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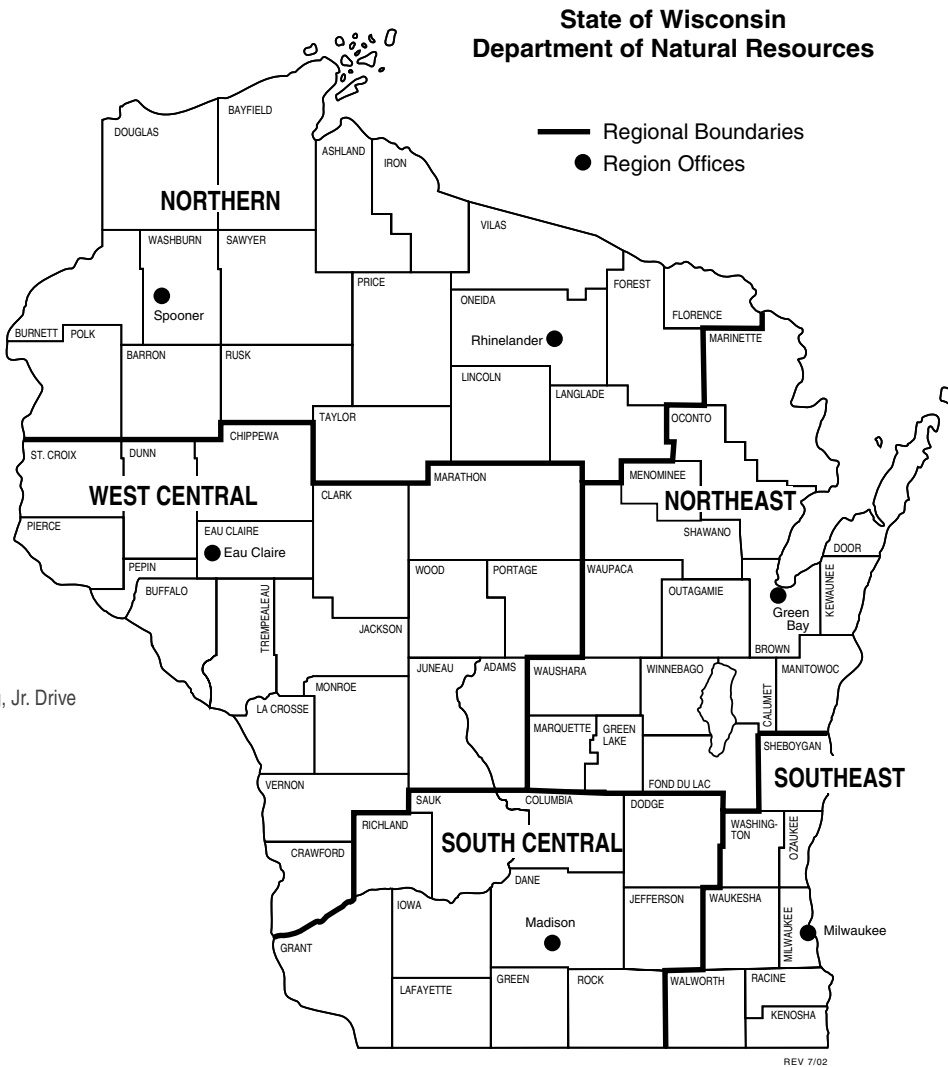
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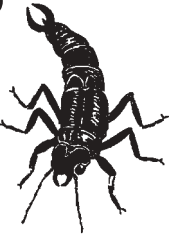
For more information about well contamination and vermin-proof well caps, contact a licensed well driller or pump installer.

For water sample test kits, contact a laboratory certified for bacteria testing of water (listed in the yellow pages under “Laboratories-Testing”) or online at: dnr.wi.gov/org/water/dwg/wells.htm under “Certified Bacteria Labs for Private Well Owners.” If a Wisconsin Unique Well Number (WUWN) has been assigned to your well, you may choose to have a copy of your test results stored in a permanent file for your well by writing the WUWN on the lab form and checking the box “send copy of results to DNR.” Results of water quality tests done by the State Laboratory of Hygiene are automatically reported to DNR for filing. You can find your Unique Well Number close to the sampling faucet on the water pipe entering the building from the well or on the main electrical fuse box.

For more information on bacteriological contamination of drinking water go to the DNR web site at dnr.wi.gov/org/water/dwg/BACTI.HTM.

The University of Wisconsin-Cooperative Extension has many publications related to drinking water and groundwater quality on its web site. Go to ecommerce.uwex.edu/. Click on “Water Quality” under the “Natural Resources” drop-down menu.

Earwigs in Your Well



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This brochure was prepared with the assistance of the University of Wisconsin-Extension.

**Wisconsin Department of Natural Resources
 Bureau of Drinking Water & Groundwater**

As a private well owner, you know you want to keep your water supply clean, pure and safe to drink. You want to protect your well from contamination in all its forms, including a more recent threat to Wisconsin well water, the earwig.

What's an Earwig?

The earwig is a brown insect about an inch long and a quarter-inch wide. Its most distinguishing feature is its fierce-looking tail pincer (see drawing).

Earwigs usually don't pose much of a problem – unless you find them in your well. Even then, it's the bacteria they bring with them, rather than the earwigs themselves, that give humans trouble.

