



University of Arkansas Division of Agriculture

An Agricultural Law Research Project

Application Restrictions Statutes & Regulations

Minnesota

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Application Restrictions

STATE OF MINNESOTA

- 1) **Minn. Stat. § 18C.433; Minn. R. 7020.2225; Manure Applicator Education; Commercial Animal Waste Technician Licensing**
- 2) **Minn. Stat. §§ 103A.204, 103H; Adopted Groundwater Protection Rules; Minnesota Nitrogen Fertilizer Management Plan**
- 3) **Minn. Stat. §§ 103B.101, 103E.315, 103F.421, 48, 477A.21; Buffers; Administrative Penalty Order (APO) – Plan for Buffer Law Implementation**

The statutes and Constitution are current through the 2018 regular and special legislative sessions. The statutes are subject to changes by the Minnesota Revisor's Office.

1) Minn. Stat. § 18C.433; Minn. R. 7020.2225; Manure Applicator Education; Commercial Animal Waste Technician Licensing

§ 18C.433. COMMERCIAL ANIMAL WASTE APPLICATION.

Subdivision 1. Requirement. Beginning January 1, 2006, only a commercial animal waste technician site manager or commercial animal waste technician applicator may apply animal waste from a feedlot that:

- (1) has a capacity of 300 animal units or more; and
- (2) does not have an updated manure management plan that meets the requirements of Pollution Control Agency rules.

Subd. 2. [Repealed by amendment, 2004 c 254 s 4]

Subd. 3. [Repealed by amendment, 2004 c 254 s 4]

7020.2225. LAND APPLICATION OF MANURE.

Subpart 1. In general.

A. Manure and process wastewater must not be applied to land in a manner that will: result in a discharge to waters of the state during the application process,

except that manure and process wastewater application is allowed onto seasonally saturated soils that are seeded to annual farm crops or crop rotations of perennial grasses or legumes; or cause pollution of waters of the state due to manure-contaminated runoff.

B. Manure and process wastewater application into road ditches is prohibited.

C. All manure and process wastewater applications to land must meet the requirements of this part except where specifically exempted.

D. When ownership of manure or process wastewater is transferred from an animal feedlot with capacity of 300 or more animal units or a manure storage area capable of holding the manure produced by 300 or more animal units for application to land not owned or leased by the owner of the animal feedlot or the manure storage area, any person receiving the manure or the process wastewater shall: comply with the manure management plan completed by the owner of the animal feedlot where the manure or process wastewater was produced; and complete the manure management plan requirements in subpart 4, item D, except for provisions that were completed by the owner of the animal feedlot where the manure or process wastewater was produced.

Subp. 2. *Manure nutrient testing requirements.* Manure from all manure storage areas storing manure produced from more than 100 animal units must be tested by the owner of the animal feedlot for nitrogen and phosphorus content in accordance with items A to E, except that item A is not required for manure storage areas storing manure produced by fewer than 300 animal units.

A. For manure storage areas storing manure from 300 or more animal units, the manure must initially be tested once per year for at least three years.

B. Manure must be retested following changes in conditions affecting manure nutrient content including unusual climatic conditions, or changes in manure storage and handling, livestock types, or livestock feed.

C. Ongoing testing must continue at least once every four years unless more frequent testing is required under item B or in a permit.

D. The nutrient analysis must be conducted using a laboratory certified by the Minnesota Department of Agriculture or commissioner-approved on-farm sampling and analysis.

E. Sampling must be conducted so that a representative sample is obtained in accordance with University of Minnesota Extension Service recommendations.

Subp. 3. *Nutrient application rate standards.* Items A and B apply to all manure and process wastewater application sites. Item C applies only to animal feedlots with a

capacity of 300 or more animal units and manure storage areas capable of holding the manure produced by 300 or more animal units.

A. Manure and process wastewater application rates must be limited as described in subitems (1) to (3) so that the estimated plant available nitrogen from all nitrogen sources does not exceed expected crop nitrogen needs for nonlegume crops and expected nitrogen removal for legumes. Expected crop nitrogen needs, crop nitrogen removal rates, and estimated plant available nitrogen from manure and legumes must be based on the most recent published recommendations of the University of Minnesota Extension Service or of another land grant college in a contiguous state. Estimated plant available nitrogen from organic nitrogen sources, including manure, may deviate up to 20 percent from University of Minnesota Extension Service, or of another land grant college in a contiguous state, estimates where site nutrient management history, soil conditions, or cool weather warrant additional nitrogen application. When crop nitrogen deficiencies are visible or measured, remedial nitrogen applications above the 20 percent deviation can be made. Nitrogen sources include commercial fertilizer nitrogen, soil organic matter, irrigation water, legumes grown during previous years, biosolids, process wastewater, and manure applied for the current year and previous years.

B. Nutrient application rate standards for land in special protection areas must meet the requirements in subpart 6, item B, subitem (2), if applicable.

C. For land receiving manure or process wastewater from animal feedlots capable of holding 300 or more animal units or manure storage areas capable of holding the manure produced by 300 or more animal units, soil samples from the upper six inches must be collected at a minimum frequency of once every four years and analyzed for phosphorus using the Bray P1 or Olsen test. If soil phosphorus levels exceed the levels in subitems (1) and (2), then the owner must complete a manure management plan in accordance with subpart 4, item D, and submit it with a permit application to the agency or delegated county for review in accordance with subpart 4, item B, subitem (1). Fields in special protection areas or within 300 feet of open tile intakes that have an average soil phosphorus test level exceeding 75 ppm using the Bray P1 test or 60 ppm using the Olsen test. Fields outside the special protection areas and more than 300 feet from open tile intakes that have an average soil phosphorus test level exceeding 150 ppm using the Bray P1 test or 120 ppm using the Olsen test.

Subp. 4. Manure management plan requirements. Item A indicates who must prepare a manure management plan and when the plan must be prepared. Item B lists when manure management plans must be submitted to the agency or delegated county for review. Item C describes when the manure management plan must be reviewed and revised. Item D lists the required elements of a manure management plan. Item E describes exceptions to manure management plans when manure ownership is transferred.

A. An owner or operator of an animal feedlot shall prepare and retain on file a manure management plan that complies with item D according to the following schedule: upon application for an NPDES, SDS, interim, or construction short-form permit for a facility capable of holding 100 or more animal units; an owner of an animal feedlot capable of holding 300 or more animal units that is not required to obtain an NPDES, SDS, interim, or construction short-form permit shall prepare or update a manure management plan prior to January 1, 2005, when a manure management plan does not meet the requirements of this part or reflect current operations and the manure is applied by someone other than a commercial animal waste technician or a certified private manure applicator; and once a manure management plan is required for a facility, a plan that meets the requirements under this subpart must be retained on file at the animal feedlot or manure storage area.

B. A manure management plan that complies with the requirements of item D must be submitted to the commissioner or delegated county when any one of the following conditions applies: when an owner submits a permit application to the commissioner for an NPDES, SDS, or interim permit under part 7020.0405, subpart 1, item C, subitem (3); or the manure management plan is requested by the commissioner or county feedlot pollution control officer.

C. The manure management plan must be reviewed by the owner each year and adjusted for any changes in the amount of manure production, manure nutrient test results, fields available for receiving manure, crop rotations, or other practices which affect the available nutrient amounts or crop nutrient needs on fields receiving manure.

