EASY WAY TO IMPROVE YOUR WATER QUALITY IN A RAW WATER RESERVOIR

By Nathan Wissenbach

At my previous job we had three reservoirs: Dow, Smith and the Holding Pond. Dow was one of the hardest reservoirs to treat due to the age and organic matter in it, so we only used it in the winter. When treating this reservoir, we had our chemical feed pumps nearly maxed out as we used potassium permanganate to eliminate the taste and odor. We also used a polymer to help aid in coagulation.

The first step to improve Dow water quality was given to me by my local health department sanitarian. In the spring when the reservoir is overflowing, I would open the drain to pull water from the bottom of the reservoir. So, for the next couple years each time the reservoir overflowed, I would open the drain and try to match what was coming over the spillway. Each year the water quality of Dow improved, raw water turbidity dropped dramatically, the taste and odor decreased, and we were able to cut back our pumps more each year.

The reservoir also had a lot of plant life which put a lot of organic matter in the water. The next step to improve water quality was to run the reservoir down as low as we could during the winter season. This allows the air to freeze dry the plants thereby reduces the number of plants the following year.

Doing these 2 steps helped reduce the turbidity in the water by 50%, which allowed us to back the Alum and Potassium Permanganate pumps down, so we barely used any polymer. This helped save money and chemicals (additives) and reduced the stress of trying to treat this reservoir, it helped save water by reducing the number of backwashes we would have to do on our filters. I encourage everyone that has reservoirs to do these steps, it's easy and makes a huge difference in your water quality. 💧💧💧

Nathan Wissenbach
Technical Assistance Provider
wissenbach@nyruralwater.org