Best Management Practices for the Adrian Drinking Water Supply Management Area (DWSMA)

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This document is a list of the University of Minnesota nitrogen (N) fertilizer best management practices (BMPs) that apply within the Adrian Drinking Water Supply Management Area (DWSMA). The BMPs are from the following University of Minnesota resources:

- Best Management Practices for Nitrogen Use in Southwestern Minnesota,
- Best Management Practices for Nitrogen on Coarse Textured Soils,
- Fertilizing Corn in Minnesota, and
- University of Minnesota Extension webpage Crop-Specific Nutrient Needs at https://extension.umn.edu/nutrient-management/crop-specific-needs

Considerations when reading the tables

- The BMPs listed below are applicable to all soils or specific to coarse or fine textured soils. There are both coarse and fine textured soils across the cropland within the Adrian DWSMA.
- A map of the Adrian DWSMA identifying where coarse soils exist can be found at https://tinyurl.com/DWSMAAdrian
- In situations where a field includes both coarse and fine textured soils, the operator can either manage each area of the field separately or follow the BMPs for the majority soil texture within the field.
- The BMPs on the final list must be implemented on 80% of the cropland (excluding soybean acres) in the DWSMA.
- Nitrogen management records need to be provided to show that a practice was adopted. If a responsible party does not provide or provides insufficient documentation showing a practice has been implemented, it counts as non-implemented during MDA's evaluation/survey of nitrogen fertilizer BMP implementation.
- Some BMPs may not apply to all cropping systems, such as, incorporation of urea with tillage in no-till systems. If a BMP is agronomically or technically unsuitable for a specific field based on soil type, topography, crop or management system, a suitable BMP or Alternative Management Tool (AMT) can be selected in its place.
- See the companion document "Definition of Terms in the University of Minnesota Nitrogen Fertilizer BMPs" for definitions of terms related to the BMPs. This document is available at www.mda.state.mn.us/adrian-dwsma.

Questions or Comments?

Kevin Hauth | MDA Local Project Lead | Kevin.Hauth@state.mn.us | 507-822-4175

Best Management Practices (BMPs)

