

1.1 **Department of Agriculture**

1.2 **Proposed Permanent Rules Relating to Groundwater Protection**

1.3 **1573.0010 DEFINITIONS.**

1.4 Subpart 1. **Scope.** The terms used in this chapter have the meanings given them in
1.5 this part. Other terms used in this chapter are defined in the part in which the terms are used.
1.6 Terms used in this chapter that are not specifically defined in applicable federal or state law
1.7 shall be construed in conformance with the context and in relation to the applicable section
1.8 of the statutes pertaining to the matter and current professional usage.

1.9 Subp. 2. **Alternative management tools.** "Alternative management tools" means
1.10 specific practices and solutions as described in part 1573.0090, subpart 1, other than nitrogen
1.11 fertilizer best management practices, that are approved by the commissioner to address
1.12 groundwater nitrate problems. Alternative management tools include precision agricultural
1.13 methods that can be used for the precise, variable, and site-specific application of nitrogen
1.14 fertilizer.

1.15 Subp. 3. **Coarse textured soils.** "Coarse textured soils" means soils that are sand,
1.16 loamy sand, fine sand, loamy fine sand, coarse sand, loamy coarse sand, very fine sand,
1.17 loamy very fine sand, single grained, or any of these textures with the following textural
1.18 modifiers: gravelly, cobbly, channery, and flaggy, based on the United States Department
1.19 of Agriculture, Natural Resources Conservation Service, Web Soil Survey.

1.20 Subp. 4. **Commissioner.** "Commissioner" means the commissioner of agriculture.

1.21 Subp. 5. **Cropland.** "Cropland" means land used primarily for the production or
1.22 harvest of annual or perennial field, forage, food, fiber, or energy crops. Cropland includes
1.23 pasture but does not include forestland.

1.24 Subp. 6. **Drinking water supply management area.** "Drinking water supply
1.25 management area" has the meaning given in part 4720.5100, subpart 13.

2.1 Subp. 7. **Fall application.** "Fall application" means the application of nitrogen fertilizer
2.2 to cropland after August 31 in each calendar year.

2.3 Subp. 8. **Frozen soil.** "Frozen soil" means soil frozen to a depth that does not allow
2.4 for the proper placement and incorporation of nitrogen fertilizer. For purposes of this subpart,
2.5 proper placement means that a responsible party is able to incorporate granular products
2.6 within three days of application at a minimum depth of three inches below the surface of
2.7 the soil.

2.8 Subp. 9. **Groundwater.** "Groundwater" has the meaning given in Minnesota Statutes,
2.9 section 115.01, subdivision 6.

2.10 Subp. 10. **Groundwater monitoring network.** "Groundwater monitoring network"
2.11 means a network of wells used by the commissioner to monitor and test nitrate-nitrogen
2.12 concentrations in groundwater.

2.13 Subp. 11. **Growing season.** "Growing season" means the period of time from planting
2.14 to physiological maturity of crops identified by the nitrogen fertilizer best management
2.15 practices.

2.16 Subp. 12. **Lag time.** "Lag time" means the period of time it takes for nitrate to travel
2.17 through an unsaturated zone to impact groundwater quality in an aquifer being monitored.

2.18 Subp. 13. **Leaching index.** "Leaching index" means the annual precipitation minus
2.19 evapotranspiration for the years 1981-2010 as calculated at daily intervals using the gridMet
2.20 dataset.

2.21 Subp. 14. **Local advisory team.** "Local advisory team" means a team of individuals
2.22 approved by the commissioner who advise the commissioner regarding appropriate response
2.23 activities for a specific local area.

3.1 Subp. 15. **Municipal public water supply well.** "Municipal public water supply well"
3.2 has the meaning given in part 4720.5100, subpart 22. For the purposes of this subpart,
3.3 municipal public water supply well also includes a rural water system.

3.4 Subp. 16. **Nitrogen fertilizer best management practices.** "Nitrogen fertilizer best
3.5 management practices" means practices associated with nitrogen use that are adopted by
3.6 the commissioner pursuant to Minnesota Statutes, section 103H.151, subdivision 2.

