

**WELL ISOLATION DISTANCE WORKSHEET For WASTE STORAGE FACILITIES
PRIVATE WELLS and TYPE IIB and III PUBLIC WELLS
(Following the criteria listed in Waste Storage Facility Practice Standard, Table 1)**

Producer Name: _____ County: _____

Farm location: Township _____ Range _____ Section _____ ¼ of _____ ¼ of _____ ¼

Farm address: _____

Prepared by: _____ Date: _____ Checked by: _____ Date: _____

Instructions: Enter the appropriate information for each step in the order they are presented and follow the directions provided after each step. Attach a map of the farmstead showing the locations and identifications for all waste storage facilities and wells included in the worksheet. **This completed worksheet must be filed with the records for this farm.**

Note: Wells must be properly constructed and unused wells properly abandoned, as determined by the Michigan Department of Environmental Quality, local health department, or a registered well drilling contractor and bacteriologic and nitrate standard levels meet drinking water standards.

1. Are there any wells located within 800 feet of any existing or planned waste storage facility on the farm?
YES / NO (circle one)
If YES, complete Part B for each well located within 800 feet before proceeding to Step 2.
If NO, you may proceed with assistance without further consideration of well isolation distances.
2. Are there any wells noted in any Part B-2 where the Actual Isolation Distance from a waste storage facility is less than the Minimum Isolation Distance? YES / NO (circle one)
If YES and the waste storage facility is existing, proceed to step 3.
If YES and the waste storage facility is planned, proceed to step 4.
If NO, proceed with design and construction assistance. Do not proceed to Steps 3 or 4.
3. **Existing** waste storage facilities
 - For each well where the actual isolation distance from an existing waste storage facility is not adequate, the Comprehensive Nutrient Management Plan (CNMP) must include the notation below. No corrective action date is necessary.
The isolation distance for well _____ from existing waste storage facility _____ does not appear to meet minimum State of Michigan isolation distance requirements.
4. **Planned** waste storage facilities
 - For each well where the actual isolation distance from a planned waste storage facility is not adequate, the CNMP must include the notation below. The corrective action and scheduled date must be shown in the CNMP Schedule of Implementation.
The isolation distance for well _____ from planned waste storage facility _____ does not appear to meet minimum State of Michigan isolation distance requirements. Corrective action to the well or waste storage facility must be taken prior to operation of the planned waste storage facility.
 - Verify in Part B-1 step 7 when corrective action, as noted in Part B-1 step 5, is fully implemented.

Isolation Distance Reduction for Part B-2	
Isolation distance reduction allowed down to 400 feet where at least one of the following Protection Factor combinations is documented in Part B-2	Isolation distance reduction allowed down to 200 feet where at least one of the following Protection Factor combinations is documented in Part B-2
A or, B+D or, C+D or, F	A+B or, A+C or, A+D or, A+F or, F+E or, F+B+C or, F+B+D or, F+C+D

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(following the criteria listed in Waste Storage Facility Practice Standard, Table 1)**

Producer Name: _____ **County:** _____

Well Identification: _____

Prepared by: _____ **Date:** _____ **Checked by:** _____ **Date:** _____

Instructions: Complete a separate Part B for each well within 800 feet of any existing or planned waste storage facility on the farm. **Attach a copy of the well record, if available.**

1. Has the Michigan Department of Environmental Quality or the local health department issued a permit or a deviation for this well in full consideration of the location of **any** existing or planned waste storage facilities located within 800 feet of this well? YES / NO (circle one)
 If YES, use the isolation distance allowed by the permit or deviation and record that distance in the Minimum Well Isolation Distance block on Part B-2 for each Waste Storage Facility where the permit or deviation applies (attach copy of permit or deviation). Proceed to step 2.
 If NO, proceed to step 2.
2. Does the well casing extend at **least** 25 feet below the ground surface? YES / NO (circle one)
 If YES, proceed to step 3.
 If NO, casing depth is less than allowed by state of Michigan law. Unless casing depth is extended to at least 25 feet, a variance is required from MDEQ or the local health department in order to proceed.
3. Do any of the following conditions apply?
 The well record indicates the well is a Type IIB or Type III public well. YES / NO (circle one)
 The well is used for the milkhouse or milking parlor for a Grade A dairy. YES / NO (circle one)
 The well is connected to a potable plumbing system and is on a farm that has at least one employee at any time during the year. YES / NO (circle one)
 If YES to **any** of the above conditions, this is a public well. Proceed to Step 4.
 If NO to **all** of the above conditions, this is a private well. Proceed to Part B-2 recording 150 feet in the Minimum Well Isolation Distance block.
4. Is the well capacity **less** than 70 gallons per minute? YES / NO (circle one) Is the project withdrawal average not more than 100,000 gallons per day for any 30 consecutive days? YES / NO (circle one)
 If YES to **either** question, proceed to Part B-2.
 If NO to **both** questions, capacity exceeds the limit established by MDEQ. Unless capacity or withdrawal is reduced, a variance is required from MDEQ or the local health department in order to proceed.
5. Are there any **planned** waste storage facilities noted in Part B-2 where the Actual Isolation Distance is **less** than the Minimum Isolation Distance? YES / NO (circle one)
 If YES, proceed to step 6.
 If NO, proceed to Part A step 2.
6. List the **planned** waste storage facility(s) and the correction action(s) needed so the Actual Isolation Distance is **equal to or greater** than the Minimum Isolation Distance then proceed to Part A step 2.

