

**567—49.12(455B) Pumps and pumping equipment.**

**49.12(1) *General pump installation requirements.*** The installation of pumps shall be planned and carried out so the pump will be:

- a.* Installed so that it and its surroundings are not exposed to chemical or biological contamination;
- b.* Properly sized so as to provide the volume of water necessary, where obtainable, for an adequate water supply;
- c.* Designed to meet the well characteristics and not exceed the yield of the well except for low yield seepage/storage wells;
- d.* Installed for operation without repriming or breaking suction;
- e.* Installed in such a manner as to provide adequate protection against contamination of the water supply from any surface or subsurface sources;
- f.* Installed in a manner so that it is accessible for maintenance, repair, and removal.

**49.12(2) *Lubrication.*** Pump motor lubricant or coolant oil shall be United States Department of Agriculture- or United States Food and Drug Administration-approved food contact grade formulations.

**49.12(3) *Other power pumps.*** Other power pumps located over the well shall be mechanically joined to the casing or on a pump foundation or stand in such a manner as to effectively seal the top of the well. A sanitary seal shall be used where the pump is not located over the well, and the pump delivery or suction pipe emerges from the top.

**49.12(4) *Hand pumps or similar devices.***

*a.* A hand pump, hand pump head, hand pump stand or similar device shall be constructed so that there are no openings into the interior of the pump or well casing where rain water, insects or vermin can enter. Hand pumps shall be provided with a casing vent as defined in 567—49.17(455B), and shall have a closed, downward-directed spout and a sealed pump rod packing assembly.

*b.* A hand pump shall be attached to a well casing by a sealed flange or other method approved by the administrative authority to adequately prevent the entrance of surface water, dirt, animals, insects, or other foreign matter. The flange shall not be less than 12 inches above a concrete slab or the ground surface.

*c.* Where a well casing functions as a hand pump cylinder wall, the plunger shall not be less than 25 feet below the ground surface. A casing wall weep hole is not permitted.