



Ohio Administrative Code

Rule 3701-28-14 Location and construction of ponds.

Effective: January 1, 2020

(A) Ponds shall be considered as a source of water for human consumption at the discretion of the board of health, only when available ground water sources are inadequate for the intended use or unacceptable due to the presence of naturally occurring or man-made contaminants that are not economically or technically feasible to treat, and on the ability of the property owner to meet all of the requirements of this rule. A pond shall not be acceptable as a new water supply source when a public water supply is readily accessible to the property, as determined by the board of health. The board of health may choose not to approve an application for a permit utilizing a pond for source water as a private water system if there is incomplete or inconclusive information about the suitability for a pond system at a specific site.

(B) Surface water sources, including, but not limited to, rivers, streams, creeks, lakes, quarries, and drainage ditches shall not be considered for construction as private water systems because there is no control of the water source by the owner of the individual property. The board of health shall not consider a variance to this rule.

(C) The pond and the watershed shall be under the complete control of the pond owner and the watershed shall be located on a parcel or parcels under one deed with the dwelling to which it is supplying water. A private water system pond may only serve one single family dwelling. If control of the watershed cannot be maintained on parcels under the same deed then other private water system sources shall be considered. The board of health shall not consider a variance to this rule.

(D) The pond shall be located at the minimum distances from sources of contamination as specified in rule 3701-28-07 of the Administrative Code. In addition, the following criteria shall be met:

(1) For purposes of this rule "watershed" means the area up gradient from the water supply that drains, channels, or otherwise directs surface water toward the water source;

(2) The watershed shall have a permanent growth of vegetation;



(3) The watershed shall be free of barns, poultry yards, sewage treatment systems, privies, orchards, cultivated fields, and other sources of contamination;

(4) The watershed shall not be used for pasture;

(5) Livestock shall be fenced or otherwise prevented from entering the pond and watershed area;

(6) The pond shall not be used for recreational purposes such as swimming, fishing, or boating;

(7) The minimum distance from the nearest building shall be ten feet; and

(8) Diversion ditches or similar devices shall be used to direct water of unsuitable quality out of the watershed and away from the pond.

(E) Any person intending to install a pond to be used as a water source shall submit a plan to the board of health as required under paragraph (F) of rule 3701-28-03 of the Administrative Code. The pond and watershed shall conform to the following basic design criteria:

(1) The watershed shall be of sufficient size to meet the requirements for pond water recharge based on local conditions as determined by the board of health. The board of health may require the watershed plan to be submitted by a professional engineer or soil scientist in accordance with paragraphs (F) and (G) of rule 3701-28-03 of the Administrative Code;

(2) The pond shall not be recharged by pumping water from field drain tiles or drainage ditches. Ponds shall not be recharged from on site wastewater system discharges, gray water systems, curtain drains, sump pumps or washing machines;

(3) The pond may be recharged from roof water runoff. The roof area may be calculated as part of the total watershed area if it is to be included as a recharge source;

(4) The pond may be filled by a water well constructed in compliance with this chapter and also meeting the following requirements:



- (a) A threaded or smooth nose faucet shall be installed near the well for collecting a water sample from the well.
- (b) If the well is to be converted into a private water system well for direct use for a residence or building, an alteration permit is required to be obtained in accordance with paragraph (C) of rule 3701-28-03 and the well shall meet all applicable requirements of this chapter at the time of the alteration.
- (5) Sealing materials and liners designed to reduce water loss from pond leakage shall be composed of bentonite or native clay materials sufficient to reduce pond permeability to less than 10^{-8} centimeters per second and meet NSF 61-2016 as applicable;
- (6) Ponds with a surface area of between one-quarter acre and one-half acre shall have more than fifty per cent of the available pond area a minimum of at least eight feet deep at the designed full water level. For ponds with a surface area of more than one half acre at least twenty-five per cent of the pond area at the design normal water level shall have a minimum depth of eight feet;
- (7) Ponds shall have side slopes no steeper than 2:1;
- (8) When a dam is part of the pond construction the minimum top width of the dam shall be eight feet. The side slopes of the dam for a pond shall be no steeper than 3:1 on the dry side, and 2:1 on the wet side; and
- (9) One or more spillways shall be provided so as to allow for the passage of normal water flow and of excess storm runoff around the dam. The spillways shall pass water safely to the outlet channel below without damage to the dam, or to life, structures, or property. Where applicable, spillway construction shall comply with requirements of rule 1501:14-3-11 of the Administrative Code.
- (F) The size of the pond shall be adequate to meet the intended needs of the household, but shall have a minimum surface area of approximately one-quarter of an acre regardless of the pond shape.
- (G) The intake for the private water system from the pond shall conform to one of the following



design criteria:

