

Ongegund (PPC) Distribution System - Input Variables for Water Requirement Model								
Parameter / Variable	Year	Income Categorization				Com. & Ind. ^(D)	Other ^(E)	Total
		High Income	Middle Income	Low Income	Sub- Total			
Units are presented in brackets with the "Parameter Description" - First Column								
Population ^(A)	2020	232	50	50	333	-	-	-
	2025	244	56	86	386			
	2030	256	61	129	447			
	2035	269	68	181	518			
	2040	283	75	243	601			
	2045	298	83	316	697			
Growth (%/year)	Growth in Population					Growth in Demand		
	2020-2025	1.00%	2.00%	11.38%	3.00%	4%	2%	-
	2025-2030	1.00%	2.00%	8.46%	3.00%	4%	2%	
	2030-2035	1.00%	2.00%	6.96%	3.00%	4%	2%	
	2035-2040	1.00%	2.00%	6.04%	3.00%	4%	2%	
	2040-2045	1.00%	2.00%	5.43%	3.00%	4%	2%	
Unit Demand (l/c/d) ^(B)	2020	140.0	90.0	60.0	-	-	-	
Average Annual Daily Water Requirement (Kl/d - NRW Excluded)	2020	32	5	3	-	0	0	40
	2025	34	5	5		0	0	45
	2030	36	6	8		0	0	50
	2035	38	6	11		0	0	55
	2040	40	7	15		0	0	61
	2045	42	7	19		0	0	69
NRW (%) ^(C)	2020	17.4	17.4	17.4	-	17.4	17.4	-
	2025	15.0	15.0	15.0		15.0	15.0	
	2030	13.8	13.8	13.8		13.8	13.8	
	2035	12.5	12.5	12.5		12.5	12.5	
	2040	11.3	11.3	11.3		11.3	11.3	
	2045	10.0	10.0	10.0		10.0	10.0	
Average Annual Daily Water Requirement (Kl/d)	2020	39	5	4	-	0	0	49
	2025	40	6	6		0	0	53
	2030	42	6	9		0	0	57
	2035	43	7	12		0	0	63
	2040	45	8	16		0	0	69
	2045	46	8	21		0	0	76
Average Peak Month Daily Water Requirement (Kl/d)	2020	90	12	8	-	0	1	111
	2025	92	13	14		0	1	120
	2030	95	15	21		0	1	131
	2035	98	16	28		0	1	144
	2040	102	17	37		1	1	158
	2045	106	19	48		1	1	174
Peak Day Water Requirement (Kl/d)	2020	112	16	10	-	0	1	139
	2025	115	17	17		0	1	150
	2030	119	18	26		0	1	164
	2035	123	20	35		1	1	180
	2040	127	22	47		1	1	197
	2045	132	24	60		1	1	217
Total Annual Water Requirement (Kl/year)	2020	14359	2001	1334	-	44	88	17826
	2025	14665	2147	2222		52	95	19180
	2030	15190	2336	3286		63	103	20978
	2035	15737	2542	4535		75	112	23001
	2040	16307	2767	5995		90	122	25281
	2045	16900	3012	7700		108	133	27854
Peak Month Factor ^(F)	2.28							
Peak Day Factor ^(G)	1.25							

Notes :

→ TO USE THIS SHEET, FILL IN THE VARIABLES IN THE SHADED BLOCKS ABOVE

References:

- (A) - Projected population for 2020/2021 is based on the Census 2011 data and the estimated future population growth, as agreed with Municipality during January 2014.
 (B) - Residential unit demands estimated.
 (C) - Non Revenue Water (NRW): Calculated NRW from July 2020 to June 2021. Estimated 2.4% reduction of NRW over the next five years.
 (D) - Commercial and Industrial: Calculated from Billed Metered Consumption data for the period July 2020 to June 2021. Average 0.1 kl/d.
 (E) - Others: Calculated from Billed Metered Consumption data for the period July 2020 to June 2021. Average 0.2 kl/d.
 (F) - Peak Month Factor: Maximum value calculated from July 2016 to June 2021 data.
 (G) - Peak Day Factor : Estimated

Ongegund (PPC) Distribution System Projected Water Requirements (Kl/a)							Wastewater Flow			
Year *	Measured Potable Water Requirement (System Input Volume)	Projected Water Requirement from model	2% Annual growth on 2020/2021 Water Requirement	4% Annual growth on 2020/2021 Water Requirement	Other Projections			Annual Wastewater Flows (Estimated from Billed Metered Consumption Data)		
					DWS's Reconciliation Strategy (March 2016)					
					Low	Medium	High			
2001										
2002	53 765									
2003	48 600									
2004	31 170									
2005	43 225									
2006	43 555									
2007	54 875									
2008	57 676							22 528		
2009	62 512							24 116		
2010	64 439							24 578		
2011	63 600							23 018		
2012	58 857							25 872		
2013	48 614							26 692		
2014	48 539							22 678		
2015	43 529							17 138		
2016	39 286							12 923		
2017	27 612							6 574		
2018	18 004							6 875		
2019	17 033							7 678		
2020	17 662	17 826	17 662	17 662	Included with Riebeeck Wes All Towns Reconciliation Strategy			8 752		
2025	19 180	19 180	19 500	21 489						
2030	20 978	21 530	21 530	26 144						
2035	23 001	23 771	23 771	31 808						
2040	25 281	26 245	26 245	38 700						
2045	27 854	28 976	28 976	47 084						

Notes: (*) The years in the above table refer to the Municipal Financial Years and is for the period July till June the following year. The measured demand for 2020 is therefore from July 2020 up to June 2021.

