In the Matter of the Proposed Rules of the Department of Agriculture Governing Groundwater Protection; Minnesota Rules Chapter 1573

This matter came before the Chief Administrative Law Judge pursuant to the provisions of Minn. Stat. § 14.15, subd. 3 (2018) and Minn. R. 1400.2240, subp. 4 (2017). These authorities require that the Chief Administrative Law Judge review an Administrative Law Judge’s findings that a proposed agency rule should not be approved.

This rulemaking concerns the Minnesota Departments of Agriculture’s (Department) proposed rules governing groundwater protection, Minnesota Rules Chapter 1573.

Based upon a review of the record in this proceeding, the Chief Administrative Law Judge CONCURS with all disapprovals contained in the Report of the Administrative Law Judge dated September 21, 2018.

The following proposed rules are DISAPPROVED:

- Proposed Minn. R. 1573.0030, subps. 2F, 2G;
- Proposed Minn. R. 1573.0040, subps. 3B, 3C, 3D;
- Proposed Minn. R. 1573.0040, subps. 7G, 7H;
- Proposed Minn. R. 1573.0040, subp. 8G;
- Proposed Minn. R. 1573.0050, subps. 1G, 1H; and
- Proposed Minn. R. 1573.0070, subp. 3.

The changes or actions necessary for approval of the disapproved rules and repeals are as identified in the Administrative Law Judge’s Report.

If the Department elects not to correct the defects associated with the proposed rules, the Department must submit the rule to the Legislative Coordinating Commission.
and the House of Representatives and Senate policy committees with primary jurisdiction over state governmental operations, for review under Minn. Stat. § 14.15, subd. 4 (2018).

If the Department chooses to make changes to correct the defects, it shall submit to the Chief Administrative Law Judge a copy of the rules as originally published in the State Register, the order adopting the rules, and the rule showing the Departments' changes. The Chief Administrative Law Judge will then make a determination as to whether the defect has been corrected and whether the modifications to the rules make them substantially different than originally proposed.

Dated: October 1, 2018

TAMMY L. PUST
Chief Administrative Law Judge
This matter came before Administrative Law Judge Jessica A. Palmer-Denig for public hearings on the Minnesota Department of Agriculture’s (Department or MDA) proposal to adopt rules governing groundwater protection. Judge Palmer-Denig conducted five public hearings on this rulemaking proceeding at various locations across the state. The hearings were held on the following dates at the following locations: (1) Robert Boeckman Middle School, Farmington, Minnesota on July 16, 2018; (2) Stewartville Civic Center, Stewartville, Minnesota on July 18, 2018; (3) Minnesota West Community and Technical College, Worthington, Minnesota on July 19, 2018; (4) River’s Edge Convention Center, St. Cloud, Minnesota on July 25, 2018; and (5) the American Legion, Park Rapids, Minnesota on July 26, 2018.

The hearing and this Report are part of a larger rulemaking process under the Minnesota Administrative Procedure Act (APA).¹ The purpose of this process is to ensure that state agencies meet all requirements established by law for adopting rules.

The hearing process permitted agency representatives and the Administrative Law Judge to hear public comment regarding the impact of the proposed rules and any changes that might be appropriate. Further, the hearing process provided the general public an opportunity to review, discuss, and critique the proposed rules.

The Department’s panel at the public hearings included: Douglas Spanier, Department Counsel; Susan Stokes, Assistant Commissioner for the Department; Daniel Stoddard, the Department’s Assistant Director for Environmental Protection; and Bruce Montgomery, Manager of the Department’s Fertilizer and Non-Point Section.

Approximately 45 people attended the July 16 hearing in Farmington, Minnesota and signed the register.² Nine members of the public provided oral comments regarding the proposed rule at the July 16 hearing. At this hearing, the Department’s exhibits were received into the record, as described below, along with one exhibit from a member of the public.³

² Rule Hearing Register (July 16, 2018).
³ Exhibit (Ex.) 1.
Approximately 26 people attended the July 18 hearing in Stewartville, Minnesota.\(^4\) Eleven members of the public provided oral comments regarding the proposed rule at the July 18 hearing and one exhibit was received into the record.\(^5\)

Approximately 20 people attended the July 19 hearing in Worthington, Minnesota.\(^6\) Five members of the public provided oral comments regarding the proposed rule at the July 19 hearing and one exhibit was received into the record.\(^7\)

Approximately 49 people attended the July 25 hearing in St. Cloud, Minnesota.\(^8\) Ten members of the public provided oral comments regarding the proposed rule at the July 25 hearing. No exhibits were received into the record during the July 25 hearing.

Approximately 28 people attended the July 26 hearing in Park Rapids, Minnesota.\(^9\) Five members of the public provided oral comments regarding the proposed rule at the July 26 hearing and one exhibit was received into the record.\(^10\)

After the close of the last hearing, the rulemaking record remained open for another 20 calendar days—until Wednesday, August 15, 2018—to permit interested persons and the Department to submit written comments. Following the initial comment period, the hearing record was open an additional five business days to permit interested persons and the Department an opportunity to reply to earlier-submitted comments.\(^11\) The rulemaking hearing record closed on Wednesday, August 22, 2018. Prior to the close of the record, numerous written comments were received for consideration in this proceeding.

**SUMMARY OF CONCLUSIONS**

The Department has established that it has the statutory authority to adopt the proposed rules and that it followed the legal requirements to promulgate those rules. The Department has also established that the proposed rules are needed and reasonable, with the exception of the following:

- Minn. R. 1573.0030, subps. 2F and 2G;
- Minn. R. 1573.0040, subps. 3B, 3C, and 3D;
- Minn. R. 1573.0040, subps. 7G and 7H;
- Minn. R. 1573.0040, subp. 8G;
- Minn. R. 1573.0050, subps. 1G and 1H; and

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\(^4\) Rule Hearing Register (July 18, 2018).
\(^5\) Ex. 2.
\(^6\) Rule Hearing Register (July 19, 2018).
\(^7\) Ex. 3.
\(^8\) Rule Hearing Register (July 25, 2018).
\(^9\) Rule Hearing Register (July 26, 2018).
\(^10\) Ex. 4.
\(^11\) See Minn. Stat. § 14.15, subd. 1.
Minn. R. 1573.0070, subp. 3.

The above provisions are unduly vague or grant the Commissioner of the Department of Agriculture (Commissioner) excessive discretion. Consequently, these proposed rules are defective and are DISAPPROVED as not meeting the requirements of Minn. R. 1400.2100 (2017), as explained in the findings below.

Based upon all the testimony, exhibits, and written comments, the Administrative Law Judge makes the following:

FINDINGS OF FACT

I. Regulatory Background to the Proposed Rules

1. The Department is proposing groundwater protection rules under the authority of the 1989 Minnesota Groundwater Protection Act (Act).12 These are the first rules the Department has proposed under the Act.13

2. The Act provides that it is the state’s goal “that groundwater be maintained in its natural condition, free from any degradation caused by human activities.”14 The Act recognizes that for some human activities this goal of preventing degradation cannot be practically achieved. However, the Act states that “where prevention is practicable, it is intended that it be achieved. Where it is currently not practicable, the development of methods and technology that will make prevention practicable is encouraged.”15

3. The Act requires the Department to develop best management practices (BMPs) to prevent or minimize the source of the pollution to the extent practicable.16 BMPs are defined as “practicable voluntary practices that are capable of preventing and minimizing degradation of groundwater, considering economic factors, availability, technical feasibility, implementability, effectiveness, and environmental effects,” and these BMPs apply to schedules of activities, restrictions of practices, management plans, and the application and use of chemicals, among other things.17

4. Nitrogen fertilizer BMPs were first developed for Minnesota in the late 1980s or early 1990s by the University of Minnesota.18 These BMPs represent a combination of practices that will reduce the risk of excessive nitrogen loss in a normal year.19 The BMPs focus on the “4Rs,” taking into account the nitrogen rate, application timing, source, and

13 Ex. P.
14 Minn. Stat. § 103H.001.
15 Id.
16 Ex. P; Minn. Stat. §§ 103H.001, .151, subd. 2.
17 Minn. Stat. § 103H.005, subd. 4.
18 Ex. C at 30.
19 Id.
application placement.20 The BMPs vary depending on the geographic area, soil type, and crop.21 The Department formally adopted the nitrogen fertilizer BMPs.22

5. The Department developed the first Nitrogen Fertilizer Management Plan (NFMP) in 1990 at the direction of the Minnesota Legislature.23

6. In 2010, the Department began the process of updating the NFMP. The update was guided by a multi-stakeholder advisory committee that included representatives from the agricultural community, the environmental community, the University of Minnesota, and local and state government representatives.24 In March 2015, the revised NFMP was finalized and it serves as the state’s blueprint for preventing or minimizing impacts of nitrogen fertilizer on groundwater.25

7. The Department has determined that the nitrogen fertilizer BMPs have not been adopted at an acceptable level and have been ineffective in curbing rising nitrate levels in groundwater.26

8. Therefore, upon completion of the NFMP in 2015, the Department began developing the current proposed rule. The Department sought public and stakeholder input. During the Department’s first comment period from October 2015 to January 2016, it received 143 comments. The Department published a draft of the proposed rule in 2017 and held 11 “listening sessions” around the state to discuss the rule, respond to questions, and obtain feedback.27

9. In response to the comments and feedback it received, the Department modified the rule. The proposed rule now has two parts. The first part (Part 1) restricts the application of nitrogen fertilizer in the fall and to frozen soils in vulnerable groundwater areas contained within the Drinking Water Supply Management Areas (DWSMAs).28 The second part (Part 2) of the proposed rule contains a process for addressing elevated nitrates in the DWSMAs. It is a progressive process, starting with voluntary measures using local advisory teams (LATs), and moving to regulatory measures if the water quality gets worse or if the BMPs are not implemented on 80 percent of the cropland in a DWSMA.29

10. In this rulemaking proceeding, the Department must establish that the proposed rules are within its statutory authority, necessary and reasonable, follow from compliance with the required procedures, and that any modifications that the Department

20 Id.
21 Id. at 31.
22 Id. at 30-31.
23 Ex. P; Ex. C at 42, 74; 1989 Minn. Laws ch. 326, art. 6, § 33, subd. 2.
24 Ex. P; Ex. C at 74-78.
25 Ex. C at 49-59.
26 Ex. C at 49-59.
27 Ex. P; Ex. C at 74-78.
28 Ex. B; See Minn. Stat. § 103H.275, subd. 2(c); and Department’s Rebuttal Comments at 7-10 (Aug.22, 2018).
29 Ex. B; Ex. C at 61-63.
made after the proposed rules were initially published in the State Register are within the scope of the matter that was originally announced.\(^{30}\)

II. Rulemaking Authority

11. The Department relies on Minn. Stat. § 103H.275, subd. 1(b) for its authority to adopt the proposed rules. This statute, which was enacted prior to January 1, 1996,\(^ {31}\) authorizes the Department to:

adopt water resource 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.

12. The Department also cites Minn. Stat. § 103H.275, subd. 2, which lists the requirements the Department must follow when adopting rules for water resource protection requirements. This statute provides, in part, that 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.”\(^ {32}\)

13. The Department has the statutory authority to adopt the proposed rules.

III. Procedural Requirements of Chapter 14

A. Publications

14. On October 26, 2015, the Department published a Request for Comments in the State Register seeking comments on a proposed rule governing groundwater protection called the Nitrogen Fertilizer Rule.\(^ {33}\)

15. On April 16, 2018, the Department requested review and approval of its Additional Notice Plan.

16. On April 20, 2018, the Department requested review and approval of its Notice of Hearing.

17. On April 20, 2018, the Administrative Law Judge issued orders approving the Department’s Additional Notice Plan and Notice of Hearing.\(^ {34}\)

\(^{30}\) Minn. Stat. §§ 14.05, .23, .25, .50 (2018).

\(^{31}\) If a law authorizing or requiring an agency to adopt, amend, or repeal rules became effective after January 1, 1996, the agency must publish a notice of intent to adopt the rules or a notice of hearing within eighteen months of the effective date of the authorizing statute or lose its rulemaking authority. Minn. Stat. § 14.125 (2018). Because the Department’s authority to adopt rules for water resource protection requirements existed prior to January 1, 1996, the time limit does not apply here.

\(^{32}\) Minn. Stat. § 103H.275, subd. 2(a).

\(^{33}\) Ex. A; 40 State Register 474 (Oct. 26, 2015).

\(^{34}\) Ex. G; Order on Request for Review and Approval of Additional Notice Plan (Apr. 20, 2018); Order on Request for Review and Approval of the Notice of Hearing (Apr. 20, 2018).
18. On April 30, 2018, the Department published the Notice of Hearing in the *State Register* stating its intent to adopt rules following public hearings.\textsuperscript{35} In the Notice of Hearing, the Department announced it would hold five hearings at various locations throughout the state beginning July 16, 2018, and ending July 26, 2018.\textsuperscript{36}

19. On April 30, 2018, the Department submitted an electronic copy of the Statement of Need and Reasonableness (SONAR) to the Legislative Reference Library.\textsuperscript{37}

20. On April 30, 2018, the Department mailed the Notice of Hearing, the proposed rules, and the SONAR to all persons and associations on the Department’s rulemaking mailing list established by Minn. Stat. § 14.14, subd. 1a.\textsuperscript{38} On April 30, 2018, the Department also sent the Notice of Hearing, the proposed rules, and SONAR to all persons and associations identified in its Additional Notice Plan.\textsuperscript{39}

21. At the hearing on July 16, 2018, the Department filed copies of the following documents:\textsuperscript{40}

(a) the Department’s Request for Comments as published in the *State Register* on October 26, 2015;\textsuperscript{41}

(b) the proposed rules dated April 24, 2018, which included the Revisor’s approval;\textsuperscript{42}

(c) the Department’s Statement of Need and Reasonableness (SONAR);\textsuperscript{43}

(d) the Certificate of Mailing the SONAR to the Legislative Reference Library on April 30, 2018;\textsuperscript{44}

(e) the Notice of Hearing as mailed and as published in the *State Register* on April 30, 2018;\textsuperscript{45}

(f) the Certificate of Mailing the Notice of Hearing to the rulemaking mailing list on April 30, 2018, and the Certificate of Accuracy of the Mailing List;\textsuperscript{46}

(g) the Certificate of Giving Additional Notice Pursuant to the Additional Notice Plan on April 30, 2018;\textsuperscript{47}

\textsuperscript{35} Ex. E; 42 *State Register* 1277 (Apr. 30, 2018).

\textsuperscript{36} Id.

\textsuperscript{37} Ex. D.

\textsuperscript{38} Ex. F.

\textsuperscript{39} Ex. G.

