

1.1 **Department of Agriculture**

1.2 **Proposed Permanent Rules Relating to Water Resource Protection Requirements**

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.

1.6 Subp. 2. **Alternative management tools.** "Alternative management tools" means
1.7 specific practices and solutions approved by the commissioner to address groundwater
1.8 nitrate-nitrogen problems as described in part 1573.0120.

1.9 Subp. 3. **Commissioner.** "Commissioner" means the commissioner of the
1.10 Department of Agriculture.

1.11 Subp. 4. **Cropland.** "Cropland" means land used primarily for the production or
1.12 harvest of annual or perennial field, forage, food, fiber, or energy crops. Cropland does not
1.13 include forestland.

1.14 Subp. 5. **Drinking water supply management area.** "Drinking water supply
1.15 management area" has the meaning given in part 4720.5100, subpart 13.

1.16 Subp. 6. **Fall application.** "Fall application" means the application of inorganic
1.17 nitrogen fertilizer to cropland after August 31 of each calendar year.

1.18 Subp. 7. **Frozen soil.** "Frozen soil" means the temperature of the soil is less than or
1.19 equal to 32 degrees Fahrenheit at or below the surface of the soil.

1.20 Subp. 8. **Groundwater.** "Groundwater" has the meaning given in Minnesota
1.21 Statutes, section 115.01, subdivision 6.

1.22 Subp. 9. **Groundwater monitoring network.** "Groundwater monitoring network"
1.23 means a network of wells used by the commissioner to monitor and test nitrate-nitrogen
1.24 concentrations in groundwater pursuant to Minnesota Statutes, section 103H.251,
1.25 subdivision 2.

2.1 Subp. 10. **Growing season.** "Growing season" means the period of time from
2.2 planting to physiological maturity of crops identified by the nitrogen fertilizer best
2.3 management practices.

2.4 Subp. 11. **Local advisory team.** "Local advisory team" means individuals who advise
2.5 the commissioner regarding appropriate response activities for a specific local area and
2.6 who provide support to the commissioner for the implementation of the response activities.

2.7 Subp. 12. **Nitrogen fertilizer best management practices.** "Nitrogen fertilizer best
2.8 management practices" means practices for nitrogen use developed and adopted by the
2.9 commissioner pursuant to Minnesota Statutes, section 103H.151, subdivision 2.

2.10 Subp. 13. **Nitrogen fertilizer.** "Nitrogen fertilizer" means a substance containing
2.11 nitrogen that is designed for use or claimed to have value in promoting plant growth.
2.12 Nitrogen fertilizer does not include animal and vegetable manures that are not
2.13 manipulated, or marl, lime, limestone, or other products exempted by the commissioner.

2.14 Subp. 14. **Private well.** "Private well" means a well that does not meet the definition
2.15 of a community water system as defined in part 4725.0100, subpart 23a.

2.16 Subp. 15. **Public well.** "Public well" means a community water system as defined
2.17 in part 4725.0100, subpart 23a.

2.18 Subp. 16. **Responsible party.** "Responsible party" means the owner, operator, or
2.19 agent in charge of cropland.

2.20 Subp. 17. **Section.** "Section" means a subdivision of a township typically one square
2.21 mile in size as established under the public land survey system.

2.22 Subp. 18. **Vulnerable groundwater area.** "Vulnerable groundwater area" means
2.23 land with Natural Resource Conservation Service soil mapping units with a weighted
2.24 average saturated hydraulic conductivity (Ksat) greater than or equal to 10 $\mu\text{m}/\text{second}$

3.1 in the top five feet of soil, or karst or bedrock at or near the surface as identified in the
3.2 Department of Natural Resources Pollution Sensitivity of Near-Surface Materials Report.

3.3 **1573.0020 INCORPORATION BY REFERENCE.**

3.4 The documents in items A to N and subsequent revisions are incorporated by
3.5 reference. The documents are not subject to frequent change and are available as indicated:

3.6 A. Natural Resources Conservation Service - Minnesota, Published Soil
3.7 Surveys (various published dates)

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

3.9 B. Pollution Sensitivity of Near Surface Materials, Minnesota Department of
3.10 Natural Resources (2016):

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

3.12 C. Fertilizing Corn in Minnesota, Kaiser, Daniel E.; Fernandez, Fabian;
3.13 Lamb, John A.; Coulter, Jeffery A.; Barber, Brian; University of Minnesota Extension
3.14 (2016): [http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-](http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-guidelines/fertilizing-corn-in-minnesota/docs/fertilizing-corn.pdf)
3.15 [guidelines/fertilizing-corn-in-minnesota/docs/fertilizing-corn.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-guidelines/fertilizing-corn-in-minnesota/docs/fertilizing-corn.pdf);

3.16 D. Fertilizing Corn Grown on Irrigated Sandy Soils, University of Minnesota
3.17 Extension (2015):

3.18 [http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-](http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-guidelines/docs/AG_NM_1501.pdf)
3.19 [guidelines/docs/AG_NM_1501.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-guidelines/docs/AG_NM_1501.pdf);

3.20 E. Fertilizer Guidelines for Agronomic Crops in Minnesota,

3.21 Lamb, John; Rosen, Carl; Bongard, Phyllis; Kaiser, Daniel E.; Fernandez,
3.22 Fabian G.; Barber, Brian L.; University of Minnesota Extension (2011):

