Stability Index

Stability Index

A. Total Solids (ppm)		*B. Temperature (° F)*		*C. Calcium Hardness (ppm of $CaCO_3$)*		*D. Total Alkalinity (ppm of $CaCO_3$)*	
50 - 300	0.1	32 - 34	2.6	10 - 11	0.6	10 - 11	1.0
400 - 1000	0.2	36 - 42	2.5	12 - 13	0.7	12 - 13	1.1
		44 - 48	2.4	14 - 17	0.8	14 - 17	1.2
		50 - 56	2.3	18 - 22	0.9	18 - 22	1.3
		58 - 62	2.2	23 - 27	1.0	23 - 27	1.4
		64 - 70	2.1	28 - 34	1.1	28 - 35	1.5
		72 - 80	2.0	35 - 43	1.2	36 - 44	1.6
		82 - 88	1.9	44 - 55	1.3	45 - 55	1.7
		90 - 98	1.8	56 - 69	1.4	56 - 69	1.8
		100 - 110	1.7	70 - 87	1.5	70 - 88	1.9

		112 - 122	1.6	88- 110	1.6	89 - 110	2.0
		124 - 132	1.5	111- 138	1.7	111- 139	2.1
		134 - 146	1.4	139- 174	1.8	140- 176	2.2
		148 - 160	1.3	175- 220	1.9	177- 220	2.3
		162 - 178	1.2	230- 270	2.0	230- 270	2.4
				280- 340	2.1	280- 350	2.5
				350- 430	2.2	360- 440	2.6
				440- 550	2.3	450- 550	2.7
				560- 590	2.4	560- 590	2.8
				700- 870	2.5	700- 880	2.9
				880-1000	2.6	890-10 00	3.0

From the water analysis , use the above tables to obtain the values of A, B, C & D.

Find the pHs using :

$$pHs = (9.3 + A + B) - (C + D)$$

After determining the pHs (pH of saturation) using the above formula, the Stability Index may then be calculated:

Stability Index - 2pHs - Actual pH.

The Stability Index is a means of predicting the tendencies of water under any given condition.

The Stability Index graph is based on a composite of results from actual field tests and conditions encountered. Water with a Stability Index of between 6.2 and 6.6 would be considered stable or in balance. An Index of 6.0 would indicate scale formation, increasingly so as the Index is lowered. An Index of 7.0 would indicate corrosion with increased activity as the Index increases