

CHAPTER 4717
DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH RULES

	PUBLIC SWIMMING POOLS		
4717.0100	SCOPE AND PURPOSE.	4717.2900	LIGHTING, VENTILATION, AND ELECTRICAL REQUIREMENTS.
4717.0200	DEFINITIONS.	4717.3000	MAINTENANCE REQUIREMENTS.
4717.0300	SUBMISSION OF PLANS AND SPECIFICATIONS.	4717.3100	DRESSING ROOMS.
4717.0310	FEES.	4717.3200	TOILETS AND SHOWERS.
4717.0350	HEALTH AND SAFETY.	4717.3300	SAFETY REQUIREMENT; LIFESAVING EQUIPMENT.
4717.0400	OPERATOR OF THE POOL.	4717.3400	DISINFECTION AND QUALITY OF WATER.
4717.0500	WATER SUPPLY.	4717.3500	CLEANING SWIMMING POOLS.
4717.0600	SEWER SYSTEM.	4717.3600	SUPERVISION OF SWIMMING POOLS
4717.0700	INSPECTION	4717.3700	SUPERVISION OF BATHERS.
	THE POOL	4717.3800	CLOSURE OF POOLS.
4717.0800	CONSTRUCTION MATERIALS.	4717.3900	MINIMUM STANDARDS FOR PUBLIC SWIMMING POOLS DIVING AREA; SCHEDULE OF DEPTHS AND THEIR LOCATIONS.
4717.0900	DESIGN, DETAIL, AND STRUCTURAL STABILITY.		ON-LAND DISPOSAL FACILITIES FOR SEWAGE AND OTHER WASTES FROM MARINE TOILETS EQUIPPED WITH RETENTION DEVICES
4717.1000	DEPTH OF WATER IN THE POOL.	4717.4000	PUMP.
4717.1100	NEW EQUIPMENT.	4717.4100	SUCTION HOSE.
4717.1200	DEPTH MARKINGS AND LINES.	4717.4200	DISCHARGE HOSE.
4717.1300	INLETS AND OUTLETS.	4717.4300	SEWAGE OR OTHER WASTE DISPOSAL REQUIREMENTS.
4717.1400	SLOPE OF BOTTOM.	4717.4400	WATER SUPPLY REQUIREMENTS.
4717.1500	SIDE WALLS.	4717.4500	PLAN APPROVAL
4717.1600	OVERFLOW GUTTERS.		VARIANCES
4717.1700	SKIMMERS.	4717.7000	VARIANCE REQUEST.
4717.1800	RECIRCULATION SYSTEMS.	4717.7010	CRITERIA FOR DECISION; CONDITIONS.
4717.1900	LADDERS, RECESSED TREADS, AND STAIRS.	4717.7020	NOTIFICATION OF DECISION.
4717.2000	DECKS AND WALKWAYS	4717.7030	EFFECT OF ALTERNATIVE MEASURES OR CONDITIONS.
4717.2100	DIVING AREAS.	4717.7040	RENEWAL OF VARIANCE.
4717.2200	USER LOADING.	4717.7050	DENIAL, REVOCATION, OR REFUSAL TO RENEW; APPEALS
4717.2300	SAND TYPE FILTERS.		
4717.2400	DIATOMACEOUS EARTH TYPE FILTERS.		
4717.2500	DISINFECTANT AND CHEMICAL FEEDERS.		
4717.2600	USE OF CHLORINE GAS.		
4717.2700	USE OF HYPOCHLORITE SOLUTION.		
4717.2800	EQUIPMENT FOR CHEMICALS		

PUBLIC SWIMMING POOLS

4717.0100 SCOPE AND PURPOSE.

The provisions of parts 4717.0100 to 4717.3900 shall apply to all public swimming and wading pools as hereinafter defined, including all facilities incident thereto. The purpose of parts 4717.0100 to 4717.3900 shall be to provide a standard for the design, construction, operation, and maintenance of such pools so that health and safety hazards will be minimized.

Statutory Authority: *MS s 144.05*

4717.0200 DEFINITIONS.

Subpart 1. **Application.** The following definitions shall apply in the interpretation and enforcement of parts 4717.0100 to 4717.3900. The word "shall" as used herein indicates a mandatory requirement.

Subp. 2. **Commissioner.** "Commissioner" means commissioner of health.

Subp. 3. **Person.** "Person" means any person, firm, partnership, association, corporation, company, governmental agency, club, or organization of any kind.

Subp. 4. **Private residential swimming pool.** "Private residential swimming pool" means any swimming pool, located on private property under the control of the homeowner, the use of which is limited to swimming or bathing by members of the homeowner's family or their invited guests. (The design, construction, and operation of such pools are not subject to the provisions of parts 4717.0100 to 4717.3900.)

Subp. 5. **Public swimming pool.** "Public swimming pool" means any swimming pool, other than a private residential swimming pool, intended to be used collectively by numbers of persons for swimming or bathing, operated by any person as defined herein, whether as an owner, lessee, operator, licensee, or concessionaire, regardless of whether a fee is charged for such use.

Subp. 5a. **Spa pool.** "Spa pool" means a hot water pool intended for seated recreational use that includes a water agitation system in addition to the recirculation system. Spa pool is synonymous with the term "whirlpool."

Subp. 6. **Special purpose pool.** "Special purpose pool" means a treatment pool, therapeutic pool, special pool for water therapy, whirlpool, spa pool, or cold plunge.

Subp. 7. **Swimming pool.** "Swimming pool" means any structure, basin, chamber, or tank containing an artificial body of water for swimming, diving, relaxation, or recreational bathing, including special purpose pools.

Subp. 8. **Wading pool.** "Wading pool" means any pool used or designed to be used exclusively for wading or bathing and having a maximum depth of 24 inches.

Statutory Authority: *L 1987 c 403 art 1 s 8 subd 2; MS s 16A.128; 144.05; 144.122; 145.05*

History: *16 SR 2780; 17 SR 1279*

4717.0300 SUBMISSION OF PLANS AND SPECIFICATIONS.

No swimming pool used or intended for use by the public or by any school, club, organization, or institution shall be constructed, nor shall any such swimming pool, now or hereafter existing, used or intended for such use, be materially altered until complete plans and specifications therefor, together with such further information as the commissioner of health may require, shall have been submitted in duplicate and approved by the commissioner of health so far as sanitary features are concerned. After such plans have been approved by the commissioner of health, no modification affecting the sanitary or safety features thereof shall be made without approval of the commissioner of health. No contract for the construction, alteration, or enlargement of any such swimming pool shall be let until the plans and specifications therefor have been approved as provided.

The pool and facilities shall be built in accordance with the plans as approved unless approval of changes has been given in writing by the commissioner of health. The owner or the owner's agent shall notify the commissioner of health at the time of completion of the pool to permit adequate inspection of the pool and related equipment. The pool shall not be placed in operation until such inspection shows compliance with the provisions of parts 4717.0100 to 4717.3900.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39; 17 SR 1279*

4717.0310 FEES.

All plans for swimming pool construction, installation, or alteration submitted to the commissioner of health for review and approval under part 4717.0300 must be accompanied by the fee specified in this part:

A. each pool, except as provided in items B and C, \$500;

B. each spa pool, \$200; and

C. alterations to an existing pool without changing the size or configuration of the pool, \$200.

Statutory Authority: *L 1987 c 403 art 1 s 8 subd 2; MS s 16A.128; 144.122; 145.05*

History: *12 SR 1660; 16 SR 2780*

4717.0350 HEALTH AND SAFETY.

Not more than the maximum design bather load as calculated in part 4717.2200 shall be permitted in the swimming pool at any one time. The design bather load shall be posted in a conspicuous location.

