

SWARTLAND MUNICIPALITY																			
Yzerfontein																			
TREATED WATER SUPPLY																			
Month	Year	System Input Volume					Non Revenue Water (NRW)												
		Revenue Water		Monthly NRW			Annual NRW	Annual NRW	Unbilled Un-metered Consumption	Unbilled Un-metered Consumption	Apparent Losses			Real Losses		Monthly Water Losses	Monthly Water Losses	Annual Water Losses	Annual Water Losses
		Billed Metered Consumption	Billed Un-metered Consumption	Monthly NRW	Monthly NRW	Annual NRW					Annual NRW	Inaccurate Meters	Administrative Errors	Leak, Reservoirs overflow, etc.					
		[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%		
Jan01	0001	34670																	
Feb01	0001	22290																	
Mar01	0001	23710																	
Apr01	0001	23550																	
May01	0001	13620																	
Jun01	0001	8900																	
Jul01	0102	10000																	
Aug01	0102	10290																	
Sep01	0102	12960																	
Oct01	0102	15100																	
Nov01	0102	17460																	
Dec01	0102	30640																	
Jan02	0203	16030																	
Feb02	0203	21880																	
Mar02	0203	25290																	
Apr02	0203	10400																	
May02	0203	13350																	
Jun02	0203	12227	9236	0	2991	24.5%			0	24	59	297	148	2462	2067	24.3%			
Jul02	0203	14873	8783	0	684	7.2%			0	19	13	67	53	552	565	7.0%			
Aug02	0203	15329	12098	0	3231	21.1%			0	31	64	320	160	2656	3000	20.9%			
Sep02	0203	16743	16754	0	-11	-0.1%			0	33	-2	-4	-37	-44	-0.3%				
