Water Resources Planning Tables 2019

v15 - June 2018

All queries on the content of this workbook should be sent to:
water-company-plan@environment-agency.gov.uk

Environment Agency

Cyfoeth Naturiol Cymru
Natural Resources Wales

Water resource zone information

Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned
Base Year:	2016/17
Responsible Officer:	William Robinson
Version:	Draft Final

Signed: **William Robinson** **Dated:** 20/08/2018

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Key to cells

Clear cells - indicate an input is required

Yellow shaded cells - indicates a formula.

Blue shaded cells - indicate base year data.

Light grey shaded cells - indicate preceding years.

Dark grey cells - indicate that no data entry is required.

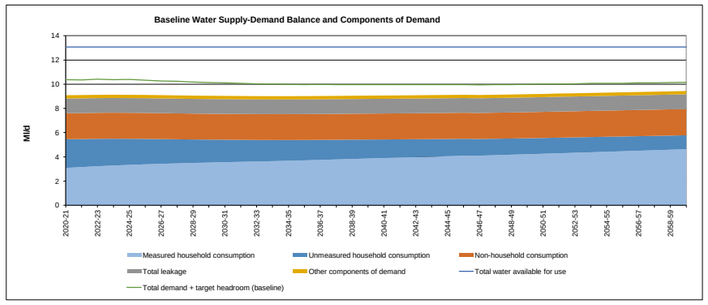
Worksheet	Content
WRZ summary	Supply-Demand Balance and components
1. BL Licences	Baseline water resources
2. BL Supply	Baseline water supplies
3. BL Demand	Baseline demand
4. BL SDB	Baseline supply demand balance
5. Feasible options	Fixed and Variable costs, Net Present Value, AIC and AISC of all feasible options (confidential)
6. Preferred options	High level costs of preferred options (Dry Year) - publicly available
7. FP Supply	Final Planning water supplies (impact of Scenario options)
8. FP Demand	Final Planning demand (impact of Scenario options)
9. FP SDB	Final Planning supply demand balance
10. Drought plan links	Drought plan links

Summary graphs of water resources planning tables data
Essex & Suffolk Water
Blyth

DERIVATION	DESCRIPTION	UNITS	For info 2017-18	For info 2018-19	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
	SUPPLY																																												
13BL	Total water available for use	Ml/d	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07
13FP	Total water available for use	Ml/d	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07
	DEMAND		0.00																																									
26BL	Unmeasured household consumption	Ml/d	2.60	2.55	2.49	2.42	2.37	2.32	2.27	2.21	2.16	2.10	2.05	1.99	1.94	1.90	1.86	1.82	1.78	1.75	1.71	1.68	1.65	1.62	1.59	1.57	1.54	1.51	1.48	1.45	1.43	1.40	1.38	1.36	1.34	1.32	1.30	1.29	1.27	1.26	1.24	1.22	1.20	1.18	1.17	1.15
26FP	Unmeasured household consumption	Ml/d	2.60	2.55	2.49	2.42	2.35	2.29	2.23	2.16	2.09	2.03	1.97	1.90	1.85	1.80	1.75	1.71	1.67	1.63	1.59	1.55	1.51	1.48	1.46	1.43	1.40	1.38	1.35	1.32	1.30	1.28	1.26	1.24	1.22	1.20	1.18	1.17	1.16	1.14	1.13	1.11	1.09	1.07	1.06	1.04
25BL	Measured household consumption	Ml/d	2.78	2.83	2.91	2.99	3.08	3.15	3.22	3.28	3.33	3.38	3.42	3.46	3.49	3.53	3.56	3.58	3.61	3.64	3.67	3.71	3.75	3.79	3.82	3.86	3.90	3.94	3.97	4.01	4.05	4.09	4.10	4.14	4.18	4.22	4.26	4.30	4.34	4.38	4.42	4.46	4.50	4.55	4.59	4.63
25FP	Measured household consumption	Ml/d	2.78	2.83	2.91	2.99	3.07	3.13	3.20	3.25	3.29	3.33	3.36	3.38	3.40	3.42	3.44	3.46	3.47	3.49	3.51	3.52	3.54	3.57	3.61	3.65	3.68	3.72	3.76	3.80	3.83	3.87	3.88	3.92	3.96	4.00	4.03	4.07	4.11	4.15	4.19	4.24	4.28	4.32	4.36	4.41
23BL+24BL	Non-household consumption	Ml/d	2.48	2.18	2.15	2.15	2.15	2.15	2.14	2.15	2.15	2.15	2.14	2.14	2.13	2.13	2.13	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.16	2.16	2.16	2.16	2.16	2.16	2.17	2.17	2.17
23FP+24FP	Non-household consumption	Ml/d	2.48	2.18	2.15	2.15	2.15	2.15	2.14	2.15	2.15	2.15	2.14	2.14	2.13	2.13	2.13	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.15	2.16	2.16	2.16	2.16	2.16	2.16	2.17	2.17	2.17
40BL	Total leakage	Ml/d	1.50	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
40FP	Total leakage	Ml/d	1.50	1.22	1.22	1.22	1.17	1.13	1.09	1.05	1.00	0.98	0.96	0.94	0.92	0.90	0.89	0.87	0.85	0.83	0.81	0.80	0.78	0.76	0.75	0.73	0.72	0.70	0.69	0.67	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
BL-(23BL:26BL)-40	Other components of demand	Ml/d	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
FP-(23FP:26FP)-40	Other components of demand	Ml/d	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27	0.27
	Total demand + target headroom (baseline	Ml/d	9.63	9.05	10.31	10.33	10.37	10.35	10.42	10.37	10.38	10.32	10.27	10.24	10.17	10.14	10.11	10.07	10.04	10.01	9.98	9.96	9.98	9.97	9.96	9.97	9.96	9.96	9.96	9.96	9.97	9.97	9.94	9.96	9.97	9.98	10.00	10.02	10.03	10.06	10.08	10.08	10.11	10.11	10.14	10.16
	Total demand + target headroom (final plar	Ml/d	9.63	9.05	10.31	10.33	10.30	10.22	10.23	10.11	10.06	9.97	9.87	9.80	9.69	9.63	9.56	9.48	9.41	9.35	9.29	9.23	9.20	9.16	9.14	9.13	9.11	9.10	9.08	9.07	9.06	9.06	9.04	9.06	9.07	9.08	9.10	9.12	9.14	9.17	9.18	9.19	9.21	9.22	9.25	9.27
	SUPPLY-DEMAND BALANCE																																												
16BL	Target headroom	Ml/d	0.00	0.00	1.28	1.28	1.28	1.25	1.30	1.24	1.26	1.21	1.17	1.17	1.11	1.10	1.08	1.04	1.02	1.00	0.97	0.95	0.96	0.94	0.91	0.91	0.90	0.88	0.87	0.86	0.86	0.84	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.78	0.77	0.75	0.75	0.73	0.73	0.73
16FP	Target headroom	Ml/d	0.00	0.00	1.28	1.28	1.28	1.25	1.30	1.24	1.26	1.21	1.17	1.17	1.11	1.10	1.08	1.04	1.02	1.00	0.97	0.95	0.96	0.94	0.91	0.91	0.90	0.88	0.87	0.86	0.86	0.84	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.78	0.77	0.75	0.75	0.73	0.73	0.73
17BL	Available headroom	Ml/d	3.44	4.02	4.04	4.02	3.98	3.97	3.95	3.94	3.95	3.96	3.98	4.00	4.01	4.03	4.04	4.05	4.06	4.06	4.06	4.06	4.05	4.04	4.03	4.02	4.01	4.00	3.98	3.97	3.96	3.95	3.96	3.94	3.92	3.90	3.87	3.84	3.82	3.79	3.77	3.74	3.72	3.69	3.66	3.63
17FP	Available headroom	Ml/d	3.44	4.02	4.04	4.02	4.05	4.10	4.14	4.20	4.27	4.32	4.37	4.43	4.49	4.54	4.59	4.63	4.68	4.72	4.75	4.79	4.83	4.85	4.85	4.85	4.86	4.86	4.86	4.86	4.86	4.85	4.86	4.84	4.82	4.80	4.77	4.74	4.72	4.69	4.66	4.64	4.61	4.58	4.56	4.53