No person having or suspected of having a communicable disease shall work at or use any public swimming pool.

Access to the pool shall be controlled by fencing or other effective means acceptable to the commissioner of health. Fencing shall meet the following criteria. The fencing shall effectively prevent the entrance of children and be without hand- or foot-holds that would en-

able a child to climb over it. The fencing shall be at least four feet high and entrances shall be equipped with a self-closing, latching gate which is capable of being locked.

Instruction regarding emergency calls shall be prominently posted.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.0400 OPERATOR OF THE POOL.

No person shall operate any public swimming pool unless such swimming pool is under the supervision of a trained operator or person who shall assume the responsibility for compliance with all provisions of parts 4717.0100 to 4717.3900 relating to pool operation, maintenance, and safety of bathers.

The operator of each pool shall keep a daily record of information regarding operation as specified in part 4717.3600, together with other data as may be required by the commissioner of health.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.0500 WATER SUPPLY.

The water supply serving the swimming pool and all plumbing fixtures including drinking fountains, lavatories, and showers shall meet the requirements of the commissioner of health.

All portions of the water distribution system serving the swimming pool and auxiliary facilities shall be protected against backflow. Water introduced into the pool, either directly or to the recirculation system, shall be supplied through an air gap (Minnesota Plumbing Code, parts 4715.2000 to 4715.2170). When such connections are not possible, the supply shall be protected by a suitable backflow preventer (Minnesota Plumbing Code, parts 4715.2000 to 4715.2170) installed on the discharge side of the last control to the fixture, device, or appurtenance.

The pumps, filter, disinfectant and chemical feeders, and related appurtenances shall be kept in operation at all times during the swimming season unless approved by the commissioner of health.

Statutory Authority: *MS s 14.05; 144.05*

History: *L 1977 c 305 s 39; 15 SR 1597*

4717.0600 SEWER SYSTEM.

The sewer shall be adequate to serve the facility, including bathhouse, locker room, and related accommodations, and shall conform to the standards of the commissioner of health and the Minnesota Pollution Control Agency.

There shall be no direct physical connection between the sewer system and any drain from the swimming pool or recirculation system. Any swimming pool or gutter drain or overflow from the recirculation system when discharged to the sewer system, storm drain, or other approved natural drainage course shall connect through a suitable air gap or air break so as to preclude the possibility of backup of sewage or waste into the swimming pool or piping system.

The sanitary sewer serving the swimming pool auxiliary facilities shall discharge into the public sewer system. Where no such sewer is available, the connection shall be made to a suitable disposal plant designed, constructed, and operated in accordance with the requirements of the commissioner of health and the Minnesota Pollution Control Agency.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.0700 INSPECTION.

The commissioner of health is authorized to conduct such inspections as it deems necessary to ensure compliance with all provisions of parts 4717.0100 to 4717.3900 and shall have right of entry, at any reasonable hour, to the swimming pool for this purpose.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

THE POOL**4717.0800 CONSTRUCTION MATERIALS.**

Swimming pools and all appurtenances thereto shall be constructed of materials which are inert, nontoxic to humans, impervious, permanent, and enduring; which can withstand the design stresses; which will provide a tight tank with a smooth and easily cleaned surface, or to which a smooth, easily cleaned surface finish can be applied, and which may be finished in white or light color.

Swimming pool finish, including bottom and sides, shall be of white or light colored material, nontoxic to humans, with a smooth finished surface, without cracks or joints, bonded to the supporting members, excluding structural expansion joints.

Statutory Authority: *MS s 144.05*

History: *17 SR 1279*

4717.0900 DESIGN, DETAIL, AND STRUCTURAL STABILITY.

All swimming pools shall be designed and constructed to withstand all anticipated loading for both full and empty conditions. A hydrostatic relief valve and/or a suitable underdrain system shall be provided in areas having a high water table. The designing architect or engineer shall be responsible for certifying to the structural stability and safety of the pool.

No limits are specified for length and width of swimming pools, except that swimming pools used for competition should meet required dimensions, and the requirements for the diving area as shown in part 4717.3900 shall be observed. Consideration shall be given to shape from the standpoint of safety and the need to facilitate supervision of bathers using the pool.

The shape of any swimming pool shall be such that the circulation of pool water and control of swimmers' safety are not impaired. There shall be no underwater or overhead projections or obstructions which would endanger bather safety or interfere with proper pool operation.

All corners formed by the intersection of walls, and of walls and floors, shall be rounded.

Provisions shall be made for complete, continuous circulation of water through all parts of the swimming pool. All swimming pools shall have a recirculation system with necessary treatment and filtration equipment as required in this regulation. Nothing in this part shall prohibit the use of so-called flow-through type swimming facilities constructed in accordance with the rules of the commissioner of health.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.1000 DEPTH OF WATER IN THE POOL.

The minimum depth of water in the swimming pool shall be three feet except for special purpose pools. Wading facilities for children shall be physically separated from the swimming pool and be provided with a separate recirculation system. The maximum depth of the shallow end of the swimming pool shall not exceed three feet six inches except for competitive or special purpose pools.

Statutory Authority: *MS s 144.05*

4717.1100 NEW EQUIPMENT.

All new equipment installed after August 2, 1971, shall comply with the following standards of the National Sanitation Foundation when applicable:

A. Standard No. 9, Diatomite Type Filters for Swimming Pool Equipment, October 1966.

B. Standard No. 10, Sand Type Filters for Swimming Pool Equipment, October 1966.

C. Standard No. 11, Recessed Automatic Surface Skimmers, October 1965.

D. Standard No. 17, Centrifugal Pumps for Swimming Pools, January 1966.

E. Standard No. 19, Adjustable Output Rate Chemical Feeding Equipment for Swimming Pools, October 1966.

F. Standard No. 22, Swimming Pool Water Treatment Chemicals and/or Processes, May 1968.

G. Standard No. 27, Multiport Valves for Swimming Pools, May 1969.

H. Standard No. 38, Test kits for Swimming Pools, November 1970.

Statutory Authority: *MS s 144.05*

4717.1200 DEPTH MARKINGS AND LINES.

Depth of water shall be plainly marked at or above the water surface on the vertical pool wall or on the edge of the deck or walk next to the pool, at maximum and minimum points, at the points of change of slope between the deep and shallow portions and at intermediate increments of depth, spaced at not more than 25-foot intervals.

Depth markings shall be numerals of four inches minimum height and of a color contrasting with the background. Markings shall be on both sides and ends of the pool. Lane lines or other markings on the bottom of the swimming pool shall be a minimum of ten inches in width and of a contrasting color.

Statutory Authority: *MS s 144.05*

4717.1300 INLETS AND OUTLETS.

Subpart 1. **Outlet.** All swimming pools shall be provided with an outlet at the deepest point to permit the pool to be completely and easily emptied. Openings must be covered by a proper grating which is not readily removable by bathers. Outlet openings of the grating in the floor of the pool shall be at least four times the area of discharge pipe or provide sufficient area so the maximum velocity of the water passing the grate will not exceed 1-1/2 feet per second. The maximum width of grate openings shall be one-half inch. In swimming pools with deep water at or near one end, multiple outlets shall be provided where the width of the pool is more than 30 feet. In such cases, outlets shall be spaced not more than 30 feet apart, nor more than 15 feet from side walls.

Subp. 2. **No connection to sewers.** No direct connections to sewers shall be permitted, and all drains from the swimming pool to sewers shall be broken at a point where any sewage which may back up from the sewer will overflow to waste instead of reaching the pool. Valves and/or pumps used for draining swimming pools shall be sized to prevent the surcharging of the sanitary sewer.

