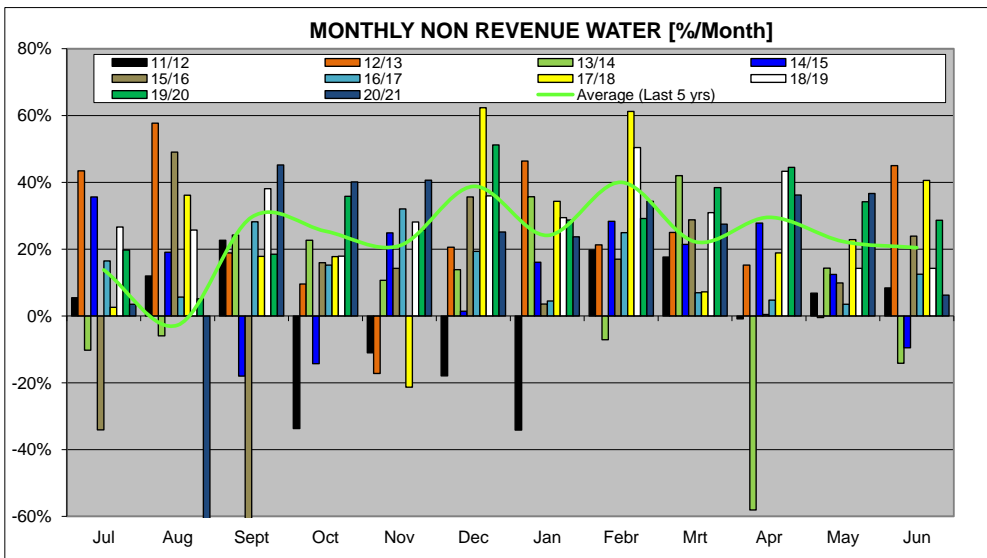
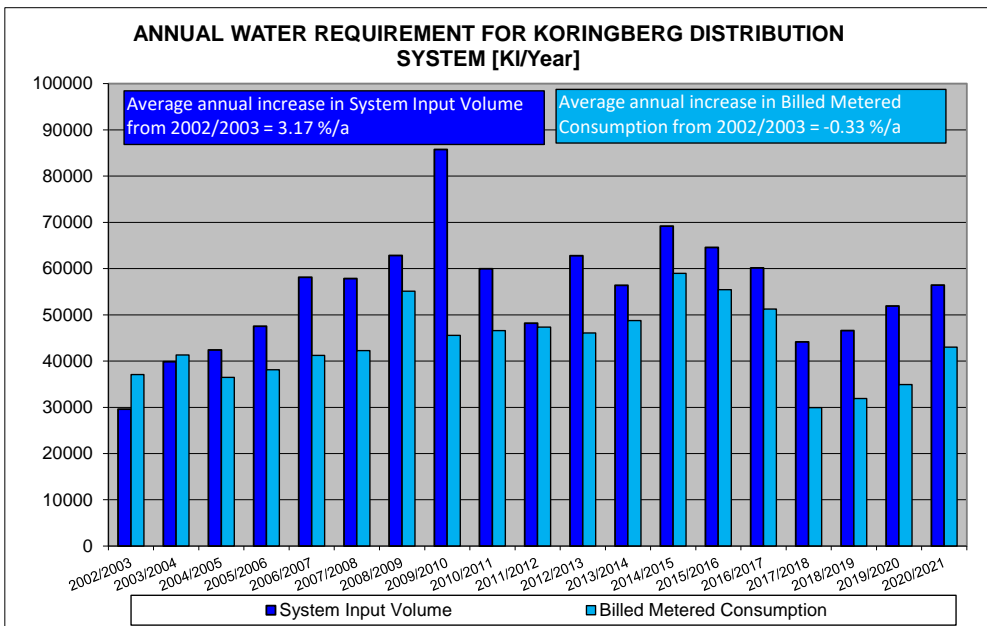
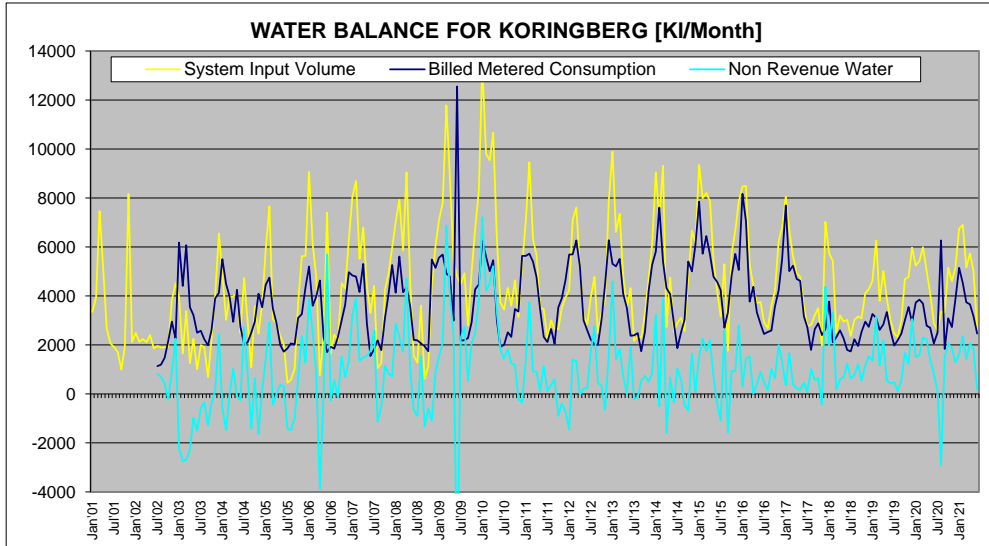


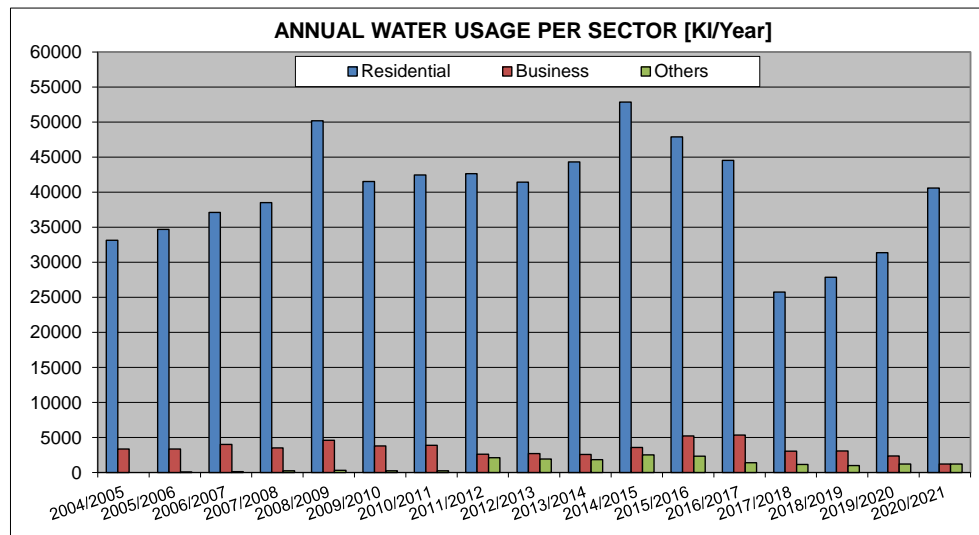
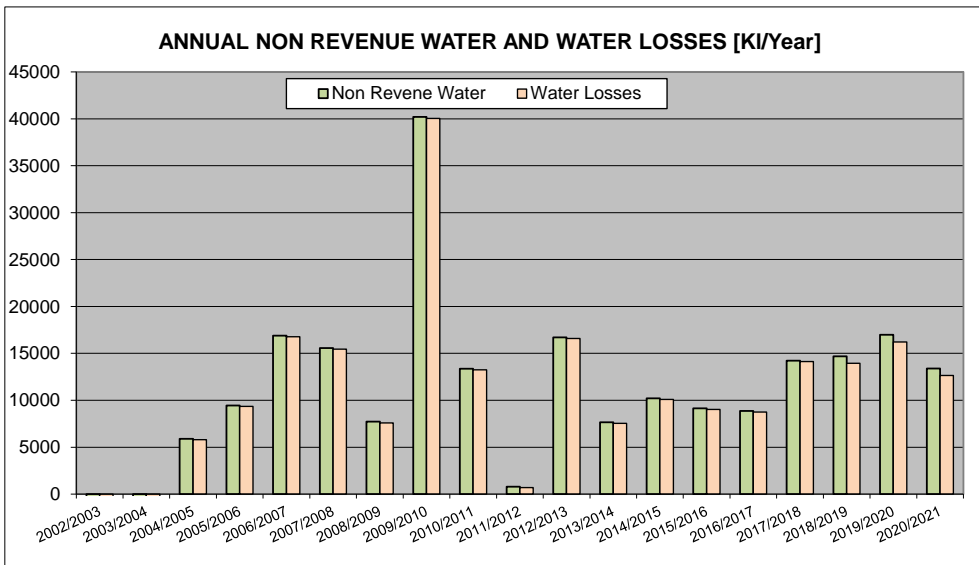
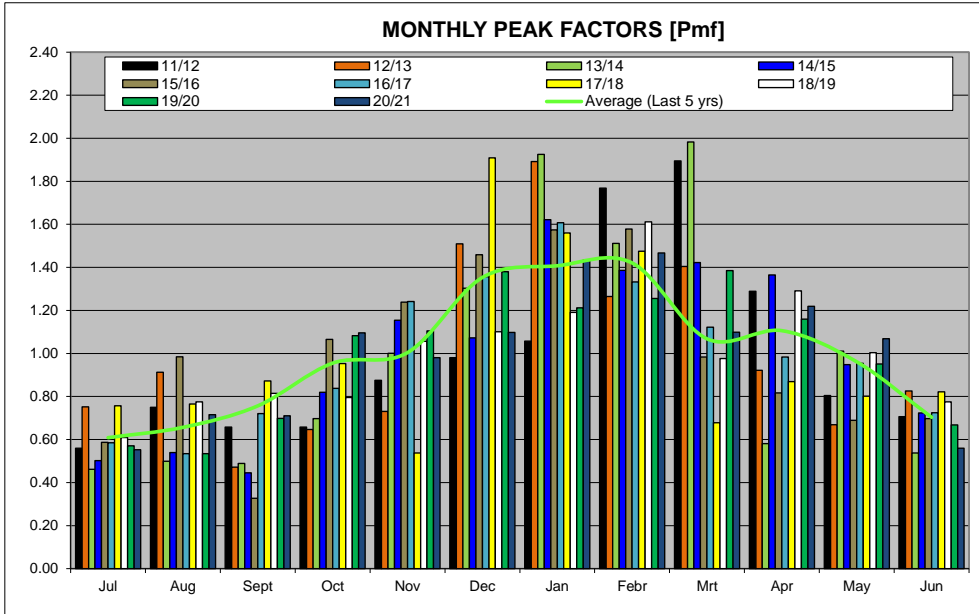
SWARTLAND MUNICIPALITY																			
Koringberg																			
Month	Year	TREATED WATER SUPPLY																	
		System Input Volume	Revenue Water			Non Revenue Water (NRW)										Monthly Water Losses	Monthly Water Losses	Annual Water Losses	Annual Water Losses
		Treated Water from WTW	Billed Metered Consumption	Billed Un-metered Consumption	Monthly NRW	Monthly NRW	Annual NRW	Annual NRW	Unbilled Metered Consumption	Unbilled Un-metered Consumption	Apparent Losses			Real Losses					
		[m³]	[m³]	[m³]	[m³]	[%]	[m³]	[%]	[m³]	[m³]	Illegal Connections	Inaccurate Meters	Administrative Errors	Leak, Reservoirs overflow, etc.		[m³]	[%]	[m³]	[%]
Jan01	00/01	3357																	
Feb01		3937																	
Mrt01		7468																	
Apr01		5051																	
May01		2671																	
Jun01	01/02	2061																	
Jul01		1901																	
Aug01		1722																	
Sep01		995																	
Oct01		1925																	
Nov01	8172																		
Dec01	2118																		