3.7 Subp. 17. **Nitrogen fertilizer.** "Nitrogen fertilizer" means a substance containing
3.8 nitrogen that is used for its plant nutrient content, is designed for use or claimed to have
3.9 value in promoting plant growth, and requires a guaranteed analysis under Minnesota
3.10 Statutes, section 18C.215. Nitrogen fertilizer does not include animal and vegetable manures
3.11 that are not manipulated, or marl, lime, limestone, biosolids, industrial by-product, industrial
3.12 wastewater, irrigation water, or other products exempted by the commissioner.

3.13 Subp. 18. **Public well.** "Public well" means a community water system as defined in
3.14 part 4725.0100, subpart 23a.

3.15 Subp. 19. **Residual soil nitrate tests.** "Residual soil nitrate tests" means soil tests
3.16 conducted by or under the direction of the commissioner that are representative of changes
3.17 in soil nitrate levels in soil below the root zone for cropland within a drinking water supply
3.18 management area.

3.19 Subp. 20. **Responsible party.** "Responsible party" means the owner, operator, or
3.20 agent in charge of cropland.

3.21 Subp. 21. **Section.** "Section" means a subdivision of a township typically one square
3.22 mile in size as established under a public land survey system.

3.23 Subp. 22. **Spring frost-free date.** "Spring frost-free date" means the date where there
3.24 is a ten percent probability of observing a temperature of 32 degrees Fahrenheit or colder
3.25 based on the years 1981-2010 as published by the Minnesota State Climatology Office.

4.1 Subp. 23. **Vulnerable groundwater area.** "Vulnerable groundwater area" means land
4.2 with:

4.3 A. coarse textured soils;

4.4 B. soils that are shallow to bedrock as identified in the United States Department
4.5 of Agriculture, Natural Resources Conservation Service, Web Soil Survey; or

4.6 C. karst, as identified in the Department of Natural Resources Pollution Sensitivity
4.7 of Near-Surface Materials Report.

4.8 Vulnerable groundwater area does not include areas identified as ultra-low sensitivity in
4.9 the Department of Natural Resources Pollution Sensitivity of Near-Surface Materials Report.

4.10 **1573.0020 INCORPORATION BY REFERENCE.**

4.11 A. The documents in subitems (1) to (4) and subsequent revisions are incorporated
4.12 by reference. The documents are not subject to frequent change and are available as indicated:

4.13 (1) GridMET dataset, University of Idaho:

4.14 <http://www.climatologylab.org/gridmet.html>;

4.15 (2) United States Department of Agriculture, Natural Resources Conservation
4.16 Service, Web Soil Survey (various published dates):

4.17 <https://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=MN>;

4.18 (3) Pollution Sensitivity of Near-Surface Materials Report, Minnesota
4.19 Department of Natural Resources (2016):

4.20 http://files.dnr.state.mn.us/waters/groundwater_section/mapping/mha/hg02_report.pdf; and

4.21 (4) Fertilizer Guidelines for Agronomic Crops in Minnesota, Lamb, John;
4.22 Kaiser, Daniel E.; Eliason, Roger; University of Minnesota Extension (2011):

5.1 <http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime->
5.2 [guidelines/fertilizer-recommendations-for-agronomic-crops-in-minnesota/docs/BU-6240S-PUB.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-guidelines/fertilizer-recommendations-for-agronomic-crops-in-minnesota/docs/BU-6240S-PUB.pdf).

5.3 B. The documents listed in item A can be found on the Department of Agriculture's
5.4 Web site.

5.5 **1573.0030 STATEWIDE WATER RESOURCE PROTECTION REQUIREMENTS.**

5.6 **Subpart 1. Prohibitions.**

5.7 A. A responsible party must not make:

5.8 (1) a fall application of nitrogen fertilizer to cropland located in a drinking
5.9 water supply management area from a municipal public water supply well with
5.10 nitrate-nitrogen levels greater than or equal to 5.4 mg/L at any point in the previous ten
5.11 years;

5.12 (2) a fall application of nitrogen fertilizer to cropland located in a quarter
5.13 section where vulnerable groundwater areas make up 50 percent or more of the quarter
5.14 section; or

5.15 (3) an application of nitrogen fertilizer to cropland with frozen soil located
5.16 in:

5.17 (a) a vulnerable groundwater area; or

5.18 (b) a drinking water supply management area that has nitrate-nitrogen
5.19 levels greater than or equal to 5.4 mg/L at any point in the previous ten years.

