

2. Maximum and Minimum Disinfectant Levels

[30 TAC §290.110(b)]

What Are Maximum Residual Disinfectant Levels?

In its rules, the EPA noted that there may be increased risks of cancer to people who drink water with *very* high levels of free or combined chlorine. Therefore, the EPA adopted an upper limit to the concentration of disinfectant a distribution system should have, based on all of the sample results. These upper limits are referred to as the Maximum Residual Disinfectant Levels (MRDLs, for short). Table 1 shows the MRDLs for free or combined chlorine [30 TAC §290.110(b)(5)].

Table 1. Maximum Residual Disinfectant Levels for Free or Combined Chlorine

Type of Disinfectant	Maximum milligrams per liter (mg/L)	To see if you comply:
Free chlorine	4.0 mg/L	See if the Running Annual Average (RAA) of all distribution system samples is at or below 4.0 mg/L. If it is, your PWS complies with this rule.
Combined chlorine (also called chloramines)	4.0 mg/L	

Isn't the Minimum Level of Disinfectant in the Distribution System More Important than the Maximum?

Yes. The minimum level of disinfectant in the distribution system **is** more critical than the maximum level, because disinfection kills microbes (germs) that can cause acute diarrhea, nausea, or other illness. The TCEQ's minimum standards for disinfectant in the distribution system have not changed. These standards are shown in Table 2 [30 TAC §290.110(b)(4)].

Table 2. Minimum Disinfectant Levels for Free or Combined Chlorine

Type of Disinfectant	Minimum milligrams per liter (mg/L)	To see if you comply:
Free chlorine	0.2 mg/L	Every month, look at the data for the samples taken that month and the preceding month. If more than 5.0% of the samples in both months are <i>below</i> the minimum, your system has committed a nonacute violation, and you must notify your customers.
Combined chlorine (also called chloramines)	0.5 mg/L	