Oct02	0203	24369	19336	0	5003	20.5%			0	49	115	677	289	4780	5771	23.7%			
Nov02	0203	26248	27816	0	-1568	-6.0%			0	52	-32	-162	-81	-1345	-1620	-6.2%			
Dec02	0203	34096	32220	0	1876	5.5%	24551	9.9%	0	68	36	180	90	1462	1708	5.9%	24053	9.7%	
Jan03	0304	24275	24340	0	-65	-0.3%			0	62	161	807	404	6688	6070	24.9%			
Feb03	0304	21799	21189	0	610	2.8%			0	44	11	57	28	470	566	2.6%			
Mar03	0304	22884	19276	0	3608	15.8%			0	45	149	743	371	6156	7429	32.7%			
Apr03	0304	18854	19648	0	-794	-4.2%			0	38	5	24	12	198	238	1.2%			
May03	0304	14954	19911	0	-4957	-33.1%			0	30	-100	-499	-249	-4139	-4987	-33.3%			
Jun03	0304	14369	16027	0	-1658	-11.6%			0	29	158	558	273	4528	5170	11.0%			
Jul03	0304	12289	11655	0	634	5.2%			0	25	14	71	35	589	709	5.7%			
Aug03	0304	15371	19038	0	-3667	-23.9%			0	31	88	440	220	3854	4402	28.6%			
Sep03	0304	16489	19891	0	-3402	-20.7%			0	31	-11	-60	-30	-800	-800	-5.0%			
Oct03	0304	19001	20643	0	-1642	-8.7%			0	38	-34	-169	-84	-1399	-1685	-8.9%			
Nov03	0304	20370	32716	0	-12446	-61.1%			0	59	-88	-440	-220	-3695	-4845	-25.0%			
Dec03	0304	28907	28900	0	7	0.0%	24618	9.5%	0	78	208	1028	518	8005	10379	26.7%	24097	9.3%	
Jan04	0405	33893	28969	0	4924	14.5%			0	68	103	516	258	4280	5156	15.2%			
Feb04	0405	20890	20905	0	-15	-0.0%			0	42	2	4	2	36	43	0.2%			
Mar04	0405	27410	21511	0	5899	21.4%			0	55	116	652	291	4644	5624	21.2%			
Apr04	0405	19376	16644	0	2732	13.9%			0	74	369	185	300	3693	3693	19.1%			
May04	0405	14338	15102	0	-764	-5.3%			0	28	-20	-100	-50	-528	-597	-4.1%			
Jun04	0405	14366	12278	0	2088	14.6%			0	29	42	209	108	1733	2088	14.6%			
