

APPENDIX 9

SURFACE WATER STORAGE CALCULATIONS

Integra Consulting						Job No	Date
						3036	07.11.18
						Sheet	By
Calculations		Telephone:		0161 237 3400		01	JS
Job Title							
Storm Water Flood Model							
M5-60 = 18		r = 0.335		Return, T = 100		Area (m²) = 8882	
				CC Factor = 0.3		Limit (l/s) = 6.5	
				Totals		400	568
D (mins)	M5-D (mm)	MT-D (mm)	Rate (mm/hr)	Flow (l/s)	CC Flow (l/s)	Storage (m³)	CC Storage (m³)
10.00	8.88	16.72	100.32	245.93	319.71	143.66	187.93
15.00	10.71	20.75	83.01	203.48	264.53	177.29	232.23
20.00	12.09	23.58	70.75	173.45	225.48	200.34	262.78
25.00	13.20	25.97	62.33	152.80	198.64	219.45	288.21
30.00	14.14	28.00	55.99	137.26	178.43	235.36	309.48
35.00	14.96	29.76	51.01	125.06	162.57	248.97	327.75
40.00	15.68	31.32	46.98	115.18	149.73	260.83	343.76
45.00	16.34	32.73	43.64	106.99	139.09	271.32	357.99
50.00	16.93	34.02	40.82	100.07	130.09	280.71	370.78
55.00	17.49	35.20	38.40	94.13	122.37	289.19	382.39
60.00	18.00	36.29	36.29	88.97	115.66	296.90	392.99
65.00	18.48	37.31	34.44	84.44	109.77	303.95	402.74
70.00	18.93	38.27	32.80	80.41	104.54	310.44	411.76
75.00	19.36	39.17	31.33	76.82	99.86	316.42	420.12
80.00	19.76	40.02	30.01	73.57	95.65	321.96	427.91
85.00	20.15	40.82	28.82	70.64	91.83	327.11	435.18
90.00	20.52	41.59	27.72	67.96	88.35	331.90	442.00
95.00	20.87	42.31	26.72	65.51	85.17	336.38	448.41
100.00	21.21	43.01	25.81	63.26	82.24	340.56	454.43
105.00	21.54	43.67	24.96	61.18	79.53	344.49	460.12
110.00	21.85	44.31	24.17	59.25	77.03	348.16	465.48
115.00	22.15	44.92	23.44	57.46	74.70	351.62	470.56
120.00	22.45	45.51	22.76	55.79	72.52	354.87	475.36
125.00	22.73	46.08	22.12	54.22	70.49	357.92	479.92
130.00	23.01	46.63	21.52	52.76	68.58	360.80	484.25
135.00	23.28	47.16	20.96	51.38	66.79	363.51	488.35
140.00	23.54	47.67	20.43	50.08	65.10	366.06	492.26
145.00	23.79	48.16	19.93	48.85	63.51	368.47	495.97
150.00	24.04	48.64	19.46	47.69	62.00	370.74	499.51
155.00	24.28	49.10	19.01	46.59	60.57	372.87	502.87
160.00	24.51	49.55	18.58	45.55	59.22	374.89	506.08
165.00	24.74	49.99	18.18	44.56	57.93	376.79	509.13
170.00	24.97	50.41	17.79	43.62	56.70	378.58	512.05
175.00	25.19	50.82	17.42	42.72	55.53	380.27	514.82
180.00	25.40	51.22	17.07	41.86	54.41	381.85	517.47
185.00	25.61	51.61	16.74	41.04	53.35	383.35	520.00
190.00	25.82	51.99	16.42	40.25	52.32	384.75	522.40
195.00	26.02	52.36	16.11	39.50	51.35	386.06	524.70
200.00	26.22	52.72	15.82	38.77	50.41	387.30	526.89

205.00	26.42	53.08	15.53	38.08	49.51	388.46	528.98
