

OKLAHOMA

Farm & Ranch*A*Syst

Worksheet 8

Assessing the Risk of Ground Water Contamination from Poultry Waste Management

Why should I be concerned?

The bacteria and some of the nutrients contained in poultry wastes are mobile and easily leached from the waste. Improper management of poultry waste can allow the mobile nutrients and bacteria to reach the ground water, which can lead to serious water quality problems.

The manner in which poultry litter is stored and applied to land can make a big difference in its value as fertilizer and in the safety of your drinking water. Practices such as storing litter in unsheltered areas, overloading soils with poultry waste, and improperly handling dead bird carcasses may pollute farmstead water supplies. They can also pose a health threat to other animals.

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 poultry 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 poultry 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 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.

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 manure test, soil test, and crop needs.	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 application based on handbook values rather than manure and soil tests.	2
High Risk:	Some animal waste facilities are closer than 100 ft. upslope from well.	3	High Risk:	No manure and soil test, and application rate more than four tons per acre.	3
Protection from Weather (dry waste)			Recordkeeping		
Low Risk:	Animal waste is protected from rain and runoff by a roof and diversion.	1	Low Risk:	Good records kept on litter production, application, and sales or give-aways. Effluent levels in lagoon are checked and recorded regularly.	1
Mod. Risk:	-----	---	Mod. Risk:	Fair records kept on litter production, application, and sales or give-aways. Effluent levels in lagoon are checked and recorded occasionally.	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:	Effluent levels are checked frequently in storage pond or lagoon.	1			
Mod. Risk:	-----	---			
High Risk:	Effluent levels are never checked in storage pond or lagoon.	3			
Waste Treatment (disposal pit, pond, or lagoon)			Check the appropriate overall risk category of your poultry waste handling system based on your total score.		
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	Low Risk (7-11)	Moderate Risk (12-16)	High Risk (17-21)
High Risk:	No NRCS or professional engineer design.	3	<p>* 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.</p> <p>* 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.</p> <p>* 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.</p>		
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			<p>Oklahoma State University, in compliance with Title VI and VII of the Civil Rights Act of 1964, Executive Order 11246 as amended, Title IX of the Education Amendments of 1972, Americans with Disabilities Act of 1990, and other federal laws and regulations, does not discriminate on the basis of race, color, national origin, sex, age, religion, disability, or status as a veteran in any of its policies, practices or procedures. This includes but is not limited to admissions, employment, financial aid, and educational services.</p> <p>Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Charles B. Browning, Director of Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of \$119.32 for 750 copies. #1154 0495 MSC.</p>		
Low Risk:	All areas include buffer strips that are more than 25 ft. from rock outcrops, 100 ft. from surface water sources, wells, dwellings, or sinkholes. All application areas are approved by a nutrient management plan.	1			
Mod. Risk:	All areas include buffer strips that are more than 25 ft. from rock outcrops, 100 ft. from surface water sources, wells, dwelling, or sinkholes. There is no nutrient management plan.	2			
High Risk:	Litter is spread near rock outcrops, surface water sources, wells, or sinkholes without buffer strips. There is no nutrient management plan.	3			