D. Except as provided in item E, the manure management plan must contain: a description of the manure storage/handling system and the expected annual amount of manure and nutrients which will need to be land applied; application methods, equipment, and calibration procedures; acreage available for manure and process wastewater application including maps or aerial photos showing field locations and areas within the fields that are suitable for manure or process wastewater application; a description of nutrient testing methods and frequency and the expected nutrient content of the manure to be applied; planned manure application rates and assumptions used to determine these rates, including assumptions of crop nitrogen and phosphorus needs and nitrogen and phosphorus supplied from all manure and nonmanure sources; total nitrogen and phosphorus amounts from manure and nonmanure sources to be applied per acre on each field and for each crop in the rotation when applied in accordance with the planned manure or process wastewater application rates established under subitem (5); expected first and second year plant available nutrients from the manure and process wastewater; expected months of application; a description of protective measures to minimize the risk of surface water and groundwater contamination when applying manure or process wastewater in a floodplain, special protection area, soils with less than three feet above limestone bedrock, drinking water

supply management areas where the aquifer is designated vulnerable under chapter 4720, and land within 300 feet of all surface tile intakes, sinkholes without constructed diversions, and uncultivated wetlands. Protective measures include, but are not limited to, soil and water conservation measures, timing of application, methods of application, manure application rates, and frequency of application; for application onto frozen or snow-covered soil, the following information about the fields that may receive the manure or process wastewater: field location; land slopes; proximity of fields to surface waters; expected months of application for each field; and tillage and other conservation measures used to minimize risk of manure-contaminated runoff; a description of how phosphorus from manure is to be managed to minimize phosphorus transport to surface waters resulting from soil phosphorus build-up to levels described in subpart 3, item C; plans for soil nitrate testing in accordance with University of Minnesota Extension Service recommendations; and type of cover crop to be planted when manure is to be applied in June, July, or August to fields that have been harvested and would otherwise not have active growing crops for the remainder of the growing season.

E. When ownership of manure from an animal feedlot capable of holding 300 or more animal units or a manure storage area capable of holding the manure produced by 300 or more animal units is to be transferred for application to fields not owned or leased by the owner of the animal feedlot or manure storage area, the owner of the animal feedlot where the manure was produced need not include the requirements in item D, subitems (3), (5) to (7), and (10) in the owner's manure management plan. Any person receiving the manure shall comply with subpart 1, item C.

Subp. 5. Record keeping. Item A establishes the length of time that records must be kept. Items B and C indicate the information needed in records depending on the size and location of the facility.

A. Any person applying or receiving manure or process wastewater from a facility capable of holding 100 or more animal units shall maintain records of the amount of manure or process wastewater application on file: for the most recent six years for manure or process wastewater application within special protection areas; and for the most recent three years on land not covered under subitem (1).

B. For an animal feedlot capable of holding 300 or more animal units or a manure storage area capable of holding the manure produced by 300 or more animal units, or where manure or process wastewater is applied from an animal feedlot capable of holding 100 or more animal units or a manure storage area capable of holding the manure produced by 100 or more animal units in a drinking water supply management area where the aquifer is designated vulnerable under chapter 4720, records kept in accordance with item A must contain the following information: field locations and cropland acreage where manure is applied; volume or tonnage of manure applied on each field; manure

test nitrogen and phosphorus content, as required by subpart 2; dates of application; dates of manure incorporation when incorporating within ten days; expected plant-available amounts of nitrogen and phosphorus released from manure and commercial fertilizers on each field where manure is applied; a description of changes to the manure management plan, including documentation of the justification for any remedial nitrogen applications that exceed the nitrogen rate standard in subpart 3; and soil nutrient test results.

C. For an animal feedlot or a manure storage area with a capacity of 100 or more animal units and fewer than 300 animal units, where manure or process wastewater will not be applied in a drinking water supply management area in which the aquifer is designated vulnerable under chapter 4720, records kept in accordance with item A must contain the following: information necessary to credit the nitrogen available for crop growth that is supplied by manure and process wastewater applications; and manure and process wastewater test results for nitrogen and phosphorus content, if required in subpart 2.

D. Where manure or process wastewater from animal feedlots or manure storage areas with a capacity of 300 or more animal units is transferred for application to fields not owned or leased by the owner of the animal feedlot which produced the manure, the owner of the animal feedlot or the manure storage area from which the manure is produced must meet the following requirements: the manure and process wastewater records for the most recent three years must be kept on file and must contain the following information: the volume or tonnage of manure or process wastewater delivered; the nutrient content of the manure or process wastewater delivered; the name and address of any commercial hauler or applicator who received the manure or process wastewater; and the location where the manure or process wastewater was applied and rate of application; and commercial applicators spreading manure or process wastewater onto land not owned or leased by the owner of the animal feedlot or the manure storage area from which the manure or process wastewater is produced shall keep records, in accordance with subitem (1). A copy of these records must be submitted to the owner of the animal feedlot or the manure storage area from which the manure or process wastewater is produced no later than 60 days following land application.

Subp. 6. Manure and process wastewater application requirements in special protection areas.

A. Manure or process wastewater must not be applied to frozen or snow-covered soils in special protection areas.

B. Manure or process wastewater applied to unfrozen soils in special protection areas must comply with subitem (1), (2), or (3). A vegetative buffer must be maintained that: consists of perennial grasses or forages; is a minimum of 100 feet wide along lakes and perennial streams and 50 feet wide in other special protection areas; and does not receive manure applications from any animal

feedlot or manure storage area. The following practices must be complied with: no application within 25 feet of the protected water, protected wetland, intermittent stream, or drainage ditch in the special protection area; inject or incorporate within 24 hours and prior to rainfall; and apply at a rate and/or frequency which will not allow soil phosphorus levels to increase over any six-year period with the following exception: soil phosphorus may be increased to 21 ppm (Bray P1) or 16 ppm (Olsen) when soil testing indicates soil phosphorus test concentrations are less than these values. Other agency-approved practices must be implemented that have been demonstrated through research by a land grant college to provide an equal degree of water quality protection as the measures in subitems (1) and (2).

C. Manure and process wastewater application by a traveling gun, center pivot, or other irrigation equipment that allows liquid application of manure to travel more than 50 feet in the air is prohibited in special protection areas.

Subp. 7. *Manure and process wastewater application for land within 300 feet of open tile intakes.* Manure and process wastewater applied within 300 feet of open tile intakes, and where manure-contaminated runoff may flow into the open tile intake, must be injected or incorporated within 24 hours of application according to the schedule in items A and B unless other agency-approved water quality protection management practices are implemented in accordance with item C.

A. All liquid manure and process wastewater applied within 300 feet of open tile intakes must be injected or incorporated within 24 hours of application beginning October 23, 2000.

B. All manure and process wastewater applied within 300 feet of open tile intakes must be injected or incorporated within 24 hours of application when applied after October 1, 2005.

C. Other agency-approved practices must be implemented that have been demonstrated through research by a land grant college to provide an equal degree of water quality protection as injection or incorporation within 24 hours.

Subp. 8. *Manure and process wastewater application near sinkholes, mines, quarries, and wells.*

A. Manure and process wastewater must not be applied to land within 50 feet of an active or inactive water supply well, sinkhole, mine, or quarry.

B. Manure and process wastewater must be incorporated within 24 hours of surface application when applied to land that slopes toward a sinkhole and is less than 300 feet from the sinkhole except that no setback incorporation is necessary where diversions prevent manure-contaminated runoff from entering the sinkhole.

Minnesota Department of Agriculture

[Manure Applicator Education](#)

Department of Agriculture

[Commercial Animal Waste Technician Licensing](#)

2) Minn. Stat. §§ 103A.204, 103H; Adopted Groundwater Protection Rules; Minnesota Nitrogen Fertilizer Management Plan

§ 103A.204. GROUNDWATER POLICY.