Jan02	02/03	2487																	
Feb02		2124																	
Mrt02		2343																	
Apr02		2118																	
May02		2400																	
Jun02	03/04	1859																	
Jul02		1961	1137	0	824	42.0%			0	4	16	82	41	681	820	41.8%			
Aug02		1895	1186	0	699	36.9%			0	4	14	70	35	577	695	36.7%			
Sep02		1905	1477	0	428	22.5%			0	4	8	42	21	352	424	22.3%			
Oct02		1913	2146	0	-233	-12.2%			0	4	-5	-24	-12	-197	-12.4%				
Nov02	3845	2956	0	889	23.1%			0	8	18	88	44	731	881	22.9%				
Dec02	4523	2264	0	2259	49.9%			0	9	45	225	112	1867	2250	49.7%				
Jan03	3919	8180	0	-2202	-55.4%			0	8	-44	-221	-110	-1834	-2210	-55.6%				
Feb03	1659	4410	0	-2751	-165.8%			0	3	-55	-275	-138	-2286	-2754	-166.0%				
Mrt03	3386	6071	0	-2685	-79.3%			0	7	-54	-269	-135	-2234	-2692	-79.5%				
Apr03	1257	3538	0	-2281	-181.5%			0	3	-46	-228	-114	-1895	-2284	-181.7%				
May03	2254	3224	0	-970	-43.0%			0	5	-19	-97	-49	-809	-975	-43.2%				
Jun03	1013	2921	0	-1488	-146.9%			0	2	-30	-149	-75	-1222	-1490	-147.1%				
Jul03	1995	2579	0	-584	-29.3%			0	4	-12	-59	-29	-488	-588	-29.5%				
Aug03	1905	2236	0	-331	-17.4%			0	4	-3	-33	-17	-278	-335	-17.6%				
Sep03	686	1982	0	-1296	-188.9%			0	1	-26	-130	-65	-1077	-1297	-189.1%				
Oct03	2195	2985	0	-390	-17.8%			0	4	-8	-39	-20	-327	-394	-18.0%				
