

WRMP ANNUAL REVIEW DATA RETURN - WATER BALANCE COMPONENTS

Revised in June 2022

Annual Average

Water Company: South East Water
Number of resource zones: Eight
Year of data submission: 2021/22
Reporting against WRMP: WRMP19

Row numbering in line with WRMP structure	Component	Derivation and type of data	Units	DP	Data requirement	Resource zone 1 data	Resource zone 2 data	Resource zone 3 data	Resource zone 4 data	Resource zone 5 data	Resource zone 6 data	Resource zone 7 data	Resource zone 8 data	Water company total data	Notes on data provided
SUPPLY															
Resources															
1 _{AR}	Raw water abstracted	Input outturn data	Ml/d	2dp	Required	34.87	70.00	57.82	169.53	34.87	64.82	23.23	87.54	542.68	
2 _{AR}	Raw water imported (in the reporting year)	Input outturn data	Ml/d	2dp	Required	0.00	0.00	1.15	0.00	0.00	0.00	0.00	0.00	1.15	
3 _{AR}	Potable water imported (in the reporting year)	Input outturn data	Ml/d	2dp	Required	3.17	0.87	1.53	2.29	0.00	10.82	4.90	0.76	24.36	
5 _{AR}	Raw water exported (in the reporting year)	Input outturn data	Ml/d	2dp	Required	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5.1 _{AR}	Non potable water supplied	Input outturn data	Ml/d	2dp	Required	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6 _{AR}	Potable water exported (in the reporting year)	Input outturn data	Ml/d	2dp	Required	0.00	3.91	0.87	0.00	2.29	1.88	0.82	14.59	24.36	
7 _{AR}	Deployable output	Input dry year figure	Ml/d	2dp	Required	45.08	61.36	67.26	181.00	53.96	58.01	15.40	110.83	592.91	
12 _{AR}	Water Available For Use (own sources)	(Deployable Output + changes to DO) - (Treatment works losses and operational use + outage experienced).	Ml/d	2dp	Required	44.42	58.85	66.84	178.63	52.35	56.55	15.26	107.23	580.13	
13 _{AR}	Total Water Available For Use	WAFU own sources + (total water imported) - (total water exported). Total WAFU is based on maximum contractual volumes as stated in WRMP19.	Ml/d	2dp	Required	38.89	76.90	65.34	214.63	52.35	71.45	26.34	90.53	636.43	
Process Losses															
9 _{AR}	Treatment works losses and operational use	Input outturn data	Ml/d	2dp	Required	0.02	0.07	0.01	0.48	0.46	0.13	0.03	0.09	1.29	
10 _{AR}	Outage experienced	Input outturn data	Ml/d	2dp	Required	0.65	2.45	0.41	1.88	1.16	1.33	0.11	3.51	11.49	
DEMAND															
11 _{AR}	Distribution input (in reporting year)	Outturn data for: Total household and non-household consumption + water taken unbilled + distribution system operational losses + total leakage	Ml/d	2dp	Required	34.48	66.36	55.55	166.81	36.61	64.94	23.81	88.12	536.68	
Consumption															
23 _{AR}	Measured non household - consumption	Input outturn data	Ml/d	2dp	Required	4.59	9.49	8.87	23.24	4.51	9.25	3.42	13.53	76.90	
24 _{AR}	Unmeasured non household - consumption	Input outturn data	Ml/d	2dp	Required	0.18	0.38	0.49	0.80	0.18	0.20	0.12	0.60	2.95	
25 _{AR}	Measured household - consumption	Input outturn data	Ml/d	2dp	Required	20.27	40.91	32.84	90.34	18.54	31.12	9.61	36.04	279.67	
26 _{AR}	Unmeasured household - consumption	Input outturn data	Ml/d	2dp	Required	5.30	9.37	7.11	21.26	4.36	7.08	5.23	14.89	74.59	
29 _{AR}	Measured household - pcc	Outturn data: (Measured household consumption * 1,000,000) / (measured household population * 1,000)	l/h/d	0dp	Required	145	145	139	151	162	136	157	140	146	
30 _{AR}	Unmeasured household - pcc	Outturn data: (Unmeasured household consumption * 1,000,000) / (Unmeasured household population * 1,000)	l/h/d	0dp	Required	220	277	271	222	207	216	295	233	236	
31 _{AR}	Average household - pcc	Outturn data: (Measured and unmeasured household consumption * 1,000,000) / (measured and unmeasured household population * 1,000)	l/h/d	0dp	Required	156	159	152	161	169	146	188	159	159	
32 _{AR}	Water taken unbilled	Input outturn data	Ml/d	2dp	Required	0.57	2.10	1.61	3.01	0.11	1.21	0.41	1.44	10.47	
33 _{AR}	Distribution system operational use	Input outturn data	Ml/d	2dp	Required	0.20	0.57	0.44	1.10	0.12	0.38	0.14	0.50	3.45	
Leakage															
34 _{AR}	Measured non household - uspl	Input outturn data	Ml/d	2dp	Required	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
35 _{AR}	Unmeasured non-household - uspl	Input outturn data	Ml/d	2dp	Required	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
36 _{AR}	Measured household - uspl	Input outturn data	Ml/d	2dp	Required	0.88	2.04	1.70	3.91	0.64	1.41	0.42	1.62	12.62	
37 _{AR}	Unmeasured household - uspl	Input outturn data	Ml/d	2dp	Required	0.16	0.24	0.22	0.65	0.13	0.24	0.13	0.47	2.24	
38 _{AR}	Void properties - uspl	Input outturn data	Ml/d	2dp	Required	0.08	0.13	0.12	0.26	0.04	0.09	0.03	0.14	0.89	