5.20 B. The commissioner shall annually develop a fall application restrictions map.
5.21 The commissioner shall post the fall restrictions map on the department's Web site by March
5.22 1 of each year.

5.23 C. Any responsible party in charge of cropland in a vulnerable groundwater area
5.24 as depicted on the commissioner's vulnerable groundwater area map is subject to item A.

6.1 Subp. 2. Exclusions.

6.2 A. A responsible party in a county or a portion of a county is excluded from the
6.3 fall application restriction requirements under subpart 1 if the county or the portion of the
6.4 county meets one of the following conditions:

6.5 (1) the spring frost-free date in the county or a portion of the county is on or
6.6 after May 22 and has a leaching index less than or equal to -12 inches as determined by the
6.7 commissioner;

6.8 (2) the spring frost-free date in the county or a portion of the county is on or
6.9 after May 29 and the leaching index is less than or equal to -10 inches as determined by the
6.10 commissioner; or

6.11 (3) the spring frost-free date in the county or a portion of the county is on or
6.12 after June 5 and the leaching index is less than or equal to -6 inches as determined by the
6.13 commissioner.

6.14 B. The exclusion under this subpart applies to an entire county if a condition under
6.15 item A is represented on 50 percent or more of the land area of the county.

6.16 C. For purposes of determining the exclusion under item A, the commissioner
6.17 may subdivide a county by geographical boundary if there is a clear change in conditions
6.18 represented in a specific area of the county.

6.19 D. The exclusion under this subpart does not apply to a drinking water supply
6.20 management area with nitrate-nitrogen levels greater than or equal to 5.4 mg/L.

6.21 E. If cropland makes up less than three percent of a county's total land area, the
6.22 county is excluded from the requirements in item A.

6.23 F. The commissioner may exclude responsible parties in a drinking water supply
6.24 management area from the fall application restrictions in subpart 1 if the commissioner

7.1 determines there is a point source of nitrate-nitrogen contamination, including but not limited
7.2 to an improperly sealed well, an animal feedlot, or an agricultural chemical incident, that
7.3 is a significant source of nitrate-nitrogen contamination in the drinking water supply
7.4 management area's well.

7.5 G. The commissioner may exclude part of a drinking water supply management
7.6 area from the fall application restriction if the commissioner determines that the area is not
7.7 contributing significantly to the contamination of the well in the drinking water supply
7.8 management area.

7.9 Subp. 3. **Exceptions.**

7.10 A. Notwithstanding subpart 1, a responsible party may make a fall application in
7.11 a vulnerable groundwater area if the responsible party uses applicable nitrogen rates, as
7.12 defined in item B, in the following situations only:

7.13 (1) when nitrogen fertilizer is required to establish winter grains planted in
7.14 the fall;

7.15 (2) when nitrogen fertilizer is required for pasture fertilization;

7.16 (3) when nitrogen fertilizer is required for perennial crops;

7.17 (4) when nitrogen fertilizer is required for grass seed production. For purposes
7.18 of this subitem, grass seed production does not include corn production;

7.19 (5) when nitrogen fertilizer is required for cultivated wild rice; or

7.20 (6) when nitrogen fertilizer is required for growing cover crops for the specific
7.21 purpose of reducing commercial applications of soil fumigants to the subsequent potato
7.22 crop.

7.23 B. For purposes of item A, "nitrogen rates" means:

8.1 (1) the nitrogen rates included in the nitrogen fertilizer best management
8.2 practices adopted by the commissioner under Minnesota Statutes, section 103H.151,
8.3 subdivision 2; or

8.4 (2) if applicable nitrogen rates have not been adopted by the commissioner
8.5 under Minnesota Statutes, section 103H.151, subdivision 2, the nitrogen rates included in
8.6 the Fertilizer Guidelines for Agronomic Crops in Minnesota as published by the University
8.7 of Minnesota Extension.

