

# ALGAE IN YOUR SOURCE WATER

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**A**lgae growth in a water source can be a big problem for treatment plant operators. When algae levels get out of control an operator will experience high turbidity, taste and odor problems, shorter filter run times, and higher raw water pH.

Daily raw water reservoir checks are the first defense against water quality problems associated with an algae bloom. During a long period of dry, hot weather such as this past summer, the reservoirs will start to turn a light greenish color. This is the time to start thinking of a remedy. An operator will have to make chemical adjustments, such as increasing coagulant dosages and quite often turning up the chlorine feed rate.

As time goes by, the reservoir will turn greener. The turbidity will increase. The water will start to smell like an old pond. You will need to backwash filters more often, sometimes several times per day. In extreme cases, you may encounter a harmful algae bloom that will turn toxic. At that point, the Department of Health may quarantine your source! Not many systems are fortunate enough to have multiple reservoirs or an emergency well to switch to as a backup.

What is an operator to do when faced with this problem? First off, you will need to determine how often algae plays a role in your system. I have encountered systems that rarely have a problem. In these systems the operator has been able to ride

out the algae bloom by increasing coagulant doses, adding Potassium Permanganate for taste and odor control, and backwashing filters often. These systems may also have backup wells that they can use during the bloom.

Some systems have a constant issue because they may have shallow reservoirs, high nutrients due to farming nearby, and have a large supply with lower than ideal usage. This makes a perfect breeding ground for algae. These areas will often have multiple sources and may employ a licensed pesticide applicator that is certified for aquatic applications of either copper sulfate or aluminum sulfate. If the operator is not licensed, they will have to either call a neighboring municipality for mutual aid or hire an applicator directly. Hiring out can get very expensive.

Being proactive is the best way to deal with the hot dry summer months. Check your reservoirs daily for signs of algae growth. Check raw water temperature and pH daily. Keep ahead of the water quality changes by increasing coagulant and chlorine doses. Backwash filters often. Add permanganate to lessen taste and odor complaints. If needed and possible, change to an alternate source and apply copper sulfate to the reservoir. After a few days of treating the reservoir, the algae will die. Now it can be settled out in the clarifier basin. And by all means, hope for rain! 💧💧