Nov03	4042	3903	0	139	3.4%			0	8	3	13	7	109	131	3.2%				
Dec03	6541	4122	0	2419	37.0%			0	13	48	241	120	1997	2406	36.8%				
Jan04	4929	5500	0	-572	-11.6%			0	10	-12	-58	-29	-483	-581	-11.8%				
Feb04	3028	4502	0	-1474	-48.7%			0	6	-30	-148	-74	-1228	-1480	-48.9%				
Mrt04	3972	3988	0	-16	-0.4%			0	8	0	-2	-1	-20	-24	-0.6%				
Apr04	3972	2947	0	1025	25.8%			0	8	20	102	51	844	1017	25.6%				
May04	4132	4247	0	-115	-2.8%			0	8	-2	-12	-6	-102	-123	-3.0%				
Jun04	2481	2739	0	-258	-10.4%			0	5	-5	-26	-13	-218	-263	-10.6%				
Jul04	4728	2008	0	2720	57.5%			0	9	54	271	136	2250	2711	57.3%				
Aug04	2953	2112	0	841	17.6%			0	7	32	841	42	693	835	28.3%				
Sep04	1091	2500	0	-1409	-129.1%			0	2	-28	-141	-71	-1171	-1411	-129.3%				
Oct04	3589	2956	0	633	17.6%			0	7	13	63	31	519	626	17.4%				
Nov04	2462	4093	0	-1631	-66.2%			0	5	-33	-164	-82	-1358	-1636	-66.4%				
Dec04	3659	3598	0	61	1.7%			0	7	3	61	30	496	597	16.1%				
Jan05	5579	4451	0	1128	24.3%			0	12	3	15	7	123	149	4.0%				
Feb05	7660	4745	0	2915	38.1%			0	15	58	290	145	2407	2900	37.9%				
Mrt05	3046	3488	0	-442	-14.5%			0	6	-9	-45	-22	-372	-448	-14.7%				
Apr05	2890	2881	0	9	0.3%			0	6	0	0	0	3	3	0.1%				
May05	2365	1992	0	373	15.8%			0	5	7	37	18	386	388	15.6%				
Jun05	2030	1727	0	303	14.9%			0	4	6	30	15	246	299	14.7%				
