

## Well disinfection information from Texas Agricultural Extension Service

(Kristine Uhlman)

To disinfect a well, the owner's best option is to hire either a licensed pump installer or well driller to shock chlorinate his well. Although individuals have shock chlorinated their own wells, the National Ground Water Association (NGWA) and other organizations do not recommend the well owner attempt this disinfection because of the serious damage that can be done to the well casing, plumbing, and pump. After an initial shocking, we recommend re-testing to see if the bacterial counts have reduced.

Note that if not done properly and if the chlorine enters the aquifer during the process, naturally occurring arsenic (as well as other constituents) could be dissolved and released into the groundwater – all the more reason to have a professional do the work.

If the well is an older well, and/or if the initial shock is not successful in reducing the bacteria counts, the licensed contractor would need to pull the pump and then 'swab' the well – essentially clean the well with a large bottle brush. The reason for this is that resident bacteria will form chlorine-resistant mats on the screen, casing, plumbing, and/or pump. These mats have been known to concentrate manganese (for example) and form a black slime or iron and form an orange/red slime. Bacterial mats have even accumulated on the torque stabilizer for the pump, essentially not accessible to shock chlorination and removable only by scrubbing and/or removing and replacing the stabilizer.

Disinfecting a well can be similar to brushing your teeth – you can only rinse so much before you really just have to get in there and scrub!

Also, a low maintenance disinfection procedure could include throwing in some dry-ice chips – the agitation of the bubbling dry-ice *may* (but not always) dislodge resistant bacterial mats, and the rapid change in pH does clear some scale and reduce bacteria. However, over use of dry ice may damage PVC casing (too much dry ice in a confined space is a bit explosive) and may damage pumps and plumbing with the pH change.