

**1573.0040 DRINKING WATER SUPPLY MANAGEMENT AREA; MITIGATION LEVEL DESIGNATION.**

Subpart 1. **Application.** This part applies to responsible parties in drinking water supply management areas.

Subp. 2. **Evaluation of nitrate-nitrogen concentrations in groundwater.** The commissioner shall evaluate nitrate-nitrogen concentrations in groundwater from public wells in drinking water supply management areas for purposes of making drinking water supply management area mitigation level 1 and 2 designations. The commissioner shall use public well nitrate-nitrogen concentration data provided by the commissioner of health or the commissioner of health's designee under chapter 4720 for this purpose. The commissioner shall initially designate a drinking water supply management area as a mitigation level 1 or a mitigation level 2 drinking water supply management area according to the criteria in subpart 3. The commissioner shall make mitigation level determinations by January 15 for monitoring data received by the commissioner before July 15 of the previous year, unless there is good cause for delay. The data shall be submitted to the commissioner on forms or in a format specified by the commissioner and shall meet data requirements specified by the commissioner.

Subp. 3. **Criteria for initial mitigation level designation.**

A. The commissioner shall use the following criteria to make mitigation level designations for drinking water supply management areas.

(1) To be designated as a mitigation level 1 drinking water supply management area, the groundwater nitrate-nitrogen concentration of the public well in the drinking water supply management area has been greater than or equal to 5.4 mg/L but less than 8.0 mg/L at any point in the previous ten years.

(2) To be designated as a mitigation level 2 drinking water supply management area, the groundwater nitrate-nitrogen concentration data of the public well in the drinking water supply management area meets one of the following:

(a) the statistical analysis of the groundwater nitrate-nitrogen concentration data for the previous ten years demonstrates that the groundwater nitrate-nitrogen concentration of the public well is projected to exceed the health risk limit in the next ten years; or

(b) the nitrate-nitrogen concentration of the public well has been 8.0 mg/L or greater at any point in the previous ten years.

B. For a nonmunicipal public water supply well, the commissioner may make exceptions for increasing a mitigation level designation based on whether there has been a change in cropland use within the drinking water supply management area and computer modeling or published leaching loss data indicates that the reduction in leaching of nitrate is predicted to result in the public well not exceeding the criteria for a mitigation level.

C. The commissioner shall exclude responsible parties in a drinking water supply management area from mitigation level designations in subpart 2 if the commissioner determines

there is a point source of nitrate-nitrogen contamination, including but not limited to an improperly sealed well, an animal feedlot, or an agricultural chemical incident, that is a significant source of nitrate-nitrogen contamination in the drinking water supply management area's well. In determining whether there is a significant point source of nitrate-nitrogen contamination, the commissioner shall:

(1) review the evaluation of point sources identified in wellhead protection plans approved under chapter 4720 for nitrate-nitrogen contributions to the municipal public water supply well; or

(2) conduct a detailed review of potential contaminant sources in the area, evaluate the condition and vulnerability of the public well, determine the hydrogeology and groundwater flow paths for groundwater flowing into the public well, and, if necessary, sample soil or other wells in the area; and

(3) based on the information obtained in subitem (1) or (2), determine whether, but for the contamination from the point source, the public well would not exceed the criteria for increasing a mitigation level.

D. The commissioner shall exclude part of a drinking water supply management area from a mitigation level designation if the commissioner determines that the area is not contributing significantly to the contamination of the public well. In determining whether the area is not contributing significantly, the commissioner shall apply the following:

(1) areas within the wellhead protection plan as approved by the Department of Health under chapter 4720 that identify an area as low vulnerability shall not be included in the mitigation area designation; or

(2) the commissioner shall not include areas within a drinking water supply management area that have a ten-foot or greater confining layer, as defined in part 4725.0100, subpart 24a, in the mitigation level designation, unless computer modeling indicates that leaching and infiltration of nitrate from sources at or near the ground surface is predicted to result in nitrate exceeding 5.4 mg/L in the aquifer being monitored.

The commissioner shall regulate areas under this part by quarter section or by using the boundaries in the wellhead protection plan for the drinking water supply management area.