Subp. 3. **Inlets.** Inlets for fresh and/or repurified water shall be located to produce uniform circulation of water and to facilitate the maintenance of a uniform disinfectant residual throughout the entire swimming pool without existence of dead spots. Inlets from the circulation system shall be flush with the pool wall and submerged at least 12 inches below the water level. No over-the-rim fill spout will be accepted unless located under a diving board or installed in a manner approved by the commissioner of health so as to remove any hazard. Makeup-water spouts shall terminate at least six inches above the fill rim of the pool or surge tank.

Subp. 4. **Adjustable inlets.** Adjustable inlets shall be located in conjunction with proposed methods of recirculation to provide effective and uniform circulation of the incoming water throughout the pool and prevent unnecessary dead spots. The maximum spacing of inlets shall be 20 feet based on the pool perimeter. In swimming pools with surface areas greater than 1,600 square feet or length in excess of 60 feet, side inlets shall be placed at 15-foot intervals around the entire perimeter. In any case, an adequate number of inlets shall be provided, properly spaced and located to accomplish complete and uniform recirculation of water and maintenance of a uniform disinfectant residual at all times. Each inlet shall be designed as an orifice subject to adjustment or shall be provided with an individual gate or similar valve to permit adjustment of water volume to obtain the best circulation.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.1400 SLOPE OF BOTTOM.

The slope of the bottom of any portion of the swimming pool having a water depth of less than five feet shall not be more than one foot in ten feet, and said slope shall be uniform. In portions with a depth greater than five feet the slope shall not exceed one foot in three feet.

Statutory Authority: *MS s 144.05*

4717.1500 SIDE WALLS.

Walls of a swimming pool shall be either vertical for water depths of at least six feet; or vertical for a distance of three feet below the water level, below which the wall may be curved to the bottom with a radius not greater than the difference between the depth at that point and three feet, provided that vertical is interpreted to permit slopes not greater than one foot, horizontally, for each five feet of depth of sidewall (11 degrees from vertical).

Statutory Authority: *MS s 144.05*

4717.1600 OVERFLOW GUTTERS.

Overflow gutters shall extend completely around the swimming pool except at steps or recessed ladders. The overflow gutter shall also serve as a handhold. This gutter shall be capable of continuously removing 50 percent or more of the recirculated water and returning it to the filter. All overflow gutters shall be connected to the recirculation system through a properly designed surge tank. The gutter, drains, and return piping to the surge tank shall be designed to rapidly remove overflow water caused by recirculation, displacement, wave action, or other cause produced from maximum pool bathing load. Spacing of drainage outlets shall not be more than 15 feet. The opening into the gutter beneath the coping shall not be less than four inches and the interior of the gutter shall not be less than three inches wide with a depth of at least three inches. Where large gutters are used, they shall be designed to prevent entrances or entrapment of bathers' arms or legs. The overflow edge or lip shall be rounded and not thicker than 2-1/2 inches for the top two inches. The overflow outlets shall be provided with outlet pipes which shall in any case be at least two inches in diameter. The outlet fittings shall have a clear opening in the grating at least equal to 1-1/2 times the cross sectional area of the outlet pipe.

Nothing in this part shall preclude the use of rollout or deck-level-type swimming pools. The design of the curb and handhold shall conform to accepted standards, and the approval of the commissioner of health shall be based on detailed review of this feature of construction and evaluated in the light of proposed use of the pool.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.1700 SKIMMERS.

Subpart 1. **Provision for use of skimmers.** Skimmers are permitted on public swimming pools provided approved handholds are installed and sufficient motion to the pool water is induced by the pressure return inlets. At least one skimming device shall be provided for each 400 square feet of water surface area or fraction thereof. Where two or more skimmers are required, they shall be so located as to minimize interference with each other and to insure proper skimming of the entire pool surface. Handholds shall consist of bull-nosed coping not over 2-1/2 inches thick for the outer two inches, or be of an equivalent approved type. The handholds must be no more than nine inches above the normal water line. Skimming devices shall be built into the pool wall, shall develop sufficient velocity on the pool water surface to induce floating oils and wastes into the skimmer from the water surface of the entire pool area, and shall meet the general specifications in subparts 2 to 5.

Subp. 2. **Design.** The piping and other pertinent components of skimmers shall be designed for a total capacity of at least 80 percent of the required filter flow of the recirculation system, and no skimmer shall be designed for a flow-through rate of less than 30 gallons per minute or 3.75 gallons per minute per lineal inch of weir. The skimmer shall be of sturdy, corrosion-resistant materials.

Subp. 3. **Skimmer weir.** The skimmer weir shall be automatically adjustable and shall operate freely with continuous action to variations in water level over a range of at least four inches. The weir shall operate at all flow variations as described in this part. The weir shall be of such buoyancy and design as to develop an effective velocity.

Subp. 4. **Screen.** An easily removable and cleanable basket or screen through which all overflow water must pass shall be provided to trap large solids.

Subp. 5. **Prevention of airlock.** The skimmer shall be provided with a device to prevent airlock in the suction line. If an equalizer pipe is used, it shall provide an adequate amount of water for pump suction should the water of the swimming pool drop below the weir level, provided that, if any other device, surge tank, or arrangement is used, a sufficient amount of water for pump suction shall be assured. Where the equalizer pipe is used, it shall be sized to meet the capacity requirements of the filter and pump and shall in no case be less than two inches in diameter. This pipe shall be located at least one foot below the lowest overflow level of the skimmer. It shall be provided with a valve or equivalent device that will remain tightly closed under normal operating conditions, but will automatically open when the water level drops as much as two inches below the lowest weir level.

Statutory Authority: *MS s 144.05*

4717.1800 RECIRCULATION SYSTEMS.

Subpart 1. **System.** A recirculation system, consisting of pumps, piping, filters, water conditioning, and disinfection equipment, and other accessory equipment shall be provided which will clarify and disinfect the swimming pool volume of water in six hours or less, thus providing a minimum turnover of at least four times in 24 hours, except that the recirculation rate shall be increased to provide a two-hour turnover for wading and special purpose pools.

The recirculation system shall include a strainer to prevent hair, lint, etc., from reaching the pump and filters. Strainers shall be corrosion-resistant with openings not more than one-eighth inch in size providing a free flow area at least four times the area of the pump suction line and shall be readily accessible for frequent cleaning.

Subp. 2. **Piping.** All piping shall be designed to reduce friction losses to a minimum and to carry the required quantity of water at a maximum velocity not to exceed six feet per second. Piping shall be of nontoxic material, resistant to corrosion, and able to withstand operating pressures. Pipes shall be identified by a color code, tags, or other acceptable markings.

Subp. 3. **Cleaning system.** A vacuum-cleaning system shall be provided. When that system is an integral part of the recirculation system, sufficient connections shall be located in the walls of the swimming pool, at least eight inches below the water line.

Subp. 4. **Rate-of-flow indicator.** A rate-of-flow indicator, reading in gallons per minute, shall be installed and located, preferably on the swimming pool return line, so that the rate of recirculation and backwash rate will be indicated. The indicator shall be capable of flows measuring at least 1-1/2 times the design flow rate, shall be accurate within ten percent of true flow, and shall be easy to read.

Subp. 5. **Pumps.** Pumps shall be of adequate capacity to provide the required number of turnovers of swimming pool water as specified in this part, and whenever possible shall be so located as to eliminate need for priming. If the pump or suction piping is located above the overflow level of the pool, the pump shall be self-priming. The pump or pumps shall be capable of providing flow adequate for the backwashing of filters. Under normal conditions the pump or pumps shall supply the recirculation rate of flow at a dynamic head of at least 50 feet for pressure sand type filters or at least 80 feet for pressure diatomaceous earth type filters.