Jul05	453	1858	0	-1405	-310.2%			0	1	-28	-141	-70	-1167	-1406	-310.4%				
Aug05	583	2066	0	-1483	-254.4%			0	1	-30	-148	-74	-1232	-1484	-254.6%				
Sep05	1025	2019	0	-994	-97.0%			0	2	-20	-100	-50	-827	-996	-97.2%				
Oct05	3708	3103	0	605	16.3%			0	7	26	605	30	496	597	16.1%				
Nov05	5622	3254	0	2368	42.1%			0	11	47	236	118	1956	2357	41.9%				
Dec05	5634	4355	0	1279	22.7%			0	11	25	127	63	1052	1268	22.5%				
Jan06	9069	5205	0	3864	42.6%			0	18	77	385	192	3192	3846	42.4%				
Feb06	6105	3598	0	2507	41.1%			0	12	50	249	125	2071	2495	40.9%				
Mrt06	4811	3862	0	849	17.6%			0	10	17	849	42	697	839	17.7%				
Apr06	770	4634	0	-3864	-501.8%			0	2	-77	-387	-193	-3208	-3866	-502.0%				
May06	2365	2332	0	33	1.4%			0	5	1	3	1	23	23	1.2%				
Jun06	7388	1711	0	5677	76.9%			0	15	113	567	284	4708	5672	76.7%				
Jul06	1648	1919	0	-271	-16.4%			0	3	-5	-27	-14	-228	-274	-16.6%				
Aug06	2428	1853	0	575	23.7%			0	5	17	575	29	473	570	23.5%				
Sep06	2179	2331	0	-152	-7.0%			0	4	-3	-16	-8	-130	-156	-7.2%				
Oct06	4524	3005	0	1519	33.6%			0	9	30	151	75	1253	1510	33.4%				
Nov06	4314	3636	0	678	15.7%			0	9	13	67	33	556	669	15.5%				
Dec06	6295	4971	0	1324	21.0%			0	13	26	131	66	1088	1311	20.8%				
Jan07	8032	4840	0	3192	39.7%			0	16	64	318	159	2636	3176	39.5%				
