

O K L A H O M A

Farm & Ranch*A*Syst

Worksheet 5

Assessing the Risk of Ground Water Contamination from Hazardous Waste Management

Why should I be concerned?

Consider the variety of products commonly used in households and on farms—paints, solvents, oils, cleaners, wood preservatives, batteries, adhesives, and pesticides. If not handled and disposed of properly, these products can contaminate ground water. Some common disposal practices not only threaten ground water but they may also be illegal.

Small, unusable amounts of hazardous materials often wind up spilled, buried, dumped, or flushed onto farm property. Minimizing the amounts of these substances used on the farm, along with proper disposal, can reduce both health risks and the potential for ground water contamination. Farmers and their families are generally familiar with the hazards of pesticides and other chemicals used for production purposes on the farm. They may be less aware of the hazards of other chemicals used in the home, garden, workshop, with pets, and with other non-business activities on the farm or ranch.

Improper use and storage of hazardous products may result in leaks, potentially dangerous chemical reactions, toxic health effects, or ground water contamination. Improper disposal can allow dangerous chemicals to enter the drinking water supply through surface or ground water.

Your drinking water is less likely to be contaminated by hazardous wastes if you follow appropriate management procedures and proper off-site waste disposal practices. Proper off-site disposal practices are essential to avoid risking contamination that could affect the water supplies and health of others.

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 hazardous 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 hazardous 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.

*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.*

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.

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. #1151 0495 MSC.

Oklahoma Farm and Ranch Assessment System

PRODUCT LOCATION	SCORE (circle)	PRODUCT TYPES (con't.)	SCORE (circle)
Product Storage Area		Used Solvents and Cleaners	
Low Risk: 100 ft. or more downslope from well.	1	Low Risk: Saved and taken to recycling facility.	1
Mod. Risk: 50-100 ft. downslope from well.	2	Mod. Risk: Evaporated on site and residue disposed in licensed landfill.	2
High Risk: Within 50 ft. downslope or within 100 ft. upslope from well.	3	High Risk: Disposed on site by dumping or spreading.	3
Product Disposal Area		Pesticides (household quantities)	
No Risk: Product completely used and container recycled or properly disposed off site.	0	Low Risk: Used completely as labelled or leftovers given to other users.	1
Low Risk: 100 ft. or more downslope from well.	1	Mod. Risk: Disposed in licensed landfill.	2
Mod. Risk: 50 to 100 ft. downslope from well.	2	High Risk: Disposed on site by dumping or spreading.	3
High Risk: Within 50 ft. downslope or within 100 ft. upslope from well.	3		
PRODUCT TYPES		CONTAINER DISPOSAL	
Building/Wood and Vehicle/Metal Maintenance Products, Such as Adhesives, Cleaners, Solvents, and Paint (lead and non-lead)		Oil, Solvent, or Other Hazardous Product Containers	
Low Risk: Stored and used according to label, proper disposal off site.	1	Low Risk: Empty containers stored in secure area until recycled, or taken to licensed landfill or municipal incinerator.	1
Mod. Risk: Stored in secure area, proper on-site disposal of empty containers.	2	Mod. Risk: Empty containers stored in secure area and properly disposed of on site.	2
High Risk: Stored in unsecured area, leftovers dumped on site.	3	High Risk: Partially filled containers dumped on site.	3
Lead-acid Batteries		TOTAL SCORE: <input style="width: 50px; height: 20px;" type="text"/>	
Low Risk: Used batteries are not stored, but taken to a recycler or battery store.	1	<p>Check the appropriate overall risk category for your well based on your total score.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <input type="checkbox"/> Low Risk (10-16) </div> <div style="text-align: center;"> <input type="checkbox"/> Moderate Risk (17-23) </div> <div style="text-align: center;"> <input type="checkbox"/> High Risk (24-30) </div> </div> <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>	
Mod Risk: Used batteries are stored away from well.	2		
High Risk: Dumped near well.	3		
Vehicle Lubricant or Fuel Drips and Spills			
Low Risk: Contained on paved area with sawdust. Contaminated sawdust disposed of at licensed landfill or municipal incinerator.	1		
Mod. Risk: Contained on unpaved area away from well.	2		
High Risk: Contained on unpaved area near well.	3		
Waste Oil			
Low Risk: Taken to used oil recycler.	1		
Mod. Risk: Saved and used for low-grade lubricant or burned.	2		
High Risk: Disposed on site by dumping or spreading.	3		
Used Antifreeze			
Low Risk: Saved and taken to recycling facility.	1		
Mod. Risk: Disposed at licensed landfill.	2		
High Risk: Disposed on site (including in septic system).	3		