



NASSAU COUNTY HEALTH DEPARTMENT
 200 COUNTY SEAT DRIVE, MINEOLA NY 11501

DAILY RECORD OF WATER QUALITY
 CHLORINE RESIDUAL, pH, SATURATION INDEX

MONTH:	FACILITY:	POOL TYPE:	ADDRESS:	NAME OF OWNER:	NAME OF OPERATOR:
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DAY	PRE-OPENING TESTS					MID-DAY TESTS				CLOSING TESTS					COMMENTS
	TIME	TEMP	pH	CL FREE	CL TOTAL	TIME	pH	CL FREE	CL TOTAL	TIME	TEMP	pH	CL FREE	CL TOTAL	
1															
2															
3															
4															
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SATURATION INDEX	DATE	TIME	TEMP:	HARDNESS:	T. ALKALINITY:	ADJUSTMENTS MADE:
ONCE A MONTH				pH [] + TF [] + CF [] + AF [] - 12.1		

COMPLETED BY: [PRINT]	TITLE:	SIGNATURE:	DATE COMPLETED:
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KEEPING RECORDS

THE NEW YORK STATE SANITARY CODE REQUIRES THAT CHLORINE AND pH LEVELS BE TESTED THREE TIMES DAILY, RESULTS RECORDED AND KEPT ON-SITE FOR 12 MONTHS. ADDITIONAL TESTS SHOULD BE TAKEN AS NEEDED. WHIRLPOOLS SHOULD BE TESTED HOURLY SINCE HIGH WATER TEMPERATURES, TURBULENCE AND SMALL VOLUMNES CAUSE CHLORINE LEVELS TO FLUCTUATE RAPIDLY.

TESTING OF WATER

WATER SAMPLES MUST BE TAKEN AT LEAST ONE-FOOT DEEP AND HALFWAY BETWEEN TWO INLETS. DO NOT TEST AT POOL CORNERS. **FOLLOW INDIVIDUAL TEST KIT INSTRUCTIONS WHEN TESTING.**

CHLORINE & pH REQUIREMENTS

SPA POOLS MUST HAVE A FREE CHLORINE OF AT LEAST 1.5 PPM. WHEN pH IS 7.2 TO 7.8 FREE CHLORINE RESIDUAL IN ALL OTHER POOLS MUST BE AT LEAST 0.6 PPM. WHEN pH IS 7.9 TO 8.2, CHLORINE IN ALL POOLS MUST BE AT LEAST 1.5 PPM. CHLORINE LEVELS MAY NOT EXCEED 5.0 IN ANY POOL. A pH RANGE OF 7.2 TO 8.2 MUST BE MAINTAINED IN ALL POOLS. SPA POOLS MAY NOT EXCEED A pH OF 7.8!!

SATURATION INDEX FOR SWIMMING POOLS

SATURATION INDEX IS EQUAL TO THE pH PLUS A TEMPERATURE FACTOR, PLUS A CALCIUM FACTOR, PLUS AND ALKALINITY FACTOR MINUS THE CONSTANT 12.1.

$$S.I. = pH + TF + CF + AF - 12.1$$

THE OPTIMUM SATURATION INDEX IS ZERO.

TOLERANCE LIMITS ARE (+) OR (-) 0.5.

CONVERSION TABLES

(IN°F)	TEMP. TF	HARDNESS	CALCIUM CF	TOTAL ALKALINITY	AF
32	0.0	5	0.3	5	0.7
37	0.1	25	1.0	25	1.4
46	0.2	50	1.3	50	1.7
53	0.3	75	1.5	75	1.9
60	0.4	100	1.6	100	2.0
66	0.5	150	1.8	150	2.2
76	0.6	200	1.9	200	2.3
84	0.7	300	2.1	300	2.5
94	0.8	400	2.2	400	2.6
105	0.9	800	2.5	800	2.9
128	1.0	1000	2.6	1000	3.0

IF THE INDEX IS POSITIVE (+), THE WATER IS SUPER-SATURATED WITH CaCO_3 AND MAY DEPOSIT A PROTECTIVE COATING OR SCALE IN THE PIPELINE, PARTICULARLY METAL FILTERS, VALVES AND PUMPS.

IF THE INDEX IS NEGATIVE (-), WATER WILL DISOLVE CaCO_3 AND MAY BE CORROSIVE TO THE POOL SHELL AND RECIRCULATION SYSTEM.

NORMAL CONTROL LEVELS

pH - 7.2 - 7.8

TEMPERATURE - 78°F - 80°F

TOTAL ALKALINITY - 80 - 120 mg/l

FREE CHLORINE 0.6 (MINIMUM, POOLS ONLY)

SATURATION INDEX (-) 0.5 - (+) 0.5

CALCIUM HARDNESS -180 - 250 mg/l

ALKALINITY CONTROL

TO INCREASE: 1.5 lbs. OF SODIUM BICARBONATE (NaHCO_3) WILL RAISE THE ALKALINITY OF 10,000 GALLONS OF WATER BY 10 mg/l.

TO LOWER: ADD MURIATIC ACID - NO MORE THAN ONE PINT (1/8 GALLON) PER 5,000 GALLON OF WATER WILL LOWER ALKALINITY BY 12 mg/l. (OR ADD 1.25 lbs. OF SODIUM BISULFATE PER 5,000 GALLONS)

HARDNESS CONTROL (NOTE: CALCIUM HARDNESS IS ASSUMED TO BE 70% OF TOTAL HARDNESS)

TO INCREASE: 1 lb. OF CALCIUM CHLORIDE WILL RAISE THE CALCIUM HARDNESS OF 10,000 GALLONS OF WATER BY 11 mg/l. IT SHOULD BE ADDED IN SMALL AMOUNTS.

TO LOWER: DILUTE WITH SOFT WATER.

CORRECTING LEVELS OF CHLORINE AND pH

RAISE pH LEVELS BY FEEDING SODA, pH PLUS, OR SODIUM BICARBONATE

LOWER pH LEVELS BY FEEDING MURIATIC ACID, pH MINUS, OR SODIUM BISULFATE

RAISE CHLORINE LEVELS BY INCREASING FEED RATE.

LOWER CHLORINE LEVELS BY DECREASING CHLORINE FEED RATE. IF FREE IS GREATER THAT 5.0 PPM, LOWER IT BE DILUTING WITH FRESH WATER BY BACKWASHING OR FEEDING SODIUM SULFITE (USE SMALL AMOUNTS).

ALL POOL CHEMICALS MUST BE ADDED TO POOL WATER BY AN APPROVED POSITIVE DISPLACEMENT MECHANICAL PUMP. HAND FEEDING POOL CHEMICALS DIRECTLY TO POOL WATER OR THROUGH SKIMMERS AND/OR PRE-COAT POTS IS PROHIBITED!!!