



Worksheet #12

Overall Farmstead Assessment





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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 individual risk rankings for various farmstead structures and activities (from Worksheets 1-10) with your soils ranking and subsurface geologic ranking from Worksheet #11. Combining these rankings will give you a much more accurate picture of the groundwater contamination risk of your various farmstead practices as they are affected—for better or worse—by your particular site conditions.

Part 2: Your second step will be to list any individual farmstead activities from your 10 worksheets that you ranked with 1's (high risk). You've probably been adding to this list as you've completed each worksheet. In this part, you will be looking at individual concerns, giving you very specific information about the groundwater contamination risk of particular farmstead practices.

Getting Started

If you have not already done so, take the boxed risk rankings from the top of the scoring sheet of each of the 10 worksheets you completed and transfer them into the box below. **(For the worksheets you did not complete, leave the boxes blank.)**

Then take your three site evaluation rankings from Worksheet #11 (soils ranking, subsurface ranking and combined ranking) and transfer them into the box below, too. (If you have fewer than three site rankings, just record the ones you have and leave the others blank.) **The figures in this box are all you need to complete parts 1 and 2 of this worksheet.**

FARMSTEAD RISK RANKINGS (from Worksheets 1-10)	SITE RANKINGS (from Worksheet #11)
#1: Well condition	Soils ranking #1
#2: Pesticide handling	Soils ranking #2
#3: Fertilizer handling	Soils ranking #3
#4: Petroleum storage	
#5: Hazardous waste management	Subsurface ranking
#6: Household waste-water treatment	Combined ranking #1
#7: Livestock waste	Combined ranking #2
#8: Livestock yards	Combined ranking #3
#9: Silage storage	
#10: Milking center waste-water	

Part 1: Combining Risk Rankings with Site Rankings

Step 1: To calculate overall risk rankings for each of the 10 worksheets you completed, take your farmstead risk rankings from the box on page 1, add them to the appropriate lines below, and calculate the average of the two numbers.

In some cases, you will use the combined site evaluation rank. In other cases, you will use only the subsurface ranking (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 ranking or combined ranking to transfer—you may need to refer to your farmstead diagram in Worksheet #11 to see which soil is associated with each farmstead structure or practice. For each category below, use the appropriate soil ranking or combined ranking.

#1: DRINKING WATER WELL CONDITION

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

#2: PESTICIDE STORAGE AND HANDLING

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

#3: FERTILIZER STORAGE AND HANDLING

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

#4: PETROLEUM PRODUCT STORAGE

(Select **one or both** categories below, as appropriate to your site.)

ABOVE-GROUND STORAGE

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

BELOW-GROUND STORAGE

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

#5: HAZARDOUS WASTE MANAGEMENT

Rank from Worksheet #5 _____
Combined Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Hazardous
Waste Risk Ranking

#6: HOUSEHOLD WASTEWATER TREATMENT

(Select **one or both** categories below, as appropriate to your site.)

SURFACE APPLICATION (includes holding tanks)

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

SUBSURFACE APPLICATION

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

#7: LIVESTOCK WASTE STORAGE

(Select **one or both** categories below, as appropriate to your site.)

ABOVE-GROUND STORAGE

Rank from Worksheet #7 _____
Combined Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Above-
Ground Livestock
Waste Storage Risk
Ranking

BELOW-GROUND STORAGE

Rank from Worksheet #7 _____
Subsurface Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Below-
Ground Livestock
Waste Storage Risk
Ranking

#8: LIVESTOCK YARDS MANAGEMENT

Rank from Worksheet #8 _____
Combined Site Rank _____
TOTAL _____ divided by 2 = _____ Overall Livestock
Yard Management
Risk Ranking

#9: SILAGE STORAGE

(Select **one or both** categories below, as appropriate to your site.)

