



Village of Copenhagen WATER SYSTEM IMPROVEMENTS

The Village of Copenhagen has struggled for decades with inadequate water supply. The Village source has been bedrock wells of poor quality and quantity and a surface water source, the Deer River, that exhibits very flashy raw water quality parameters and is also susceptible to drought conditions. At times, the Village has issued water conservation orders and has even had to purchase and haul water to keep the storage tank full.

Bernier, Carr & Associates was retained to find an alternate source of supply for the Village. After an exhaustive search of ground water supplies, a bedrock well of adequate capacity was found. The new source has a more consistent quality than the previous sources, however, it was found to be under the influence of surface water. The surface water influence of the new wells required filtration facilities. The facilities installed included a series of cartridge and bag filters with a gross filter, pre-filter, and final filter to provide the removal of particles down to 1 micron absolute. The treatment facilities also include UV disinfection to minimize the necessary chlorine contact time. A new control system allows the operators to monitor and adjust system settings remotely. These facilities were completed and put into operation in March 2011.

The Village received a \$2 million grant and \$1,063,000 no interest loan from the Drinking Water State Revolving Fund to develop the new well source and make improvements to the distribution system. The total project cost was \$3,063,000.