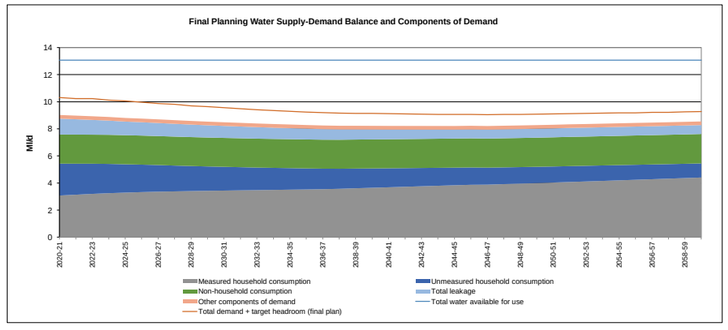
Baseline Supply-Demand Balance:

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
SDB (Ml/d)	2.71	2.72	2.65	2.70	2.69	2.75	2.80	2.83	2.90	2.93	2.96	3.00	3.04	3.06	3.09	3.11	3.09	3.10	3.11	3.10	3.11	3.11	3.12	3.11	3.10	3.10	3.13	3.11	3.10	3.09	3.07	3.05	3.04	3.01	3.00	2.99	2.97	2.96	2.93	2.91



Final Planning Supply-Demand Balance:

	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
SDB (Ml/d)	2.77	2.85	2.84	2.96	3.01	3.11	3.20	3.27	3.38	3.44	3.51	3.59	3.66	3.72	3.78	3.84	3.87	3.91	3.93	3.94	3.96	3.98	3.99	4.00	4.01	4.01	4.03	4.01	4.00	3.99	3.97	3.95	3.94	3.91	3.89	3.89	3.86	3.85	3.82	3.80



Company:	Essex & Suffolk Water
Resource Zone Name	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

Table 1: Baseline licences

Row ref	Derivation	Licence number	Source name	Source type	Deployable output (Ml/d)	Annual licensed quantity (Ml/d)	Constraints on deployable output	Additional notes (if desired)
All individual licences:								
0.1BL	Sum (0.1BL+...)	-	-	-	10.44	3810.15	-	
-	Input	AN/035/0004/014/R01	Blyth Borehole 4	GW	3.11	1135.15	Annual average daily licence	
		7/35/03/*G/0072	Blyth Borehole 3	GW	2.273972603	830	Annual average daily licence	
		7/35/03/*G/0044	Blyth Borehole 2	GW	2.205479452	805	Annual average daily licence	
		7/35/02/*G/0082	Blyth Borehole 7	GW	2.849315068	1040	Annual average daily licence	
	Input							
Grouped licences	**Derivation**	**Licence number**	**Source name**	**Source type**	**DYAA deployable output (Ml/d)**	**Annual licensed quantity (Ml/d)**		
0.2BL	Sum (0.2BL+...)	-	**Total**	-	4.23	-	-	
-	-	**Group #:**	**[Enter name of group]**	-	4.23	-	-	
-	Input	7/35/04/*G/0067	Blyth Boreholes 1, 5 & 6	GW	4.23	1545.60		
-	Input							
-	Input							
-	Input							
-	Input							
Unused licences:	**Derivation**	**Licence number**	**Source name**	**Source type**	**DYAA deployable output (Ml/d)**	**Annual licensed quantity (Ml/d)**	**Reason licence is unused**	
0.3BL	Sum (0.3BL+...)	-	-	-	0.00	91.00	-	
	Input	7/35/05/*G/0013	Blyth Borehole 8	GW	0.00	91.00	Non-potable supply (Club irrigation)	
-	Input							
New licences (within current AMP):	**Derivation**	**Licence number**	**Source name**	**Source type**	**DYAA deployable output (Ml/d)**	**Annual licensed quantity (Ml/d)**	**Status of licence**	
0.4BL	Sum (0.4BL+...)	-	-	-	0.00	0.00	-	
	Input							
-	Input							

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Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

