



# CHAMPLAIN WATER DISTRICT

Dedicated to Quality Water & Service



**First In The Nation ~ Excellence In Water Treatment, Partnership For Safe Water**

## Champlain Water District (CWD) Update in Providing Safe Drinking Water All the Way to Your Tap

In order to update our consumers and provide the facts about the drinking water quality and treatment at Champlain Water District's Peter L. Jacob Water Treatment Facility, we include the following summary. The water that CWD provides to twelve (12) municipal water systems throughout Chittenden County is of the highest quality and safely serves CWD's 68,000 customers. The CWD treatment facility received the First-in-the-Nation "Excellence in Water Treatment Award" under the National Partnership for Safe Water program of which the United States Environmental Protection Agency (USEPA) is a partner agency. CWD has maintained this "pinnacle of excellence" status each year since 1999 following an extensive annual review process. At this time, only four (4) additional water treatment facilities across the country have also now attained this public health protection optimization level.

CWD's water source originates 2500 feet off shore at a depth of 75 feet in the cold, deep underwater canyon of Shelburne Bay, well away from any potential sources of contamination. This high quality source is then filtered at the treatment facility. The state-of-the-art treatment process removes the natural clay and diatoms from the source water using adsorption clarification pretreatment, followed by deep-bed multi-media filtration. Treatment efficiency is continuously measured by on-line laser particle counting technology. In addition, approximately 40 % of the natural organic material (i.e. diatoms, plankton) is also removed during filtration, as measured continuously by on-line analyzers. CWD then uses disinfection (as required by USEPA and the Vermont Water Supply Division) as a necessary additional barrier protective of the public health.

The disinfection applied at CWD consists of two stages – primary disinfection with free chlorine and secondary disinfection with monochloramines. Monochloramines are USEPA's best technology recommendation to meet more stringent disinfection-by-product regulations under the Safe Drinking Water Act. Monochloramines have been successfully used in this country for 90 years and presently serve over 68 million people in the U.S. The primary disinfectant, free chlorine, serves to ensure that the occasional, unlikely virus, bacteria and/or protozoa are inactivated immediately. The secondary disinfectant, monochloramines, enhances the benefits of the primary free chlorine. Monochloramines further inactivates microbes, and eliminates the continual formation of disinfection-by-products produced with the reactive free chlorine. These disinfection-by-products are regulated by USEPA and must be kept to a minimum because of their potential to cause carcinogenic and reproductive problems. CWD is the first surface water supply in Vermont to proactively reduce the health risks associated with disinfection-by-products down to USEPA goal levels. The VT Department of Health has endorsed the use of monochloramines and supports the Champlain Water District's proactive response to tighter regulatory controls on disinfection-by-products of free chlorination.

This monochloramines public health protection measure is consistent with CWD's leading efforts in optimizing water treatment including the following:

- First surface supply in Vermont to optimize treatment for minimizing lead solder leaching from home copper plumbing.
- First in Vermont to employ continual laser particle counting technology to highly optimize and enhance treatment effectiveness.
- First in Vermont to employ continual total organic carbon analyzer technology to highly optimize and enhance treatment removal of natural organic matter.
- First in the Nation to retrofit to full-scale, Adsorption Clarification pretreatment technology.
- First in the Nation to obtain the "Excellence in Water Treatment" Award under the Partnership for Safe Water.

In summary, CWD is a regional, municipal organization chartered to provide high quality drinking water to its served municipalities. We supply 68,000 people with safe water that is continually being used for all potable purposes: drinking, cooking, bathing, and showering. Monochloramines has enhanced the quality of the CWD water allowing our customers to continue to feel confident in the safety of their water supply. At CWD, "Excellence in Water Treatment" is our overarching mission. If you have any questions please call Mike Barsotti, CWD's Director of Water Quality and Production at 864-7454 ext 12.