3.23 [http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-](http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-guidelines/fertilizer-recommendations-for-agronomic-crops-in-minnesota/docs/BU-6240S-PUB.pdf)
3.24 [guidelines/fertilizer-recommendations-for-agronomic-crops-in-](http://www.extension.umn.edu/agriculture/nutrient-management/nutrient-lime-guidelines/fertilizer-recommendations-for-agronomic-crops-in-minnesota/docs/BU-6240S-PUB.pdf)
3.25 [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);

4.1 E. Nutrient Management for Commercial Fruit & Vegetable Crops in
4.2 Minnesota, Rosen, Carl J.; Eliason, Roger; University of Minnesota Extension
4.3 (2005): [http://www.extension.umn.edu/garden/fruit-vegetable/nutrient-management-](http://www.extension.umn.edu/garden/fruit-vegetable/nutrient-management-for-commercial-fruit-and-vegetables-in-mn/docs/5886_full.pdf)
4.4 [for-commercial-fruit-and-vegetables-in-mn/docs/5886_full.pdf](http://www.extension.umn.edu/garden/fruit-vegetable/nutrient-management-for-commercial-fruit-and-vegetables-in-mn/docs/5886_full.pdf);

4.5 G. University of Minnesota Extension Nitrogen BMP Brochures, from:
4.6 <http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/>

4.7 Also available on the Minnesota Department of Agriculture Web site at:
4.8 <http://www.mda.state.mn.us/protecting/bmps/nitrogenbmps.aspx>;

4.9 H. Best Management Practices for Nitrogen Use in Minnesota, University
4.10 of Minnesota Extension (2008):
4.11 [http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08560-](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08560-generalMN.pdf)
4.12 [generalMN.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08560-generalMN.pdf);

4.13 I. Best Management Practices for Nitrogen Use in Northwestern Minnesota,
4.14 University of Minnesota Extension (2008):
4.15 [http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08555-](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08555-northwestMN.pdf)
4.16 [northwestMN.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08555-northwestMN.pdf);

4.17 J. Best Management Practices for Nitrogen Use in Southwestern
4.18 and West-Central Minnesota, University of Minnesota Extension (2008):
4.19 [http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08558-](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08558-swwcMN.pdf)
4.20 [swwcMN.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08558-swwcMN.pdf);

4.21 K. Best Management Practices for Nitrogen Use in South-Central Minnesota,
4.22 University of Minnesota Extension (2008):
4.23 [http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08554-](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08554-southcentralMN.pdf)
4.24 [southcentralMN.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08554-southcentralMN.pdf);

4.25 L. Best Management Practices for Nitrogen Use in Southeastern Minnesota,
4.26 University of Minnesota Extension (2008):

5.1 [http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08557-](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08557-southeastMN.pdf)
5.2 [southeastMN.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08557-southeastMN.pdf);

5.3 M. Best Management Practices for Nitrogen Use: Irrigated Potatoes, University
5.4 of Minnesota Extension (2008):
5.5 [http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08559-](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08559-potatoesMN.pdf)
5.6 [potatoesMN.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08559-potatoesMN.pdf); and

5.7 N. Best Management Practices for Nitrogen on Coarse Textured Soils,
5.8 University of Minnesota Extension (2008):
5.9 [http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08556-](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08556-coarsoilsMN.pdf)
5.10 [coarsoilsMN.pdf](http://www.extension.umn.edu/agriculture/nutrient-management/nitrogen/docs/08556-coarsoilsMN.pdf).

5.11 **1573.0030 STATEWIDE WATER RESOURCE PROTECTION REQUIREMENTS.**

5.12 **Subpart 1. Prohibitions.**

5.13 **A. A responsible party must not make:**

5.14 **(1) a fall application of nitrogen fertilizer to cropland located in a**
5.15 **vulnerable groundwater area; or**

5.16 **(2) an application of nitrogen fertilizer to cropland with frozen soil located**
5.17 **in a vulnerable groundwater area.**

5.18 **B. If more than 50 percent of a section meets the definition of a vulnerable**
5.19 **groundwater area, a responsible party must not make:**

5.20 **(1) a fall application of nitrogen fertilizer to cropland located within that**
5.21 **section; or**

5.22 **(2) an application of nitrogen fertilizer to cropland with frozen soil located**
5.23 **within that section.**

6.1 C. The commissioner shall develop a vulnerable groundwater area map. The
6.2 commissioner shall make the map publicly available and post it on the Department
6.3 of Agriculture's Web site.

6.4 D. Any responsible party in charge of cropland in a vulnerable groundwater
6.5 area as depicted on the commissioner's vulnerable groundwater area map is subject
6.6 to items A and B.

