

LANDOWNER'S SURVEY: WHAT'S THE RISK TO YOUR WATER FROM FERTILIZER CONTAMINATION?

Utah Farmstead Assessment for Ground Water and Surface Water Protection

Survey 3

Revised March 2012

Fertilizers play a vital role in agriculture by dramatically increasing crop production. Along with these benefits comes the responsibility to properly store and handle fertilizers to reduce health and environmental risks.

Excessive application rates, spills in the storage area, and even seemingly insignificant spills during mixing and loading can lead to fertilizer movement into ground or surface waters. If contamination reaches drinking water sources, the nitrates in the fertilizer can pose serious health risks, especially for infants. Excess nutrients can also lead to surface water problems such as fish kills.



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This survey will help you identify some common risks that fertilizer storage and application practices can pose to drinking and surface water on your farmstead or acreage. The survey asks a series of questions about specific practices or conditions that should be addressed to reduce the risk of water contamination.

The results of this survey are intended to provide general information and recommendations regarding farmstead practices and potential risks to water quality. Keep this survey as your private record and use it as a guide to taking action to reduce risks.



Water is Life : Quality Matters



See Glossary in Fact Sheet #6 for clarification of terms in this survey.

SURVEY INSTRUCTIONS

For each question circle the answer that best describes your situation. At the end of each section add the numbers that correspond to each answer. When you have completed the survey, add the section totals for the total risk assessment score.

Mixing and Loading Practices

1. On what type of surface do you mix or load fertilizer?
concrete or asphalt pad with curbs (1)
concrete or asphalt pad without curbs (2)
soil or gravel (3)

2. What is the minimum distance between the fertilizer mixing/loading area and your well or surface water?
greater than 100 feet (1)
between 20 and 100 feet (2)
less than 20 feet (3)

3. Are all fertilizer mixing/loading areas downslope from the water well?
Yes (1)
No (3)

4. How often is someone present during liquid fertilizer mixing/loading to prevent spills and other problems?
don't use liquid fertilizers (0)
always (1)
most of time (2)
start mixing, leave and return after set time (3)

5. Have you ever had a spill that you did not clean up?
No (1)
Yes (3)

Mixing and Loading Practices section total _____



6. Is there a roof over your fertilizer storage area?
Yes (1)
No (3)

7. Is your fertilizer stored within 100 feet of:
a water well?
No (1)
Yes (3)

surface water?
No (1)
Yes (3)

8. Is your fertilizer storage locked to prevent accidental spilling or vandalism?
Yes (1)
No (3)

9. What type of floor does your fertilizer storage have?
sealed concrete floor with curbs (1)
unsealed concrete floor (2)
soil or gravel floor (3)

10. Are there inside drains in the fertilizer storage area?
No (1)
Yes, drain has sump (1)
Yes, drain runs to city sewer (2)
Yes, drain runs in back of building (3)

11. Are there any leaks or drips from liquid fertilizer tanks, valves, pump seals, etc.?
don't use liquid fertilizer (0)
never (1)
sometimes (2)
frequently (3)

12. Is dry fertilizer exposed to weather or running water?
don't use dry fertilizer (0)
never (1)
sometimes (2)
frequently (3)

Storage section total _____

Cleanup and Container Disposal

13. Do you take precautions to clean up spilled fertilizer and reuse it as indicated?

- always clean up spilled fertilizer (1)
- clean up larger spills and some smaller spills (2)
- don't clean up spilled fertilizer (3)

14. Where do you apply the rinsate from fertilizer sprayers?

- field (1)
- farmyard, more than 100 feet from well or surface water (2)
- farmyard, less than 100 feet from well or surface water (3)

15. Where do you clean your fertilizer application equipment?

- over a mixing/loading pad, or in a field (1)
- farmyard, more than 100 feet from well or surface water (2)
- farmyard, less than 100 feet from well or surface water (3)

16. Where do you dispose of fertilizer bags?

- recycle or take to appropriate landfill (1)
- farm dump or burn pile on farm (3)

Cleanup and Container Disposal section total _____

Application

17. Do you have and follow a nutrient management plan accounting for nutrients added to soil in manure and fertilizer, and those removed in harvest?

- Yes (1)
- No (3)

19. Do you keep records of how much fertilizer is applied each year and what the results were on production?

- Yes (1)
- No (3)

18. Do you have your soil tested to determine the proper amount of fertilizer to apply?

- soil is tested annually (1)
- soil is tested every 3-5 years (2)
- soil is never tested for nutrient levels (3)

Application section total _____

Other Management Considerations

(circle Yes or No)

Is the fertilizer storage area clean?

Yes No

Is the fertilizer storage area labeled?

Yes No

Do you keep a current fertilizer inventory on site?

Yes No

Total number of Yes answers: _____

Are bagged fertilizers stored off the floor, but still low to the ground (eg. on a pallet)?

Yes No

Total number of No answers: _____

If you had more Yes answers than No, the section total is 1. If you had more No answers than Yes, the section total is 3. If they were equal, the total is 2.

Other Management section total _____

RISK RATING

Add the following totals:		<u>Low</u>	<u>Moderate</u>	<u>High</u>
Mixing and Loading Practices section total	$\text{_____} \times 4 = \text{_____}$	16	40	60
Storage section total	$\text{_____} \times 3 = \text{_____}$	18	46	63
Cleanup and Container Disposal section total	$\text{_____} \times 4 = \text{_____}$	16	32	48
Application section total	$\text{_____} \times 7 = \text{_____}$	21	42	63
Other Management section total	$\text{_____} \times 3 = \text{_____}$	3	6	9
SURVEY 3 TOTAL SCORE _____				
SURVEY 3 TOTAL SCORE	74	168	243	
TOTAL RISK LEVEL	Low	Moderate	High	

INTERPRETING YOUR RISK RATING

Locate your total risk score on the spectrum above to get a general idea of the risk fertilizer is posing to water sources on your farmstead or acreage.

Next, compare your risk scores for each section with the ratings (Low, Moderate, and High) for the individual sections to determine the practices where your risk is moderate to high.

For these sections go back into the survey and look at the questions you marked a high scoring choice. These are the areas you should address first to reduce risk of water contamination.

Follow Up

Refer to Fact Sheet #3-How to Protect Your Water From Fertilizer Contamination for contacts and information about handling, storing and applying fertilizers. Contact your Utah State University county Extension office, or the Extension web page <http://www.extension.usu.edu> for more information.

