

How harmful are high copper levels in water?

People living in some Nebraska towns recently received notice that their water system exceeded the EPA Action Level for copper in a water supply. In Lancaster County, these public water suppliers include Brownie Manufacturing, Davey, Kawasaki Motor Mfg. Co., Lincoln Regional Center, Roca and Waverly. This notice means that some, not necessarily all, homes have copper levels at the tap greater than 1.3 milligrams per liter (mg/L) in water that has been in contact with plumbing for six hours or more. How does this affect you, and what can you do about it?

Copper is an essential nutrient, required by the body in very small amounts for good health. At high concentrations, copper is a gastro-intestinal irritant and may cause nausea, vomiting, diarrhea, and sometimes, a metallic taste. Individu-

als with Wilson's disease and glucose-6-phosphate dehydrogenase deficiency are at a higher risk of health effects due to copper than the general public. EPA established an Action Level of 1.3 mg/L copper in drinking water. EPA believes this level of protection would not cause any of the potential health problems described above.

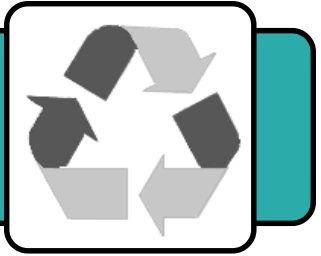
The primary source of copper in drinking water is from corrosion of copper pipes which are widely used for interior plumbing of residences and other buildings. Since this corrosion occurs in your home, the copper cannot be directly detected or removed by the water system supplier at the water source. Public water suppliers are, therefore, required to test for copper in a percentage of the homes served. Water is drawn at the tap after it has been in contact with plumbing for six

hours or more. If the level of copper exceeds the Action Level in more than 10 percent of all homes tested, the water supplier must notify the public. The water supplier must then take steps outlined by EPA to reduce the copper level in the water supply at the tap. This usually involves treating the water supply at the source to reduce its corrosiveness, thus reducing its ability to dissolve copper from pipes. For small public water systems, additional options are approved by EPA.

Because copper continues to dissolve into water, the copper concentration in water will increase with time. Water drawn after any extended period of nonuse will contain the highest copper levels. If copper is present in your water supply as a result of copper pipe corrosion, flushing the water system before using the water for drinking or

continued on page 11

Environmental Focus



Thank you!

earth wellness festival has reached nearly 13,000 fifth graders in Lancaster County with kits that provide educational activities for the classroom and a culminating "hands-on" festival. Special thanks to the following sponsors who provide in-kind and financial support for this award-winning program. (SE)

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Upcoming household hazardous waste collections

Date	Location	Time
Friday, May 15	2nd & Main, Hickman, NE	3:00 - 6:00 p.m.
Saturday, May 16	Christ United Methodist Church 4530 "A" Street, North Parking Lot	9:00 a.m. - 3:00 p.m.
Saturday, June 6 (Latex Paint Exchange Day)*	State Fair Park Parking lot NW of Ag Hall	9:00 a.m. - 3:00 p.m.

*These collections are for households only; not for businesses. Only residents of Lincoln and Lancaster County can bring items to collections. *For details, call the Lincoln-Lancaster County Health Department at 441-8040. (LB)*

Yes, it's safe, but does it work?

Barb Ogg
Extension Educator

Many people are reluctant to use pesticides inside the home. This makes sense, especially when there are effective low-toxic alternatives. But, when searching for alternatives, check with experts to see if the treatment will be effective. Some natural substances used to control insects that **do not** work are:

- Ultrasonic devices: Scientists have tested these products, and no evidence suggests that they repel insects or vertebrates when used in structures. They are being sold on the cable marketing channels and *do not* work.
- Copper wire: A commonly held folk remedy says that insects/slugs won't cross a copper wire because the low voltage current repels them. Copper wire will not conduct electricity unless it is hooked up to an electrical source. This is an old gardeners' tale that won't work.
- Osage oranges (a.k.a., hedge apples): Despite a well ingrained belief, they do not

repel insects.

- Cucumber, peppermint, hot pepper: These foods also do not repel or kill insects.
- Moth balls: Mothballs protect clothing stored in an airtight space, like a cedar chest or plastic storage box. But, they must be replenished regularly because the repellency dissipates over time. Moth balls do not work as a snake repellent. When moth balls are used against insects and wildlife pests in ways not given on the label, they are not likely to work.

Some natural substances that **do** have insecticidal properties:

- Citrus extracts (limonene) are known to have insecticidal properties, and there are some flea shampoos on the market. Be careful how you use these concentrated citrus shampoos.
- Boric acid has insecticidal properties when ingested by insects. Be careful not to inhale it.
- Silica aerogel and diatomaceous earth will dry out soft-bodied insects.
- Some soaps (not detergents) that are sodium or potassium salts (like Safers

soap) have some insecticidal properties against soft-bodied insects, like aphids. There is some evidence that coconut oil soap has some effectiveness against lice.

- Nicotine. This natural substance is effective and has been used for years, known to gardeners as Black Leaf. It is also very toxic to humans and animals, more toxic than many synthetic pesticides. Be extremely careful with any products containing nicotine.
 - Pyrethrum. This is the root of chrysanthemum and does have insecticidal properties. However, it has quick knock down activity, but often will not kill the insect. To make the product more effective, synergists are added which increase the toxicity.
 - Citronella. This plant extract has a mild repellency against mosquitoes. But it cannot compare with DEET in effectiveness. Citronella is found in some lotions marketed as a repellent.
- As with other products, it is important to read and follow the directions on the label.

Tips for attracting birds

Attracting the widest variety of wild birds to your backyard can be rewarding, if you follow basic guidelines. There are four elements to offer in your backyard to ensure frequent visits by wild birds:



Element #1: Food

To attract the widest variety of wild birds, you should consider placing a wide variety of bird feeders and food around your backyard. Consider different types of feeding stations such as a platform feeder for ground feeding birds, hanging feeders for perching birds and suet feeders for insect-eating birds.

Element #2: Shelter and Places to Raise Young

Wild birds feel more secure if they have shelter to protect themselves from the elements and predators. Trees and large shrubs are welcome places to raise and protect their young. Consider offering nesting boxes and nesting materials in spring for the specific species of birds you want to attract. Plant native trees and shrubs that provide cover to attract birds.

Element #3: Water

Probably one of the single most important elements to include in your backyard bird habitat is water. The noisier the better. The

continued on page 11

Snakes in the yard

Snakes! These tongue protruding, slithering creatures are amongst the most feared creatures in America. The very mention of snakes makes some people break out in a cold sweat. While it is always recommended that people have appropriate fear/respect of wildlife, the paranoia about snakes is simply remarkable. Unfortunately, this paranoia about snakes has led to the demise of many snakes.

Snakes play an important role in the environment. Hopefully, by educating the public we can begin to have a more responsible attitude toward these important creatures.

The two snakes that you are most likely to encounter around your home or garden are the Common Garter (not garden) snake and the Eastern Ribbon Snake. At first glance it is difficult to tell them apart. Here are a few clues. The Garter snake has two rows of alternating black spots. His tail also isn't as long as the Ribbon snake. The Ribbon snake by contrast has a tail that is about a third of its total length. Measure the length by starting from the end of the tip to where the snake's body width stops widening. The Ribbon snake also has three yellow stripes that run the length of his body. The Ribbon snake also exhibits a more slender body than the Garter snake.

Both snakes mate in April and May. Ribbon snakes give birth to 10-12 live young in the months of July or August. Garter snakes

continued on page 11