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STATE OF MINNESOTA
MINNESOTA DEPARTMENT OF HEALTH

In the Matter of Proposed Rules of the Minnesota Department of Health Relating to Public Water Supplies, Minnesota Rules parts 4720.0025, 4720.0350, 4720.0450, 4720.0550, 4720.2300, 4720.2700, 4720.3920, and 4720.3942.

STATEMENT OF NEED AND REASONABLENESS

The Minnesota Department of Health is proposing amendments to adopted rules contained in Minnesota Rules Chapter 4720 governing public water supplies. The department regulates about 1,500 community water supply systems in the state which include the water supplies for cities, villages, and manufactured home parks. The state also regulates about 8,000 noncommunity public water supply systems which supply water in places such as child care centers, schools and places of employment, campgrounds, resorts, parks, restaurants, and highway rest areas.

Public water supply systems may secure water from groundwater or surface water, wells, springs, aquifers, lakes, rivers, streams and reservoirs. Chapter 4720 addresses the methods for treating and regularly testing the water to ensure it is safe to drink.

Minnesota's regulations governing safe drinking water and public water supplies are based on federal law and regulation. State public water supplies are regulated under the federal Safe Drinking Water Act which was passed by Congress in 1974 and amended in 1986. This act of congress requires the federal Environmental Protection Agency to set regulations for safe drinking water. It provides for the delegation of the administration and enforcement of the federal safe drinking water laws and regulations to individual states provided they carry out the regulatory program in a manner that is as strict as or stricter than federal standards. The federal Safe Drinking Water Act required the federal Environmental Protection Agency to set regulations based on 1962 United States Public Health Service standards, to establish recommended maximum contaminant levels for contaminants with potential adverse health effects, and to protect the groundwater. In 1986 congress reauthorized the Safe Drinking Water Act making extensive, substantial changes. The key changes were 58 new maximum contaminant levels in addition to the 25 already in place; the addition of 25 more contaminants every three years after that; designation of best available technology (BAT) for each of the regulated contaminants; filtration of many surface water supplies; disinfection of all public water supplies; monitoring for unregulated contaminants; a ban on lead solders; and wellhead protection.

The state of Minnesota retains authority over the water

quality from public supplies through adoption of the federal standards. Without current, adopted state standards, the federal government retains authority for enforcement of applicable federal regulations. Section 1411 of the 1986 Safe Drinking Water Act states:

> national primary drinking water regulations under this part shall apply to each public water system in each State; except that such regulations shall not apply to a public water system--
>
> (1) which consists only of distribution and storage facilities (and does not have any collection and treatment facilities);
>
> (2) which obtains all of its water from, but is not owned or operated by, a public water system to which such regulations apply;
>
> (3) which does not sell water to any person; and
>
> (4) which is not a carrier which conveys passengers in interstate commerce.

When the state adopts the regulations already adopted by the federal government, the state assumes authority (or primacy) for enforcement of those federal regulations.

The state has incorporated the federal regulations governing public water supply systems into state rules by referring to the federal code. This is called incorporation of the federal code by reference. Where the state has decided to differ from the federal regulations, where the state wants to be stricter, or where the state is required to indicate state public policy from among a number of federal policy options, the state rules so indicate.

The adoption of federal regulations by reference into state rules has greatly reduced the actual length (though obviously not the effect) of the state regulations. It has afforded maximum consistency with federal laws and regulations, reduced the amount of squabbling about technical state and federal regulatory styles, and clearly highlights those areas where the state rules differ from federal code, augment it, or make policy decisions where federal code provides discretion and mandates a statewide policy.

This rule proceeding undertakes rulemaking for five reasons.

1. The existing rules contained in chapter 4720 and adopted in 1991 must be amended to comply with changes mandated by the federal Environmental Protection Agency to ensure that those adopted state rules are consistent with and as strict as the federal regulations contained in title 40, parts 141 and 142.40 to 142.64 as amended through June 29, 1989. (These federal regulations are sometimes referred to as the "Surface Water Treatment and Total Coliform rules.")

