

Drinking Water

FACTS:

- Of the State's official total water and land area of 96,791 mi², roughly 40% is covered by the Great Lakes, and over 1,000 mi² are inland lakes and ponds.
- About half of the state's residents rely on groundwater for their drinking water and all Michigan counties except for Wayne and Bay counties have communities supplied by municipal groundwater wells.
- Michigan has more households (1.12 million) served by private wells than any other state, with approximately 25,000 domestic wells drilled per year.
- The Michigan Department of Environmental Quality has regulatory oversight for all public water supplies, including approximately 1,500 community water supplies and 11,000 noncommunity water supplies.
- Over 172 communities have completed Wellhead Protection Plans, and approximately 200 public water supplies have received approval of their wellhead protection area delineations.

Pollution Prevention Month

RESOURCES:

Washtenaw County Public Health

<http://publichealth.ewashtenaw.org>

Michigan Department of Environmental Quality

http://www.michigan.gov/deq/0,1607,7-135-3313_3675---,00.html

Michigan Safe Drinking Water Act

<http://www.deq.state.mi.us/documents/deq-wd-water-fos-tsu-Act399.pdf>

Environmental Protection Agency (EPA) – Water

<http://www.epa.gov/ow/>

Current Drinking Water Standards - EPA

<http://www.epa.gov/safewater/contaminants/index.html>



WHAT YOU SHOULD KNOW:

Where does drinking water come from?

A clean, constant supply of drinking water is essential to every community. People in large cities frequently drink water that comes from surface water sources, such as lakes, rivers, and reservoirs. Sometimes these sources are close to the community. Other times, drinking water suppliers get their water from sources many miles away. In either case, when you think about where your drinking water comes from, it's important to consider not just the part of the river or lake that you can see, but the entire watershed. The watershed is the land area over which water flows into the river, lake, or reservoir.

How is drinking water treated?

When a water supplier takes untreated water from a river or reservoir, the water often contains dirt and tiny pieces of leaves and other organic matter, as well as trace amounts of certain contaminants. When it gets to the treatment plant, water suppliers often add chemicals called coagulants to the water. These act on the water as it flows very slowly through tanks so that the dirt and other contaminants form clumps that settle to the bottom.

Ground water is naturally filtered as it passes through layers of the earth into underground reservoirs known as aquifers. Water that suppliers pump from wells generally contains less organic material than surface water and may not need to go through any or all of the treatments described in the previous paragraph. The quality of the water will depend on local conditions.

The most common drinking water treatment, considered by many to be one of the most important scientific advances of the 20th century, is disinfection. Most water suppliers add chlorine or another disinfectant to kill bacteria and other germs.

What are the health effects of contaminants in drinking water?

EPA has set standards for more than 80 contaminants that may occur in drinking water and pose a risk to human health. EPA sets these standards to protect the health of everybody, including vulnerable groups like children.

Acute effects occur within hours or days of the time that a person consumes a contaminant. People can suffer acute health effects from almost any contaminant if they are exposed to extraordinarily high levels (as in the case of a spill). Most people's bodies can fight off microbial contaminants the way they fight off germs, and these acute contaminants typically don't have permanent effects. Nonetheless, when high enough levels occur, they can make people ill, and can be dangerous or deadly for a person whose immune system is already weak.

Chronic effects occur after people consume a contaminant at levels over EPA's safety standards for many years. The drinking water contaminants that can have chronic effects are chemicals (such as disinfection by-products, solvents, and pesticides), radionuclides (such as radium), and minerals (such as arsenic). Examples of the chronic effects of drinking water contaminants are cancer, liver or kidney problems, or reproductive difficulties.

SERVICES AVAILABLE:

For more information about water testing services, visit

<http://environmentalhealth.ewashtenaw.org>

or call 734-222-3800.