**Subp. 4. Determination of nitrogen fertilizer best management practices and mitigation levels.**

A. For a mitigation level 2 drinking water supply management area, the commissioner shall determine the nitrogen fertilizer best management practices applicable for that drinking water supply management area. The commissioner may form a local advisory team to consult on the determination of applicable nitrogen fertilizer best management practices.

B. The commissioner shall provide notice to the public of the designation of a drinking water supply management area as a mitigation level 2 and the nitrogen fertilizer best management practices that are applicable to that drinking water supply management area through publication in

the legal newspaper for the affected drinking water supply management area and on the Department of Agriculture website.

**Subp. 5. Monitoring.**

A. The commissioner shall monitor a drinking water supply management area's nitrate-nitrogen concentrations pursuant to Minnesota Statutes, section 103H.251, subdivision 2. For purposes of the monitoring required by this subpart, the commissioner may:

(1) use groundwater nitrate-nitrogen concentrations of a public well provided by the commissioner of health or the commissioner's designee; or

(2) establish a groundwater monitoring network to determine changes in water quality in the drinking water supply management area.

B. If the commissioner establishes a groundwater monitoring network, the commissioner must design the groundwater monitoring network to represent the drinking water supply management area or a portion of the drinking water supply management area being monitored.

C. The commissioner may conduct residual soil nitrate tests to evaluate changes in residual soil nitrate for cropland within a drinking water supply management area.

**Subp. 6. Nitrogen fertilizer best management practices evaluation.**

A. The commissioner shall conduct an evaluation in designated mitigation level 2 drinking water supply management areas to determine whether the nitrogen fertilizer best management practices approved by the commissioner have been implemented by responsible parties on at least 80 percent of the cropland, excluding soybean cropland. The commissioner shall not conduct an evaluation under this subpart for at least three growing seasons subsequent to the publication of the nitrogen fertilizer best management practices applicable to the drinking water supply management area. The commissioner may conduct periodic evaluations during the three growing seasons to monitor the drinking water supply management area's progress.

B. When conducting an evaluation under this subpart, the commissioner shall consider:

(1) cropland where a responsible party has implemented approved alternative management tools as being in compliance with nitrogen fertilizer best management practices applicable to that drinking water supply management area;

(2) cropland certified by the Minnesota Agricultural Water Quality Certification Program as being cropland in compliance with all nitrogen fertilizer best management practices;

(3) nitrogen fertilizer best management practices not to be implemented if the responsible party does not provide information or provides insufficient information to the commissioner to make a determination related to the implementation of nitrogen fertilizer best management practices on that cropland; and

(4) practices that do not meet the nitrogen fertilizer best management practices to be in compliance with the nitrogen fertilizer best management practices if the noncompliance is due to an agricultural emergency or other extreme circumstance as determined by the commissioner.

**Subp. 7. Mitigation level 2 drinking water supply management area; mitigation designation review.**

A. The commissioner shall review the water quality and monitoring data of a mitigation level 2 drinking water supply management area and either provide a new mitigation level designation or maintain the existing mitigation level designation for the drinking water supply management area after no fewer than three growing seasons or the lag time, whichever is longer, following the commissioner's initial mitigation level 2 designation. However, if residual soil nitrate testing is conducted, the review period shall not be less than three growing seasons. The commissioner shall review the mitigation level designation not less than every three growing seasons thereafter.

B. The commissioner shall designate a mitigation level 2 drinking water supply management area as a mitigation level 1 drinking water supply management area if the commissioner determines that the statistical analysis for nitrate-nitrogen concentrations in the public well is not projected to exceed the health risk limit and the groundwater nitrate-nitrogen concentration has been below 8.0 mg/L for ten years.

C. The commissioner shall designate a mitigation level 2 drinking water supply management area as a mitigation level 3 drinking water supply management area if responsible parties within the drinking water supply management area have implemented nitrogen fertilizer best management practices on less than 80 percent of cropland and:

(1) the statistical analysis of the nitrate-nitrogen concentration of the public well within the drinking water supply management area for the past ten years is projected to exceed the health risk limit in the next ten years; or

(2) the nitrate-nitrogen concentration of the public well within the drinking water supply management area is 8.0 mg/L or more at any point in the previous ten years.

D. The commissioner shall designate a mitigation level 2 drinking water supply management area as a mitigation level 3 drinking water supply management area if the net residual nitrate in soil below the root zone is increasing after not less than three growing seasons within the drinking water supply management area.