Jul04	0405	13926	10415	0	3511	25.2%			0	28	70	348	174	2891	3483	25.0%			
Aug04	0405	14748	14748	0	0	0.0%			0	29	-1	-3	-2	-25	-30	-0.2%			
Sep04	0405	1401	13409	0	-1208	-86.2%			0	19	-60	-401	-200	-840	-907	-64.8%			
Oct04	0405	18396	16055	0	2341	12.7%			0	37	46	230	115	1912	2304	12.5%			
Nov04	0405	11818	12115	0	-297	-2.5%			0	24	-187	-460	-231	-3778	-4099	-34.7%			
Dec04	0405	38356	31404	0	6952	18.1%	18354	9.0%	0	77	138	688	344	5706	6875	17.8%	17945	8.8%	
Jan05	0506	16805	17829	0	-1024	-6.1%			0	34	-21	-106	-53	-1058	-1058	-6.3%			
Feb05	0506	17254	19186	0	-1932	-11.2%			0	35	103	615	298	4279	4150	23.8%			
Mar05	0506	19477	19964	0	-487	-2.5%			0	39	69	347	174	2883	3474	17.8%			
Apr05	0506	16243	18919	0	-2676	-16.5%			0	32	108	539	270	4476	5303	32.2%			
May05	0506	13088	10287	0	2801	21.2%			0	38	70	312	162	3022	3641	26.1%			
Jun05	0506	12721	10538	0	2183	17.2%			0	25	43	216	108	1791	2158	17.0%			
Jul05	0506	14781	9880	0	4901	33.2%			0	30	97	487	244	4043	4872	33.0%			
Aug05	0506	12965	11338	0	1627	12.6%			0	25	20	100	50	800	800	6.1%			
Sep05	0506	21057	14893	0	6164	29.3%			0	42	122	612	301	5081	6122	29.1%			
Oct05	0506	22882	19629	0	3253	14.2%			0	45	140	700	351	5625	7018	30.9%			
Nov05	0506	19617	27001	0	-7384	-37.6%			0	49	-105	-773	-386	-6415	-7729	-38.6%			
Dec05	0506	17386	29793	0	-12387	-71.3%			0	35	-249	-1243	-622	-10319	-12432	-71.5%			
Jan06	0607	17386	23196	0	-5791	-33.4%			0	35	-249	-1243	-622	-10319	-12432	-71.5%			
Feb06	0607	12461	26678	0	-14217	-114.1%			0	35	-249	-1243	-622	-10319	-12432	-71.5%			