\textsuperscript{40} See Minn. R. 1400.2220 (2017).

\textsuperscript{41} Ex. A.

\textsuperscript{42} Ex. B.

\textsuperscript{43} Ex. C.

\textsuperscript{44} Ex. D.

\textsuperscript{45} Ex. E.

\textsuperscript{46} Ex. F.

\textsuperscript{47} Ex. G.
(h) the written comments on the proposed rules that the Department received during the request for comments period;48

(i) the written comments on the proposed rules that the Department received during the notice of hearing comment period;49

(j) correspondence between the Department and Minnesota Management and Budget (MMB) regarding the fiscal impact of the proposed rules on local units of government;50

(k) a statement regarding the Department’s compliance with Minn. Stat. §§ 14.111 and 14.14, subd. 1b;51

(l) the Certificate of Sending the Notice of Hearing and SONAR to Legislators and Legislative Coordinating Commission on April 24, 2018;52

(m) a summary of proposed rule changes;53

(n) clarification of SONAR text at page 131;54

(o) scope of work and report of Dr. Dennis Helsel;55

(p) a written statement of Assistant Commissioner Susan Stokes regarding the proposed rules;56

(q) a written statement of Daniel Stoddard, Assistant Director of the Department’s Pesticide and Fertilizer Management Division;57

B. Additional Notice Requirements

22. Minn. Stat. §§ 14.131, .23 require that an agency include in the SONAR a description of its efforts to provide additional notification to persons or classes of persons who may be affected by the proposed rule; or alternatively, the agency must detail why these notification efforts were not made.

23. The Department states that it has made great efforts to solicit public and stakeholder input in the development of the proposed rule.58 The Department published a request for comments on the proposed rules on October 26, 2015, and held the

48 Ex. H.
49 Ex. I.
50 Ex. J.
51 Ex. K.
52 Ex. L.
53 Ex. M.
54 Ex. N.
55 Ex. O.
56 Ex. P. The Department’s original Exhibit P was amended to correct typographical and other minor errors, and the amended version now appears in the record.
57 Ex. Q.
58 Ex. P.
comment period open until January 29, 2016. The Department received 143 comments during that comment period.

24. During the summer of 2017, the Department posted a draft of the proposed rule on its website and sent it electronically to persons on its GovDelivery email list. The Department solicited comments, and ultimately received over 820 comments between June 7, 2017, and August 25, 2017. During that time period, the Department held 11 “listening sessions” around the state to solicit comments on the draft rule. The Department also gave presentations on the proposed rule at six town hall stakeholder meetings, and presented the draft rule to ten different agricultural and environmental organizations.

25. On April 16, 2018, the Department requested approval of its Additional Notice Plan. The plan included publishing the proposed rule on the Department’s Nitrogen Fertilizer Rule website and sending the Notice of Hearing, proposed rules, and SONAR to all persons and groups that had expressed an interest in the proposed rule by registering with the Department’s GovDelivery email list.


27. On April 30, 2018, the Department provided a copy of the Notice of Hearing, proposed rules and SONAR to persons and groups detailed in its approved Additional Notice Plan.

28. If the agency implements an approved additional notice plan, the order approving the additional notice plan is the final determination by the Office of Administrative Hearings that the additional notice plan is adequate.

C. Notice Practice

i. Notice to Stakeholders

29. On April 30, 2018, the Department provided a copy of the Notice of Hearing to its official rulemaking list (maintained under Minn. Stat. § 14.14), and to stakeholders identified in its Additional Notice Plan.

59 Ex. A.
60 Ex. H; Ex. C at 75.
61 Ex. P; Ex. C at 75.
62 Ex. P; Ex. C at 74-78.
63 Ex. P; Ex. C at 74-78.
64 Ex. C at 78.
65 Ex. G; Order on Request for Review and Approval of Additional Notice Plan (Apr. 20, 2018); Order on Request for Review and Approval of the Notice of Hearing (Apr. 20, 2018).
66 Exs. F and G.
68 Exs. G and H.
30. The Department complied with Minn. R. 1400.2080, subp. 6 (2017), by mailing the Notice of Hearing at least 33 days before the start of the hearing.

ii. Notice to Legislators

31. Under Minn. Stat. § 14.116 (2018), when an agency sends its Notice of Hearing to persons on its rulemaking list and pursuant to its additional notice plan, it must also send a copy of the same Notice of Hearing and the SONAR to certain legislators.

32. On April 24, 2018, the Department sent a copy of the Notice of Hearing and SONAR to legislators.69

33. The Department mailed the Notice of Hearing to legislators in compliance with Minn. Stat. § 14.116.70

iii. Notice to the Legislative Reference Library

34. Minn. Stat. § 14.23 provides that an agency must send a copy of the SONAR to the Legislative Reference Library when the Notice of Hearing is mailed.

35. On April 30, 2018, the Department submitted a copy of the SONAR by email to the Legislative Reference Library.71

36. The Department submitted the SONAR as required by Minn. Stat. § 14.23.

D. Impact on Farming Operations

37. Additional notice requirements exist when proposed rules affect farming operations.72 In that circumstance, an agency must provide a copy of any such changes to the Commissioner of Agriculture at least 30 days prior to publishing the proposed rules in the State Register.

38. In addition, where proposed rules affect farming operations, Minn. Stat. § 14.14, subd. 1b, requires that at least one hearing be conducted in an agricultural area of the state.

39. This rulemaking was undertaken at the direction of the Commissioner of Agriculture and he was made aware of rule drafts throughout the rulemaking process.73

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69 Ex. L.
70 Under Minn. Stat. § 14.116, notice to legislators must be given “[w]hen an agency mails notice of intent to adopt rules . . . .” In this case, the Department sent notice to legislators six days before sending notice to its rulemaking list and stakeholders. It would be a better practice for an agency to send the notices at or around the same time to comply with the statute’s directive. The Administrative Law Judge determines, however, that even if this constituted an error, it was harmless error under Minn. Stat. § 14.15, subd. 5.
71 Ex. D.
73 Ex. K.
In addition, the Department scheduled five public hearings on the proposed rules in different agricultural areas of the state.\textsuperscript{74}

40. The Department complied with the requirements of Minn. Stat. §§ 14.111, .14, subd. 1b.

\section*{E. Statutory Requirements for the SONAR}

41. An agency adopting rules must address eight factors in its SONAR.\textsuperscript{75} Those factors are:

\begin{enumerate}
\item a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule;
\item the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues;
\item a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule;
\item a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule;
\item the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals;
\item the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals;
\item an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference; and,
\item an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule and reasonableness of each difference.
\end{enumerate}

\textsuperscript{74} Id.
\textsuperscript{75} Minn. Stat. § 14.131.
i. The Agency’s Regulatory Analysis

(a) A description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule.

42. The Department states that the regulatory portions of the proposed rule apply to “responsible parties.” That term is defined to mean owners, operators, or agents in charge of cropland.76

43. The proposed rule has two parts. Part 1 contains a statewide restriction on the application of nitrogen fertilizer in the fall and on frozen soils where there is vulnerable groundwater due to soil types and in areas contained within the DWSMAs.77 Part 2 of the proposed rule contains a progressive process for addressing elevated nitrates in the DWSMAs. The process starts with voluntary measures, but moves to regulatory measures if the water quality gets worse or if the BMPs are not implemented on 80 percent of the cropland in DWSMAs.78

44. With respect to the restriction on fall application of nitrogen fertilizer, the Department notes some farmers may incur additional costs while others should see no increased costs. According to the Department, a majority of farmers in southeast and central Minnesota, where most of the vulnerable groundwater areas are located, do not currently apply nitrogen fertilizer in the fall. As a result, the Department maintains that these farmers should see very little increased costs as a result of the fertilizer restriction in Part 1 of the proposed rule, and may achieve savings due to decreased fertilizer losses from leaching.79

45. The Department states that for other areas of the state, especially the western area, shifting from a fall to a spring fertilizer application could result in some additional costs if fertilizer prices increase due to increased demand and a shorter time period for application.80 The Department notes, however, that there are far fewer vulnerable groundwater areas in these parts of the state. As a result, increased costs under this scenario would not affect a majority of farmers.81

46. The Department also states that farmers could incur additional labor costs if they need to hire more workers to apply fertilizer in the spring.82 However, the Department anticipates this would be an issue primarily in the northwestern part of the state, which is excluded from Part 1 of the proposed rule.83

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76 See Ex. B (proposed Minn. R. 1573.0010, subp. 20).
77 Ex. B; See Minn. Stat. § 103H.275, subd. 2(c).
78 Ex. B; Ex. C at 61-63.
79 Ex C at 62.
80 Ex. C at 62.
81 Id.
82 Id.
83 Id.
47. The Department points out that it has extended the effective date of the proposed rules to January 1, 2020, in order to provide farmers with additional time to adjust to the changes and costs associated with switching from fall application of fertilizer to application in the spring.84

48. The Department notes that it received comments about inadequate bulk dry fertilizer storage capacity and an extremely short spring planting season in some parts of the state. The Department states that the climate exclusion, which excludes portions of the state from the prohibition on fall application based on the leaching index and spring frost free dates, should help alleviate the majority of these concerns.85

49. With respect to Part 2 of the proposed rules, the Department states that responsible parties could bear some costs if the DWSMAs in which they raise crops are designated as regulatory mitigation levels. In that scenario, the responsible parties are required to follow the nitrogen BMPs or water resource protection requirements.86 The Department maintains, however, that the nitrogen fertilizer BMPs are designed to be “economically viable” and should not result in significant costs. According to the Department, in most cases, the adoption of BMPs will not result in any increased costs and should result in increased profitability for farmers.87 The Department also notes that Minn. Stat. § 103H.275, subd. 2, directs the Department to consider economic factors and implementability, among other considerations, before requiring a practice.88

50. As for those who will benefit from the proposed rule, the Department states that Minnesota citizens served by public water suppliers as well as private well owners in DWSMAs will benefit from the reduction and prevention of nitrate in the groundwater.89 According to the Department, the proposed rule will provide the greatest direct health benefit to infants under 6 months of age. High nitrate-nitrogen concentration in drinking water can pose a health risk for infants, including causing a condition called methemoglobinemia, or “blue baby syndrome.”90 In addition, various epidemiological and animal studies have reported a wide range of negative health effects on people generally attributable to consumption of water with elevated nitrate-nitrogen. These negative effects include birth defects, miscarriages, hypertension, stomach and gastro-intestinal cancer, and non-Hodgkin’s lymphoma.91

51. The Department states that preventing and reducing nitrate in groundwater also benefits public water suppliers by decreasing the costs of providing drinking water to the public.92

52. Finally, the Department states that there is a large social benefit to the general public from having groundwater with nitrate-nitrogen concentrations below the

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84 Id.
85 Id. at 62, 100.
86 Id. at 62.
87 Id. at 61-62.
88 Id.
89 Id. at 63.
90 Id.
91 Id.
92 Id.
Minnesota Department of Health’s (MDH) health risk limit (HRL). According to the Department, Minnesotans place a high value on the quality of the waters in the state. The Department contends that this value was demonstrated by the passage of the Clean Water, Land and Legacy Amendment (Legacy Amendment) to the Minnesota Constitution in 2008. The Legacy Amendment raised the state sales tax to provide funding for various things, including the protection of drinking water sources and the restoration of groundwater.

(b) The probable costs to the Agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues.

53. The Department states that the primary costs of implementing Part 1 of the proposed rule are costs associated with educating people about the locations of vulnerable groundwater areas and the requirements of the rules, and enforcing the fall application and frozen soil restrictions. The Department states that it intends to enforce the restrictions on a “complaint-driven basis.”

54. The Department asserts that the total costs to implement and enforce the DWSMA Mitigation Level Designation section of the proposed rule will vary depending on the number of DWSMAs that are found to have high nitrate levels. The Department will bear the costs of evaluating the nitrogen fertilizer BMPs adopted in the DWSMA, establishing any groundwater monitoring networks, as well as providing education within the DWSMAs about the nitrogen fertilizer BMPs and providing financial and technical assistance to facilitate the local advisory team. Also, if DWSMAs move to regulatory status, the Department will bear costs for public notice and hearings.

55. The Department maintains that there will be little or no costs to other agencies associated with the implementation and enforcement of the proposed rule. The Department explains that it will invite the Minnesota Pollution Control Agency (MPCA) and MDH to provide technical advice on projects concerning matters within their authority, such as manure management or public water suppliers. The Department will also use nitrate-nitrogen concentration well data collected by MDH. Because MDH is already required to collect this data under the federal Safe Water Drinking Act, it will not incur costs associated with additional monitoring or sampling. Soil and Water Conservation Districts (SWCDs) will also be invited to participate in local advisory teams on a voluntary basis. Any additional staff costs related to this voluntary participation should be minimal.

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93 Id.
95 Ex. C at 63.
96 Id. at 64.
97 Id.
98 Id.
100 Ex. C at 64.
56. The Department does not anticipate the proposed rule will have any effect on state revenues.\(^{101}\)

\[(c)\] The determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule.

57. The Department acknowledges that many possible approaches could be used to achieve the proposed rule’s purpose of reducing nitrate in groundwater. The Department states that it gathered significant input from an advisory committee regarding the costs and burdens of various methods for achieving the proposed rule’s purpose when drafting the NFMP, which is the conceptual framework for the proposed rule.\(^{102}\) In addition, the Department states that statutory requirements guided the methods it chose. For example, nitrogen fertilizer BMPs must be promoted in areas where groundwater pollution is detected and water resource protection requirements must be designed to prevent and minimize pollution "to the extent practicable.”\(^{103}\)

58. The Department notes that some people who commented on the proposed rule maintain that it would be less costly for the Department to simply increase its research and education efforts.\(^{104}\) The Department will continue its ongoing research and education efforts, but it believes that those efforts alone are inadequate to ensure that groundwater will be maintained in its natural condition and that nitrate-nitrogen concentrations do not exceed the MDH HRL.\(^{105}\) The Department notes it would also be less costly to do nothing, but this would not meet the goals of the Act that groundwater be protected.\(^{106}\)

59. The Department does not believe there are less intrusive methods for achieving the proposed rule’s purpose. The Department notes that the proposed rule is targeted to vulnerable groundwater areas and DWSMAs where nitrate-nitrogen concentrations meet certain criteria. Areas that do not meet the criteria do not fall under the regulations. Therefore, rather than impose a statewide nitrogen fertilizer BMPs requirement, which would be less effective and more intrusive for farmers, the proposed rule is tailored to address local groundwater conditions and practices.\(^{107}\)

\[(d)\] A description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule.

60. The Department states that it considered a rule based solely on nitrate-nitrogen concentrations in groundwater that did not restrict application of nitrogen fertilizer

\(^{101}\) Id.