2. The existing rules contained in chapter 4720 and adopted

in 1991 must be further amended to incorporate new federal regulations which are now applicable to state public water supply systems. New National Primary Drinking Water Regulations are contained in Code of Federal Regulations, title 40, parts 141, 142 and 143.

A. On January 30, 1991, the Environmental Protection Agency adopted maximum contaminant levels or treatment techniques for 33 new chemicals, 26 synthetic organic chemicals, and seven inorganic chemicals. This brings the total number of maximum contaminant levels to 83. The National Primary Drinking Water Regulations include monitoring, reporting, and public notice requirements for these compounds. Also adopted by the federal Environmental Protection Agency are secondary maximum contaminant levels for two contaminants and one-time monitoring requirements for approximately 20 synthetic organic chemicals and inorganic chemicals. (These new federal regulations are sometimes referred to as "Phase II.")

B. On June 7, 1991, maximum contaminant level goals (MCLGs) and national primary drinking water regulations for controlling lead and copper in drinking water were adopted by the federal Environmental Protection Agency. The Environmental Protection Agency promulgated an MCLG of zero for lead and an MCLG of 11.3 milligrams per liter for copper. The adopted federal drinking water regulations for lead and copper consist of a treatment technique requirement that includes source water treatment, lead service line replacement, and public education. (These new federal regulations are sometimes referred to as "the lead and copper rules.")

C. On July 1, 1991, the federal Environmental Protection Agency adopted regulations that revised the monitoring requirements for eight volatile organic contaminants which were originally promulgated July 8, 1987. This change synchronizes requirements for these eight contaminants with monitoring requirements promulgated on January 30, 1991. The Environmental Protection Agency also promulgated the MCLGs and a maximum contaminant level for aldicarb, aldicarb sulfoxide, aldicarb sulfone, pentachlorophenol, and barium. Some error and clarifications are also addressed. (These new federal regulations are sometimes referred to as "Phase V.")

D. On July 17, 1992, the federal Environmental Protection Agency adopted maximum contaminant level goals and maximum contaminant levels for 18 synthetic organic chemicals and five inorganic chemicals. Monitoring,

reporting and public notice requirements for these chemicals were adopted. Regulation of sulfate was deferred. The regulations include the best available technology on which the maximum contaminant levels are based and the best available technology for the purpose of issuing variances.

3. The department is proposing to repeal existing part 4720.3910 TYPHOID FEVER on the basis that this rule is redundant of other existing standards and is now obsolete.

4. The department is proposing to modify the variance procedures in part 4720.2700. The modification to part 4720.2700 is made, along with the proposed repeal of parts 4720.2800, 4720.2900 and 4720.3000 to provide the commissioner with authority to make the determination on a variance request to parts 4720.0200 to 4720.2300 and simplify the rule by cross referencing directly to the federal variance procedures and criteria in federal code, rather than paraphrasing them in state rule.

5. A new part 4720.0025 is proposed to address the issue of backflow prevention into public water supply systems. The proposed part 4720.0025 is similar to the requirements in part 4720.0020 which were repealed in 1991.

I. STATUTORY AUTHORITY.

In 1977 the State of Minnesota adopted the Safe Drinking Water Act, sections 144.381 to 144.387. Minnesota Statutes, section 144.383, paragraph (e) provides authority for these rules. Section 144.383 states:

> In order to insure safe drinking water in all public water supplies, the commissioner has the following powers:
>
> (e) To promulgate rules, pursuant to chapter 14 but no less stringent than federal regulation, which may include the granting of variances and exemptions.

II. NOTICE OF SOLICITATION FOR COMMENT; DISCRETIONARY NOTICE; COMMENT RECEIVED IN RESPONSE TO NOTICE; RULE DEVELOPMENT.

Notices of Solicitation for Comment on this matter were published in the State Register on October 7, 1991 at 16 S.R. 871 and on June 14, 1993 at 17 S.R. 3100.

