

CHAPTER 4720
DEPARTMENT OF HEALTH
PUBLIC WATER SUPPLIES

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4720.5100 DEFINITIONS.

Subpart 1 **Scope.** The terms used in parts 4720 5100 to 4720 5590 have the meanings given them in Minnesota Statutes, section 103I 005 and in this part

Subp 2 **Angle of ambient groundwater flow.** "Angle of ambient groundwater flow" means the direction of groundwater flow through an aquifer undisturbed by pumping or human-caused activities. The angle of ambient groundwater flow is expressed in degrees, ranging from 0 to 360 degrees, and is measured in a clockwise direction from geographical north, not magnetic north

Subp 3 **Aquifer.** "Aquifer" has the meaning given in part 4725 0100, subpart 21.

Subp 4 **Aquifer test plan.** "Aquifer test plan" means the document containing the plan by which the aquifer transmissivity value will be calculated for a public water supply well, as required under part 4720 5540

Subp 5 **Casing.** "Casing" has the meaning given in part 4725 0100, subpart 22

Subp 6 **Commissioner.** "Commissioner" means the commissioner of health

Subp 7 **Community water supply.** "Community water supply" has the meaning given to "community water system" in Code of Federal Regulations, title 40, section 141.2 (1992 and as subsequently amended)

Subp 8. **Confined aquifer.** "Confined aquifer" has the meaning given in part 7045 0020, subpart 10

Subp 9 **Confining layer.** “Confining layer” has the meaning given in part 4725 0100, subpart 24a

Subp 10 **Contamination.** “Contamination” has the meaning given in part 4725 0100, subpart 34

Subp 11 **Contingency strategy.** “Contingency strategy” means the part of a wellhead protection plan that describes an organized, planned, and coordinated course of action that identifies the location and provision of an alternate drinking water supply if the public water supply is disrupted by mechanical failure or contamination

Subp 12 **Department.** “Department” means the Minnesota Department of Health

Subp 13 **Drinking water supply management area.** “Drinking water supply management area” means the surface and subsurface area surrounding a public water supply well, including the wellhead protection area, that must be managed by the entity identified in a wellhead protection plan. The boundaries of the drinking water supply management area are

- A center lines of highways, streets, roads, or railroad rights-of-way,
- B section, half-section, quarter-section, quarter-quarter-section, or other fractional section lines of the United States public land survey,
- C property or fence lines,
- D the center of public drainage systems,
- E public utility service lines; or
- F political boundaries

Subp 14 **Drinking water supply management area vulnerability.** “Drinking water supply management area vulnerability” means an assessment of the likelihood for a potential contaminant source within the drinking water supply management area to contaminate a public water supply well based on.

- A the aquifer’s inherent geologic sensitivity, and
- B the chemical and isotopic composition of the groundwater

Subp 15 **Flow boundaries.** “Flow boundaries” means hydrologic or geologic boundaries, including:

- A. the physical limits of an aquifer,
- B lakes, rivers, streams, drainage ditches, or other surface hydrologic features,
- C areas of contrasting geologic materials, or
- D the pumping influence of other wells

Subp. 16 **Geographic reference point.** “Geographic reference point” means a location on the earth’s surface that is referenced in

- A. latitude and longitude,
- B a universal transverse mercator projection,
- C the public land survey system, or
- D the state plane coordinate system.

Subp 17 **Groundwater.** “Groundwater” has the meaning given in Minnesota Statutes, section 115 01, subdivision 6

Subp. 18 **Hydraulic gradient.** “Hydraulic gradient” means the slope of the water table or potentiometric surface

Subp 19 **Inner wellhead management zone.** “Inner wellhead management zone” means the land within a 200-foot radius of a public water supply well

Subp. 20 **Isolation distance.** “Isolation distance” means the distance from a contamination source as described in parts 4725.4450 and 4725.5850

Subp 21 **Local unit of government.** “Local unit of government” has the meaning given in part 8405.0110, subpart 5.

Subp 22 **Municipal public water supply well.** “Municipal public water supply well” means a public water supply well owned, managed, or operated by a municipality as defined in Minnesota Statutes, section 103B 305, subdivision 6.

Subp 23 **Noncommunity water supply.** “Noncommunity water supply” has the meaning given to “noncommunity water system” in Code of Federal Regulations, title 40, section 141.2 (1992 and as subsequently amended)

Subp. 24. **Nontransient noncommunity water supply.** “Nontransient noncommunity water supply” has the meaning given to “nontransient noncommunity water system” in Code of Federal Regulations, title 40, section 141.2 (1992 and as subsequently amended)

Subp 25 **Official controls.** “Official controls” has the meaning given in part 8405 0110, subpart 7

Subp 26 **Potential contaminant source.** “Potential contaminant source” means any human-related activity that presents a risk to groundwater quality

Subp 27 **Public water supplier or supplier.** “Public water supplier” or “supplier” has the meaning given to “supplier of water” in Code of Federal Regulations, title 40, section 141.2 (1992 and as subsequently amended)

Subp 28 **Public water supply or supply.** “Public water supply” or “supply” has the meaning given to “public water system” in Code of Federal Regulations, title 40, section 141.2 (1992 and as subsequently amended)

Subp 29 **Public water supply well.** “Public water supply well” means a well as defined in Minnesota Statutes, section 103I 005, subdivision 21, that serves a public water supply and is not a dewatering well or a monitoring well serving a public water supply.

Subp 30 **Pumping discharge rate.** “Pumping discharge rate” means the volume of water discharged by a well per unit of time

Subp 31 **Pumping test.** “Pumping test” means a test, as described in parts 4720 5520 and 4720 5530, that is used to determine the aquifer transmissivity

Subp 32 **Related land resources.** “Related land resources” has the meaning given in Minnesota Statutes, section 103B.305, subdivision 8

Subp 33 **Remaining portion of the wellhead protection plan.** “Remaining portion of the wellhead protection plan” means that portion of the wellhead protection plan that remains to be completed after the public water supplier has fulfilled the requirements of parts 4720 5320 and 4720 5330

Subp 34. **Specific capacity test.** “Specific capacity test” means the productivity of a well obtained by dividing the gallons of water pumped per unit time by the number of feet the water level in the well is lowered due to its pumping.

Subp 35 **State identifier.** “State identifier” means the unique number assigned by the department to a well or the number assigned by a state agency responsible for a potential source of contamination

Subp 36. **Time of travel.** “Time of travel” means the amount of time over which groundwater will move through a portion of an aquifer and the overlying geologic materials to recharge a well in use

Subp 37. **Transient noncommunity water supply.** “Transient noncommunity water supply” means a public water supply that is not a community water supply or a nontransient noncommunity water supply

Subp 38 **Transmissivity.** “Transmissivity” means the product of the average hydraulic conductivity and the saturated thickness of the aquifer. Hydraulic conductivity means the volume of water that will move through a porous medium in unit time under a unit hydraulic gradient through a unit area measured at right angles to groundwater flow

Subp 39 **Unconfined aquifer.** “Unconfined aquifer” has the meaning given in part 6115 0630, subpart 17

Subp 40 **Watershed district.** “Watershed district” means a district established under Minnesota Statutes, chapter 103D.

Subp 41. **Watershed management organization.** “Watershed management organization” has the meaning given in Minnesota Statutes, section 103B 205, subdivision 13

Subp 42. **Well vulnerability.** “Well vulnerability” means an assessment of the likelihood of contamination entering a public water supply well based on the criteria specified in part 4720 5550, subpart 2

Subp. 43 **Wellhead protection.** “Wellhead protection” means a method of preventing well contamination by effectively managing potential contaminant sources in all or a portion of the well’s recharge area.

Subp 44 **Wellhead protection measure.** “Wellhead protection measure” means a method adopted and implemented by a public water supplier to prevent contamination of a public water supply, and approved by the department under parts 4720 5110 to 4720.5590

Subp 45 **Wellhead protection plan or plan.** “Wellhead protection plan” or “plan” means a document that provides for the protection of a public water supply, is submitted to the department, is implemented by the public water supplier, and complies with.

A. the wellhead protection elements specified in the 1986 amendments to the federal Safe Drinking Water Act, United States Code, title 42, chapter 6A, subchapter XII, part C, section 300h-7 (1986 and as subsequently amended), and

B. parts 4720 5200 to 4720 5290

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5110 APPLICABILITY.

Subpart 1 **Inner wellhead management zone.** A public water supplier must

A maintain the isolation distances for new contaminant sources specified in parts 4725.4450 and 4725.5850 for potential contamination sources located around the public water supply well following the schedule specified in part 4720 5120;

B monitor potential contaminant sources that were in existence, recorded, or authorized before May 10, 1993, and that are not in compliance with parts 4725 4450 and 4725 5850, and

C implement wellhead protection measures for potential contaminant sources within the inner wellhead management zone.

