

Salt Pollution Reference Table

Level	Notes	Chloride Concentration	Conductivity *	Color Code
Safe		0 mg/L – 49 mg/L	0 μ S/cm - 239 μ S/cm	Green
Harmful to Living Things	Some biota will respond to this level of contamination**	50 -249 mg/L	240 -1279 μ S/cm	Yellow
Harmful to Human Health	The EPA has set 250mg/L as the max drinking water standard	250 - 999 mg/L	1280 -5179 μ S/cm	Orange
Lethal	Lethal to many freshwater organisms ***	\geq 1,000 mg/L	\geq 5180 μ S/cm	Red

* Equation used to convert chloride concentration to conductivity for this table:

$$\text{Specific conductance} = (\text{chloride} \times 5.2) - 20$$

This table assumes that the majority of the conductivity in the sample comes from chloride.

** Biota can be affected in “sub-lethal” ways, such as by becoming weaker, failing to develop, not being able to reproduce, not being able to feed (Cowgill and Milazzo, 1990; Anderson, 1948).

*** Effects of chloride on organisms depend on many factors, including dissolved oxygen, temperature, and whether or not the organism is stressed. For example, *Daphnia magna* was able to tolerate higher levels of sodium chloride when dissolved oxygen concentrations were higher; the zooplankton were also able to better tolerate high levels when they had eaten (Fairchild, 1955; Kanygina and Lebedeva, 1957; Biesinger and Christensen, 1972). Salt can accumulate in an organism over time, causing delayed impacts the longer the organism is in the contaminated water body.

References

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- Cowgill, U.M and D.P. Milazzo. 1990. The sensitivity of two cladocerans to water quality variables: salinity and hardness. Arch. Hydrobiol. 120(2): 185-196.
- Fairchild, E.J. 1955. Low dissolved oxygen effect upon the toxicity of certain inorganic salts to the aquatic invertebrate *Daphnia magna*. Louisiana State University Engineering Experiment Station Bull No. 51. 95 pp. (In McKee and Wolf 1963).
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