

Worksheet 9

Overall Farmstead Assessment

As an overall summary of the work you've already done to assess your farmstead structures and activities, this worksheet has two parts.

Part 1. Your first step will be to combine the soils and subsurface geologic ranks from Worksheet 8 with your individual risk ranks for various farmstead structures and activities from Worksheets 1–7. Combining these will give you a much more accurate picture of the groundwater contamination risk of your farmstead practices as they are affected—for better or worse—by your particular site conditions.

Part 2. Your second, and probably most beneficial step will be to list any individual farmstead activities that you ranked with 1's (high risk). You may have been adding to this list as you've completed each worksheet. Completing this part will give you site specific information about the groundwater contamination risk of your farmstead practices and allow you to develop short-term and long-term strategies to reduce that risk.

Getting Started

If you have not already done so, take the boxed risk ranks from the top of the scoring sheet on each of the worksheets you completed. Transfer these into the box below. For the worksheets you did not complete, leave the lines blank.

Take your three site evaluation ranks from Worksheet 8 (soils, subsurface and combined rank) and transfer them into the box below as well. If you have fewer than three site ranks, just record the ones you have and leave the others blank. The figures in this box are all you need to complete part 1 of this worksheet.

FARMSTEAD RISK RANKS (from Worksheets 1–7)		SITE RANKS (from Worksheet 8)	
1. Well condition	_____	Soils rank 1	_____
2. Pesticide handling	_____	Soils rank 2	_____
3. Fertilizer handling	_____	Soils rank 3	_____
4. Fuel storage	_____		
5. Farm & home waste management	_____	Subsurface rank	_____
6. Household waste-water treatment	_____	Combined rank 1	_____
7. Animal waste management	_____	Combined rank 2	_____
		Combined rank 3	_____

Part 1: Combining Risk Ranks with Site Ranks

Step 1. To calculate overall risk ranks for each of the worksheets you completed, take your farmstead risk ranks from the box on page one, add them to the appropriate lines below, and calculate the average.

In some cases, you will use the combined site evaluation rank. In other cases, you will use only the subsurface rank—for example, when you are calculating the risk associated with a septic system's soil absorption field or an in-ground manure storage pit.

If you don't have a combined site or subsurface rank for your farmstead, use the soil rank. Although subsurface information, either by itself or in a combined site rank, gives a more accurate picture of your site's ability to hold and break down contaminants, **soil rank is an acceptable substitute for the combined site rank if subsurface information for your site is unavailable.**

If you have more than one soil on your farmstead—and therefore more than one soils rank or combined rank to transfer—you may need to refer to your farmstead diagram in Worksheet 8 to see which soil is associated with each farmstead structure or practice. For each category below, use the appropriate soil, subsurface or combined rank.

1. DRINKING WATER WELL CONDITION

Rank from Worksheet 1 _____ = _____ Overall Drinking
(Do not use a site rank.) Water Well
Risk Rank

2. PESTICIDE STORAGE & HANDLING

Rank from Worksheet 2 _____
Combined Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Pesticide
Risk Rank

3. FERTILIZER STORAGE & HANDLING

Rank from Worksheet 3 _____
Combined Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Fertilizer
Risk Rank

4. FUEL STORAGE

(Select **one or both** of the following categories, as appropriate to your site.)

ABOVE-GROUND STORAGE

Rank from Worksheet 4 _____
Combined Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Above-Ground Storage Risk Rank

BELOW-GROUND STORAGE

Rank from Worksheet 4 _____
Subsurface Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Below-Ground Storage Risk Rank

5. FARM & HOME WASTE MANAGEMENT

Rank from Worksheet 5 _____
Combined Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Farm & Home Waste Risk Rank

6. HOUSEHOLD WASTEWATER TREATMENT

(Select **one or both** of the following categories, as appropriate to your site.)

SURFACE DISPOSAL (includes holding tanks)

Rank from Worksheet 6 _____
Combined Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Surface Household Waste-water Risk Rank

SUBSURFACE DISPOSAL

Rank from Worksheet 6 _____
Subsurface Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Subsurface Household Waste-water Risk Rank

7. ANIMAL WASTE MANAGEMENT

Rank from Worksheet 7 _____
Combined Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Animal Waste Management Risk Rank

Step 2. Interpret and compare your overall risk ranks. For each rank in the blanks above, use the box below to assess your overall groundwater contamination risk from that area of activity on your farmstead. This information should give you a general idea of areas of concern that need addressing.

INTERPRETING YOUR SCORES	
<u>Rank</u>	<u>Groundwater Contamination Risk</u>
3.6–4	Low
2.6–3.5	Low-Moderate
1.6–2.5	Moderate-High
1–1.5	High

Keep in mind that each of these ranks are based on an average of many individual activities and structures—such as each of your pesticide storage and handling practices in Worksheet 2. **Don't use these overall ranks to predict the amount—if any—of actual groundwater contamination on your farmstead.** An actual determination of groundwater contamination requires an intensive onsite investigation.

The ranks do provide an overall assessment of the risk level of various farmstead activities and how site conditions affect these levels of risk. Part 2 focuses on specific activities or structures that you ranked as 1's on your individual worksheets.