6.7 Subp. 2. **Exceptions.** Notwithstanding subpart 1, a responsible party may make a
6.8 fall application in a vulnerable groundwater area in the following situations:

6.9 A. when nitrogen fertilizer is required to establish small grains planted in the
6.10 fall, so long as nitrogen rates follow the Fertilizer Guidelines for Agronomic Crops in
6.11 Minnesota as published by the University of Minnesota Extension;

6.12 B. when nitrogen fertilizer is required for fall pasture fertilization, so long as
6.13 nitrogen rates follow the Fertilizer Guidelines for Agronomic Crops in Minnesota as
6.14 published by the University of Minnesota Extension;

6.15 C. when applying ammoniated polyphosphate or micronutrient formulation
6.16 containing nitrogen, so long as the applied nitrogen rate does not exceed 20 pounds per
6.17 acre. Fields that have had a soil analysis completed by a certified lab and determined
6.18 to have low to very low phosphorus levels according to the Fertilizer Guidelines for
6.19 Agronomic Crops in Minnesota are not subject to the 20 pounds per acre total nitrogen rate;

6.20 D. when making a land application of agricultural chemical contaminated soil
6.21 and other media according to Minnesota Statutes, section 18D.1052; or

6.22 E. when making an application of nitrogen fertilizer for agricultural research
6.23 and demonstrations for academic purposes. Application of nitrogen fertilizer for
6.24 agricultural research and demonstrations is limited to 20 acres or less.

7.1 **1573.0040 PRIVATE WELLS; MITIGATION LEVEL DESIGNATION.**

7.2 Subpart 1. **Application.** This part applies to private wells.

7.3 Subp. 2. **Evaluation of nitrate-nitrogen concentrations in groundwater.** The
7.4 commissioner shall evaluate nitrate-nitrogen concentrations in groundwater from private
7.5 wells pursuant to Minnesota Statutes, section 103H.251, subdivision 1, for purposes
7.6 of making mitigation level 1 and 2 designations. The commissioner shall initially
7.7 designate a township as a mitigation level 1 or a mitigation level 2 township according
7.8 to the criteria in part 1573.0050. The nitrate-nitrogen concentration results obtained
7.9 pursuant to Minnesota Statutes, section 103H.251, subdivision 2, shall be used to issue a
7.10 commissioner's order for water resource protection requirements under part 1573.0080 for
7.11 a mitigation level 3 or 4 township.

7.12 Subp. 3. **Designation of nitrogen fertilizer best management practices and**
7.13 **mitigation levels.**

7.14 A. For a township designated as a mitigation level 2 township, the
7.15 commissioner shall determine the nitrogen fertilizer best management practices applicable
7.16 to that township. The commissioner may form a local advisory team to consult on the
7.17 determination of applicable nitrogen fertilizer best management practices.

7.18 B. The commissioner shall provide notice to the public of the designation of a
7.19 township as a mitigation level 2 township and the nitrogen fertilizer best management
7.20 practices that are applicable to that township through publication in the legal newspaper
7.21 for the affected township and on the Department of Agriculture's Web site.

7.22 Subp. 4. **Monitoring.** For a township the commissioner designates as a mitigation
7.23 level 2 township, the commissioner shall monitor the township's nitrate-nitrogen
7.24 concentrations pursuant to Minnesota Statutes, section 103H.251, subdivision 2, which
7.25 may include establishing a groundwater monitoring network.

8.1 **Subp. 5. Nitrogen fertilizer best management practices evaluation.**

8.2 A. The commissioner shall conduct an evaluation in a mitigation level 2
8.3 township to determine whether the nitrogen fertilizer best management practices approved
8.4 by the commissioner have been implemented on at least 80 percent of the cropland in
8.5 the township. The commissioner shall not conduct an evaluation under this subpart for
8.6 at least three growing seasons subsequent to the publication of the nitrogen fertilizer
8.7 best management practices.

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

8.10 (1) whether alternative management tools have been implemented on
8.11 cropland located in the designated mitigation level 2 township;

8.12 (2) that cropland located in a mitigation level 2 township that is certified
8.13 by the Minnesota Agricultural Water Quality Certification Program is cropland that has
8.14 implemented nitrogen fertilizer best management practices;

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

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

8.23 **Subp. 6. Limitation on change in designation.** The commissioner shall not
8.24 designate a township more than one mitigation level higher than the township's previous
8.25 designation for each period of a minimum of three growing seasons.

9.1 **Subp. 7. Mitigation level 2 townships; reevaluation.**

9.2 A. For a township designated as a mitigation level 2 township, after no fewer
9.3 than three growing seasons, the commissioner shall conduct a reevaluation of the township
9.4 using the criteria in subpart 5, item B. Based on the reevaluation results and the township's
9.5 nitrate-nitrogen concentration levels, the commissioner shall reevaluate a township's
9.6 mitigation level according to part 1573.0050.

9.7 B. The commissioner shall designate a mitigation level 2 township as a
9.8 mitigation level 3 township if the commissioner determines that the nitrogen fertilizer best
9.9 management practices have been implemented on less than 80 percent of cropland in
9.10 the designated township.

9.11 **Subp. 8. Mitigation level 3 townships; reevaluation.**

9.12 A. For a township designated as a mitigation level 3 township, after no fewer
9.13 than three growing seasons, the commissioner shall conduct a reevaluation of the township
9.14 by evaluating the nitrogen fertilizer best management practices using the criteria in
9.15 subpart 5, item B, and reviewing the results of the township's groundwater nitrate-nitrogen
9.16 concentrations.

9.17 B. The commissioner shall designate a mitigation level 3 township as a mitigation
9.18 level 4 township if the township meets the criteria in part 1573.0050, item A, subitem (4).