\(^{102}\) Id. at 65.

\(^{103}\) Id.; See Minn. Stat. §§ 103H.001, .275.

\(^{104}\) Ex. C at 65.

\(^{105}\) Id. at 65-66.

\(^{106}\) Id. at 65.

\(^{107}\) Id. at 66.
in the fall and on frozen soil.\textsuperscript{108} The Department ultimately rejected this alternative because restricting the application of nitrogen fertilizer in vulnerable groundwater areas furthers the preventative and mitigation goals of the Act.\textsuperscript{109}

61. The Department states that it also considered a rule that included regulatory levels and water resource protection requirements for private wells in vulnerable townships with high nitrate-nitrogen concentrations that were similar to those proposed for DWSMAs. The Department rejected this alternative to focus its limited resources on the DWSMAs; DWSMAs are the highest priority in the NFMP, they were the focus of many comments on the draft rule, and they represent the greatest population at risk from high nitrate levels. By focusing on areas with the greatest number of people, the proposed rule will have the greatest impact on public health. Additionally, the large land area comprised by the townships would have required an entirely new program and significant resources that the Department currently lacks.\textsuperscript{110} The Department intends to continue the work set out in the NFMP for townships, including private well testing, development and promotion of nitrogen fertilizer BMPs, establishing monitoring networks where feasible, and helping to form LATs to involve local farmers and their advisors in water quality issues in their area.\textsuperscript{111}

\textbf{(e) The probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals.}

62. The Department asserts that for most farmers, complying with Part 1 of the proposed rule should not result in additional costs. The Department believes that most farmers in southeast and central Minnesota, where vulnerable groundwater areas are located, already follow the nitrogen fertilizer BMP restricting fall application on vulnerable soil or in karst. The Department acknowledges that these farmers may see some increase in costs if fertilizer or labor prices go up in the spring due to greater demand. However, these costs are speculative and difficult to quantify.\textsuperscript{112}

63. The Department states that suppliers of nitrogen fertilizer and agricultural chemical facilities could face additional shipping and storage costs because applications will occur in the spring and summer.\textsuperscript{113} This concern arose mostly in the northwestern part of the state, however, and this portion of the state is excluded from Part 1 of the rule.\textsuperscript{114}

64. The Department acknowledges that farmers could face additional costs if nitrogen fertilizer BMPs are required for mitigation levels 3 and 4 under Part 2 of the proposed rule. In those cases, farmers could incur costs associated with additional

\textsuperscript{108} Id.
\textsuperscript{109} Id.; see Minn. Stat. § 103H.001.
\textsuperscript{110} Ex. C at 67.
\textsuperscript{111} Id.
\textsuperscript{112} Id.
\textsuperscript{113} Id.
\textsuperscript{114} Id.
education, soil and manure testing, soil amendments, and the splitting of nitrogen fertilizer applications to apply smaller amounts at one time.115

65. Requiring the adoption of Alternative Management Tools (AMTs) in DWSMAs for mitigation level 3 will increase overall costs. However, because the practices may only be required if a source of funding is available to responsible parties, the Department asserts it would not result in increased costs to the responsible party.116

66. Water resource protection requirements in mitigation level 4 could also increase costs. However, economic factors and implementability must be considered when evaluating water resource protection requirements. In addition, the proposed rule requires that BMPs be selected in consultation with the Local Advisory Team (LAT). The Department believes that consideration of economic factors and consultation with LATs should prevent excessive increased costs to farmers.117

67. Finally, the Department states that there will be no or limited additional costs to other units of government related to the proposed rule. The primary costs of implementing the proposed rule will be borne by the Department.118

(f) The probable costs or consequences of not adopting the proposed rule, including those costs borne by individual categories of affected parties, such as separate classes of governmental units, businesses, or individuals.

68. Public water suppliers are required to monitor quarterly if nitrate-nitrogen concentration exceeds 5.4 mg/L.119 If concentrations exceed 10 mg/L, public water suppliers must issue a drinking water advisory to the community and take immediate steps to return to compliance.120 Ongoing monitoring continues until concentrations fall below the 10 mg/L nitrate-nitrogen limit.121

69. The Department states that if the proposed rule is not adopted, public water suppliers with high concentrations of nitrate-nitrogen will be required to continue treating drinking water and may incur substantial increased costs related to having to drill new wells, blend from other wells, or build a treatment facility.122 The Department also notes that, because current water rates often cannot cover the additional costs of new wells or treatment, public water suppliers are forced to raise rates.123 In addition, residents, businesses, and industries bear the costs associated with water use restrictions during a drinking water advisory, such as paying for bottled water.124

115 Id. at 68.
116 Id.
117 Id.
118 Id.
119 Id.
120 Id.
121 Id.
122 Id.
123 Id.
124 Id.
70. The Department estimates that the cost of installing a new well in a deeper or uncontaminated aquifer may well exceed $200,000, depending on whether land must be purchased and pump houses and transmission mains constructed.\textsuperscript{125} Moreover, water from deep aquifers may require treatment to remove iron, manganese, sulfate, arsenic or radium.\textsuperscript{126}

71. Costs associated with blending water supplies include labor, pumping, monitoring, and reduced capacity. According to the Department, annual costs for source water blending range from $900 to $3,000. In addition, capital costs of $500,000 or more may be incurred if pumps or transmission mains need to be constructed.\textsuperscript{127} The Department notes that communities may be able to purchase water from another low-nitrate water supplier. However, these communities may incur costs associated with building the infrastructure to distribute the water and ensuring the chemistry or treatment is adequate.\textsuperscript{128}

72. The Department states that for some communities, treatment may be the only option. Nitrate removal processes for public water suppliers include reverse osmosis and anion exchange. The Department notes that the initial construction cost for one municipal reverse osmosis system was more than $7 million dollars.\textsuperscript{129} In addition, the Department states that estimated annual operating and maintenance costs for these types of treatment plants can range from tens of thousands of dollars to more than $100,000.\textsuperscript{130} Moreover, these systems have the disadvantage of using up to 4 gallons of water for every gallon produced, having a “large energy footprint,” creating salty waste product, and increasing the corrosion potential for lead and copper exceedances in finished drinking water.\textsuperscript{131}

73. The Department states that construction costs for an anion exchange system range from $300,000 for a non-municipal system to more than $4,000,000 for a municipal system. The Department estimates annual maintenance costs for these systems to be $7,000 to more than $22,000. These systems have disadvantages, including the creation of salty waste product that is discharged into the environment and the increased potential for lead and copper corrosion in finished drinking water.\textsuperscript{132}

74. According to interviews the Department conducted with seven public water suppliers, the installation and maintenance of municipal nitrate removal systems increased the cost of water delivery fourfold or more. Additional costs range from $0.82 to $7.23 to produce 1,000 gallons. Moreover, the Department states that communities with treatment systems incur higher labor costs as the systems require staff with higher-

\textsuperscript{125} \textit{Id.} at 69.  
\textsuperscript{126} \textit{Id.}  
\textsuperscript{127} \textit{Id.}  
\textsuperscript{128} \textit{Id.}  
\textsuperscript{129} \textit{Id.}  
\textsuperscript{130} \textit{Id.}  
\textsuperscript{131} \textit{Id.} at 69-70.  
\textsuperscript{132} \textit{Id.} at 70.
class licenses to operate the treatment plant, and these additional costs are passed on to ratepayers.\textsuperscript{133}

75. MDH estimates that the number of community water systems that treat for nitrate has increased from six systems serving 15,000 people in 2008 to eight systems serving 50,000 in 2014.\textsuperscript{134} According to the Department, for the five-year period of 2011-2016, the annual costs for those communities that treat nitrate-nitrogen above 10 mg/L ranged from $46 to $7,900 per household.\textsuperscript{135}

76. Pete Moulton, director of public works for the city of St. Peter, spoke at the hearing in St. Cloud about the costs St. Peter has incurred to treat its water. Mr. Moulton stated that, due to high nitrate concentrations, the city of St. Peter installed reverse osmosis facilities in 2011 that significantly increased the cost of the water it provides.\textsuperscript{136}

\begin{equation}
\begin{align*}
\text{(g)} & \quad \text{An assessment of any differences between the proposed rules and existing federal regulation and a specific analysis of the need for and reasonableness of each difference.} \\
\text{(h)} & \quad \text{An assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule.}
\end{align*}
\end{equation}

77. The Department states that this regulatory factor is not applicable as the proposed rule governs an area that is not addressed by federal law.\textsuperscript{137}

78. The Department states that there are no existing rules that regulate the use of nitrogen fertilizer. According to the Department, the proposed rule is complementary to and works efficiently with other types of existing regulations. The Department notes that Minn. R. 7020.0200-.2225 (2017) regulates animal feedlots and land application of manure. While this proposed rule does not regulate the application of manure, manure application must be considered to determine the total amount of nitrogen fertilizer applied. The Department points out that it has included a provision in the proposed rule to allow the use of manure management plans and related approvals and inspections in order to document appropriate use of nitrogen fertilizer BMPs.\textsuperscript{138}

79. The Department also notes that MDH administers the Safe Drinking Water Act in Minnesota. Public water suppliers must monitor drinking water and take corrective action if nitrate-nitrogen exceeds the 10 mg/L HRL. According to the Department, the proposed rule complements existing requirements because nitrogen fertilizer is one of the

\textsuperscript{133} Id.
\textsuperscript{134} Id.
\textsuperscript{135} Id.
\textsuperscript{136} St. Cloud Public Hearing Transcript (Tr.) at 36-38 (Moulton) (July 25, 2018).
\textsuperscript{137} Ex. C at 70-71.
\textsuperscript{138} Id. at 71.
main sources of nitrate in groundwater, and the rule is intended to address this concern before public water supplies reach the 10 mg/L HRL.\textsuperscript{139}

80. The Department has adequately analyzed the eight factors set forth in Minn. Stat. § 14.131, in the text of its SONAR.

\textbf{ii. Consultation with the Commissioner of Minnesota Management and Budget (MMB)}

81. As required by Minn. Stat. § 14.131, by letter dated April 24, 2018, the Commissioner of MMB responded to a request by the Department to evaluate the fiscal impact and benefit of the proposed rules on local units of government.\textsuperscript{140} MMB reviewed the proposed rules and concluded they would cause “no fiscal impact to local units of government.”\textsuperscript{141} MMB noted that the proposed rules do not apply to cities and do not require local units of government to adopt any or all of the proposed rules.\textsuperscript{142}

\textbf{iii. Performance-Based Regulation}

82. The APA requires an agency to describe how it has considered and implemented the legislative policy supporting performance-based regulatory systems. A performance-based rule is one that emphasizes superior achievement in meeting the agency’s regulatory objectives and maximum flexibility for the regulated party and the agency in meeting those goals.\textsuperscript{143}

83. The Department asserts that it has complied with performance-based regulatory requirements. The Department states that the fall nitrogen application restrictions in Part 1 of the proposed rule are directed to those areas that are the most vulnerable to nitrates leaching into groundwater.\textsuperscript{144} The Department notes that the area covered in the proposed rules includes quarter-sections that are equal to or greater than 50 percent vulnerable and does not include quarter-sections less than 50 percent vulnerable.\textsuperscript{145} And the Department states that all of the regulations in Part 2 of the proposed rules will be based on objective measures, such as documented increases in nitrates or the failure to implement BMPs.\textsuperscript{146}

84. The Department also maintains that the proposed rules incorporate maximum flexibility for regulated parties and the MDA in achieving the Department’s regulatory goals.\textsuperscript{147} The Department notes that some areas of the state are excluded based on their climate or because a county has less than 3 percent agricultural use.\textsuperscript{148} In addition, the Department points out that Part 2 of the proposed rules is designed to allow

\begin{footnotesize}
\textsuperscript{139} Id.
\textsuperscript{140} Ex. J.
\textsuperscript{141} Id.
\textsuperscript{142} Id.
\textsuperscript{143} Minn. Stat. §§ 14.002, 14.131.
\textsuperscript{144} Ex. C at 72.
\textsuperscript{145} Id.
\textsuperscript{146} Id.
\textsuperscript{147} Id.
\textsuperscript{148} Id. at 72-73.
\end{footnotesize}
for flexibility and local input regarding the practices to be adopted or required in DWSMAs.\textsuperscript{149} Under the proposed rules’ site-specific water resources requirements, DWSMAs meeting the criteria will start in voluntary mitigation levels 1 or 2. According to the Department, this framework was intended to provide time for discussions and the formation of a LAT to advise the Department on the appropriate BMPs to be adopted based on soils, types of crops grown, and other factors.\textsuperscript{150}

85. Finally, the Department notes that farmers will have at least three growing seasons to adopt the new standards and to address nitrate levels. The Department points out that farmers also have the option under the proposed rules of implementing AMTs. These alternative tools are designed to be local solutions that go beyond the nitrogen fertilizer BMPs.\textsuperscript{151}

iv. Summary

86. The Department has complied with Minn. Stat. § 14.131 in assessing the impact of the proposed rules, including consideration and implementation of the legislative policy supporting performance-based regulatory systems, and the fiscal impact on units of local government.


87. Minn. Stat. § 14.127 requires agencies to “determine if the cost of complying with a proposed rule in the first year after the rule takes effect will exceed $25,000 for: (1) any one business that has less than 50 full-time employees; or (2) any one statutory or home rule charter city that has less than ten full-time employees.” The agency must make this determination before the close of the hearing record, and the Administrative Law Judge must review the determination and approve or disapprove it.\textsuperscript{152}

88. The Department states that the rule does not apply to cities. Therefore, there will be no cost of compliance for cities.\textsuperscript{153}

89. As for small businesses, the Department does not believe that compliance with the proposed rule will exceed $25,000 for any “responsible party” in the first year after the rule takes effect.\textsuperscript{154} As already noted, the Department maintains that most farmers in vulnerable groundwater areas already do not apply nitrogen fertilizer in the fall or should not be doing so under existing BMPs. And the Department points out that only voluntary measures will be required in DWMSAs for the first three growing seasons. According to the Department, the nitrogen fertilizer BMPs are designed to be economically feasible and AMTs may only be required if they are funded.\textsuperscript{155}

\begin{flushleft}
\textsuperscript{149} Id. at 73.
\textsuperscript{150} Id.
\textsuperscript{151} Id.
\textsuperscript{152} Minn. Stat. § 14.127, subds. 1 and 2.
\textsuperscript{153} Ex. C at 71.
\textsuperscript{154} Id.
\textsuperscript{155} Id. at 72.
\end{flushleft}
Department contends that scenarios in which a responsible party would incur costs of more than $25,000 would be based on voluntary choices and are speculative.\footnote{Id. at 71.}

The Department has made the determinations required by Minn. Stat. § 14.127, and the Administrative Law Judge approves those determinations.