8.8 C. Notwithstanding subpart 1 and in addition to item A, a responsible party may
8.9 make a fall application in a vulnerable groundwater area in the following situations:

8.10 (1) when applying ammoniated phosphate or micronutrient formulations
8.11 containing nitrogen, so long as the applied nitrogen rate does not exceed an average of 40
8.12 pounds per acre in a field. Fields that have had a soil analysis completed by a certified lab
8.13 and determined to have low to very low phosphorus levels according to the Fertilizer
8.14 Guidelines for Agronomic Crops in Minnesota are not subject to the 40 pounds per acre
8.15 total nitrogen rate;

8.16 (2) when making a land application of agricultural-chemical-contaminated
8.17 soil and other media according to Minnesota Statutes, section 18D.1052; or

8.18 (3) when making an application of nitrogen fertilizer for agricultural research
8.19 and demonstrations for academic purposes. Application of nitrogen fertilizer for agricultural
8.20 research and demonstrations is limited to 20 acres or less unless a higher acreage amount
8.21 is approved by the commissioner.

8.22 **1573.0040 DRINKING WATER SUPPLY MANAGEMENT AREA; MITIGATION**
8.23 **LEVEL DESIGNATION.**

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

9.1 Subp. 2. Evaluation of nitrate-nitrogen concentrations in groundwater. The
9.2 commissioner shall evaluate nitrate-nitrogen concentrations in groundwater from public
9.3 wells in drinking water supply management areas for purposes of making drinking water
9.4 supply management area mitigation level 1 and 2 designations. The commissioner shall use
9.5 public well nitrate-nitrogen concentration data provided by the commissioner of health or
9.6 the commissioner of health's designee under chapter 4720 for this purpose. The commissioner
9.7 shall initially designate a drinking water supply management area as a mitigation level 1 or
9.8 a mitigation level 2 drinking water supply management area according to the criteria in
9.9 subpart 3.

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

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

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

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

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

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

10.1 B. For a nonmunicipal public water supply well, the commissioner may make
10.2 exceptions for increasing a mitigation level designation based on:

10.3 (1) whether there has been a significant change in the amount of land used
10.4 for agricultural production within the drinking water supply management area;

10.5 (2) the severity of the nitrate-nitrogen concentration found in other wells in
10.6 the drinking water supply management area;

10.7 (3) the population affected by the groundwater contamination of
10.8 nitrate-nitrogen; and

10.9 (4) other factors expected to influence nitrate-nitrogen concentrations.

10.10 C. The commissioner may exclude a drinking water supply management area
10.11 from mitigation level determinations in subpart 2 if the commissioner determines there is
10.12 a point source of nitrate-nitrogen contamination, including but not limited to an improperly
10.13 sealed well, an animal feedlot, or an agricultural chemical incident, that is a significant
10.14 source of nitrate-nitrogen contamination in the drinking water supply management area's
10.15 well.

10.16 D. The commissioner may exclude part of a drinking water supply management
10.17 area from a mitigation level designation if the commissioner determines that the area is not
10.18 contributing significantly to the contamination of the well in the drinking water supply
10.19 management area.

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

10.22 A. For a mitigation level 2 drinking water supply management area, the
10.23 commissioner shall determine the nitrogen fertilizer best management practices applicable
10.24 for that drinking water supply management area. The commissioner may form a local

11.1 advisory team to consult on the determination of applicable nitrogen fertilizer best
11.2 management practices.

11.3 B. The commissioner shall provide notice to the public of the designation of a
11.4 drinking water supply management area as a mitigation level 2 and the nitrogen fertilizer
11.5 best management practices that are applicable to that drinking water supply management
11.6 area through publication in the legal newspaper for the affected drinking water supply
11.7 management area and on the Department of Agriculture's Web site.

11.8 Subp. 5. **Monitoring.**

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

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

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

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

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

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

11.23 A. The commissioner shall conduct an evaluation in designated mitigation level
11.24 2 drinking water supply management areas to determine whether the nitrogen fertilizer best

12.1 management practices approved by the commissioner have been implemented by responsible
12.2 parties on at least 80 percent of the cropland, excluding soybean cropland. The commissioner
12.3 shall not conduct an evaluation under this subpart for at least three growing seasons
12.4 subsequent to the publication of the nitrogen fertilizer best management practices applicable
12.5 to the drinking water supply management area. The commissioner may conduct periodic
12.6 evaluations during the three growing seasons to monitor the drinking water supply
12.7 management area's progress.

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

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

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

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

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

12.24 (5) cropland where a manure management plan has been implemented by the
12.25 responsible party as cropland that has implemented nitrogen fertilizer best management

13.1 practices if the manure management plan has been approved and determined to be
13.2 implemented by the commissioner of the Pollution Control Agency or the commissioner's
13.3 designee, and includes the nitrogen fertilizer best management practices determined
13.4 applicable for the drinking water supply management area by the commissioner.