210.00	26.61	53.42	15.26	37.42	48.64	389.54	530.97
215.00	26.79	53.75	15.00	36.77	47.81	390.54	532.86
220.00	26.98	54.08	14.75	36.16	47.01	391.48	534.67
225.00	27.16	54.40	14.51	35.56	46.23	392.36	536.39
230.00	27.34	54.71	14.27	34.99	45.49	393.16	538.02
235.00	27.52	55.02	14.05	34.44	44.77	393.91	539.58
240.00	27.69	55.32	13.83	33.90	44.07	394.60	541.06
245.00	27.86	55.61	13.62	33.39	43.40	395.23	542.46
250.00	28.03	55.90	13.42	32.89	42.75	395.81	543.80
255.00	28.19	56.18	13.22	32.40	42.12	396.33	545.06
260.00	28.35	56.45	13.03	31.94	41.52	396.80	546.26
265.00	28.52	56.72	12.84	31.48	40.93	397.22	547.39
270.00	28.67	56.98	12.66	31.04	40.36	397.59	548.46
275.00	28.83	57.24	12.49	30.62	39.80	397.92	549.47
280.00	28.98	57.50	12.32	30.20	39.26	398.20	550.42
285.00	29.14	57.74	12.16	29.80	38.74	398.44	551.32
290.00	29.29	57.99	12.00	29.41	38.23	398.64	552.16
295.00	29.43	58.22	11.84	29.03	37.74	398.79	552.95
300.00	29.58	58.46	11.69	28.66	37.26	398.91	553.68
305.00	29.73	58.69	11.55	28.30	36.79	398.99	554.37
310.00	29.87	58.91	11.40	27.95	36.34	399.03	555.00
315.00	30.01	59.14	11.26	27.61	35.90	399.03	555.59
320.00	30.15	59.35	11.13	27.28	35.47	399.00	556.13
325.00	30.29	59.57	11.00	26.96	35.05	398.93	556.63
330.00	30.42	59.78	10.87	26.64	34.64	398.83	557.09
335.00	30.56	59.98	10.74	26.34	34.24	398.69	557.50
340.00	30.69	60.18	10.62	26.04	33.85	398.53	557.87
345.00	30.83	60.38	10.50	25.74	33.47	398.33	558.20
350.00	30.96	60.58	10.38	25.46	33.09	398.11	558.49
355.00	31.09	60.99	10.31	25.27	32.85	399.80	561.28
360.00	31.21	61.21	10.20	25.01	32.51	399.76	561.81
365.00	31.34	61.42	10.10	24.75	32.18	399.70	562.32
370.00	31.47	61.63	9.99	24.50	31.85	399.62	562.80
375.00	31.59	61.84	9.89	24.26	31.53	399.52	563.25
380.00	31.71	62.05	9.80	24.02	31.22	399.40	563.68
385.00	31.83	62.25	9.70	23.78	30.92	399.25	564.08
390.00	31.96	62.46	9.61	23.56	30.62	399.09	564.45
395.00	32.07	62.66	9.52	23.33	30.33	398.91	564.80
400.00	32.19	62.86	9.43	23.11	30.05	398.72	565.13
405.00	32.31	63.05	9.34	22.90	29.77	398.50	565.44
410.00	32.43	63.25	9.26	22.69	29.50	398.27	565.72
415.00	32.54	63.44	9.17	22.48	29.23	398.02	565.98
420.00	32.66	63.63	9.09	22.28	28.97	397.75	566.22
425.00	32.77	63.82	9.01	22.09	28.71	397.47	566.44
430.00	32.88	64.01	8.93	21.89	28.46	397.17	566.63
435.00	32.99	64.19	8.85	21.71	28.22	396.86	566.81
440.00	33.10	64.38	8.78	21.52	27.98	396.53	566.97
445.00	33.21	64.56	8.70	21.34	27.74	396.18	567.11
450.00	33.32	64.74	8.63	21.16	27.51	395.83	567.22

