APPENDIX B

Solubility of Oxygen[1] in Fresh Water and Values of $1.035^{(T-20)}$ for Temperature Correction[2]

Temperature °C	Temperature °F	Saturation DO mg/l	$1.035^{(T-20)}$	Temperature °C	Temperature °F	Saturation DO mg/l	$1.035^{(T-20)}$
0	32	14.6	.503	21	69.8	9.0	1.035
1	33.8	14.2	.520	22	71.6	8.8	1.071
2	35.6	13.8	.538	23	73.4	8.7	1.109
3	37.4	13.5	.557	24	75.2	8.5	1.148
4	39.2	13.1	.577	25	77.0	8.4	1.188
5	41.0	12.8	.597	26	78.8	8.2	1.229
6	42.8	12.5	.618	27	80.6	8.2	1.272
7	44.6	12.2	.639	28	82.4	7.9	1.317
8	46.4	11.9	.662	29	84.2	7.8	1.363
9	48.2	11.6	.685	30	86.0	7.6	1.411
10	50.0	11.3	.709	31	87.8	7.5	1.460
11	51.8	11.1	.734	32	89.6	7.4	1.511
12	53.6	10.8	.759	33	91.4	7.3	1.564
13	55.4	10.6	.786	34	93.2	7.2	1.619
14	57.1	10.4	.814	35	95.0	7.1	1.675
15	59.0	10.2	.842	36	96.8	7.0	1.739
16	60.8	10.0	.871	37	98.6	6.9	1.795
17	62.6	9.7	.902	38	100.4	6.8	1.858
18	64.4	9.5	.934	39	102.2	6.7	1.923
19	66.2	9.4	.966	40	104.0	6.6	1.990
20	68.0	9.2	1.000				

Temperature effect on $E_t = E_{20} \cdot (T-20)$

[1] To be used for calculating oxygen transfer capability.

[2] To be used for trickling filter design utilizing Howland Formula.

Work and Energy

Kilowatt-Hours	Horsepower-Hours	British Thermal Units
1	1.341	3,410
0.746	1	2,540

Temperature

Degree Fahrenheit = 32. + 9/5 × Degree Celcius

0	5	10	15	20	25	30	35	40	45	50	55	60	C
32	41	50	59	68	77	86	95	104	113	122	131	140	F

Metric Units Application

Description	Unit	Symbol	English Equivalents
River flow	cubic meter per second	Cu m/sec	35.314 cfs
Flow in pipes, conduits, channels, over weirs, pumping	cubic meter per second	cu m/sec	
	liter per second	liter/sec	15.85 gpm
Discharges or abstractions, yields	cubic meter per day	cu m/day	0.183 gpm
	cubic meter per year	cu m/yr	
Usage of water	liter per person per day	liter/person/day	0.264 gcpd
Density	kilogram per cubic meter	kg/cu m	0.0624 lb/cu ft
Concentration	milligram per liter	mg/liter	1 ppm