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

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

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

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

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

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

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

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

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

14.13 G. If responsible parties within a drinking water supply management area have
14.14 demonstrated progress in addressing nitrates in groundwater within the drinking water
14.15 supply management area, the commissioner may grant a onetime exemption from designating
14.16 a mitigation level 2 drinking water supply management area as a mitigation level 3 drinking
14.17 water supply management area for a period equal to the period for the mitigation level
14.18 designation decision under item A.

14.19 H. The commissioner may make exceptions for increasing a mitigation level
14.20 designation if there has been a significant change in land use in a drinking water supply
14.21 management area.

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

14.24 A. The commissioner shall review the water quality and monitoring data of a
14.25 mitigation level 3 drinking water supply management area and either make a new mitigation

15.1 level designation or maintain the existing mitigation level designation for the drinking water
15.2 supply management area after no fewer than three growing seasons or the lag time, whichever
15.3 is longer, following the commissioner's initial mitigation level 3 designation. However, if
15.4 residual soil nitrate testing is conducted, the review period shall not be fewer than three
15.5 growing seasons. The commissioner shall review the mitigation level designation not fewer
15.6 than every three growing seasons thereafter.

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

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

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

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

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

16.1 G. If responsible parties within a drinking water supply management area have
16.2 demonstrated progress in addressing nitrate in groundwater, the commissioner may grant
16.3 a onetime exemption from designating a mitigation level 3 drinking water supply management
16.4 area as a mitigation level 4 drinking water supply management area for a period equal to
16.5 the period for the mitigation level designation decision under item A.

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

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

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

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

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

16.23 Subp. 10. **Limitation on change in designation.** The commissioner shall not designate
16.24 a drinking water supply management area more than one mitigation level higher than the

17.1 drinking water supply management area's previous designation for a minimum of three
17.2 growing seasons.

17.3 **1573.0050 WATER RESOURCE PROTECTION REQUIREMENTS ORDER.**

17.4 **Subpart 1. Commissioner's water resource protection requirements order.**

17.5 A. The commissioner shall issue a water resource protection requirements order
17.6 to responsible parties in mitigation level 3 and 4 drinking water supply management areas
17.7 that meet the criteria in part 1573.0040, subparts 7 to 9. The commissioner shall use the
17.8 nitrate-nitrogen concentration results obtained in part 1573.0040, subpart 5, to issue a water
17.9 resource protection requirements order for a mitigation level 3 or 4 drinking water supply
17.10 management area.

17.11 B. If a groundwater monitoring network is installed or residual soil nitrate testing
17.12 is conducted in the drinking water supply management area, then a commissioner's order
17.13 applies to the entire drinking water supply management area.

17.14 C. If a groundwater monitoring network is not installed or residual soil nitrate
17.15 testing is not conducted in the drinking water supply management area, then the
17.16 commissioner's order applies to the area within the drinking water supply management area
17.17 for which land surface practices may impact water quality within the monitored well after
17.18 the recommended nitrogen fertilizer best management practices for the drinking water supply
17.19 management area are first published by the commissioner. This area shall be determined
17.20 based on the estimated travel time, including lag time, for nitrate-nitrogen to travel from
17.21 the place of application to the well.

17.22 D. In prioritizing the issuance of water resource protection requirements orders
17.23 throughout the state, the commissioner shall consider the following:

18.1 (1) the nitrate-nitrogen concentration in drinking water supply management
18.2 areas as determined by the commissioner of health's public well data or the groundwater
18.3 monitoring network data;

18.4 (2) the population at risk in the drinking water supply management area due
18.5 to high nitrate in groundwater;

18.6 (3) whether the drinking water supply management area has a water treatment
18.7 system; and

18.8 (4) the potential cost for a new water treatment system or systems.

18.9 E. A commissioner's water resource protection requirements order shall include
18.10 the following:

18.11 (1) the mitigation level of the drinking water supply management area;

18.12 (2) the drinking water supply management area that is subject to the water
18.13 resource protection requirements order;

18.14 (3) the water resource protection requirements for the drinking water supply
18.15 management area that is subject to the water resource protection requirements order;

18.16 (4) the effective date of the water resource protection requirements order;
18.17 and

18.18 (5) information on a responsible party's right to request a contested case
18.19 hearing regarding the water resource protection requirements order.

