This report is a predictive model utilizing U.S. Environmental Protection Agency’s Information Collection Rule (ICR) disinfection by-products (DBP) drinking water sample data for chlorine, chloramine and combined disinfection methods for the sum of 9 haloacetic acids (HAA9). Much of the HAA occurrence is for only 5 or 6 of the HAA species although the remaining chemicals have potentially higher human health risk. Because of increased usage of chloramines and combined treatment across utilities in the United States, this study takes advantage of the large ICR database to develop a better picture of HAA9 values for these specific disinfection treatments. Results can be seen for measured versus estimated HAA9 values for all treatment methods. Statistical analysis was framed in terms of a Pearson linear regression and interclass correlation. Results indicate combined treatment sees higher occurrence and health risk with HAA3 values over treatment with chlorine or chloramine alone.

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