Mar06	0607	19585	22465	0	-2880	-14.8%			0	39	-58	-291	-145	-2415	-2909	-14.8%			
Apr06	0607	19585	13784	0	5811	29.7%			0	39	-58	-291	-145	-2415	-2909	-14.8%			
May06	0607	14484	14868	0	-384	-2.6%			0	29	79	357	198	3265	3870	27.4%			
Jun06	0607	13619	11171	0	2448	18.0%			0	27	48	242	121	2009	2421	17.8%			
Jul06	0607	12893	11877	0	1016	7.8%			0	28	38	193	93	769	938	7.2%			
Aug06	0607	15524	13937	0	1587	10.2%			0	31	158	78	1291	1556	10.0%				
Sep06	0607	18789	16290	0	2499	13.3%			0	38	49	246	123	2343	2461	13.1%			
Oct06	0607	18741	18788	0	-47	-0.3%			0	47	-2	-4	-4	-4	-4	-0.2%			
Nov06	0607	18148	30903	0	-12754	-70.3%			0	36	-256	-1279	-640	-10616	-12790	-70.5%			
Dec06	0607	44616	30906	0	13610	30.4%			0	89	279	1393	697	11562	13930	31.2%			
Jan07	0708	20801	23839	0	-3038	-14.6%			0	69	119	593	297	4933	5933	19.9%			
Feb07	0708	25381	24128	0	1253	4.8%			0										

SWARTLAND MUNICIPALITY																			
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TREATED WATER SUPPLY																			
Month	Year	Revenue Water			Non Revenue Water (NRW)										Annual Water Losses				
		Treated Water from WTV	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 Leaks, Reservoirs overflow, etc.	Monthly Water Losses	Monthly Water Losses	Annual Water Losses	Annual Water Losses	
											Illegal Connections	Inaccurate Meters	Administrative Errors						
		Estimated Percentages (Variables)										%		%					
[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]		
Jul16		15704	12028	0	2776	17.7%	0	31	55	274	137	2278	2745	17.5%					