455.00	33.43	64.92	8.56	20.99	27.28	395.45	567.32
460.00	33.54	65.09	8.49	20.81	27.06	395.07	567.41
465.00	33.64	65.27	8.42	20.65	26.84	394.67	567.47
470.00	33.75	65.44	8.35	20.48	26.62	394.25	567.52
475.00	33.85	65.62	8.29	20.32	26.41	393.82	567.55
480.00	33.96	65.79	8.22	20.16	26.21	393.38	567.56
485.00	34.06	65.96	8.16	20.00	26.00	392.93	567.55
490.00	34.16	66.12	8.10	19.85	25.80	392.46	567.53
495.00	34.26	66.29	8.04	19.70	25.61	391.99	567.50
500.00	34.36	66.46	7.97	19.55	25.41	391.49	567.44
505.00	34.46	66.62	7.92	19.40	25.23	390.99	567.38
510.00	34.56	66.78	7.86	19.26	25.04	390.48	567.29
515.00	34.66	66.95	7.80	19.12	24.86	389.95	567.19
520.00	34.76	67.11	7.74	18.98	24.68	389.42	567.08
525.00	34.85	67.26	7.69	18.85	24.50	388.87	566.96
530.00	34.95	67.42	7.63	18.71	24.32	388.31	566.82
535.00	35.05	67.58	7.58	18.58	24.15	387.74	566.66
540.00	35.14	67.73	7.53	18.45	23.98	387.16	566.49
545.00	35.24	67.89	7.47	18.32	23.82	386.57	566.31
550.00	35.33	68.04	7.42	18.20	23.66	385.97	566.12
555.00	35.42	68.19	7.37	18.07	23.49	385.36	565.91
560.00	35.52	68.34	7.32	17.95	23.34	384.74	565.69
565.00	35.61	68.49	7.27	17.83	23.18	384.11	565.45
570.00	35.70	68.64	7.23	17.71	23.03	383.48	565.21
575.00	35.79	68.79	7.18	17.60	22.88	382.83	564.95
580.00	35.88	68.94	7.13	17.48	22.73	382.17	564.68
585.00	35.97	69.08	7.09	17.37	22.58	381.50	564.40
590.00	36.06	69.23	7.04	17.26	22.44	380.83	564.11
595.00	36.15	69.37	7.00	17.15	22.29	380.14	563.80
600.00	36.24	69.51	6.95	17.04	22.15	379.45	563.49
605.00	36.32	69.65	6.91	16.93	22.01	378.75	563.16
610.00	36.41	69.79	6.86	16.83	21.88	378.04	562.82
615.00	36.50	69.93	6.82	16.73	21.74	377.32	562.47
620.00	36.58	70.07	6.78	16.62	21.61	376.60	562.12
625.00	36.67	70.21	6.74	16.52	21.48	375.86	561.75
630.00	36.75	70.35	6.70	16.42	21.35	375.12	561.37
635.00	36.84	70.48	6.66	16.33	21.22	374.37	560.98
640.00	36.92	70.62	6.62	16.23	21.10	373.61	560.58
645.00	37.00	70.75	6.58	16.13	20.97	372.85	560.17
650.00	37.09	70.89	6.54	16.04	20.85	372.08	559.75
655.00	37.17	71.02	6.51	15.95	20.73	371.30	559.32
660.00	37.25	71.15	6.47	15.86	20.61	370.51	558.88
665.00	37.33	71.28	6.43	15.77	20.50	369.71	558.43
670.00	37.42	71.41	6.40	15.68	20.38	368.91	557.98
675.00	37.50	71.54	6.36	15.59	20.27	368.10	557.51
680.00	37.58	71.67	6.32	15.50	20.15	367.29	557.03
685.00	37.66	71.80	6.29	15.42	20.04	366.47	556.55
690.00	37.74	71.92	6.25	15.33	19.93	365.64	556.06
695.00	37.81	72.05	6.22	15.25	19.82	364.80	555.56
700.00	37.89	72.18	6.19	15.17	19.72	363.96	555.05