Subp. 6. **Heaters.** Swimming pools equipped with heaters shall have a fixed thermometer in the recirculation line near the outlet to the pool.

Statutory Authority: *MS s 144.05*

4717.1900 LADDERS, RECESSED TREADS, AND STAIRS.

Subpart 1. **Where provided in the pool.** Steps or ladders shall be provided at the shallow end of the swimming pool if the vertical distance from the bottom of the pool to the deck or walk is over two feet. Recessed steps or ladders shall be provided at the deep portion of the swimming pool, and, if the pool is over 30 feet wide, such steps or ladders shall be installed on each side.

Subp. 2. **Steps.** Steps leading into the swimming pool shall be of nonslip design, and have a minimum tread of 12 inches and a maximum rise or height of ten inches. There shall be no abrupt drop-off or submerged projections into the pool, unless guarded by handrails.

Subp. 3. **Ladders.** Swimming pool ladders shall be corrosion-resistant and shall be equipped with nonslip treads. All ladders shall be so designed as to provide a handhold and shall be rigidly installed. There shall be a clearance of not more than five inches nor less than three inches between any ladder and the pool wall. If steps are inserted in the walls or if stepholes are provided, they shall be of such design that they may be cleaned readily and shall be arranged to drain into the pool to prevent the accumulation of dirt thereon. Stepholes shall have a minimum tread of five inches and a minimum width of 14 inches.

Subp. 4. **Handrails.** Where steps, stepholes, or ladders are provided within the swimming pool, there shall be a handrail at the top of both sides thereof, extending over the coping or edge of the deck.

Subp. 5. **Diving boards.** Supports, platforms, and steps for diving boards shall be of substantial construction and of sufficient structural strength to carry safely the maximum anticipated loads. Steps shall be of corrosion-resistant material, easily cleanable, and of nonslip design. Handrails shall be provided at all steps and ladders leading to diving boards more than one meter above the water, except those set at 15 degrees or more from the vertical. Platforms and diving boards which are over one meter high shall be protected with guard railings.

Statutory Authority: *MS s 144.05*

4717.2000 DECKS AND WALKWAYS.

A continuous deck, free from fixed obstructions, at least five feet (and preferably eight or more feet) wide shall extend completely around the swimming pool. The deck shall be sloped away from the pool to drain at a grade of one-fourth inch to three-eighths inch per lineal foot and shall have a nonslip surface. Deck drains connected to the recirculation system or gutters shall be prohibited on outdoor swimming pools. In deck areas where carpeting is used, the deck shall be so designed and constructed as to provide adequate drainage and convey all water away from carpeted areas. The carpeting shall not, in any case, be permitted within ten feet of the pool.

Statutory Authority: *MS s 144.05*

4717.2100 DIVING AREAS.

The dimensions of the swimming pool and appurtenances in the diving area shall conform to part 4717.3900.

There shall be a completely unobstructed clear distance of 16 feet above the diving board measured from the center of the front end of the board, and this area shall extend at least eight feet behind, eight feet to each side, and 16 feet ahead of the measuring point. Commissioner of health approval shall be obtained for a variance of this part.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.2200 USER LOADING.

For the purposes of computing user loading, those portions of the swimming pool five feet or less in depth shall be designated as "nonswimming" areas. In order to compute swimmer and bather capacity, swimming pool areas shall be determined as follows:

A. ten square feet of pool water surface area shall be provided for each nonswimmer expected at time of maximum load;

B. 24 square feet shall be provided for each swimmer expected at time of maximum load;

C. 300 square feet of pool water surface area shall be reserved around each diving board or diving platform and this area shall not be included in computing the area of the swimming section.

The commissioner of health shall make additional allowance for bathers in cases of swimming pools with extensive deck areas used by patrons for lounging or sunbathing.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.2300 SAND TYPE FILTERS.

Subpart 1. **Requirements.** The requirements in subparts 2 to 9 are equally applicable to either gravity or pressure sand type filters.

Subp. 2. **Pressure sand type filters.** Pressure sand type filters shall be designed for a filter rate of three gallons per minute per square foot of bed area at time of maximum head loss, with sufficient area to meet the design rate of flow required by the prescribed turnover. The design filtration rate for high-rate sand filters shall not be in excess of 25 gallons per minute per square foot of bed area. Also, high-rate sand filters shall meet or be equal to the standards of the National Sanitation Foundation as specified in part 4717.1100.

Subp. 3. **Filtering material.** Filtering material shall consist of at least 20 inches of screened, sharp filter sand with an effective size between 0.4 and 0.55 mm, and a uniformity coefficient not exceeding 1.75, supported by at least ten inches of graded filter gravel. Anthracite having an effective size between 0.6 and 0.8 mm, with a uniformity coefficient of not greater than 1.8 may be used in lieu of the sand. The gravel shall effectively distribute water uniformly during filtration and backwashing. A reduction in this depth or an elimination of gravel may be permitted where equivalent performance and service are demonstrated.

Subp. 4. **Underdrain system.** The underdrain system shall be of corrosion-resistant and enduring material, and so designed that the orifices or other openings will maintain approximately constant area. It shall be designed to provide even collection or distribution of the flow during filtration and backwashing.

Subp. 5. **Freeboard.** At least 12 inches of freeboard shall be provided between the upper surface of the filter media and the lowest portion of the pipes or drains which serve as overflows during backwashing.

Subp. 6. **Filter system.** The filter system shall be provided with influent and effluent pressure gauges, backwash sight glass on the waste discharge line, and air-relief valves at or near the high point of the filter. The filter system shall be designed with necessary valves and piping to permit:

- A. filtering to swimming pool;
- B. individual backwashing of filters to waste at a rate of not less than 15 gallons per minute per square foot of filter area;
- C. isolation of individual filters for repairs while other units are in service;
- D. complete drainage of all parts of the system;
- E. necessary maintenance, operation, and inspection in a convenient manner.

Subp. 7. **Access to filters.** Each pressure type filter tank shall be provided with an access opening of not less than a standard 11-inch by 15-inch manhole and cover.

Subp. 8. **Dosage cover.** Devices with reasonably accurate dosage control features shall be provided if coagulants are added ahead of filters.

Subp. 9. **Tank.** On pressure type filters, the tank and its integral parts shall be constructed of substantial material capable of withstanding continuous anticipated usage, and shall be designed for a pressure safety factor of four based on the maximum shutoff head of the pump. The shutoff head for design purposes shall in no case be considered less than 50 pounds per square inch.

Statutory Authority: *MS s 144.05*

4717.2400 DIATOMACEOUS EARTH TYPE FILTERS.

Subpart 1. **Area.** Sufficient filtering area shall be provided to meet the design pump capacity as required by this part.

Filtering area, where fabric is used, shall be determined on the basis of effective filtering surfaces as created by the septum supports, with no allowances for areas of impaired filtration, such as broad supports, folds, or portions which may bridge.

Subp. 2. **Rate of filtration.** The design rate of filtration shall not be greater than two gallons per minute per square foot of the effective filtering area without continuous body feed, and not greater than 2.5 gallons per minute per square foot with continuous body feed.

Subp. 3. **Use of a body feeder.** If a body feeder is required, the device shall be accurate (ten percent) and dependable, and shall be capable of continually feeding within a calibrated range, adjustable from two to six ppm, at the design capacity of the recirculation pump. The feeding of diatomaceous earth through skimmers is prohibited.

Subp. 4. **Construction of the filter.** The filter and all component parts shall be of such materials, design, and construction as to withstand normal continuous use without signifi-

cant deformation, deterioration, corrosion, or wear which could adversely affect filter operation. The filter shall be so designed and constructed, or provision made, to preclude the introduction of appreciable quantities of filter-aid into the pool during precoating operations.