(a) The responsibility for the protection of groundwater in Minnesota is vested in a multiagency approach to management. The following is a list of agencies and the groundwater protection areas for which the agencies are primarily responsible; the list is not intended to restrict the areas of responsibility to only those specified:

- (1) Environmental Quality Board: coordination of state groundwater protection programs;
- (2) Pollution Control Agency: water quality monitoring and reporting and the development of best management practices and regulatory mechanisms for protection of groundwater from nonagricultural chemical contaminants;
- (3) Department of Agriculture: sustainable agriculture, integrated pest management, water quality monitoring, and the development of best management practices and regulatory mechanisms for protection of groundwater from agricultural chemical contaminants;
- (4) Board of Water and Soil Resources: reporting on groundwater education and outreach with local government officials, local water planning and management, and local cost share programs;
- (5) Department of Natural Resources: water quantity monitoring and regulation, sensitivity mapping, and development of a plan for the use of integrated pest management and sustainable agriculture on state-owned lands; and
- (6) Department of Health: regulation of wells and borings, and the development of health risk limits under section 103H.201.

(b) The Environmental Quality Board shall prepare a report on policy issues related to its responsibilities listed in paragraph (a), and include these reports with the assessments in section 103A.43 and the "Minnesota Water Plan" in section 103B.151.

§ 103H.001. DEGRADATION PREVENTION GOAL.

It is the goal of the state that groundwater be maintained in its natural condition, free from any degradation caused by human activities. It is recognized that for some human activities this degradation prevention goal cannot be practicably achieved. However, where prevention is practicable, it is intended that it be achieved. Where it is not currently practicable, the development of methods and technology that will make prevention practicable is encouraged.

§ 103H.005. DEFINITIONS.

Subdivision 1. *Applicability.* The definitions in this section apply to this chapter.

Subd. 2. *Agricultural chemical.* "Agricultural chemical" means a pesticide, fertilizer, plant amendment, or soil amendment.

Subd. 3. *Health risk limits.* "Health risk limits" means a concentration of a substance or chemical adopted by rule of the commissioner of health that is a potential drinking water contaminant because of a systemic or carcinogenic toxicological result from consumption.

Subd. 4. *Best management practices.* "Best management practices" means practicable voluntary practices that are capable of preventing and minimizing degradation of groundwater, considering economic factors, availability, technical feasibility, implementability, effectiveness, and environmental effects. Best management practices apply to schedules of activities; design and operation standards; restrictions of practices; maintenance procedures; management plans; practices to prevent site releases, spillage, or leaks; application and use of chemicals; drainage from raw material storage; operating procedures; treatment requirements; and other activities causing groundwater degradation.

Subd. 5. *Common detection.* "Common detection" means detection of a pollutant that is not due to misuse or unusual or unique circumstances, but is likely to be the result of normal use of a product or a practice.

Subd. 6. *Degradation.* "Degradation" means changing groundwater from its natural condition by human activities.

Subd. 7. *Fertilizer.* "Fertilizer" has the meaning given in section 18C.005, subdivision 11.

Subd. 8. *Groundwater.* "Groundwater" means groundwater as defined in section 115.01, subdivision 6.

Subd. 9. *Pesticide.* "Pesticide" has the meaning given in section 18B.01, subdivision 18.

Subd. 10. *Plant amendment.* "Plant amendment" has the meaning given in section 18C.005, subdivision 25.

Subd. 11. *Pollutant.* "Pollutant" means a chemical or substance for which a health risk limit has been adopted.

Subd. 12. *Pollution.* "Pollution" means degradation of groundwater by a pollutant.

Subd. 13. *Sensitive area.* "Sensitive area" means a geographic area defined by natural features where there is a significant risk of groundwater degradation from activities conducted at or near the land surface.

Subd. 14. *Soil amendment.* "Soil amendment" has the meaning given in section 18C.005, subdivision 34.

Subd. 15. *Water resource protection requirements.* "Water resource protection requirements" means requirements adopted by rule for one or more pollutants intended to prevent and minimize pollution of groundwater. Water resource protection requirements include design criteria, standards, operation and maintenance procedures, practices to prevent releases, spills, leaks, and incidents, restrictions on use and practices, and treatment requirements.

§ 103H.101. PROTECTING SENSITIVE AREAS.

Subdivision 1. *Criteria for determining sensitive areas.* The commissioner of natural resources in consultation with the Minnesota Geological Survey, soil and water conservation districts, local water planning authorities, and other interested parties shall develop specific criteria for identifying sensitive groundwater areas and adopt the criteria by rule.

Subd. 2. *Identifying sensitive areas.* The commissioner of natural resources shall, in consultation with the Minnesota Geological Survey, identify the location of sensitive areas by mapping and other appropriate methods after consulting the Minnesota Geological Survey, soil and water conservation districts, and local water planning authorities.

Subd. 3. *Location of sensitive areas; notice.* The commissioner of natural resources shall:

- (1) notify political subdivisions with planning or zoning authority and provide maps and other materials that show where sensitive areas are located and indicate the type of risk of groundwater degradation that may occur from activities at or near the surface; and

(2) publish notification of sensitive areas in a newspaper of general circulation in the county where the sensitive areas are located.

Subd. 4. *Information gathering.* The commissioner of natural resources shall coordinate the collection of state and local information to identify sensitive areas. Information must be automated on or accessible to systems developed at the Minnesota Geospatial Information Office.

Subd. 5. *State protection of sensitive areas.*

(a) The commissioner of agriculture for pollution resulting from agricultural chemicals and practices and the Pollution Control Agency for other pollutants must consider the type of risk identified under subdivision 3 when adopting best management practices, water resource protection plans, and water resource protection requirements to prevent and minimize groundwater degradation in sensitive areas.

(b) To prevent and minimize groundwater degradation, state agencies must consider the type of risk identified under subdivision 3 when undertaking an activity within a sensitive area.

Subd. 6. *Actions by regulating authorities.* Upon adoption of a comprehensive local water plan as defined in section 103B.101 to 103B.355 or a water management plan under chapter 473 or sections 103B.201 to 103B.255, a regulating authority must take into account the plan and any geological assessments referenced in the plan when taking appropriate actions in sensitive areas.

Subd. 7. *State agencies.* Each state agency that has a program affecting activities that may cause or contribute to groundwater pollution shall identify and develop best management practices to ensure that the program is consistent with and is effective in achieving the goal of section 103H.001. For those activities which may cause or contribute to pollution of groundwater, but are not directly regulated by the state, best management practices shall be promoted through education, support programs, incentives, and other mechanisms.

§ 103H.105. CONSERVATION EASEMENTS TO PROTECT SENSITIVE AREAS.

(a) Agricultural land within a sensitive area identified in section 103H.101, subdivision 2, or by the Board of Water and Soil Resources and land in or immediately surrounding a sinkhole is marginal agricultural land for purposes of section 103F.515, subdivision 2, and is eligible for the reinvest in Minnesota reserve program under section 103F.515.

(b) Notwithstanding section 103F.515, subdivision 2, paragraph (c), clauses (1) and (4), and subdivision 4, the Board of Water and Soil Resources may authorize acquisition of hillside easements that restrict hillside pasturing or grazing of livestock.

§ 103H.111. LIABILITY AFTER PROTECTION OF SENSITIVE AREA.

(a) A landowner within a sensitive area, identified under section 103H.101, has a complete defense to liability for degradation of groundwater caused by surface water from the sensitive area recharging groundwater if:

(1) the landowner's portion of the sensitive area is subject to a plan adopted by the soil and water conservation district to protect the groundwater from degradation through surface water recharge;

(2) the projects and practices required by the plan have been implemented and have been certified as having been implemented by the soil and water conservation district;

(3) the projects and practices required by the plan are maintained according to the plan; and

(4) the landowner has not allowed unlawful practices on the property that disrupt the projects and practices required by the plan.

(b) The soil and water conservation district's plan must include appropriate best management practices and water resource protection requirements.

§ 103H.151. BEST MANAGEMENT PRACTICES.

Subdivision 1. *Development by Pollution Control Agency.* Except as provided in subdivision 2 for agricultural chemicals and practices, the Pollution Control Agency in consultation with local water planning authorities shall develop best management practices for the prevention of groundwater degradation for specific activity categories. The Pollution Control Agency shall contact and solicit comments from affected persons and businesses in developing the best management practices. The Pollution Control Agency must publish notice and also solicit comments and recommendations from state agencies and local governments affected by or regulating the activities.