G. Adoption or Amendment of Local Ordinances

Under Minn. Stat. § 14.128 (2018), the agency must determine if a local government will be required to adopt or amend an ordinance or other regulation to comply with a proposed agency rule. The agency must make this determination before the close of the hearing record, and the Administrative Law Judge must review the determination and approve or disapprove it.\footnote{Minn. Stat. § 14.128, subd. 1.}

The Department states that it has sole authority for the proposed rule and its regulations, and that there is no requirement that a local government unit adopt any part of the proposed rule.\footnote{Ex. C at 72.} Local regulation of nitrogen fertilizer is not preempted, such that a local government could adopt a local standard with or without the proposed rule, but there is no requirement that a local government do so.\footnote{Id.}

Because the regulations are not implemented by local governments, no changes to local ordinances or regulations will be required to conform to the proposed rules.

The Department has made the determination required by Minn. Stat. § 14.128 and the Administrative Law Judge approves that determination.

IV. Rulemaking Legal Standards

A rulemaking proceeding under the APA must include the following inquiries: whether the agency has statutory authority to adopt the rule; whether the rule is unconstitutional or otherwise illegal; whether the agency has complied with the rule adoption procedures; whether the proposed rule grants undue discretion to government officials; whether the rule constitutes an undue delegation of authority to another entity; and whether the proposed language meets the definition of a rule.\footnote{See Minn. R. 1400.2100.}

Under Minn. Stat. § 14.14, subd. 2, and Minn. R. 1400.2100, the agency must establish the need for, and reasonableness of, a proposed rule by an affirmative presentation of facts. In support of a rule, the agency may rely upon materials developed for the hearing record,\footnote{See Manufactured Hous. Inst. v. Pettersen, 347 N.W.2d 238, 240 (Minn. 1984); Minnesota Chamber of Commerce v. Minnesota Pollution Control Agency, 469 N.W.2d 100, 103 (Minn. Ct. App. 1991).} “legislative facts” (namely, general and well-established
principles that are not related to the specifics of a particular case, but which guide the development of law and policy), \(^{162}\) and the agency’s interpretation of related statutes.\(^ {163}\)

97. A proposed rule is reasonable if the agency can “explain on what evidence it is relying and how the evidence connects rationally with the agency’s choice of action to be taken.”\(^ {164}\)

98. By contrast, a proposed rule will be deemed arbitrary and capricious where the agency’s choice is based upon whim or devoid of articulated reasons, or if it “represents its will and not its judgment.”\(^ {165}\)

99. An important corollary to these standards is that, when proposing new rules, an agency is entitled to make choices between different possible regulatory approaches, so long as the alternative selected by the agency is a rational one. Thus, while reasonable minds might differ as to whether one or another particular approach represents “the best alternative,” the agency’s selection will be approved if it is one that a rational person could have made.\(^ {166}\)

100. Because the Department proposed further changes to the proposed rule language after the date it was originally published in the \textit{State Register}, it is also necessary to address whether this new language is substantially different from the language as originally proposed.\(^ {167}\)

101. Minn. Stat. § 14.05, subd. 2(b), details the standards used to determine whether any changes to proposed rules create a substantially different rule. A modification does not make a proposed rule substantially different if:

\begin{enumerate}
\item “the differences are within the scope of the matter announced . . . in the notice of hearing and are in character with the issues raised in that notice”;
\item the differences “are a logical outgrowth of the contents of the . . . notice of hearing, and the comments submitted in response to the notice”; and
\item the notice of hearing “provided fair warning that the outcome of that rulemaking proceeding could be the rule in question.”\(^ {168}\)
\end{enumerate}

\(^ {162}\) Compare generally \textit{United States v. Gould}, 536 F.2d 216, 220 (8th Cir. 1976).

\(^ {163}\) See \textit{Mammenga v. Agency of Human Servs.}, 442 N.W.2d 786, 789-92 (Minn. 1989); \textit{Manufactured Hous. Inst.}, 347 N.W.2d at 244.

\(^ {164}\) \textit{Manufactured Hous. Inst.}, 347 N.W.2d at 244.


\(^ {166}\) \textit{Minnesota Chamber of Commerce}, 469 N.W.2d at 103; \textit{Peterson v. Minn. Dep’t of Labor & Indus.}, 591 N.W.2d 76, 78 (Minn. Ct. App. 1999).

\(^ {167}\) See Ex. M.

\(^ {168}\) Minn. Stat. § 14.05, subd. 2(b).
102. When determining whether modifications result in a rule that is substantially different, the Administrative Law Judge must consider whether:

(1) “persons who will be affected by the rule should have understood that the rulemaking proceeding . . . could affect their interests”;  

(2) the “subject matter of the rule or issues determined by the rule are different from the subject matter or issues contained in the . . . notice of hearing”; and 

(3) “the effects of the rule differ from the effects of the proposed rule contained in the . . . notice of hearing.”  

V. General Analysis of Rule

103. The role of the Administrative Law Judge during a legal review of rules is to determine whether the agency has made a reasonable selection among the regulatory options that it has available. A judge does not fashion requirements that the judge regards as best suited for the regulatory purpose. The delegation of rulemaking authority is drawn from the Minnesota Legislature and is conferred upon the agency. The legal review under the APA begins with this important premise.  

104. Many comments received in this proceeding fell into the following general groupings: (1) comments objecting to the proposed rule as too restrictive and arbitrary; (2) comments maintaining the rule is not restrictive enough to protect the state’s groundwater and is arbitrary; and (3) comments generally supportive of the proposed rule. All of the comments received were read and considered. This report does not discuss every comment that was submitted, but includes discussion of representative comments in each of these categories.

A. Comments Asserting the Proposed Rule is Too Restrictive or is Arbitrary

i. Comments

105. Jim Nesseth, a crop and livestock producer, contends that the proposed rule is unfairly focused on agriculture and attempts a “one size fits all” solution for addressing high levels of nitrogen in the soil. Mr. Nesseth maintains that farmers should have the option of applying nitrogen fertilizer in the fall if that is what works better for their

169 See Minn. Stat. § 14.05, subd. 2(c). 
170 See Manufactured Housing Institute, supra, 347 N.W.2d at 244 (The Court instructs that the state courts are to restrict the review of agency rulemaking to a “narrow area of responsibility, lest [the court] substitute its judgment for that of the agency”); see also, In the Matter of the Proposed Rules of the Minnesota Pollution Control Agency Governing Permits for Greenhouse Gas Emissions, Minnesota Rules Chapters 7005, 7007 and 7011, Docket No. 8-2200-22910-1 at 20, REPORT OF THE ADMINISTRATIVE LAW JUDGE (Minn. Office Admin. Hearings Nov. 9, 2012). 
171 Comment by Jim Nesseth (June 18, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
particular soil conditions. Mr. Nesseth emphasized that farmers respect environmental concerns, especially concerns about water quality. He notes that farmers conduct deep soil nitrate tests in the fall (24” depth) and pre-side dress nitrogen soil tests in the spring (12” depth), and use the nitrogen fertilizer calculator developed by Iowa State University in order to ensure their rates are environmentally safe and economically profitable. Like other commenters, Mr. Nesseth also points out that there are other sources of nitrate-nitrogen contributing to the elevated levels in the groundwater. Mr. Nesseth also objects that the Department is setting a more restrictive nitrate-nitrogen level of 5.4 parts per million (ppm) as the trigger for restricting fall application of nitrogen fertilizer. Mr. Nesseth maintains that the level should be the current EPA standard of 10 ppm.

106. Charles Louis, a farmer of 40-plus years from Farmington, submitted comments similar to those of Mr. Nesseth. Mr. Louis states that he follows the University of Minnesota’s BMPs and then exceeds those guidelines by using Variable Rate Irrigation (VRI) technology, which applies variable rate water and nitrogen applications in irrigation pivots to supply nitrogen just as the crops need it. Mr. Louis objects to what he claims is a “one size fits all” state-wide regulation that ignores how farmers are actually at the forefront of protecting Minnesota’s groundwater.

107. Brent Nyquist, a fifth-generation farmer from Cokato, states that farmers have long ago moved away from over-applying nitrogen with blanketed applications. Mr. Nyquist states that he and other farmers use a plastic coated nitrogen granule (ESN) that breaks down over time and does not leach through the soil profile. He also states that farmers use GPS site-specific testing and application on every acre. Mr. Nyquist urges the Department not to talk down to farmers through regulations from afar. He maintains that farmers respect the land and want to pass it on to future generations.

108. Several commenters explained their farming practices with regard to nitrogen utilization and their attempts to use only the amount necessary. At the public hearing in Stewartville, Dave Mensink stated that he knows that nitrates are present in the water, but believes that the levels may have resulted from “the way our forefathers farmed.” Mr. Mensink also noted that farmers now “do not want to put on one extra pound of excess nitrogen” due to the environmental and economic cost. Stewartville commenter Ben Storm echoed the same concern, noting that “farmers aren’t out there to waste money” by applying excess nitrogen, and that applying additional nitrogen beyond the amount necessary would be like “drilling a pinhole in the bottom of your fuel tank and

\[ 172 \text{ Id.} \\
173 \text{ Id.} \\
174 \text{ Id.} \\
175 \text{ Id.} \\
176 \text{ Comment by Charles Louis (July 24, 2018) (SpeakUp) (eDocket No. 71-9024-35205).} \\
177 \text{ Id.} \\
178 \text{ Id.} \\
179 \text{ Comment by Brent Nyquist (July 23, 2018) (SpeakUp) (eDocket No. 71-9024-35205).} \\
180 \text{ Id.} \\
181 \text{ Id.} \\
182 \text{ Stewartville Public Hearing Tr. at 44 (Mensink) (July 18, 2018).} \\
183 \text{ Id.} \]
letting the fuel run out.”\textsuperscript{184} Commenter Kern Iverson, who spoke at the public hearing in Worthington, noted that nitrogen for this year cost $40 per acre, and that “[w]hen you put nitrogen on, you don’t want it to get away.”\textsuperscript{185}

109. Melinda Groth, who spoke in Stewartville, noted that she and her husband farm “century farms,” which have been in the family for over 100 years and they are proud of their land.\textsuperscript{186} Ms. Groth cautioned against using one regulatory strategy across the board because she and other younger farmers are using creativity and flexibility to address variable circumstances on their farms and she does not wish for their hands to be tied in the approaches they take.\textsuperscript{187}

110. The Irrigators Association of Minnesota, Minnesota Crop Protection Retailers, and Minnesota Agricultural Water Resource Center submitted comments on behalf of farmers, agronomists and fertilizer retailers.\textsuperscript{188} These organizations contend the Department rushed the development of the proposed rule without first adequately evaluating whether the implementation of BMPs has been effective.\textsuperscript{189} They note that Minn. Stat. § 103H.275, subd. 1(b) permits the Department to adopt water source protection requirements “if the implementation of best management practices has proven to be ineffective.” These organizations maintain that the Department’s determination that the BMPs have been ineffective is based on a series of general statements and not on sound data. They urge the Department to work with local advisory groups using the available BMP research and implement targeted programs rather than pursue what they contend is a rigid rule.\textsuperscript{190}

111. The Minnesota Corn Growers Association echoes this concern, stating that BMPs have been widely adopted and that the Department cannot show that the BMPs are ineffective, meaning that the Department lacks regulatory authority.\textsuperscript{191} The Minnesota Corn Growers Association also asserts the Department has failed to take into account increased efficiency in nitrogen fertilizer use and has relied on flawed study data.\textsuperscript{192} The Minnesota Corn Growers Association believes that a voluntary approach is the best strategy and that farmers want to be a part of solutions, noting that the organization has itself invested nearly $6,000,000 in research and education efforts on improving the efficient use of fertilizer.\textsuperscript{193}

112. The Red River Valley Sugarbeet Growers Association (RRVSGA) also criticized the proposed rule, contending that groundwater is degraded only when it

\textsuperscript{184} Stewartville Public Hearing Tr. at 50 (Storm) (July 18, 2018).
\textsuperscript{185} Worthington Public Hearing at 73 (Iverson) (July 19, 2018).
\textsuperscript{186} Stewartville Public Hearing Tr. at 122 (Groth) (July 18, 2018).
\textsuperscript{187} Id.
\textsuperscript{188} Comment by Irrigators Association of Minnesota, Minnesota Crop Protection Retailers, and Minnesota Agricultural Water Resource Center (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{189} Id. See also Comment by Minnesota Farm Bureau Federation (Aug. 15, 2018) (SpeakUp) (eDocket 71-9024-35205).
\textsuperscript{190} Comment by Irrigators Association of Minnesota, Minnesota Crop Protection Retailers, and Minnesota Agricultural Water Resource Center (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{191} Comment by Minnesota Corn Growers Association (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{192} Id. at 4-7.
\textsuperscript{193} Id. at 1-2, 7-8.
reaches the 10 mg/L HRL for nitrate, such that no statutory violation occurs at levels of 9.9 mg/L and below.\textsuperscript{194} The RRVSGA further maintained that the Department based the proposed rule on outdated data, failed to consider other sources of nitrogen, and erroneously linked increased fertilizer sales with increased contamination.\textsuperscript{195}

113. Several commenters were concerned that the proposed rule only regulates one source of nitrogen (nitrogen fertilizer) when nitrate-nitrogen in soil and water systems originate from both inorganic (nitrogen fertilizer) and organic (manures, legumes, soil organic matter) sources.\textsuperscript{196} Stewartville commenter John Meyer asserted that lawn fertilizer containing nitrogen was a source of concern.\textsuperscript{197} Commenter Allen Wold in Park Rapids identified goose feces as contributing to the problem.\textsuperscript{198} These commenters maintain that the proposed rule’s failure to recognize and address other sources of nitrate-nitrogen in public waters renders the proposed rule arbitrary and defective.\textsuperscript{199} Additionally, several commenters suggested that high nitrogen levels are naturally occurring. For example, one commenter at the Stewartville public hearing, Nora Felton, asserted that some areas of the state have naturally occurring rates of nitrogen that are higher than those in other areas of the state, and that the Department should keep that in mind.\textsuperscript{200} Similarly, Glen Graff, who commented at the public hearing in Worthington, indicated he had “always been told that when we draw groundwater out of bedrock it’s going to be high in nitrates.”\textsuperscript{201}