39 _{AR}	Distribution Losses	Input outturn data	Ml/d	2dp	Required	2.26	1.14	2.15	22.23	7.98	13.96	4.28	18.90	72.90	
40 _{AR}	Total leakage	Outturn data: Total USPL + distribution losses	Ml/d	2dp	Required	3.38	3.55	4.19	27.05	8.79	15.70	4.87	21.12	88.65	
CUSTOMERS															
Properties															
42 _{AR}	Measured non-household - properties	Input end of reporting year data	000's	3dp	Required	3.432	6.482	5.926	9.572	2.810	4.571	2.357	7.114	42.264	
43 _{AR}	Unmeasured non-household - properties	Input end of reporting year data	000's	3dp	Required	0.139	0.175	0.300	0.543	0.196	0.145	0.086	0.434	2.018	
44 _{AR}	Void non households - properties	Input end of reporting year data	000's	3dp	Required	0.660	1.018	1.001	2.152	0.538	0.686	0.362	1.173	7.589	
45 _{AR}	Measured household - properties	Input end of reporting year data	000's	3dp	Required	58.489	118.331	101.667	249.192	48.963	92.746	27.492	107.164	804.043	
45.7 _{AR}	Measured void household - properties	Input end of reporting year data	000's	3dp	Required	1.372	2.079	2.069	4.593	0.795	1.722	0.502	2.431	15.564	
46 _{AR}	Unmeasured household - properties	Input end of reporting year data	000's	3dp	Required	6.671	8.659	8.037	25.344	6.177	9.519	5.263	19.007	88.678	
47 _{AR}	Unmeasured void household - properties	Input end of reporting year data	000's	3dp	Required	0.349	0.350	0.492	1.096	0.207	0.395	0.145	0.795	3.830	
48 _{AR}	Total resource zone properties (inc voids)	End of reporting year data : Total non-household properties + total void non-household properties + total household properties + total void household properties	000's	3dp	Required	71.112	137.094	119.492	292.492	59.686	109.784	36.208	138.117	963.985	
Population															
49 _{AR}	Measured non-household - population	Input end of reporting year data	000's	3dp	Required	2.576	5.527	5.829	9.508	3.483	3.757	1.839	9.584	42.104	
50 _{AR}	Unmeasured non-household - population	Input end of reporting year data	000's	3dp	Required	0.116	0.172	0.345	0.612	0.272	0.131	0.072	0.667	2.387	
51 _{AR}	Measured household - population	Input end of reporting year data	000's	3dp	Required	140.286	282.021	236.567	597.472	114.163	228.941	61.227	256.894	1917.568	
52 _{AR}	Unmeasured household population	Input end of reporting year data	000's	3dp	Required	24.121	33.824	26.224	95.900	21.037	32.794	17.711	63.929	315.540	
53 _{AR}	Total resource zone population	End of reporting year data: Unmeasured and measured household population + Unmeasured and measured non-household population	000's	3dp	Required	167.099	321.545	268.965	703.492	138.954	265.622	80.849	331.073	2277.599	
Metering															
57 _{AR}	Total measured household metering penetration (incl. voids)	Outturn data: Measured household properties exc. voids / (measured household properties exc. voids + unmeasured household properties exc. voids) + measured and unmeasured household void properties)	%	2dp	Required	0.87	0.91	0.91	0.89	0.87	0.89	0.82	0.83	0.88	Figures have barely changed since our 2021 submission. Possible error in the QA check formula.
57.1	Total households with a meter installed	Input outturn data (See technical annex for guidance)	%	2dp	Optional										
	Total numbers of household meters installed	Input outturn data	000's	3dp	Required	0.031	0.048	0.05	0.127	0.019	0.023	0.022	0.075	0.395	
SUPPLY-DEMAND BALANCE															
16 _{AR}	Target headroom	Input adjusted reporting year figure or dry year WRMP	Ml/d	2dp	Required	1.99	8.05	4.60	10.36	1.80	4.44	1.90	4.32	37.46	
18 _{AR}	Observed supply-demand balance (in reporting year)	(Total WAFU - DI) - target headroom	Ml/d	2dp	Required	2.42	2.49	5.19	37.46	13.94	2.08	0.62	-1.90	62.29	
QA check 1	Distribution input	23AR + 24AR + 25AR + 26AR + 32AR + 33AR + 40AR				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 2	Water available for use (own sources)	7AR - (9AR + 10AR)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 3	Total properties	42AR + 43AR + 45AR + 45.7AR + 46AR + 47AR				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 4	Total population	49AR + 50AR + 51AR + 52AR				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 5	Household metering	42AR / (42AR + 43AR + 45.7AR + 47AR)				-86.58	-90.52	-89.65	-88.04	-86.34	-87.96	-81.48	-81.99	-87.27	
QA check 6	Average pcc	((25AR + 26AR) * 1,000,000) / ((49AR + 50AR) * 1,000))				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 7	Total leakage	34AR + 35AR + 36AR + 37AR + 38AR + 39AR				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 8	Supply-demand balance	(13AR - 11AR) - 16AR				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Values returns as zero where calculated value equals input value