Aug16		15304	13002	0	1802	11.8%	0	31	35	177	89	1470	1771	11.6%					
Sep16		17173	13441	0	3732	21.7%	0	34	74	370	185	3009	3668	21.5%					
Oct16		17452	15569	0	1883	10.8%	0	35	37	185	92	1534	1848	10.6%					
Nov16		24860	13905	0	10855	24.4%	0	60	118	582	296	4910	5915	23.8%					
Dec16		26909	27977	0	-1068	-4.0%	0	54	-22	-112	-56	-931	-1122	-4.2%					
Jan17		36703	30088	0	6605	18.4%	33077	0	73	119	593	297	4923	5932	16.2%	33079	13.3%		
Feb17		27746	19341	0	8405	15.9%	0	45	67	335	169	2788	3360	14.8%					
Mar17		20057	15014	0	5043	25.1%	0	40	100	500	250	4152	5003	24.9%					
Apr17		19090	20404	0	-2364	-13.1%	0	36	-48	-240	-120	-1922	-2400	-13.3%					
May17		19505	14910	0	4595	23.6%	0	39	91	456	228	3781	4566	23.4%					
Jun17		14342	12529	0	1803	12.6%	0	29	35	177	89	1473	1774	12.6%					
Jul17		14657	11750	0	2907	20.0%	0	29	58	290	145	2405	2906	19.8%					
Aug17		15048	-12644	0	27732	184.3%	0	30	554	2770	1395	22903	27702	184.1%					
Sep17		17912	20242	0	-2330	-13.0%	0	28	-150	-740	-374	-6213	-7406	-43.0%					
Oct17		14098	10132	0	3966	28.1%	0	28	79	394	197	3209	3938	27.9%					
Nov17		12548	10276	0	2272	18.1%	0	25	63	314	157	2605	3139	25.0%					
Dec17		13316	10745	0	2570	19.3%	0	27	51	254	127	2111	2543	19.1%					
Jan18		17861	14166	0	3695	20.7%	0	36	73	365	183	3037	3659	20.5%					
Feb18		18975	14848	0	2471	15.0%	0	20	49	245	123	2035	2451	24.8%					
Mar18		10564	7252	0	3402	31.9%	0	21	38	338	169	2806	3381	31.7%					
Apr18		13151	6078	0	4475	34.0%	0	28	69	445	222	3692	4449	33.8%					
