

## **Cryptosporidium and Giardia:**

New York State law requires water suppliers to notify their customers about the risks of cryptosporidium and giardia. These pathogens are of concern because they are found in surface water and ground water under the influence of surface water throughout the United States. Filtration and disinfection are the best methods for use against them, but 100% removal or inactivation cannot be guaranteed. Cryptosporidiosis and giardiasis are intestinal illnesses caused by these microscopic parasites. Symptoms of infection include nausea, diarrhea, and cramps. Most healthy people can overcome the disease within a few weeks.

In 2021, the presence of cryptosporidium and giardia were tested for in Otisco, Ontario, and Skaneateles lakes as part of routine monitoring by OCWA and the City of Syracuse Water Department. Both the raw lake waters and the treated waters were tested at both of OCWA's treatment plants. Additionally, OCWA's Otisco Lake Water Treatment Plant tested its recycled wash water, which is water that is reclaimed after filter backwashing and returned to the treatment plant influent stream for retreatment.

OCWA collected a total of 36 cryptosporidium and giardia samples in 2021 representing water originating from Otisco Lake. Monthly samples were analyzed from the Raw (untreated) water, the Entry Point (treated) water, and the Recycled water. Giardia was detected in the raw water sample in April. Cryptosporidium was not detected in any of the raw water or recycled water samples. Neither giardia nor cryptosporidium were detected in any of the entry point water samples from Otisco Lake.

OCWA collected a total of eight cryptosporidium and giardia samples in 2021 representing water originating from Lake Ontario. Quarterly samples were taken from raw water and entry point water. Neither cryptosporidium nor giardia were detected in any of the raw water or entry point water samples from Lake Ontario.

The City of Syracuse Water Department collected a total of 24 cryptosporidium and giardia samples in 2021 representing water originating from Skaneateles Lake. Two raw water samples (one from each intake) were sampled monthly. Neither cryptosporidium nor giardia were detected in any of the City of Syracuse's raw water samples.

***Some people may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium, giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).***

Individuals who think they may have cryptosporidiosis or giardiasis should contact their health care provider immediately. For additional information on cryptosporidiosis or giardiasis you may contact the Onondaga County Health Department, in writing at 421 Montgomery St., 12<sup>th</sup> Floor, Syracuse, NY 13202 or by calling 315-435-6600.

Bottled water may be a viable alternative, however the same degree of caution applied to your tap water should be used in selecting a bottled water supplier. To that end, a list of certified bottled waters for sale in New York (along with their sources) can be obtained from the New York State Department of Health by calling 1-800-458-1158.

The EPA's Surface Water Treatment Rule (SWTR) established water treatment standards specifically designed to ensure the removal or deactivation of giardia and other microbial contaminants. The EPA is currently working on enhancing these standards to further ensure protection against exposure to cryptosporidium from drinking water. The Otisco and Ontario water treatment plants are in full compliance with all current operational, monitoring, and reporting requirements. OCWA's internal performance standards are more stringent than the law currently requires.

For example, the SWTR requires a treatment plant's combined filter effluent water turbidity (a measure of clarity used to check filtration particulate removal) to be less than 0.30 NTUs 95% of the time. For 2021, the Otisco Filtration Plant's combined filter effluent turbidity was less than 0.08 NTUs 95% of the time based on continuous four-hour sampling intervals. The Ontario Filtration Plant's combined filter effluent turbidity for 2021 averaged less than 0.07 NTUs 95% of the time, again based on four-hour sampling intervals. Cryptosporidium regulations contain improved filtration performance requirements to ensure removal of any protozoans that may be present. Part of the enhanced filtration requirements involves lowering the turbidity criteria from 0.50 NTU to the 0.30 NTU range. Both of OCWA's treatment plants are achieving turbidity results much lower than the regulated levels.