For volumetric metrics, QA value will show as red text where calculated value +/- 0.1 Ml/d from entered values.

For population and property QA, value will show as red text where calculated value is +/- 0.01 (10) difference from entered values

WRMP ANNUAL REVIEW DATA RETURN - WATER BALANCE COMPONENTS

Revised in June 2022

Critical Period

Water Company: South East Water
Number of resource zones: Eight
Year of data submission: 2021/22
Reporting against WRMP: WRMP19

Row numbering in line with WRMP structure	Component	Derivation and type of data	Units	DP	Data requirement	Resource zone 1 data	Resource zone 2 data	Resource zone 3 data	Resource zone 4 data	Resource zone 5 data	Resource zone 6 data	Resource zone 7 data	Resource zone 8 data	Water company total data	Notes on data provided
SUPPLY Resources															
1 _{AR}	Raw water abstracted	Input outturn data	MI/d	2dp	Required	36.95	78.86	63.87	175.95	44.01	60.95	22.90	110.30	593.78	
2 _{AR}	Raw water imported (in the reporting year)	Input outturn data	MI/d	2dp	Required	0.00	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.78	
3 _{AR}	Potable water imported (in the reporting year)	Input outturn data	MI/d	2dp	Required	3.53	3.99	0.00	28.08	0.00	15.01	3.92	3.58	58.11	
5 _{AR}	Raw water exported (in the reporting year)	Input outturn data	MI/d	2dp	Required	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5.1 _{AR}	Non potable water supplied	Input outturn data	MI/d	2dp	Required	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6 _{AR}	Potable water exported (in the reporting year)	Input outturn data	MI/d	2dp	Required	0.00	2.59	0.84	0.00	2.81	0.91	0.95	16.38	24.47	
7 _{AR}	Deployable output	Input dry year figure	MI/d	2dp	Required	49.99	84.92	80.13	198.71	61.92	67.78	23.17	127.10	693.71	
12 _{AR}	Water Available For Use (own sources)	(Deployable Output + changes to DO) - (Treatment works losses and operational use + outage experienced).	MI/d	2dp	Required	49.52	84.30	80.12	195.26	61.23	67.40	23.09	123.66	684.57	
13 _{AR}	Total Water Available For Use	WAFU own sources + (total water imported) - (total water exported). Total WAFU is based on maximum contractual volumes as stated in WRMP19.	MI/d	2dp	Required	45.02	106.20	73.12	231.26	61.23	87.16	31.59	106.20	741.77	
Process Losses															
9 _{AR}	Treatment works losses and operational use	Input outturn data	MI/d	2dp	Required	0.02	0.07	0.01	0.48	0.46	0.09	0.00	0.88	2.01	
10 _{AR}	Outage experienced	Input outturn data	MI/d	2dp	Required	0.46	0.55	0.00	2.96	0.23	0.30	0.07	2.55	7.12	
DEMAND															
11 _{AR}	Distribution input (in reporting year)	Outturn data for: Total household and non-household consumption + water taken unbilled + distribution system operational losses + total leakage	MI/d	2dp	Required	39.21	76.15	61.04	199.42	42.74	76.68	26.02	98.73	619.99	Peak DI figure has been derived as part of the Water Balance process. Using the sum of components within the formula of this workbook causes an error of 0.8 MI/d due to rounding in the original data sources. This has been adjusted and included within the distribution system operational use figure in order to match our Critical Peak DI figure for 2021-22.
Consumption															
23 _{AR}	Measured non household - consumption	Input outturn data	MI/d	2dp	Required	5.21	10.89	9.75	27.78	5.27	10.92	3.74	15.16	88.73	
24 _{AR}	Unmeasured non household - consumption	Input outturn data	MI/d	2dp	Required	0.20	0.44	0.54	0.95	0.21	0.24	0.14	0.68	3.39	