Where dissimilar metals, which may set up galvanic electric currents, are used in the filters, provision shall be made to resist electrolytic corrosion. The filters shall be designed in such a manner that they may be easily disassembled, with allowances made for adequate working space above and around the filter to permit the removal and replacement of any part and proper maintenance.

All filters shall be equipped for cleaning by one or more of the following methods: backwashing, air bump assist backwashing, spray wash (mechanical or manual), or agitation.

Subp. 5. Construction of the tank. The tank containing the filter elements shall be constructed of steel, plastic, or other suitable material, which will satisfactorily provide resistance to corrosion, with or without coating. Pressure type filters shall be designed for a minimum working pressure of 50 pounds per square inch with a four to one safety factor. Vacuum type filters shall be designed to withstand the pressure developed by the weight of the water contained therein, and closed vacuum type filters shall, in addition, be designed to withstand the crushing pressure developed under a vacuum of 25 inches of mercury with a safety factor of 1.5 in both instances. The septa or elements which support the filter-aid shall be of corrosion-resistant material. The septa shall be constructed to be resistant to rupture under conditions of the maximum differential pressure between influent and effluent which can be developed by the circulating pump, and be of adequate strength to resist any additional stresses developed by the cleaning operation.

Subp. 6. Filter plant. The filter plant shall be provided with such pressure, vacuum, or compound gauges as are required to indicate the condition of the filter. In vacuum type filter installations where the circulating pump is two horsepower or higher, an adjustable high vacuum automatic shutoff shall be provided to prevent damage to the pump by cavitation.

Subp. 7. Rapid draining of the filter. Provision shall be made for completely and rapidly draining the filter.

Statutory Authority: *MS s 144.05*

4717.2500 DISINFECTANT AND CHEMICAL FEEDERS.

The swimming pool shall be equipped with a chlorinator, hypochlorinator, or other disinfectant feeder or feeders which meet the following requirements. They shall be of sturdy construction and materials which will withstand wear, corrosion, or attack by disinfectant solutions or vapors and which are not adversely affected by repeated regular adjustments or other conditions anticipated in the use of the device. The feeder shall be capable of being easily disassembled for cleaning and maintenance. The design and construction shall be such as to preclude stoppage from chemicals intended to be used or foreign materials that may be contained therein. The feeder shall incorporate failure-proof features so that the disinfectant cannot feed directly into the swimming pool, the pool piping system, water supply system, or the swimming pool enclosure under any type of failure of the equipment or its maintenance. They shall be capable of supplying at least the equivalent of one pound of chlorine per eight hours for each 10,000 gallons of swimming pool capacity under conditions of operation to be anticipated at the proposed installation. They shall have a graduated and clearly marked dosage adjustment to provide flows from full capacity to 25 percent of such capacity. The device shall be capable of continuous delivery within ten percent of the dosage at any setting.

When the disinfectant is introduced at the suction side of the pump, a device or method shall be provided to prevent air lock of the pump or recirculation system.

Statutory Authority: *MS s 144.05*

4717.2600 USE OF CHLORINE GAS.

When compressed chlorine gas is used, the following additional features shall be provided:

A. The chlorine and chlorinating equipment shall be in a separate mechanically ventilated room. Such rooms shall not be below ground level and shall be provided with vents near the floor which terminate out-of-doors. The door of the room shall not open to the

swimming pool, and shall open to the outside. The door shall be labeled "DANGER — GAS CHLORINE" in letters at least four inches in height and of an orange color on a green background. Commissioner of health approval shall be obtained for a variance of this item.

B. The chlorinator equipment shall be of rugged design, capable of withstanding wear without developing leaks.

C. All chlorine cylinders shall be anchored to prevent their falling over. A valve stem wrench shall be maintained on the chlorine cylinder so that the supply can be shut off quickly in the case of an emergency. The valve protection hood shall be kept in place except when the cylinder is connected.

D. The chlorine-feeding device shall be designed so that during accidents or interruptions of the water supply leaking chlorine gas will be conducted to the out-of-doors.

E. The chlorinator shall be a solution-feed type, capable of delivering chlorine at its maximum rate without releasing chlorine gas to the atmosphere.

F. The chlorinators shall be designed to prevent the backflow of water into the chlorine solution container.

G. A gas mask designed for use in a chlorine atmosphere and of a type approved by the United States Bureau of Mines shall be provided. In addition, replacement canisters shall be provided and a record shall be kept of gas mask usage to ensure that the mask will be serviceable when needed.

H. The gas mask shall be kept in a closed cabinet, accessible without a key, located outside of the room in which the chlorinator is maintained.

I. Installation of chlorinator equipment, and operation thereof, shall be carried on by and under the supervision of personnel experienced with installation and operation of such equipment.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.2700 USE OF HYPOCHLORITE SOLUTION.

When a hypochlorite solution is used to be fed through hypochlorinator equipment:

A. feed shall be continuous under all conditions of pressure in the circulating system, and without artificial constriction of the pump suction line, whether this line is under vacuum or pressure head;

B. regulation shall be provided to ensure constant feed with varying supply or back pressure;

C. positive features shall be provided for preventing backflow from the recirculation system to the solution container and for reducing to a minimum the entry into the swimming pool of free calcium released from calcium hypochlorite; and

D. means shall be provided to prevent siphoning of hypochlorite solution when the recirculation pump and hypochlorinator are both turned off. (This applies to above-swimming-pool-level installations only.)

Statutory Authority: *MS s 144.05*

4717.2800 EQUIPMENT FOR CHEMICALS.

Equipment and piping used to apply chemicals to the water shall be of such size, design, and material as to be nonclogging and easily cleanable; equipment of the positive displacement type is preferred. All material used for such equipment and piping shall be resistant to action of chemicals to be used therein.

Statutory Authority: *MS s 144.05*

4717.2900 LIGHTING, VENTILATION, AND ELECTRICAL REQUIREMENTS.

Where underwater lighting is used, not less than 0.5 watts shall be employed per square foot of swimming pool water surface areas. Such lights shall be spaced to provide illumination so that all portions of the pool, including the bottom, may be readily seen without glare.

Area lighting shall provide at least 0.6 watts per square foot of deck area. If such lighting is used for night swimming, area and swimming pool lighting combined shall provide at least two watts per square foot of pool and deck area.

All electrical wiring shall conform with the applicable provisions of the latest edition of the National Electrical Code (article 680), as provided for in Minnesota Statutes, section 326.243 (1969) and the code of the Board of Electricity.

All indoor swimming pools, bathhouses, dressing rooms, shower rooms, and toilet spaces shall be adequately ventilated by mechanical means.

Statutory Authority: *MS s 144.05*

4717.3000 MAINTENANCE REQUIREMENTS.

The swimming pool, swimming pool equipment, and appurtenances shall be maintained in a satisfactory operating condition.

Statutory Authority: *MS s 144.05*

4717.3100 DRESSING ROOMS.

Bathhouses to be used simultaneously by both sexes shall be divided into two parts separated by a tight partition, each designated for men or women. The entrances and exits shall be screened to break line of sight. Bathhouse floors shall be smooth finished material with nonslip surface, impervious to moisture, and sloped to a drain. Junctions between walls and floors shall be covered. Walls and partitions shall be of smooth, impervious material, free from cracks or open joints. Partitions between dressing rooms shall terminate at least ten inches above the floor or shall be placed on continuous raised masonry or concrete bases at least four inches high. Lockers shall be set either on solid masonry bases four inches high or on legs, with the bottom of the locker at least ten inches above the floor. Lockers shall be properly vented.