Subp. 2 **Wellhead protection area.** For a community public water supply well and a nontransient noncommunity public water supply well, the public water supplier must

A delineate the wellhead protection area and the drinking water supply management area,

B. prepare a wellhead protection plan for the drinking water supply management area; and

C implement a wellhead protection plan for the drinking water supply management area

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5120 SCHEDULE; INNER WELLHEAD MANAGEMENT ZONE.

Wellhead protection measures for the inner wellhead management zone of a public water supply well must be initiated

A. at the time a new public water supply well is constructed,

B before June 1, 1999, for an existing community water supply well,

C. before June 1, 1999, for an existing nontransient noncommunity water supply well serving a child care center regulated under chapter 9503 or a school,

D. before June 1, 2000, for any other existing nontransient noncommunity water supply well,

E before June 1, 2001, for an existing transient noncommunity water supply well serving a facility licensed by the department,

F before June 1, 2002, for an existing transient noncommunity water supply well serving a facility licensed by the department that is covered by a community health service delegation agreement entered under Minnesota Statutes, section 145A 07, and

G. before June 1, 2003, for any other existing transient noncommunity water supply well

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5130 WELLHEAD PROTECTION PLAN; PRELIMINARY REQUIREMENTS; SCHEDULE.

Subpart 1 **New municipal public water supply well.** In addition to the requirements of part 4720.0010, a well construction plan for a new municipal public water supply well must have.

A a preliminary delineation of a wellhead protection area based on available information, and

B an assessment of the impacts that existing land use and existing water use in the preliminary wellhead protection area, as described in subpart 2, may have on the movement of contaminants resulting from human activity to the aquifer serving the proposed municipal public water supply well.

Subp 2 **Criteria; preliminary wellhead protection area delineation.** A preliminary wellhead protection area must be delineated using the criteria in this subpart

A The criteria described in part 4720 5510, subparts 2 and 4, must be identified.

B For a well to be constructed in an unconfined aquifer, the preliminary wellhead protection area must be extended one-half mile in an upgradient direction from the proposed well site, if the delineation method used does not incorporate the criteria specified in part 4720 5510, subpart 5

Subp 3 **Schedule.** An initial wellhead protection plan must be completed and submitted by the public water supplier for all the wells in a public water supply system within two years after

A. an additional well is connected to a municipal public water supply system, or

B the public water supplier receives notification from the department as specified in part 4720 5550 for

(1) a community well not included under item A, or

(2) a nontransient noncommunity public water supply

Subp 4 **Additional time.** In addition to the two years allowed in subpart 3, the public water supplier has an additional six months to submit the plan

A for each two existing or new wells, up to six wells,

B if the public water supply is not owned by a federal, state, or local unit of government,

C if funds are not available to support plan development or implementation;

D if the wellhead protection area lies in more than two governmental jurisdictions, or

E if pumping of a well that is not a part of the water supply system influences the boundaries of the wellhead protection area being delineated.

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

CONTENT OF WELLHEAD PROTECTION PLAN**4720.5200 DATA ELEMENTS; ASSESSMENT.**

Subpart 1 **Required data elements.** The data elements identified in the scoping decision notice under parts 4720 5310, subpart 2, and 4720 5340, subpart 2, must be assessed by the public water supplier

Subp 2 **Assessment of data elements.** A wellhead protection plan must assess the present and future implications of the data elements required in subpart 1 on

A. the use of the well,

B. the wellhead protection area delineation criteria specified in part 4720 5510,

C. the quality and quantity of water supplying the public water supply well, and

D. the land and groundwater uses in the drinking water supply management area

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5205 WELLHEAD PROTECTION AREA AND DRINKING WATER SUPPLY MANAGEMENT AREA DELINEATION.

Subpart 1 **Boundaries; wellhead protection area.** A wellhead protection plan must have a map showing the boundaries of the wellhead protection area that were determined using the criteria in part 4720 5510.

Subp 2 **Documentation.** A wellhead protection plan must document the delineation of the wellhead protection area. The documentation must

- A describe the hydrogeologic setting used to characterize the aquifer,
- B identify the five delineation criteria described in part 4720 5510, subparts 2 to

6,

C describe the delineation method used, including assumptions, and the supporting documentation for the assumptions,

D. describe all parameters, other than the delineation criteria described in part 4720.5510, used for the delineation, .

E describe the delineation results, including

- (1) the results of model calibrations, when a groundwater flow model is used,

and

(2) a narrative describing the uncertainties relating to the accuracy of the calculated wellhead protection area boundaries,

F specify the data elements used, including data sources, and

G contain a copy of the calculations performed or, when a computer model is used, the electronic data input and solution file

Subp 3 **Boundaries; drinking water supply management area.** A wellhead protection plan must have a map showing the boundaries of the drinking water supply management area. The boundary of the drinking water supply management area must follow the wellhead protection area as closely as possible

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5210 VULNERABILITY ASSESSMENT.

Subpart 1. **Well vulnerability.** A wellhead protection plan must describe the results of the well vulnerability assessment conducted according to part 4720.5550

Subp 2 **Drinking water supply management area vulnerability.** A wellhead protection plan must have an assessment of the drinking water supply management area vulnerability

Subp 3 **Documentation; drinking water supply management area vulnerability assessment.** A wellhead protection plan must document the vulnerability assessment of the drinking water supply management area. The documentation must

A identify the method used to assess vulnerability,

B describe the geologic conditions throughout the drinking water supply management area from the land surface to the aquifer used by the public water supply well,

C contain copies of the data elements used, including data sources, and

D contain maps, diagrams, reports, studies, and tables that were prepared to support the drinking water supply management area vulnerability assessment.

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5220 IMPACT OF CHANGES ON PUBLIC WATER SUPPLY WELL.

Subpart 1 **Changes identified.** A wellhead protection plan must identify and describe expected changes that may occur during the next ten years to

A the physical environment,

B land use,

C surface water, and

D groundwater

Subp 2 **Impact of changes.** A wellhead protection plan must list, describe, and assess the possible impact on the aquifer serving the public water supply well resulting from

A the expected changes identified in subpart 1,

B the influence of existing water and land government programs and regulations;
and

C the administrative, technical, and financial considerations of the public water supplier and the property owners within the drinking water supply management area

Statutory Authority: *MS s 1031.101*

History: 22 SR 668

4720.5230 ISSUES, PROBLEMS, AND OPPORTUNITIES.

Subpart 1 **Requirement.** A wellhead protection plan must identify water use and land use issues, problems, and opportunities related to

A the aquifer serving the public water supply well;

B the well water, and

C the drinking water supply management area.

Subp 2 **Identification.** To identify water use and land use issues, problems, and opportunities, the public water supplier must assess

A. those problems and opportunities disclosed at public meetings and in written comment,

B the data elements identified by the department in parts 4720.5310, subpart 2, and 4720.5340, subpart 2, and

C the status and adequacy of official controls, plans, and other local, state, and federal programs on water use and land use.

Statutory Authority: *MS s 1031.101*

History: 22 SR 668

4720.5240 WELLHEAD PROTECTION GOALS.

A wellhead protection plan must state goals for present and future water use and land use to provide a framework for determining plan objectives and related actions.

Statutory Authority: *MS s 1031.101*

History: 22 SR 668

4720.5250 OBJECTIVES AND PLAN OF ACTION.

Subpart 1 **Objectives.** A wellhead protection plan must have measurable objectives for the well and drinking water supply management area

Subp 2 **Plan of action.** A wellhead protection plan must state a plan of action. A plan of action must.

A address the problems and opportunities identified in the wellhead protection plan,

B. identify and prioritize the wellhead protection measures that will be used;

C identify proposed changes in well construction, maintenance, and use; and

D identify a time frame for the implementation of the action identified in the plan

Subp 3 **Establishing priorities.** A public water supplier must establish priorities in the plan of action that.

A. address

(1) any substance that exceeds the maximum contaminant level specified in Code of Federal Regulations, title 40, part 141 (1995 and as subsequently amended); and

(2) a quantifiable level of a contaminant in the well water resulting from human activity, and

B. reflect:

(1) the number of each potential contaminant source identified and the nature of the potential contamination associated with each source,

- (2) the location of each potential contaminant source in relation to
 - (a) the public water supply well,
 - (b) the isolation distances, and
 - (c) a one-year time of travel emergency response time;
- (3) the capability of the geologic material to absorb a contaminant,
- (4) the effectiveness of existing controls,
- (5) the time required to obtain cooperation from other public water suppliers, and local, state, and federal agencies and programs, and
- (6) the administrative, legal, technical, and public and private financial resources needed

Subp 4. Implementation responsibilities. A plan of action must

- A describe those actions that will be taken by the public water supplier alone,
- B describe those actions that will require the cooperation of a local unit of government or state and federal agencies, and
- C state whether the public water supplier has received commitments for the cooperation described in item B

Statutory Authority: *MS s 1031 101*

History: 22 SR 668

4720.5270 EVALUATION PROGRAM.

Subpart 1 Program required. A wellhead protection plan must identify a strategy for evaluating the progress of the plan of action and the impact of a contaminant release on the aquifer supplying the public water supply well

Subp 2 Strategy requirements. The evaluation strategy must

- A. be conducted throughout the drinking water supply management area;
- B be based on the health risk the specific potential contaminant source presents to the public water supply well, and
- C specify the evaluation approach used for specific potential contaminant sources.

