

Ongegund (PPC) Distribution System - Input Variables for Water Requirement Model								
Parameter / Variable	Year	Income Categorization				Com. & Ind. <sup>(D)</sup>	Other <sup>(E)</sup>	Total
		HI	MI	LI	Sub- Total			
Units are presented in brackets with the "Parameter Description" - First Column								
Population <sup>(A)</sup>	2019	225	49	49	323	-	-	-
	2024	237	54	84	374			
	2029	249	60	126	434			
	2034	262	66	176	503			
	2039	275	73	236	583			
	2044	289	80	307	676			
Growth (%/year)		Growth in Population				Growth in Demand		
	2019-2024	1.00%	2.00%	11.38%	3.00%	4%	2%	
	2024-2029	1.00%	2.00%	8.46%	3.00%	4%	2%	
	2029-2034	1.00%	2.00%	6.96%	3.00%	4%	2%	
	2034-2039	1.00%	2.00%	6.04%	3.00%	4%	2%	
	2039-2044	1.00%	2.00%	5.43%	3.00%	4%	2%	
Unit Demand (l/c/d) <sup>(B)</sup>	2019	250.0	190.0	120.0	-	-	-	-
Average Annual Daily Water Requirement (KI/d - NRW Excluded)	2019	56	9	6		6	3	80
	2024	59	10	10		7	3	90
	2029	62	11	15		9	4	101
	2034	65	12	21		11	4	114
	2039	69	14	28		13	4	128
	2044	72	15	37		16	5	145
NRW (%) <sup>(C)</sup>	2019	24.9	24.9	24.9		24.9	24.9	
	2024	20.0	20.0	20.0		20.0	20.0	
	2029	18.8	18.8	18.8		18.8	18.8	
	2034	17.5	17.5	17.5		17.5	17.5	
	2039	16.3	16.3	16.3		16.3	16.3	
	2044	15.0	15.0	15.0		15.0	15.0	
Average Annual Daily Water Requirement (KI/d)	2019	75	12	8		8	4	107
	2024	74	13	13		9	4	113
	2029	77	14	19		11	5	125
	2034	79	15	26		13	5	138
	2039	82	16	34		16	5	153
	2044	85	18	43		19	6	171
Average Peak Month Daily Water Requirement (KI/d)	2019	171	28	18		18	9	244
	2024	169	29	29		21	9	257
	2029	175	32	42		25	10	284
	2034	181	35	58		30	11	315
	2039	187	38	77		36	12	350
	2044	194	41	99		43	13	390
Peak Day Water Requirement (KI/d)	2019	214	35	22		23	11	305
	2024	211	37	36		26	12	321
	2029	218	40	53		31	13	355
	2034	226	43	73		37	14	393
	2039	234	47	96		45	15	437
	2044	242	51	124		54	17	487
Total Annual Water Requirement (KI/year)	2019	27380	4510	2849		2916	1458	39113
	2024	27014	4675	4583		3331	1511	41114
	2029	27956	5082	6774		3990	1643	45444
	2034	28936	5526	9339		4781	1786	50368
	2039	29958	6010	12336		5730	1943	55977
	2044	31024	6538	15831		6868	2113	62375
Peak Month Factor <sup>(F)</sup>	2.28							
Peak Day Factor <sup>(G)</sup>	1.25							

Notes :

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

References:

- (A) - Projected population for 2019/2020 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 2019 to June 2020. Estimated 4.9% reduction of NRW over the next five years.
- (D) - Commercial and Industrial: Calculated from Billed Metered Consumption data for the period July 2016 to June 2017. Average 6 kl/d.
- (E) - Others: Calculated from Billed Metered Consumption data for the period July 2016 to June 2017. Average 3 kl/d.
- (F) - Peak Month Factor: Maximum value calculated from July 2015 to June 2020 data.
- (G) - Peak Day Factor : Estimated

Ongegend (PPC) Distribution System Projected Water Requirements (Kl/a)								Wastewater Flow Annual Wastewater Flows (Estimated from Billed Metered Consumption Data)		
Year *	Measured Potable Water Requirement (System Input Volume)	Projected Water Requirement from model	2% Annual growth on 2016/2017 Water Requirement	4% Annual growth on 2016/2017 Water Requirement	Other Projections					
					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	39 113	39 286	39 286	Included with Riebeek Wes All Towns Reconciliation Strategy			7 678		
2024		41 114	43 375	47 797						
2029		45 444	47 889	58 153						
2034		50 368	52 874	70 752						
2039		55 977	58 377	86 080						
2044		62 375	64 453	104 730						

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 2019 is therefore from July 2019 up to June 2020.