Feb07	8692	4797	0	3895	44.8%			0	17	78	388	194	3219	3878	44.6%				
Mrt07	5512	4164	0	1348	24.5%			0	11	27	134	67	1110	1337	24.3%				
Apr07	6793	5308	0	1485	21.9%			0	14	29	147	74	1221	1471	21.7%				
May07	4413	2861	0	1552	35.2%			0	9	31	154	77	1281	1543	35.0%				
Jun07	3306	1552	0	1754	53.1%			0	7	35	175	87	1451	1748	52.9%				
Jul07	4408	1822	0	2586	58.7%			0	9	52	258	129	2139	2577	58.5%				
Aug07	1055	2189	0	-1134	-107.5%			0	2	-23	-114	-57	-943	-1136	-107.7%				
Sep07	1288	1782	0	-494	-38.3%			0	3	-11	-53	-26	-327	-497	-38.5%				
Oct07	4207	3106	0	1101	26.1%			0	5	23	114	57	948	1142	26.8%				
Nov07	4904	4065	0	839	17.1%			0	10	83	41	688	82						

SWARTLAND MUNICIPALITY																			
Koringberg																			
Month	Year	TREATED WATER SUPPLY																	
		System Input Volume			Revenue Water			Non Revenue Water (NRW)											
		Treated Water from WTW	Billed Metered Consumption	Billed Un-metered Consumption	Monthly NRW	Monthly NRW	Annual NRW	Annual NRW	Unbilled Metered Consumption	Unbilled Un-metered Consumption	Apparent Losses			Real Losses		Monthly Water Losses	Monthly Water Losses	Annual Water Losses	Annual Water Losses
											Illegal Connections	Inaccurate Meters	Administrative Errors	Leaks, Reservoirs overflow, etc.					