705.00	37.97	72.30	6.15	15.08	19.61	363.11	554.53
710.00	38.05	72.42	6.12	15.00	19.50	362.26	554.00
715.00	38.13	72.55	6.09	14.92	19.40	361.39	553.47
720.00	38.20	72.67	6.06	14.85	19.30	360.53	552.93
725.00	38.28	72.79	6.02	14.77	19.20	359.65	552.37
730.00	38.36	72.91	5.99	14.69	19.10	358.77	551.82
735.00	38.43	73.03	5.96	14.62	19.00	357.89	551.25
740.00	38.51	73.15	5.93	14.54	18.90	357.00	550.68
745.00	38.58	73.27	5.90	14.47	18.81	356.10	550.09
750.00	38.66	73.39	5.87	14.39	18.71	355.20	549.51
755.00	38.73	73.51	5.84	14.32	18.62	354.29	548.91
760.00	38.81	73.63	5.81	14.25	18.52	353.37	548.31
765.00	38.88	73.74	5.78	14.18	18.43	352.45	547.69
770.00	38.95	73.86	5.76	14.11	18.34	351.53	547.08
775.00	39.03	73.98	5.73	14.04	18.25	350.60	546.45
780.00	39.10	74.09	5.70	13.97	18.16	349.66	545.82
785.00	39.17	74.20	5.67	13.90	18.07	348.72	545.18
790.00	39.25	74.32	5.64	13.84	17.99	347.77	544.53
795.00	39.32	74.43	5.62	13.77	17.90	346.82	543.88
800.00	39.39	74.54	5.59	13.71	17.82	345.86	543.22
805.00	39.46	74.66	5.56	13.64	17.73	344.90	542.56
810.00	39.53	74.77	5.54	13.58	17.65	343.93	541.88
815.00	39.60	74.88	5.51	13.51	17.57	342.96	541.20
820.00	39.67	74.99	5.49	13.45	17.49	341.98	540.52
825.00	39.74	75.10	5.46	13.39	17.41	341.00	539.83
830.00	39.81	75.21	5.44	13.33	17.33	340.02	539.13
835.00	39.88	75.32	5.41	13.27	17.25	339.02	538.43
840.00	39.95	75.42	5.39	13.21	17.17	338.03	537.72
845.00	40.02	75.53	5.36	13.15	17.09	337.03	537.00
850.00	40.09	75.64	5.34	13.09	17.02	336.02	536.28
855.00	40.15	75.75	5.32	13.03	16.94	335.01	535.55
860.00	40.22	75.85	5.29	12.97	16.86	334.00	534.82
865.00	40.29	75.96	5.27	12.92	16.79	332.98	534.08
870.00	40.36	76.06	5.25	12.86	16.72	331.96	533.33
875.00	40.42	76.17	5.22	12.80	16.64	330.93	532.58
880.00	40.49	76.27	5.20	12.75	16.57	329.90	531.82
885.00	40.56	76.37	5.18	12.69	16.50	328.86	531.06
890.00	40.62	76.48	5.16	12.64	16.43	327.82	530.29
895.00	40.69	76.58	5.13	12.59	16.36	326.77	529.52
900.00	40.75	76.68	5.11	12.53	16.29	325.73	528.74
905.00	40.82	76.78	5.09	12.48	16.22	324.67	527.96
910.00	40.88	76.88	5.07	12.43	16.16	323.62	527.17
915.00	40.95	76.98	5.05	12.38	16.09	322.55	526.38
920.00	41.01	77.09	5.03	12.32	16.02	321.49	525.58
925.00	41.08	77.19	5.01	12.27	15.96	320.42	524.77
930.00	41.14	77.28	4.99	12.22	15.89	319.35	523.96
935.00	41.21	77.38	4.97	12.17	15.83	318.27	523.15
940.00	41.27	77.48	4.95	12.12	15.76	317.19	522.33
945.00	41.33	77.58	4.93	12.08	15.70	316.11	521.50
950.00	41.40	77.68	4.91	12.03	15.63	315.02	520.67