ABOVE-GROUND STORAGE

Rank from Worksheet #9 _____

Combined Site Rank _____

TOTAL _____ divided by 2 = _____ Overall Above-Ground Silage Storage Risk Ranking

BELOW-GROUND STORAGE

Rank from Worksheet #9 _____

Subsurface Site Rank _____

TOTAL _____ divided by 2 = _____ Overall Below-Ground Silage Storage Risk Ranking

#10: MILKING CENTER WASTEWATER TREATMENT

(Select **one or both** categories below, as appropriate to your site.)

ABOVE-GROUND DISPOSAL

Rank from Worksheet #10 _____

Combined Site Rank _____

TOTAL _____ divided by 2 = _____ Overall Above-Ground Milking Center Wastewater Treatment Risk Ranking

BELOW-GROUND DISPOSAL

Rank from Worksheet #10 _____

Subsurface Site Rank _____

TOTAL _____ divided by 2 = _____ Overall Below-Ground Milking Center Wastewater Treatment Risk Ranking

Step 2: Interpret and compare your overall risk rankings. For each ranking 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

Ranking	Groundwater Contamination Risk
3.6–4	Low
2.6–3.5	Low-Moderate
1.6–2.5	Moderate-High
1–1.5	High

Keep in mind, however, that each of these rankings is based on an averaging of many individual activities and structures—such as all of your specific pesticide storage and handling practices in Worksheet #2. Don't use these overall rankings to assess or predict the amount—if any—of actual groundwater contamination on your farmstead. An actual determination of groundwater contamination requires an intensive onsite investigation.

The rankings 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 10 worksheets you completed and identify any individual activities or structures that you 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 three blanks (to the left of the double vertical line on the chart). Do this for each of the 10 worksheets you completed.

Step 3: Then, for each activity that you listed, fill in the "response options" and "taking action" sections to the right of the double vertical line on the chart.

•**Response options:** Check one of the two boxes: either "immediate action possible" or "further planning required." This should be a quick assessment of whether a change in practice requires major effort and money (like relocating a well or building a pesticide storage facility) or whether it "just" requires a change in practice (like cleaning a livestock yard more often or being sure that stored pesticides are clearly labeled).

•**Taking action:** Decide right now on a possible first step to take to begin to address each concern listed. It might be patching old pesticide containers, or cleaning your milking center settling tank right away, or making a first phone call to get information about relocating and redesigning your pesticide storage area.

The first step for a concern that you identified as "immediate action possible" should, of course, be easier than a first step for a major or costly project. But, whatever the area of concern, what's an initial step you can take to begin to address each of the high-risk concerns you have listed?

Step 4: Keep this list handy and refer to it often. It provides important information for you as you plan how to begin to more effectively protect the groundwater that provides drinking water to you and your family.

High-Risk Activities

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

After completing each of the 10 assessments appropriate to your farmstead, ~~list~~ **list** individual activities or structures that you ranked as “1” (high risk). Fill in the worksheet number, the worksheet name and the individual activity of concern. Don’t fill in the blanks to the right of the line. You’ll do that later, when you’re completing Worksheet #12.

Work-sheet number	Worksheet name	Individual activity identified as being high risk (1)	Response Options (check one)		Taking Action (proposed first step to address concern)
			Immediate action possible (change in practice only; cost not a factor)	Further planning required (requires major structural improvement or relocation; involves major effort or high cost)	

(Continue listing on next page as necessary.)

A Few Final Words

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

- One factor could be activities away from the farmstead. Nitrates could be leaching from your fields, for example.

- Problems could originate in more distant areas, too. Depending on the geology of an area, activities miles away can result in groundwater contamination flowing slowly toward your property and the groundwater you drink. It may take years for a spill on someone else's land 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.**

You may want to keep track of potential sources of groundwater contamination beyond your farmstead. You may also want to encourage your neighbors to use this farmstead assessment.

On the other hand, despite the fact that results of your farm well 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 the 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 rankings. 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 ask an expert to 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 county Extension, Soil Conservation Service or New Mexico Environment Department office.