May18		10663	8424	0	2239	21.1%	0	21	45	224	112	1807	2238	20.9%					
Jun18		9946	7217	0	2729	27.4%	0	20	54	271	135	2249	2729	27.2%					
Jul18		10323	7842	0	2481	24.0%	0	441	41	204	102	1963	2480	19.8%					
Aug18		10520	9272	0	1248	11.9%	0	441	16	81	40	670	807	7.7%					
Sep18		10248	10768	0	-4634	-45.1%	0	441	-119	-697	-449	-1409	-4975	-49.4%					
Oct18		12515	10954	0	1561	12.5%	0	445	22	112	56	505	1116	8.9%					
Nov18		11795	11920	0	-124	-1.1%	0	444	-11	-57	-29	-471	-568	-4.8%					
Dec18		10528	10444	0	84	0.8%	0	452	37	183	92	1173	1500	11.5%					
Jan19		24007	20000	0	3917	16.3%	0	468	69	345	172	2983	3449	14.4%					
Feb19		16661	14071	0	2590	15.3%	0	453	43	214	107	1773	2137	12.8%					
Mar19		15805	11971	0	3834	24.3%	0	452	68	338	169	2807	3382	21.4%					
Apr19		17798	13984	0	3804	21.4%	0	456	67	335	167	2779	3348	18.9%					
May19		15147	14806	0	1341	8.9%	0	452	18	89	44	738	899	5.9%					
Jun19		14141	12564	0	1577	11.2%	0	448	23	113	56	937	1129	8.0%					

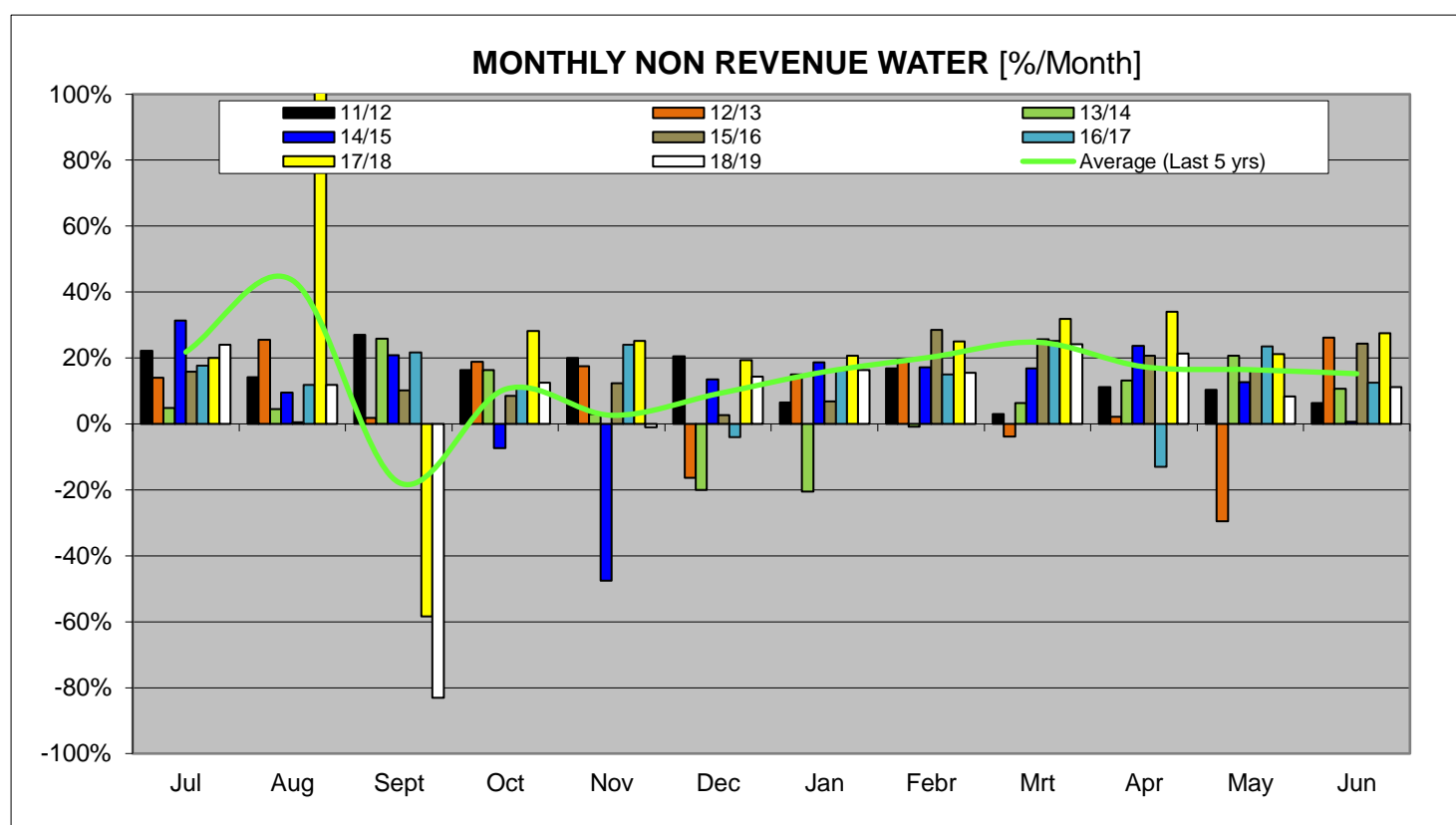
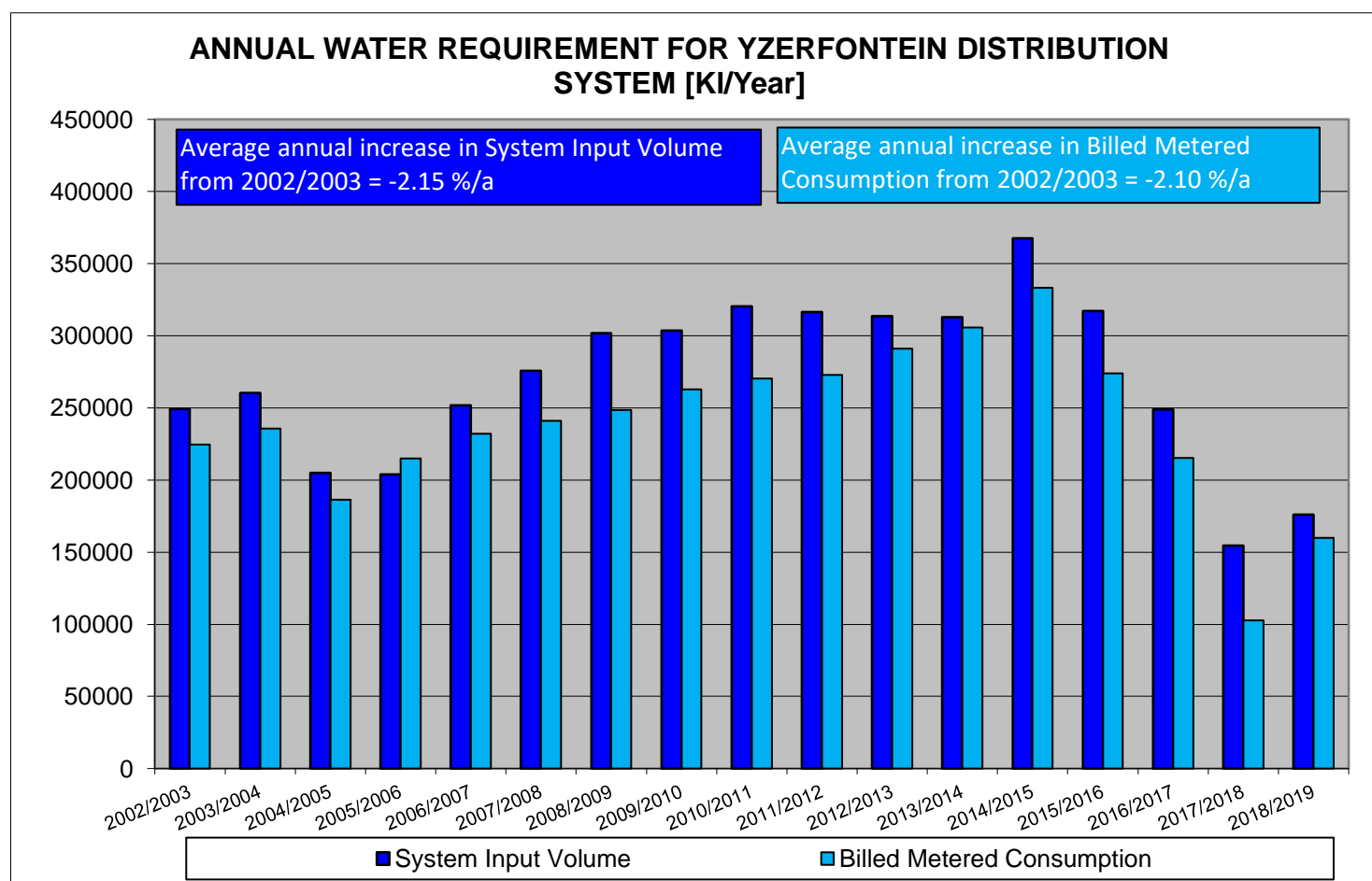
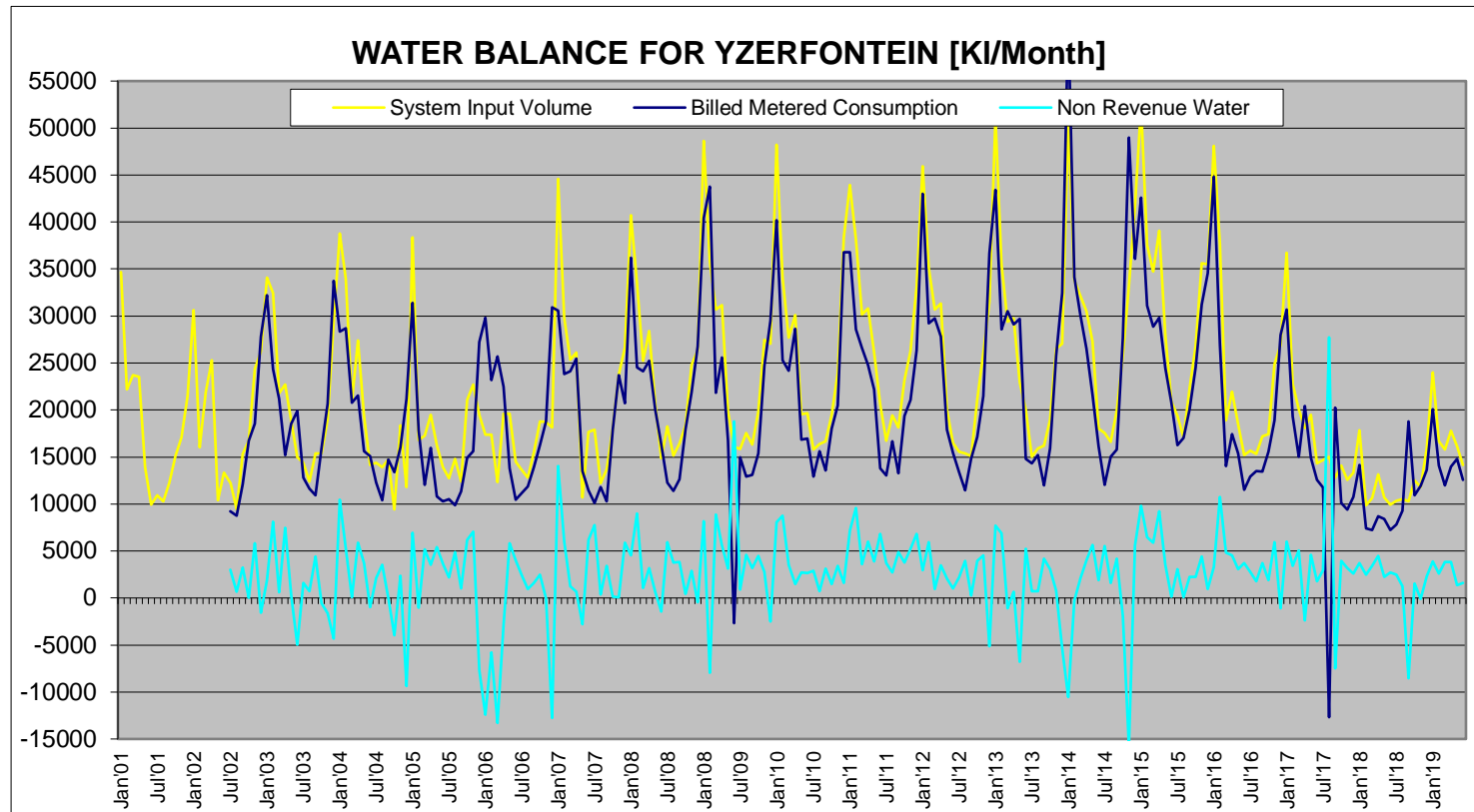
ANNUAL TOTALS																			
Year	Revenue Water			Non Revenue Water (NRW)										Annual Water Losses					
	Treated Water from WTV	Billed Metered Consumption	Billed Un-metered Consumption	Monthly NRW	Monthly NRW	Annual NRW	Annual NRW	Unbilled Metered Consumption	Unbilled Un-metered Consumption	Apparent Losses			Real Losses Leaks, Reservoirs overflow, etc.	Monthly Water Losses	Monthly Water Losses	Annual Water Losses	Annual Water Losses		
										Illegal Connections	Inaccurate Meters	Administrative Errors							