18.20 F. A commissioner's water resource protection requirements order applies to
18.21 responsible parties in a drinking water supply management area that is subject to a water
18.22 resource protection requirements order.

18.23 G. The commissioner may exclude part of a drinking water supply management
18.24 area from the water resource protection requirements order if the commissioner determines

19.1 that the area is not contributing significantly to the contamination in the well or it is not
19.2 practicable to include that part.

19.3 **Subp. 2. Notice of proposed water resource protection requirements order.**

19.4 **A. The commissioner shall hold at least one public informational meeting in the**
19.5 **county of the mitigation area subject to the proposed water resource protection requirements**
19.6 **order before publishing the proposed water resource protection requirements order.**

19.7 **B. The commissioner shall provide notice of the proposed water resource protection**
19.8 **requirements order to all known affected responsible parties within the drinking water supply**
19.9 **management area. If personal notification is not practicable, the commissioner shall publish**
19.10 **notice of the proposed water resource protection requirements order in two consecutive**
19.11 **issues of the legal newspaper for the affected drinking water supply management area and**
19.12 **in the State Register.**

19.13 **C. The commissioner shall also provide the notice required under item B to the**
19.14 **following entities whose jurisdiction includes a mitigation area:**

19.15 **(1) cities;**

19.16 **(2) township boards;**

19.17 **(3) counties;**

19.18 **(4) soil and water conservation districts; and**

19.19 **(5) watershed districts.**

19.20 **D. The commissioner shall also provide the notice required under item B to the**
19.21 **executive director of the Board of Water and Soil Resources, the commissioner of natural**
19.22 **resources, the commissioner of the Pollution Control Agency, the commissioner of health,**
19.23 **and the executive director of the Environmental Quality Board.**

20.1 E. The commissioner must provide or publish the notices required under this
20.2 subpart at least 60 days before the proposed effective date of the water resource protection
20.3 requirements order.

20.4 Subp. 3. **Contested case hearing.**

20.5 A. Following notice of the proposed water resource protection requirements order
20.6 as required by subpart 2, any person or entity subject to the water resource protection
20.7 requirements order may petition the commissioner for a contested case hearing to challenge
20.8 a water resource protection requirements order.

20.9 B. A petition for a hearing must contain a statement of the issue or issues proposed
20.10 to be addressed at the hearing as well as the part of the proposed water resource protection
20.11 requirements order to be challenged. The petition must also contain the specific relief or
20.12 resolution requested as well as the proposed findings of fact in dispute.

20.13 C. Upon receipt of a timely petition for a hearing, the commissioner shall order
20.14 a public hearing. The commissioner shall publish the order for hearing in the legal newspaper
20.15 for the affected drinking water supply management area and in the State Register at least
20.16 30 days before the public hearing. The public hearing shall be held within 60 days of the
20.17 proposed effective date of the proposed water resource protection requirements order before
20.18 an administrative law judge in the county in which the mitigation area is located.

20.19 D. The administrative law judge shall submit recommended findings of fact,
20.20 conclusions of law, and the final order to the commissioner and each petitioner no later than
20.21 30 days from the conclusion of the public hearing.

20.22 E. Any party to the hearing may submit written exceptions and argument to the
20.23 commissioner up to ten business days from the date of issuance of the recommendations
20.24 from the administrative law judge.

21.1 F. Within 30 days of the issuance of the recommended findings of fact, conclusions
21.2 of law, and final order by the administrative law judge, the commissioner shall issue a final
21.3 water resource protection requirements order, which is the final decision of the agency for
21.4 a contested case for purposes of judicial review under Minnesota Statutes, sections 14.63
21.5 to 14.69.

21.6 G. The commissioner shall publish notice of the final water resource protection
21.7 requirements order in two consecutive issues of the legal newspaper for any affected drinking
21.8 water supply management area.

21.9 The commissioner shall also provide the notice of the final water resource protection
21.10 requirements order to the executive director of the Board of Water and Soil Resources, the
21.11 commissioner of natural resources, the commissioner of the Pollution Control Agency, the
21.12 commissioner of health, and the executive director of the Environmental Quality Board.