Subd. 2. *Agricultural chemicals; best management practices.* The commissioner of agriculture, in consultation with local water planning authorities, shall develop best management practices for agricultural chemicals and practices. The commissioner shall give public notice and contact and solicit comment from affected persons and businesses interested in developing the best management practices.

Subd. 3. *Education and promotion.* The commissioners of the Pollution Control Agency and agriculture, in conjunction with the Board of Water and Soil Resources, soil and water conservation districts, and the Minnesota Extension Service, must promote best management practices and provide education about how the use of best management practices will prevent, minimize, reduce, and eliminate the source of groundwater degradation. The promotion and education shall include demonstration projects.

Subd. 4. *Evaluation.* The commissioners of agriculture and the Pollution Control Agency shall, through field audits and other appropriate means, monitor the use and effectiveness of best management practices developed and promoted under this section. The information collected must be submitted to the Environmental Quality Board, which must include the information in the report required in section 103A.43, paragraph (d).

§ 103H. 175. GROUNDWATER QUALITY MONITORING.

Subdivision 1. *Submitting monitoring results.* The results of monitoring groundwater quality by state agencies and political subdivisions must be submitted to the Minnesota Geospatial Information Office.

Subd. 2. *Computerized database.* Agencies monitoring groundwater shall maintain computerized databases of the results of groundwater quality monitoring using standards adopted by the Office of MN.IT Services and geospatial technology standards and guidelines published by the Minnesota Geospatial Information Office. The database must be accessible to the Pollution Control Agency, Department of Agriculture, Department of Health, and Department of Natural Resources.

Subd. 3. *Report.* Every five years, the Pollution Control Agency, in cooperation with other agencies participating in the monitoring of water resources, shall provide a draft report on the status of groundwater monitoring to the Environmental Quality Board for review and then to the house of representatives and senate committees with jurisdiction over the environment, natural resources, and agriculture as part of the report in section 103A.204.

§ 103H.201. HEALTH RISK LIMITS.

Subdivision 1. *Procedure.*

(a) If groundwater quality monitoring results show that there is a degradation of groundwater, the commissioner of health may promulgate health risk limits under subdivision 2 for substances degrading the groundwater.

(b) Health risk limits shall be determined by two methods depending on their toxicological end point.

(c) For systemic toxicants that are not carcinogens, the adopted health risk limits shall be derived using United States Environmental Protection Agency risk assessment methods using a reference dose, a drinking water equivalent, and a relative source contribution factor.

(d) For toxicants that are known or probable carcinogens, the adopted health risk limits shall be derived from a quantitative estimate of the chemical's carcinogenic

potency published by the United States Environmental Protection Agency and determined by the commissioner to have undergone thorough scientific review.

Subd. 2. *Adoption.*

(a) Health risk limits shall be adopted by rule.

(b) If the commissioner determines that emergency conditions exist and the public health and welfare require the health risk limits to be adopted as soon as possible, the commissioner shall promulgate the adopted health risk limits notwithstanding chapter 14 but the adopted health risk limits adopted under this paragraph are only effective for one year.

Subd. 3. *Review and revision.*

(a) The commissioner shall review each adopted health risk limit at least every four years.

(b) The commissioner may revise health risk limits under subdivision 2.

Subd. 4. *Adopting existing recommended allowable limits.*

(a) Notwithstanding and in lieu of subdivision 2, until November 1, 1994, the commissioner may adopt recommended allowable limits, and related toxicological end points, established by the commissioner on or before February 15, 1994, as health risk limits under this subdivision. Before a recommended allowable limit is adopted as an adopted health risk limit under this subdivision, the commissioner shall:

(1) publish in the State Register and disseminate through the Minnesota Extension Service and through soil and water conservation districts notice of intent to adopt a recommended allowable limit as an adopted health risk limit for specific substances and shall solicit information on the health impacts of the substance;

(2) publish the recommended allowable limit in the State Register and disseminate through the Minnesota Extension Service and through soil and water conservation districts allowing 60 days for public comment; and

(3) publish the adopted recommended allowable limit in the State Register and, at the same time, make available a summary of the public comments received and the commissioner's responses to the comments.

(b) A recommended allowable limit adopted by the commissioner as an adopted health risk limit under this subdivision may be challenged in the manner provided in sections 14.44 and 14.45.

(c) During the comment period under paragraph (a), clause (2), 25 or more persons may submit a written request for a public hearing as provided under section 14.25 for any health risk limits as adopted under this subdivision.

§ 103H.251. EVALUATING DETECTION OF POLLUTANTS.

Subdivision 1. *Methods.*

(a) The commissioner of agriculture for pollution resulting from agricultural chemicals and practices and the Pollution Control Agency for other pollutants shall evaluate the detection of pollutants in groundwater of the state. Evaluation of the detection may include collection technique, sampling handling technique, laboratory practices, other quality control practices, climatological conditions, and potential pollutant sources.

(b) If conditions indicate a likelihood of the detection of the pollutant or pollutant breakdown product to be a common detection, the commissioner of agriculture or the Pollution Control Agency must begin development of best management practices and continue to monitor for the pollutant or pollutant breakdown products.

Subd. 2. *Analysis of pollution trend.* The commissioner of agriculture for pollution resulting from agricultural chemicals and practices and the Pollution Control Agency for other pollutants shall develop and implement groundwater monitoring and hydrogeologic evaluation following pollution detection to evaluate pollution frequency and concentration trend. Assessment of the site-specific and pollutant-specific conditions and the likelihood of common detection must include applicable monitoring, pollutant use information, physical and chemical properties of the pollutant, hydrogeologic information, and review of information and data from other local, state, or federal monitoring databases.

§ 103H.275. MANAGING POLLUTANTS WHERE GROUNDWATER IS POLLUTED.

Subdivision 1. *Areas where groundwater pollution is detected.*

(a) If groundwater pollution is detected, a state agency or political subdivision that regulates an activity causing or potentially causing a contribution to the pollution identified shall promote implementation of best management practices to prevent or minimize the source of pollution to the extent practicable.

(b) The Pollution Control Agency, or for agricultural chemicals and practices, the commissioner of agriculture may adopt water source protection requirements under subdivision 2 that are consistent with the goal of section 103H.001 and are commensurate with the groundwater pollution if the implementation of best management practices has proven to be ineffective.

(c) The water resources protection requirements must be:

(1) designed to prevent and minimize the pollution to the extent practicable;

(2) designed to prevent the pollution from exceeding the health risk limits; and

(3) submitted to the house of representatives and senate committees with jurisdiction over the environment, natural resources, and agriculture.

Subd. 2. *Adopting water resource protection requirements.*

(a) The Pollution Control Agency, or for agricultural chemicals and practices, the commissioner of agriculture shall adopt by rule water resource protection requirements that are consistent with the goal of section 103H.001 to prevent and minimize the pollution to the extent practicable. The proposed rule must be submitted to the house of representatives and senate committees with jurisdiction over the environment, natural resources, and agriculture before adoption. The water resource protection requirements must be based on the use and effectiveness of best management practices, the product use and practices contributing to the pollution detected, economic factors, availability, technical feasibility, implementability, and effectiveness. The water resource protection requirements may be adopted for one or more pollutants or a similar class of pollutants. A water resource protection requirement may not be adopted before January 1, 1991.

(b) Before the water resource protection requirements are adopted, the Pollution Control Agency or the commissioner of agriculture for agricultural chemicals and practices must notify affected persons and businesses for comments and input in developing the water resource protection requirements.