README

Table 2: Baseline supply

	Row ref	Component	Derivation	Unit	decimal places	2016/17	For info 2017-18	For info 2018-19	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
Resources	1BL	Raw water abstracted	Input	Mld	2	9.01	8.44	8.42	8.44	8.48	8.50	8.51	8.52	8.52	8.51	8.49	8.47	8.46	8.44	8.43	8.43	8.42	8.42	8.42	8.42	8.43	8.44	8.46	8.47	8.48	8.49	8.50	8.52	8.53	8.54	8.53	8.55	8.57	8.60	8.62	8.66	8.68	8.70	8.73	8.76	8.78	8.81	8.84	8.87
	2BL	Total raw water imported	sum(2.1BL+2.2BL+2.3BL...)	Mld	2	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
	2.1BL*	Raw water imported from: None	Input	Mld	2	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
	-	-	-	-	2					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3BL	Total potable water imported	sum(3.1BL+3.2BL+3.3BL...)	Mld	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3.1BL*	Potable water imported from: None	Input	Mld	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	5BL	Total raw water exported (raw e	sum(5.1BL+5.2BL+...)	Mld	2	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	5.1BL	Non potable water supplied to:	Input	Mld	2	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	5.2BL*	Raw water export to: None	Input	Mld	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6BL	Total potable water exported	sum(6.1BL+6.2BL+6.3BL...)	Mld	2	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
	6.1BL*	Potable water export to: None	Input	Mld	2	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
	-	-	-	Mld	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7BL	Deployable Output (baseline pro	sum(0.1BI+0.2BL+0.3BL+0.4Bl L)	Mld	2	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68	14.68
Resource (and process) Losses	8BL	Baseline forecast changes to De	sum(8.1BL+8.2BL+8.3BL)	Mld	2	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20
	8.1BL	Change in DO due to climate ch	Input (reductions must be expressed as -ve)	Mld	2	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	8.2BL	Reductions to restore sustainab	sum(8.2BL sub-components)	Mld	2	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20
	8.21BL*	Total for the zone	Input (zero or negative number)	Mld	2	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20	-0.20
	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8.3BL	Total other changes to DO (bas	Input (reductions must be expressed as -ve)	Mld	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
					2																																										
	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	9BL	Raw water losses, treatment wa	Input	Mld	2	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
	10BL	Outage allowance	Input	Mld	2	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68

Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

Table 3: Baseline demand

Group	Row ref	Component	Derivation	Unit	Decimal places	2016/17	For info 2017-18	For info 2018-19	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Consumption	19BL	Water delivered measured non-household	Input	Ml/d	2	2.48	2.18	2.15	2.15	2.14	2.14	2.14	2.14	2.14	2.14
	20BL	Water delivered unmeasured non- household	Input	Ml/d	2	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	21BL	Water delivered measured household	Input	Ml/d	2	2.95	2.92	3.00	3.08	3.18	3.25	3.32	3.38	3.44	3.48
	22BL	Water delivered unmeasured household	Input	Ml/d	2	2.76	2.63	2.56	2.50	2.44	2.39	2.34	2.28	2.22	2.17
	23BL	Measured Non Household - Consumption	19BL-34BL	Ml/d	2	2.46	2.17	2.14	2.14	2.14	2.13	2.13	2.14	2.13	2.13
	24BL	Unmeasured Non Household - Consumption	20BL-35BL	Ml/d	2	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	25BL	Measured Household - Consumption	21BL-36BL	Ml/d	2	2.78	2.83	2.91	2.99	3.08	3.15	3.22	3.28	3.33	3.38
	26BL	Unmeasured Household - Consumption	22BL-37BL	Ml/d	2	2.60	2.55	2.49	2.42	2.37	2.32	2.27	2.21	2.16	2.10
	27 -	Percentage of consumption driven by climate change	Input	%	1	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3
	28 -	Volume of consumption driven by climate change		Ml/d	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PCC and consumption by component	29BL	Measured Household - PCC	(25BL*1,000,000)/(51BL*1,000)	l/h/d	1	134.6	133.6	132.8	132.0	131.3	129.9	128.9	128.0	127.2	126.4
	29.1BL	Measured toilet flushing	Input	l/h/d	1	32.5	32.4	32.3	32.3	32.2	32.0	31.9	31.8	31.7	31.6
	29.2BL	Measured personal washing	Input	l/h/d	1	64.5	64.3	64.1	64.0	63.8	63.5	63.3	63.1	62.8	62.6
	29.3BL	Measured clothes washing	Input	l/h/d	1	11.3	11.2	11.1	10.9	10.7	10.5	10.3	10.1	9.9	9.8
	29.4BL	Measured dish washing	Input	l/h/d	1	7.7	7.3	7.2	7.1	7.0	6.8	6.6	6.5	6.4	6.2
	29.5BL	Measured miscellaneous internal use	Input	l/h/d	1	10.2	10.0	9.9	9.8	9.7	9.4	9.3	9.2	9.1	9.0
	29.6BL	Measured external use	Input	l/h/d	1	8.4	8.3	8.2	8.0	7.9	7.7	7.6	7.4	7.3	7.1
	30BL	Unmeasured Household - PCC	(26BL*1,000,000)/(52BL*1,000)	l/h/d	1	150.0	149.3	148.6	147.9	147.3	146.8	146.3	145.8	145.3	144.8
	30.1BL	Unmeasured toilet flushing	Input	l/h/d	1	37.5	37.5	37.4	37.3	37.2	37.2	37.1	37.1	37.1	37.0
	30.2BL	Unmeasured personal washing	Input	l/h/d	1	71.5	71.4	71.1	70.9	70.8	70.7	70.6	70.4	70.3	70.2
	30.3BL	Unmeasured clothes washing	Input	l/h/d	1	10.8	10.5	10.3	10.1	9.9	9.7	9.5	9.3	9.2	9.0
	30.4BL	Unmeasured dish washing	Input	l/h/d	1	10.0	9.9	9.8	9.6	9.5	9.4	9.3	9.2	9.1	9.0
	30.5BL	Unmeasured miscellaneous internal use	Input	l/h/d	1	11.7	11.7	11.6	11.6	11.6	11.5	11.5	11.4	11.4	11.3
	30.6BL	Unmeasured external use	Input	l/h/d	1	8.4	8.4	8.4	8.3	8.3	8.3	8.3	8.3	8.3	8.3
	31BL	Average Household - PCC	((25BL+26BL)*1,000,000)/(51BL+52BL*1,000)	l/h/d	1	141.7	140.6	139.7	138.7	137.8	136.5	135.6	134.6	133.7	132.8
	32BL	Water Taken Unbilled	Input	Ml/d	2	0.21	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
	33BL	Distribution System Operational Use	Input	Ml/d	2	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Leakage	34BL	Measured Non Household - USPL	Input	Ml/d	2	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	35BL	Unmeasured Non Household - USPL	Input	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	36BL	Measured Household - USPL	Input	Ml/d	2	0.17	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.10
	37BL	Unmeasured Household - USPL	Input	Ml/d	2	0.16	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	38BL	Void Properties - USPL	Input	Ml/d	2	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	39BL	Distribution Losses	Input	Ml/d	2	1.13	1.03	1.03	1.03	1.03	1.03	1.03	1.02	1.02	1.02
	40BL	Total Leakage	sum(34BL:39BL)	Ml/d	2	1.50	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
	41BL	Total Leakage	(40BL*1,000,000)/(48BL*1,000)	l/prop/d	2	80.72	64.73	63.95	63.13	62.19	61.33	60.55	59.91	59.38	58.87
Customer: Properties	42BL	Measured non-households - properties	Input (total, excluding voids)	000's	2	1.28	1.30	1.30	1.30	1.31	1.31	1.31	1.32	1.32	1.32
	43BL	Unmeasured non-households - properties	Input (total, excluding voids)	000's	2	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	44BL	All void non-households - properties	Input (voids in each year)	000's	2	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	45BL	Total measured households - properties (excl void)	Pre-plan year = input. Forecast years = Previous year 45BL +	000's	2	10.87	11.11	11.43	11.77	12.17	12.52	12.85	13.13	13.38	13.61
	45.1BL	New build properties - properties	Input (new builds in each year)	000's	2	0.09	0.20	0.23	0.25	0.29	0.27	0.25	0.22	0.18	0.18
	45.2BL	Meter optants - properties	Input (meter optants in each year)	000's	2	0.14	0.12	0.11	0.10	0.10	0.09	0.08	0.08	0.07	0.06
	45.3BL	Compulsory metering - properties	Input (compulsory meters in each year)	000's	2										
	45.4BL	Metering on change of occupancy - properties	Input (change of occupancy meters in each year)	000's	2										
	45.5BL	Selective metering - properties	Input (selective meters in each year)	000's	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	45.6BL	Other changes to existing metering - properties	Input (other changes to meters in each year)	000's	2	0.00	-0.08	-0.01	-0.01	0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	45.7BL	Measured void households - properties	Input (voids in each year)	000's	2	0.46	0.54	0.55	0.56	0.55	0.56	0.57	0.58	0.58	0.59
	46BL	Unmeasured households - properties (excl void)	Input (total)	000's	2	5.53	5.41	5.31	5.21	5.13	5.05	4.97	4.90	4.83	4.76
	47BL	Unmeasured void households - properties	Input (voids in each year)	000's	2	0.25	0.24	0.23	0.23	0.21	0.21	0.20	0.20	0.19	0.19
	48BL	Total Resource Zone Properties (incl voids)	SUM(42BL:45BL)+45.7BL+46BL+47BL	000's	2	18.60	18.81	19.04	19.28	19.58	19.85	20.11	20.32	20.50	20.68
Customer: Population	49BL	Measured Non Household - Population	Input (total)	000's	2	0.54	0.54	0.55	0.56	0.57	0.58	0.60	0.61	0.62	0.63
	50BL	Unmeasured Non Household - Population	Input (total)	000's	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	51BL	Measured Household - Population	Input (total)	000's	2	20.65	21.18	21.89	22.63	23.50	24.27	25.00	25.64	26.20	26.75
	52BL	Unmeasured Household - Population	Input (total)	000's	2	17.35	17.08	16.73	16.39	16.07	15.79	15.49	15.19	14.84	14.51
	53BL	Total Resource Zone Population	Sum(49BL:52BL)	000's	2	38.55	38.81	39.16	39.58	40.13	40.65	41.09	41.43	41.66	41.89
Occupar	54BL	Measured Household - Occupancy Rate (average) (ex	51BL/45BL	h/prop	1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0
	55BL	Unmeasured Household - Occupancy Rate	52BL/46BL	h/prop	1	3.1	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.0
Metering	56BL	Total Household Metering penetration (excl. voids)	45BL/45BL+46BL	%	0	66%	67%	68%	69%	70%	71%	72%	73%	73%	74%
	57BL	Total Household Metering penetration (incl. voids)	45BL/(45BL+45.7BL+46BL+47BL)	%	0	64%	64%	65%	66%	67%	68%	69%	70%	70%	71%

