

## 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 2013, the presence of Cryptosporidium and Giardia was tested for in Otisco, Ontario, and Skaneateles lakes as part of the routine plans of OCWA, MWB, and the City of Syracuse Water Department. Both the raw lake waters and the treated waters were tested. Additionally, OCWA also 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 took a total of 36 Cryptosporidium and Giardia samples in 2013 representing water originating from Otisco Lake. Monthly samples were taken from the Raw (untreated) water and the Finished (treated) water. The Recycled water was also sampled monthly. None of the monthly samples of Raw water, Finished water, or Recycle water originating from Otisco Lake had any Cryptosporidium or Giardia detected.

MWB took a total of 4 Cryptosporidium and Giardia samples in 2013 representing water originating from Lake Ontario. Raw water samples were taken in the months of March, June, September, and December. No Cryptosporidium or Giardia was detected in any of MWB's Raw water samples.

The City of Syracuse Water Dept. took a total of 44 Cryptosporidium and Giardia samples in 2013 representing water originating from Skaneateles Lake. Two Raw water samples (one from each intake) and, one finished water sample were taken each month. Two additional sites in the distribution system were sampled quarterly (Feb, May, Aug, and Nov). No Cryptosporidium or Giardia were detected in any of the City of Syracuse's Raw water or Finished water samples.

During 2013, No Cryptosporidium or Giardia were found in the Finished of Otisco Lake, Lake Ontario, or Skaneateles Lake.

***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 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 OCWA and MWB treatment plants are in full compliance with all current operational, monitoring, and reporting requirements. OCWA's internal performance standards are actually tougher than the law currently requires.

For example, the SWTR requires a treatment plant's finished water turbidity (a measure of clarity used to check filtration particulate removal) to be less than 0.30 NTUs 95% of the time. For 2013 the OCWA filtration plant finished water turbidity was less than 0.08 NTUs 95% of the time based on continuous four-hour sampling intervals. MWB's filtration plant finished water turbidity, for 2013, averaged less than 0.073 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 involved lowering the turbidity criteria from the 0.50 to the 0.30 NTU range. Both the OCWA and MWB treatment plants are doing better than the regulated levels.