9.19 **Subp. 9. Mitigation level 4 townships; reevaluation.** For a mitigation level 4
9.20 township, after no fewer than three growing seasons, the commissioner shall conduct a
9.21 reevaluation of the township's mitigation level by reviewing the township's groundwater
9.22 nitrate-nitrogen concentrations.

9.23 **Subp. 10. Downgrade to mitigation level 1.** The commissioner shall downgrade
9.24 a township to a mitigation level 1 if the township's groundwater nitrate-nitrogen
9.25 concentrations demonstrate a stable or downward trend for the 90th percentile of the

10.1 nitrate-nitrogen concentrations and less than ten percent of wells sampled within the
10.2 township have nitrate-nitrogen concentrations greater than the health risk limits.

10.3 Subp. 11. Downgrade to mitigation level 3. The commissioner shall downgrade a
10.4 mitigation level 4 township to a mitigation level 3 township if the township's groundwater
10.5 nitrate-nitrogen concentrations demonstrate a stable or downward trend for the 90th
10.6 percentile of the groundwater nitrate-nitrogen concentrations and less than 15 percent
10.7 of the wells in the township have groundwater nitrate-nitrogen concentrations above
10.8 the health risk limits.

10.9 **1573.0050 MITIGATION LEVEL CRITERIA IN TOWNSHIPS.**

10.10 A. The commissioner shall use the following criteria to make mitigation level
10.11 designations for townships:

10.12 (1) to be designated as a mitigation level 1 township:

10.13 (a) five percent to 9.99 percent of private wells sampled by the
10.14 commissioner within the township have a nitrate-nitrogen concentration that is greater
10.15 than the health risk limits; or

10.16 (b) ten percent or more of private wells sampled by the commissioner
10.17 within the township have nitrate-nitrogen concentrations greater than 7.0 mg/L but less
10.18 than the health risk limits;

10.19 (2) to be designated as a mitigation level 2 township:

10.20 (a) ten percent or more of private wells sampled by the commissioner
10.21 within the township have nitrate-nitrogen concentrations greater than the health risk
10.22 limits and an evaluation of nitrogen best management practices has not been conducted
10.23 by the commissioner; or

10.24 (b) ten percent or more of private wells sampled by the commissioner
10.25 within the township have nitrate-nitrogen concentrations greater than the health risk

11.1 limits and the commissioner's evaluation of nitrogen fertilizer best management practices
11.2 demonstrates that nitrogen fertilizer best management practices are implemented on 80
11.3 percent or more of cropland in the township;

11.4 (3) to be designated as a mitigation level 3 township:

11.5 (a) ten percent or more of the wells sampled by the commissioner
11.6 within the township's groundwater monitoring network have nitrate-nitrogen
11.7 concentrations greater than the health risk limits; and

11.8 (b) the commissioner's evaluation of nitrogen fertilizer best
11.9 management practices demonstrates that nitrogen fertilizer best management practices are
11.10 implemented on less than 80 percent of cropland in the township; or

11.11 (4) to be designated as a mitigation level 4 township:

11.12 (a) 15 percent or more of the wells sampled by the commissioner
11.13 within the township's groundwater monitoring network have nitrate-nitrogen
11.14 concentrations greater than the health risk limits; and

11.15 (b) the commissioner's evaluation of the rate of nitrogen fertilizer
11.16 application demonstrates that the University of Minnesota rate guidelines are implemented
11.17 on less than 80 percent of cropland in the township. Rate requirements must be crop
11.18 specific and based on:

11.19 i. for corn, using the acceptable range for the 0.10 ratio for corn at
11.20 a minimum as defined in Fertilizing Corn in Minnesota;

11.21 ii. for all crops other than corn: Fertilizer Guidelines for
11.22 Agronomic Crops in Minnesota; and Nutrient Management for Commercial Fruit and
11.23 Vegetable Crops in Minnesota; or

11.24 iii. other rate guidelines adopted by the commissioner under
11.25 Minnesota Statutes, section 103H.151, subdivision 2.

12.1 B. In addition to the criteria in item A, the commissioner shall consider the
12.2 following when making township mitigation level designations:

12.3 (1) whether there has been a significant change in the amount of land used
12.4 for agricultural production within a township;

12.5 (2) the severity of the nitrate-nitrogen concentration found in the
12.6 groundwater in a township;

12.7 (3) the percentage of private wells that are over the health risk limit in a
12.8 township;

12.9 (4) the population affected by the groundwater contamination of
12.10 nitrate-nitrogen; and

12.11 (5) other factors expected to influence nitrate-nitrogen concentration.

12.12 C. A mitigation level 2 township shall remain a mitigation level 2 township
12.13 as long as nitrogen fertilizer best management practices are implemented on 80 percent
12.14 or more of the township's cropland, unless the requirements of part 1573.0040, subpart
12.15 10, are met.

12.16 D. A township shall remain a mitigation level 2 until an evaluation of nitrogen
12.17 fertilizer best management practices is conducted by the commissioner.