Row ref	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46
19BL	2.14	2.14	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.15	2.15
20BL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
21BL	3.53	3.57	3.60	3.63	3.67	3.70	3.72	3.76	3.79	3.82	3.86	3.90	3.94	3.98	4.02	4.06	4.10	4.13	4.17	4.21
22BL	2.11	2.05	2.01	1.96	1.92	1.88	1.84	1.81	1.78	1.75	1.72	1.69	1.66	1.63	1.60	1.57	1.54	1.52	1.49	1.47
23BL	2.13	2.13	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.14	2.14	2.14
24BL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
25BL	3.42	3.46	3.49	3.53	3.56	3.58	3.61	3.64	3.67	3.71	3.75	3.79	3.82	3.86	3.90	3.94	3.97	4.01	4.05	4.09
26BL	2.05	1.99	1.94	1.90	1.86	1.82	1.78	1.75	1.71	1.68	1.65	1.62	1.59	1.57	1.54	1.51	1.48	1.45	1.43	1.40
27 -	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9
28 -	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
29BL	125.6	124.9	124.2	123.6	123.0	122.4	121.8	121.4	121.0	120.6	120.4	120.3	120.2	119.9	119.8	119.7	119.6	119.5	119.4	119.2
29.1BL	31.5	31.4	31.3	31.2	31.1	31.0	31.0	30.9	30.9	30.8	30.8	30.8	30.8	30.8	30.8	30.9	30.9	30.9	30.9	30.9
29.2BL	62.4	62.2	62.1	61.9	61.7	61.5	61.4	61.2	61.1	61.0	60.9	60.8	60.7	60.5	60.4	60.4	60.3	60.2	60.2	60.1
29.3BL	9.6	9.5	9.4	9.3	9.2	9.1	9.0	9.0	8.9	8.9	8.8	8.8	8.8	8.8	8.7	8.7	8.7	8.7	8.6	8.6
29.4BL	6.1	6.0	5.9	5.8	5.7	5.6	5.5	5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2	5.2	5.2	5.2	5.2	5.2
29.5BL	9.0	8.9	8.9	8.8	8.8	8.7	8.7	8.7	8.6	8.6	8.7	8.7	8.7	8.7	8.7	8.7	8.8	8.8	8.8	8.8
29.6BL	7.0	6.9	6.7	6.6	6.5	6.4	6.3	6.1	6.1	6.0	6.0	5.9	5.9	5.9	5.8	5.8	5.7	5.7	5.7	5.6
30BL	144.3	143.9	143.5	143.1	142.8	142.5	142.0	141.6	141.3	141.3	141.2	141.2	141.2	141.1	141.0	140.9	140.9	140.8	140.8	140.7
30.1BL	37.0	36.9	36.9	36.8	36.8	36.8	36.7	36.7	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.6	36.7	36.7	36.7	36.7
30.2BL	70.1	70.0	69.9	69.8	69.7	69.6	69.5	69.4	69.3	69.2	69.1	69.1	69.0	69.0	68.9	68.8	68.7	68.6	68.5	68.4
30.3BL	8.8	8.6	8.4	8.3	8.1	8.1	7.8	7.6	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.6	7.6
30.4BL	8.9	8.8	8.8	8.7	8.7	8.6	8.6	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
30.5BL	11.3	11.2	11.2	11.2	11.1	11.1	11.0	11.0	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
30.6BL	8.3	8.3	8.3	8.4	8.5	8.5	8.5	8.4	8.5	8.5	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
31BL	132.0	131.2	130.5	129.8	129.1	128.5	127.8	127.3	126.8	126.4	126.1	125.9	125.7	125.4	125.1	124.9	124.7	124.5	124.3	124.1
32BL	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
33BL	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
34BL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
35BL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36BL	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
37BL	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
38BL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
39BL	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
40BL	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
41BL	58.41	58.03	57.64	57.26	56.87	56	56	56	55	55	55	54	54	54	54	53	53	53	52	52
42BL	1.32	1.33	1.33	1.33	1.33	1.34	1.34	1.34	1.34	1.35	1.35	1.35	1.36	1.36	1.36	1.36	1.37	1.37	1.37	1.37
43BL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
44BL	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
45BL	13.82	14.00	14.18	14.33	14.48	14.62	14.76	14.89	15.03	15.16	15.29	15.43	15.55	15.68	15.81	15.94	16.06	16.18	16.30	16.42
45.1BL	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12	0.12
45.2BL	0.06	0.05	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
45.3BL																				
45.4BL																				
45.5BL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.6BL	-0.01	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
45.7BL	0.59	0.59	0.59	0.60	0.60	0.61	0.61	0.62	0.63	0.63	0.64	0.64	0.65	0.65	0.66	0.66	0.67	0.67	0.68	0.68
46BL	4.71	4.67	4.64	4.62	4.61	4.60	4.59	4.58	4.58	4.57	4.56	4.55	4.55	4.54	4.53	4.52	4.52	4.51	4.50	4.49
47BL	0.19	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17
48BL	20.84	20.98	21.12	21.26	21.41	21.55	21.69	21.82	21.96	22.09	22.23	22.36	22.49	22.62	22.75	22.87	23.00	23.12	23.23	23.35
49BL	0.64	0.65	0.66	0.68	0.69	0.71	0.73	0.75	0.76	0.78	0.79	0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.89	0.90
50BL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51BL	27.25	27.70	28.13	28.53	28.91	29.28	29.65	30.02	30.38	30.74	31.10	31.46	31.82	32.18	32.54	32.89	33.24	33.58	33.93	34.27
52BL	14.17	13.82	13.52	13.24	12.99	12.75	12.53	12.33	12.12	11.92	11.70	11.49	11.29	11.10	10.90	10.71	10.51	10.33	10.14	9.98
53BL	42.06	42.17	42.31	42.45	42.60	42.74	42.91	43.10	43.26	43.43	43.60	43.76	43.94	44.12	44.28	44.45	44.62	44.79	44.96	45.15
54BL	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1
55BL	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.6	2.6	2.6	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2
56BL	75%	75%	75%	76%	76%	76%	76%	76%	77%	77%	77%	77%	77%	78%	78%	78%	78%	78%	78%	79%
57BL	72%	72%	72%	73%	73%	73%	73%	73%	74%	74%	74%	74%	74%	75%	75%	75%	75%	75%	75%	75%