(c) Unless the water resource protection requirements are to cover the entire state, the water resource protection requirements are only effective in areas designated by the commissioner of the Pollution Control Agency by order or for agricultural chemicals and practices in areas designated by the commissioner of agriculture by order. The procedures for issuing the order and the effective date of the order must be included in the water resource protection requirements rule.

(d) The water resource protection requirements rule must contain procedures for notice to be given to persons affected by the rule and order of the commissioner. The procedures may include notice by publication, personal service, and other appropriate methods to inform affected persons of the rule and commissioner's order.

(e) A person who is subject to a water resource protection requirement may apply to the Pollution Control Agency, or for agricultural chemicals and practices the commissioner of agriculture, and suggest an alternative protection requirement. Within 60 days after receipt, the agency or commissioner of agriculture must approve or deny the request. If the Pollution Control Agency or commissioner of agriculture approves the request, an order must be issued approving the alternative protection requirement.

(f) A person who violates a water resource protection requirement relating to pollutants, other than agricultural chemicals, is subject to the penalties for violating a rule adopted under chapter 116. A person who violates a water resource protection requirement relating to agricultural chemicals and practices is subject to the penalties for violating a rule adopted under chapter 18D.

§ 103H.280. SUPPLEMENTAL AUTHORITY.

The authority of the Pollution Control Agency and the commissioner of agriculture in this chapter is supplemental to other authority given by law and does not restrict other authorities.

Adopted Permanent Rules Relating to Groundwater Protection

1573.0010 DEFINITIONS.

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

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

Subp. 2a. **Capture zone.** "Capture zone" means the subsurface area surrounding a well or well field through which water is likely to move toward and reach the well supplying a public water system with water.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Subp. 17. **Nitrogen fertilizer.** "Nitrogen fertilizer" means a substance containing nitrogen that is used for its plant nutrient content, is designed for use or claimed to have value in promoting plant growth, and requires a guaranteed analysis under Minnesota Statutes, section 18C.215. Nitrogen fertilizer does not include animal and vegetable manures that are not manipulated, or marl, lime, limestone, biosolids, industrial by-product, industrial wastewater, irrigation water, or other products exempted by the commissioner. Chemicals or substances added to manure during storage to reduce odor or gas emissions or to prevent foaming, or added to manure to extend the time the nitrogen component of manure remains in the soil, are not considered a manipulation of manure.

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

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

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

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

Subp. 22. **Spring frost-free date.** "Spring frost-free date" means the date where there is a ten percent probability of observing a temperature of 32 degrees

Fahrenheit or colder based on the years 1981-2010 as published by the Minnesota State Climatology Office.

Subp.23. **Vulnerable ground water area.** "Vulnerable ground water area" means land with:

A. coarse textured soils;

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

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

1573.0020 INCORPORATION BY REFERENCE.

A. The documents in subitems (1) to (5) and subsequent revisions are incorporated by reference. The documents are not subject to frequent change and are available as indicated:

(1) GridMET dataset, University of Idaho:

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

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

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

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

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

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

<https://conservancy.umn.edu/handle/11299/198924>;

(5) Farm Nutrient Management Assessment Program (FANMAP),
Minnesota Department of Agriculture:

<http://www.mda.state.mn.us/farm-nutrient-management-assessment-program-fanmap>.

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

1573.0030 STATEWIDE WATER RESOURCE PROTECTION REQUIREMENTS.

Subpart 1. Prohibitions.

A. A responsible party must not make:

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

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

(3) an application of nitrogen fertilizer to cropland with frozen soil located

(a) a vulnerable groundwater area; or

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

B. The commissioner shall annually develop a fall application restrictions map. The commissioner shall post the fall restrictions map on the department's Web site by January 15 of each year.

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

Subp. 2. Exclusions.

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

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

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

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

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

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

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

E. If cropland makes up less than three percent of a county's total land area, the county is excluded from the requirements in subpart 1, item A.

F. The commissioner shall exclude responsible parties in a drinking water supply management area from the fall application restrictions in subpart 1 if the commissioner determines there is a point source of nitrate-nitrogen contamination, including but not limited to an improperly sealed well, an animal feedlot, or an agricultural chemical incident, that is a significant source of nitrate-nitrogen contamination in the drinking water supply management area's well. In determining whether there is a significant point source of nitrate-nitrogen contamination, the commissioner shall:

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

(2) conduct a detailed review of potential contaminant sources in the area; evaluate the condition and vulnerability of the municipal water supply well; determine the hydrogeology and groundwater flow paths for

groundwater flowing into the municipal public water supply well; and if necessary, sample soil or other wells in the area; and

(3) based on the information obtained in subitem (1) or (2), determine whether, but for the contamination from the point source, the municipal water supply well would not exceed the reference value of 5.4 mg/L. If the municipal water supply well would not exceed the reference value of 5.4 mg/L but for the contamination from the point source, the responsible parties within the drinking water supply management area are excluded from fall application restrictions under subpart 1, item A.

G. The commissioner shall exclude part of a drinking water supply management area from the fall application restriction if the commissioner determines that the area is not contributing significantly to the contamination of the well in the drinking water supply management area. In determining whether an area is not contributing significantly, the commissioner shall apply the following:

(1) for drinking water supply management areas greater than 100,000 acres, only the designated capture zone and vulnerable groundwater areas are subject to the fall application restrictions under subpart 1, item A;

(2) for drinking water supply management areas that are less than 100,000 acres and for areas within a designated capture zone for drinking water supply management areas greater than 100,000 acres:

(a) areas within the wellhead protection plan as approved by the Department of Health under chapter 4720 that identify an area as low vulnerability are not subject to the fall application restrictions under subpart 1, item A; or

(b) areas within a drinking water supply management area that have a ten-foot or greater confining layer, as defined in part 4725.0100, subpart 24a, are not subject to fall application restrictions under subpart 1, item A, unless computer modeling indicates that leaching and infiltration of nitrate from sources at or near the ground surface is predicted to result in nitrate exceeding 5.4 mg/L in the aquifer being monitored;

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

Subp. 3. Exceptions.

A. Notwithstanding subpart 1, a responsible party may make a fall application of nitrogen fertilizer in a vulnerable groundwater area or drinking water supply

management area if the responsible party uses applicable nitrogen rates, as defined in item B, in the following situations only:

- (1) when nitrogen fertilizer is required to establish winter grains planted in the fall;
- (2) when nitrogen fertilizer is required for pasture fertilization;
- (3) when nitrogen fertilizer is required for perennial crops;
- (4) when nitrogen fertilizer is required for grass seed production. For purposes of this subitem, grass seed production does not include corn production;
- (5) when nitrogen fertilizer is required for cultivated wild rice; or
- (6) when nitrogen fertilizer is required for growing cover crops for the specific purpose of reducing commercial applications of soil fumigants to the subsequent potato crop.

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

- (1) the nitrogen rates included in the nitrogen fertilizer best management practices adopted by the commissioner under Minnesota Statutes, section 103H.151, subdivision 2; or
- (2) if applicable nitrogen rates have not been adopted by the commissioner under Minnesota Statutes, section 103H.151, subdivision 2, the nitrogen rates included in the Fertilizer Guidelines for Agronomic Crops in Minnesota as published by the University of Minnesota Extension.

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

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

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

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

1573.0040 DRINKING WATER SUPPLY MANAGEMENT AREA; MITIGATION LEVEL DESIGNATION.

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

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

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

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

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

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

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

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

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

C. The commissioner shall exclude responsible parties in a drinking water supply management area from mitigation level determinations designations in subpart 2 if the commissioner determines there is a point source of nitrate-nitrogen contamination, including but not limited to an improperly sealed well, an animal feedlot, or an agricultural chemical incident, that is a significant source of nitrate-nitrogen contamination in the drinking water supply management area's well. In determining whether there is a significant point source of nitrate-nitrogen contamination, the commissioner shall:

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

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

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

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

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

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

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

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

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

Subp. 5. Monitoring.