	Estimated Percentages (Variables)										%		%						
[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]	[m³]		
2001/2002	204660		0																
2002/2003	249211	224660	0			24551	9.9%	0	498	481	2405	19964	24053	9.7%					
2003/2004	260440	226822	0			24618	9.5%	0	521	462	2410	1205	20001	24617	9.3%				
2004/2005	294773	194419	0			18354	6.2%	0	410	369	1784	897	14884	17845	6.0%				
2005/2006	203959	214877	0			-10918	-5.4%	0	408	-227	-1133	-566	-9400	-11325	-5.6%				
2006/2007	211914	231037	0			19977	9.4%	0	504	389	1847	974	16162	19473	9.2%				
2007/2008	275702	241052	0			34650	12.6%	0	551	662	3410	1705	28302	34698	12.4%				
2008/2009	301621	248573	0			53048	17.6%	0	633	1049	5244	2622	43020	53045	17.4%				
2009/2010	303462	262706	0			40716	13.4%	0	607	603	4917	2048	33343	40709	13.4%				
2010/2011	303086	270159	0			50227	16.7%	0	641	962	4959	2479	41157	50227	16.6%				
2011/2012	316902	272941	0			43911	13.9%	0	633	693	4298	2149	33672	43911	13.6%				
2012/2013	313423	291121	0			22302	7.1%	0	627	433	2167	1084	17950	21675	6.9%				
2013/2014	312719	305812	0			6997	2.2%	0	655	189	629	314	1214	6997	2.2%				
2014/2015	367432	333197	0			34235	9.3%	0	735	670	3350	1675	27855	33500	9.1%				
2015/2016	317039	273801	0			43238	13.6%	0	634	652	4260	2130	35361	43238	13.4%				
2016/2017	248845	215268	0			33077	13.3%	0	498	662	3308	1654	27458	33079	13.3%				
2017/2018	154811	102681	0			51930	33.6%	0	309	1032	5162	2581	42845	51621	33.4%				
2018/2019	178903	159926	0			18977	10.6%	0	539	212	1059	529	8786	18977	10.6%				