955.00	41.46	77.78	4.89	11.98	15.57	313.93	519.84
960.00	41.52	77.87	4.87	11.93	15.51	312.83	519.00
965.00	41.58	77.97	4.85	11.88	15.45	311.73	518.16
970.00	41.64	78.06	4.83	11.84	15.39	310.63	517.31
975.00	41.71	78.16	4.81	11.79	15.33	309.52	516.46
980.00	41.77	78.26	4.79	11.75	15.27	308.41	515.60
985.00	41.83	78.35	4.77	11.70	15.21	307.30	514.73
990.00	41.89	78.44	4.75	11.65	15.15	306.18	513.87
995.00	41.95	78.54	4.74	11.61	15.09	305.06	513.00
1000.00	42.01	78.63	4.72	11.57	15.04	303.94	512.12
1005.00	42.07	78.73	4.70	11.52	14.98	302.81	511.24
1010.00	42.13	78.82	4.68	11.48	14.92	301.68	510.36
1015.00	42.19	78.91	4.66	11.44	14.87	300.55	509.47
1020.00	42.25	79.00	4.65	11.39	14.81	299.41	508.57
1025.00	42.31	79.09	4.63	11.35	14.75	298.27	507.68
1030.00	42.37	79.19	4.61	11.31	14.70	297.13	506.77
1035.00	42.43	79.28	4.60	11.27	14.65	295.98	505.87
1040.00	42.49	79.37	4.58	11.22	14.59	294.83	504.96
1045.00	42.55	79.46	4.56	11.18	14.54	293.68	504.05
1050.00	42.61	79.55	4.55	11.14	14.49	292.52	503.13
1055.00	42.67	79.64	4.53	11.10	14.43	291.36	502.20
1060.00	42.73	79.73	4.51	11.06	14.38	290.20	501.28
1065.00	42.78	79.82	4.50	11.02	14.33	289.03	500.35
1070.00	42.84	79.90	4.48	10.98	14.28	287.86	499.41
1075.00	42.90	79.99	4.46	10.94	14.23	286.69	498.48
1080.00	42.96	80.08	4.45	10.91	14.18	285.52	497.53
1085.00	43.01	80.17	4.43	10.87	14.13	284.34	496.59
1090.00	43.07	80.25	4.42	10.83	14.08	283.16	495.64
1095.00	43.13	80.34	4.40	10.79	14.03	281.98	494.69
1100.00	43.18	80.43	4.39	10.75	13.98	280.79	493.73
1105.00	43.24	80.51	4.37	10.72	13.93	279.60	492.77
1110.00	43.30	80.60	4.36	10.68	13.88	278.41	491.80
1115.00	43.35	80.69	4.34	10.64	13.84	277.22	490.84
1120.00	43.41	80.77	4.33	10.61	13.79	276.02	489.86
1125.00	43.47	80.86	4.31	10.57	13.74	274.82	488.89
1130.00	43.52	80.94	4.30	10.54	13.70	273.62	487.91
1135.00	43.58	81.03	4.28	10.50	13.65	272.41	486.93
1140.00	43.63	81.11	4.27	10.46	13.60	271.20	485.94
1145.00	43.69	81.19	4.25	10.43	13.56	269.99	484.95
1150.00	43.74	81.28	4.24	10.40	13.51	268.78	483.96
1155.00	43.80	81.36	4.23	10.36	13.47	267.56	482.96
1160.00	43.85	81.44	4.21	10.33	13.42	266.34	481.96
1165.00	43.91	81.52	4.20	10.29	13.38	265.12	480.96
1170.00	43.96	81.61	4.18	10.26	13.34	263.90	479.95
1175.00	44.01	81.69	4.17	10.23	13.29	262.67	478.94
1180.00	44.07	81.77	4.16	10.19	13.25	261.44	477.93
1185.00	44.12	81.85	4.14	10.16	13.21	260.21	476.92
1190.00	44.18	81.93	4.13	10.13	13.17	258.97	475.90
1195.00	44.23	82.01	4.12	10.09	13.12	257.74	474.87