In conjunction with the 1991 notice the department followed the criteria and procedures delineated in Minnesota Statutes, section 14.10 as contained in Minnesota Statutes, 1991 providing for publication in the State Register. With respect to the notice published in 1993, the department followed the requirements for Notice of Solicitation in section 14.10 as amended by Laws of

Minnesota 1993, chapter 310, section 10. The notice published in 1993 summarized issues that may be considered, noted a timeframe for rule promulgation, indicated whether a rule task force would be formed, and ensured that a copy of the notice was mailed to all parties who have registered with the department to be notified of rulemaking activities. Copies of the notices as published along with a certificate of the agency list and the affidavit of mailing the 1993 notice are included in the record on this matter.

The agency did not receive written comment from the 1991 notice. The agency received one written comment in response to the publication of the 1993 notice. That comment has been entered into the record.

Though a task force specifically for rule development or amendment was not formed, department staff have, since the adoption of the federal standards, discussed the federal standards with public water suppliers to make the suppliers aware of the nature of the federal regulations and the state's intent to adopt the federal standards and retain enforcement primacy.

An advisory committee on alternative financing of the public water supply program was formed in 1991 and ended in 1992. Members of that committee included the League of Minnesota Cities; the American Water Works Association (Minnesota Section); the Minnesota Chamber of Commerce; the Manufactured Housing Association; the Minnesota Department of Education; the Minnesota Rural Water Association; and the Minnesota Restaurant, Hotel and Resort Association. Committee members were provided with background information on the current state public water supply regulations and a description of rules the department was developing and intending to propose in response to new federal mandates. Input and comment on the rules was requested.

Ten training sessions for approximately 1,000 persons were conducted for the operators serving all sizes of public water supply systems. The new federal regulations being incorporated into the state rules and their impact on state public water supply systems was discussed as part of the water operator training sessions. Input and comment on the rules was requested.

Articles were prepared for a department newsletter called Waterline which is published quarterly. It is distributed to water system operators and water system owners. The articles explained the impact of the new federal regulations on the state's public water supply systems.

In February of 1992, the department prepared a mailing to 1,800 community and non-transient systems explaining the impact of the proposed regulations. And information packets describing the lead and copper regulations were sent to all small water supply systems. These comprehensive packets contained a complete explanation of the

proposed rules and what is required to meet the new federal standards that are proposed for incorporation into state regulations.

IV. FISCAL IMPACT: COST OF IMPLEMENTATION TO STATE AND LOCAL PUBLIC AGENCIES.

Municipalities, townships, cities, and school districts, are local public entities impacted by these rules. At the state level, in addition to the Minnesota Department of Health, public water supply systems may be found at regional treatment centers regulated by the Department of Human Services, wayside rest areas regulated by the Department of Transportation, and in parks regulated by the Department of Natural Resources.

The new federal regulations proposed for incorporation into state rules at this time were promulgated by the federal Environmental Protection Agency on January 30, 1991; June 7, 1991; July 1, 1991; and July 17, 1992. These regulations have been applicable via the federal Safe Drinking Water Act of 1986 (section 1411) since the federal regulations were promulgated and enforcement responsibility since those promulgation dates has resided with the United States Environmental Protection Agency. Incorporation of the federal standards into state regulation at this time does not increase any regulatory burden or fiscal impact that is not already present in the adopted federal laws and regulations. Minnesota Statutes, section 144.383 (e) compels the commissioner to promulgate rules no less stringent than federal regulation. The major change resulting from the incorporation of the federal regulations into state rule is that the state will now assume responsibility for enforcement (primacy) of the federal regulations.

V. IMPACT ON AGRICULTURAL LAND.

Minnesota Statutes, section 14.11, subdivision 2 requires that agencies proposing rules that have a "direct and substantial adverse impact on agricultural land in the state" comply with the requirements set forth in Minnesota Statutes, sections 17.80 to 17.84. Under those statutory provisions, adverse impact is described as including acquisition of farmland for a nonagricultural purpose, granting a permit for the nonagricultural use of farmland, the lease of state-owned land for nonagricultural purposes, or granting or loaning state funds for uses incompatible with agriculture (Minnesota Statutes, section 17.81, subdivision 2). The proposed rules will not have a direct and substantial adverse impact on agricultural land, thus Minnesota Statutes, section 14.11, subdivision 2 does not apply.