The rules relating to bathhouses, dressing rooms, toilet facilities, and showers may be waived when such facilities are conveniently available to swimming pool patrons.

Statutory Authority: *MS s 144.05*

4717.3200 TOILETS AND SHOWERS.

Toilet and shower facilities shall be provided on the basis of the following fixture schedule. Fixture schedules should be increased for swimming pools at schools or similar locations where bather loads may reach peaks due to schedules of use.

	Males	Females
Water Closets	1/75	1/50
Urinals	1/75	—
Lavatories	1/100	1/100
Showers (minimum of two)	1/50	1/50

Drinking fountain — minimum of one to be located in swimming pool area.

The layout of the bathhouse shall be such that the bathers on leaving the dressing room pass the toilets and showers en route to the swimming pool. Showers shall be supplied with water at a temperature of at least 90 degrees Fahrenheit at a rate of at least three gallons per minute. Thermostatic, tempering, or mixing valves shall be installed, if necessary, to prevent scalding of the bathers.

Statutory Authority: *MS s 144.05*

4717.3300 SAFETY REQUIREMENT; LIFESAVING EQUIPMENT.

Subpart 1. **Use of lifeguard platform.** Swimming pools operated primarily for unorganized use and having an area of more than 2,250 square feet of water surface area shall be provided with an elevated lifeguard platform or chair. In pools with 4,000 square feet or more of water surface area, additional elevated chairs or stations shall be provided, located so as to provide a clear unobstructed view of the pool bottom in the area under surveillance.

Subp. 2. **Equipment.** One unit of lifesaving equipment shall consist of the following: A ring buoy not more than 15 inches in diameter and equivalent in weight to a cork buoy, to which shall be attached a 60-foot length of 3/16-inch manila rope or equivalent; a life pole or shepherd's crook type of pole having blunted ends and a minimum length of 12 feet; and a separate throwing line of one-fourth-inch rope with a length not less than 1-1/2 times the

maximum width of the pool. Not less than one unit of equipment, as enumerated above, shall be provided at every public swimming pool. One unit shall be presumed to be adequate for 2,000 square feet of water surface area, and one additional unit shall be provided for each additional 2,000 square feet, or major fraction thereof, of water.

Every pool, where a lifeguard is provided, shall be equipped with a standard 16-unit first aid kit which shall be kept filled and ready for use.

Subp. 3. **Accessibility of equipment.** Lifesaving equipment shall be mounted in conspicuous places, distributed around the swimming pool deck, at lifeguard chairs, or elsewhere, readily accessible, its function plainly marked, and kept in repair and ready condition. Bathers or others shall not be permitted to tamper with, use for any purpose other than its intended use, or remove such equipment from its established location.

Subp. 4. **Warning sign.** Where no lifeguard service is provided, a warning sign shall be placed in plain view and shall state "Warning - No Lifeguard on Duty" with clearly legible letters at least four inches high. In addition, the sign shall state "Children Shall Not Use Pool Without An Adult In Attendance."

Statutory Authority: *MS s 144.05*

4717.3400 DISINFECTION AND QUALITY OF WATER.

Subpart 1. **Disinfection.** Swimming pools, when in use, shall be continuously disinfected with a chemical which imparts an easily measured, free available residual effect. When chlorine is used, a free chlorine residual of at least 0.5 ppm shall be maintained throughout the pool whenever it is open or in use. If other halogens are used, residuals of equivalent disinfecting strength shall be maintained. A testing kit for measuring the concentration of the disinfectant, accurate within 0.1 ppm, shall be provided at each swimming pool. The commissioner of health may accept other disinfecting materials or methods when they have been adequately demonstrated to provide a satisfactory residual effect which is easily measured, and to be otherwise equally as effective under conditions of use as the chlorine concentration required herein, and not be dangerous to public health, create objectionable physiological effects, or impart toxic properties to the water.

Subp. 2. **Condition of the water.** The swimming pool water shall be maintained in alkaline condition as indicated by a pH of not less than 7.2 and not over 8.2. A pH testing kit accurate to the nearest 0.2 pH unit shall be provided at each swimming pool. The alkalinity of the water shall be at least 50 ppm as measured by the methyl orange test. The water shall have sufficient clarity at all times so that a black disc, six inches in diameter, is readily visible when placed on a white field at the deepest point of the swimming pool. Failure to meet this requirement shall constitute grounds for immediate closing of the pool.

Subp. 3. **Sample check.** Not more than 15 percent of the samples collected over any considerable period of time shall either:

A. contain more than 200 bacteria per ml, as determined by the standard (35 degrees Celsius) agar plate count; or

B. show positive test (confirmed test) for coliform organisms in any of the five 10 ml portions of a sample or more than 1.0 coliform organisms per 50 ml when the membrane filter test is used.

All samples shall be collected, dechlorinated, and examined in accordance with the procedures outlined in the 13th edition (1971) of "Standard Methods for the Examination of Water and Wastewater" (APHA). The commissioner of health may collect and examine samples on a routine basis when the swimming pool is in active use.

Subp. 4. **Use of nontoxic chemicals.** Chemicals used in controlling the quality of water shall be demonstrated as imparting no toxic properties to the water. Such chemicals as may be used for algae control shall be approved for use by the commissioner of health.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.3500 CLEANING SWIMMING POOLS.

Visible dirt on the bottom of the swimming pool shall be removed every 24 hours or more frequently as required.

Visible scum or floating matter on the swimming pool surface shall be removed every 24 hours or more frequently as required by flushing or other effective means.

Statutory Authority: *MS s 144.05*

4717.3600 SUPERVISION OF SWIMMING POOLS.

Every swimming pool shall be operated under the close supervision of a designated operator. The commissioner of health may require a certificate of competency obtained through attendance at and successful completion of a swimming pool operator's training course. Proper operating records, which may include the following as required by the commissioner of health, shall be kept daily showing:

- A. bather loads, total;
- B. peak bather load;
- C. volume fresh water added;
- D. operating periods of recirculation pumps and filters and corresponding rate-of-flow meter readings;
- E. amounts of chemical used;
- F. disinfectant residuals;
- G. pH readings; and
- H. maintenance (and malfunctioning) of equipment.

Statutory Authority: *MS s 144.05*

History: *L 1977 c 305 s 39*

4717.3700 SUPERVISION OF BATHERS.

A qualified attendant, trained in first aid and resuscitation, shall be on duty at all times the swimming pool is open to use by bathers except as provided in part 4717.3300, subpart 4. Such attendant should be in full charge of bathing and have authority to enforce all rules of safety and sanitation. The following personal rules shall be enforced:

A. All persons using the swimming pool shall take a cleansing shower bath in the nude, using warm water and soap and thoroughly rinsing off all soap suds, before entering the swimming pool room or enclosure. A bather leaving the pool to use the toilet shall take a second cleansing bath before returning to the swimming pool room or enclosure.

B. Any person having an infectious or communicable disease shall be excluded from a public swimming pool. Persons having any considerable area of exposed subepidermal tissue, open blisters, cuts, etc., shall be warned that these are likely to become infected and advised not to use the pool.

C. Spitting, spouting of water, blowing the nose, etc., in the swimming pool shall be strictly prohibited.

D. No running and boisterous or rough play, except supervised water sports, shall be permitted in the pool, on the runways, diving boards, floats or platforms, or in dressing rooms, shower rooms, etc.

E. Glassware or similar materials having a tendency to shatter upon impact shall not be allowed within the swimming pool enclosure area.

F. Suitable placards embodying the above personal regulations and instructions and those relating to suits and towels shall be conspicuously posted in the swimming pool room or enclosure and in the dressing rooms and offices at all swimming pools.