Planned Waste Storage Facility	Corrective Action(s) Required

7. **Verification of Corrective Action:** Corrective action is fully implemented as required above for this well where the actual isolation distance from any **planned** waste storage facility was not adequate.

Verified By: _____ Date: _____

Record documentation supporting verification below or attached supporting documentation:

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Instructions: At the top of the table, enter the identification/description of each waste storage facility within 800 feet of the well and circle Existing or Planned for each storage. Then indicate whether or not the each well protection factor applies relative to each waste storage facility. Use information from the well records and information on the individual waste storage facility. Where on-site soils investigations provide additional information, attach a copy of the investigation report and note on the worksheet where the investigation information altered the worksheet results, as applicable. **After completing the table, return to step 5 on Part B-1.**

Producer Name: _____ County: _____ Prepared by: _____ Date: _____ Checked by: _____ Date: _____

Well Identification: _____	Waste Storage Facilities within 800 feet of the Well			
	Identification/Description:	Identification/Description:	Identification/Description:	Identification/Description:
Well Protection Factors	Existing / Planned	Existing / Planned	Existing / Planned	Existing / Planned
A - Ground water flow direction is away from well	YES / NO / UNKNOWN (circle one)			
B - Confining material of 10 feet of continuous clay or shale <u>or</u> 20 feet of a continuous clay mixture* below the design bottom elevation of the waste storage facility	YES / NO (circle one)	Thickness = _____ feet	CLAY, CLAY MIXTURE or SHALE (circle one)	
C - Well casing depth is 100 feet or more	YES / NO (circle one)	Actual Casing Depth = _____ feet		
D - Well pump capacity is 25 gallons per minute or less	YES / NO (circle one)	Well pump capacity = _____ gallons per minute		
E - Confining material [minimum of 10 feet continuous clay or shale <u>or</u> 20 feet continuous clay mixture* below the design bottom elevation of the waste storage facility] + Well casing depth [minimum of 60 feet casing depth] = 100 feet or more	YES / NO (circle one)	Thickness = _____ feet	CLAY, CLAY MIXTURE or SHALE (circle one)	
F - Waste storage facility constructed with flexible membrane liner, reinforced concrete**, or steel, <u>or</u> solid manure stacking facility with roof and concrete floor constructed in accordance with USDA NRCS-Michigan Field Office Technical Guide standards/specifications and sited/graded to protect the water supply in the event of failure	YES / NO (circle one) Describe facility type and liner, as appropriate:	YES / NO (circle one) Describe facility type and liner, as appropriate:	YES / NO (circle one) Describe facility type and liner, as appropriate:	YES / NO (circle one) Describe facility type and liner, as appropriate:
List the well protection factors (A, B, C, D, E, or F) with a “Yes” response for each individual waste storage facility.				
Minimum Well Isolation Distance in feet (based on Part B-1 step 1, Part B-1 step 3, or Isolation Distance Reduction table at the bottom of Part A, whichever is less.)	Feet	Feet	Feet	Feet
Actual Well Isolation Distance in feet.	Feet	Feet	Feet	Feet
Is the Actual Well Isolation Distance LESS than the Minimum Well Isolation Distance?	YES / NO (circle one)			

*Note – For continuous clay mixtures, when interpreting water well record information contained under Formation Description, the first material named is the dominant material in the strata being described. For example: (a) If the material is described as “clay/sand/gravel,” clay is the dominant material and would classify as a continuous clay mixture; (b) If the material is described as “sand/clay,” it would not be acceptable as a continuous clay mixture since sand is the dominant material.

**Note – Reinforced concrete structures include tanks with pre-cast or cast-in-place reinforced concrete walls and plain concrete floors where: (1) the floor is placed below the natural ground surface to a depth equal to at least 3/4 of the maximum wall height, and (2) the walls are backfilled to a depth equal to at least 3/4 of the wall height.