VI. SMALL BUSINESS CONSIDERATIONS. Minnesota Statutes, section 14.115 requires that an agency consider five factors for reducing the impact of proposed rules on small businesses. These are:

1. Less stringent compliance or reporting requirements;
2. Less stringent schedules or deadlines for compliance or reporting;
3. Consolidation or simplification of compliance or reporting requirements;
4. The establishment of performance standards for small businesses to replace design or operational standards required in the rules; and
5. Exempting small businesses from the proposed rules.

Small business is defined in section 14.115 as "...a business entity, including its affiliates that (a) is independently owned and operated; (b) is not dominant in its field; and (c) employees fewer than 50 full time employees or has gross annual sales of less than four million dollars...."

The small businesses affected by the proposed rules include manufactured home parks, resorts, hotels, motels, restaurants, child care facilities and private schools. All public water supply systems that meet the minimum size requirement of "....15 service connections or 15 living units, or serving at least five persons daily for 60 days of the year", must, by federal law and regulation, comply with the federal safe drinking water standards.

The federal regulations to be incorporated in these proceedings apply to public water supply systems in the state and to the small businesses as described since the federal code was adopted by the federal Environmental Protection Agency. The federal safe drinking water standards apply to these entities whether or not they are adopted in state rule.

The federal rules to be incorporated provide for phased compliance with various federal requirements depending on the size of the system. For the lead and copper regulations, a large system is one serving populations over 50,000. These must comply first. Then medium sized systems (more than 3,300 to 50,000) and finally small systems (less than 3,300).

Other federal rules also have phased in compliance schedules, but the compliance is based on the system definition, ie. nontransient-noncommunity, transient-noncommunity, and size of a community water system. The number of samples required for a system is also based on the size of the system. For example, the number of total coliform samples per month needed is based on the size of the system. One sample is required per month for systems with populations of 25 to 1,000; 480 samples per month are required for systems serving populations of more than 3,960,001.

Because the danger to health is just as great for a person drinking contaminated water from a small system as from a large system, no provisions were allowed by federal regulations for less compliance standards or reporting requirements or for less stringent schedules

or deadlines.

The federal standards are performance standards. The specification of a maximum contaminant level is a performance standard. The design standards for the construction of surface water and groundwater under the direct influence of surface water treatment facilities in parts 4720.3920 to 4720.3965 are not being changed in these proceedings.

Neither federal law or regulation, nor state statute provide for an exemption for a public water supply system based on its classification as a small business. For Minnesota to retain primacy and enforce the federal regulations, and for the department to comply with the requirements of Minnesota Statutes, section 144.383 (e) "to promulgate rules....no less stringent than federal regulation" the department must adopt the rules as proposed. The rules, in accordance with Code of Federal Regulations, section 142.20; Minnesota Statutes, section 144.383 (e); and Minnesota Statutes, section 14.05, subdivision 4; provide criteria and procedures for the consideration of variances. With primacy the department has assumed responsibility to collect most of the required water samples for public water supply systems. (The main exception is the coliform testing for municipal systems.) Starting in 1992, all community public water supplies and 800 nontransient noncommunity public water supplies were tested by the department for the 83 maximum contaminant levels. The 8,000 noncommunity public water supplies are tested only for bacteria, nitrates and nitrites.

The department pays for the testing of all public water supply systems through the collection of a service connection fee of $5.21 which was authorized by the 1992 legislature (Minnesota Statutes, section 144.3831.) Though collected by home rule or charter cities or towns, the fee is designed to cover the cost of testing the water in all public water supply systems, not just those serving municipalities and towns. As specified in the Report to the 1993 Minnesota Legislature on Alternative Financing of the Public Water Supply Program (November 1992), the use of the service connection fee to provide testing of all public water supplies is needed because "At some time or another, every person drinks from a public water supply, either in a residence or at some public place such as a restaurant, place of employment, school, park or roadside rest area."

