

Environmental Health Services Division

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Maintaining proper water quality in your pool

Proper water quality is important for the health and safety of pool users as well as for the protection of your pool equipment and the pool itself.

Maintaining the disinfectant and pH levels within the allowable range set by the Washington State Water Recreation Facility regulations (WAC 246-260 and 262) and keeping your filtration system in good working order are critical to the water quality of your pool. Keeping your pool water chemistry in balance can also save you money. You will use less pool chemicals, your pool equipment will last longer and the pool itself will remain in good condition longer.

The Washington State pool code requires you to close your pool when the disinfectant or pH is outside the allowable range (see back of this page), to protect users from unhealthy conditions. If an Environmental Health investigator finds a pool in operation with the disinfectant or pH outside the allowable range, the investigator will close the pool. The investigator will return later for a follow up inspection to recheck the water quality.

We know that the majority of facilities maintain proper water chemistry in their pools. However, improper disinfectant and pH levels are the most common although not the only reasons for pool closures and return inspections. Therefore, rather than increasing the cost of everyone's operating permit to cover the cost of our return inspections, a separate return inspection fee (50% of permit fee) is now charged.

Check the Washington State Water Recreation Facility regulations (WAC 246-260 and 262), read our handout on pool closure issues or contact your Environmental Health investigator to learn more about other important pool parameters that need to be maintained at your pool.

Environmental Services Offices

Seattle 206-263-9566

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**Table 111.1
Minimum and Maximum Levels of Disinfectant (ppm)***

SWIMMING POOL: ***	Minimum
Chlorine	1.5
Chlorine with cyanurate compound	2.0
Bromine	2.5
SPA & WADING POOL: ***	Minimum
Chlorine	3.0
Chlorine with cyanurate compound	3.5
Bromine	4.0

- * Chlorine is measured as free available chlorine residual.
- ** Recirculating spray pools and sensory deprivation tanks shall meet spa and wading pool levels.
- *** The maximum disinfectant level shall conform with manufacturers' recommendations and shall not exceed 10 ppm for any pool.

**Table 111.2
Acceptable Ranges of Selected Chemical and Physical Water Quality Constituents**

CHEMICAL OR PHYSICAL CONSTITUENT	MINIMUM	MAXIMUM
pH (Hydrogen ion)	7.2	8.0
Water clarity (safety)	Main drain and pool bottom visible at all times	-
Turbidity (shielding microorganisms T.U.)*	-	0.5
Cyanuric acid or its derivatives	0	90 ppm
Temperature**	-	104°F
Combined chlorine	-	50% of free chlorine
Ozone***	-	.05
Ionizers (Copper/Silver)	-	1.0/.05

- * In peak periods, turbidity may increase to 1.0 T.U. provided turbidity returns to 0.5 T.U. within a six-hour period following peak use. Turbidity is not a required routine analysis. The local health officer may require turbidity monitoring if special conditions warrant.
- ** A pool facility thermometer shall be provided when the water temperature exceeds 95 degrees Fahrenheit.
- *** Atmospheric measurement.