

BOOK SMART

By Joe Redmond

When it comes to operating a treatment plant, most people think if you took a class and read the manual then you can run any plant at any time. This could not be further from the truth. Yes, the book is great to help you understand the basics of water or wastewater treatment. It is also perfect for explaining calculations and some of us still use those books to look up formulas or other references to the issues we are having.

The reality is that every treatment plant is different, even if they are designed the same and by the same engineer. Water and Wastewater Operation Specialists must be able to use the book as a starting point. You need to try different things and adjust chemicals that make positive results for your situation. Do not be afraid to make adjustments! Just make the changes in small increments to avoid upsetting the entire treatment process.

The New York Rural Water Association receives calls from operation specialists often. In some of these cases the specialist states that the manual says to add a certain amount of chemical, but it does not seem to be working. In a controlled environment, I am sure that works well. Therefore, testing for residuals is particularly important. When disinfecting a new water main the book is very accurate, but when a jar test for a drinking water plant looks good on the bench, more or less coagulant may need

to be used in the “real world.” Reservoirs may need a higher dose of copper sulfate to kill algae because of the many years spent treating it with the same chemical. The algae can build up a type of resistance, according to researchers.

The bottom line is this: the book is for training, and it provides a wealth of information. It is up to the operation specialist to take that knowledge and couple it with real world experiences to better manage chemical use and troubleshooting operational problems. I guess you can say we must also be “plant smart” not just book smart. 💧💧



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