**—Your system is generally functioning well, but a few improvements could be made. Look at those areas where your assessment of risk was greater than the "low risk" category and identify which improvements could be made.
- **Moderate Risk**—Several deficiencies need improvement. Identify areas where your rating was greater than "low risk." Areas rated as "high risk" should be improved as soon as possible.
- **High Risk**—Your system has several serious problems and major changes are needed. All areas rated as "high risk" should be improved immediately. Continued use of your current system could pose a serious threat to your family's water supply.