State Disinfectant Residual Requirements

State	Distribution System Residual (mg/L)	Details about Monitoring, Compliance Determinations, etc.	Regulation Citations
EPA	SW – detectable residual or HPC ≤ 500	95% of samples. Detectable is not defined.	40 CFR § 141.72 (2015)
Alabama	0.2 (free), 0.5 (total)	Daily monitoring. If < 0.2 more than 4 hours, TT violation & PN within 14 days. If < 0.2 more than 24 hours, bacteria samples required. If positive, acute violation & PN.	Ala. Admin. Code r. 335-7-10-.04 (2014)
Colorado	0.2 (free or total)	Measured at TCR sites. Based on # samples - 95%, more than one, one.	5 Colo. Code Regs. § 1002-11, 11.8(3)(2015)
Delaware	0.3 (free)	Maintain throughout distribution system, daily monitoring at TCR sites, defines detectable as 0.04	16 Del. Admin. Code § 4462-8.2 (2015)
Florida	0.2 (free), 0.6 (total)	Maintain at all times. Two or five samples per week based on pop. If < min. residual, increase dose and flush until restored.	Fla. Admin. Code Ann. r. 62-555.350(6) (2015)
Georgia	0.2 (free)	Maintain in all locations.	Ga. Comp. R. & Regs. r. 391-3-5-.14(2) (2013)
Illinois	0.2 (free), 0.5 (total)	Maintain in all locations. Monitor at frequent and regular intervals.	Ill. Adm. Code tit. 35 § 653.604 (2015)
Indiana	0.2 (free), 0.5 (total)	Defines detectable as 0.2 free or 0.5 total. 95% of samples.	327 Ind. Admin. Code 8-2-1(98) (2015)
Iowa	0.3 (free), 1.5 (total)	Measured at TCR sites. Continuously maintained throughout DS except at dead ends. Defines detectable as 0.1.	Iowa Admin. Code r. 567-42.4(3) (2015)
Kansas	0.2 (free), 1.0 (total)	Daily monitoring. 95% of samples.	Kan. Admin. Regs. § 28-15-19 (2015)
Kentucky	0.2 (free), 0.5 (total)	Daily monitoring. Maintain throughout distribution system.	401 Ky. Admin. Regs. 8:150 (2015)
Louisiana	0.5 (free or total)	Daily at MRT sites, at TCR sample sites, and at 25% more sites.	La. Admin. Code. Tit 41, § 524, 525 (2015)
Minnesota	0.1 (free or total)	Requires a detectable residual and defines detectable as 0.1.	Minn. R. 4720.3965 (2015) & Minn. R. 4720.0450 (2015)
Missouri	0.2 (total)	Measured at TCR sites. 95% of samples.	Mo. Code. Regs. tit. 10 § 60-4.055(3)&(4) (2015)
Nebraska	SW - 0.2 (free), 0.25 or 0.5 (total); GW – 0.1 (free)	95% of samples.	179 Neb. Admin. Code 13-005.01D1 (2014)
Nevada	0.05 mg/L (free or total)	Requires a detectable residual and defines detectable as 0.05.	Nev. Admin. Code. § 445A.6683 (2014)
New Jersey	0.05 mg/L (free or total)	Requires a detectable residual and defines detectable as 0.05.	N.J. Admin. Code § 7:10-11.16 & 7:10-1.3 (2015)
North Carolina	0.2 (free), 1.0 (total)	Measured at TCR sites. Must be detectable at MRT sites.	15 N.C. Admin. Code 18C.2002 (2015)
Ohio	0.2 (free), 1.0 (total)	Measured at TCR sites. 95% of samples.	Ohio Admin. Code 3745-81-72 & 3745-83-01 (2015)
Oklahoma	0.2 (free), 1.0 (total)	Maintain at most distant points.	Okla. Admin. Code § 252:631-3-3 (2014)
Pennsylvania	Proposed: 0.20 mg/L (free or total)	Proposed: 95% of samples, monitor daily or weekly, 5% OOC cannot be repeated.	25 Pa. Code. § 109.710 & 109.301 (2015)
Tennessee	0.2 (free)	Monitor at TCR sites. 95% of samples.	Tenn. Comp. R. & Regs. 0400-45-01-.31 & .17 (2015)
Texas	0.2 (free), 0.5 (total)	Daily or weekly monitoring based on pop. 95% of samples.	30 Tex. Admin. Code §290.110 (2015)
Vermont	0.1 (free)	Maintain at distant points and defines detectable as 0.1.	12-030-003 Vt. Code. R. 21 (2015)
West Virginia	0.2 (total)	Minimum at all points.	64CSR77, 6.4.c

Source: Compiled by Pennsylvania DEP, June 2015

Industry Standards:

Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers, 2012 Edition, Recommended Standards for Waterworks (Ten States Standards):

- Minimum free chlorine residual in a water distribution system should be 0.2 mg/L.
- Minimum chloramine residual, where chloramination is practiced, should be 1.0 mg/L at distant points in the distribution system.
- Higher residuals may be required depending on pH, temperature and other characteristics of the water.

Water Research Foundation, 2010, Criteria for Optimized Distribution Systems:

- Chlorine residual in 95% of measurements:
    - Free chlorine ≥ 0.20 mg/L
    - Total chlorine ≥ 0.50 mg/L