\textbf{ii. Department’s Response}

114. In response to commenters who objected to the proposed rule’s focus on agricultural areas and cropland at the exclusion of urban areas and other sources of nitrogen, the Department states that only a small percentage of nitrogen fertilizer sold in Minnesota is applied to lawns, golf courses, and parks.\textsuperscript{202} The Department estimates that 95 percent of the nitrogen sold in Minnesota is applied to agricultural crops.\textsuperscript{203} The amount of fertilizer applied to turf grass and in urban areas is very small compared to the amount used in production agriculture.\textsuperscript{204} In addition, the Department states that nitrate leaching from fertilizer on lawns ranges from low to very low due in part to the dense root structure of lawns.\textsuperscript{205}

\textsuperscript{194} Comment by Red River Valley Sugarbeet Growers Association (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{195} Id.
\textsuperscript{196} See, e.g., Comment by Andrew Chapman-Nesseth (June 6, 2018) (SpeakUp) (eDocket No. 71-9024-35205); Brad and Meg Freking (June 10, 2018)(SpeakUp)(eDocket 71-9024-35205); Comment by George Rehm (July 30, 2018) (SpeakUp) (eDocket No. 71-9024-35205); Park Rapids Public Hearing Tr. at 37 (Wold) (July 26, 2018); Comment by Rodd Beyer (Aug. 15, 2018) (SpeakUp) (eDocket 71-9024-35205).
\textsuperscript{197} Stewartville Public Hearing Tr. at 64-65 (Meyer) (July 18, 2018).
\textsuperscript{198} Park Rapids Public Hearing Tr. at 37 (Wold) (July 26, 2018).
\textsuperscript{199} Id.
\textsuperscript{200} Stewartville Public Hearing Tr. at 141-42 (Felton) (July 18, 2018).
\textsuperscript{201} Worthington Public Hearing Tr. at 49 (Graff) (July 19, 2018).
\textsuperscript{202} Department’s Response to Comments (Aug. 15, 2018).
\textsuperscript{203} Id. (citing MDA 2015 Crop Year Fertilizer Sales Report).
\textsuperscript{204} Id.
\textsuperscript{205} Id.
115. In response to comments criticizing the Department for not taking into consideration other sources of nitrate, such as manure, legumes, organic matter, and septic systems, the Department notes that its authority is limited to regulating agricultural chemicals.\textsuperscript{206} The Department does not have authority over septic systems or municipal waste-water treatment systems. Moreover, the Department points out that there is an extensive body of research documenting that nitrate from nitrogen fertilizer can leach below the root zone and migrate to groundwater. And while contributions from soil organic matter, manure applications and legume crops do occur, the Department states that fertilizer inputs are the most important concern.\textsuperscript{207}

116. The Department also points out that sources of nitrogen other than fertilizer, such as legume crops and manure, are indirectly accounted for in the proposed rule under the University of Minnesota Extension nitrogen application BMPs.\textsuperscript{208} Taking proper credit for manure, legumes and other nitrogen sources is a recommended BMP and will be included in the Commissioner’s orders in mitigation level 3.\textsuperscript{209} Finally, in response to individuals who commented that water fowl excrement is a significant source of nitrogen, the Department notes an MPCA report from 2013 that determined water fowl contributed 0.1 percent of the nitrogen to water.\textsuperscript{210}

117. The Department also disputes comments from the Irrigators Association of Minnesota, the Minnesota Corn Growers Association, and the RRVSGA that the Department has not adequately demonstrated that implementation of the BMPs has been ineffective.\textsuperscript{211} The Department maintains that it has established through extensive evidence, including a vast amount of monitoring data set forth in its SONAR, that: (1) nitrate levels in groundwater pose a serious concern; (2) MDA has met all of the statutory requirements for adopting the rules; (3) nitrogen fertilizer is a major source of the nitrate in groundwater; and (4) the proposed rule is necessary to meet the Groundwater Protection Act’s goals of prevention and mitigation.\textsuperscript{212}

118. Finally, the Department rejects those comments asserting that the Department’s use of levels lower than the 10 mg/L nitrate-nitrogen HRL standard for drinking water is arbitrary and too restrictive. The Department states that the 5.4 mg/L nitrate-nitrogen threshold proposed in the rule is an action level based on the Safe Drinking Water Act. The Department asserts that waiting until the groundwater reaches the HRL will make it too late to effectively address or reverse the contamination. In addition, the Department states that taking action at thresholds below the HRL gives

\textsuperscript{206} Id. at 2.
\textsuperscript{207} Id. at 3.
\textsuperscript{208} Id.
\textsuperscript{209} Id.
\textsuperscript{210} Id.
\textsuperscript{211} See Comment by Irrigators Association of Minnesota, Minnesota Crop Protection Retailers, and Minnesota Agricultural Water Resource Center (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205); Comment by Minnesota Corn Growers Association (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205); and Duane Maatz, Executive Director, Red River Valley Sugarbeet Growers Association (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{212} Department’s Rebuttal Comments at 2-6 (Aug. 22, 2018); Ex. C at 49-59.
farmers time to make changes to avoid having to take immediate or extraordinary action if the public water supply exceeds the HRL.\textsuperscript{213}

\textbf{B. Comments Objecting to Proposed Rule as Not Restrictive Enough or Arbitrary}

\textit{i. Comments}

119. Several commenters maintain that the proposed rule does not go far enough to protect Minnesota’s groundwater.\textsuperscript{214} These commenters criticized the Department’s reliance on voluntary measures and adoption rates of BMPs.\textsuperscript{215} Rebecca Shockley, for example, maintains that the proposed rules should be revised to remove BMP adoption rates as a consideration.\textsuperscript{216} According to Ms. Shockley, the Department should deploy regulatory intervention whenever unhealthy levels of nitrate in water is discovered.\textsuperscript{217} Ms. Shockley also asserts that the proposed rule’s restriction on applying nitrogen fertilizer in the fall or to frozen soils should be expanded statewide and not limited to only those areas overlaying vulnerable groundwater.\textsuperscript{218}

120. Jane Hoffman objected to the extended time frames for compliance in areas where the groundwater already has nitrate levels deemed unsafe for human consumption.\textsuperscript{219}

121. Freshwater Society (Freshwater) submitted a similar comment, arguing that the Department should set the standard to allow mitigation activities as soon as human-caused nitrogen pollution is observed.\textsuperscript{220} Freshwater asserts that levels higher than 3 mg N L\textsuperscript{-1} are the result of human activity, and that the Department should set a clear goal of 5 mg N L\textsuperscript{-1} as the threshold for mandatory mitigation activities.\textsuperscript{221} Freshwater also contends that the Department should use targeted local strategies rather than a statewide rule.\textsuperscript{222}

122. Gyles Randall is a University of Minnesota Professor Emeritus and Soil Scientist.\textsuperscript{223} Professor Randall was named to the original NFMP Task Force mandated by the legislature in passing the Act in 1989, and he served as the Vice Chair of the task

\textsuperscript{213} Department’s Rebuttal Comments at 12-13.
\textsuperscript{214} See, \textit{e.g.}, Comment by Rebecca Shockley (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205); Comment by Cara Peterson (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205); Comment by Brian Henning (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-5205); Comment by Dr. Stefan Collinet (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-5205); Comment by Elizabeth Wroblewski (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-5205).
\textsuperscript{215} \textit{Id.}
\textsuperscript{216} Comment by Rebecca Shockley (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205). Ms. Shockley’s comment was in a form letter identical to that submitted by numerous other commenters. Her comment was selected as a representative example of these identical or nearly identical comments. \textsuperscript{217} \textit{Id.}
\textsuperscript{218} \textit{Id.}
\textsuperscript{220} Comment by Freshwater Society at 2 (Aug. 15, 2018) (SpeakUp) (EDocket No. 71-9024-35205).
\textsuperscript{221} \textit{Id.}
\textsuperscript{222} \textit{Id. at 4-5.}
\textsuperscript{223} Comment by Professor Gyles Randall (Aug. 3, 2018) (SpeakUp) (EDocket No. 71-9024-35205).
force that conducted many stakeholder meetings. Professor Randall objects to the proposed rule as timid, protracted, and expensive.\textsuperscript{224} He also urges the Department to restrict fall-applied nitrogen fertilizer across the board and not just on vulnerable soils.\textsuperscript{225} Professor Randall believes the Department is afraid to implement a rule that would actually reduce nitrate losses to groundwater within a reasonably short couple of year period.\textsuperscript{226}

123. Professor Randall and several other commenters strongly object to the Department’s decision not to regulate private drinking water wells in vulnerable areas.\textsuperscript{227} According to Professor Randall, well water sampling data from the large area of very vulnerable soils show over 10 percent of the 25,000+ wells sampled exceeded the 10 ppm HRL for nitrate.\textsuperscript{228} In addition, Professor Randall states that a separate study showed 76 percent of the wells in the Central sands area and 24 percent of the wells in the SE Karst area exceeded 10 ppm nitrate.\textsuperscript{229} Because this data shows that the drinking water in many private wells in these vulnerable soil areas is already contaminated by excessive amounts of nitrate, Professor Randall urges the Department to extend its regulation to private wells.\textsuperscript{230}

124. MDH also objects to the exclusion of private wells from the proposed rules’ mitigation requirements.\textsuperscript{231} Citing to a recent MDA report, MDH notes that in 242 vulnerable townships tested between 2013 and 2017, almost half had 10 percent or more of wells over the HRL for nitrate.\textsuperscript{232} By excluding private wells, the MDH maintains the proposed rule does not equitably address nitrate as a public health contaminant for all Minnesotans.\textsuperscript{233}

125. The Minnesota Center for Environmental Advocacy (MCEA) also contends that the rule is arbitrary due to the exclusion of private wells.\textsuperscript{234} MCEA maintains that the Department has failed to articulate an adequate basis for excluding private wells given data about the number of townships where wells are contaminated.\textsuperscript{235} MCEA asserts that the Department’s decision to exclude private wells due to resource considerations and a preference for the adoption of a voluntary approach, is arbitrary and unlawful according

\begin{footnotesize}
\textsuperscript{224}Id.
\textsuperscript{225}Id.
\textsuperscript{226}Id.
\textsuperscript{227}See, e.g., Comment by Professor Gyles Randall (Aug. 3, 2018) (SpeakUp) (eDocket No. 71-9024-35205); Comment by Jeffrey Scott Broberg (Stewartville Public Hearing Tr. at 85); Comment by Leslie Everett at 2 (Aug. 13, 2018); Comment by Friends of the Mississippi River (Aug.15, 2018) (SpeakUp) (eDocket 71-9024-35205)
\textsuperscript{228}Comment by Professor Gyles Randall (Aug. 3, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{229}Id.
\textsuperscript{230}Id.
\textsuperscript{231}Comment by Minnesota Department of Health Assistant Commissioner Paul Allwood (Aug. 14, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{232}Id., citing MDA’s Township Testing Program (TTP) Update – March 2018 Report.
\textsuperscript{233}Comment by Minnesota Department of Health Assistant Commissioner Paul Allwood (Aug. 14, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{234}Comment by MCEA (Aug. 15, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{235}Id. at 3.
\end{footnotesize}
to the Minnesota Court of Appeals decision in Builders Ass’n of Twin Cities v. Minn. Dept. of Labor and Industry.236

126. While MCEA supports adoption of a groundwater protection rule, MCEA contends that the fall fertilizer ban is “riddled with convoluted and unsupported exceptions.”237 MCEA argues that the proposed rule is arbitrary because it prolongs reliance on the BMPs, when the Department acknowledges that the BMPs have not been successful in reducing nitrate levels.238 MCEA asserts that the rule is arbitrary because it delays enforcement through a prolonged monitoring period.239 MCEA further maintains that the rule unreasonably limits the Department’s discretion to require actions addressing nitrogen concentrations, but also provides the Department with too much discretion in other areas.240

127. The Board of Directors of the Long Lake Area Association (Hubbard County) Inc. (Board) also expressed concern that the proposed rule fails to govern private wells.241 The Board noted that groundwater provides drinking water for the approximately 500 private wells around the lake and that several of these wells currently exceed acceptable limits for nitrate levels in drinking water.242 Without rules, affected lakeshore owners may employ treatment methods to remove nitrates from their drinking water with varying degrees of effectiveness and efficiency. The Board urged the Department to extend the proposed rules to private wells and lakes, expressing concern that as Long Lake is spring-fed, its water quality is especially vulnerable.243

128. Likewise, the Minnesota Well Owners Organization (MNWOO) vigorously objected to the fact that the proposed rule excludes private wells and townships.244 MNWOO maintains that 1.07 million people obtain water from private wells, and that they may have the least social and financial resources to deal with contaminated water.245 MNWOO asserts that private wells and townships should have been included in the rule, and the failure to do so is irrational, contrary to social justice, and possibly unconstitutional, as the Act applies to all groundwater in Minnesota and MNWOO asserts that private well owners are disenfranchised by the rule.246

ii. Department’s Response

129. In response to comments urging the Department to ban fall nitrogen fertilizer application state-wide, the Department states that this would not be reasonable. The Department notes that many of Minnesota’s soils are fine textured and the BMP for fine

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236 872 N.W.2d 263 (Minn. Ct. App. 2015).
238 Id. at 5.
239 Id.
240 Id. at 8-9.
242 Id.
243 Id.
245 Id. at 3-4.
246 Id.
textured soils recommends nitrogen fertilizer applications in the fall. The Department states that the risk of nitrate leaching is low in fine textured soils. The Department also notes that it has used the best available maps in determining where the fall ban should apply, including maps published by the Department of Natural Resources and the United States Department of Agriculture, with which farmers are familiar.

130. In response to comments that the Department’s decision not to regulate private wells is unreasonable and arbitrary, the Department notes as an initial matter that the proposed rule restricts application of nitrogen fertilizer in the fall and on frozen soils in vulnerable groundwater areas statewide, which includes areas with both private and public wells.

131. The Department also asserts that excluding private wells from the proposed rule is consistent with MDA’s statutory authority. The Department notes that Minn. Stat. § 103H.275 requires the Department to base regulations on effectiveness, economic factors, implementability, availability, and feasibility. Therefore, the Department contends that its authority is unlike the agency’s directive considered by the Court of Appeals in Builders Ass’n, which required that rules be promulgated according to application of scientific principles, approved tests, and professional judgment.

132. The Department maintains that the proposed rule’s regulatory focus on public wells satisfies these factors given that the areas served by public water supply wells have the largest population that will be directly impacted by high nitrate levels in drinking water. According to the Department, on average there are 136 people served by a public well for every person served by a private well. Thus, the Department contends its focus on public wells was a reasonable and justifiable policy choice, supported by the record. And the Department contends that the proposed rule does not run afoul of the decision in Builders Ass’n.

133. The Department further contends that its focus on DWSMA’s is consistent with the NFMP, which is authorized by statute. The Department asserts that the NFMP requires it to consider the size of the population that is potentially affected. The NFMP also identifies as a priority vulnerable wellhead protection areas where groundwater quality or quantity is limited and a considerable population is served by the public water supplier.