Row ref	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
19BL	2.14	2.15	2.15	2.15	2.15	2.16	2.15	2.16	2.16	2.16	2.16	2.16	2.17	2.17
20BL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
21BL	4.22	4.26	4.30	4.34	4.38	4.42	4.46	4.51	4.55	4.59	4.63	4.68	4.72	4.77
22BL	1.44	1.42	1.40	1.38	1.37	1.35	1.34	1.32	1.30	1.28	1.26	1.25	1.23	1.21
23BL	2.13	2.14	2.14	2.14	2.14	2.15	2.14	2.15	2.15	2.15	2.15	2.15	2.16	2.16
24BL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
25BL	4.10	4.14	4.18	4.22	4.26	4.30	4.34	4.38	4.42	4.46	4.50	4.55	4.59	4.63
26BL	1.38	1.36	1.34	1.32	1.30	1.29	1.27	1.26	1.24	1.22	1.20	1.18	1.17	1.15
27 -	0.9	0.9	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.3
28 -	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
29BL	118.3	118.3	118.3	118.3	118.3	118.3	118.3	118.2	118.2	118.2	118.2	118.2	118.2	118.2
29.1BL	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7
29.2BL	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
29.3BL	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
29.4BL	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
29.5BL	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.5	8.5	8.5	8.5	8.5	8.5	8.5
29.6BL	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
30BL	140.7	140.6	140.6	140.5	140.4	140.4	140.3	140.2	140.2	140.3	140.3	140.3	140.3	140.3
30.1BL	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7	36.7
30.2BL	68.3	68.2	68.2	68.1	68.0	67.9	67.8	67.7	67.6	67.5	67.4	67.3	67.2	67.1
30.3BL	7.6	7.7	7.7	7.7	7.8	7.8	7.8	7.9	7.9	7.9	8.0	8.1	8.1	8.2
30.4BL	8.5	8.5	8.5	8.5	8.5	8.4	8.4	8.4	8.5	8.5	8.5	8.5	8.5	8.5
30.5BL	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
30.6BL	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.7	8.7	8.7	8.7	8.8	8.8
31BL	123.3	123.1	123.0	122.9	122.8	122.7	122.6	122.5	122.4	122.4	122.3	122.2	122.1	122.0
32BL	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
33BL	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
34BL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
35BL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36BL	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13
37BL	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
38BL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
39BL	1.01	1.01	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
40BL	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.22
41BL	52	52	51	51	51	51	50	50	50	50	49	49	49	49
42BL	1.38	1.38	1.38	1.39	1.39	1.39	1.39	1.40	1.40	1.40	1.40	1.41	1.41	1.41
43BL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
44BL	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
45BL	16.54	16.65	16.77	16.88	17.00	17.11	17.23	17.34	17.46	17.58	17.70	17.82	17.95	18.07
45.1BL	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12
45.2BL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
45.3BL														
45.4BL														
45.5BL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.6BL	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
45.7BL	0.69	0.69	0.70	0.70	0.71	0.71	0.72	0.72	0.73	0.73	0.74	0.74	0.75	0.75
46BL	4.49	4.48	4.47	4.46	4.46	4.45	4.44	4.43	4.43	4.42	4.41	4.41	4.40	4.39
47BL	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
48BL	23.47	23.59	23.70	23.82	23.93	24.05	24.16	24.28	24.40	24.52	24.64	24.76	24.88	25.01
49BL	0.91	0.92	0.93	0.95	0.97	0.98	0.99	1.00	1.01	1.02	1.03	1.03	1.04	1.04
50BL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51BL	34.62	34.96	35.30	35.64	35.98	36.32	36.66	37.01	37.36	37.73	38.09	38.45	38.82	39.18
52BL	9.81	9.66	9.52	9.40	9.28	9.18	9.08	8.98	8.85	8.71	8.57	8.44	8.31	8.19
53BL	45.34	45.53	45.75	45.98	46.22	46.48	46.73	46.98	47.22	47.46	47.69	47.92	48.17	48.42
54BL	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2
55BL	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9
56BL	79%	79%	79%	79%	79%	79%	79%	80%	80%	80%	80%	80%	80%	80%
57BL	76%	76%	76%	76%	76%	76%	76%	76%	77%	77%	77%	77%	77%	77%

Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

Table 4: Baseline supply demand balance

	Row ref	Component	Derivation	Unit	Decimal places	2016/17	For info 2017-18	For info 2018-19	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
SDB	118L	Distribution input	198L+208L+218L+228L+328L+338L+598L	Mld	2	9.63	9.63	9.63	9.63	9.09	9.10	9.12	9.13	9.12	9.11	9.10	9.08	9.06	9.04	9.03	9.02	9.01	9.01	9.01	9.01	9.01	9.02	9.03	9.05	9.06	9.06	9.08	9.09	9.10	9.11	9.13	9.11	9.13	9.15	9.17	9.20	9.23	9.25	9.28	9.30	9.33	9.35	9.38	9.41	9.44
	129L	Water Available For Use (own sources)	(78L+88L)-(98L+108L)	Mld	2	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11
	138L	Total Water Available For Use	128L+(28L+38L)-(58L+68L)	Mld	2	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07
	148L	Target headroom (climate change component)	Input	Mld	2	0.00	0.00	-0.02	-0.03	-0.02	-0.05	0.04	-0.03	0.03	0.01	0.02	0.02	0.00	0.03	0.02	0.03	0.02	0.01	0.00	0.01	0.04	0.02	0.03	0.03	0.03	0.04	0.05	0.03	0.04	0.05	0.03	0.05	0.05	0.06	0.05	0.04	0.04	0.04	0.05	0.05	0.04	0.05	0.05
	158L	Target headroom (all other components)	Input	Mld	2	0.00	0.00	1.30	1.27	1.30	1.30	1.26	1.27	1.23	1.20	1.15	1.15	1.11	1.08	1.05	1.02	1.00	0.98	0.97	0.94	0.92	0.91	0.88	0.88	0.85	0.84	0.84	0.82	0.81	0.78	0.78	0.76	0.76	0.76	0.74	0.74	0.73	0.73	0.73	0.72	0.71	0.70	0.68	0.68	0.67
	168L	Target Headroom	148L+158L	Mld	2	0.00	0.00	1.28	1.24	1.28	1.25	1.30	1.24	1.26	1.21	1.17	1.17	1.11	1.10	1.08	1.04	1.02	1.00	0.97	0.95	0.96	0.94	0.91	0.91	0.90	0.88	0.87	0.86	0.86	0.84	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.78	0.77	0.75	0.75	0.73	0.73	0.73
	178L	Available Headroom	138L-118L	Mld	2	3.44	4.02	4.04	4.02	3.98	3.97	3.95	3.94	3.95	3.96	3.98	4.00	4.01	4.03	4.04	4.05	4.06	4.06	4.06	4.06	4.05	4.04	4.03	4.02	4.01	4.00	3.98	3.97	3.96	3.95	3.96	3.94	3.92	3.90	3.87	3.84	3.82	3.79	3.77	3.74	3.72	3.69	3.66	3.63
	188L	Supply Demand Balance	178L-168L	Mld	2	3.44	4.02	2.76	2.78	2.71	2.72	2.65	2.70	2.69	2.75	2.80	2.83	2.90	2.93	2.96	3.00	3.04	3.06	3.09	3.11	3.09	3.13	3.10	3.11	3.10	3.11	3.11	3.12	3.11	3.10	3.10	3.13	3.11	3.10	3.09	3.07	3.05	3.04	3.01	3.00	2.99	2.97	2.96	2.93	2.91

Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

README

Table 5: Feasible options detailed costs
Detail the gains in WAFU / savings in demand, and the costs of feasible options under capacity use scenario

ENTER DISCOUNT RATE %
ENTER DISCOUNT PERIOD (YRS) 80

Note: If option costs are required from beyond year 80 then the NPV calculation formula must be amended manually to cover the extended period

Row ref	Option name	Option reference no.	Type of option	Preferred Option (Y/N)	Earliest potential option start date	Costs based on capacity	WAFU on full implementation	NPV of WAFU (Ml)	CAPEX NPV (£000)	OPEX NPV (£000)	NPV of opex savings (£000)	NPV of carbon (£000)	Social & Env. NPV (£000)	TOTAL NPV (£000)	AIC (p/m3)	AISC (p/m3)	Scope confidence (score 1 to 5)	Cost confidence (score 1 to 5)
58a	**RESOURCE SIDE**																	
58.1a	Options to increase raw water abstractions																	
58.2a	Options to increase raw imports																	
58.3a	Options to increase potable imports																	
58.4a	Options to reduce raw water losses and operational use																	
58.5a	Options to reduce raw water exports																	
58.6a	Options to reduce potable water exports																	
58.7a	Other options to increase Deployable Output																	
59a	**DISTRIBUTION SIDE**																	
59.1a	Options to reduce Distribution Losses																	
	Leakage	1	Leakage Control	Y	2017/18	Capacity	0.5	2714.63	6196.27	409.77	0.00	0.00	0.00	6606.05	243.35	243.35		
59.2a	Options to reduce Distribution System Operating Use (DSOU) losses																	
60a	**PRODUCTION SIDE**																	
60.1a	Options to reduce treatment works losses																	
60.2a	Options to reduce outage																	
61a	**CUSTOMER SIDE**																	
61.1a	Options to change volume delivered to measured non households																	
61.2a	Options to change volume delivered to unmeasured non households																	
61.3a	Options to change volume delivered to measured households																	
	Enhanced Water Efficiency	2	Household Water Efficiency	Y	2020/21	Capacity	0.2	1299.43	0.00	484.22	0.00	0.00	0.00	484.22	37.26	37.26		
	Enhanced Metering	3	Household Metering	Y	2020/21	Capacity	0.0	-167.43	36.41	0.00	0.00	0.00	0.00	36.41	-21.75	-21.75		
61.4a	Options to change volume delivered to unmeasured households																	
	Enhanced Water Efficiency	2	Household Water Efficiency	Y	2020/21	Capacity	0.1	598.16	0.00	244.00	0.00	0.00	0.00	244.00	40.79	40.79		
61.5a	Options to reduce water taken unbilled																	
61.6a	Options impacting on measured Non Household - USPL																	
61.7a	Options impacting on unmeasured Non Household - USPL																	
61.8a	Options impacting on measured Household - USPL																	
61.9a	Options impacting on unmeasured Household - USPL																	
61.10a	Options impacting on Void properties - USPL																	

