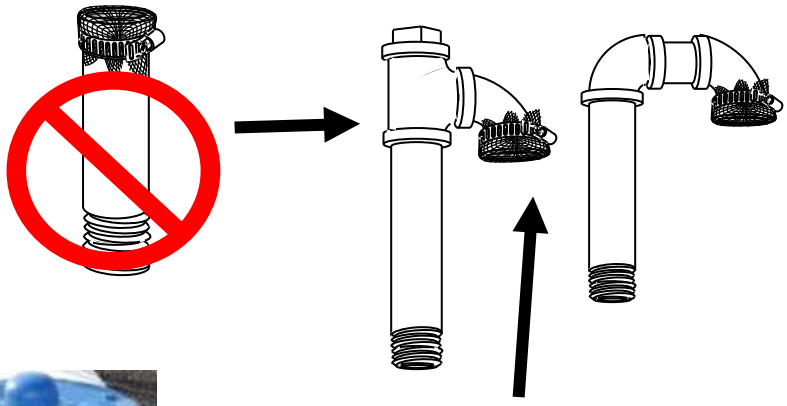
EPA Region 8 Drinking Water Unit Tech Tips

Simple Fixes for Wellheads

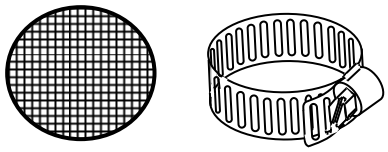
WELL CAP
Tighten and replace any missing bolts to ensure a proper sanitary seal is created by the well cap.

Replace any damaged well cap gaskets between the top and bottom plate and/or the compression seals on the outside diameter of the well casing.

WELL VENTS
Well vents (if applicable) must be at least as high as the well casing or pitless adapter. Replace straight, open well vents with inverted screened vents such as those below. Use non-corrodible 24-mesh screen on all configurations of well vents to exclude insects, rodents and other small animals.



#24-MESH SCREEN
Non-corrodible 24-mesh screen (wire diameter 0.014 inches) and a stainless steel adjustable clamp



WELL HEIGHT
Permanent casing for all groundwater wells must project at least:

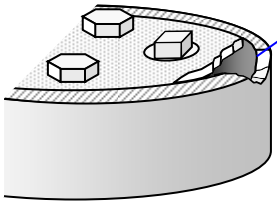
- 12 inches above the concrete floor; or
- 18 inches above natural ground surface.

PROPERLY DESIGNED WELL CAPS & SANITARY SEALS
Replace damaged or non-watertight well caps with vermin-proof, premium watertight wellhead caps. Vented caps must use #24-mesh screen.

FOR WELLS INSIDE A BUILDING
Eliminate rodents from the well house and the area around the wellhead. Airborne fecal material can contaminate the well or coliform samples. To keep rodents out, seal all entry points.

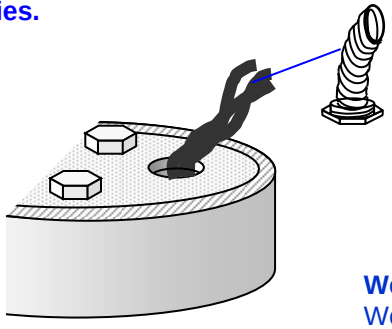
NON-PREFERRED DRINKING WATER WELL CAPS
Well caps with set screws on the side of the cap may not have a sanitary seal gasket. They are not to be used on a drinking water well if a gasket is not part of the assembly.

AVOID HANTAVIRUS: Please refer to the Center for Disease Control (CDC) Website regarding how to properly clean up mice infested areas to prevent contracting the Hantavirus pulmonary syndrome: www.cdc.gov/ncidod/diseases/hanta/hps/noframes/prevent3.htm



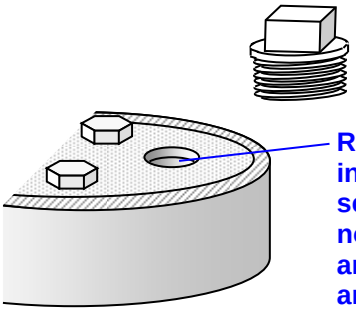
Replace damaged seal and repair well casing. Repairs must be durable and watertight. Silicone is not an acceptable permanent fix for any well opening deficiencies.

Install an appropriately sized conduit with an electrical grommet to seal the opening around the wires on a submersible pump. Silicone is not an acceptable permanent fix for any well opening deficiencies.

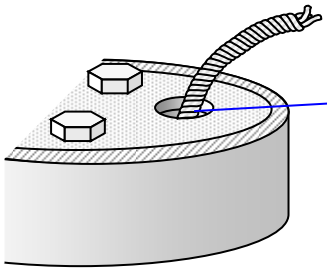


Well in a Pit or Vault

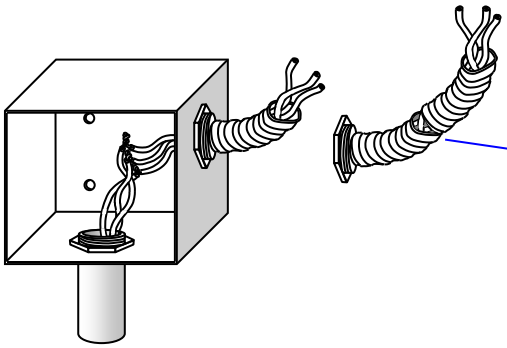
Wells in pits are not appropriate in areas prone to flooding or elevated water tables. The pit or vault should be watertight; however, when a well is located in a pit or vault that is not watertight, the pit or vault must be constructed with proper drainage or an appropriately sized permanent or portable pump shall be provided.



Replace access plug or install an inverted, screened well vent if one is not present. Silicone (or any other caulking) is not an acceptable permanent fix for any well opening deficiencies.



To seal the opening remove the rope, or attach it to an eyebolt on the sanitary seal bottom or drop pipe, and use an access plug. Silicone is not an acceptable permanent fix for any well opening deficiencies. Pump hoisting methods (rope, chain, etc.) extending through the well cap should be removed due to difficulty in providing adequate seal to prevent contaminants from entering the well through the opening. Pump removal can be accomplished per manufacturer's configuration recommendations. Afterwards, replace the opening with an access plug.



An electrical junction box shall be watertight (including at box attachment to the well casing and electrical conduits attached to the box) to prevent contaminants from entering the well. Replace damaged flexible conduit.