Statutory Authority: *MS s 144.05*

4717.3800 CLOSURE OF POOLS.

When any of the following conditions are found, any public swimming pool shall be immediately closed to use when so ordered by any authorized representative of the commissioner of health, and may be placarded with the appropriate wording to indicate that it has been closed:

- A. The proper number of units of safety equipment are not provided.
- B. The clarity is such that a black disc, six inches in diameter, is not readily visible when placed on a white field at the deepest point of the pool.

MINNESOTA RULES 1993

1003

ENVIRONMENTAL HEALTH RULES 4717.3800

C. The disinfectant residual is found to be below the acceptable levels established in part 4717.3400.

D. Any other condition which endangers the health, safety, or welfare of the public.

The pool shall remain closed until the conditions are corrected and follow-up observations made by an authorized representative of the commissioner of health.

Statutory Authority: *MS s 144.05*

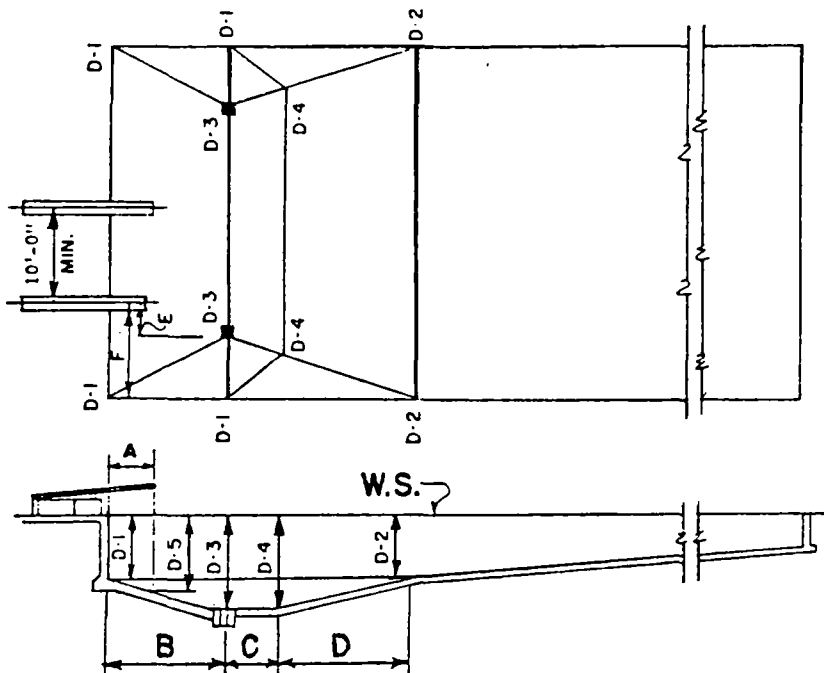
History: *L 1977 c 305 s 39*

MINNESOTA RULES 1993

4717.3900 ENVIRONMENTAL HEALTH RULES

1004

4717.3900 MINIMUM STANDARDS FOR PUBLIC SWIMMING POOLS DIVING AREA; SCHEDULE OF DEPTHS AND THEIR LOCATIONS.



D-1 Shall be at End Wall of Diving Area or Not More Than 12" From This Wall.

STANDS & BOARDS		DEPTH—MIN.—MAX.					LENGTH OF SECTION					
		D-1	D-2	D-3	D-4	D-5	A	B	C	D	E	F
3—METER BOARD	Min.	5'-0"	4'-6"	11'-0"	9'-9"	8'-6"	5'-0"	*6'-0"	*9'-0"	20'-0"	1'-0"	12'-0"
	Max.		5'-6"				6'-0"	10'-0"				
1—METER BOARD	Min.	5'-0"	4'-6"	9'-0"	8'-3"	7'-6"	5'-0"	*6'-0"	*9'-0"	15'-0"	1'-0"	10'-0"
	Max.		5'-6"				6'-0"	10'-0"				
DECK LEVEL BOARD	Min.	5'-0"	4'-6"	8'-0"	7'-6"		2'-6"	*6'-0"	*6'-0"	12'-0"	1'-0"	10'-0"
	Max.		5'-6"				4'-0"	10'-0"				
NO BOARD	Min.	NO DIVING				*B & *C May Vary to Attain Total 15'-0" Min.						
	Max.	NO DIVING				*B & *C May Vary to Attain Total 12'-0" Min.						

Statutory Authority: *MS s 144.05*

ON-LAND DISPOSAL FACILITIES FOR SEWAGE AND OTHER WASTES FROM MARINE TOILETS EQUIPPED WITH RETENTION DEVICES**4717.4000 PUMP.**

A self-priming pump, suitable for pumping raw sewage or other wastes, and easily serviceable in the event of clogging shall be provided for the on-land disposition of sewage or other wastes from watercraft or other marine conveyance equipped with a marine toilet and retention device. Head characteristics and capacity shall be based on installation needs for the site; however, as a minimum the pump shall be capable of lifting sewage or other wastes 12 feet. The pump may be either fixed in position or portable mounted.

Statutory Authority: *MS s 144.12 subd 1*

4717.4100 SUCTION HOSE.

The suction hose shall be pliable, noncollapsible, nonkinking, and a minimum of 15 feet in length. It shall have a smooth interior. A quick-connect drip-proof connector shall be fitted to the end of the hose that is attached to the boat piping outlet. Such connector should be capable of a friction fit in the inside diameter of a 1-1/2-inch Schedule 40 pipe.

Statutory Authority: *MS s 144.12 subd 1*

4717.4200 DISCHARGE HOSE.

Flexible hose, compatible with the pump characteristics, shall be used. The discharge hose and suction hose of part 4717.4100 shall be labeled and color-coded brown. All permanent piping shall conform to the Minnesota State Plumbing Code, parts 4715.0100 to 4715.6000.

Statutory Authority: *MS s 144.12 subd 1*

4717.4300 SEWAGE OR OTHER WASTE DISPOSAL REQUIREMENTS.

When connection to a public sanitary sewer is available, the disposal piping shall be designed to discharge thereto.

When a public sewer is not available, a private sewage disposal system installed in compliance with applicable state standards shall be provided unless adequate private treatment and disposal systems are already available. The sewage disposal system may be either a septic tank-soil absorption system or a holding tank.

Statutory Authority: *MS s 144.12 subd 1*

4717.4400 WATER SUPPLY REQUIREMENTS.

The on-land disposal facility shall be served by a water supply piping system to permit flushing of the facilities serviced. If a potable water supply is the source of flushing, the distribution piping shall be protected from back-siphonage and back-pressure, labeled, and color-coded brown from the back-siphonage, back-pressure device to the end of the hose. A separate hose shall be provided for filling the drinking water system of the watercraft or other marine conveyance. That hose shall be labeled and color-coded blue.

Statutory Authority: *MS s 144.12 subd 1*

4717.4500 PLAN APPROVAL.

Subpart 1. Plans submitted. Two sets of plans and specifications for the proposed construction of new, or modification of existing on-land disposal facilities for the receipt of sewage or other wastes from watercraft or other marine conveyances equipped with marine toilets and retention devices shall be submitted to the Minnesota Department of Health. The proposed modification or construction of the on land disposal facilities shall not commence until the plans and specifications are approved, in writing, by the Department of Health. If the disposal system is designed to discharge an effluent to the waters of the state, or involves a sewer extension from a municipal sewer system, plan approval and a permit shall also be obtained from the Minnesota Pollution Control Agency.