E. The commissioner shall designate a mitigation level 2 drinking water supply management area as a mitigation level 3 drinking water supply management area if the statistical analysis indicates the nitrate-nitrogen concentration is increasing for the public well or groundwater monitoring network.

F. The mitigation level remains a mitigation level 2 unless one of the criteria in items B to E is met.

G. If responsible parties within a drinking water supply management area have demonstrated progress by changing agricultural or land use practices within the drinking water supply management

area, so that the public well does not meet the criteria of a mitigation level 3 as shown by computer modeling data or residual soil nitrate testing, the commissioner may grant a onetime exemption from designating a mitigation level 2 drinking water supply management area as a mitigation level 3 drinking water supply management area for a period equal to the period for the mitigation level designation decision under item A.

**Subp. 8. Mitigation level 3 drinking water supply management areas; mitigation level designation review.**

A. The commissioner shall review the water quality and monitoring data of a mitigation level 3 drinking water supply management area and either make a new mitigation level designation or maintain the existing mitigation level designation for the drinking water supply management area after no fewer than three growing seasons or the lag time, whichever is longer, following the commissioner's initial mitigation level 3 designation. However, if residual soil nitrate testing is conducted, the review period shall not be fewer than three growing seasons. The commissioner shall review the mitigation level designation not fewer than every three growing seasons thereafter.

B. The commissioner shall designate a mitigation level 3 drinking water supply management area as a mitigation level 1 drinking water supply management area if the commissioner determines that the statistical analysis for nitrate-nitrogen concentrations in the public well is not projected to exceed the health risk limit and the groundwater nitrate-nitrogen concentration has been below 8.0 mg/L for ten years.

C. The commissioner shall designate a mitigation level 3 drinking water supply management area as a mitigation level 4 drinking water supply management area if the nitrate-nitrogen concentration of the public well within the drinking water supply management area is 9.0 mg/L or higher for any three samples in the previous ten years unless a statistical trend analysis indicates nitrate-nitrogen concentrations have decreased.

D. The commissioner shall designate a mitigation level 3 drinking water supply management area as a mitigation level 4 drinking water supply management area if net residual nitrate in soil below the root zone is increasing after not less than three growing seasons within the drinking water supply management area.

E. The commissioner shall designate a mitigation level 3 drinking water supply management area as a mitigation level 4 drinking water supply management area if the statistical analysis of the nitrate-nitrogen concentration in the public well or in the groundwater monitoring network is increasing.

F. The mitigation level remains a mitigation level 3 unless one of the criteria in items B to E is met.

G. If responsible parties within a drinking water supply management area have demonstrated progress by changing agricultural or land use practices, so that the public well does not meet the criteria of a mitigation level 4 as shown by computer modeling data or residual soil nitrate testing, the commissioner may grant a onetime exemption from designating a mitigation level 3 drinking

water supply management area as a mitigation level 4 drinking water supply management area for a period equal to the period for the mitigation level designation decision under item A.

**Subp. 9. Mitigation level 4 drinking water supply management area; mitigation level designation review.**

A. The commissioner shall review the water quality and monitoring data of a mitigation level 4 drinking water supply management area and either make a new mitigation level designation or maintain the existing mitigation level 4 designation for the drinking water supply management area after no fewer than three growing seasons or the lag time, whichever is longer, following the commissioner's initial mitigation level 4 designation. However, if residual soil nitrate testing is conducted, the review period shall not be less than three growing seasons. The commissioner shall review the mitigation level designation every three growing seasons thereafter.

B. The commissioner shall designate a mitigation level 4 drinking water supply management area as a mitigation level 3 drinking water supply management area if:

(1) the statistical analysis for groundwater nitrate-nitrogen concentrations in the public well shows that the well is not projected to exceed the health risk limit for a period of ten years; and

(2) the groundwater nitrate-nitrogen concentrations in the public well have not reached or exceeded 9.0 mg/L for any three samples in the past ten years.

**Subp. 10. Limitation on change in designation.** The commissioner shall not designate a drinking water supply management area more than one mitigation level higher than the drinking water supply management area's previous designation for a minimum of three growing seasons.

**Statutory Authority:** *MS s 103H.275*

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