Subp 3 Evaluation approaches. Evaluation approaches are

- A sampling the quality of the groundwater throughout the drinking water supply management area,
- B documenting inventory control of potential contaminants,
- C documenting the implementation of wellhead protection measures, and
- D using monitoring data already required by existing laws and rules in effect at the time of plan adoption

Subp 4 Evaluation frequency. An evaluation must be conducted

- A every 2.5 years or less, and
- B when a wellhead protection plan is amended as required in part 4720 5570, subpart 1

Subp 5 Evaluation submittal. An evaluation conducted in accordance with subpart 4, item B, must be submitted to the department at the first scoping meeting held to amend an existing plan

Statutory Authority: *MS s 1031 101*

History: 22 SR 668

4720.5280 ALTERNATE WATER SUPPLY; CONTINGENCY STRATEGY.

Subpart 1 Contingency strategy required. A wellhead protection plan must have a contingency strategy that addresses disruptions of the water supply caused by contamination or mechanical failures of the public water supply system

Subp 2 Requirements. The contingency strategy must:

- A identify the water supply replacement alternatives, including the location of the replacement supply that will be available during a disruption,

B be based on

- (1) the location and capacity of individual wells and storage tanks,
- (2) the location, type, and capacity of the water treatment facility;
- (3) the location and capacity of major distribution lines, and
- (4) the location of key points for isolating parts of the water supply system,

C be based on water use and demand,

D prioritize water uses and demands into low, medium, and high categories,

E have

- (1) the response coordinator's name, telephone number, address, and response assignments,
- (2) the names, addresses, telephone numbers, and response assignments of personnel for public health, water supply operations, and public relations,
- (3) an alternate for each of the individuals identified in subitems (1) and (2),
- (4) a list of services, equipment, and supplies available to respond to a disruption,
- (5) a list of services, equipment, and supplies not available but needed to respond to a disruption; and
- (6) a plan of action and time frame for obtaining the services, equipment, and supplies identified in subitem (5),

F have a procedure to:

- (1) identify the disruption;
- (2) notify response personnel,
- (3) identify incident direction and control,
- (4) identify internal communication,
- (5) inform the public;
- (6) assess the incident on a continual basis;
- (7) assess a contamination disruption;
- (8) assess a mechanical disruption;
- (9) provide an alternative water supply, and
- (10) impose water use restrictions, and

G identify ways to reduce the vulnerability of the water supply system to disruption and to improve the community's response capabilities

Statutory Authority: *MS s 1031.101*

History: 22 SR 668

4720.5290 DATA ELEMENTS; INCLUSION.

A wellhead protection plan must have a copy of the data elements identified in the scoping decision notices described in parts 4720.5310, subpart 2, and 4720.5340, subpart 2

Statutory Authority: *MS s 1031.101*

History: 22 SR 668

PROCEDURES FOR WELLHEAD PROTECTION PLAN DEVELOPMENT AND REVIEW

4720.5300 WELLHEAD PROTECTION PLAN DEVELOPMENT; PROCEDURES.

Subpart 1 **Applicability.** The procedures specified in parts 4720.5300 to 4720.5360 must be used by a public water supplier to develop and review a wellhead protection plan

Subp 2. **Plan manager.** A public water supplier must identify a person to manage and coordinate plan development and implementation.

Subp 3 **Plan development; notice.** Before the development of a wellhead protection plan begins, a public water supplier must send notice of its decision to develop a plan to

A the governing bodies of counties, townships, municipalities, watershed districts, and watershed management organizations that may have jurisdiction wholly or partly within the estimated drinking water supply management area,

B the regional development commission, if any, and

C the department

Subp 4 **Notice content.** The notice must contain

A the name, address, and telephone number of the wellhead protection plan manager,

B the state identifier of each well to be addressed in the wellhead protection plan,

C the date the wellhead protection plan must be completed,

D a workplan for plan development,

E a list of the data elements identified by the department in the scoping decision notice that the public water supplier does not have but needs to

(1) delineate the wellhead protection area and the drinking water supply management area, and

(2) assess the vulnerability of the well, the wellhead protection area, and the drinking water supply management area,

F a request that the data elements identified in item E be shared, if available, and

G a request for

(1) existing water and related land resource plans and official controls, and

(2) a description of conflicts, problems, or opportunities that local units want examined and addressed in the wellhead protection plan

Subp 5 **Local units of government; meetings.** During the time the plan is being developed, a public water supplier must conduct at least one meeting with local units of government that may have jurisdiction in water and related land resources management within the drinking water supply management area

Subp 6 **Public participation.** A public water supplier developing a wellhead protection plan must ensure that there is a process for public participation during plan development and implementation.

Subp. 7. **Recordkeeping.** A public water supplier must maintain a record of each public meeting held

Statutory Authority: *MS s 1031 101*

History: 22 SR 668

4720.5310 FIRST SCOPING MEETING PROCEDURES.

Subpart 1 **Scoping meeting; delineation and vulnerability assessments.** A public water supplier and the department shall meet to discuss the data elements specified in part 4720 5400 that the department determines must be contained in the wellhead protection plan and be used to

A delineate the wellhead protection area and the drinking water supply management area, and

B assess the vulnerability of the well and the drinking water supply management area

Subp 2 **Scoping decision; notice.** No later than 30 days after the scoping meeting specified in subpart 1, the department shall notify the public water supplier in writing of the data elements specified in part 4720 5400 that must be

A used to perform the delineation and vulnerability assessments,

B contained in the wellhead protection plan, and

C submitted to the department

Statutory Authority: *MS s 1031 101*

History: 22 SR 668

4720.5320 AQUIFER TEST PLAN; PROCEDURES.

Subpart 1 **Submittal.** An aquifer test plan as specified in part 4720 5540 must be submitted to the department by a public water supplier for department approval.

A before the selection of the aquifer test method, and

B before the delineation of the wellhead protection area.

Subp 2 **Review; notice.** No later than 30 days after receipt of an aquifer test plan, the department shall

A approve or disapprove the aquifer test plan based on the criteria specified in part 4720 5555, and

B provide the public water supplier notice of approval or disapproval of the aquifer test plan

Subp 3 **Disapproval notice.** If an aquifer test plan is disapproved, the department shall, as part of the notice of disapproval, provide the public water supplier with

A a written statement that identifies those portions of the disapproved aquifer test plan that require revision, and

B the reasons for disapproval

Subp 4 **Resubmittal.** A disapproved aquifer test plan must be revised by the public water supplier and resubmitted to the department within 45 days after receiving notice of disapproval

Subp. 5. **Revised aquifer test plan; review.** On receipt of a revised aquifer test plan, the department shall follow the same review process as for an original submittal

Statutory Authority: *MS s 1031 101*

History: *22 SR 668*

4720.5330 DELINEATION AND VULNERABILITY ASSESSMENT REVIEW; PROCEDURES.

Subpart 1 **Delineation and vulnerability assessment; submittal.** Before the remaining portion of the wellhead protection plan is prepared, a public water supplier must submit to the department.

A the maps and documentation required in part 4720 5205,

B the vulnerability assessment required in part 4720 5210, and

C the data elements required under part 4720.5310, subpart 2.

Subp 2 **Review; notice.** No later than 60 days after the filing of the information specified in subpart 1, the department shall

A approve or disapprove, based on the criteria in part 4720 5555, the following

(1) the wellhead protection area delineation,

(2) the drinking water supply management area boundary, and

(3) the well and drinking water supply management area vulnerability assessment, and

B provide the public water supplier notice of approval or disapproval of the delineation

Subp 3 **Disapproval notice.** If a wellhead protection area delineation, a drinking water supply management area boundary, or a vulnerability assessment is disapproved, the department shall, as part of its notice of disapproval, provide the public water supplier with

A a written statement that identifies those portions of the disapproved document that require revision, and

B reasons for disapproval.

Subp 4 **Resubmittal.** A public water supplier must revise a disapproved wellhead protection area delineation, drinking water supply management area boundary, or vulnerability assessment and submit the revision to the department within 45 days after receiving notice of disapproval

Subp 5 **Revised information; review.** On receipt of a revised wellhead protection area delineation, drinking water supply management area boundary, or vulnerability assessment, the department shall follow the same review process as for an original submittal.

