

O K L A H O M A

Farm & Ranch*A*Syst

Worksheet 7

Assessing the Risk of Ground Water Contamination from Swine, Dairy, and Beef Cattle

Why should I be concerned?

Proper waste management from swine, dairy, and beef cattle production makes it possible to receive some benefit from these wastes. Improperly managed wastes can contaminate ground water with nutrients, such as nitrates, and disease-causing organisms. The safety of farm water sources depends in part on the design, installation, and operation of liquid, semi-liquid, or dry waste handling systems. Leaks, overflows, over-application, and general mishandling of these wastes could pollute ground water and your own water sources.

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 ground water?

* It will take you step by step through your animal waste 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 animal waste 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 may 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 those 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.

The procedure doesn't take long to complete.

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

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STORAGE/PRODUCTION/ TREATMENT FACILITIES		SCORE (circle)	WASTE DISPOSAL/UTILIZATION (con't.)		SCORE (circle)
Location Relative to Well			Nutrient Management		
Low Risk:	All animal waste facilities located at least 300 ft. downslope from well.	1	Low Risk:	Amount and timing of waste applied is based on waste analysis, soil test from waste application sites, and crop nutrient use information (i.e., growth stage) or done according to an NRCS waste management plan, or off-site disposal.	1
Mod. Risk:	All animal waste facilities located more than 300 ft. upslope, or at least 100 ft. downslope or at same elevation from well.	2	Mod Risk:	Amount and timing of waste applied is based on published handbook estimates alone with no soil or manure tests.	2
High Risk:	Some animal waste facilities are closer than 100 ft. upslope from well.	3	High Risk:	Amount and timing of waste applied is not based on any tests, yield goals or weather conditions.	3
Dry Waste Handling (protection from weather)			Recordkeeping		
Low Risk:	Animal waste is protected from rain and runoff by a roof and diversion.	1	Low Risk:	Good records kept on waste applications and waste leaving farm through sales or give-aways. Water levels in lagoon are checked and recorded on schedule.	1
Mod. Risk:	-----	---	Mod. Risk:	Fair records kept on farm applications and wastes leaving farm through sales or give-aways. Water levels are seldom checked in lagoon.	2
High Risk:	Animal waste has no protection from rain and runoff.	3	High Risk:	No records kept.	3
Liquid Systems (only)			TOTAL SCORE: <input type="text"/>		
Low Risk:	Water levels are checked frequently in storage pond or lagoon.	1			
Mod. Risk:	-----	---			
High Risk:	Water levels are never checked in storage pond or lagoon.	3			
Waste Treatment (disposal pond or lagoon)					
Low Risk:	Designed and installed according to the NRCS' or a professional engineer's specifications since January 1, 1992 and maintained according to specifications.	1			
Mod. Risk:	Designed and installed according to the NRCS' or a professional engineer's specifications prior to January 1, 1992 and maintained according to specifications.	2			
High Risk:	No NRCS or professional engineer design.	3			
Confinement Area Condition			<input type="checkbox"/> Low Risk (8-11) <input type="checkbox"/> Moderate Risk (12-16) <input type="checkbox"/> High Risk (17-21)		
Low Risk:	Paved, with runoff management system.	1	* 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.		
Mod. Risk:	Paved, with no runoff management system.	2	* 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:	Unpaved confinement area.	3	* 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.		
WASTE DISPOSAL/UTILIZATION			<i>Partial funding for the cost of printing the Farm & Ranch*A*Syst publications was provided by a grant from the Environmental Protection Agency, Region 6.</i>		
Location of Application Areas					
Low Risk:	Animal waste applied or disposed of more than 300 ft. downslope from well or off-site disposal.	1			
Mod. Risk:	Animal waste applied or disposed of more than 300 ft. upslope, or at least 100 ft. downslope or at same elevation as the well.	2			
High Risk:	Animal waste applied or disposed of within 100 ft. upslope from well.	3			