

# WATER DROP

Franklin Water Plant Newsletter January 2007



## DISINFECTION BY-PRODUCTS DON'T LIKE YOU.

**Or us, for that matter. A new regulation from the EPA is making things more difficult and increasing costs.**

We treat your drinking water with a disinfectant to kill known pathogens and viruses. That disinfectant is Chlorine in the form of Liquid Bleach. That's good. In fact, that's great. But the government wants to crack down on something new. It's called Disinfectant By-Products. Disinfectant By-Products are formed by excess chlorine in the water system (left over after the chlorine demand is met) and organic matter (turbidity in the form of decaying matter). We have to continually consider how much chlorine we add to kill the bad guys in the water but not add too much to create Disinfectant By-Products. Also, we have to add coagulant to keep the turbidity low but not add too much to be wasteful. It's an extremely complicated juggling act to say the least. Here's a simple formula to keep in mind: Disinfectant By-Products (DBP) = Chlorine + Organic Matter

There are two types of DBP we have to monitor: Trihalomethanes (THM) and Halo Acetic Acids (HAA). There are several strategies we have implemented to deter the formation of DBP. The first is Chlorine Dosage. We have goals that are set for the Chlorine Dosage and we monitor those at the water plant and in the system.

Second, is low turbidity leaving the water plant before it hits the distribution system. We have Performance Goals set for our turbidity leaving the water plant and we monitor those constantly as well.

Third, is tank turnover. We fill up the distribution system tanks to a calculated level that is suited best for system pressure for customers and a level that allows for the "older" water in the tank to be used up first before the "new" water is put into the system. Water that sits

around in a distribution tank causes the build up of DBP.

Fourth, is flushing. The Distribution System has a flushing program in place and is in the process of installing Automatic Flush Hydrants in locations where "old" water in the system needs to be replaced by "new" water.

The Water Plant is the heart of the Water System. Water is treated there and sent to all of the taps via the Distribution System, the arteries if you will.

If we can minimize the precursors of DBP at the heart (Water Plant), we will drastically reduce our chances of having DBP in the Distribution System.

The EPA has mandated new regulations that require water systems to increase their monitoring of DBP effective this calendar year.