12.18 **1573.0060 PUBLIC WELLS; MITIGATION LEVEL DESIGNATION.**

12.19 Subpart 1. **Application.** This part applies to public wells.

12.20 Subp. 2. **Evaluation of nitrate-nitrogen concentrations in groundwater.** For
12.21 purposes of making mitigation level 1 and 2 designations, the commissioner shall evaluate
12.22 nitrate-nitrogen concentrations in groundwater from public wells pursuant to Minnesota
12.23 Statutes, section 103H.251, subdivision 1. The commissioner shall initially designate a
12.24 drinking water supply management area as a mitigation level 1 or a mitigation level 2
12.25 drinking water supply management area according to the criteria in part 1573.0070. Public

13.1 well nitrate-nitrogen concentration data provided by the commissioner of health or a
13.2 designee under chapter 4720 must be used to issue water resource protection requirement
13.3 orders under part 1573.0080 for mitigation level 3 or 4 drinking water supply management
13.4 areas.

13.5 **Subp. 3. Designation of nitrogen fertilizer best management practices and**
13.6 **mitigation levels.**

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

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

13.17 **Subp. 4. Nitrogen fertilizer best management practices evaluation.**

13.18 A. The commissioner shall conduct an evaluation in a designated mitigation
13.19 level 2 drinking water supply management area to determine whether the nitrogen fertilizer
13.20 best management practices approved by the commissioner have been implemented on at
13.21 least 80 percent of the cropland. The commissioner shall conduct the evaluation under
13.22 this subpart after no fewer than three growing seasons subsequent to the publication of
13.23 the best management practices.

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

14.1 (1) whether alternative management tools have been implemented on
14.2 cropland located in the mitigation level 2 drinking water supply management area;

14.3 (2) that cropland located in a mitigation level 2 drinking water supply
14.4 management area that is certified by the Minnesota Agricultural Water Quality Certification
14.5 Program is cropland that has implemented nitrogen fertilizer best management practices;

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

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

14.14 **Subp. 5. Limitation on change in designation.** The commissioner shall not
14.15 designate a drinking water supply management area more than one mitigation level higher
14.16 than the drinking water supply management area's previous designation for each period
14.17 of a minimum of three growing seasons.

14.18 **Subp. 6. Mitigation level 2 drinking water supply management area;**
14.19 **reevaluation.**

14.20 A. For a mitigation level 2 drinking water supply management area, after no
14.21 fewer than three growing seasons, the commissioner shall conduct a reevaluation of the
14.22 drinking water supply management area using the criteria in subpart 4, item B. Based
14.23 on the evaluation results and the nitrate-nitrogen concentration of the drinking water
14.24 supply management area, the commissioner shall reevaluate the drinking water supply
14.25 management area's mitigation level as defined in part 1573.0070.

15.1 B. The commissioner shall designate a mitigation level 2 drinking water supply
15.2 management area as a mitigation level 3 drinking water supply management area if
15.3 the commissioner determines through a nitrogen fertilizer best management practices
15.4 evaluation that the nitrogen fertilizer best management practices have been implemented on
15.5 less than 80 percent of cropland in the designated drinking water supply management area.

15.6 **Subp. 7. Mitigation level 3 drinking water supply management area;**
15.7 **reevaluation.**

15.8 A. For a mitigation level 3 drinking water supply management area, after no
15.9 fewer than three growing seasons, the commissioner shall conduct a reevaluation of
15.10 the drinking water supply management area by reevaluating the nitrogen fertilizer best
15.11 management practices using the criteria in subpart 4, item B, and reviewing the results
15.12 of the nitrate-nitrogen concentrations of the drinking water supply management area
15.13 provided by the commissioner of health or a designee.

15.14 B. The commissioner shall designate a mitigation level 3 drinking water supply
15.15 management area as a mitigation level 4 drinking water supply management area if the
15.16 drinking water supply management area meets the criteria listed in part 1573.0070, item
15.17 A, subitem (4).

15.18 **Subp. 8. Mitigation level 4 drinking water supply management area;**
15.19 **reevaluation.** For a mitigation level 4 drinking water supply management area, after
15.20 no fewer than three growing seasons, the commissioner shall conduct a reevaluation
15.21 of the drinking water supply management area's mitigation level by reviewing the
15.22 nitrate-nitrogen concentrations in the drinking water supply management area provided by
15.23 the commissioner of health or a designee.

15.24 **Subp. 9. Downgrade to mitigation level 1.** The commissioner shall downgrade a
15.25 drinking water supply management area to a mitigation level 1 when the statistical trend
15.26 analysis for nitrate-nitrogen concentrations is not projected to exceed the health risk

16.1 limits and if the groundwater nitrate-nitrogen concentration has been under 9.0 mg/L
16.2 for a period of ten years.

16.3 Subp. 10. Downgrade to mitigation level 3. The commissioner shall downgrade
16.4 a drinking water supply management area to a mitigation level 3 drinking water supply
16.5 management area when the statistical trend analysis for nitrate-nitrogen concentrations is
16.6 not projected to exceed the health risk limits for a period of ten years and if the concentration
16.7 has not reached or exceeded 9.0 mg/L more than twice in the past ten-year period.

