

Determine water condition after blending to 30mg/L as CaCO₃

	Ex Sandfilter	Ex NF Plant	Blend	Softening to desired Ca input (Soda Ash)	pH Adjusted	Alternative pH Adjusted	Elevated temperature Boiler Water	Units	Softening to desired Ca input (Lime)	pH Adjusted	Elevated temperature Boiler Water
pH	7.71	7.81	7.77	8.52	8.00	8.00	8.01		8.65	8.00	8.01
Temperature	20	20	20.00	20.00	20.00	20.00	65	degrees C	20.00	20.00	65.00
Total alkalinity	130	33	52.40	57.43	57.43	57.43	55.81	mg/l CaCO ₃	32.40	32.40	32.40
Acidity	140.7	35.14	56.25	56.08	56.08	56.08	57.69	mg/l CaCO ₃	30.96	33.46	33.46
Calcium	63	35	60.00	30.00	30.00	30.00	30.00	mg/l CaCO ₃	40.00	40.00	40.00
Magnesium	33	6.8	12.04	12.04	12.04	12.04	12.04	mg/l CaCO ₃	12.04	12.04	12.04
Sodium	22	13	14.16	26.80	26.80	26.80	26.80	mgNa/l	10.68	10.68	10.68
Sulphate	12	0.2	2.56	2.56	2.56	2.56	2.56	mgSO4/l	2.56	2.56	2.56
Chloride	32	9.7	14.16	14.16	14.16	15.31	14.16	mgCl/l	14.16	14.16	14.16
Ionic strength	0.0062	0.0016	0.0025	0.0025	0.0025	0.0025	0.0025		0.0025	0.0025	0.0025
TDS	247.04	65.28	101.63	101.63	101.63	101.63	101.63	mg/l	101.63	101.63	101.63
Conductivity	38.6	10.2	15.88	15.88	15.88	15.88	15.88	mS/m	15.88	15.88	15.88
Precipitation potential	5.52	-3.43	-3.29	-0.02	-2.93	-2.92	-0.96	mg/l CaCO ₃	0.00	-2.32	-0.83
Dosage type				Soda ash	CO₂	HCL			Lime	CO₂	
Dosage required				37.14	1.45	1.16		mg/l as Na ₂ CO ₃ and CO ₂	18.59	1.10	
Langelier Index				0.14	-0.38		0.47				

Langelier Index Definition

Slightly scale forming and corrosive.

Slightly corrosive but non-scale forming.

Slightly scale forming and corrosive.

Determine water condition after blending to 40mg/L as CaCO₃

	Ex Sandfilter	Ex NF Plant	Blend	Softening to desired Ca input	pH Adjusted	Elevated temperature Boiler Water	Units
pH	7.71	7.81	7.77	8.40	8.00	8.01	
Temperature	20	20	20.00	20.00	20.00	90	degrees C
Total alkalinity	130	33	52.40	56.66	56.66	56.66	mg/l CaCO ₃
Acidity	140.7	35.14	56.25	56.08	58.57	58.57	mg/l CaCO ₃
Calcium	160	35	60.00	40.00	40.00	40.00	mg/l CaCO ₃
Magnesium	33	6.8	12.04	12.04	12.04	12.04	mg/l CaCO ₃
Sodium	22	13	14.16	21.84	21.84	21.84	mgNa/l
Sulphate	12	0.2	2.56	2.56	2.56	2.56	mgSO4/l
Chloride	32	9.7	14.16	14.16	14.16	14.16	mgCl/l
Ionic strength	0.0062	0.0016	0.0025	0.0025	0.0025	0.0025	
TDS	247.04	65.28	101.63	101.63	101.63	101.63	mg/l
Conductivity	38.6	10.2	15.88	15.88	15.88	15.88	mS/m
Precipitation potential	5.52	-3.43	-3.29	-0.03	-2.25	2.05	mg/l CaCO ₃
Dosage type				Soda ash	CO₂		
Dosage required				25.72	1.10		mg/l as Na ₂ CO ₃ and CO ₂