# Stay Afloat

## Healthy Practices in Natural Waterbodies

### An Educational Series For Stream Teams To Learn and Collect

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Missouri is fortunate to have many rivers, streams, and lakes that provide countless recreational opportunities and add great beauty to our state. These natural, uncontrolled bodies of water, including the streams you know so well and help to keep clean, contain bacteria at naturally occurring levels and may contain other contaminants. Occasionally, some waterbodies might contain bacteria or contaminants at unhealthy levels. However, if you practice healthy habits, you can work in any stream or other waterbody safely.

This article covers the types of contaminants that might be found in waterbodies, waterborne illnesses, what to do if you suspect a waterborne illness, how to tell if a stream is safe to work in, precautions you can take to reduce waterborne illness risk, and other ways to stay safe.

### Not All Contaminants Can Be Seen

In addition to visible pollution, such as debris or trash, water can contain contaminants that cannot be seen. Contamination may occur from natural events such as runoff after a storm or waste from wildlife, waterfowl, pets, or farm animals. Other sources that may contribute to water pollution include industrial sources or sewage sources such as bypasses from sewage pump stations, storm water sewer overflows, sewage spills, seepages from failing septic systems, and boat waste discharges.

The Missouri Department of Natural Resources issues water advisories due to hazardous conditions that can occur for many reasons, including those stated above. Current advisories can be found at https://dnr.mo.gov/water/alerts-hazards.

### Waterborne Pathogens

Because the number of potential pathogens is too vast to monitor individually, indicator organisms such as Enterococci and E. coli, are monitored and used to assess recreational water quality. It is normal for E. coli and other bacteria to be found at naturally occurring levels in natural waterbodies. Elevated bacteria levels due to heavy rains or other contamination sources may pose a health risk.

### Waterborne Illnesses

With simple precautions, you are unlikely to experience waterborne illnesses. Without precautions, germs like bacteria, viruses, and parasites in water may cause illness when people are exposed to them as a result of contact with natural waterbodies. Water contaminated with these germs can make you sick if you swallow it. It can also cause an infection if you get into the water with an open cut or wound (especially from a surgery or piercing).

Symptoms of waterborne illnesses are varied but may include abdominal cramps, diarrhea, vomiting, fever, headache, or infections of the eyes, ear, or skin. Symptoms seldom appear immediately after exposure. Most symptoms will occur within 1-3 days, but some illnesses may take as long as 4 weeks after contact with water.

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**Stream Team Academy Fact Sheet Series**



Collect this entire educational series for future reference! Contact us at 800-781-1989 for copies of previous Fact Sheets and a binder for storing them.

## What should I do if I become ill after contact with the water?

In the event of any emergency, you should stop work and call 911.
Symptoms of waterborne illness may appear within a day or up to 4 weeks after contact with water. Check with your healthcare provider first. After getting appropriate medical attention, please report waterborne illnesses to your local health department or to DHSS. A list of local public health agencies and phone numbers can be found at the following web link: https://health.mo.gov/living/lpha/lphas.php. Or call DHSS at 573-751-6113.

## How can I tell if a stream is safe to work in?

As a stream team member, you are likely more familiar with the waters you work in than most other people. As you probably are aware of current advisories, stay on the watch for any new signs there could be a change in your stream's water quality, such as new construction. In addition, take note of any changes in the water's characteristics. Does the water look or smell different than usual? Water might be unusually stagnant, smell off, look unusually cloudy, have an unusual color, or have excessive algae growth. Any of these characteristics may indicate a stream isn't safe to work in, or that you should take extra precautions to stay safe.

If you have to work in the following conditions, do so with increased caution.

- Near sewer pipes, discharge pipes, or storm drain outlets.
- Water that is frequented by livestock.
- Areas containing a large number of dead fish or other dead animals in or near the water.
- In the event of inclement weather. Be aware that storms and flash floods can occur suddenly and without warning.
- After inclement weather, such as a heavy rain, when levels of contaminants in the water tend to be higher due to runoff. Large debris, downed power lines, and other hazards might also be present.

## What precautions can I take to reduce my risk of waterborne illness?

Many waterborne illnesses can be prevented with simple precautions.

- Avoid working with open sores or cuts. Promptly tend to any wounds, cuts, or abrasions you get while in or near the water.
- Thoroughly wash the wound with clean water and soap. Contact your healthcare provider if redness or swelling develops around the wound.
- Shower with soap and clean water as soon as possible after working in or near the water.
- If you have a weakened immune system, check with your provider before working in and around natural water bodies.
- Wash your hands for 20 seconds or use hand sanitizer containing at least 60% alcohol before eating. Hand sanitizer might not be as effective when hands are visibly dirty or greasy, so wiping off debris before using it will be helpful.

While it can be unavoidable at times, minimize getting any water or sand in your mouth or up your nose. If you fall in the water and are immersed, you should prioritize protecting your head and returning to the surface as quickly as possible, but also do your best to not inhale or swallow any water.

## Preventing Drowning

Drowning can happen to anyone at any time they are in or around water. Drowning can happen in seconds and is often silent and unnoticeable. There are a number of steps you can take to reduce your risk of drowning:

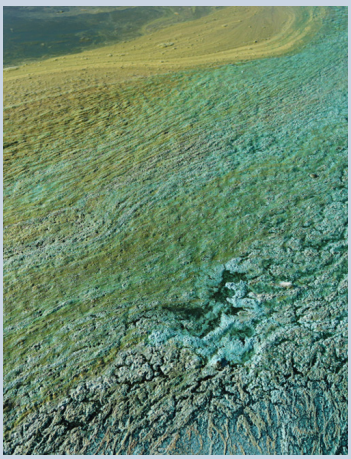
- Wear a life jacket. Life jackets reduce drowning risk for those of all ages and swimming abilities. Do not rely on air-filled or foam toys, as these are not safety devices.
- Learn CPR. Your CPR skills could save someone's life in the time it takes for paramedics to arrive. Many organizations such as the American Red Cross and the American Heart Association offer CPR training courses, both online and in-person.
- Take extra care if you have medical conditions such as epilepsy, heart conditions, or autism. Use the buddy system.
- Take extra care if your balance, coordination, or judgement is impaired for any reason. These impairments can be the result of medication side effects, alcohol consumption, and carbon monoxide from idling boat engines.



MISSOURI STREAM TEAM

Stay tuned for upcoming articles from DHSS on extreme temperatures, the Fish Advisory, ticks and mosquitoes, and foams.

For more information on cyanobacteria, please see the DHSS brochure here: https://health.mo.gov/safety/recreationalwater/pdf/bgalgaebrochure.pdf



*The Missouri Department of Health and Senior Services, Department of Natural Resources, and Department of Conservation sincerely appreciate Missouri Stream Team's efforts to keep our state's waters healthy, safe, and beautiful.*

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