[m³]	[m³]	[m³]	[m³]	[%]	[m³]	[%]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]		
										2%	10%	5%	63%						
Jul14	14/15	2897	1865	0	1032	35.6%	0	6	21	103	51	852	1026	35.4%	0	1026	35.4%		
Aug14		3111	2516	0	593	19.1%	0	6	12	59	29	487	587	18.9%	0	587	18.9%		
Sep14		2568	3031	0	-463	-18.0%	0	5	-9	-47	-23	-389	-468	-18.2%	0	-468	-18.2%		
Oct14		4727	5402	0	-675	-14.3%	0	9	-14	-68	-34	-568	-684	-14.5%	0	-684	-14.5%		
Nov14		6660	5005	0	1655	24.8%	0	13	33	164	82	1363	1642	24.6%	0	1642	24.6%		
Dec14		6187	6101	0	86	1.4%	0	12	1	7	4	61	74	1.2%	0	74	1.2%		
Jan15		9351	7847	0	1504	16.1%	10221	14.8%	0	19	30	149	74	1233	14.6%	10083	14.6%		
Feb15		7992	5728	0	2264	28.3%	0	16	45	225	112	1866	2248	28.1%	0	2248	28.1%		
Mar15		8205	6447	0	1758	21.4%	0	16	35	174	87	1446	1742	21.2%	0	1742	21.2%		
Apr15		7869	5682	0	2187	27.8%	0	16	43	217	109	1802	2171	27.6%	0	2171	27.6%		
May15		5465	4787	0	678	12.4%	0	11	13	67	33	554	667	12.2%	0	667	12.2%		
Jun15		4170	4568	0	-398	-9.5%	0	8	-8	-41	-20	-337	-406	-9.7%	0	-406	-9.7%		
Jul15	15/16	3161	4238	0	-1077	-34.1%	0	6	-22	-108	-54	-899	-1083	-34.3%	0	-1083	-34.3%		
Aug15		5297	2701	0	2596	49.0%	0	11	52	259	129	2146	2585	48.8%	0	2585	48.8%		
Sep15		1760	3336	0	-1576	-89.5%	0	4	-32	-158	-79	-1311	-1580	-89.7%	0	-1580	-89.7%		
Oct15		5733	4818	0	915	16.0%	0	11	18	90	45	750	904	15.8%	0	904	15.8%		
Nov15		6665	5717	0	948	14.2%	0	13	19	93	47	776	935	14.0%	0	935	14.0%		
Dec15		7849	5056	0	2793	35.6%	0	16	56	278	139	2305	2777	35.4%	0	2777	35.4%		
Jan16		8472	8172	0	300	3.5%	0	17	6	28	14	235	283	3.3%	0	283	3.3%		
Feb16		8483	7051	0	1432	17.0%	0	17	29	143	71	1183	1425	16.8%	0	1425	16.8%		
Mar16		5285	3773	0	1512	28.7%	0	11	30	151	76	1254	1511	28.5%	0	1511	28.5%		
Apr16		4395	4375	0	20	0.5%	0	9	0	1	1	9	11	0.3%	0	11	0.3%		
May16		3706	3339	0	367	9.9%	0	7	7	36	18	298	360	9.7%	0	360	9.7%		
Jun16		3752	2855	0	897	23.9%	0	8	18	89	44	738	889	23.7%	0	889	23.7%		
Jul16	16/17	2930	2447	0	483	16.5%	0	6	10	48	24	396	477	16.3%	0	477	16.3%		
Aug16		2680	151	0	151	5.6%	0	5	2	15	7	146	146	5.4%	0	146	5.4%		
Sep16		3609	2592	0	1017	28.2%	0	7	20	101	50	838	1010	28.0%	0	1010	28.0%		
Oct16		4199	3560	0	639	15.2%	0	8	13	63	32	523	631	15.0%	0	631	15.0%		
Nov16		6219	4226	0	1993	32.0%	0	12	40	198	99	1644	1981	31.8%	0	1981	31.8%		
Dec16		6800	5485	0	1315	19.3%	0	14	26	130	65	1080	1301	19.1%	0	1301	19.1%		
Jan17		8053	7695	0	358	4.4%	0	16	7	34	17	284	342	4.2%	0	342	4.2%		
Feb17		6675	5012	0	1663	24.9%	0	13	18	165	82	1389	1650	24.7%	0	1650	24.7%		
Mar17		5623	5233	0	390	6.9%	0	11	8	38	19	314	379	6.7%	0	379	6.7%		
Apr17		4929	4695	0	234	4.7%	0	10	4	22	11	186	224	4.5%	0	224	4.5%		
May17		4781	4614	0	167	3.5%	0	10	3	16	8	131	157	3.3%	0	157	3.3%		
Jun17		3630	3177	0	453	12.5%	0	7	9	45	22	370	446	12.3%	0	446	12.3%		
Jul17	17/18	2786	2715	0	71	2.5%	0	3	2	7	3	54	54	2.3%	0	54	2.3%		