Subp 6 **Submittal to local units of government.** Within 30 days of department approval, the public water supplier must submit a copy of the wellhead protection area delineation, the drinking water supply management area boundary, and the vulnerability assessments approved by the department to

A. local units of government wholly or partly within the drinking water supply management area,

B. the regional development commission, if any, and

C. watershed districts and watershed management organizations wholly or partly within the drinking water supply management area

Subp. 7 **Public information meeting.** Within 60 days of the receipt of the notice of approval from the department, a public water supplier must hold one public information meeting for the general public about the approved

A. wellhead protection area delineation,

B. drinking water supply management area boundary, and

C. vulnerability assessments

Statutory Authority: *MS s 1031 101*

History: 22 SR 668

4720.5340 SECOND SCOPING MEETING PROCEDURES.

Subpart 1 **Scoping meeting; remaining portion of wellhead protection plan.** A public water supplier and the department shall meet to discuss the data elements specified in part 4720 5400 that the department determines must be contained in the wellhead protection plan and used to prepare the remaining portion of the wellhead protection plan

Subp. 2 **Scoping decision; notice.** No later than 30 days after the scoping meeting specified in subpart 1, the department shall notify the public water supplier in writing of the data elements specified in part 4720 5400 that must be

A. used to prepare the remaining portion of the wellhead protection plan,

B. contained in the wellhead protection plan, and

C. submitted to the department

Statutory Authority: *MS s 1031 101*

History: 22 SR 668

4720.5350 LOCAL REVIEW; PUBLIC HEARING.

Subpart 1 **Submittal to local units of government.** The public water supplier must submit a copy of the remaining portion of the wellhead protection plan to:

A. local units of government wholly or partly within the wellhead protection area,

B. the regional development commission, if any, and

C. watershed districts and watershed management organizations wholly or partly within the wellhead protection area

Subp 2 **Local review.** A public water supplier must allow 60 days for the governmental units identified in subpart 1 to comment in writing on the remaining portion of the wellhead protection plan.

Subp 3 **Comments; consideration.** A public water supplier must consider comments of a local unit of government, regional development commission, watershed district, or water management organization, if any, that.

A. identify and describe any conflict the commenting party has with the plan, when the conflict is not already identified in the remaining portion of the wellhead protection plan, and

B. state the commenting party's position on a conflict identified by the public water supplier for consideration by the department during the department's review of the plan

Subp 4 **Public hearing.** A public water supplier must conduct a public hearing on the wellhead protection plan after the 60-day period for local review and comment is completed and before submitting the plan to the department

Statutory Authority: *MS s 1031 101*

History: 22 SR 668

4720.5360 DEPARTMENTAL REVIEW; REMAINING PORTION OF PLAN.

Subpart 1 **Submittal to department.** After conducting a public hearing, a public water supplier must submit to the department six copies of

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A the remaining portion of the wellhead protection plan, including the data elements to be submitted to the department as specified in part 4720 5340, subpart 2,

B written comments received on the entire plan, and

C a summary of changes made to the entire plan as a result of the local review process

Subp 2 Department consultation. On receipt of the items specified in subpart 1, the department shall transmit a copy of the items, along with a map of the wellhead protection area, a map of the drinking water supply management area, and the vulnerability assessment of the drinking water supply management area to

A the Minnesota Department of Agriculture,

B the Minnesota Department of Natural Resources,

C the Minnesota Pollution Control Agency,

D the Board of Water and Soil Resources, and

E any other state or federal agency the department determines could assist the department with the review of the plan

Subp 3. Comment review. The department shall

A. evaluate a wellhead protection plan based on written comments from an entity specified in subpart 2 received no later than 60 days after the plan is transmitted to the entity, and

B consider comments from an entity specified in subpart 2 that identifies any part of the remaining portion of a wellhead protection plan that is.

(1) contrary to a state or federal law or rule administered by the entity, or

(2) contradictory to the review criteria specified in part 4720 5555

Subp 4 Review; notice; resubmittal. No later than 90 days after a public water supplier files the remaining portion of a wellhead protection plan, the department shall approve or disapprove the remaining portion of the wellhead protection plan based on the criteria specified in part 4720 5555, and shall provide the public water supplier notice of approval or disapproval of the wellhead protection plan

A If the remaining portion of a wellhead protection plan is disapproved, the department shall, as part of its notice of disapproval, provide the public water supplier with.

(1) a written statement that identifies those portions of the disapproved wellhead protection plan that require revision, and

(2) the reasons for disapproval

B A public water supplier must revise a disapproved wellhead protection plan and submit the revision to the department within 120 days after receiving notice of disapproval

C On receipt of a revised plan, the department shall follow the same review process as for an originally submitted wellhead protection plan.

Statutory Authority: *MS s 1031.101*

History: 22 SR 668

DATA ELEMENTS FOR A WELLHEAD PROTECTION PLAN

4720.5400 DATA ELEMENTS.

Subpart 1 Selection. The department shall select data elements to be used in a wellhead protection plan in accordance with parts 4720 5310 and 4720 5340 based on the hydrogeological setting and vulnerability of the well and the drinking water supply management area known at both the time the scoping meeting is held and the scoping decision notice is mailed

Subp 2 Physical environment. The department shall select data elements about the physical environment from the areas described in items A to D

A Information about precipitation must include

(1) an existing map or list of local precipitation gaging stations, and

(2) an existing table showing the average monthly and annual precipitation in inches for the preceding five years

B Information about the geology of the area must include

(1) an existing geologic map and a description of the geology, including aquifers, confining layers, recharge areas, discharge areas, sensitive areas as defined in Minnesota Statutes, section 103H 005, subdivision 13, and groundwater flow characteristics;

(2) existing records of the geologic materials penetrated by wells, borings, exploration test holes, or excavations, including those submitted to the department,

(3) existing borehole geophysical records from wells, borings, and exploration test holes, and

(4) existing surface geophysical studies

C Information about the soil conditions must include

(1) existing maps of the soils and a description of soil infiltration characteristics, and

(2) a description or an existing map of known eroding lands that are causing sedimentation problems

D Information about water resources must include

(1) an existing map of the boundaries and flow directions of major watershed units and minor watershed units;

(2) an existing map and a list of public waters as defined in Minnesota Statutes, section 103G 005, subdivision 15, and public drainage ditches,

(3) the shoreland classifications of the public waters listed under subitem (2), pursuant to part 6120 3000 and Minnesota Statutes, sections 103F 201 to 103F 221,

(4) an existing map of wetlands regulated under chapter 8420 and Minnesota Statutes, sections 103G 221 to 103G 2373, and

(5) an existing map showing those areas delineated as floodplain by existing local ordinances

Subp 3 Land use. The department shall select data elements about land use from the areas described in items A and B

A Information about land use must include

(1) an existing map of parcel boundaries,

(2) an existing map of political boundaries,

(3) an existing map of public land surveys including township, range, and section,

(4) a map and an inventory of the current and historical agricultural, residential, commercial, industrial, recreational, and institutional land uses and potential contaminant sources,

(5) an existing comprehensive land-use map, and

(6) an existing zoning map

B Information about public utility services must include an existing:

(1) map of transportation routes or corridors,

(2) map of storm sewers, sanitary sewers, and public water supply systems,

(3) map of the gas and oil pipelines used by gas and oil suppliers,

(4) map or list of public drainage systems, and

(5) record of the construction, maintenance, and use of the public water supply well and other wells within the drinking water supply management area

Subp 4 Water quantity. The department shall select data elements about water quantity from the areas described in items A and B

A Information about surface water quantity must include an existing

(1) description of high, mean, and low flows on streams,

(2) list of lakes where the state has established ordinary high water marks,

(3) list of permitted withdrawals from lakes and streams, including source, use, and amounts withdrawn,

(4) list of lakes and streams for which state protected levels or flows have been established, and

(5) description of known water–use conflicts, including those caused by groundwater pumping

B. Information about groundwater quantity must include an existing

(1) list of wells covered by state appropriation permits, including amounts of water appropriated, type of use, and aquifer source,

(2) description of known well interference problems and water use conflicts, and

(3) list of state environmental bore holes, including unique well number, aquifer measured, years of record, and average monthly levels

Subp 5 **Water quality.** The department shall select data elements about water quality from the areas described in items A and B

A. Information about surface water quality must include an existing

(1) map or list of the state water quality management classification for each stream and lake, and

(2) summary of lake and stream water quality monitoring data, including

(a) bacteriological contamination indicators,

(b) inorganic chemicals,

(c) organic chemicals,

(d) sedimentation,

(e) dissolved oxygen; and

(f) excessive growth or deficiency of aquatic plants

B. Information about groundwater quality must include an existing

(1) summary of water quality data, including

(a) bacteriological contamination indicators,

(b) inorganic chemicals, and

(c) organic chemicals,

(2) list of water chemistry and isotopic data from wells, springs, or other groundwater sampling points,

(3) report of groundwater tracer studies,

(4) site study and well water analysis of known areas of groundwater contamination,

(5) property audit identifying contamination, and

(6) report to the Minnesota Department of Agriculture and the Minnesota Pollution Control Agency of contaminant spills and releases

Statutory Authority: *MS s 103I 101*

History: *22 SR 668*

GENERAL WELLHEAD PROTECTION REQUIREMENTS AND CRITERIA

4720.5500 DATA REPORTING REQUIREMENTS.

Subpart 1 **Data requirements.** Data collected for a wellhead protection plan must.