1200.00	44.28	82.09	4.10	10.06	13.08	256.50	473.85

1205.00	44.34	82.17	4.09	10.03	13.04	255.26	472.82
1210.00	44.39	82.25	4.08	10.00	13.00	254.01	471.79
1215.00	44.44	82.33	4.07	9.97	12.96	252.77	470.75
1220.00	44.49	82.41	4.05	9.94	12.92	251.52	469.71
1225.00	44.55	82.49	4.04	9.90	12.88	250.27	468.67
1230.00	44.60	82.57	4.03	9.87	12.84	249.01	467.63
1235.00	44.65	82.65	4.02	9.84	12.80	247.76	466.58
1240.00	44.70	82.73	4.00	9.81	12.76	246.50	465.53
1245.00	44.75	82.81	3.99	9.78	12.72	245.24	464.48
1250.00	44.81	82.89	3.98	9.75	12.68	243.98	463.42
1255.00	44.86	82.96	3.97	9.72	12.64	242.71	462.36
1260.00	44.91	83.04	3.95	9.69	12.60	241.44	461.30
1265.00	44.96	83.12	3.94	9.66	12.56	240.17	460.23
1270.00	45.01	83.19	3.93	9.64	12.53	238.90	459.16
1275.00	45.06	83.27	3.92	9.61	12.49	237.63	458.09
1280.00	45.11	83.35	3.91	9.58	12.45	236.35	457.02
1285.00	45.16	83.42	3.90	9.55	12.41	235.07	455.94
1290.00	45.21	83.50	3.88	9.52	12.38	233.79	454.86
1295.00	45.27	83.57	3.87	9.49	12.34	232.51	453.78
1300.00	45.32	83.65	3.86	9.46	12.30	231.23	452.69
1305.00	45.37	83.73	3.85	9.44	12.27	229.94	451.61
1310.00	45.42	83.80	3.84	9.41	12.23	228.65	450.52
1315.00	45.47	83.88	3.83	9.38	12.20	227.36	449.42
1320.00	45.52	83.95	3.82	9.35	12.16	226.07	448.33
1325.00	45.56	84.02	3.80	9.33	12.13	224.77	447.23
1330.00	45.61	84.10	3.79	9.30	12.09	223.47	446.13
1335.00	45.66	84.17	3.78	9.27	12.06	222.18	445.02
1340.00	45.71	84.24	3.77	9.25	12.02	220.87	443.92
1345.00	45.76	84.32	3.76	9.22	11.99	219.57	442.81
1350.00	45.81	84.39	3.75	9.19	11.95	218.27	441.70
1355.00	45.86	84.46	3.74	9.17	11.92	216.96	440.58
1360.00	45.91	84.54	3.73	9.14	11.89	215.65	439.47
1365.00	45.96	84.61	3.72	9.12	11.85	214.34	438.35
1370.00	46.01	84.68	3.71	9.09	11.82	213.03	437.22
1375.00	46.05	84.75	3.70	9.07	11.79	211.71	436.10
1380.00	46.10	84.83	3.69	9.04	11.75	210.39	434.97
1385.00	46.15	84.90	3.68	9.02	11.72	209.08	433.84
1390.00	46.20	84.97	3.67	8.99	11.69	207.76	432.71
1395.00	46.25	85.04	3.66	8.97	11.66	206.43	431.58
1400.00	46.29	85.11	3.65	8.94	11.62	205.11	430.44
1405.00	46.34	85.18	3.64	8.92	11.59	203.78	429.30
1410.00	46.39	85.25	3.63	8.89	11.56	202.45	428.16
1415.00	46.44	85.32	3.62	8.87	11.53	201.12	427.02
1420.00	46.48	85.39	3.61	8.84	11.50	199.79	425.87
1425.00	46.53	85.46	3.60	8.82	11.47	198.46	424.72
1430.00	46.58	85.53	3.59	8.80	11.44	197.12	423.57
1435.00	46.62	85.60	3.58	8.77	11.41	195.79	422.42
1440.00	46.67	85.67	3.57	8.75	11.38	194.45	421.26
1445.00	46.72	85.74	3.56	8.73	11.35	193.11	420.11