Subp. 2. Content of plans. At a minimum, plans and specifications shall cover in detail the materials to be used, the pump characteristics, and the water supply system. Where applicable, the connection to the public sewer or the private disposal system, the size and

MINNESOTA RULES 1993

4717.4500 ENVIRONMENTAL HEALTH RULES

1006

construction details of the septic or holding tank, results of soil percolation tests and soil borings and the construction details of the soil absorption system shall be included. Location of all wells within 100 feet of the absorption system, the surface water high water level and the general topography of the area shall be shown on the plans.

Subp. 3. **Plan approval.** Plans and specifications will not be reviewed for approval until they are submitted in sufficient detail to permit proper evaluation for compliance with Minnesota Statutes, section 361.29 and these and all other applicable rules. The plan approval required by this section shall be in addition to any other permit, approval, or license required by federal, state, or local law.

Statutory Authority: *MS s 144.12 subd 1*

4717.4600 [Repealed, 14 SR 1874]

4717.4700 [Repealed, 14 SR 1874]

4717.4800 [Repealed, 14 SR 1874]

4717.4900 [Repealed, 14 SR 1874]

4717.5000 [Repealed, 14 SR 1874]

4717.5100 [Repealed, 14 SR 1874]

4717.5200 [Repealed, 14 SR 1874]

4717.5300 [Repealed, 14 SR 1874]

4717.6000 [Repealed, 15 SR 1842]

4717.6100 [Repealed, 15 SR 1842]

4717.6200 [Repealed, 15 SR 1842]

4717.6300 [Repealed, 15 SR 1842]

4717.6400 [Repealed, 15 SR 1842]

4717.6500 [Repealed, 15 SR 1842]

4717.6600 [Repealed, 15 SR 1842]

4717.6700 [Repealed, 15 SR 1842]

4717.6800 [Repealed, 15 SR 1842]

4717.6900 [Repealed, 15 SR 1842]

VARIANCES

4717.7000 VARIANCE REQUEST.

Subpart 1. **Request.** A party may ask the commissioner of health to grant a variance from the following rules:

A. clean indoor air, parts 4620.0100 to 4620.1500, except part 4620.0300;

B. formaldehyde in housing, part 4620.1800;

C. asbestos abatement, part 4620.3500, subpart 4, item B, and part 4620.3700, subpart 3, item B, first sentence;

D. lodging establishments, parts 4625.0400 to 4625.0600; 4625.0900; 4625.1200 to 4625.1600; 4625.2000, except the last sentence; and 4625.2200;

E. food and beverage establishments, parts 4625.2901 to 4625.7801, except parts 4625.3601; 4625.3801, subpart 1; 4625.3901, subpart 3; 4625.4101, subpart 1; 4625.4301; 4625.4401; 4625.4601; 4625.5000; 4625.5101, subpart 7; 4625.5601; 4625.5701; 4625.6101, subparts 3 and 7; 4625.6601; 4625.6701; 4625.7101, subpart 7; 4625.7601; and 4625.7701;

MINNESOTA RULES 1993

1007

ENVIRONMENTAL HEALTH RULES 4717.7020

- F. manufactured home parks and recreational camping areas, parts 4630.0400; 4630.0600, subparts 2 to 4; and 4630.0900 to 4630.1700;
- G. children's camps, parts 4630.2300 to 4630.4700;
- H. migrant labor camps, parts 4630.5000 to 4630.6500;
- I. roller towels, part 4635.0200;
- J. enclosed sports arenas, parts 4635.1100 to 4635.2000, except part 4635.1500;
- K. water conditioning contractors and installers, parts 4715.5000 to 4715.6000;
- L. public swimming pools, parts 4717.0100 to 4717.3900;
- M. water haulers, parts 4720.4000 to 4720.4600;
- N. wells and borings, parts 4725.0100 to 4725.7600;
- O. explorers and exploratory borings, parts 4727.0100 to 4727.1300; and
- P. ionizing radiation, parts 4730.0100 to 4730.3610, except parts 4730.0400 and 4730.0600.

Subp. 2. Procedures for requesting a variance. The procedures in this subpart apply to a request for a variance of the rules specified in subpart 1. Additional procedures may be specified in the rules listed in subpart 1 which also must be complied with. The party requesting the variance must submit the variance request in writing to the commissioner of health along with any applicable fee. A request must contain:

- A. the specific language in the rule or rules from which the variance is requested;
- B. the reasons why the rule cannot be met;
- C. the alternative measures that will be taken to assure a comparable degree of protection to health or the environment if a variance is granted;
- D. the length of time for which the variance is requested;
- E. a statement that the party applying for the variance will comply with the terms of the variance, if granted; and
- F. other relevant information the commissioner determines necessary to properly evaluate the request for the variance.

Subp. 3. Applicant for a variance. The applicant for a variance must be the party to whom the rule specified in subpart 1 applies.

Statutory Authority: *MS s 14.05; 1031.101; 1031.221; 1031.301; 1031.621; 144.05; 144.12; 144.383; 157.04; 157.08; 157.09; 157.13*

History: *15 SR 1597; 17 SR 2773*

4717.7010 CRITERIA FOR DECISION; CONDITIONS.

Subpart 1. Criteria for granting a variance. The commissioner may grant a variance if:

- A. the variance was requested in a manner prescribed by part 4717.7000;
- B. the variance will have no potential adverse effect on public health, safety, or the environment;
- C. the alternative measures to be taken, if any, are equivalent to or superior to those prescribed in the rule;
- D. strict compliance with the rule will impose an undue burden on the applicant; and
- E. the variance does not vary a statutory standard.

Subp. 2. Conditions for variance. In granting a variance the commissioner may attach conditions the commissioner determines are needed to protect public health, safety, or the environment.

Subp. 3. Future effect. A variance shall have only future effect.

Statutory Authority: *MS s 14.05*

History: *15 SR 1597*

4717.7020 NOTIFICATION OF DECISION.

The commissioner of health shall notify the party in writing of the commissioner's decision to grant or deny the variance. If a variance is granted, the notification must specify the

period of time for which the variance will be effective and the alternative measures or conditions, if any, the applicant must meet. If a variance is denied, the commissioner of health shall specify the reasons for the denial.

Statutory Authority: *MS s 14.05*

History: *15 SR 1597*

4717.7030 EFFECT OF ALTERNATIVE MEASURES OR CONDITIONS.

Alternative measures or conditions attached to a variance have the force and effect of the applicable rule. If the party violates the alternative measures or conditions attached to the variance, the party is subject to the enforcement actions and penalties provided in the applicable law or rule. The party to whom a variance has been issued must notify the commissioner of health in writing within 30 days of any material change in the conditions upon which the variance was granted.

Statutory Authority: *MS s 14.05*

History: *15 SR 1597*

4717.7040 RENEWAL OF VARIANCE.

A request for the renewal of a variance must be submitted to the commissioner of health in writing 30 days before its expiration date. Renewal requests must contain the information specified in part 4717.7000, subpart 2. The commissioner shall renew a variance if the party continues to satisfy the criteria contained in part 4717.7010 and demonstrates compliance with the alternative measures or conditions imposed at the time the original variance was approved. This provision does not apply if there has been any material change in the conditions upon which the variance was granted.

Statutory Authority: *MS s 14.05*

History: *15 SR 1597*

4717.7050 DENIAL, REVOCATION, OR REFUSAL TO RENEW; APPEALS.

Subpart 1. **Action.** The commissioner shall deny, revoke, or refuse to renew a variance if the commissioner determines that the criteria in part 4717.7010 are not met.

Subp. 2. **Appeal procedure.** A party may appeal the denial, revocation, or refusal to renew a variance by requesting, in writing, a contested case hearing under the Administrative Procedure Act, Minnesota Statutes, chapter 14, within 30 days of receipt of the notice to deny, revoke, or refuse to renew the variance.

Statutory Authority: *MS s 14.05*

History: *15 SR 1597*