What You Should Know About Pesticides in Drinking Water

Pesticides are widely used in many areas of the world. They aren’t limited to insecticides, but also include chemicals like herbicides and fungicides, as they are intended to destroy, prevent or repel a living organism. While these chemicals can help control diseases, insects, weeds and other pests, they can all be toxic at some level to organisms that live in or drink water.

Whether these contaminants pose a health risk depends on how toxic the pesticide is, how much is in the water and how much exposure occurs on a daily basis. When applied outdoors, pesticides can make their way into ground or surface water systems that feed local drinking water supplies. A majority of pesticide runoff occurs during the growing season, with sandy soils and high rain levels usually increasing the risk of groundwater contamination.

Safe Use of Pesticides

If you do choose to use pesticides, select those that are short-lived in the environment. Look for pesticides that do not move easily into groundwater once they have been applied, and don’t apply the product if rain is forecast. Pesticide labels have “environmental hazard statements” that describe the product’s risk and what steps you should take to protect local water supplies. The label also indicates whether any species like fish, amphibians or birds may be sensitive to the ingredients used in the product.

Never dispose of any unused pesticides in storm drains, sewers or septic systems; they are considered hazardous waste and must be disposed of properly.

Two Drinking Water Treatment Options for Pesticides

Many water utilities currently monitor for the presence of pesticides like atrazine, lindane and toxaphene. American National Standard NSF/ANSI 53: Drinking Water Treatment Units sets performance standards for many types of filtration systems and includes testing to help determine if a system is effective at reducing these and other regulated pesticides and organic chemicals.

Some additional pesticides that are not currently regulated in drinking water in the U.S. include:

- DEET (N,N-Diethyl-meta-toluamide), a pesticide and common active ingredient in insect repellents
- Metolachlor, an organic compound that is widely used as an herbicide.
- Linuron, an herbicide often used in the control of grasses and weeds

To help address concerns about these compounds, NSF/ANSI 401: Drinking Water Treatment Units - Emerging Compounds/Incidental Contaminants was developed. This standard evaluates the ability of water treatment devices to reduce up to 15 emerging contaminants in drinking water.

A list of water treatment devices that are certified for pesticide reduction under both of these standards is available in the NSF online database.

Additional information on the safe use of pesticides is available through the National Pesticide Information Center. For more tips on drinking water quality, contact the NSF Consumer Affairs Office at info@nsf.org.