

APPENDIX A - RULE 901:10-2-14: HOW TO USE THE APPENDICES TO THIS RULE

Refer to Appendix A, Tables 1 and 2 – Soils Prone to Flooding through Appendix F – Most Limiting Manure Application Rates of Rule 901:10-2-14 (OAC):

1. Determine if the site has **soils** that are prone to **flooding** and **when** the expected flooding seasons are (**Appendix A, Table 1**). Note that applications **can only be made to soils prone to flooding at times outside the predicted flooding season**. All applications to soils prone to flooding must be **incorporated within 24 hours** and must follow the **setbacks in Appendix A, Table 2**.
2. Determine if a **solid or liquid** manure application will be performed. Determine if solid manure will be **stockpiled** at the land application site. Stockpiles must meet the **setbacks described in Column 1 of Appendix A, Table 2**.
3. For **liquid manure** applications, follow **Appendix B, Available Water Capacity Chart, and Appendix F, Most Limiting Manure Application Rates Chart (Table 1 – Tiled Fields, Table 2 – Non-Tiled Fields)**. For **solid manures**, follow **Appendix F, Most Limiting manure Application Rates Chart**.
4. Determine the **nutrient removal** for the expected cropping sequence using **Appendix C, Tables 1 – 3**. Determine **residual nitrogen credits** for the expected cropping sequence using **Appendix C, Table 4**.
5. Determine the **nitrogen leaching potential** of the field based on **Appendix C, Table 5, Nitrogen Leaching Assessment Procedure**. Note that all **tiled fields** have a **high nitrogen leaching potential**. **High** nitrogen leaching potential fields must have application **rates less than or equal to 50 lb/ac as applied nitrogen (calculated by adding NH₄-N to 1/3 Organic N) from June-October 1st UNLESS the field has a cover crop planted**.
6. Use the **current manure analysis** and the **relevant sections of Appendix C, Tables 6-7 through Appendix D, Tables 1-5** to determine the amount of manure **nutrients available** for crop production.
7. Use **Appendix E, Table 1 (P-Index) if the Bray P1 value of the soil test is over 150 ppm**. **P-Index** may only be relied upon for a transitional period of time to allow the owner or operator an opportunity to find other fields or other methods to distribute nutrients from the facility in order to achieve less than 150 ppm Bray P1 soil test method.
8. Use **Appendix F, Most Limiting Manure Application Rates Chart**, Nitrogen, P₂O₅, K₂O, Rate (tons or gallons per acre), or Available Water Capacity *to determine the application rate*. *The selected application rate must be the most restrictive of the five "Limiting Application Rate Criteria" for each Field Situation & Time of Year*

Other Notes:

9. When using **Appendix F**, although **not recommended**, **Phosphate** manure application rates can be made between **250-500 lb/ac/yr** in cases where **liquid manure exceeds 60 lbs. P₂O₅ per 1000 gallons** or **solid manure that exceed 80 lbs. P₂O₅ per ton**. The following criteria also apply: manure must be **incorporated within 24 hours** and **no applications** can be made on either **frozen or snow covered** ground or fields with **soil tests over 100 ppm Bray P1**; soil tests **less than 40 ppm Bray P1** shall have no further P additions for **3 years**; soil tests **between 40-100 ppm Bray P1** shall have no further additions of P for **5 years**; **no other limiting criteria can be violated**.
10. When using **legumes** as a nitrogen removal source, the **maximum legume nitrogen removal must be less than or equal to 150 lbs./ac**.

11. When applying **liquid manure** to tiled fields, the **following criteria must be followed (except for growing crops)**:
- Applications must be less than or equal to 0.5" or 13,576 gal/ac.
 - Use a tool (**AERWAY tool or similar tool**) that can disrupt/close (using horizontal fracturing) the preferential flow paths in the soil, OR **till the surface of the soil 3-5" deep to a seedbed condition** to soak up the liquid manure and keep it out of preferential flow channels.
 - If **injection** is used, it should only be deep enough to cover the manure with soil. **Till the soil at least 3" below the depth of injection prior to application**. Tillage prior to application will be considered incorporation of the manure.
 - The **outlets must be monitored** before, during, and after application AND **provisions planned to plug the tile or capture the tile flow if liquid manure reaches the tile outlets**. If **No-till or pastures** are used for applications, **tiles must be plugged**.
12. If manure is to be applied on **frozen or snow-covered ground**, the field must have **at least 90% surface residue cover (e.g., good quality hay or pasture field, all corn grain residue)**. For applications to **frozen or snow-covered ground**, manure shall not be applied on more than 20 contiguous acres. Contiguous areas for application are to be separated by a break from streams, ditches, waterways, surface water, etc. (areas that present the least runoff potential and are furthest from surface water). The **setbacks in Column 3** should be followed. **Prior approval** must be obtained from the **ODA, Livestock Environmental Permitting Program** BEFORE frozen or snow/ice covered ground surface manure applications. If manure can be **incorporated within 24 hours on frozen ground**, approval from ODA, Livestock Environmental Permitting Program **is not** required.
13. For **surface manure applications**, follow the **setbacks in Column 2**. For **incorporation within 24 hours or injection**, follow the **setbacks in Column 4**.