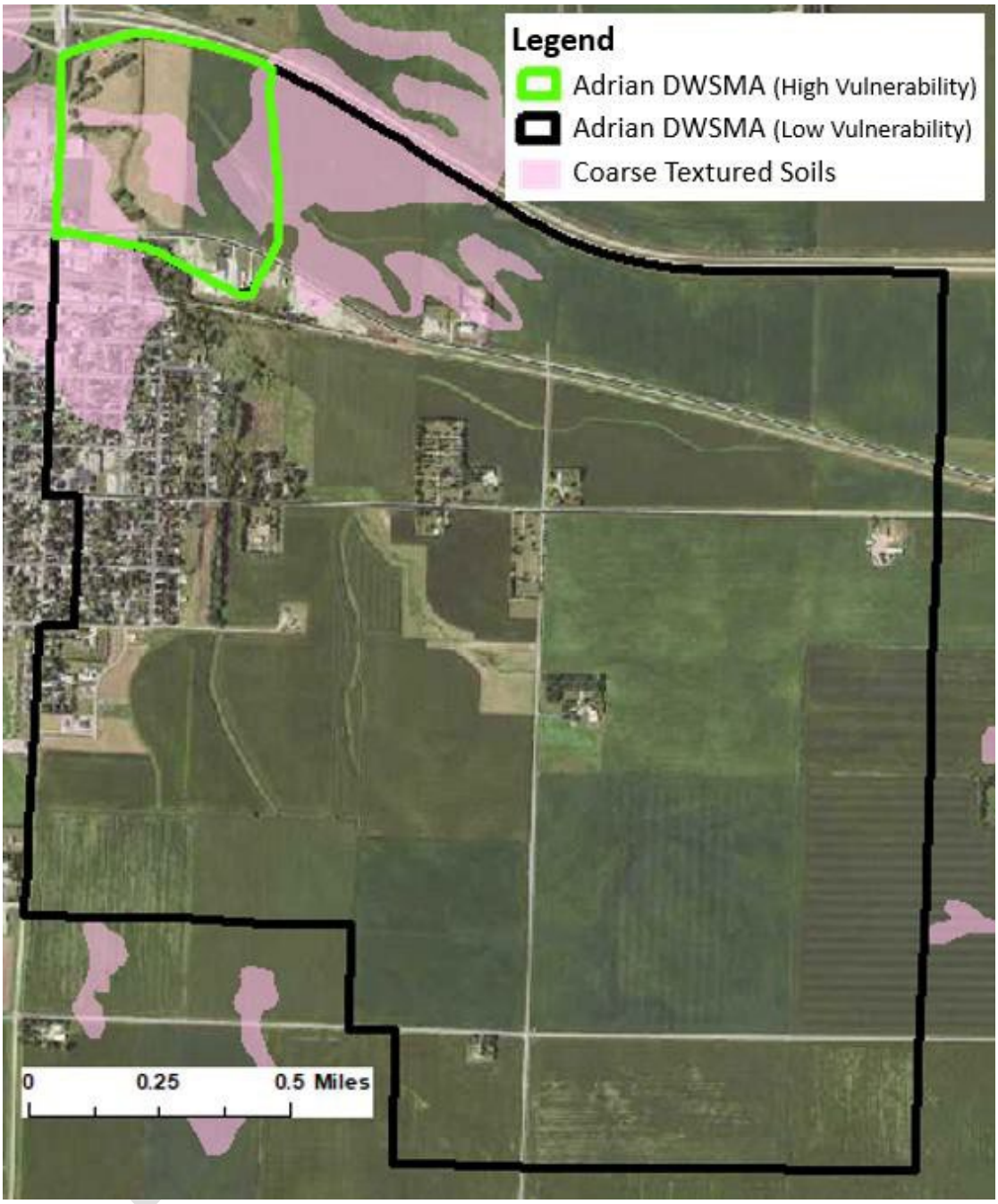
The BMPs numbered 1 – 3 apply to all soil types and are the most important BMPs to reduce nitrate losses.

BMP Number	Nitrogen Rate BMPs	Applies to
1	Nitrogen rates are based on nitrogen fertilizer application guidelines from the University of Minnesota[1]. **Dryland corn following corn**: up to the 0.075 MRTN (currently at 200 lbs N/ac)[1,2] **Dryland corn following soybean:** up to the high end of the 0.075 rate range (currently at 170 lbs N/ac)[1,2] For other crops grown in the DWSMA, nitrogen rates must follow the current University of Minnesota guidance applicable to that crop[3]	All agronomic crops on all soils
2	Include N supplied in a starter, weed and feed program, and contributions from phosphorus fertilizers such as MAP and DAP when calculating total N rate	All agronomic crops on all soils
3	Take appropriate N credit for previous legume crops and manure used in the crop rotation	All agronomic crops on all soils

[1] Corn nitrogen rate guidelines from the University of Minnesota https://extension.umn.edu/crop-specific-needs/fertilizing-corn-minnesota or its successor.
[2] The implementation of approved alternative management tools may allow a higher nitrogen rate provided that the field specific data indicates this is appropriate.
[3] All crops listed at the University of Minnesota Extension webpage Crop-Specific Nutrient Needs at https://extension.umn.edu/nutrient-management/crop-specific-needs or its successor.

BMP Number	Nitrogen Placement, Timing and Source BMPs	Applies to
4	Use split applications of nitrogen fertilizer	Corn on **coarse** textured soils

Additional Practices	Applies to
Keep records of nitrogen use, including rates, crediting of nitrogen sources, timing, placement, and source. The MDA will provide guidance on record keeping requirements.	All agronomic crops on all soils



This map shows the boundary of the Adrian DWSMA. Both the green and black outline combined make the complete DWSMA. The area with the black outline has low vulnerability. Only cropland within the green outline is subject to restriction of nitrogen fertilizer application in the fall and on frozen soil. The green outline is also where adoption of the BMPs listed above is needed.

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