247 Department’s Rebuttal Comments at 7 (Aug. 22, 2018).
248 Id. at 7.
249 Id. at 10.
250 Id. at 10. See Minn. Stat. § 103H.275 (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”).
251 872 N.W.2d 263 (Minn. Ct. App. 2015).
252 Department’s Rebuttal Comments at 10; see also Minn. Stat. § 326B.106, subd. 1 (2018).
253 Id.; See also Ex. C at 66-67 and 108-111.
254 Department’s Rebuttal Comments at 12 (Aug. 22, 2018).
255 Id.
256 Id.
257 Id. at 11.
134. The Department also contends that the mitigation measures adopted in Part 2 of the rule closely follow the NFMP.\textsuperscript{258} The Department contends that its use of a voluntary approach before moving to a regulatory response is a method chosen to enhance compliance through social modeling, education and changing values, to create a more effective long term strategy.\textsuperscript{259} The Department defends its use of lag time to address nitrate movement, and asserts that the voluntary to regulatory approach is warranted because individuals in the DWSMA will be alerted in the voluntary stages that nitrate levels are rising and that responsive actions should be taken.\textsuperscript{260}

C. Comments in Support of the Proposed Rule

135. In a comment dated July 12, 2018, MPCA Commissioner John Linc Stine voiced his agency’s strong support of the proposed rule.\textsuperscript{261} Commissioner Stine asserts that the proposed rule is a “thoughtful and reasonable approach” for addressing the state’s high nitrate levels in groundwater.\textsuperscript{262}

136. The Coalition of Greater Minnesota Cities indicated it supports adoption of the proposed rule.\textsuperscript{263} It notes that while other sources of nitrogen exist, other agencies with jurisdiction must come forward to address those issues, and that this is not a reason to reject the proposed rules.\textsuperscript{264}

137. As noted above, Pete Moulton, the director of public works for the city of St. Peter, Minnesota, spoke in favor of the proposed rule at the public hearing in St. Cloud.\textsuperscript{265} Mr. Moulton noted that water in St. Peter, as it is pulled from the ground, cannot be consumed because the water is approaching nitrate levels of 28 ppm.\textsuperscript{266} Mr. Moulton noted that though change won’t happen overnight, the proposed rules represent a “great first step” in protecting the health of Minnesota citizens.\textsuperscript{267}

138. The Stearns County SWCD expressed its support for adoption of the proposed rule, noting that it has promoted agricultural BMPs for decades, and indicated that adoption of the rule will aid its own efforts.\textsuperscript{268}

139. The Minnesota Nursery and Landscape Association also supports the rule, indicating that it appreciates the tone of the rule and the responsive changes the Department made in earlier stages of its process.\textsuperscript{269} It further states that its growers and

\textsuperscript{258} Id. at 10-11.

\textsuperscript{259} Id. at 9.

\textsuperscript{260} Id. at 10; Department’s Response to Comments at 6 (Aug. 15, 2018).

\textsuperscript{261} Comment by MPCA Commissioner John Linc Stine (July 12, 2018) (SpeakUp) (eDocket 71-9024-35205).

\textsuperscript{262} Id.

\textsuperscript{263} Comment by Coalition of Greater Minnesota Cities (Aug. 15, 2018) (SpeakUp) (eDocket 71-9024-35205).

\textsuperscript{264} Id.

\textsuperscript{265} St. Cloud Public Hearing Tr. at 35-38 (Moulton) (July 25, 2018).

\textsuperscript{266} Id. at 37.

\textsuperscript{267} Id. at 38.

\textsuperscript{268} Comment by Stearns County SWCD (July 23, 2018) (SpeakUp) (eDocket 71-9024-35205).

\textsuperscript{269} Comment by Minnesota Nursery & Landscape Association (Aug. 8, 2018) (SpeakUp) (eDocket 71-9024-35205).
landscapers are committed to land and water stewardship, and that they stand ready to assist in the goals of groundwater and surface water protection.270

140. Paul Swanstrom, a resident of Hastings, commented that his water supplier was required “to spend millions of dollars” on equipment and wells to reduce nitrate levels.271 Mr. Swanstrom expressed support for the proposed rule’s restriction on fall fertilizer application and stated his concern about water containing nitrogen, indicating “I don’t want to drink it.”272

141. A number of individual citizens submitted comments generally favoring the adoption of the proposed rule.273

VI. Rule by Rule Analysis

142. This rulemaking proceeding generated significant public interest and resulted in many comments from the public. While some comments were more general, as discussed above, other comments focused specifically on certain portions of the rule. This report does not discuss all comments received. Instead, this report addresses the portions of the proposed rules that prompted genuine dispute by commenters as to the reasonableness of the Department’s regulatory choices or raised issues that require closer examination.

143. The Administrative Law Judge has identified a number of defects in the proposed rule that require correction and has also suggested clarifying language as to other rule parts. The defects identified in this Report concern vagueness and excessive discretion.

144. A rule is void for vagueness if it “fails to give a person of ordinary intelligence a reasonable opportunity to know what is prohibited or fails to provide sufficient standards for enforcement.”274 A rule is required to be sufficiently specific to put the public on fair notice of what its provisions require.275

145. A proposed rule is also impermissible if it delegates unbridled discretion to administrative officers. As the Minnesota Supreme Court has held, a law must furnish:

A reasonably clear policy or standard of action which controls and guides the administrative officers in ascertaining the operative facts to which the law applies, so that the law takes effect upon these facts by virtue of its own

270 Id.
271 Comment by Paul Swanstrom (July 17, 2018) (SpeakUp) (eDocket 71-9024-35205).
272 Id. 
274 In re Charges of Unprofessional Conduct against N.P., 361 N.W.2d 386, 394 (Minn. 1985).
terms, and not according to the whim or caprice of the administrative officers.\textsuperscript{276}

146. As to those rule parts addressed in this report, unless a defect or clarification is specifically identified, the Administrative Law Judge finds that the need for and reasonableness of the rule provisions are supported by an affirmative presentation of facts, the rule provisions are authorized by statute, and the proposed rules contain no defects that would bar adoption.

147. To the extent that any proposed rule is not specifically addressed and analyzed in this Report, the Administrative Law Judge finds that the Department has demonstrated by an affirmative presentation of facts the need for and reasonableness of all such rule provisions. The Administrative Law Judge further finds that all proposed rule provisions not specifically addressed in this Report are authorized by statute and that there are no other defects that would bar the adoption of those rules.

A. Revisions by the Department Made Prior to the Hearings

148. Prior to the commencement of the hearings, the Department proposed three minor modifications to proposed Minn. R. 1573.0030 governing Statewide Water Resource Protection Requirements.\textsuperscript{277}

149. The first modification would add the phrase “or government lot” to Minn. R. 1573.0030, subp. 1A(2). As modified, this proposed subpart would provide:

\begin{enumerate}
  \item \textbf{Prohibitions}
  \item A responsible party must not make:
    \begin{itemize}
      \item 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;
      \item or
    \end{itemize}
\end{enumerate}

150. The Department states that the modification is needed to clarify that government lots will be included in the rule. The Department explains that government lots are areas throughout the state that are not described as part of sections but are a standard part of the Public Land Survey System. Because government lots do not meet the definition of a section, the Department maintains they need to be expressly included in the proposed rule.\textsuperscript{278}

151. The Department also proposes to add “Subpart 1” before “item A” in proposed Subpart 2E to clarify which item A it is referencing.

\textsuperscript{276} \textit{Lee v. Delmont}, 228 Minn. 101, 113, 36 N.W.2d 530, 538 (1949).
\textsuperscript{277} See \textit{Ex. M.}
\textsuperscript{278} \textit{Ex. M.}
152. The Department seeks to modify proposed subpart 3A of Minn. R. 1573.0030, which governs exceptions to the prohibitions listed in proposed Minn. R. 1573.0030, subp. 1. As modified, proposed subpart 3A would state as follows:

**Subpart 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:

153. The Department states that the modification is needed to clarify its intent that the fall application of nitrogen fertilizer restrictions apply to both vulnerable groundwater areas and drinking water supply management areas.279

154. The Administrative Law Judge finds these modifications to proposed Minn. R. 1573.0030 are needed and reasonable and do not render the rule substantially different from the rule as originally proposed.

B. **Proposed Minn. R. 1573.0010 Definitions**

155. Subpart 12 defines the term “lag time” to mean “the period of time it takes for nitrate to travel through an unsaturated zone to impact groundwater quality in an aquifer being monitored.”

156. In its SONAR, the Department stated that the definition is necessary to address, in a scientifically correct manner, “how long it will take before changes in practices on the land surface will result in changes in water quality that can be observed in groundwater wells.”280 The Department states that using lag time as a criteria in the proposed rules is reasonable because it is a method recognized by hydrologists to determine impacts on groundwater. The Department asserts that since regulatory requirements may be based on changes in water quality, it is reasonable and necessary to define what the term “lag time” means.281

157. Some comments criticized the use of lag time, noting that it varies and can be slow.282 The Department responds that consideration of lag time is necessary because one cannot know if changes in practices are having the desired effect on groundwater quality until after the lag time.283 According to the Department, nitrate movement and lag time can be calculated through the use of modeling data based on the time it takes for

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279 *Id.*
280 Ex. C at 82.
281 *Id.*
282 See, *e.g.*, Comment by Professor Gyles Randall (Aug. 3, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
283 Department’s Response to Comments at 6 (Aug. 15, 2018).
water to move through the unsaturated zone from a point near the ground surface and into the aquifer.\textsuperscript{284}

158. Subpart 14 defines the term “local advisory team” to mean “a team of individuals approved by the commissioner who advise the commissioner regarding appropriate response activities for a specific local area.”

159. Professor Randall commented that the proposed definition of “local advisory team” is vague.\textsuperscript{285} Professor Randall recommends that the rule require that a LAT’s membership include, at a minimum: someone from the University of Minnesota Extension; the local fertilizer dealer; a local crop production consultant; and a township (or other local government unit) official.\textsuperscript{286}

160. The Minnesota Corn Growers Association also suggests revisions to this provision, asserting that the rule should state that each LAT shall be comprised only of persons who own real property in the DWSMA for which the LAT is appointed, and that a majority of the members of each LAT should be farmers and professional crop advisors or consultants.\textsuperscript{287}

161. MCEA objects that the process by which members of the LAT are approved by the Commissioner is not established and that the rule should reference a process, or require that the LAT have a certain constitution that does not require approval by the Commissioner.\textsuperscript{288}

162. The Department responds that it chose the approach in the proposed rule because DWSMAs may vary in size from a few hundred acres to tens of thousands of acres. According to the Department, each DWSMA will be different and may require that different people with varying backgrounds participate in the LAT. The Department also notes that LATs are advisory and have no formal authority.\textsuperscript{289}

163. Subpart 17 defines the term “nitrogen fertilizer.” As proposed, subpart 17 provides as follows:

“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.

\textsuperscript{284} Id.
\textsuperscript{285} Comment by Professor Gyles Randall (Aug. 3, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{286} Id.
\textsuperscript{287} Comment by Minnesota Corn Growers Association (Aug. 15, 2018) (SpeakUp) (eDocket 71-9024-35205).
\textsuperscript{288} Comment by the MCEA (Aug. 15, 2018) (SpeakUp) (eDocket 71-9024-35205).
\textsuperscript{289} Department’s Rebuttal Comments at 22-23 (Aug. 22, 2018).
164. David Preisler of the Minnesota Pork Producers Association commented that the phrase “manure that is not manipulated” was ambiguous and could cause confusion as to when and under what circumstances animal manure may be deemed to be “nitrogen fertilizer.” Mr. Preisler noted that application of animal manure to agricultural land is already highly regulated by the MPCA. On behalf of the Minnesota Pork Producers Association, he recommends that the Department clarify the ambiguity by defining the term “manipulated.”

165. At the St. Cloud public hearing, Matthew Berger, an attorney who represents livestock producers, questioned whether “manipulation” would include the addition of pit additives or other substances used to control or reduce odor from manure at feedlots or to prevent foaming at manure pits, or the addition of nitrogen stabilizer products.

166. To address these concerns, the Department proposed modifying the definition of “nitrogen fertilizer” by adding the following sentence to the end of the proposed definition.

Chemicals or substances added to manure during storage to reduce odor or gas emissions or to prevent foaming, or that are added to extend the time the nitrogen component of manure remains in the soil, are not considered manipulation of manure.

167. The Department asserts that this revision addresses the concern about whether additives would be considered to be manipulation. The Department contends that the revision is consistent with its longstanding interpretation of the term “manipulation” and that this change does not represent a change to the content of the proposed rule.

168. The Administrative Law Judge finds proposed Minn. R. 1573.0010, subp. 17, as modified, is needed and reasonable and not substantially different from the rule as originally proposed.

169. Subpart 19 defines the term “residual soil nitrate tests.” As proposed, the term is defined, in part, as soil tests representative of changes in soil nitrate levels in soil “below the root zone for cropland” within DWSMAs.

170. Because various crops have different depths of rooting, Professor Randall recommends the definition provide a uniform testing depth of 5 feet.

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291 Id.
292 St. Cloud Public Hearing Tr. at 69-71 (Berger) (July 25, 2018).
293 Department’s Rebuttal Comments at 22 (Aug. 22, 2018).
294 Id.
171. The Department responds that it has identified disadvantages of using the shallow version of the residual soil nitrate test and that it has specifically chosen to use the approach in the proposed rule.296

C. Proposed Minn. R. 1573.0030 Statewide Water Resource Protection Requirements

172. Subpart 1 restricts the application of nitrogen fertilizer in the fall and to frozen soils in vulnerable groundwater areas.

173. Mark Gamm, Dodge County Environmental Services Director, questioned generally how the restrictions and prohibitions identified in subpart 1 will be enforced.297

174. The Department has indicated it will be on a complaint-driven basis.298

175. Subpart 2 governs Exclusions from the fall application restriction requirements where a county or a portion of the county meets specific conditions.