1450.00	46.76	85.81	3.55	8.70	11.32	191.77	418.95

1455.00	46.81	85.88	3.54	8.68	11.29	190.42	417.78
1460.00	46.86	85.94	3.53	8.66	11.26	189.08	416.62
1465.00	46.90	86.01	3.52	8.64	11.23	187.73	415.45
1470.00	46.95	86.08	3.51	8.61	11.20	186.38	414.28
1475.00	46.99	86.15	3.50	8.59	11.17	185.03	413.11
1480.00	47.04	86.22	3.50	8.57	11.14	183.68	411.94
1485.00	47.09	86.28	3.49	8.55	11.11	182.32	410.76
1490.00	47.13	86.35	3.48	8.52	11.08	180.97	409.59
1495.00	47.18	86.42	3.47	8.50	11.05	179.61	408.41
1500.00	47.22	86.49	3.46	8.48	11.02	178.25	407.23
1505.00	47.27	86.55	3.45	8.46	11.00	176.89	406.04
1510.00	47.31	86.62	3.44	8.44	10.97	175.53	404.86
1515.00	47.36	86.69	3.43	8.42	10.94	174.16	403.67
1520.00	47.40	86.75	3.42	8.39	10.91	172.80	402.48
1525.00	47.45	86.82	3.42	8.37	10.89	171.43	401.29
1530.00	47.49	86.88	3.41	8.35	10.86	170.06	400.09
1535.00	47.54	86.95	3.40	8.33	10.83	168.69	398.89
1540.00	47.58	87.01	3.39	8.31	10.80	167.32	397.70
1545.00	47.62	87.08	3.38	8.29	10.78	165.95	396.50
1550.00	47.67	87.15	3.37	8.27	10.75	164.57	395.29
1555.00	47.71	87.21	3.37	8.25	10.72	163.20	394.09
1560.00	47.76	87.28	3.36	8.23	10.70	161.82	392.88
1565.00	47.80	87.34	3.35	8.21	10.67	160.44	391.67
1570.00	47.85	87.40	3.34	8.19	10.65	159.06	390.46
1575.00	47.89	87.47	3.33	8.17	10.62	157.67	389.25
1580.00	47.93	87.53	3.32	8.15	10.59	156.29	388.04
1585.00	47.98	87.60	3.32	8.13	10.57	154.91	386.82
1590.00	48.02	87.66	3.31	8.11	10.54	153.52	385.60
1595.00	48.06	87.72	3.30	8.09	10.52	152.13	384.38
1600.00	48.11	87.79	3.29	8.07	10.49	150.74	383.16
1605.00	48.15	87.85	3.28	8.05	10.47	149.35	381.94
1610.00	48.19	87.91	3.28	8.03	10.44	147.96	380.71
1615.00	48.24	87.98	3.27	8.01	10.42	146.56	379.48
1620.00	48.28	88.04	3.26	7.99	10.39	145.17	378.26
1625.00	48.32	88.10	3.25	7.97	10.37	143.77	377.02
1630.00	48.36	88.17	3.25	7.96	10.34	142.37	375.79
1635.00	48.41	88.23	3.24	7.94	10.32	140.97	374.56
1640.00	48.45	88.29	3.23	7.92	10.29	139.57	373.32
1645.00	48.49	88.35	3.22	7.90	10.27	138.17	372.08
1650.00	48.53	88.41	3.22	7.88	10.25	136.76	370.84
1655.00	48.58	88.48	3.21	7.86	10.22	135.36	369.60
1660.00	48.62	88.54	3.20	7.84	10.20	133.95	368.36
1665.00	48.66	88.60	3.19	7.83	10.17	132.54	367.11
1670.00	48.70	88.66	3.19	7.81	10.15	131.13	365.86
1675.00	48.74	88.72	3.18	7.79	10.13	129.72	364.61
1680.00	48.79	88.78	3.17	7.77	10.10	128.31	363.36
1685.00	48.83	88.84	3.16	7.76	10.08	126.90	362.11
1690.00	48.87	88.90	3.16	7.74	10.06	125.48	360.86