21.13 Subp. 4. **Final water resource protection requirements order.** If the commissioner
21.14 does not receive any petitions requesting a hearing under subpart 3 within 60 days of the
21.15 notice of the proposed water resource protection requirements order as required by subpart
21.16 2, the published proposed water resource protection requirements order is effective on the
21.17 date provided in the proposed water resource protection requirements order.

21.18 Subp. 5. **Amendment to a water resource protection requirements order.**

21.19 A. The commissioner may amend the content of a water resource protection
21.20 requirements order based on the content of part 1573.0070.

21.21 B. The commissioner shall provide notice of proposed amendments to a water
21.22 resource protection requirements order to all known affected responsible parties within the
21.23 drinking water supply management area. If personal notification is not practicable, the
21.24 commissioner shall publish notice of proposed amendments to a water resource protection
21.25 requirements order in two consecutive issues of the legal newspaper for any affected drinking

22.1 water supply management area and in the State Register at least 30 days before the proposed
22.2 effective date of the amendments. The commissioner shall also provide notice of proposed
22.3 amendments to a water resource protection requirements order to the executive director of
22.4 the Board of Water and Soil Resources, the commissioner of natural resources, the
22.5 commissioner of the Pollution Control Agency, the commissioner of health, and the executive
22.6 director of the Environmental Quality Board at least 30 days before the proposed effective
22.7 date of the amendments.

22.8 C. Any person or entity subject to proposed amendments to a water resource
22.9 protection requirements order has 30 days from the date of notice of the amendments under
22.10 item B to provide written comments to the commissioner on the proposed amendments.

22.11 D. The commissioner shall publish notice of the amended final water resource
22.12 protection requirements order in two consecutive issues in the legal newspaper for any
22.13 drinking water supply management area affected by the amendments to the water resource
22.14 protection requirements order.

22.15 E. The amended final water resource protection requirements order is effective
22.16 upon publication under item D.

22.17 Subp. 6. **Judicial review.**

22.18 A. Any person or entity subject to a final water resource protection requirements
22.19 order or an amended water resource protection requirements order may seek judicial review
22.20 pursuant to Minnesota Statutes, sections 14.63 to 14.69.

22.21 B. For judicial review of an amended water resource protection requirements
22.22 order, only the amendments to the water resource protection requirements order are subject
22.23 to judicial review.

23.1 Subp. 7. **Recording.** The commissioner shall record all final water resource protection
23.2 requirements orders and amendments for water resource protection requirements in the
23.3 appropriate county.

23.4 **1573.0060 REQUIREMENTS FOR WATER RESOURCE PROTECTION**
23.5 **REQUIREMENTS ORDERS.**

23.6 A. A responsible party in a mitigation level 3 or 4 drinking water supply
23.7 management area must comply with the following:

23.8 (1) maintain field-specific records for six years, starting with the effective
23.9 date of the water resource protection requirements order. The records required to be kept
23.10 under this subitem must document nitrogen fertilizer use, including but not limited to its
23.11 application date, application rate, any credit given for organic and inorganic nitrogen sources,
23.12 the timing of the nitrogen fertilizer application, the source of the nitrogen, and nitrogen's
23.13 placement;

23.14 (2) provide records maintained under this part to the commissioner upon
23.15 request;

23.16 (3) comply with the prohibitions on fall application and application to frozen
23.17 soils under part 1573.0030, unless the application is excluded from the prohibitions under
23.18 part 1573.0030, subpart 2; and

23.19 (4) comply with any water resource protection requirements orders that apply
23.20 to the drinking water supply management area governing the cropland over which the
23.21 responsible party has control.

23.22 B. This chapter is enforceable pursuant to Minnesota Statutes, chapter 18D.

24.1 **1573.0070 WATER RESOURCE PROTECTION REQUIREMENTS ORDER**
24.2 **CONTENTS.**

24.3 **Subpart 1. Mitigation level 3.**

24.4 A. The commissioner shall consider including the following requirements for
24.5 responsible parties in a water resource protection requirements order for mitigation level 3
24.6 drinking water supply management areas:

24.7 (1) nitrogen fertilizer best management practices approved by the
24.8 commissioner pursuant to Minnesota Statutes, section 103H.151, subdivision 2;

24.9 (2) application guidelines for nitrogen fertilizer from the University of
24.10 Minnesota;

24.11 (3) educational activities approved by the commissioner;