176. Some commenters object to proposed Subpart 2E, which excludes from the fall application restriction requirements counties with less than 3 percent cropland. These commenters maintain that the exclusion is arbitrary and designed to exclude the Twin Cities metropolitan area. They contend that the fall fertilizer application restrictions should apply state-wide.299

177. Friends of the Mississippi River (FMR) commented that a community well or a cluster of private wells could experience elevated nitrate levels due to a concentration of cropland agriculture that is sufficient to contaminate wells while remaining below the 3 percent acreage threshold.300 FMR recommended that the rule include a specific provision whereby at-risk communities in currently exempt areas can apply for protection under the rule if data shows elevated nitrates from agricultural sources in local groundwater.301

178. The Department states that it is reasonable to exclude counties with very low agricultural intensity from the fall application restriction because they have a low concentration of crops grown and a corresponding low nitrogen fertilizer use. The Department explains that it used a 3 percent value because it represents very few acres compared to the county’s total acres. The Department maintains that it is reasonable to allocate its limited resources to counties with higher areas of cropland, where the public health needs and environmental risks are greater.302

296 Department’s Rebuttal Comments (Aug. 22, 2018).
297 Comment by Mark Gamm (July 18, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
298 Ex. C. at 64.
299 See, e.g., Comment by Red River Valley Sugarbeet Growers Association (Aug. 15, 2018) (Speakup) (eDocket 71-9024-35205).
300 Comment by Friends of the Mississippi River (Aug. 15, 2018) (Speakup) (eDocket 71-9024-35205).
301 Id.
302 Ex. C at 100-101.
179. Subpart 2F identifies an exclusion for responsible parties from the fall fertilizer application prohibition if a significant source of the nitrate-nitrogen contamination in the DWSMA’s well is from a point source. Several commenters objected to the use of the word “may” in Subpart 2F. The Department has agreed to replace the word “may” with “shall” so that proposed subpart 2F will state:

The commissioner shall exclude responsible parties in a drinking water supply management area from the fall application restriction 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.

180. The Department states that this change is consistent with the MDA’s intent to remove wells with point sources from further consideration.303

181. The Administrative Law Judge determines that the Department’s use of “shall” rather than “may” in proposed Minn. R. 1573.0030, subp. 2F is a needed and reasonable modification and it does not render the rule substantially different from the rule as originally proposed.

182. MDH expressed concern that proposed Subpart 2F does not provide any methodology or process for how the Commissioner will “exclude responsible parties” in a DWSMA or how a point source of contamination will be determined.304 MDH is concerned that this provision will allow for the granting of too many exemptions.305 MDH recommends that clarity be provided in the rule as to how the Commissioner will exclude responsible parties from the fall applied nitrogen restrictions.306

183. The Department asserts that it has a unit dedicated to the cleanup of point sources that has extensive technical knowledge and experience investigating and evaluating the potential presence of point sources.307 The Department states that the protocol it uses to evaluate the potential for point source includes: conducting a detailed review of all potential contaminant sources in the area; evaluating the condition and vulnerability of the water supply well; determining the hydrogeology and groundwater flow paths for groundwater flowing into the well; and if necessary, conducting an active investigation to sample soil and other wells to determine if a point sources is present.308 The Department also states that it will conduct its investigation into point sources in consultation with hydrologists with MDH.309

303 Department’s Rebuttal Comments at 24 (Aug.22, 2018).
305 Id.
306 Id.
308 Id.
309 Id.
184. The Department explains that if it determines from an on-site assessment that there is a point source of nitrate-nitrogen contamination, such as an improperly sealed well, then regulating nitrogen fertilizer agricultural practices will not have an impact on the DWSMA’s nitrate levels. And if the source of the contamination is a feedlot, any regulatory jurisdiction lies with the MPCA.

185. The Administrative Law Judge finds that proposed Minn. R. 1573.0030, subp. 2F grants the agency discretion beyond that allowed by applicable law and must be disapproved under Minn. R. 1400.2100(D). The rule fails to describe the methods and standards the Department will apply to determine whether a point source is a significant source of nitrate-nitrogen contamination. The word “significant” is also vague and fails to identify the standard the Department will use to quantify the amount of the contribution that will trigger the exclusion.

186. To cure the defect as to the method used, the Department could add the following sentence at the end of proposed subpart 2F:

In determining whether there is a point source of nitrate-nitrogen contamination, the commissioner shall conduct a detailed review of all potential contaminant sources in the area; evaluate the condition and vulnerability of the water supply well; determine the hydrogeology and groundwater flow paths for groundwater flowing into the well; and, if necessary, sample soil and other wells in the area.

187. The Department must also quantify or clarify what it means by a “significant source.”

188. Subpart 2G allows an exclusion from the fall fertilizer application restriction if the Commissioner determines part of a DWSMA is not “contributing significantly” to the contamination of the well.

189. The Department has proposed to modify Subpart 2G by replacing the word “may” with “shall.” As modified, Subpart 2G will state:

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.

190. The Administrative Law Judge determines that the Department’s use of “shall” rather than “may” in proposed Minn. R. 1573.0030, subp. 2G is a needed and reasonable modification and it does not render the rule substantially different from the rule as originally proposed.

191. In its SONAR, the Department states that this provision is necessary to allow the Commissioner to exempt parts of a DWSMA that are not contributing

310 Id.
311 Id.
significantly to the groundwater contamination in the public well from fall application restrictions. The Department explains that DWSMAs vary in size from less than a hundred acres, to tens of thousands of acres. According to the Department, for most DWSMAs, the soil types and vulnerability to groundwater contamination should be fairly uniform across the DWSMA and this exclusion will not be needed. But for large DWSMAs, the Department contends there may be areas with significantly different soil types and groundwater vulnerability such that those parts of the DWSMA may not contribute significantly to high nitrate-nitrogen concentrations in the public well. The Department maintains that for those parts, an exclusion from the fall application restriction is reasonable.

192. MDH expressed concerns about Subpart 2G. MDH states that the Department should clarify how the Commissioner will determine that an area is “not contributing significantly” to the contamination of a well in a DWSMA.

193. In its rebuttal comments, the Department states that this provision is intended to permit the Department to evaluate the contribution of different parts of a DWSMA to the contamination in the well and to exclude those areas which are not contributing significantly to nitrate in the well. According to the Department, the determination that an area is not contributing significantly to the well’s contamination will be “based on scientific data.”

194. Subpart 2G must be disapproved under Minn. R. 1400.2100(D) because it grants the agency discretion beyond that allowed by applicable law. To cure this defect, the Department must clarify the protocol for the Commissioner to determine an area is not “contributing significantly to the contamination” for purposes of this exclusion, and must define what “contributing significantly” means.

D. Proposed Minn. R. 1573.0040 DWSMA; Mitigation Level Designation

195. This proposed rule governs the evaluation of nitrate-nitrogen in DWSMAs and the mitigation level designations to be applied to DWSMAs.

196. In its SONAR, the Department states that the mitigation level criteria is based broadly on a multi-level approach currently in use in the State of Nebraska. The Department modified the approach to conform to requirements in the Groundwater Protection Act, and to conditions and data specific to Minnesota. There are four levels; two are voluntary and two are regulatory. Each mitigation level is designed to initiate actions commensurate with the level of contamination in the source water, or threatening the source water, in the public water supply well. The Department states that the factors used for moving within mitigation levels include past nitrate concentrations, the length of

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312 Ex. C at 101.
313 Id.
315 Department’s Rebuttal Comments at 18 (Aug. 22, 2018).
316 Id.
317 Ex. C. at 112.
318 Id.
time of past public well monitoring, projecting future nitrate concentrations, residual soil nitrate below the root zone, and the adoption of nitrogen fertilizer BMPs.\textsuperscript{319}

197. Proposed Subpart 2 governs evaluation of nitrate-nitrogen concentration in groundwater, providing as follows:

**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 is subpart 3.

198. In response to comments, the Department has agreed to modify this subpart to include a deadline by which the Commissioner must make an initial mitigation level designation.\textsuperscript{320} The Department proposes to add the following text to the end of proposed Subpart 2:

A mitigation level determination shall be made by January 15\textsuperscript{th} for monitoring data received by the MDA prior to July 15\textsuperscript{th} of the previous year, unless there is good cause for delay. The data shall be submitted to MDA on forms or in a format specified by the Commissioner and shall meet data requirements specified by the Commissioner.

199. The Administrative Law Judge determines that the Department’s modification to proposed Minn. R. 1573.0040, subp. 2 is needed and reasonable and does not render the rule substantially different from the rule as originally proposed.

200. Proposed Subpart 3 governs the criteria for initial mitigation level designation. Item A provides as follows:

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

\textsuperscript{319} Id.
\textsuperscript{320} Department’s Rebuttal Comments at 21 (Aug. 22, 2018).
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 is 8.0 mg/L or greater at any point in the previous ten years.

201. The Administrative Law Judge suggests modifying proposed subpart 3A(2)(b) by deleting the word “is” and substituting “has been.” This modification would correct what appears to be a typographical error and would not render the rule substantially different within the meaning of Minn. Stat. § 14.05, subd. 2.

202. MDH maintains that the proposed rule should be further modified to include a description of the methodology the Commissioner will use to determine mitigation levels 1 and 2 based on a well or group of public water supply wells included in a DWSMA. MDH also proposes clarifying that mitigation levels 1 and 2 are voluntary and referring to the Minnesota NFMP. MDH also maintains that the methodology used to complete the statistical analysis in proposed subpart 3A(2) should be described in publically available guidelines.

203. Proposed Subpart 3B provides as follows:

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

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

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

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

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

322 Id. at 3.
204. The Administrative Law Judge finds that proposed Subpart 3B is defective because it grants the agency discretion beyond that allowed by applicable law. Therefore, this rule part is disapproved under Minn. R. 1400.2100(D).

205. To correct the defects in proposed Subpart 3B, the Department must adequately quantify the standards the Commissioner may use to make an exception. Subpart 3B(1) uses the term “significant” without a quantitative reference for that term. Subpart 3B(2) does not establish a quantitative standard for determining the severity of contamination in one well or another. Similarly, Subpart 3B(3) does not articulate any specific factors about the population affected that would bear on whether an exception may be made. Finally, the use of the term “other factors” in proposed Subpart 3B(4) provides unlimited discretion to the Commissioner.

206. The Department could remedy these defects by quantifying or clarifying the standards in proposed Subpart 3B(1) and (2), and identifying factors about the population that would be considered under proposed Subpart 3B(3). The Administrative Law Judge suggests deleting proposed Subpart 3B(4). If the Department chooses to retain that subpart, it must provide some identification of the “other factors” that are expected to influence nitrate-nitrogen concentrations.

207. Proposed Subpart 3C and D allow the Commissioner to exclude a DWSMA from a mitigation level determination if the Commissioner determines there is a point-source of nitrate-nitrogen contamination that is a “significant source” of the contamination or if the Commissioner determines that the area is “not contributing significantly to the contamination of the well in the DWSMA.”

208. The Department has proposed to modify Minn. R. 1573.0040, subp. 3C and 3D by replacing the word “may” with “shall.” As modified, these subparts would state that the Commissioner “shall exclude” a DWSMA from mitigation level determination. The Administrative Law Judge finds that replacing the word “may” with “shall” in these subparts is needed and reasonable and would not render the proposed rule substantially different.

209. Proposed Subparts 3C and 3D are, however, defective. Like proposed Minn. R. 1573.0030, subps 2F and 2G discussed above, proposed Subpart 3C and D use of the phrases “significant source” and “not contributing significantly” are vague and provide the agency with discretion beyond that permitted by law. These provisions are disapproved under Minn. R. 1400.2100(D). To cure the defects, the Department must provide some specificity as to what will be deemed “significant” for purposes of these exclusions.

210. Subpart 5 of the proposed rule governs monitoring of DWSMAs. Item A(2) states that the Commissioner “may establish a groundwater monitoring network to determine changes in water quality” in the DWSMA. Item B of Subpart 5 provides that if

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323 Proposed Minn. R. 1573.0040, subpart 3C.
324 Proposed Minn. R. 1573.0040, subpart 3D.
the Commissioner establishes a groundwater monitoring network, the Commissioner must design it to represent the DWSMA being monitored.

211. Professor Randall commented that the phrase “groundwater monitoring network” is vague.325

212. “Groundwater monitoring network” is defined in proposed Minn. R. 1573.0010, subp. 10, to mean “a network of wells used by the commissioner to monitor and test nitrate-nitrogen concentrations in groundwater.”

213. In its rebuttal comments, the Department states that groundwater monitoring networks will be installed where the conditions are suitable for their use. The Department maintains that the specific geologic conditions of the DWSMA will dictate the design features and protocols used for groundwater monitoring networks and residual soil testing. The Department asserts that it has extensive experience in the design of groundwater monitoring systems for investigative purposes and it states that it will develop specific guidance for the installation of groundwater monitoring networks in the DWSMAs.326 The Department states that it will also consult a report by Dr. Dennis Helsel, introduced as Exhibit O, to ensure appropriate statistical rigor and design considerations.327

214. According to the Department, the specific detail of the groundwater monitoring networks and the residual soil nitrate testing methodologies is best presented in “guidance documents.” The Department maintains that the level of detail necessary to outline specific, highly technical methods would be difficult to accomplish in rule and would reduce flexibility for adopting new methods should they become available.328

215. Subpart 6 governs nitrogen fertilizer BMPs evaluation. Under item A, the Commissioner is required to conduct an evaluation in designated mitigation level 2 DWSMAs to determine whether the nitrogen fertilizer BMPs have been implemented on at least 80 percent of the cropland, excluding soybean cropland.

216. Professor Randall commented that, in evaluating nitrogen fertilizer BMPs, the Department should take into consideration the nitrogen rate applied. He also questioned how the nitrogen rate per year will be determined and monitored for compliance.329

217. In its SONAR, the Department explains that Minn. Stat. § 103H.275, requires it to evaluate the nitrogen fertilizer BMPs based on implementation and effectiveness.330 The Department states that it has developed a diagnostic tool called the Farm Nutrient Management Assessment Process (FANMAP) to document existing farm practices regarding agricultural inputs such as fertilizers, manures and pesticides.331

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326 Department’s Rebuttal Comments at 19 (Aug. 22, 2018).
327 Id. at 19, Ex. O.
328 Department’s Rebuttal Comments at 20 (Aug. 22, 2018).
330 Ex. C at 125.
331 Id.
According to the Department, FANMAP provides a useful and accurate method of compiling data on BMP adoption. The collected data can be used as a baseline to assist in determining if the nitrogen fertilizer BMPs are being adopted. The complete compendium of FANMAP surveys is available on MDA’s website.\textsuperscript{332}

218. As FANMAP constitutes a methodology used by the Department, the Administrative Law Judge suggests that, for additional clarify, the Department could identify FANMAP in the rule or incorporate the compendium of surveys by reference.\textsuperscript{333}

219. Subpart 6B governs the factors the Commissioner must consider when conducting the evaluation. The fifth factor listed under item B states as follows:

(5) cropland where a manure management plan has been implemented by the responsible party as cropland that has implemented nitrogen fertilizer best management practices if the manure management plan has been approved and determined to be implemented by the commissioner or the Pollution Control Agency or the commissioner’s designee, and includes the nitrogen fertilizer best management practices determined applicable for the drinking water supply management area by the commissioner.