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

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

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

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

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

Subp. 6. Nitrogen fertilizer best management practices evaluation.

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

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

(1) crop land where a responsible party has implemented approved alternative management tools as being in compliance with nitrogen

fertilizer best management practices applicable to that drinking water supply management area;

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

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

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

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

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

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

C. The commissioner shall designate a mitigation level 2 drinking water supply management area as a mitigation level 3 drinking water supply management area if responsible parties within the drinking water supply

management area have implemented nitrogen fertilizer best management practices on less than 80 percent of cropland and:

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

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

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

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

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

G. If responsible parties within a drinking water supply management area have demonstrated progress by changing agricultural or land use practices within the drinking water supply management area, so that the public well does not meet the criteria of a mitigation level 3 as shown by computer modeling data or residual soil nitrate testing, the commissioner may grant a onetime exemption from designating a mitigation level 2 drinking water supply management area as a mitigation level 3 drinking water supply management area for a period equal to the period for the mitigation level designation decision under item A.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1573.0050 WATER RESOURCE PROTECTION REQUIREMENTS ORDER.

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

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

requirements order for a mitigation level 3 or 4 drinking water supply management area.

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

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

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

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

(2) the size of the population at risk receiving water from the public well in the drinking water supply management area due to high nitrate in groundwater;

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

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

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

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

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

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

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

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

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

G. The commissioner may exclude part of a drinking water supply management area from the water resource protection requirements order if the commissioner determines that the area is not contributing significantly to the contamination of the well. In determining whether an area is not contributing significantly, the commissioner shall apply the following:

(1) areas within the wellhead protection plan as approved by the Department of Health under chapter 4720 that identify an area as low vulnerability are not subject to the water resource protection requirements order; or

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

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

H. The commissioner shall issue a water resource protection requirements order within 180 days of receiving all the information required in part 1573.0040, subparts 7, 8, and 9. For good cause shown, the commissioner may extend the deadline by 180 days.

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

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

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

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

- (1) cities;
- (2) township boards;
- (3) counties;
- (4) soil and water conservation districts; and
- (5) watershed districts.

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

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

Subp. 3. Contested case hearing.

A. Following notice of the proposed water resource protection requirements order as required by subpart 2, any person or entity subject to the water resource protection requirements order may petition the commissioner for a

contested case hearing to challenge a water resource protection requirements order.

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

C. Upon receipt of a timely petition for a hearing, the commissioner shall order a public hearing. The commissioner shall publish the order for hearing in the legal newspaper for the affected drinking water supply management area and in the State Register at least 30 days before the public hearing. The public hearing shall be held within 60 days of the proposed effective date of the proposed water resource protection requirements order. The hearing shall be held before an administrative law judge in the county in which the mitigation area is located and in accordance with the requirements of Minnesota Statutes, chapter 14, and the rules relating to contested case proceedings.

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

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

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

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

The commissioner shall also provide the notice of the final water resource protection requirements order to the executive director of the Board of Water and Soil Resources, the commissioner of natural resources, the

commissioner of the Pollution Control Agency, the commissioner of health, and the executive director of the Environmental Quality Board.

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

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

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

B. The commissioner shall provide notice of proposed amendments to a water resource protection requirements order to all known affected responsible parties within the drinking water supply management area. If personal notification is not practicable, the commissioner shall publish notice of proposed amendments to a water resource protection requirements order in two consecutive issues of the legal newspaper for any affected drinking water supply management area and in the State Register at least 30 days before the proposed effective date of the amendments. The commissioner shall also provide notice of proposed amendments to a water resource protection requirements order to the executive director of the Board of Water and Soil Resources, the commissioner of natural resources, the commissioner of the Pollution Control Agency, the commissioner of health, and the executive director of the Environmental Quality Board at least 30 days before the proposed effective date of the amendments.

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

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

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

Subp. 6. Judicial review.

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

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

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

1573.0060 REQUIREMENTS FOR WATER RESOURCE PROTECTION REQUIREMENTS ORDERS.

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

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

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

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

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

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

1573.0070 WATER RESOURCE PROTECTION REQUIREMENTS ORDER CONTENTS.

Subpart 1. Mitigation level 3.

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

- (1) nitrogen fertilizer best management practices approved by the commissioner pursuant to Minnesota Statutes, section 103H.151, subdivision 2;
- (2) application guidelines for nitrogen fertilizer from the University of Minnesota;
- (3) educational activities approved by the commissioner;
- (4) field testing to determine nitrogen requirements for specific crops;
- (5) testing of manure using a lab approved or certified by the commissioner; (6) testing as needed to monitor nitrate-nitrogen concentrations in the groundwater;
- (7) nitrogen crediting from previous crops, manure application, irrigation application, and all other sources of nitrogen;
- (8) irrigation, fertilizer chemigation, water, manure, and nutrient management plans developed or approved by a qualified professional;
- (9) soil amendments registered with the commissioner that reduce the need for or improve the use of nitrogen;
- (10) plant amendments registered with the commissioner that improve the efficient use of nitrogen inputs;
- (11) products delaying nitrification, approved by the commissioner;
or
- (12) products delaying plant available nitrogen, approved by the commissioner.

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

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

A. any requirement listed in subpart 1;

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

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

Subp. 3. **Exceptions.** The commissioner may provide exceptions to a water resource protection requirements order. if the commissioner determines the order could not be implemented because of:

A. adverse weather conditions including late spring thaw, heavy rainfall, drought, or other extreme weather event;

B. crop failure for any reason including plant diseases or pest infestations;
or

C. the required practice is agronomically or technically unsuitable for a specific field based on the soil types, topography, or the crops grown.

1573.0080 MINNESOTA AGRICULTURAL WATER QUALITY CERTIFICATION PROGRAM EXEMPTION.

A responsible party certified through the Minnesota Agricultural Water Quality Certification Program under Minnesota Statutes, sections 17.9891 to 17.993, is

deemed to be in compliance with this chapter for the duration of the water quality certification.

1573.0090 ALTERNATIVE MANAGEMENT TOOLS; ALTERNATIVE PROTECTION REQUIREMENTS.

Subpart 1. Alternative management tools.

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

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

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

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

Subp. 2. Alternative protection requirements.

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

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

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

3) Minn. Stat. §§ 103B.101, 103E.315, 103F.421, 48, 477A.21; Buffers; Administrative Penalty Order (APO) – Plan for Buffer Law Implementation

§ 103B.101. BOARD OF WATER AND SOIL RESOURCES.

Subd. 12. Authority to issue penalty orders.

(a) Except as provided under subdivision 12a, the board may issue an order requiring violations to be corrected and administratively assessing monetary penalties of up to \$10,000 per violation for violations of this chapter and chapters 103C, 103D, 103E, 103F, and 103G, any rules adopted under those chapters, and any standards, limitations, or conditions established by the board.

(b) Administrative penalties issued by the board under paragraph (a) or subdivision 12a, may be appealed according to section 116.072, if the recipient of the penalty requests a hearing by notifying the commissioner in writing within 30 days after receipt of the order. For the purposes of this section, the terms "commissioner" and "agency" as used in section 116.072 mean the board. If a hearing is not requested within the 30-day period, the order becomes a final order not subject to further review.

(c) Administrative penalty orders issued under paragraph (a) or subdivision 12a, may be enforced under section 116.072, subdivision 9. Penalty amounts must be remitted within 30 days of issuance of the order.

Subd. 12a. Authority to issue penalty orders.

(a) A county or watershed district with jurisdiction or the Board of Water and Soil Resources may issue an order requiring violations of the water resources riparian protection requirements under sections 103F.415, 103F.421, and 103F.48 to be corrected and administratively assessing monetary penalties up to \$500 for noncompliance commencing on day one of the 11th month after the noncompliance notice was issued. The proceeds collected from an administrative penalty order issued under this section must be remitted to the county or watershed district with jurisdiction over the noncompliant site or otherwise remitted to the Board of Water and Soil Resources.

