

PART 1 OF THE GROUNDWATER PROTECTION RULE

Minnesota's Groundwater Protection Rule went into effect on June 24, 2019. The purpose of the rule is to minimize potential nitrogen fertilizer sources of nitrate pollution to the state's groundwater and protect our drinking water. The rule contains two parts. Each part contains separate criteria and requirements. Depending on where you farm you may be subject to one part of the rule, both parts, or none at all.

Part 1 of the Groundwater Protection Rule restricts the application of nitrogen fertilizer in the fall and on frozen soils. If you farm in 1) an area with vulnerable groundwater or 2) the protected area around a public well with high nitrate you cannot apply nitrogen fertilizer in the fall or on frozen soils. Part 2 of the rule responds to public water supply wells with elevated nitrate.

This factsheet provides a summary of Part 1 of the rule. It does not present the Groundwater Protection Rule in its entirety and should not be viewed as comprehensive. A complete copy of the Groundwater Protection Rule is available at: www.mda.state.mn.us/nfr.

Part 1: Nitrogen fertilizer application restriction in the fall and on frozen soil

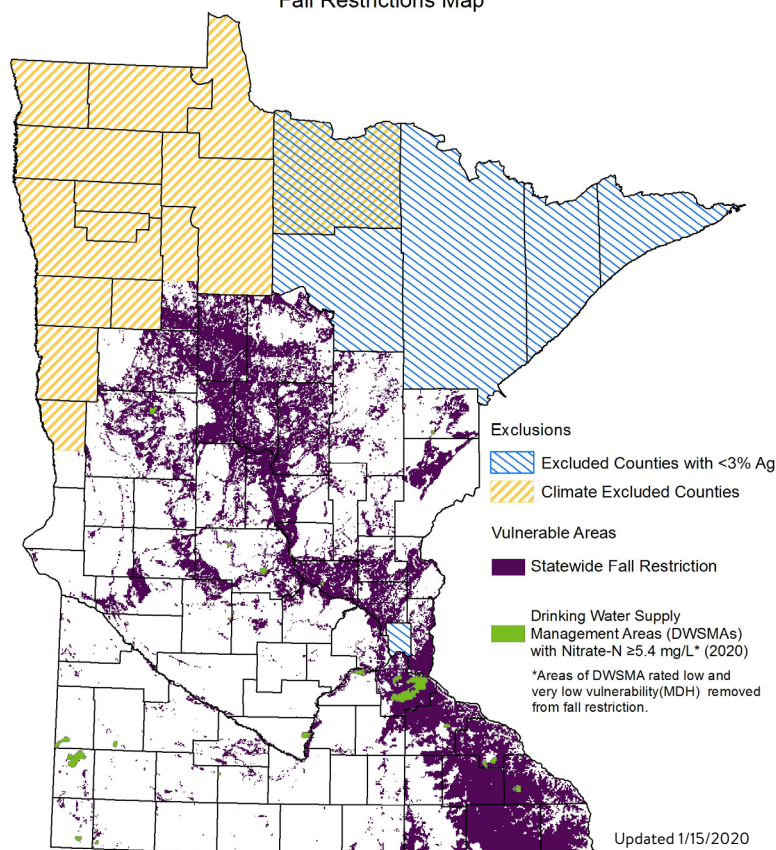
Vulnerable Groundwater Area

The nitrogen fertilizer restriction applies to vulnerable groundwater areas. In these areas, nitrate can move easily through soil and into groundwater, contaminating drinking water sources. They are determined by coarse textured soils, shallow bedrock, or karst geology and are designated by quarter sections. An entire quarter section is included if 50% or more of a quarter-section is considered vulnerable. Determinations are made using the United States Department of Agriculture's Natural Resources Conservation Service soil maps and the Department of Natural Resources karst geology maps.

Drinking Water Supply Management Areas

The restriction also applies to drinking water supply management areas (DWSMAs) of public water supply wells with nitrate-nitrogen concentrations at or in excess of 5.4 mg/L. A DWSMA is the surface and subsurface area surrounding a public water supply, including the wellhead protection area. The DWSMA boundaries are based on highways, section lines or other well-known features.

Fall Restrictions Map



View the interactive map at:
www.mda.state.mn.us/vulnerableareamap

Some portions of the DWSMAs have low and very low vulnerability, those areas are not subject to the fall restriction.

Notification of areas subject to fall application restrictions under Part 1 of the rule will be made each year and a map will be posted by January 15. Restrictions will begin September 2020.

Exclusions

Certain counties of the State are excluded from the fall nitrogen fertilizer application restriction depending on the area's planting season and the amount of cropland. These exclusions do not apply to drinking water supply management areas with nitrate-nitrogen levels greater than or equal to 5.4 mg/L.

Exclusion: Climate excluded counties

Counties with low nitrate leaching potential based on precipitation and evapotranspiration rates and a short planting season are excluded from the fall nitrogen fertilizer restriction if 50% or more of the land area in the county meets the criteria. These counties are primarily located in northwest Minnesota. Farmers are still restricted from applying nitrogen fertilizer to frozen soils.

Exclusion: Less than 3% of land used for cropland

Counties are excluded from the fall nitrogen fertilizer restriction if less than 3% of the land is used for cropland. These counties are primarily located in northeast Minnesota and include Ramsey County.



Minnesota Ag Water Quality Certification Program

An operation that is certified through the Minnesota Agricultural Water Quality Certification Program is deemed to be in compliance with the Groundwater Protection Rule for the duration of the ag producer's water quality certification.

Exceptions

There are several exceptions to the fall application restriction of nitrogen fertilizer that can be applied to all regions of the state.

Exception: Crop specific

Fall application of nitrogen fertilizer will be allowed if the University of Minnesota recommended nitrogen rates and best management practices are used:

- to establish winter grains planted in the fall;
- for fall pasture fertilization;
- for perennial crops;
- for grass seed production;
- for cultivated wild rice; or
- for growing fall cover crops within a potato rotation to reduce applications of soil fumigants to future potato crops.

View the University of Minnesota nitrogen rates at: extension.umn.edu/nutrient-management/nitrogen

Exception: Other

Listed below are additional exceptions to the fall nitrogen fertilizer restriction. Fall nitrogen fertilizer is allowed in the following situations.

- Ammoniated polyphosphate (MAP and DAP) or micronutrient formulations containing nitrogen can be applied as long as the average applied rate does not exceed 40 pounds of nitrogen per acre in a field.
- Fields with low or very low phosphorus soil test levels are exempt from the 40 pounds per acre total nitrogen rate restriction.
- Fall nitrogen fertilizer applications will be allowed for agricultural research and demonstrations for academic purposes, provided the area is limited to 20 acres or less, unless a higher amount is approved by the Commissioner of Agriculture.
- When land applying Minnesota Department of Agriculture (MDA) approved agricultural chemical contaminated media.