16.8 **1573.0070 MITIGATION LEVEL CRITERIA IN DRINKING WATER SUPPLY**
16.9 **MANAGEMENT AREAS.**

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

16.12 (1) to be designated as a mitigation level 1 drinking water supply
16.13 management area, the groundwater nitrate-nitrogen concentration of a public well must
16.14 be 5.4 mg/L or greater but less than 9.0 mg/L in the previous ten years according to data
16.15 provided by the commissioner of health or a designee;

16.16 (2) to be designated as a mitigation level 2 drinking water supply
16.17 management area:

16.18 (a) the commissioner's evaluation of nitrogen fertilizer best
16.19 management practices demonstrates that nitrogen fertilizer best management practices are
16.20 implemented on 80 percent or more of cropland in the drinking water supply management
16.21 area. A drinking water supply management area shall remain a mitigation level 2 until an
16.22 evaluation of nitrogen best management practices is conducted by the commissioner; or

16.23 (b) the commissioner's evaluation of nitrogen fertilizer best
16.24 management practices demonstrates that nitrogen fertilizer best management practices are
16.25 implemented on 80 percent or more of cropland in the drinking water supply management
16.26 area; and

17.1 (c) the groundwater nitrate-nitrogen concentration data of a public
17.2 well provided by the commissioner of health or a designee meets one of the following:

17.3 i. the statistical trend analysis of the groundwater nitrate-nitrogen
17.4 concentration data for the previous ten years demonstrates that the groundwater
17.5 nitrate-nitrogen concentrations of a public well is projected to exceed the health risk limits
17.6 in the next ten years; or

17.7 ii. the nitrate-nitrogen concentration of a public well is 9.0 mg/L or
17.8 higher at any point in the previous ten years; and

17.9 (3) to be designated as a mitigation level 3 drinking water supply
17.10 management area:

17.11 (a) the commissioner's evaluation of nitrogen fertilizer best
17.12 management practices demonstrates that nitrogen fertilizer best management practices are
17.13 implemented on less than 80 percent of cropland in the drinking water supply management
17.14 area; and

17.15 (b) the groundwater nitrate-nitrogen concentration data of a public
17.16 well provided by the commissioner of health or a designee meets one of the following:

17.17 i. the statistical trend analysis of the groundwater nitrate-nitrogen
17.18 concentration data for the previous ten years demonstrates that the groundwater
17.19 nitrate-nitrogen concentration of a public well is projected to exceed the health risk limits
17.20 in the next ten years; or

17.21 ii. the nitrate-nitrogen concentration of a public well is 9.0 mg/L
17.22 or higher at any point in the previous ten years; and

17.23 (4) to be designated as a mitigation level 4 drinking water supply
17.24 management area:

18.1 (a) the groundwater nitrate-nitrogen concentration of a public well is
18.2 9.0 mg/L or higher for any three samples collected in the previous ten years, as provided
18.3 by the commissioner of health or a designee; and

18.4 (b) the commissioner's evaluation of the rate of nitrogen fertilizer
18.5 application demonstrates that the University of Minnesota rate guidelines are implemented
18.6 on less than 80 percent of cropland in the drinking water supply management area. Rate
18.7 requirements must be crop specific and based on:

18.8 i. for corn, using the acceptable range for the 0.10 ratio for corn at
18.9 a minimum as defined in Fertilizing Corn in Minnesota;

18.10 ii. for all crops other than corn: Fertilizer Guidelines for
18.11 Agronomic Crops in Minnesota; and Nutrient Management for Commercial Fruit and
18.12 Vegetable Crops in Minnesota; or

18.13 iii. other rate guidelines adopted by the commissioner under
18.14 Minnesota Statutes, section 103H.151, subdivision 2.

18.15 B. In addition to the criteria in item A, the commissioner shall consider
18.16 the following when making drinking water supply management area mitigation level
18.17 designations:

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

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

18.22 (3) the population affected by the groundwater contamination of
18.23 nitrate-nitrogen; and

18.24 (4) other factors expected to influence nitrate-nitrogen concentration.

19.1 C. A mitigation level 2 drinking water supply management area shall remain a
19.2 mitigation level 2 drinking water supply management area regardless of the public wells
19.3 nitrate-nitrogen concentration as long as nitrogen fertilizer best management practices
19.4 are implemented on no less than 80 percent of the drinking water supply management
19.5 area's cropland.

19.6 **1573.0080 COMMISSIONER'S ORDER FOR SITE-SPECIFIC WATER**
19.7 **RESOURCE PROTECTION REQUIREMENTS.**

19.8 **Subpart 1. Commissioner's order.**

19.9 A. The commissioner shall issue a water resource protection requirement order
19.10 to mitigation level 3 and 4 townships and mitigation level 3 and 4 drinking water supply
19.11 management areas that meet the criteria in parts 1573.0050 and 1573.0070. In prioritizing
19.12 the issuance of orders throughout the state, the commissioner shall consider the following:

19.13 (1) the level of the nitrate-nitrogen concentrations in the mitigation level 2
19.14 township or the mitigation level 2 drinking water supply management area as determined
19.15 by a groundwater monitoring network or by the commissioner of health's public well
19.16 data; and

19.17 (2) the results of the nitrogen fertilizer best management practices
19.18 evaluation of a mitigation level 2 township or a drinking water supply management area
19.19 conducted by the commissioner.

19.20 B. A commissioner's water resource protection requirement order shall include
19.21 the following:

19.22 (1) the township's or drinking water supply management area's mitigation
19.23 level;

19.24 (2) the results of the commissioner's evaluation of the nitrate-nitrogen
19.25 concentrations in the groundwater of the specific township;

20.1 (3) the townships or drinking water supply management areas that are
20.2 subject to the order;

20.3 (4) the water resource protection requirements for the townships or
20.4 drinking water supply management areas that are subject to the order;

20.5 (5) the effective date of the order; and

20.6 (6) information on the responsible party's right to request a contested case
20.7 hearing regarding the water resource protection requirements.