Aug17		2814	1798	0	1016	36.1%	0	6	20	101	51	839	1010	35.9%	0	1010	35.9%		
Sep17		3211	2638	0	573	17.8%	0	6	11	57	28	470	567	17.6%	0	567	17.6%		
Oct17		3508	2884	0	624	17.8%	0	7	12	62	31	512	617	17.6%	0	617	17.6%		
Nov17		1977	2399	0	-422	-21.3%	0	4	-9	-43	-21	-354	-426	-21.5%	0	-426	-21.5%		
Dec17		7024	2647	0	4377	62.3%	0	6	13	67	33	555	668	22.7%	0	668	22.7%		
Jan18		5741	3773	0	1968	34.3%	0	11	39	196	98	1624	1967	34.1%	0	1967	34.1%		
Feb18		5427	2105	0	3322	61.2%	0	11	66	331	166	2748	3311	61.0%	0	3311	61.0%		
Mar18		2496	2316	0	180	7.2%	0	5	4	18	9	145	175	7.0%	0	175	7.0%		
Apr18		3199	2596	0	603	18.8%	0	6	12	60	30	495	597	18.6%	0	597	18.6%		
May18		2949	2275	0	674	22.9%	0	6	13	67	33	555	668	22.7%	0	668	22.7%		
Jun18		3025	1798	0	1227	40.6%	0	6	24	122	61	1013	1221	40.4%	0	1221	40.4%		
Jul18	18/19	2368	1738	0	630	26.6%	0	59	11	57	29	474	571	24.1%	0	571	24.1%		
Aug18		3012	2237	0	775	25.7%	0	60	14	71	36	593	715	23.7%	0	715	23.7%		
Sep18		3165	1960	0	1205	38.1%	0	60	23	114	57	950	1145	36.2%	0	1145	36.2%		
Oct18		3088	2535	0	553	17.9%	0	60	10	49	25	469	493	16.0%	0	493	16.0%		
Nov18		4104	2950	0	1154	28.1%	0	62	22	109	55	906	1092	26.6%	0	1092	26.6%		
Dec18		4274	2737	0	1537	36.0%	0	63	29	147	74	1224	1474	34.5%	0	1474	34.5%		
Jan19		4624	3265	0	1359	29.4%	0	63	26	130	65	1075	1296	28.0%	0	1296	28.0%		
Feb19		6259	3106	0	3153	50.4%	0	67	62	309	154	2562	3086	49.3%	0	3086	49.3%		
Mar19		3793	2619	0	1174	31.0%	0	62	22	111	56	623	1112	28.3%	0	1112	28.3%		
Apr19		5013	2842	0	2171	43.3%	0	64	42	211	105	1748	2107	42.0%	0	2107	42.0%		
May19		3899	3344	0	555	14.2%	0	62	10	49	25	409	493	12.6%	0	493	12.6%		
Jun19		3010	2582	0	428	14.2%	0	60	7	37	18	305	368	12.2%	0	368	12.2%		
Jul19	19/20	2467	1980	0	487	19.7%	0	59	9	43	21	355	428	17.4%	0	428	17.4%		
Aug19		2312	2198	0	114	4.9%	0	59	1	6	3	60	60	2.6%	0	60	2.6%		
Sep19		3019	2481	0	538	18.5%	0	60	10	50	25	413	498	16.5%	0	498	16.5%		
Oct19		4682	3007	0	1675	35.8%	0	63	32	161	81	1338	1612	34.4%	0	1612	34.4%		
Nov19		4777	3551	0	1226	25.7%	0	64	23	116	58	965	1162	24.3%	0	1162	24.3%		
Dec19		5971	2914	0	3057	51.2%	0	66	60	299	150	2483	2991	50.1%	0	2991	50.1%		
Jan20		5241	3735	0	1506	28.7%	0	64	29	144	72	1196	1442	27.5%	0	1442	27.5%		
Feb20		5429	3847	0	1582	29.1%	0	65	30	152	76	1259	1517	27.9%	0	1517	27.9%		
Mar20		5991	3689	0	2302	38.4%	0	66	45	224	112	1856	2236	37.3%	0	2236	37.3%		
Apr20		5014	2785	0	2229	44.5%	0	64	43	216	108	1797	2165	43.2%	0	2165	43.2%		
May20		4114	2707	0	1407	34.2%	0	62	27	134	67	1116	1345	32.7%	0	1345	32.7%		
Jun20		2891	2063	0	828	28.6%	0	60	15	77	38	638	768	26.6%	0	768	26.6%		
Jul20	20/21	2596	2596	0	91	3.5%	0	59	2	3	2	28	32	1.2%	0	32	1.2%		
Aug20		3365	6272	0	-2907	-86.4%	0	61	-59	-297	-148	-2463	-2967	-88.2%	0	-2967	-88.2%		
Sep20		3338	1829	0	1509	45.2													

WATER BALANCE AND USAGE FOR KORINGBERG DISTRIBUTION SYSTEM



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