220. Professor Randall strongly objected to manure being applied to cropland in DWSMAs, as referenced in Subpart 6B(5).\textsuperscript{334}

221. In its rebuttal comments, the Department proposed deleting proposed Subpart 6B(5).\textsuperscript{335} The Department states that deleting this provision will not change any requirements of the proposed rule. The Department explains that it was included in the proposed rule in response to comments on an earlier rule draft that it would be desirable for responsible parties to only have to work with one agency when reviewing BMP adoption. The Department asserts that deleting this provision will eliminate what has been a source of confusion for several commenters.\textsuperscript{336}

222. The Administrative Law Judge finds the Department’s deletion of subpart 6B(5) of proposed Minn. R. 1573.0040 is needed and reasonable and does not render the proposed rule substantially different.

223. Subpart 7G provides the Commissioner with discretion to grant a “onetime exemption” from designating a mitigation level 2 DWSMA as a mitigation level 3 DWSMA if “responsible parties within a drinking water supply management area have demonstrated progress in addressing nitrates in groundwater” within the DWSMA.

224. Proposed Subpart 7G is defective because it contains no standards or methodology for determining that responsible parties have “demonstrated progress” and articulates no standard for determining the amount of progress that is sufficient to qualify

\textsuperscript{332} Id. at 125-126.
\textsuperscript{333} See Minn. Stat. § 14.07, subd. 4 (2018).
\textsuperscript{334} Comment by Professor Gyles Randall (Aug. 3, 2018) (SpeakUp) (eDocket No. 71-9024-35205).
\textsuperscript{335} Department’s Rebuttal Comments at 24 (Aug. 22, 2018).
\textsuperscript{336} Id.
for the exemption. The proposed subpart is disapproved under Minn. R. 1400.2100(D). To cure this defect, the Commissioner should quantify or clarify standards for demonstrating progress.

225. Proposed Subpart 7H permits the Commissioner to make exceptions for increasing a mitigation level designation “if there has been a significant change in land use” in a DWSMA.

226. This subpart is defective because it does not establish the standard by which a “significant change” is to be measured. It is disapproved under Minn. R. 1400.2100(D). As in earlier instances, the Department may cure this defect by quantifying or clarifying how it would determine a change in land use is “significant.”

227. Subpart 8G suffers from a similar defect and is disapproved under Minn. R. 1400.2100(D). This proposed subpart permits the Commissioner to grant a “onetime exemption” from designating a mitigation level 3 DWSMA as a mitigation level 4 DWSMA based upon whether responsible parties within the DWSMA have “demonstrated progress in addressing nitrate in groundwater.” This provision fails to define the demonstration of progress that would be necessary to qualify for the exemption or quantify how such progress will be measured.

E. Proposed Minn. R. 1573.0050 Water Resource Protection Requirements Order.

228. Subpart 1 governs the Commissioner’s water resources protection requirements order.

229. Subpart 1D governs how the Department will prioritize water resource protection requirements orders throughout the state. One of the factors the Department is required to consider is “the population at risk in the drinking water supply management area due to high nitrate in groundwater.”

230. Jane Hoffman recommended that instead of taking into consideration the population at risk in the DWSMA, the Department should consider the percentage of the population affected by the elevated nitrates in a particular DWSMA. Ms. Hoffman points out that most people served by water with high nitrate levels do not live within the DWSMA. For example, Ms. Hoffman states that, in the case of Rural Water Systems in Southwestern Minnesota, there may be only a dozen people living in the DWSMA but the contaminated DWSMA may affect over 90 percent of the population in the area receiving service from a Rural Water System.

231. The Department notes that it is following the NFMP’s directive to consider “the size of population potentially affected” in prioritizing its mitigation efforts.

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337 Proposed Minn. R. 1573.0050, subp. 1D(2).
339 Id.
340 Department’s Rebuttal Comments at 11 (Aug. 22, 2018); Ex. C Attachment 9 at 75 (NFMP).
232. The Administrative Law Judge recommends modifying Subpart 1D to clarify that the relevant factor considered regarding the population at risk is its size. The modification would not render the rule substantially different from the rule as originally proposed.

233. Subpart 1G provides that the Commissioner may exclude part of a DWSMA from a water resource protection requirements order if the Commissioner determines that the area is not “contributing significantly” to the contamination in the well.

234. This subpart is defective and disapproved under Minn. R. 1400.2100(D). The vagueness of the term “contributing significantly” grants the agency discretion beyond that allowed by law. To cure the defect, the Department must clarify the protocol for the Commissioner to determine an area is not “contributing significantly to the contamination.

235. The Department has proposed to modify Subpart 1 to include a deadline by which the Commissioner must issue a water resource protection requirements order once it is determined that the DWSMA meets the criteria for being included in mitigation level 3 or 4. The Department states that it will modify the proposed rule by adding a new item H to provide a maximum period of six months to make a mitigation level determination unless there is good cause for a delay. The Department’s proposed Subpart 1H would read as follows:

The commissioner shall issue a water resource protection requirements order within 6 months of receiving all the necessary information regarding a drinking water supply management area unless there is good cause for delay.

236. The Administrative Law Judge finds the phrase “all the necessary information” in proposed Subpart 1H is defective because it is vague. Additionally, the use of months rather than days could introduce confusion about the deadline for the Commissioner’s order. To cure these defects, the Department could specify the information required by modifying the proposed subpart to state:

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

237. Subpart 3 governs contested case hearings and provides that “any person or entity subject to the water resources protection requirements order” may petition the Commissioner for a contested case hearing to challenge the order.

238. Some commenters urged the Department to change who can appeal a proposed water resource protection requirement order from any person or entity “subject to the order” to any person or entity “aggrieved by the order.” These commenters

341 Department’s Rebuttal Comments at 22 (Aug. 22, 2018).
342 See Department’s Rebuttal Comments at 14 (Aug. 22, 2018).
contend that all persons impacted by the rule must be provided an opportunity for administrative and judicial review.\textsuperscript{343}

239. The Department maintains that it is reasonable to limit the appeal rights to those individuals and entities subject to the order – the private landowners whose practices are being regulated and whose livelihoods are directly affected. The Department states that it is these private landowners who are the “affected persons” referenced in Minn. Stat. § 103H.251. The Department maintains that to hold that others may appeal water resource protection requirement orders that affect what landowners can do on their property would produce an absurd result inconsistent with principles of due process.\textsuperscript{344}

240. As proposed, Subpart 3C provides:

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 before an administrative law judge in the county in which the mitigation area is located.

241. To clarify the type of hearing provided under this subpart, the Department proposes to add the following sentence at the end of subpart 3C: “The hearing shall be in accordance with the requirements of chapter 14 and rules adopted thereunder.”

242. For additional clarity, the Administrative Law Judge recommends the Department further modify the final two sentences of this subpart to read:

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.

243. The Administrative Law Judge finds that the Department’s proposed modifications to proposed Minn. R. 1573.0050, and the recommended modifications suggested herein, are needed and reasonable and do not render the proposed rule substantially different.

\textsuperscript{343} Id.
\textsuperscript{344} Id.
F. Proposed Minn. R. 1573.0070 Requirements for Water Resource Protection Requirements Order.

244. Subpart 1B governs the AMTs the Commissioner may require to be used in DWSMAs. This subpart prohibits the Commissioner from restricting the selection of the primary crop.

245. Some commenters opined that the Department was unnecessarily limiting itself by expressly stating that it will not restrict the selection of a primary crop.345

246. Professor Randall urges the Department to allow the Commissioner to restrict corn acreage. According to Professor Randall, restricting corn acreage is “a proven short and long-term management answer for correcting nitrate problems in groundwater.”346 Professor Randall states that at a minimum, the Commissioner should suggest consideration that some corn acreage in each DWSMA be shifted to low nitrogen input crops.347

247. In its SONAR, the Department states that it is reasonable to clarify for farmers that MDA will not dictate the main crop they should grow.348 According to the Department, requiring farmers to grow a primary crop could burden a farmer and have a significant effect on the farmer’s livelihood as it is possible that other crops would not be as profitable as the primary crop.349 The Department maintains that it would be unreasonable for the Commissioner to prevent farmers from selecting which crop to raise in order to earn a living.350

248. In its rebuttal comments, the Department reiterated that it does not believe it would be reasonable or practicable to require a primary crop be planted by a producer. Moreover, such a requirement could leave the Department vulnerable to legal challenges on the constitutionality of such a requirement.351

249. Subpart 3 states that the Commissioner “may provide exceptions to a water resources protection order on a site-specific basis.”

250. MCEA objects that proposed subpart 3 permits the Commissioner with unlimited discretion without any description of how this process would work.352

251. The Department states that it is reasonable to allow for exceptions to the water resource protection requirements order on a site-specific basis as there are factors that can affect whether nitrogen fertilizer BMPs can be implemented.353 For example,

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347 Id.
348 Ex. C at 146.
349 Id.
350 Id.
351 Department’s Rebuttal Comments at 13.
352 Comment by MCEA (Aug. 15, 2018 (SpeakUp) (eDocket 71-9024-35205).
353 Ex. C at 146.
BMPs may not be able to be followed in cases where severe weather damages a large amount of a crop and requires crops be put in late. The Department maintains it is needed and reasonable for it to grant exceptions from a requirement in the order to a targeted area or individual farmer.\textsuperscript{354}

252. Subpart 3 is defective. It grants the Commissioner unlimited discretion because it does not articulate any specific circumstances that would justify a site-specific exception to a water resources protection order. This proposed subpart is disapproved pursuant to Minn. R. 1400.2100(D). To cure this defect, the Department must identify circumstances under which it could grant such an exception, such as by establishing standards that would warrant a waiver or variance.

Based upon the Findings of Fact and the contents of the rulemaking record, the Administrative Law Judge makes the following:

CONCLUSIONS OF LAW

1. The Department gave notice to interested persons in this matter and fulfilled its additional notice requirements.

2. The Department fulfilled the procedural requirements of Minn. Stat. § 14.14 and all other procedural requirements of law or rule.

3. The Department demonstrated it has statutory authority to adopt the proposed rules, and it fulfilled all other substantive requirements of law or rule within the meaning of Minn. Stat. §§ 14.05, subd. 1, 2 and 14.50(i), (ii).

4. The Notice of Hearing, the proposed rules, and the SONAR complied with Minn. R. 1400.2080, subp. 5 (2017).

5. The Department has demonstrated the need for and reasonableness of the proposed rules by an affirmative presentation of facts in the record within the meaning of Minn. Stat. §§ 14.14 and 14.50(iii), except for the following proposed rules, which are defective and disapproved as noted in the following Findings:

Finding 185 regarding Minn. R. 1573.0030, subp. 2F;
Finding 194 regarding Minn. R. 1573.0030, subp. 2G;
Finding 204 regarding Minn. R. 1573.0040, subp. 3B;
Finding 209 regarding Minn. R. 1573.0040, subp. 3C;
Finding 209 regarding Minn. R. 1573.0040, subp. 3D;
Finding 224 regarding Minn. R. 1573.0040, subp. 7G;
Finding 226 regarding Minn. R. 1573.0040, subp. 7H;
Finding 227 regarding Minn. R. 1573.0040, subp. 8G;
Finding 234 regarding Minn. R. 1573.0050, subp. 1G;
Finding 236 regarding Minn. R. 1573.0050, subp. 1H; and
Finding 252 regarding Minn. R. 1573.0070, subp. 3.

\textsuperscript{354} Id.
6. The Administrative Law Judge has suggested actions to correct the defects noted in Conclusion 5 and Findings 185, 194, 204, 209, 224, 226, 227, 234, 236, and 252.

7. Due to Conclusion 5, this Report has been submitted to the Chief Administrative Law Judge for her approval pursuant to Minn. Stat. § 14.15, subd. 3.

8. As part of the public comment process, a number of stakeholders urged the Department to adopt other revisions to the proposed rules. Unless otherwise stated, in each instance, the Department’s rationale in declining to make the requested revisions to its rules was grounded in this record and reasonable.

9. The modifications to the proposed rules suggested by the Department after publication of the proposed rules in the State Register are not substantially different from the proposed rules as published in the State Register within the meaning of Minn. Stat. §§ 14.05, subd. 2, .15, subd. 3.

10. A Finding or Conclusion that a proposed rule is needed and reasonable does not preclude, and should not discourage, the Department from further modification of the proposed rules, provided that the rule finally adopted is based upon facts appearing in this rule hearing record.

Based upon the foregoing Conclusions, the Administrative Law Judge makes the following:

RECOMMENDATION

The Department’s proposed rules should be adopted, except as noted in Conclusion 5 above.

Dated: September 21, 2018

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JESSICA A. PALMER-DENIG
Administrative Law Judge

NOTICE

The Department must make this Report available for review by anyone who wishes to review it for at least five working days before it may take any further action to adopt final rules or to modify or withdraw the proposed rules. If the Department makes changes in the rules, it must submit the rules, along with the complete hearing record, to the Chief Administrative Law Judge for a review of those changes before it may adopt the rules in final form.

Because the Administrative Law Judge has determined that the proposed rules are defective in certain respects, state law requires that this Report be submitted to the Chief Administrative Law Judge for her approval. If the Chief Administrative Law Judge
approves the adverse findings contained in this Report, she will advise the Department of actions that will correct the defects, and the Department may not adopt the rules until the Chief Administrative Law Judge determines that the defects have been corrected.

However, if the Chief Administrative Law Judge identifies defects that relate to the issues of need or reasonableness, the Department may either adopt the actions suggested by the Chief Administrative Law Judge to cure the defects or, in the alternative, submit the proposed rules to the Legislative Coordinating Commission for the Commission’s advice and comment. If the Department makes a submission to the Commission, it may not adopt the rules until it has received and considered the advice of the Commission. However, the Department is not required to wait for the Commission’s advice for more than 60 days after the Commission has received the Board’s submission.

If the Department elects to adopt the actions suggested by the Chief Administrative Law Judge and make no other changes and the Chief Administrative Law Judge determines that the defects have been corrected, it may proceed to adopt the rules. If the Department makes changes in the rules other than those suggested by the Administrative Law Judge and the Chief Administrative Law Judge, it must submit copies of the rules showing its changes, the rules as initially proposed, and the proposed order adopting the rules to the Chief Administrative Law Judge for a review of those changes before it may adopt the rules in final form.

After adopting the final version of the rules, the Department must submit them to the Revisor of Statutes for a review of their form. If the Revisor of Statutes approves the form of the rules, the Revisor will submit certified copies to the Administrative Law Judge, who will then review them and file them with the Secretary of State. When they are filed with the Secretary of State, the Administrative Law Judge will notify the Department, and the Department will notify those persons who requested to be informed of their filing.