VII. NEED FOR AND REASONABLENESS OF THE PROPOSED RULES.

4720.0025 UNSAFE WATER CONNECTIONS.

Part 4720.0025 is proposed for addition to Chapter 4720 to prohibit any physical connection between a public potable water supply system and any potential source of contamination unless protected by an approved and properly maintained backflow preventer. This

part is needed to assure that the potability of the water is protected while within the water supply's distribution system. Considerable effort and cost is expended to assure that drinking water is obtained from a safe and protected source and that it receives proper treatment to meet drinking water standards before being discharged to the distribution system. To protect that initial investment in the quality of the water, and to assure its continued potability, it must be assured that there is no connection to the distribution system which would allow the quality of the water to be adversely affected. A backflow preventer is the only device that can provide the necessary degree of protection for the water supply. The department routinely recognizes devices approved by the American Society for Sanitary Engineering, the American Water Works Association, or by the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California. There is no federal Environmental Protection Agency standard governing these devices. The commissioner routinely uses the advice on the use of backflow devices given by the Advisory Council on Plumbing Code and Examination. Proper maintenance is required of these devices because all mechanical devices must receive periodic maintenance to assure that they function as intended. Without maintenance the device could not be considered to provide the needed protection for the water supply.

4720.0350 RULES AND STANDARDS ADOPTED BY REFERENCE.

The proposed amendment to this rule part is needed to accomplish the incorporation of the four new sets of federal regulations into the state rule. July 17,1992 was the last date that new regulations were adopted by the federal Environmental Protection Agency. As noted above, the state is mandated to maintain the state standards in a manner no less stringent than adopted federal Safe Drinking Water Regulations. Incorporation by reference ensures that the state standards are consistent with federal regulation.

4720.0450 DEFINITIONS; SECTION 141.2 OF THE NATIONAL PRIMARY DRINKING WATER REGULATIONS.

The amendment to subpart 2 is necessary to make the adopted rules consistent in cross reference to existing statute. Laws of Minnesota 1992 refer to the Safe Drinking Water Act as sections 144.381 to 144.387. This amendment provides for consistency with state law.

4720.0550 MICROBIOLOGICAL CONTAMINANT SAMPLING AND ANALYTICAL REQUIREMENTS; SECTION 141.21 OF THE NATIONAL PRIMARY DRINKING WATER REGULATIONS.

Subpart 1. Section 141.21, paragraph (b), clause (1). This rule provision is an existing provision. It has been made into a separate subpart to accommodate further modifications to section

141.21 of the national regulations. There is no substantial change to the existing language.]

Subp. 2. Section 141.21, paragraph (d), clause (2) of the federal regulations states that "Sanitary surveys must be conducted by the state or an agent approved by the state. The system is responsible for ensuring the survey takes place." The department proposes to delete "or an agent approved by the state. The system is responsible for ensuring the survey takes places." The department proposes that the rule state: "Sanitary surveys will be conducted by the department." The state now conducts and will continue to conduct sanitary surveys. The sanitary survey is the backbone of the drinking water protection program. It involves inspections performed on an 18 month cycle and includes routine sampling for bacteriological contaminants, an inspection of documentation of disinfection application, fluoride treatment, filtration requirements, filtration effectiveness, and technical assistance, if necessary. The water treatment plant is inspected for proper operation and health hazards. Continued state conduct of sanitary surveys ensures that they are carried out in an uniform and consistent manner. The state believes it reasonable to provide direct oversight of the surveys and direct accountability for the survey results and outcomes.

Subp. 3. Section 141.21, paragraph (e), clause (2). The department proposes to delete section 141.21, paragraph (e), clause (2). This federal provision states:

> The State has the discretion to allow a public water system, on a case-by-case basis, to forgo fecal coliform or E.coli testing on a total coliform-positive sample if that system assumes that the total coliform-positive sample is fecal coliform-positive or E. coli positive. Accordingly, the system must notify the State as specified in paragraph (e)(1) of this section and the provisions of section 141.63(b) apply.

On a total coliform positive test the state has the option of assuming, on a case-by-case basis, that the sample is E.coli or fecal coliform positive. (Normally, after a total coliform positive test, the system must be retested to determine if it is fecal coliform or E. coli positive.)

