

CITY OF NORTH RICHLAND HILLS

CONSUMER HEALTH DIVISION

WATER CHEMISTRY LEVELS FOR POOLS/SPAS

Maintaining the right water chemistry at swimming pools/spas is vital! All public/semi-public pools and spas in North Richland Hills are required to meet the water chemistry levels below when the pool is accessible to residents/users.

The Certified Pool Operator/Person In Charge are responsible for checking water chemistry and ensuring that pools and spas are inaccessible to residents/users when the levels below are not met.

Required Water Chemistry Levels for NRH Swimming Pools/Spas			
Parameter	Minimum	Ideal	Maximum
Free Chlorine, Pools Without Stabilizer	1 ppm	2-3 ppm	8 ppm
Free Chlorine, Pools With Stabilizer*	2 ppm	2-4 ppm	8 ppm
Free Chlorine, Spas*	2 ppm	3 ppm	8 ppm
Bromine, Pools	3 ppm	4-6 ppm	10 ppm
Bromine, Spas	4 ppm	5 ppm	10 ppm
Combined Chlorine	None	None	0.4 ppm
pH	≥7.0	7.2-7.6	7.8
Stabilizer/Cyanuric Acid*	None	30-50 ppm	90 ppm**
ORP (Oxidation-Reduction Potential)	600 mV	650-750 mV	900 mV
Alkalinity	60 ppm	60-180 ppm	>180 ppm
Calcium Hardness, Pools	150 ppm	>150ppm-400 ppm	1000 ppm
Calcium Hardness, Spas	100 ppm	150-400 ppm	800 ppm
Algae	None	None	None

*Use of stabilizer/cyanuric acid not allowed for spas, indoor pools, or therapy pools.

**City of NRH follows Model Aquatic Health Code guidelines for use of stabilizer/cyanuric acid.

In addition to the parameters listed above, chemical water balance must be monitored and maintained. Water balance can be measured using the Langelier Saturation Index (LSI) or similar method. Ask your health inspector if you have questions about how to check the chemical balance of the water in the pool/spa. You are required to test for chemical water balance at least once every 10 days while the pool/spa is open.

What test kits/reagents must the pool/spa operator have available?

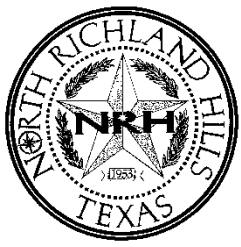
You must have a reliable means of testing for:

- pH,
- free and combined chlorine,
- alkalinity,
- calcium hardness,
- stabilizer/cyanuric acid (when used), and
- bromine (when used).

Chlorine and bromine levels must be determined using a DPD method (i.e. no test strips).

ORP readings must be checked at the same time that pH/sanitizer samples are pulled if you're using in-line ORP meters.

You must protect test kits/reagents from damage/contamination. Reagents must also be changed frequently to ensure accuracy.



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How often are water tests required?

- Class A/B Pools and Spas:
 - o Disinfectant/pH: Every 2 hours if testing manually
 - o Disinfectant/pH: Once per day if using automatic control system, plus reading of control system
 - o Stabilizer/Cyanuric Acid: Once per week

- Class C Pools/Spas That Have Lifeguards or Onsite Staff:
 - o Disinfectant/pH: Minimum 3 times per day if testing manually
 - o Disinfectant/pH: Once per day if using automatic control system, plus reading of control system
 - o Stabilizer/Cyanuric Acid: Once per week

- Class C Pools/Spas Without Lifeguards or Onsite Staff:
 - o Disinfectant/pH: Minimum once per day if testing manually
 - o Disinfectant/pH: If using automatic control system that has capability to transmit the mV level or free chlorine/pH level to CPO once/day—once/week with manual testing kit, plus reading of control system.
 - o Stabilizer/Cyanuric Acid: Once per week

- All Swimming Pools/Spas:
 - o Water Balance: Minimum once every 10 days
 - o Alkalinity/Calcium Hardness: Minimum once every 30 days

How long must water chemistry records be kept?

Water chemistry records and logs must be kept at least two years, and must be available within 5 business days when your inspector requests them.

Other items related to water chemistry that pool/spa owners and operators need to know:

The label is the law! Always read and follow label directions when using chemicals.

Safety Data Sheets (SDS) are required to be kept on site for all chemicals used.

All staff that may need to handle equipment/chemicals for the swimming pool/spa must also be trained and be provided with sufficient personal protective equipment (PPE).

Hand distribution of chemicals is prohibited while users are in the pool/spa. After hand distribution of chemicals, tests of disinfectant levels/pH are required 30 minutes after distribution. No one may reenter pool/spa until the levels are checked and within required range.

Chemical storage containers and tanks must be clearly marked to identify the contents. Chemicals must also be stored properly to prevent wetting/damage/mixing with incompatible chemicals.

Chemicals and chemical feed equipment must be stored so that pool/spa users do not have access to it.

Questions?

Contact NRH Consumer Health at 817-427-6650 or consumerhealth@nrhtx.com