Option	Cost component	Derivation	Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	Year 21	Year 22
				3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Leakage	Gains in WAFU / Savings in demand	Input	Ml/d	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5
	Fixed capex	Input	£000s	117.1	1.4	0.0	22.1	0.0	0.0	0.0	0.0	310.1	310.1	310.1	310.1	310.1	775.2	775.2	775.2	775.2	775.2	775.2	775.2	775.2	775.2
	Variable capex	Input	£000s
	Financing costs	Input	£000s
	Fixed opex	Input	£000s	16.5	18.7	18.7	18.7	16.5	16.5	16.5	16.5	30.5	30.5	30.5	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3	28.3
	Variable opex	Input	£000s
	Opex savings	Input	£000s
	Fixed env & social	Input	£000s
	Variable env & social	Input	£000s
	Fixed carbon costs	Input	£000s
	Variable carbon costs	Input	£000s
	Customer willingness to	Input	£000s
	Total	above (eac	£000s	133.65	20.08	18.68	40.83	16.51	16.51	16.51	16.51	340.55	340.55	340.55	338.38	338.38	803.50	803.50	803.50	803.50	803.50	803.50	803.50	803.50	803.50
Enhanced Water Efficiency	Gains in WAFU / Savings in demand	Input	Ml/d	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Fixed capex	Input	£000s
	Variable capex	Input	£000s
	Financing costs	Input	£000s
	Fixed opex	Input	£000s	31.8	32.6	33.3	33.8	34.3	34.8	35.3	35.7	36.1	36.4	36.7	37.0	37.3	37.5	37.7	38.0	38.2	38.4	0.0	0.0	0.0	0.0
	Variable opex	Input	£000s
	Opex savings	Input	£000s
	Fixed env & social	Input	£000s
	Variable env & social	Input	£000s
	Fixed carbon costs	Input	£000s
	Variable carbon costs	Input	£000s
	Customer willingness to	Input	£000s
	Total	above (eac	£000s	31.80	32.56	33.25	33.83	34.31	34.77	35.25	35.67	36.06	36.40	36.72	37.00	37.25	37.50	37.73	37.96	38.20	38.44	0.00	0.00	0.00	0.00
Enhanced Metering	Gains in WAFU / Savings in demand	Input	Ml/d	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fixed capex	Input	£000s	8.8	8.5	7.8	7.2	6.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Variable capex	Input	£000s
	Financing costs	Input	£000s
	Fixed opex	Input	£000s
	Variable opex	Input	£000s
	Opex savings	Input	£000s
	Fixed env & social	Input	£000s
	Variable env & social	Input	£000s
	Fixed carbon costs	Input	£000s
	Variable carbon costs	Input	£000s
	Customer willingness to	Input	£000s
	Total	above (eac	£000s	8.80	8.46	7.82	7.17	6.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Water Efficiency (61.4a)	Gains in WAFU / Savings in demand	Input	Ml/d	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
	Fixed capex	Input	£000s
	Variable capex	Input	£000s
	Financing costs	Input	£000s
	Fixed opex	Input	£000s	21.7	21.2	20.6	20.0	19.4	18.9	18.3	17.8	17.3	16.9	16.5	16.1	15.7	15.4	15.1	14.7	14.4	14.0	0.0	0.0	0.0	0.0
	Variable opex	Input	£000s
	Opex savings	Input	£000s
	Fixed env & social	Input	£000s
	Variable env & social	Input	£000s
	Fixed carbon costs	Input	£000s
	Variable carbon costs	Input	£000s
	Customer willingness to	Input	£000s
	Total	above (eac	£000s	21.74	21.19	20.60	20.04	19.44	18.87	18.33	17.80	17.34	16.90	16.50	16.11	15.74	15.40	15.06	14.72	14.37	14.03	0.00	0.00	0.00	0.00

Option	Cost component	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	Year 38	Year 39	Year 40	Year 41	Year 42	Year 43	Year 44	Year 45
		3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Leakage	Gains in WAFU / Savings in demand	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.0	0.0
	Fixed capex	775.2	775.2	775.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fixed opex	28.3	28.3	28.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	803.50	803.50	803.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Water Efficiency	Gains in WAFU / Savings in demand	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0
	Fixed opex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Metering	Gains in WAFU / Savings in demand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fixed capex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Water Efficiency (61.4a)	Gains in WAFU / Savings in demand	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
	Fixed opex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Option	Cost component	Year 46	Year 47	Year 48	Year 49	Year 50	Year 51	Year 52	Year 53	Year 54	Year 55	Year 56	Year 57	Year 58	Year 59	Year 60	Year 61	Year 62	Year 63	Year 64	Year 65	Year 66	Year 67	Year 68	Year 69	Year 70	Year 71	Year 72	Year 73	Year 74	Year 75	Year 76	Year 77	Year 78	Year 79	Year 80
		3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	2.50%	2.50%	2.50%	2.50%	2.50%
Leakage	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Water Efficiency	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Metering	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Water Efficiency (61.4a)	Gains in WAFU / Savings in demand	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																							
	Fixed opex	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																							
	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Option	Cost component	Year 81	Year 82	Year 83	Year 84	Year 85	Year 86	Year 87	Year 88	Year 89	Year 90	Year 91	Year 92	Year 93	Year 94	Year 95	Year 96	Year 97	Year 98	Year 99	Year 100	Year 101	Year 102	Year 103	Year 104
		2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Leakage	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Water Efficiency	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Metering	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enhanced Water Efficiency (61.4a)	Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

RZCOSTSHERE

Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3.00
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

Start dates	Option Categories
2020-21	Aquifer recharge
2021-22	Bulk supply
2022-23	Conjunctive use
2023-24	Desalination
2024-25	Effluent reuse
2025-26	GW enhancement
2026-27	GW new
2027-28	Reservoir enlargement
2028-29	New reservoir
2029-30	SW enhancement
2030-31	SW new
2031-32	
2032-33	
2033-34	Active leakage management
2034-35	Mains repair
2035-36	Mains replacement (not trunk mains)
2036-37	Pressure management
2037-38	Other leakage control
2038-39	Trunk mains renewal
2039-40	Pumps
2040-41	Service reservoir
2041-42	
2042-43	
2043-44	Water treatment works loss recovery
2044-45	Water treatment works capacity increase