(1) The intake for the water system shall be attached to a flotation device at the deepest end of the pond and shall be suspended not less than eighteen inches and not more than three feet below the water surface;

(a) A noncorroding permeable filter material or screen with openings for 0.0043 of an inch or smaller shall be incorporated into the intake; and

(b) The intake for the water system shall be connected by not less than an one and one-quarter inch diameter flexible pipe to the waterline and shall either pass through the bank at a depth adequate to prevent freezing, or pass through the dam and be protected by sleeving.

(2) A submersible pump may be used with a cased pond intake constructed for the sole purpose of delivering water from the pond to the household. A cased pond intake shall not be deeper than the deepest portion of the pond. A cased pond intake shall not be used when there is any risk of contaminating an aquifer from the inflow of pond water.

(H) Antiseep collars shall be provided for durably and solidly installed intake and spillway inlets when such devices pass through the pond dam. For purposes of this rule antiseep collar means a projecting collar of concrete or other material built around the outside of a tunnel or conduit, under an embankment dam, to reduce the seepage potential along the outer surface of the conduit.

(I) All pond water shall be continuously disinfected and continuously filtered in accordance with the requirements of rule 3701-28-15 of the Administrative Code.

(J) All ponds in use as private water supply sources shall comply with the disinfection and filtration requirements for ponds found in rule 3701-28-15 of the Administrative Code, and paragraph (G) of this rule, when the pond is altered or repaired or as determined by the board of health in accordance with paragraph (A) of rule 3701-28-08 of the Administrative Code.

(K) The private water system pond owner shall maintain a written service contract with a registered private water system contractor for the maintenance of the continuous disinfection and filtration of



the pond system for the life of system operation. A copy of the initial service contract shall be on file at the local health department prior to approval of the pond system. The initial service contract shall be for a period of no less than two years.

(L) In addition to the requirements of paragraph (K) rule 3701-28-04 of the Administrative Code, the turbidity of the pond water shall be one NTU or less after filtration and disinfection collected at the sample faucet. If the water quality measures greater than one NTU, then the treatment system shall be modified or rehabilitated by a registered private water systems contractor until that requirement can be achieved.

(M) All newly built, installed, repaired, or altered pond private water systems shall be disinfected with chlorine or disinfection products authorized by the director to reduce contamination prior to water being removed for human consumption.

(1) The registered private water systems contractor performing the construction, installation, alteration, or the person performing the repair, shall disinfect the private water system according to this rule at the time of completion of the portion of work performed by that person.

(2) The owner of the private water system shall provide access to the system to ensure that the entire private water system, including the plumbing and all related fixtures, are disinfected in accordance with this rule, prior to placing that private water system into service.

(3) The following start up disinfection procedures apply to pond system and plumbing:

(a) All loose debris, sediment, mineral encrustation and bacterial slime shall be removed from any water storage containers prior to disinfection. A solution of fifty milligrams per liter of chlorine shall be prepared in a container.

(b) The quantity of solution prepared shall be of sufficient volume to disinfect all related storage or pressure tanks, existing plumbing and attached fixtures. The solution shall then be circulated through the water supply system distribution lines.

(N) Valves shall be protected from frost damage and installed so that they are accessible from the



surface of the ground by means of an open stack.

(O) All water treatment components shall be protected from weather, freezing, contamination, and located so as to be easily inspected, cleaned, and serviced. With the exception of basement installation, all water treatment components of the system shall be stored above ground and housed in an enclosed area.

(P) All ponds that are no longer being used as a water source for a private water system shall be decommissioned in accordance with paragraph (D)(7) of rule 3701-28-17 of the Administrative Code.