Part 2: Identifying Specific High-Risk Activities

Step 1. If you haven't already done so, go back to each of the worksheets you completed and identify any individual activities or structures ranked as 1's (high risk). You may have already done this as you completed each worksheet.

Step 2. List each activity of concern on the chart on pages 6 and 7. Begin by filling in the first two blanks to the left of the double vertical line on the chart. Do this for each of the worksheets you completed.

Step 3. If you have completed or plan to complete the farmstead diagram in Worksheet 8, you may use the diagram to help identify high pollution risks found using Farm•A•Syst. This diagram can assist you as you set priorities, make plans and take action to address the high-risk concerns on your farmstead.

Step 4. For each activity listed, fill in the “response options” and “taking action” sections to the right of the double vertical line on the chart.

Response options. Identify specific actions you can take to reduce the risk associated with each of the activities listed. Assess whether the needed action requires major effort and money—such as constructing a livestock waste lagoon or relocating a well—or whether it “just” requires a change in practice such as cleaning a livestock lot more often or being sure that stored pesticides are clearly labeled. List all possible responses for each area of concern.

Taking action. Use this section to establish a timetable for taking action in reducing risks found on your farmstead. Start by deciding which response option is best for your situation. Then determine an initial step you can take to begin addressing each of the high-risk concerns you have listed. It might be patching old pesticide containers, cleaning your livestock waste settling tank, moving that pile of old batteries, or making a first phone call to get information about modifying your household wastewater management practices.

Planning is needed to achieve desired results. This is true not only in managing a profitable farm operation or business, but in responding to groundwater pollution risks on your farmstead as well. Some high-risk concerns will require little planning, and your initial response may take care of the problem. Other concerns will require that you develop short- and long-term strategies to respond. Use the taking action section to develop your plan of action for each high-risk concern.

Farm•A•Syst fact sheets will be helpful as you work through the planning process—helping you assess your activities and providing you with information on how to best protect your drinking water. Often times you will need assistance in planning and carrying out your response. The contacts and references section included in each fact sheet will provide you with information on who to contact for your specific area of concern.

Step 5. Keep this list handy and refer to it often. It provides important information as you plan how to more effectively protect the groundwater that provides drinking water for you and your family.

High-Risk Activities

A list of individual activities or structures that ranked “1” on your Farm•A•Syst worksheets

After completing each of the assessments appropriate to your farmstead, list any individual activities or structures that you ranked as “1” (high risk). Fill in the worksheet number and name and the individual activity of concern. Determine your response and the steps you will take to address each high-risk activity and enter these in the blanks to the right of the double line.

Worksheet number and name	Individual activity identified as being high risk (1)	Response Options (Including estimated costs)	Taking Action (Steps to address concern)

(Continue on next page as necessary.)

Worksheet number and name	Individual activity identified as being high risk (1)	Response Options (Including estimated costs)	Taking Action (Steps to address concern)

(Continue on additional pages as necessary.)

A Few Final Words

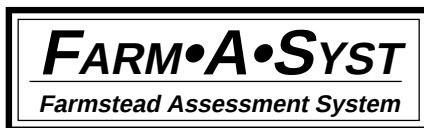
After doing all you can to reduce the risk of groundwater contamination on your farmstead your water test results may still show high levels of some contaminants.

- One factor could be activities away from the farmstead. Nitrates could be leaching from your fields, for example.
- Problems can originate in more distant areas, too. Depending on the geology of your area, activities miles away can result in contaminated groundwater flowing slowly toward your property and the water you drink. It may take years for some contaminants to show up in your well. Leaking petroleum tanks, farm dumps and waste pits away from your property all have the potential to affect your drinking water—**just as activities on your farmstead have the potential to affect the drinking water of your neighbors and even others living miles away from you.**

On the other hand, despite the fact that results of your water quality tests are quite good, your worksheet results may show the need for changes. Your well may be upslope from your farmstead, so the water drawn from that area is not affected by your activities. That doesn't mean, however, that contaminants are not entering groundwater and affecting someone else's drinking water. You need to be as careful as you can about farmstead management, especially if your farmstead is on land vulnerable to groundwater contamination.

You may have quite a few "high-risk" pollution potential ranks. You may also be concerned about your well water quality test results and want to know more about how your farmstead activities might have influenced them. If so, after completing the Farmstead Assessment System, you may want to have an expert conduct a detailed site analysis and look more closely at potential sources to determine the causes of the contamination.

For further information about potential sources of groundwater contamination on your farmstead, contact your local health department or county Extension office, or the Groundwater Management District or KDHE district office for your area.



The Farmstead Assessment System is a cooperative project of the Cooperative Extension Service, Kansas State University, and the Kansas Department of Health and Environment.

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This material is based upon work supported by the U.S. Department of Agriculture, Extension Service, under special project number 91-EWQI-1-9293.

Publications from Kansas State University are available on the World Wide Web at: <http://www.oznet.ksu.edu>

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Kansas State University Agricultural Experiment Station and Cooperative Extension Service

EP-41

August 1998

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