A. have one geographic reference point for point information,

B. in the case of parcels, be identified with a parcel identification number assigned by the county auditor pursuant to Minnesota Statutes, section 272 193;

C. be identified with a state identifier, if available, and

D. be recorded and reported to the department on:

(1) forms and software provided by the department, or

(2) other software when a data dictionary and an electronic cross–reference table are provided by the public water supplier for translating the data into department data management format

Subp 2 **Maps.** When information is presented in map form and the map is newly created for plan purposes, the map

- A must be presented at a one to 24,000 scale or greater detail;
- B must be presented in an electronic format or on a stable base material,
- C must have four geographic reference points with x and y coordinates, located at the extremes of the map,
- D must be presented in a consistent map scale, and
- E may be combined on multiple maps or map overlays.

Subp 3 **Laboratory methods.** The laboratory methods used to analyze a well water sample must be at least as precise as those used by the department in part 4720 0350

Subp 4 **Geographic reference point documentation.** The coordinate system used to define a geographic reference point must be documented, including a description of

- A the units of measurement used,
- B the applicable zone,
- C the applicable reference datum; and
- D the map projection method used

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5510 CRITERIA FOR WELLHEAD PROTECTION AREA DELINEATION.

Subpart 1. **Criteria.** A method selected to delineate a wellhead protection area must incorporate the criteria specified in subparts 2 to 6

Subp 2 **Time of travel.** The time of travel must be at least ten years

Subp 3 **Flow boundaries.** The location and influence of flow boundaries must be identified using existing information

Subp 4 **Daily volume.** The daily volume of water pumped must be calculated for each well in the public water supply system

A The daily volume calculation must be

- (1) determined by dividing the annual volume of water pumped by 365, and
- (2) based on the greatest annual volume of water used during the previous five years or the greatest annual volume of water projected over the next five years, whichever is greater

B The daily volume of water pumped must be expressed in gallons per day

Subp 5 **Groundwater flow field.** The groundwater flow field must be identified for the aquifer used by the public water supply well.

A The ambient hydraulic gradient must be measured in a location

- (1) upgradient of the public water supply well, and
- (2) beyond the pumping influence of the public water supply well

B Except as provided in item C, when a wellhead protection area is delineated for a public water supply well, an analytical method

- (1) may use a single value for the ambient hydraulic gradient, and
- (2) must delineate a composite wellhead protection area that uses the angles of ambient groundwater flow that are ten degrees less and ten degrees greater than the measured angle of ambient groundwater flow.

C When the ambient groundwater flow field cannot be determined due to transient hydraulic conditions, seasonal differences in the hydraulic gradient and the angle of groundwater flow must be accounted for when delineating the wellhead protection area. The ambient groundwater flow field is the two dimensional representation of equipotentials and flowlines created by groundwater movement through an aquifer undisturbed by pumping or other human-caused activities

D The hydraulic gradient must be expressed as the ratio of vertical feet divided by the distance in horizontal feet

Subp 6 **Aquifer transmissivity.** The aquifer transmissivity must be calculated

- A The aquifer transmissivity must be expressed in feet squared per day

B The aquifer transmissivity must be based on the first of the following methods that is applicable to the public water supply system

(1) an existing pumping test that meets the requirements of part 4720 5520 and that was previously conducted on a well in the public water supply system,

(2) an existing pumping test that meets the requirements of part 4720 5520 and that was previously conducted on another well in a hydrogeologic setting determined by the department to be equivalent;

(3) a pumping test that meets the requirements of part 4720 5520 and that was conducted to determine the aquifer transmissivity for a new or existing public water supply well specified in part 4720 5520, subpart 1,

(4) a pumping test that meets the requirements of part 4720 5530 and that was conducted to determine the aquifer transmissivity for a new or an existing public water supply well specified in part 4720 5530, subpart 1,

(5) an existing pumping test that does not meet the requirements of part 4720 5520 and that was previously conducted on

(a) the public water supply well, or

(b) another well in a hydrogeologic setting determined by the department to be equivalent,

(6) an existing specific capacity test or a specific capacity test for the public water supply well, or

(7) an existing published transmissivity value

Statutory Authority: *MS s 1031 101*

History: 22 SR 668

4720.5520 PUMPING TEST STANDARDS FOR LARGER SIZED WATER SUPPLY SYSTEMS.

Subpart 1 **Applicability.** A pumping test must be conducted as specified in this part if

A the public water supply system consists of two or more wells,

B a well is accessible for measuring the water level in the aquifer used by the public water supply system,

C the pump or the water distribution system can maintain a ten percent or less variation in the discharge rate,

D the water storage facility of the public water supply system can hold enough water to meet the water needs for the length of the pumping test specified in subpart 5, or

E the water storage facility of the public water supply system can hold the discharge water or the water disposal method is not a public safety hazard

Subp 2. **Pumping capacity.** When a pumping test is conducted, the public water supply well must be pumped at its maximum obtainable capacity

Subp 3. **Water level measurement.** The water level measurements must be recorded in units of one-hundredths of a foot

Subp 4 **Total volume of water measurement.** The total volume of water pumped during the pumping phase of the test must be recorded as the total gallons pumped

Subp. 5 **Pumping test length.** The length of the pumping test for a public water supply well must be no less than

A 24–continuous hours pumping, followed by a 24–continuous hour recovery period, in a confined aquifer, or

B 72–continuous hours pumping, followed by a 72–continuous hour recovery period, in an unconfined aquifer

Subp 6. **Recording; start and finish.** The date and time of the start and the finish of the pumping test must be recorded to the second

Subp. 7 **Groundwater level monitoring.** For a public water supply well completed in geological materials specified in part 4720 5550, subpart 2, item D, subitem (2), at least one well or environmental bore hole must be used to monitor groundwater levels before, during, and after the pumping test.

A. The well or environmental bore hole used to monitor groundwater levels must be located where it is influenced by the pumping well

B The public water supplier is responsible for the construction of one well or environmental bore hole to monitor groundwater levels if an existing well or environmental bore hole cannot be used for the test requirements specified in this subpart

Subp 8 Frequency of readings; confined aquifer. During the pumping phase and recovery phase of the test for a confined aquifer, water levels in the pumping well and any well or environmental bore hole used to monitor groundwater levels must be measured with sufficient frequency to characterize the drawdown versus time response in each of the following time intervals

- A prepumping condition,
- B 0 to 5 minutes,
- C 5 to 10 minutes,
- D 10 to 20 minutes,
- E 20 to 60 minutes,
- F 60 to 120 minutes,
- G 120 to 180 minutes,
- H. 180 to 360 minutes,
- I 360 to 720 minutes, and
- J 720 to 1,440 minutes

Subp 9 Frequency of readings; unconfined aquifer. During the pumping phase and recovery phase of the test for an unconfined aquifer, water levels in the pumping well and any well or environmental bore hole used to monitor groundwater levels must be measured with sufficient frequency to characterize the drawdown versus time response in each of the following time intervals.

- A prepumping condition,
- B 0 to 5 minutes,
- C 5 to 10 minutes,
- D 10 to 20 minutes,
- E 20 to 60 minutes,
- F 60 to 120 minutes,
- G 120 to 180 minutes,
- H 180 to 360 minutes;
- I 360 to 720 minutes,
- J 720 to 1,440 minutes,
- K 1,440 to 2,880 minutes, and
- L 2,880 to 4,320 minutes

Subp 10 Readings; discontinuation. The readings during the recovery phase of the test may be discontinued when the water levels in the pumping well and the well or environmental bore hole used to monitor groundwater level reach 95 percent recovery of the prepumping condition

Subp 11 Recording; pumping rate. The pumping rate for a public water supply well must be recorded during the pumping phase of the test

- A every five minutes during the first hour of the pumping phase of the test,
- B at hours 2, 3, 6, and 12 for a confined aquifer, and
- C at hours 2, 3, 6, 12, 24, and daily following the 24-hour reading for an unconfined aquifer

Subp 12 Final recording. The final recording of the pumping rate for a public water supply well must be recorded five minutes before shutting off the pump

Subp 13 Pumping rate variation. When the pumping rate of a public water supply well varies by ten percent or greater from the previous reading, except for the final recording specified in subpart 12, new readings must be recorded at five-minute intervals for either the

next hour or until a variation of less than ten percent is observed, whichever is the greater length of time

Subp 14 **Failure to record pumping rate.** Failure to record the pumping rate for a public water supply well at the times specified in subparts 11 and 12 requires the pump test to be redone

Subp 15 **Pumping rate measurement.** The pumping rate must be expressed in gallons per minute

Subp 16 **Recording and submittal requirements.** Pumping test data must be recorded and submitted to the department on forms or electronic data file templates provided by the department

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5530 PUMPING TEST STANDARDS FOR SMALLER SIZED WATER SUPPLY SYSTEMS.