1695.00	48.91	88.96	3.15	7.72	10.04	124.07	359.60
1700.00	48.95	89.02	3.14	7.70	10.01	122.65	358.34

1705.00	48.99	89.08	3.13	7.69	9.99	121.23	357.08
1710.00	49.04	89.14	3.13	7.67	9.97	119.81	355.82
1715.00	49.08	89.20	3.12	7.65	9.95	118.39	354.56
1720.00	49.12	89.26	3.11	7.63	9.92	116.97	353.30
1725.00	49.16	89.32	3.11	7.62	9.90	115.54	352.03
1730.00	49.20	89.38	3.10	7.60	9.88	114.12	350.76
1735.00	49.24	89.44	3.09	7.58	9.86	112.69	349.49
1740.00	49.28	89.50	3.09	7.57	9.84	111.26	348.22
1745.00	49.32	89.56	3.08	7.55	9.81	109.83	346.95
1750.00	49.36	89.62	3.07	7.53	9.79	108.40	345.67
1755.00	49.40	89.68	3.07	7.52	9.77	106.97	344.40
1760.00	49.44	89.74	3.06	7.50	9.75	105.54	343.12
1765.00	49.48	89.80	3.05	7.48	9.73	104.11	341.84
1770.00	49.52	89.85	3.05	7.47	9.71	102.67	340.56
1775.00	49.56	89.91	3.04	7.45	9.69	101.23	339.28
1780.00	49.60	89.97	3.03	7.43	9.66	99.80	338.00
1785.00	49.64	90.03	3.03	7.42	9.64	98.36	336.71
1790.00	49.68	90.09	3.02	7.40	9.62	96.92	335.42
1795.00	49.72	90.14	3.01	7.39	9.60	95.48	334.14
1800.00	49.76	90.20	3.01	7.37	9.58	94.04	332.85
1805.00	49.80	90.26	3.00	7.35	9.56	92.59	331.56
1810.00	49.84	90.32	2.99	7.34	9.54	91.15	330.26
1815.00	49.88	90.37	2.99	7.32	9.52	89.70	328.97
1820.00	49.92	90.43	2.98	7.31	9.50	88.26	327.67
1825.00	49.96	90.49	2.97	7.29	9.48	86.81	326.37
1830.00	50.00	90.54	2.97	7.28	9.46	85.36	325.08
1835.00	50.04	90.60	2.96	7.26	9.44	83.91	323.78
1840.00	50.08	90.66	2.96	7.25	9.42	82.46	322.47
1845.00	50.12	90.71	2.95	7.23	9.40	81.00	321.17
1850.00	50.16	90.77	2.94	7.22	9.38	79.55	319.87
1855.00	50.20	90.83	2.94	7.20	9.36	78.10	318.56
1860.00	50.24	90.88	2.93	7.19	9.34	76.64	317.25
1865.00	50.27	90.94	2.93	7.17	9.32	75.18	315.94
1870.00	50.31	90.99	2.92	7.16	9.30	73.73	314.63
1875.00	50.35	91.05	2.91	7.14	9.29	72.27	313.32
1880.00	50.39	91.10	2.91	7.13	9.27	70.81	312.01
1885.00	50.43	91.16	2.90	7.11	9.25	69.34	310.69
1890.00	50.47	91.21	2.90	7.10	9.23	67.88	309.38
1895.00	50.51	91.27	2.89	7.08	9.21	66.42	308.06
1900.00	50.54	91.32	2.88	7.07	9.19	64.95	306.74
1905.00	50.58	91.38	2.88	7.06	9.17	63.49	305.42
1910.00	50.62	91.43	2.87	7.04	9.15	62.02	304.10
1915.00	50.66	91.49	2.87	7.03	9.14	60.55	302.78
1920.00	50.70	91.54	2.86	7.01	9.12	59.09	301.45
1925.00	50.73	91.60	2.85	7.00	9.10	57.62	300.13
1930.00	50.77	91.65	2.85	6.98	9.08	56.15	298.80
1935.00	50.81	91.71	2.84	6.97	9.06	54.67	297.47
1940.00	50.85	91.76	2.84	6.96	9.04	53.20	296.14
1945.00	50.88	91.81	2.83	6.94	9.03	51.73	294.81
1950.00	50.92	91.87	2.83	6.93	9.01	50.25	293.48