25 _{AR}	Measured household - consumption	Input outturn data	MI/d	2dp	Required	23.17	47.25	36.25	108.77	21.75	37.01	10.54	40.57	325.31	
26 _{AR}	Unmeasured household - consumption	Input outturn data	MI/d	2dp	Required	6.55	11.49	8.38	31.01	6.53	11.32	6.21	19.40	100.89	
29 _{AR}	Measured household - pcc	Outturn data: (Measured household consumption * 1,000,000) / (measured household population * 1,000)	l/h/d	0dp	Required	165	168	153	182	191	162	172	158	170	
30 _{AR}	Unmeasured household - pcc	Outturn data: (Unmeasured household consumption * 1,000,000) / (Unmeasured household population * 1,000)	l/h/d	0dp	Required	271	340	320	323	311	345	351	303	320	
31 _{AR}	Average household - pcc	Outturn data: (Measured and unmeasured household consumption * 1,000,000) / (measured and unmeasured household population * 1,000)	l/h/d	0dp	Required	181	186	170	202	209	185	212	187	191	
32 _{AR}	Water taken unbilled	Input outturn data	MI/d	2dp	Required	0.57	2.10	1.61	3.01	0.11	1.21	0.41	1.44	10.47	
33 _{AR}	Distribution system operational use	Input outturn data	MI/d	2dp	Required	0.12	0.44	0.32	0.84	0.08	0.29	0.11	0.36	2.56	Adjusted figure in order to report Peak DI figure matching our Water Balance process. Original data included within the Annual Average tab
Leakage															
34 _{AR}	Measured non household - uspl	Input outturn data	MI/d	2dp	Required	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
35 _{AR}	Unmeasured non-household - uspl	Input outturn data	MI/d	2dp	Required	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
36 _{AR}	Measured household - uspl	Input outturn data	MI/d	2dp	Required	0.88	2.04	1.70	3.91	0.64	1.41	0.42	1.62	12.62	
37 _{AR}	Unmeasured household - uspl	Input outturn data	MI/d	2dp	Required	0.16	0.24	0.22	0.65	0.13	0.24	0.13	0.47	2.24	
38 _{AR}	Void properties - uspl	Input outturn data	MI/d	2dp	Required	0.08	0.13	0.12	0.26	0.04	0.09	0.03	0.14	0.89	
39 _{AR}	Distribution Losses	Input outturn data	MI/d	2dp	Required	2.26	1.14	2.15	22.23	7.98	13.96	4.28	18.90	72.90	
40 _{AR}	Total leakage	Outturn data: Total USPL + distribution losses	MI/d	2dp	Required	3.38	3.55	4.19	27.05	8.79	15.70	4.87	21.12	88.65	
CUSTOMERS Properties															
42 _{AR}	Measured non-household - properties	Input end of reporting year data	000's	3dp	Required	3.432	6.482	5.926	9.572	2.810	4.571	2.357	7.114	42.264	
43 _{AR}	Unmeasured non-household - properties	Input end of reporting year data	000's	3dp	Required	0.139	0.175	0.300	0.543	0.196	0.145	0.086	0.434	2.018	
44 _{AR}	Void non households - properties	Input end of reporting year data	000's	3dp	Required	0.660	1.018	1.001	2.152	0.538	0.686	0.362	1.173	7.589	
45 _{AR}	Measured household - properties	Input end of reporting year data	000's	3dp	Required	58.489	118.331	101.667	249.192	48.963	92.746	27.492	107.164	804.043	
45.7 _{AR}	Measured void household - properties	Input end of reporting year data	000's	3dp	Required	1.372	2.079	2.069	4.593	0.795	1.722	0.502	2.431	15.564	
46 _{AR}	Unmeasured household - properties	Input end of reporting year data	000's	3dp	Required	6.671	8.659	8.037	25.344	6.177	9.519	5.263	19.007	88.678	
47 _{AR}	Unmeasured void household - properties	Input end of reporting year data	000's	3dp	Required	0.349	0.350	0.492	1.096	0.207	0.395	0.145	0.795	3.830	