Subpart 1. **Applicability.** A pumping test must be conducted as specified in this part for public water supply systems not included under part 4720 5520, subpart 1

Subp 2 **Pumping capacity.** When a pumping test is conducted, the public water supply well must be pumped at its maximum obtainable capacity

Subp 3. **Pumping discharge rate.** The pumping discharge rate must be held to within ten percent of the discharge rate selected for the test

Subp 4 **Water level measurement.** The water level measurements must be recorded in units of one-hundredths of a foot

Subp 5 **Total volume of water measurement.** The total volume of water pumped during the pumping phase of the test must be recorded as the total gallons pumped

Subp 6 **Pumping test length.** The length of the pumping test must be as long as allowed by the

- A capability of the pump,
- B capacity of the water reservoirs,
- C capacity of the water distribution system, and
- D capability to dispose of excess discharge water

Subp 7 **Frequency of readings.** Water levels must be measured for the duration of the test, and with sufficient frequency to characterize the drawdown versus time response in each of the time intervals specified in part 4720 5520, subpart 8 for a confined aquifer setting, or subpart 9 for an unconfined aquifer setting

Subp 8 **Recording; start and finish.** The date and time of the start and the finish of the pumping test must be recorded to the second

Subp 9 **Recording and submittal requirements.** Pumping test data must be recorded and submitted to the department on forms or electronic data file templates provided by the department

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5540 AQUIFER TEST PLAN CONTENT.

An aquifer test plan must be prepared for the wells in a public water supply system and submitted to the department for approval. The aquifer test plan must contain:

- A the state identifier,
- B a map showing the location of the pumping well and the monitoring well or environmental bore hole,
- C the name and address of the public water supplier,
- D the name and address of the person preparing the aquifer test plan,
- E specification of the method used from part 4720 5510, subpart 6,
- F a description of why the method was selected,

G the existing data and the calculated transmissivity value, if the method selected is one of those specified in part 4710 5510, subpart 6, item B, subitem (1), (2), (5), (6), or (7)

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5550 CRITERIA FOR ASSESSING WELL VULNERABILITY.

Subpart 1 **Department determination.** The department shall use the criteria specified in this part to assign priority and notify a public water supplier in writing that a wellhead protection plan must be prepared for an existing well

Subp 2 **Well vulnerability criteria.** A public water supply well is vulnerable if

A the well water contains ten milligrams per liter or more nitrate plus nitrite nitrogen,

B the well water contains quantifiable levels of pathogens as defined in part 7040 0100, subpart 26, or chemical compounds that indicate groundwater degradation as defined in Minnesota Statutes, section 103H 005, subdivision 6,

C. the well water contains one tritium unit or more when measured with an enriched tritium detection method, or

D an enriched tritium analysis of the well water has not been performed within the past ten years, and

(1) information on the well construction is not available, or

(2) the geological material from the land surface to where the groundwater enters the public water supply well is

(a) fractured bedrock,

(b) solution weathered bedrock,

(c) sandstone bedrock,

(d) unconsolidated material 0.062 millimeters (fine sand) or larger, or

(e) a combination of the materials specified in subitems (a) to (d)

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5555 CRITERIA FOR PLAN REVIEW.

Subpart 1 **Compliance with rules.** The department shall review

A an aquifer test plan for compliance with parts 4720 5320 and 4720 5510 to 4720 5540, and

B. a wellhead protection plan for compliance with parts 4720.5100 to 4720 5590

Subp 2 **Principles of review.** In addition to verifying compliance with rules, the department shall determine if the plan is based on

A hydrologic management of water criteria, including

(1) upgradient and downgradient effects on groundwater by actions impacting water and related land resources,

(2) data and complete documentation of technical analysis,

(3) the interrelationships between surface water and groundwater, land and water use, and quality and quantity of water, and

(4) the effects of potential variations in precipitation,

B. health and environmental protection criteria, including

(1) prevention of potential water and related land resource problems,

(2) anticipated improvements in the overall quality of the environment,

(3) public health and safety, and

(4) potential cumulative effects of past, present, and future actions, and

C management criteria, including

(1) estimated cost of implementing the wellhead protection plan,

(2) methods used to fund the wellhead protection plan,

(3) ways that wellhead protection planning is coordinated with other related planning programs,

(4) approaches used to identify problems and opportunities, and

(5) use of water conservation practices

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5560 IMPLEMENTATION OF APPROVED WELLHEAD PROTECTION PLAN.

Subpart 1. **Plan implementation.** A public water supplier must begin implementation of a plan no later than 60 days after the public water supplier has received department approval of the plan or amendments to the plan

Subp 2 **Notification after plan adoption.** A public water supplier must notify local units of government within the drinking water supply management area of the adoption of a plan or amendments to a plan no later than 60 days after the public water supplier has received department approval of the plan or amendments to the plan

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5570 AMENDMENTS TO WELLHEAD PROTECTION PLAN.

Subpart 1 **Amendments required.** A public water supplier must review and amend a wellhead protection plan

A if a well is added to the public water supply system,

B if the boundaries of a wellhead protection area being delineated overlaps the boundaries of a department approved wellhead protection area of another public water supply system, or

C every ten years from the date of the last approval of a plan by the department

Subp 2 **Amendment procedure** Amendments to a wellhead protection plan must be developed and reviewed in the same manner specified in parts 4720 5300 to 4720 5360 for an initial wellhead protection plan

Subp 3 **Amendment timing.** The process of amending a wellhead protection plan in compliance with subpart 1, item C, must begin eight years after the date of the last approval of a plan by the department

Subp 4 **Amendment criteria.** Amendments to a wellhead protection plan must comply with parts 4720 5200 to 4720 5290 and 4720 5500 to 4720 5540

Statutory Authority: *MS s 103I.101*

History: 22 SR 668

4720.5580 VARIANCE PROCEDURES.

The commissioner shall grant a variance to parts 4720 5200 to 4720 5570 only according to the procedures and criteria in parts 4717 7000 to 4717 7050

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.5590 INFORMAL RESOLUTION OF DISPUTES.

Subpart 1 **Applicability.** A public water supplier may use the procedures in this part to resolve any conflict between the public water supplier and the department about the development and implementation of a wellhead protection plan.

Subp 2 **Request for meeting.** A public water supplier must request a meeting with the department by submitting a written request to the department that specifically identifies the provision of the wellhead protection plan in question and the issue involved. No later than 60 days after the meeting, the department shall notify the public water supplier in writing of the results of the meeting

Statutory Authority: *MS s 103I 101*

History: 22 SR 668

4720.9000 PURPOSE.

The drinking water revolving fund provides financial assistance to eligible public drinking water suppliers for the planning, design, and construction of facilities to ensure safe and adequate drinking water. The program is jointly administered by the Minnesota Department of Health and the Minnesota Public Facilities Authority. The Minnesota Department of Health establishes priorities for the use of the drinking water revolving fund. All projects must be approved by the Minnesota Department of Health before they may be considered for funding by the Minnesota Public Facilities Authority. Parts 4720.9000 to 4720.9080 provide, for the Minnesota Department of Health, administration of its responsibilities under Minnesota Statutes, section 446A.081. Rules governing the Minnesota Public Facilities Authority's administration of its responsibilities under Minnesota Statutes, section 446A.081, are contained in chapter 7380.

The United States Environmental Protection Agency provides capitalization grants for this program to the state of Minnesota. Financial assistance projects must be in conformance with the requirements of the Public Health Service Act, United States Code, title 42, sections 300f et seq., Public Law Number 104-182, title XIV, section 1452, Part E.

Statutory Authority: *MS s 446A.081*

History: *22 SR 397*

4720.9005 DEFINITIONS.

Subpart 1 **Scope.** The terms defined in this part, in Minnesota Statutes, section 446A.081, and in the Public Health Service Act, apply to parts 4720.9000 to 4720.9080.

Subp 2 **Act.** "Act" means the Public Health Service Act, United States Code, title 42, sections 300f et seq., Public Law Number 104-184, title XIV, section 1452, Part E.

Subp 3 **Authority.** "Authority" means the Minnesota Public Facilities Authority.

Subp 4 **Commissioner.** "Commissioner" means the commissioner of the Minnesota Department of Health.