Water Balance Components		Water Balance Volumes							
Component	Units	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019
Consumer Units	Number of connections	1188	1211	1251	1283	1331	1366	1435	1528
System Input Volume	l/connection/day	729	709	695	795	853	489	256	315
Average Billed Metered Cons.	l/connection/day	631	659	676	712	564	432	198	287
Non-Revenue Water	l/connection/day	101	50	15	73	85	87	59	29

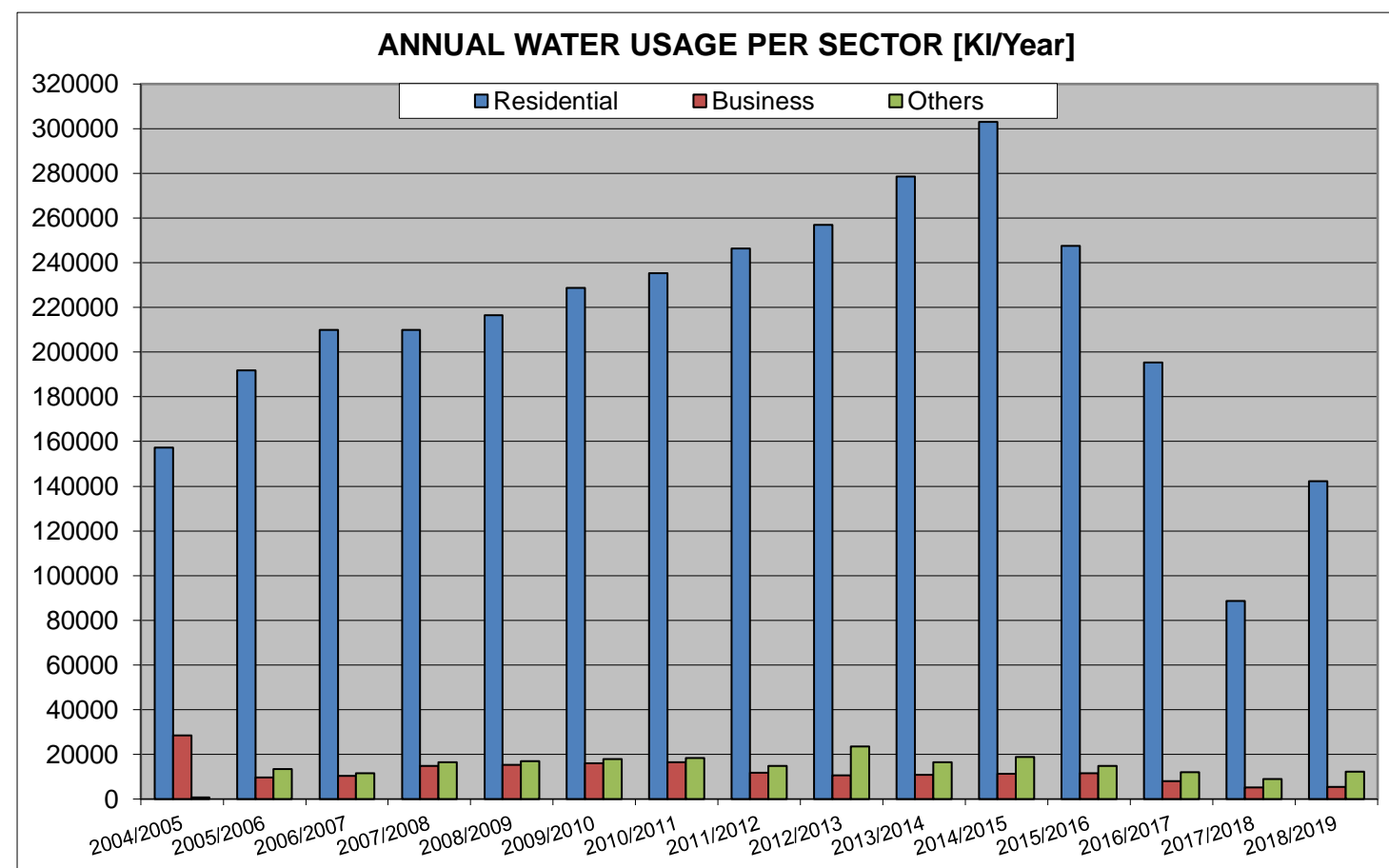
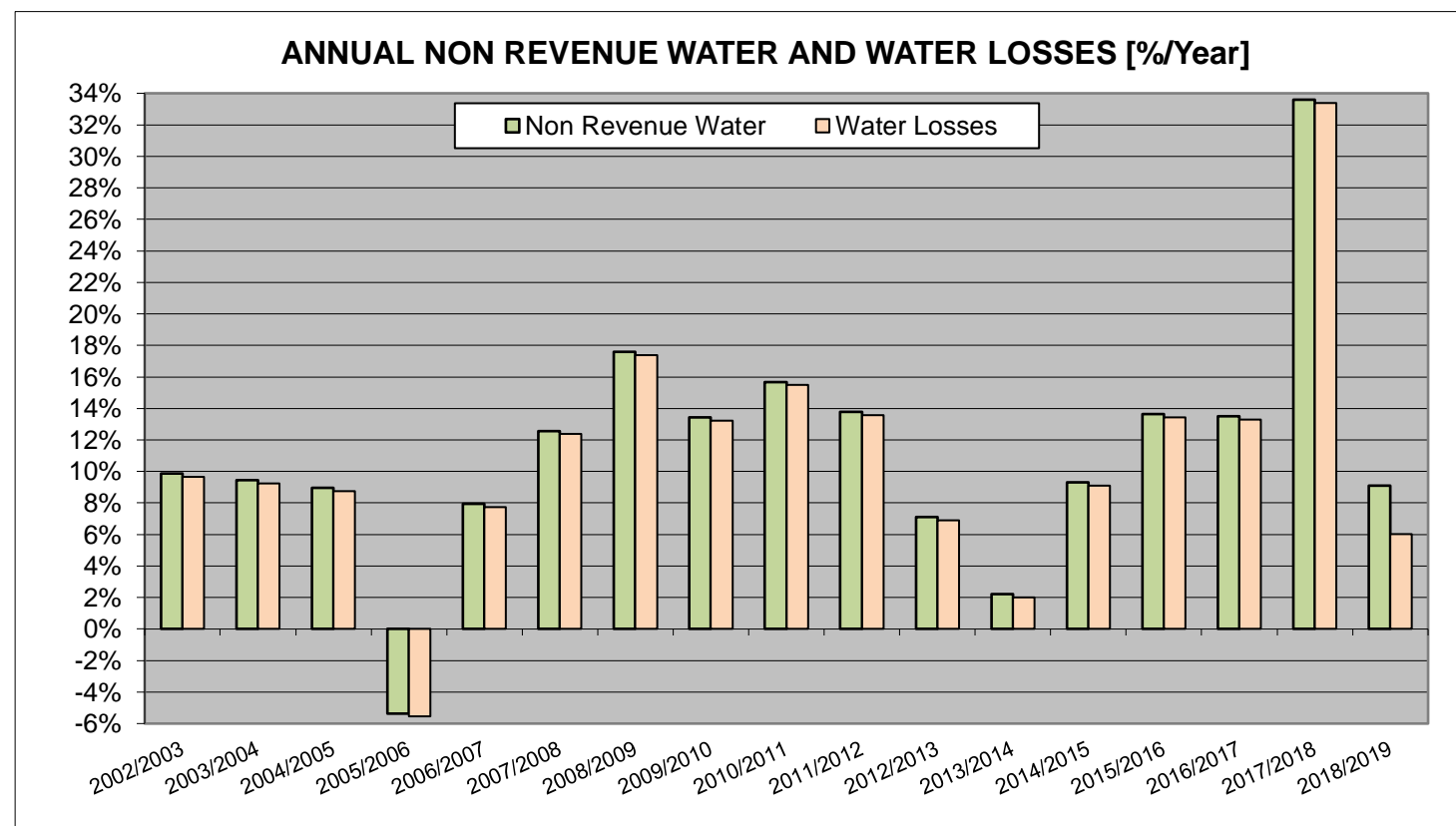
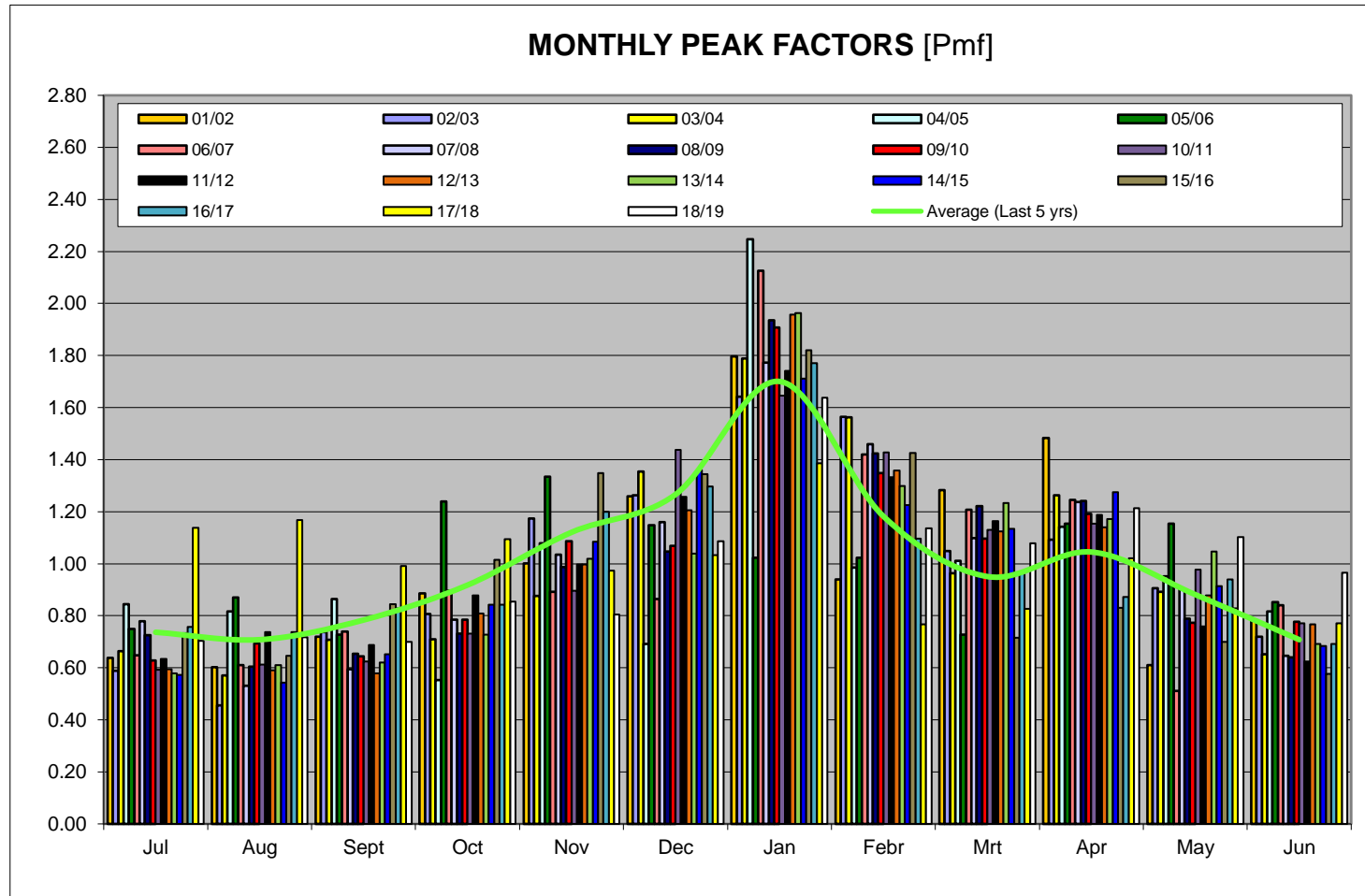
Water Balance Components		Percentage Change in Volumes l/connection/day, year on year							
Component	Units	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019
System Input Volume	% Change in Volume	-	-3.1%	-1.8%	11.5%	-18.8%	-23.5%	-45.8%	6.8%
Average Billed Metered Cons.	% Change in Volume	-	4.3%	1.6%	6.2%	-20.7%	-24.3%	-46.2%	46.2%
Non-Revenue Water	% Change in Volume	-	-49.9%	-70.0%	383.2%	21.74%	-24.33%	47.22%	-71.11%

Water Balance Components		Did volume l/connection/day Rise or Fall, year on year?							
Component	Units	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019
System Input Volume	Rise or Fall	-	Fall	Fall	Rise	Fall	Fall	Fall	Rise
Average Billed Metered Cons.	Rise or Fall	-	Rise	Rise	Rise	Fall	Fall	Fall	Rise
Non-Revenue Water	Rise or Fall	-	Fall	Fall	Rise	Rise	Fall	Rise	Fall

WATER BALANCE AND USAGE FOR YZERFONTEIN DISTRIBUTION



WATER BALANCE AND USAGE FOR YZERFONTEIN DISTRIBUTION



WATER BALANCE AND USAGE FOR YZERFONTEIN DISTRIBUTION