(b) Before exercising this authority, the Board of Water and Soil Resources must adopt a plan containing procedures for the issuance of administrative penalty orders by local governments and the board as authorized in this subdivision. This plan, and any subsequent amendments, will become effective 30 days after being published in the State Register. The initial plan must be published in the State Register no later than July 1, 2017.

(c) Administrative penalties may be reissued and appealed under paragraph (a) according to section 103F.48, subdivision 9.

§ 103E.315. ASSESSMENT OF DRAINAGE BENEFITS AND DAMAGES.

Subd. 8. *Extent of damages.*

(a) Damages to be paid may include:

- (1) the fair market value of the property required for the channel of an open ditch and the permanent strip of perennial vegetation under section 103E.021;
- (2) the diminished value of a farm due to severing a field by an open ditch;
- (3) loss of crop production during drainage project construction;
- (4) the diminished productivity or land value from increased overflow;
and
- (5) costs to restore a perennial vegetative cover or structural practice existing under a federal or state conservation program adjacent to the permanent drainage system right-of-way and damaged by the drainage project.

(b) When damages are determined to acquire or otherwise provide compensation for buffer strips or alternative riparian water quality practices previously installed as required by section 103F.48, subdivision 3, the viewers and drainage authority shall consider the land use prior to buffer strip or alternative practice installation in determining the fair market value of the property under paragraph (a), clause (1).

§ 103F.421. ENFORCEMENT.

Subd. 4. *Application for cost-sharing funds.* The landowner has 90 days after a complaint is substantiated to apply for state cost-sharing funds. Fifty percent of the cost share will be provided if the application is not made within 90 days after the settlement is filed, unless the soil and water conservation district or the board provides an extension. An extension must be granted if funds are not available.

Subd. 6. *Application of state and federal law.* Nothing in this section is intended to preclude the application of other applicable state or federal law.

§ 103F.48. RIPARIAN PROTECTION AND WATER QUALITY PRACTICES.

Subdivision 1. Definitions.

(a) For the purposes of this section, the following terms have the meanings given them.

(b) "Board" means the Board of Water and Soil Resources.

(c) "Buffer" means an area consisting of perennial vegetation, excluding invasive plants and noxious weeds, adjacent to all bodies of water within the state and that protects the water resources of the state from runoff pollution; stabilizes soils, shores, and banks; and protects or provides riparian corridors.

(d) "Buffer protection map" means buffer maps established and maintained by the commissioner of natural resources.

(e) "Commissioner" means the commissioner of natural resources.

(f) "Executive director" means the executive director of the Board of Water and Soil Resources.

(g) "Local water management authority" means a watershed district, metropolitan water management organization, or county operating separately or jointly in its role as local water management authority under chapter 103B or 103D.

(h) "Normal water level" means the level evidenced by the long-term presence of surface water as indicated directly by hydrophytic plants or hydric soils or indirectly determined via hydrological models or analysis.

(i) "Public waters" means public waters that are on the public waters inventory as provided in section 103G.201.

(j) "With jurisdiction" means a board determination that the county or watershed district has adopted a rule, ordinance, or official controls providing procedures for the issuance of administrative penalty orders, enforcement, and appeals for purposes of this section and section 103B.101, subdivision 12a.

Subd. 2. Purpose. It is the policy of the state to establish riparian buffers and water quality practices to:

- (1) protect state water resources from erosion and runoff pollution;
- (2) stabilize soils, shores, and banks; and
- (3) protect or provide riparian corridors.

Subd. 3. *Water resources riparian protection requirements on public waters and public drainage systems.*

(a) Except as provided in paragraph (b), landowners owning property adjacent to a water body identified and mapped on a buffer protection map must maintain a buffer to protect the state's water resources as follows:

(1) for all public waters, the more restrictive of:

(i) a 50-foot average width, 30-foot minimum width, continuous buffer of perennially rooted vegetation; or

(ii) the state shoreland standards and criteria adopted by the commissioner under section 103F.211; and

(2) for public drainage systems established under chapter 103E, a 16.5-foot minimum width continuous buffer as provided in section 103E.021, subdivision 1. The buffer vegetation shall not impede future maintenance of the ditch.

(b) A landowner owning property adjacent to a water body identified in a buffer protection map and whose property is used for cultivation farming may meet the requirements under paragraph (a) by adopting an alternative riparian water quality practice, or combination of structural, vegetative, and management practices, based on the Natural Resources Conservation Service Field Office Technical Guide or, common alternative practices adopted and published by the board, other practices approved by the board, or practices based on local conditions approved by the local soil and water conservation district that are consistent with the Field Office Technical Guide, that provide water quality protection comparable to the buffer protection for the water body that the property abuts. Included in these practices are retention ponds and alternative measures that prevent overland flow to the water resource.

(c) The width of a buffer on public waters must be measured from the top or crown of the bank. Where there is no defined bank, measurement must be from the edge of the normal water level. The width of the buffer on public drainage systems must be measured as provided in section 103E.021, subdivision 1.

(d) Upon request by a landowner or authorized agent or operator of a landowner, a technical professional employee or contractor of the soil and water conservation district or its delegate may issue a validation of compliance with the requirements of this subdivision. The soil and water conservation district validation may be appealed to the board as described in subdivision 9.

(e) Buffers or alternative water quality practices required under paragraph (a) or (b) must be in place on or before:

(1) November 1, 2017, for public waters; and

(2) November 1, 2018, for public drainage systems.

(f) Nothing in this section limits the eligibility of a landowner or authorized agent or operator of a landowner to participate in federal or state conservation programs, including enrolling or reenrolling in federal conservation programs.

(g) After the effective date of this section, a person planting buffers or water quality protection practices to meet the requirements in paragraph (a) must use only seed mixes verified by the Department of Agriculture as consistent with chapter 18G or 21 to prevent contamination with Palmer amaranth or other noxious weed seeds.

Subd. 4. *Local water resources riparian protection.* In consultation with local water management authorities, on or before July 1, 2017, the soil and water conservation district shall develop, adopt, and submit to each local water management authority within its boundary a summary of watercourses for inclusion in the local water management authority's plan. A local water management authority that receives a summary of watercourses identified under this subdivision must incorporate an addendum to its comprehensive local water management plan or comprehensive watershed management plan to include the soil and water conservation district recommendations by July 1, 2018. The incorporation to include the summary of watercourses provided by the soil and water conservation district does not require a plan amendment as long as a copy of the included information is distributed to all agencies, organizations, and individuals required to receive a copy of the plan changes. A local water management authority that receives a summary of watercourses identified under this subdivision must address implementation of the soil and water conservation district recommendations when revising its comprehensive local water management plan as part of a regularly scheduled update to its comprehensive local water management plan or development of a comprehensive watershed management plan under section 103B.801.

Subd. 5. *Exemptions.* Land adjacent to waters subject to subdivision 3 is exempt from the water resource protection requirements under subdivision 3, to the extent these exemptions are not inconsistent with the requirements of the state shoreland rules adopted by the commissioner pursuant to section 103F.211, if it is:

(3) enrolled in the federal Conservation Reserve Program;

(4) used as a public or private water access or recreational use area including stairways, landings, picnic areas, access paths, beach and watercraft access areas, and permitted water-oriented structures as provided in the shoreland model standards and criteria adopted pursuant to section 103F.211 or as provided for in an approved local government shoreland ordinance;

(5) covered by a road, trail, building, or other structures; or

(6) regulated by a national pollutant discharge elimination system/state disposal system (NPDES/SDS) permit under Minnesota Rules, chapter 7090, and provides water resources riparian protection, in any of the following categories:

(i) municipal separate storm sewer system (MS4);

(ii) construction storm water (CSW); or

(iii) industrial storm water (ISW);

(7) part of a water-inundation cropping system; or

(8) in a temporary nonvegetated condition due to drainage tile installation and maintenance, alfalfa or other perennial crop or plant seeding, or construction or conservation projects authorized by a federal, state, or local government unit.