Subp 5 **Project priority list.** "Project priority list" means the document prepared pursuant to section 1452(b)(3)(B) of the act. The list shall identify all projects eligible for funding and the points assigned to the project as provided in parts 4720.9020 to 4720.9040.

Subp 6 **Treatment technique.** "Treatment technique" means an enforceable procedure developed by the United States Environmental Protection Agency when it is not economically or technologically feasible to ascertain the level of a contaminant and that public drinking water suppliers must follow to treat their drinking water.

Statutory Authority: *MS s 446A.081*

History: *22 SR 397*

4720.9010 ELIGIBILITY.

The following entities are eligible to receive funds from the drinking water revolving fund for eligible activities listed in the act:

- A a community drinking water supply,
- B a nonprofit noncommunity drinking water supply,
- C a county, city, or town, or

D any other governmental subdivision of the state responsible for the treatment and distribution of piped drinking water for human consumption, serving or proposing to serve a minimum of 15 connections or 15 living units, or serving or proposing to serve an average of 25 people daily for 60 days of the year.

Statutory Authority: *MS s 446A.081*

History: *22 SR 397*

4720.9015 PROJECT PRIORITY LIST.

Subpart 1 **General.** The commissioner must develop and maintain a project priority list for entities that have a need for a new or upgraded water supply system.

Subp 2 **Notice.** At least once a year, the commissioner must provide notification to all eligible public drinking water suppliers that requests for placement on the project priority list.

are being accepted. The notice must include the schedule for submittal of the requirements listed in subparts 4 and 5, or subpart 6, in order to be placed on the project priority list.

Subp 3 Project priority list amendments. As needed, but at least once per year, the commissioner must amend the project priority list to add or delete projects.

Subp 4. General requirements. To be eligible for placement on the project priority list, a written request for placement on the project priority list must be submitted to the commissioner. The request must include

A the type of project (planning, design, or construction) for which financial assistance is being requested,

B a current cost estimate and, if different, the amount of financial assistance being requested, and

C a proposed project schedule in a form acceptable to the commissioner.

Subp 5 Additional requirements for applicants seeking financial assistance for planning activities and design. The request for inclusion of a project under the planning or design section of the project priority list must include

A a description of the need for the project,

B an estimate of the population and number of households to be served, and

C a map showing the geographical area the project is expected to serve.

Subp 6 Additional requirements for applicants seeking financial assistance for construction. The request for listing a construction project on the project priority list under this part must include

A a map of the geographical area,

B the population and number of households to be served,

C a description of the current drinking water supply system,

D a discussion of any existing and potential problems or failures in the current drinking water system,

E an analysis of possible alternatives for the correction of the problems or failures, including a cost estimate for each alternative,

F the selection of an alternative, including the reasons for the selection of this alternative and a detailed cost estimate, and

G for public water suppliers serving more than 1,000 persons, the status of the applicant's implementation of an approved emergency and water conservation plan required under Minnesota Statutes, section 103G.291.

Subp 7. Priority points. A project must be assigned project priority points before being listed on the project priority list. The commissioner must review and approve the information submitted under subpart 4, 5, or 6 before assigning project priority points. Approval must be based on the determination that the information addresses the requirements under subpart 4, 5, or 6 and an evaluation that the selected alternative will provide a solution to the problems presented. A project's priority points must be the total number of priority points assigned under parts 4720.9020 to 4720.9040. The project priority points may be recalculated when new information becomes available until the project is placed on the intended use plan as provided in part 7380.0255.

Subp 8 Listing order. Projects must be listed on the project priority list in descending order according to the number of total priority points assigned to each one. When two or more projects have the same priority point total, the project sponsored by the entity with the lowest median household income must receive the highest priority.

Statutory Authority: *MS s 446A.081*

History: *22 SR 397*

4720.9020 PUBLIC HEALTH PRIORITY POINTS.

Subpart 1 Existing eligible public drinking water supply. Only existing eligible public drinking water supply projects can be assigned priority points under subparts 2 to 4.

Subp 2. Acute violations. A maximum of 100 priority points may be assigned to a project as described in items A to E.

A Twenty-five priority points must be assigned if there have been one or more violations defined as an acute violation in Code of Federal Regulations, title 40, section 141 32(a)(1)(iii)(A), within the past 36 calendar months

B Twenty-five priority points must be assigned if there have been one or more violations defined as an acute violation in Code of Federal Regulations, title 40, section 141 32(a)(1)(iii)(B), within the past 36 calendar months

C Twenty-five priority points must be assigned if there have been one or more occurrences defined as a waterborne disease outbreak in Code of Federal Regulations, title 40, section 141 2, within the past 36 calendar months

D Twenty-five priority points must be assigned if there have been one or more violations of the maximum contaminant level for total coliforms pursuant to Code of Federal Regulations, title 40, section 141 32(a)(1)(iii)(C), when total coliforms are determined to be present in the wells of a groundwater system or at the point of entry for a surface water system within the past 36 calendar months

E Fifteen priority points must be assigned if there have been one or more violations of the maximum contaminant level for total coliforms pursuant to Code of Federal Regulations, title 40, section 141 32(a)(1)(iii)(C), when total coliforms are determined to be present in a part of the system other than the wells of a groundwater system or at the point of entry for a surface water system within the past 36 calendar months Points may not be assigned under this item if points have been assigned under item D

Subp 3 Failure to comply with treatment technique requirements.

A Fifteen priority points must be assigned if there have been one or more failures to comply with a treatment technique requirement pursuant to Code of Federal Regulations, title 40, sections 141 70 to 141 74

B Thirteen priority points must be assigned if there have been one or more failures to comply with a treatment technique requirement, other than those referred to in item A, within the past 36 calendar months Additional points must not be assigned for multiple failures to comply with the same requirement

Subp 4 Violations of nonacute primary maximum contaminant levels. Fifteen priority points must be assigned if there has been a violation of any nonacute primary maximum contaminant levels within the past 36 calendar months

Subp 5 Contaminated private wells. Only projects that will result in the creation of an eligible public water supply or connection to an eligible public water supply may be assigned points under this subpart More than 50 percent of the private wells in the proposed project service area must meet a criterion in item A or B for priority points to be assigned under item A or B If 50 percent or less of the private wells in the proposed project service area meet a criterion, one-half of the listed points must be assigned Results of tests, done in accordance with the United States Environmental Protection Agency approved analytical methods, must be submitted

A Twenty-five priority points must be assigned if test results indicate that a condition exists that meets the criteria in subpart 2, item A, B, C, or D

B Ten priority points must be assigned if a drinking water advisory has been issued by the Minnesota Department of Health

Statutory Authority: *MS s 446A 081*

History: 22 SR 397

4720.9025 INADEQUATE WATER SUPPLY PRIORITY POINTS.

Subpart 1 Consistently provide. For the purposes of this part, the term "consistently provide" means that, at all times, the minimum pressures and flow rates for plumbing fixtures, as defined in the Minnesota Plumbing Code, part 4715.1770, are maintained

Subp 2 Existing public drinking water suppliers. For existing public drinking water suppliers serving more than 1,000 people, evidence of the implementation of an emergency and water conservation plan approved by the Minnesota Department of Natural Resources pursuant to Minnesota Statutes, section 103G 291, subdivision 3, must be provided to the commissioner before priority points may be assigned under this subpart.

A Fifteen priority points must be assigned if an existing public drinking water supply is unable to consistently provide for the domestic water demand, excluding industrial and commercial uses

B Seven priority points must be assigned if an existing public drinking water supply is able to consistently provide domestic water demand for the uses listed under item A, but is unable to consistently provide water for other uses, including industrial and commercial uses

Subp 3 Inadequate supply from private wells. Only projects that result in the creation of an eligible public water supply or connection to an eligible public water supply may be assigned points under this subpart

A Fifteen priority points must be assigned if more than 50 percent of the private wells in the proposed project service area are unable to consistently provide an adequate amount of water for general household purposes as demonstrated by an analysis of the aquifer supply and the demand for water in the area

B Five points must be assigned if 50 percent or less of the private wells in the proposed project service area meet the criteria in item A

Statutory Authority: *MS s 446A 081*

History: *22 SR 397*

4720.9030 PUBLIC DRINKING WATER INFRASTRUCTURE IMPROVEMENT PRIORITY POINTS.

Subpart 1 Existing public drinking water suppliers. Only existing eligible public drinking water supply projects may be assigned priority points under this part. A project may be assigned priority points under only one subpart. If it has been assigned points under part 4720.9020 or 4720.9025, it may not be assigned points under this part

Subp 2 System reliability. Seven priority points must be assigned to projects that will address a demonstrated need for a new backup well or interconnection with another public water supply

Subp 3 Looping of water mains. Seven priority points must be assigned to projects that will address a demonstrated need for looping of water mains

Subp 4. Chlorine feed equipment. Seven priority points must be assigned to projects that will address a demonstrated need for chlorine feed equipment.