24.12 (4) field testing to determine nitrogen requirements for specific crops;

24.13 (5) testing of manure using a lab approved or certified by the commissioner;

24.14 (6) testing as needed to monitor nitrate-nitrogen concentrations in the
24.15 groundwater;

24.16 (7) nitrogen crediting from previous crops, manure application, irrigation
24.17 application, and all other sources of nitrogen;

24.18 (8) irrigation, fertilizer chemigation, water, manure, and nutrient management
24.19 plans developed or approved by a qualified professional;

24.20 (9) soil amendments registered with the commissioner that reduce the need
24.21 for or improve the use of nitrogen;

24.22 (10) plant amendments registered with the commissioner that improve the
24.23 efficient use of nitrogen inputs;

24.24 (11) products delaying nitrification, approved by the commissioner; or

25.1 (12) products delaying plant available nitrogen, approved by the
25.2 commissioner.

25.3 B. The commissioner may require alternative management tools to be used in
25.4 drinking water supply management areas provided that a source of funding for increased
25.5 costs related to the implementation of the alternative management tool is available to
25.6 responsible parties. The commissioner shall select alternative management tools for purposes
25.7 of this subpart in consultation with the local advisory team. The commissioner shall not
25.8 restrict the selection of the primary crop.

25.9 Subp. 2. **Mitigation level 4.** The commissioner shall consider including the
25.10 requirements in items A to C for responsible parties in a water resource protection
25.11 requirements order for mitigation level 4 drinking water supply management areas:

25.12 A. any requirement listed in subpart 1;

25.13 B. specific nitrogen fertilizer rate requirements for crops. The commissioner shall
25.14 not set rate requirements for nitrogen fertilizer below the lowest University of Minnesota
25.15 recommended rate; and

25.16 C. water resource protection requirements as defined in Minnesota Statutes, section
25.17 103H.005, subdivision 15, and that meet factors under Minnesota Statutes, section 103H.275,
25.18 subdivision 2a. The commissioner shall not restrict the selection of the primary crop.

25.19 Subp. 3. **Exceptions.** The commissioner may provide exceptions to a water resource
25.20 protection requirements order on a site-specific basis.

25.21 **1573.0080 MINNESOTA AGRICULTURAL WATER QUALITY CERTIFICATION**
25.22 **PROGRAM EXEMPTION.**

25.23 A responsible party certified through the Minnesota Agricultural Water Quality
25.24 Certification Program under Minnesota Statutes, sections 17.9891 to 17.993, is deemed to
25.25 be in compliance with this chapter for the duration of the water quality certification.

26.1 **1573.0090 ALTERNATIVE MANAGEMENT TOOLS; ALTERNATIVE**
26.2 **PROTECTION REQUIREMENTS.**

26.3 **Subpart 1. Alternative management tools.**

26.4 **A. The commissioner shall maintain a list of alternative management tools on the**
26.5 **Department of Agriculture's Web site.**

26.6 **B. The commissioner shall identify on the list of alternative management tools if**
26.7 **an alternative management tool can be substituted for a nitrogen fertilizer best management**
26.8 **practice in the nitrogen fertilizer best management practice evaluation.**

26.9 **C. A responsible party subject to a water resource protection requirements order**
26.10 **may implement an alternative management tool as an alternative to a specific requirement**
26.11 **in a water resource protection requirements order only if the commissioner states in the list**
26.12 **of alternative management tools that the alternative management tool is a substitute for a**
26.13 **nitrogen fertilizer best management practice. A responsible party must keep records of all**
26.14 **alternative management tools used and the specific water resource protection requirements**
26.15 **order that allows the alternative management tool to be used.**

26.16 **D. A responsible party may use an alternative management tool in addition to the**
26.17 **requirements in the water resource protection requirements order.**

26.18 **Subp. 2. Alternative protection requirements.**

26.19 **A. A person subject to a water resource protection requirements order may apply**
26.20 **to the commissioner to suggest an alternative protection requirement pursuant to Minnesota**
26.21 **Statutes, section 103H.275, subdivision 2, paragraph (e).**

26.22 **B. All applications for alternative protection requirements shall be made on a**
26.23 **form approved by the commissioner.**

26.24 **EFFECTIVE DATE. Minnesota Rules, part 1573.0030, is effective January 1, 2020.**