Subd. 6. *Local implementation and assistance.*

(a) Soil and water conservation districts must assist landowners with implementation of the water resource riparian protection requirements established in this section. For the purposes of this subdivision, assistance includes planning, technical assistance, implementation of approved alternative practices, and tracking progress toward compliance with the requirements.

(b) The commissioner or the board must provide sufficient funding to soil and water conservation districts to implement this section.

Subd. 7. *Corrective actions.*

(a) If the soil and water conservation district determines a landowner is not in compliance with this section, the district must notify the county or watershed district with jurisdiction over the noncompliant site and the board. The county or watershed district with jurisdiction or the board must provide the landowner with a list of corrective actions needed to come into compliance and a practical timeline to meet the requirements in this section. The county or watershed district with jurisdiction must provide a copy of the corrective action notice to the board.

(b) A county or watershed district exercising jurisdiction under this subdivision and the enforcement authority granted in section 103B.101, subdivision 12a, shall affirm their jurisdiction and identify the ordinance, rule, or other official controls to carry out the compliance provisions of this section and section 103B.101, subdivision 12a, by notice to the board prior to March 31, 2017. A county or watershed district must provide notice to the board at least 60 days prior to the effective date of a subsequent decision on their jurisdiction.

(c) If the landowner does not comply with the list of actions and timeline provided, the county or watershed district may enforce this section under the authority granted in section 103B.101, subdivision 12a, or by rule of the watershed district or ordinance or other official control of the county. Before exercising administrative penalty authority, a county or watershed district must adopt a plan consistent with the plan adopted by the board containing procedures for the issuance of administrative penalty orders and may issue orders beginning November 1, 2017. If a county or watershed district with jurisdiction over the noncompliant site has not adopted a plan, rule, ordinance, or official control under this paragraph, the board must enforce this section under the authority granted in section 103B.101, subdivision 12a.

(d) If the county, watershed district, or board determines that sufficient steps have been taken to fully resolve noncompliance, all or part of the penalty may be forgiven.

(e) An order issued under paragraph (b) may be appealed to the board as provided under subdivision 9.

(f) A corrective action is not required for conditions resulting from a flood or other act of nature.

(g) A landowner agent or operator of a landowner may not remove or willfully degrade a riparian buffer or water quality practice, wholly or partially, unless the agent or operator has obtained a signed statement from the property owner stating that the permission for the work has been granted by the unit of government authorized to approve the work in this section or that a buffer or water quality practice is not required as validated by the soil and water conservation district. Removal or willful degradation of a riparian buffer or water quality practice, wholly or partially, by an agent or operator is a separate and independent offense and may be subject to the corrective actions and penalties in this subdivision.

Subd. 8. *Funding subject to withholding.* The board may withhold funding from a local water management authority with jurisdiction or a soil and water conservation district that fails to implement this section, or from a local water management authority that fails to implement subdivision 4. Funding may be restored upon the board's approval of a corrective action plan.

Subd. 9. *Appeals of validations and penalty orders.* A landowner or agent or operator may appeal the terms and conditions of a soil and water conservation district validation or an administrative penalty order to the board within 30 days of receipt of written or electronic notice of the validation or order. The request for appeal must be in writing. The appealing party must provide a copy of the validation or order that is being appealed, the basis for the appeal, and any supporting evidence. The request for appeal may be

submitted personally, by first class mail, or electronically to the executive director. If a written or electronic request for appeal is not submitted within 30 days, the validation or order is final. The executive director shall review the request and supporting evidence and issue a decision within 60 days of receipt of an appeal. The executive director's decision is appealable directly to the Court of Appeals pursuant to sections 14.63 to 14.69.

Subd. 10. *Landowner financial assistance and public drainage system procedure.*

(a) A landowner or drainage authority may contact the soil and water conservation district for information on how to apply for local, state, or federal cost-share grants, contracts, or loans that are available to establish buffers or other water resource protection measures.

(b) The provisions of sections 103E.011, subdivision 5 103E.021; and 103E.715 may be used in advance or retroactively to acquire or provide compensation for all or part of the buffer strip establishment or alternative riparian water quality practices as required under subdivision 3, paragraph (a).

Subd. 11. *State lands.* This section applies to the state and its departments and agencies.

§ 477A.21. RIPARIAN PROTECTION AID.

Subdivision 1. *Definitions.* For purposes of this section, the following terms have the meanings given:

(1) "buffer protection map" has the meaning given under section 103F.48, subdivision 1; and

(2) "public watercourses" means public waters and public drainage systems subject to riparian protection requirements under section 103F.48.

Subd. 2. *Certifications to commissioner.*

(a) The Board of Water and Soil Resources must certify to the commissioner of revenue, on or before July 1 each year, which counties and watershed districts have affirmed their jurisdiction under section 103F.48 and the proportion of centerline miles of public watercourses, and miles of public drainage system ditches on the buffer protection map, within each county and each watershed district within the county with affirmed jurisdiction.

(b) On or before July 1 each year, the commissioner of natural resources shall certify to the commissioner of revenue the statewide and countywide number of centerline miles of public watercourses and miles of public drainage system ditches on the buffer protection map.

Subd. 3. *Distribution.*

(a) A county that is certified under subdivision 2, or that portion of a county containing a watershed district certified under subdivision 2, is eligible to receive aid under this section to enforce and implement the riparian protection and water quality practices under section 103F.48. Each county's preliminary aid amount is equal to the proportion calculated under paragraph (b) multiplied by the appropriation received each year by the commissioner for purposes of payments under this section.

(b) The commissioner must compute each county's proportion. A county's proportion is equal to the ratio of the sum in clause (1) to the sum in clause (2):

(1) the sum of the total number of acres in the county classified as class 2a under section 273.13, subdivision 23, the countywide number of centerline miles of public watercourses on the buffer protection map, and the countywide number of miles of public drainage system ditches on the buffer protection map; and

(2) the sum of the statewide total number of acres classified as class 2a under section 273.13, subdivision 23, the statewide total number of centerline miles of public watercourses on the buffer protection map, and the statewide total number of public drainage system miles on the buffer protection map.

(c) Aid to a county must not be greater than \$200,000 or less than \$50,000. If the sum of the preliminary aids payable to counties under paragraph (a) is greater or less than the appropriation received by the commissioner, the commissioner of revenue must calculate the percentage of adjustment necessary so that the total of the aid under paragraph (a) equals the total amount received by the commissioner, subject to the minimum and maximum amounts specified in this paragraph. The minimum and maximum amounts under this paragraph must be adjusted by the ratio of the actual amount appropriated to \$10,000,000.

(d) If only a portion of a county is certified as eligible to receive aid under subdivision 2, the aid otherwise payable to that county under this section must be multiplied by a fraction, the numerator of which is the buffer protection map miles of the certified watershed districts contained within the county and the denominator of which is the total buffer protection map miles of the county.

(e) Any aid that would otherwise be paid to a county or portion of a county that is not certified under subdivision 2 shall be paid to the Board of Water and Soil Resources for enforcing and implementing the riparian protection and water quality practices under section 103F.48.

Subd. 4. *Payments.*

The commissioner of revenue must compute the amount of riparian protection aid payable to each eligible county and to the Board of Water and Soil Resources under this section. On or before August 1 each year, the commissioner must certify the amount to be paid to each county and the Board of Water and Soil Resources in the following year, except that the payments for 2017 must be certified by July 15, 2017. The commissioner must pay riparian protection aid to counties and to the Board of Water and Soil Resources in the same manner and at the same time as aid payments under section 477A.01.

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