

Lead From Well Pumps Can Contaminate Drinking Water

UNIVERSITY PARK (Centre Co.) — An estimated 750,000 Pennsylvanians may be in danger of getting "pumped full of lead."

The lead is coming from submersible well pumps and getting rid of it could be expensive, says a water quality expert in Penn State's College of Agricultural Sciences and the Environmental Resources Research Institute.

"A recent study has found that many of these pumps could be leaching high amounts of lead into private water supplies," says William Sharpe, professor of forest hydrology.

"Pennsylvania has more than a million individual private water systems that provide an estimated 2.5 million people with drinking water, he says. "Most of these systems are deep wells fed by groundwater, and about 20,000 new wells are drilled in the state each year. Since no government agency monitors private systems, those who rely on individual wells should have their water tested and take action if necessary."

Submersible well pumps made of stainless steel and plastic do not cause any lead problems.

But most pumps are constructed with brass fittings and housings. Brass alloys used in such pumps contain lead. If water coming from a well is corrosive, meaning it is soft and acidic, lead can dissolve into drinking water, posing a potential health risk.

"If your water is not corrosive, you probably won't have a lead problem," says Sharpe.

Children and fetuses are at greatest risk from lead exposure. Once in the bloodstream, lead can cause serious neurological damage, loss of IQ, mental retardation

and other problems. Lead also may cause hypertension, hearing loss and kidney and liver damage.

Penn State research has been shown how often lead is found in Pennsylvania's private water supplies. "We sampled about 1,600 individual supplies from around the state," says Sharpe. "About 20 percent had lead concentrations larger than the Environmental Protection agency's action level of 15 parts per billion, and nearly 30 percent exceeded 10 parts per billion, which is considered unacceptable by many in the environmental health community. That means about 750,000 rural Pennsylvanians may be exposed to excessive lead."

"In most cases, lead in drinking water is thought to come primarily from lead-soldered plumbing joints," he says. "We don't know exactly how much well pump fittings are contributing to the problem."

To find out, homeowners with wells should have their water tested. "To do this take a first-draw sample from your faucet first thing in the morning," Sharpe explains. "The let the water run for 30 seconds or longer and take a second sample. Comparing this to the first-draw sample will help determine how much lead is coming from your well and how much is coming from your inside plumbing."

The samples should be tested by a firm certified to check for lead. A list of certified testing firms is available from any county office of Penn State Cooperative Extension.

If excessive lead is found to be coming from a well pump, a homeowner has several options.

- Contact a well-driller to have the pump's brass fittings replaced.

- Install a point-of-use treatment system that removes lead. "We usually recommend activated aluminum or reverse osmosis treatment systems," says Sharpe. "The January 1990 and February 1993 issues of Consumer Reports, available in most libraries, contain useful reviews of lead removal treatment equipment."

- Use bottled water for drinking and cooking.

If high levels of lead are found to be coming only from leaded components of your inside plumbing, you have another option. "Since it takes about an hour for lead to begin leaching from pipes, let the water run for about 30 seconds to flush any water that's been in the pipes for more than an hour," says Sharpe. "Your tap water then should be safe to drink. To conserve water, do this once in the morning, fill a container and place it in your refrigerator. That water can be used for drinking the rest of the day."

"But if the lead is coming from your pump, this method won't

work because you can't very easily flush all the water out of your well."

For more information about

lead in drinking water or household water testing, contact the Penn State Cooperative Extension office in your county.

Extension Plans June Programs

WEST CHESTER (Chester Co.) — Penn State Cooperative Extension will be sponsoring several programs of interest in June including educational exhibits for those interested in sewing, needlework and textile crafts at the Creative Festival, June 3-5, Sheraton Convention Center in Valley Forge.

"Train the Trainer on Life Skills" on Wednesday, June 8, 10:00 a.m. to 3:00 p.m. at the Chester County Extension office in the Government Services Center, is designed to help agency personnel and volunteers in community education address basic life skills education for their clientele.

The Certified Food Safety & Sanitation Course begins Monday,

June 13, 6:00-9:30 p.m., at the Chester County Extension office in the Government Services Center. This 16-hour program is for those who have a food service establishment or those required to have a certified food sanitation manager on site.

Is a home-based business for you? Learn how to turn "Your Crafts Business" into a successful enterprise on Thursday, June 16, 9:00 a.m. to 3:30 p.m., at Bentley's Restaurant, Routes 202 & 63, North Wales.

For further information or registration information about these and other programs available through Penn State Cooperative Extension, contact the Chester County Extension office at (610) 696-3500.



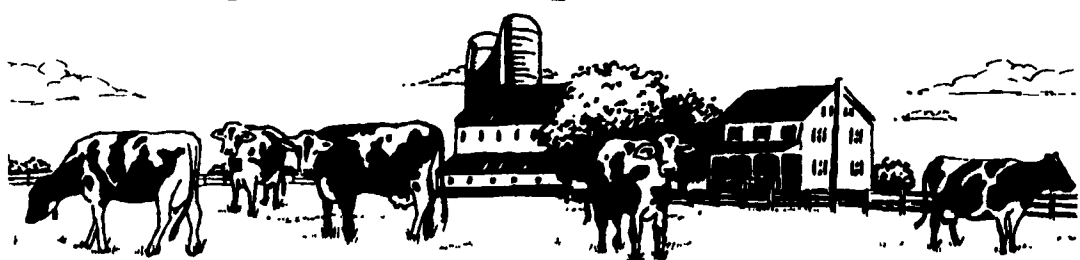
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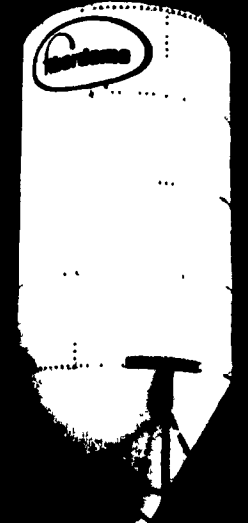
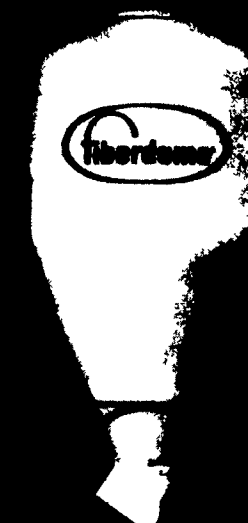
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