If a total coliform test is fecal coliform or E. coli positive, it would require a public water supply system to immediately notify the public and issue an order to boil water for drinking and cooking. (Coliform bacteria are not harmful, their presence is an indicator that harmful bacteria (fecal coliform or E.Coli) might be in the water. By not adopting this provision the state must determine, by additional testing, if fecal coliform or E.coli bacteria are present in the water supply. If the additional testing shows the supply contaminated with harmful bacteria a "Boil

order" must be issued and disinfection chemicals added to the water. The follow up testing by the state is done quickly enough that little time is lost in notifying drinking water consumers of a fecal coliform or E. coli positive test. It must also be noted that the state does not have systems with a proclivity toward regular bouts of E. coli of fecal coliform positive tests.

Repealing clause (2) of the federal regulations removes a burden from public water supply systems and reduces the chance of unnecessarily alarming the water consumer without any sacrifice in safety or water quality.

4720.2300 ADDITIONAL MONITORING REQUIREMENTS.

It is necessary to amend the date in this rule part so the maximum contaminant levels specified for testing in state rule are the same as those now specified in federal code. July 17, 1992 is the latest date that new federal public water supply regulations were adopted. The amendment is reasonable because the state regulations must be as strict as the federal requirements. The proposed amendment brings the state regulations into line with federal requirements.

4720.2700 APPLICATION PROCEDURE FOR VARIANCE FROM PARTS 4720.0200 TO 4720.2300.

The proposed modifications to this part are designed to simplify the state regulation. The federal code in title 40, part 142.20 requires that whenever a state with primary enforcement responsibility issues variances from the requirements of the federal drinking water regulations contained in Minnesota Rules part 4720.0200 to 4720.2300, the state must do so in a manner which is no less stringent than the conditions laid out in section 1415 of the federal Safe Drinking Water Act. What has been contained in rule parts 4720.2700, 4720.2800, 4720.2900 and 4720.3000 was language that paraphrased the conditions in federal law. The department proposes to simplify the state rules by directly referencing to the procedures and requirements in the federal code (which in turn references to the procedures in federal law, section 1415). That way the state rules will remain consistent with and no less stringent than federal requirements. This modification makes it easy for the state to maintain its primacy status with federal authorities because it negates any questions as to whether the state variance standards are equivalent to the federal standards. Paraphrasing a federal law or regulation may open dispute or interpretation. This provision is reasonable in that the authority to grant or deny the variance is given to the commissioner of health. It is the commissioner of health who is delegated primacy authority by the federal government to administer and enforce the federal Safe Drinking Water Act and regulations adopted thereunder, and it is reasonable that it be the commissioner of health who determines whether a variance to the federal laws and regulations

she is authorized to enforce should be varied or not.

4720.3920 GENERAL REQUIREMENTS FOR CONSTRUCTION OF SURFACE WATER AND GROUNDWATER UNDER THE DIRECT INFLUENCE OF SURFACE WATER TREATMENT FACILITIES.

4720.3942 FILTRATION.

The proposed amendments to these parts are needed to bring the state standards for the treatment of water into line with federal requirements. The federal regulations require treatment of surface water and water under the direct influence of surface water. Surface water and ground water systems differ, not because of where the water comes from, but in the types of contaminants and problems associated with making the water safe to drink. Groundwater systems under the direct influence of surface water are, in fact, surface water systems. The water in groundwater systems under the direct influence of surface water is heavily influenced by rain, runoff, and snowmelt which may contain contaminants. The water, regardless of whether it is a surface source or a source under the influence of surface water, must be treated and monitored to ensure protection of public health.

REPEALER. It is necessary to repeal parts 4720.2800, 4720.2900 and 4720.3000 because they paraphrase the conditions, procedures and criteria for granting a variance from federal standards stipulated in federal code. The department proposes to directly reference to the requirements in federal code.

Part 4720.3910 is proposed for repeal because it is obsolete. It appears to duplicate other rules pertaining to medical facilities, communicable disease reporting, food safety and public water supplies. The continued need for this rule was assessed not only by the public water supply unit of the state health department, but also by the divisions of the health department that oversee hospitals, nursing homes and other health care facilities, inspect restaurants and food and beverage services; and oversee the reporting and monitoring of acute disease epidemiology. These other divisions concurred that the regulation was obsolete, duplicative and no longer needed.

Date: 11/30/93

Mary Jo O'Brien

Mary Jo O'Brien, Commissioner
Minnesota Department of Health