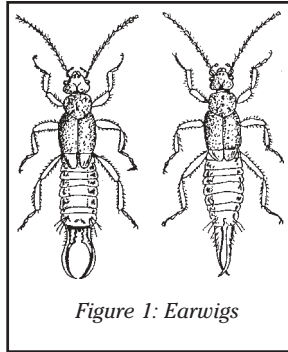


Figure 1: Earwigs

There are different species of earwig, but the one infesting wells in Wisconsin was discovered on the East Coast. Because of recent mild winters, the earwig has been expanding its range across the continent, reaching Wisconsin several years ago.

Earwigs are scavengers. They eat small insects and decaying plant and animal matter. Warm summer weather makes earwigs more active. They may stay active in the fall if they find relatively warm shelter.

Earwigs live in damp areas, usually around, underneath or in vegetation. They can also be found in and under piles of wood, lumber and other items stored around building foundations. The cool, moist environment of a well casing also provides earwigs with a favorite home.

Although other insects also fall into wells, earwigs are found more often in well water than their brethren. One well owner removed a faucet aerator, and out fell an earwig. Wells located near woodpiles, shrubs with ornamental bark mulch and similar areas are more likely to become infested with earwigs.

How Do Earwigs Contaminate Wells?

Earwigs and other small invertebrates can contaminate well water with bacteria, some of which may cause illness or disease. For example, earwigs may have entered a septic system, then your well – bringing potentially harmful bacteria, viruses or other microbes with them.

How Do I Know if Earwigs are a Problem in My Well?

It's a good idea to have your well water tested each year for coliform bacteria. These bacteria normally do not cause illness or disease themselves, but their presence means other disease-producing microbes may be present. Besides earwigs and other insects, your well may be vulnerable to bacterial invaders from a leaking septic system or animal waste. You won't know unless you get your water tested regularly – or until you get sick.

What Can I Do to Get Rid of Earwigs in My Well?

- 1. Clean away debris such as woodpiles and vegetation from around your well casing.**
- 2. Properly install a vermin-proof cap or seal (Figure 2) to prevent earwigs and other insects from entering your well. This will also keep out snow fleas or springtails, millipedes, mites and other creatures (Figure 3) that may contaminate your well.**

Wells constructed before February 1991 probably don't have vermin-proof cap or seal. A vermin-proof cap has a gasket around the inside to prevent entry of insects and other vermin. The cap has a screened vent that allows air into the well. These may cost \$75 to \$175 depending on the type and who installs it.

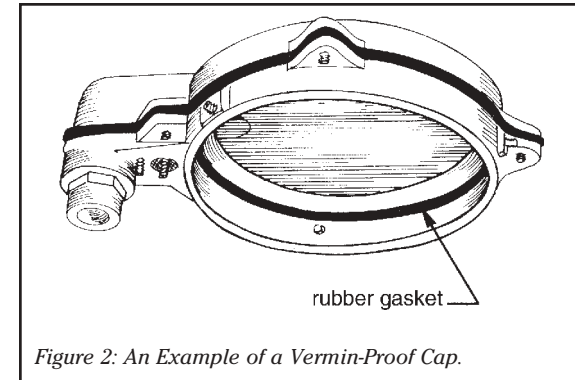


Figure 2: An Example of a Vermin-Proof Cap.

3. Treat your well with chlorine to kill any bacteria that might have been brought into your well by earwigs or other insects.

If a well is producing bacteria-laden, unsafe water, and earwigs have been seen in or near the well, they may be the culprits. If the problem persists after a few chlorinations, especially if bacterial counts are increasing, you'll need to try more drastic methods.

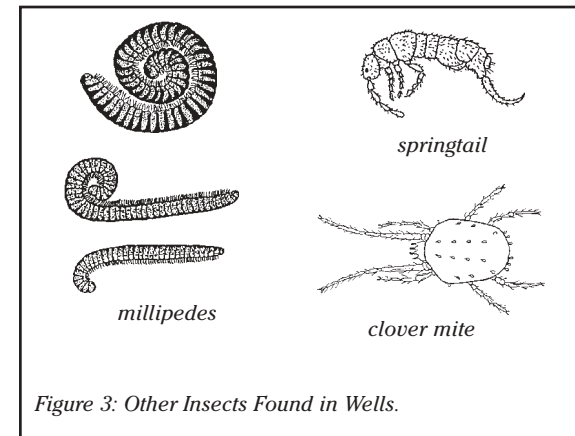


Figure 3: Other Insects Found in Wells.

4. Physically remove earwigs from your well if repeat treatments with chlorine have not solved your bacteria problem.

As you search for the cause of a persistent bacteria problem, you may be horrified to find that hundreds of earwigs or other insects have invaded your well! Even after disinfecting the well, the earwigs simply fall to the bottom of the well, providing a food source for continued bacterial growth.

This is one reason why well water samples taken after disinfection may have higher bacterial counts than earlier samples. In some cases, hundreds of earwigs have been dredged from the bottom of a well. The insect bodies were bleached white from chlorine treatments, but still intact.

To solve this problem, you'll have to remove the earwigs from the well. This can be done either by bailing out the well using a drilling rig or blowing the insects out with compressed air. A well contractor can provide these services. Once the well has been cleaned, it should be disinfected with chlorine again and re-sampled for bacteria.

5. Get your well water tested for coliform bacteria once a year. This is a cheap way to identify at least some of the threats to your drinking water supply before they affect your health.

Finally, for information on the use of insecticides for controlling earwigs and other pests in outdoor areas such as lawns and around homes, contact your local county extension office. **The use of chemicals or pesticides inside a well itself, other than chlorine, is strictly prohibited by federal and state law and may be extremely hazardous to your health.**