48 _{AR}	Total resource zone properties (inc voids)	End of reporting year data : Total non-household properties + total void non-household properties + total household properties + total void household properties	000's	3dp	Required	71.112	137.094	119.492	292.492	59.686	109.784	36.208	138.117	963.985	
Population															
49 _{AR}	Measured non-household - population	Input end of reporting year data	000's	3dp	Required	2.576	5.527	5.829	9.508	3.483	3.757	1.839	9.584	42.104	
50 _{AR}	Unmeasured non-household - population	Input end of reporting year data	000's	3dp	Required	0.116	0.172	0.345	0.612	0.272	0.131	0.072	0.667	2.387	
51 _{AR}	Measured household - population	Input end of reporting year data	000's	3dp	Required	140.286	282.021	236.567	597.472	114.163	228.941	61.227	256.894	1917.568	
52 _{AR}	Unmeasured household population	Input end of reporting year data	000's	3dp	Required	24.121	33.824	26.224	95.900	21.037	32.794	17.711	63.929	315.540	
53 _{AR}	Total resource zone population	End of reporting year data: Unmeasured and measured household population + Unmeasured and measured non-household population	000's	3dp	Required	167.099	321.545	268.965	703.492	138.954	265.622	80.849	331.073	2277.599	
Metering															
57 _{AR}	Total measured household metering penetration (incl. voids)	Outturn data: Measured household properties exc. voids / (measured household properties exc. voids + unmeasured household properties exc. voids) + measured and unmeasured household void properties)	%	2dp	Required	0.87	0.91	0.91	0.89	0.87	0.89	0.82	0.83	0.88	Figures have barely changed since our 2021 submission. Possible error in the QA check formula.
57.1	Total households with a meter installed	Input outturn data (See technical annex for guidance)	%	2dp	Optional										
	Total numbers of household meters installed	Input outturn data	000's	3dp	Required	0.031	0.048	0.05	0.127	0.019	0.023	0.022	0.075	0.395	
SUPPLY-DEMAND BALANCE															
16 _{AR}	Target headroom	Input adjusted reporting year figure or dry year WRMP	MI/d	2dp	Required	2.65	11.12	4.57	10.58	1.77	4.21	2.55	4.70	42.16	
18 _{AR}	Observed supply-demand balance (in reporting year)	(Total WAFU - DI) - target headroom	MI/d	2dp	Required	3.15	18.93	7.51	21.25	16.72	6.27	3.02	2.77	79.62	

QA check 1	Distribution input	23AR + 24AR + 25AR + 26AR + 32AR + 33AR + 40AR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 2	Water available for use (own sources)	7AR - (9AR + 10AR)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 3	Total properties	42AR + 43AR + 45AR + 45.7AR + 46AR + 47AR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 4	Total population	49AR + 50AR + 51AR + 52AR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 5	Household metering	42AR / (42AR + 43AR + 45.7AR + 47AR)	-86.58	-90.52	-89.65	-88.04	-86.34	-87.96	-81.48	-81.99	-87.27				
QA check 6	Average pcc	((25AR + 26AR) * 1,000,000) / ((49AR + 50AR) * 1,000))	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 7	Total leakage	34AR + 35AR + 36AR + 37AR + 38AR + 39AR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
QA check 8	Supply-demand balance	(13AR - 11AR) - 16AR	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Values returns as zero where calculated value equals input value

For volumetric metrics, QA value will show as red text where calculated value +/- 0.1 MI/d from entered values.

For population and property QA, value will show as red text where calculated value is +/- 0.01 (10) difference from entered values

WSPF19 Scheme delivery

[illegible]