20.8 C. A commissioner's water resource protection requirement order applies to
20.9 the responsible party in any township or drinking water supply management area that is
20.10 subject to an order. The commissioner may combine two or more contiguous townships or
20.11 drinking water supply management areas if the areas subject to the order have the same
20.12 mitigation level and similar cropping systems.

20.13 **Subp. 2. Notice of order.**

20.14 A. The commissioner shall hold at least one public informational meeting
20.15 in the county of the mitigation area subject to the proposed water resource protection
20.16 requirement order prior to publishing the proposed order.

20.17 B. The commissioner shall publish notice of the proposed water resource
20.18 protection requirement order in two consecutive issues of the legal newspaper for any
20.19 affected township or drinking water supply management area and in the State Register at
20.20 least 60 days before the proposed effective date of the order.

20.21 C. The commissioner shall provide the notice required under item B to the
20.22 following entities whose jurisdiction includes a mitigation area:

20.23 (1) soil and water conservation districts;

20.24 (2) township boards;

21.1 (3) cities; and

21.2 (4) counties.

21.3 D. The commissioner shall also provide the notice required under item B to the
21.4 executive director of the Board of Water and Soil Resources, the commissioner of natural
21.5 resources, the commissioner of the Pollution Control Agency, the commissioner of health,
21.6 and the executive director of the Environmental Quality Board.

21.7 E. The commissioner must provide the notices required under this subpart
21.8 at least 60 days before the proposed effective date of the water resource protection
21.9 requirement order.

21.10 **Subp. 3. Contested case hearing.**

21.11 A. Following publication of the proposed water resource protection requirement
21.12 order as required by subpart 2, any person or entity subject to the order may petition
21.13 for a contested case hearing to challenge a proposed mitigation level or water resource
21.14 protection requirement.

21.15 B. A petition for a hearing must contain a statement of the issue or issues
21.16 proposed to be addressed at the hearing as well as the part of the proposed water resource
21.17 protection requirement order to be challenged. The petition must also contain the specific
21.18 relief or resolution requested as well as the proposed findings of fact in dispute.

21.19 C. Upon receipt of a timely petition for a hearing, the commissioner shall
21.20 order a public hearing. The commissioner shall publish the order for hearing in the legal
21.21 newspaper for the affected township or drinking water supply management area and in
21.22 the State Register at least 30 days before the public hearing. The public hearing shall
21.23 be held within 60 days of the proposed effective date of the proposed water resource
21.24 protection requirement order before an administrative law judge in the county in which the
21.25 mitigation area is located.

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

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

22.7 F. Within 30 days of the issuance of the recommended findings of fact,
22.8 conclusions of law, and final order by the administrative law judge, the commissioner shall
22.9 issue a final water resource protection requirement order, which is the final decision of
22.10 the agency for a contested case for purposes of judicial review under Minnesota Statutes,
22.11 sections 14.63 to 14.69.

22.12 G. The commissioner shall publish notice of the final water resource protection
22.13 requirement order in two consecutive issues of the legal newspaper for any affected
22.14 township or drinking water supply management area.

22.15 The commissioner shall also provide the notice of the final water resource protection
22.16 requirement order to the executive director of the Board of Water and Soil Resources, the
22.17 commissioner of natural resources, the commissioner of the Pollution Control Agency, the
22.18 commissioner of health, and the executive director of the Environmental Quality Board.

22.19 Subp. 4. **Final order.** If the commissioner does not receive any petitions requesting
22.20 a hearing under subpart 3 within 60 days of the publication of the proposed water
22.21 resource protection requirement order, the published proposed water resource protection
22.22 requirement order shall be effective on the date provided in the proposed order.

22.23 Subp. 5. **Amendment to order.**

22.24 A. The commissioner may amend the content of a water resource protection
22.25 requirement order based on revised nitrogen fertilizer best management practices or other
22.26 recommended practices.

23.1 B. The commissioner shall publish notice of the proposed water resource
23.2 protection requirement order amendments in two consecutive issues of the legal
23.3 newspaper for any affected township or drinking water supply management area and in
23.4 the State Register at least 30 days before the proposed effective date of the amendments.
23.5 The commissioner shall also provide notice of the proposed water resource protection
23.6 requirement order amendments to the executive director of the Board of Water and
23.7 Soil Resources, the commissioner of natural resources, the commissioner of the
23.8 Pollution Control Agency, the commissioner of health, and the executive director of the
23.9 Environmental Quality Board at least 30 days before the proposed effective date of the
23.10 amendments.

23.11 C. Any person or entity subject to the proposed water resource protection
23.12 requirement order amendments has 30 days from the date of publication of the
23.13 amendments under item B to provide written comments to the commissioner on the
23.14 proposed amendments.

23.15 D. The commissioner shall publish the amended final water resource protection
23.16 requirement order in two consecutive issues in the legal newspaper for any township or
23.17 drinking water supply management area affected by the amendments to the order.