Subp 5 One-day storage. Six priority points must be assigned to projects that allow the supply to have one-day storage capacity equal to the average daily use

Subp 6 Other infrastructure projects. Five priority points must be assigned to projects that will address a demonstrated need for new or upgraded public drinking water facilities if priority points have not been assigned under subpart 2, 3, 4, or 5

Statutory Authority: *MS s 446A 081*

History: *22 SR 397*

4720.9035 ADDITIONAL PRIORITY POINTS CATEGORIES.

Subpart 1 Natural disaster. In order to be assigned priority points under this subpart, a description of the existing public drinking water supply, or portion thereof, damaged or destroyed by a natural disaster, must be submitted along with a statement that other state or federal disaster relief is not available

A Fifteen extra priority points must be assigned if more than 50 percent of the proposed project will replace or repair the existing public drinking water supply damaged or destroyed by a natural disaster

B Ten extra priority points must be assigned if 50 percent or less of the proposed project will replace or repair the existing public drinking water supply damaged or destroyed by a natural disaster

Subp 2 Compliance. Ten extra priority points must be assigned if the proposed project will enable an eligible public drinking water supply to comply with an administrative penalty order, bilateral compliance agreement, permit, or other enforceable document issued by the Minnesota Department of Health

Subp 3 **Consolidation.** Ten extra priority points must be assigned if the proposed project will result in the consolidation of existing public drinking water suppliers

Subp 4 **Source water protection.** Three extra priority points must be assigned if the proposed project, or any portion thereof, is needed in order to protect the drinking water source

Statutory Authority: *MS s 446A 081*

History: 22 SR 397

4720.9040 FINANCIAL NEED.

Subpart 1 **General.** Only projects sponsored by community public drinking water suppliers can be assigned priority points under this part

Subp 2 **Median household income.** The median household income levels of the state must be determined from income data from the most recent census of the United States or from data from the state demographer

A A municipal community public water supply must use the median household income for the appropriate political subdivision or subdivisions encompassing its service area, except as provided in item C

B A nonmunicipal community drinking water supply must use the median household income for the smallest political subdivision encompassing the nonmunicipal community drinking water supply, except as provided in item C

C If there is reason to believe that the United States census data or the data from the state demographer is not a currently accurate representation of the median household income, documentation of the reasons why the data is not an accurate representation may be submitted. If the commissioner, after review, agrees, the applicant may submit additional information regarding median household income. The information must consist of reliable data from local, regional, state, or federal sources, or from a survey conducted by a reliable impartial source. The median household income level must be updated to reflect the most current and accurate figures

Subp 3 **Assignment of points.** A project sponsored by a community public drinking water supply with a median household income less than either the median household income for a metropolitan or nonmetropolitan area, as applicable, must be assigned five priority points

Statutory Authority: *MS s 446A 081*

History: 22 SR 397

4720.9045 PLAN AND SPECIFICATION REQUIREMENTS.

Subpart 1 **General.** An applicant seeking financial assistance from the drinking water revolving fund for a construction project must submit plans and specifications to the commissioner for review and approval. Plans and specifications must:

A be signed by a professional engineer registered in Minnesota, except as provided in subpart 2,

B be consistent with the selected alternative approved under part 4720.9015, subpart 6, item F,

C describe the project in full and detail the construction requirements,

D include the latest detailed cost estimate for the project prepared by the person preparing the plans and specifications for the project,

E comply with applicable state statutes, rules, and requirements, and

F for public water suppliers serving more than 1,000 persons, include the status of the applicant's implementation of an approved emergency and water conservation plan required under Minnesota Statutes, section 103G.291

Subp 2 **Exception to registered professional engineer requirement.** Plans and specifications for a nonmunicipal community or noncommunity public drinking water supply project may be signed by a licensed plumber, a licensed water conditioning contractor, or

a licensed water well contractor if the scope of the project is totally within the field for which the person is licensed to practice in Minnesota

Statutory Authority: *MS s 446A 081*

History: 22 SR 397

4720.9050 DEPARTMENT APPROVAL OF PROJECTS.

The commissioner must approve the project upon review of the documents submitted and a determination that the project meets the applicable requirements of the act, federal regulations, Minnesota Statutes, and parts 4720 9000 to 4720 9080

If there is significant alteration to the project after the commissioner approves the project, the eligible applicant must request in writing an amended approval. The commissioner must review the request and project alteration and, upon a determination that the project meets the applicable requirements of the act, federal regulations, Minnesota Statutes, and parts 4720 9000 to 4720 9080, the commissioner must approve the project

Statutory Authority: *MS s 446A.081*

History: 22 SR 397

4720.9055 EMERGENCY LOAN PROGRAM.

Subpart 1 General. An eligible public drinking water supply may apply for emergency assistance in the case of catastrophic failure of the drinking water supply or unforeseen threats of contamination to the drinking water supply. Emergency projects need not comply with parts 4720 9015 to 4720 9050, but must be eligible under part 4720.9010

Subp 2 Notification. An eligible public drinking water supply must notify the commissioner of the need for emergency remediation of threats of contamination or catastrophic failure of the drinking water supply. The notification must include the nature of the threat or failure, the proposed remediation, and estimated costs

Subp 3 Approval. Upon review of the information required by subpart 2 and a determination that the project meets the applicable requirements of the act, federal regulations, Minnesota Statutes, and parts 4720 9000 to 4720 9010 and 4720 9055 to 4720 9080, the commissioner must approve the project. Approval must be based on the determination that the information demonstrates the need for emergency funding and that the proposed remediation will provide a solution to the problems presented.

Statutory Authority: *MS s 446A 081*

History: 22 SR 397

4720.9060 CERTIFICATION OF PROJECT TO AUTHORITY.

Upon approval of a project pursuant to part 4720 9050 or 4720 9055 and verification that the project is listed on the current project priority list, the commissioner must certify the project to the authority for review and consideration

Statutory Authority: *MS s 446A 081*

History: 22 SR 397

4720.9065 CONSTRUCTION PHASE AND POSTCONSTRUCTION PHASE REQUIREMENTS.

Subpart 1 Project completion and final inspection. The financial assistance recipient must notify the commissioner of the estimated date on which the operation of the project's major components is initiated or is capable of being initiated. A final inspection of the project must be performed if the commissioner determines it is necessary to verify that construction conforms with approved plans and specifications and any change orders

The commissioner must consider the following criteria when determining the necessity of conducting a final inspection: previous site visits or other field reports, the nature and scope of the project; the experience, training, and capability of the facility operators, and other information received about the conduct of the project

Subp 2 Project performance.

A Three months after initiation of operation of the project, the financial assistance recipient must certify to the commissioner that the project is operating as planned and designed. This certification must be made in a form acceptable to the commissioner

B If the financial assistance recipient is unable to certify the project is operating as planned and designed, the recipient must submit a corrective action report to the commissioner for review and approval. The corrective action report must contain an analysis of the project's failure to operate as planned and designed, a discussion of the nature, scope, and cost of the action necessary to correct the failure, and a schedule for completing the corrective work.

Statutory Authority: *MS s 446A 081*

History: 22 SR 397

4720.9070 CERTIFIED OPERATOR.

Subpart 1 **General.** Except as provided in subpart 2, before the financial assistance recipient submits its final financial assistance payment request to the authority, it must submit to the commissioner the name, certification number, and certification expiration date of the operator certified under chapter 9400 and directly responsible for the operation of the facility.

Subp 2. **Exception for transient noncommunity public drinking water supply.** A financial assistance recipient that is a transient noncommunity public drinking water supply is exempt from the requirement in subpart 1, but must perform monitoring of its drinking water supply as specified in the plans and specifications approval letter and have periodic inspections of the supply done by qualified personnel during the term of the loan.

Statutory Authority: *MS s 446A 081*

History: 22 SR 397

4720.9075 SANCTIONS.

If a project fails to conform to approved plans and specifications, or a financial assistance recipient fails to comply with the requirements of parts 4720 9000 to 4720 9080, the commissioner must request the authority to withhold or terminate either total or partial disbursements to the financial assistance recipient. Once an agreement for correcting the condition which led to the withholding of funds is reached between the commissioner and the financial assistance recipient, the commissioner must recommend to the authority that the retained funds be released according to the provisions of the agreement.

Statutory Authority: *MS s 446A 081*

History: 22 SR 397

4720.9080 DISPUTES.

A person adversely affected by an action of department staff may request a review of the action. A request for review must be submitted in writing to the commissioner by the person within 45 days of the date of notification of the commissioner's final decision. The request must be reviewed under parts 4720 9000 to 4720 9080 by the commissioner.

Statutory Authority: *MS s 446A 081*

History: 22 SR 397