23.18 E. The amended final water resource protection requirement order is effective
23.19 upon publication under item D.

23.20 **Subp. 6. Judicial review.**

23.21 A. Any person or entity aggrieved by a final water resource protection
23.22 requirement order or an amended water resource protection requirement order may seek
23.23 judicial review pursuant to Minnesota Statutes, sections 14.63 to 14.69.

23.24 B. For judicial review of an amended water resource protection requirement
23.25 order, only the amendments to the order are subject to judicial review.

24.1 Subp. 7. **Recording.** The commissioner shall record all final water resource
24.2 protection requirement orders and amendments to final orders in the appropriate county.

24.3 **1573.0090 REQUIREMENTS FOR SITE-SPECIFIC WATER RESOURCE**
24.4 **PROTECTION REQUIREMENT ORDERS.**

24.5 A. A responsible party in a mitigation level 3 or 4 township or a mitigation level
24.6 3 or 4 drinking water supply management area must comply with the following:

24.7 (1) maintain records of nitrogen application, including application rates,
24.8 crediting of all organic and inorganic nitrogen sources, timing, and placement for six years
24.9 from application starting with the effective date of the mitigation level designations;

24.10 (2) provide records maintained under this part to the commissioner upon
24.11 request;

24.12 (3) comply with the prohibitions on fall application and application to
24.13 frozen soils under part 1573.0030, unless the application is exempt from the prohibitions
24.14 under part 1573.0030; and

24.15 (4) comply with any water resource protection requirement orders that
24.16 apply to the township or drinking water supply management area governing the cropland
24.17 over which the responsible party has control.

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

24.19 **1573.0100 SITE-SPECIFIC WATER RESOURCE PROTECTION**
24.20 **REQUIREMENTS.**

24.21 Subpart 1. **Mitigation level 3.** The commissioner shall consider the following for
24.22 inclusion in a water resource protection requirement order for mitigation level 3 townships
24.23 or mitigation level 3 drinking water supply management areas:

24.24 A. nitrogen fertilizer best management practices adopted by the commissioner
24.25 pursuant to Minnesota Statutes, section 103H.151, subdivision 2;

- 25.1 B. application guidelines for nitrogen fertilizer from the University of Minnesota;
- 25.2 C. education activities approved by the commissioner;
- 25.3 D. field testing to determine nitrogen crop needs;
- 25.4 E. manure testing using a lab certified by the commissioner;
- 25.5 F. other testing as needed to monitor nitrate-nitrogen concentrations in the
25.6 groundwater;
- 25.7 G. nitrogen crediting from previous crops, manure application, irrigation
25.8 application, and all other sources of nitrogen;
- 25.9 H. irrigation, fertigation, water, manure, and nutrient management plans
25.10 developed or approved by a qualified professional;
- 25.11 I. soil amendments registered with the commissioner that reduce the need for
25.12 or improve the use of nitrogen;
- 25.13 J. plant amendments registered with the commissioner that reduce the need for
25.14 or improve the use of nitrogen;
- 25.15 K. products delaying nitrification, approved by the commissioner; or
- 25.16 L. products delaying plant available nitrogen, approved by the commissioner.
- 25.17 Subp. 2. **Mitigation level 4.** The commissioner shall include the following in a
25.18 water resource protection requirement order for mitigation level 4 townships or drinking
25.19 water supply management areas:
- 25.20 A. any requirement listed in subpart 1; and
- 25.21 B. specific rate requirements for crops.

26.1 **1573.0110 WATER QUALITY CERTIFICATION PROGRAM EXEMPTION.**

26.2 A responsible party certified through the Minnesota agricultural water quality
26.3 certification program under Minnesota Statutes, sections 17.9891 to 17.993, is deemed to
26.4 be in compliance with this chapter for the duration of the water quality certification.

26.5 **1573.0120 ALTERNATIVE MANAGEMENT TOOLS; ALTERNATIVE**
26.6 **PROTECTION REQUIREMENTS.**

26.7 Subpart 1. **Authorization.** A responsible party located within a township or
26.8 drinking water supply management area with a mitigation level 2, 3, or 4 designation
26.9 may implement alternative management tools or alternative protection requirements, as
26.10 authorized under Minnesota Statutes, section 103H.275, subdivision 2, paragraph (e), in
26.11 addition to the requirements contained in the water resource protection requirement order
26.12 applicable to that responsible party's cropland.

26.13 Subp. 2. **Alternative management tools.**

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

26.16 B. A responsible party subject to a water resource protection requirement order
26.17 may choose to use an alternative management tool as an alternative to a requirement in the
26.18 order. Records must be kept of all alternative management tools used.

26.19 Subp. 3. **Alternative protection requirements.**

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

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

27.1 C. The commissioner shall issue an order approving or denying the alternative
27.2 protection requirement request within 60 days of receipt of a completed application.

27.3 D. If the commissioner denies an applicant's request for the use of alternative
27.4 protection requirements, an applicant may appeal the commissioner's decision within 30
27.5 days of the denial. The applicant must submit the appeal in writing and include the reasons
27.6 in support of the appeal and any supporting evidence. The commissioner's final decision
27.7 is subject to judicial review pursuant to Minnesota Statutes, sections 14.63 to 14.69. A
27.8 decision that is not timely appealed to the commissioner is a final agency decision and
27.9 is not subject to judicial review.