Cistern displacement device
Household water audit
Commercial water audit
Customer education / awareness
Other water efficiency
Metering optants
Metering change of occupancy
Metering compulsory
Metering other selective
Supply pipe repairs / replacement
Outdoor water efficiency devices
Retrofitting indoor water efficiency devices
Alternative tariffs
Collaborative R&D

Table 6: Preferred list of water management options

DRY YEAR PLANNED GAINS IN WAFU OR SAVINGS IN DEMAND (Ml/d) - TO BE COMPLETED FOR ALL PREFERRED OPTIONS

Row Ref	Option Name [Insert / delete non-numbered lines to suit]	Option Reference No.	Unit	Decimal places	2016/17	For info 2017-18	For info 2018-19	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
S8	**Resource Management**	-	**Ml/d**	**2**	**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S8.1	Increase raw water abstractions	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																											
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S8.2	Raw water imports	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S8.3	Potable water imports (input reductions as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S8.4	Reduce raw water losses and operational use (input as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S8.5	Reduced raw water export (including non potable supplies)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S8.51	Reduce raw water exports (input as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S8.52	Reduce non potable supplies (input as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S8.6	Reduce potable water exports (input as -ve)	-	Ml/d		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S8.7	Other options to increase deployable output	-	Ml/d		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S9	**Distribution Side Management**	-			0.00	0.00	0.00	0.00	-0.04	-0.09	-0.13	-0.17	-0.21	-0.23	-0.25	-0.27	-0.29	-0.31	-0.33	-0.35	-0.37	-0.39	-0.40	-0.42	-0.44	-0.45	-0.47	-0.48	-0.50	-0.51	-0.53	-0.54	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56
S9.1	Reduce distribution losses (input as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	-0.04	-0.09	-0.13	-0.17	-0.21	-0.23	-0.25	-0.27	-0.29	-0.31	-0.33	-0.35	-0.37	-0.39	-0.40	-0.42	-0.44	-0.45	-0.47	-0.48	-0.50	-0.51	-0.53	-0.54	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56
-	Leakage		Ml/d	2	0.00	0.00	0.00	0.00	-0.04	-0.09	-0.13	-0.17	-0.21	-0.23	-0.25	-0.27	-0.29	-0.31	-0.33	-0.35	-0.37	-0.39	-0.40	-0.42	-0.44	-0.45	-0.47	-0.48	-0.50	-0.51	-0.53	-0.54	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56	-0.56
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S9.2	Reduce distribution system operational use (DSOU) (input as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60	**Production Side Management, Specify Below....**	-		**2**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.1	Reduce treatment works losses (input as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60.2	Reduce outages (input as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61	**Customer Side Management**	-		**2**	0.00	0.00	0.00	0.00	-0.02	-0.04	-0.07	-0.09	-0.11	-0.13	-0.15	-0.16	-0.18	-0.20	-0.22	-0.24	-0.25	-0.27	-0.29	-0.32	-0.34	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.35	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34
61.1	Change volume delivered to measured non households (input reductions as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61.2	Change volume delivered to unmeasured non households (input reductions as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61.3	Change volume delivered to measured households (input reductions as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.03	-0.03	-0.04	-0.05	-0.07	-0.08	-0.09	-0.10	-0.12	-0.13	-0.14	-0.15	-0.17	-0.18	-0.20	-0.21	-0.21	-0.21	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.22	-0.23	-0.23	-0.23
-	Enhanced Water Efficiency	2	Ml/d	2					-0.01	-0.03	-0.04	-0.05	-0.06	-0.08	-0.09	-0.10	-0.11	-0.13	-0.14	-0.15	-0.16	-0.18	-0.19	-0.21	-0.23	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.24	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25	-0.25
-	*Enhanced Metering*	3	Ml/d	2					0.00	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
61.4	Change volume delivered to unmeasured households (input reductions as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	-0.01	-0.03	-0.04	-0.05	-0.06	-0.07	-0.08	-0.09	-0.09	-0.10	-0.10	-0.11	-0.11	-0.12	-0.12	-0.13	-0.14	-0.14	-0.14	-0.14	-0.13	-0.13	-0.13	-0.13	-0.13	-0.13	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.12	-0.11	-0.11	-0.11	-0.11	-0.11
-	Enhanced Water Efficiency		Ml/d	2	0.00	0.00	0.00	0.00	-0.01	-0.02	-0.03	-0.03	-0.04	-0.05	-0.05	-0.06	-0.06	-0.07	-0.08	-0.08	-0.09	-0.09	-0.10	-0.10	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.09	-0.08	-0.08	-0.08	-0.08	-0.08
-	*Enhanced Metering*	3	Ml/d	2					0.00	-0.01	-0.01	-0.02	-0.02	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03	-0.03
61.5	Options to reduce water taken unbilled (input as -ve)	-	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61.6	Options impacting on measured Non Household - USPL (input reductions as -ve)		l/pr	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61.7	Options impacting on unmeasured Non Household - USPL (input reductions as -ve)		l/pr	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61.8	Options impacting on measured Household - USPL (input reductions as -ve)		l/pr	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	Enhanced Metering		Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61.9	Options impacting on unmeasured Household - USPL (input reductions as -ve)		l/pr	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	Enhanced Metering		Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
61.10	Options impacting on Void properties - USPL (input reductions as -ve)		l/pr	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-			Ml/d	2																																										
-	*(insert row above)*	-	-	-	-				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

Table 7: Final planning water supply

	Row Ref	Component	Derivation	Unit	Decimal places	2016/17	For info 2017-18	For info 2018-19	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
Resources	1FP	Raw Water Abstracted	1BL	Ml/d	2	9.01	8.44	8.42	8.44	8.41	8.37	8.32	8.27	8.20	8.15	8.10	8.04	7.98	7.93	7.89	7.84	7.80	7.76	7.72	7.69	7.65	7.64	7.63	7.63	7.63	7.63	7.63	7.63	7.63	7.64	7.63	7.65	7.67	7.70	7.72	7.76	7.78	7.81	7.83	7.86	7.89	7.92	7.95	7.98
	2FP	Raw Water Imported	2BL+ (6. Preferred scenario ref 58.2)	Ml/d	2	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3FP	Potable Water Imported	3BL+ (6. Preferred scenario ref 58.3)	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Resource (and process) losses	5FP	Raw Water Exported (raw exports and non potable uses)	5BL+ (6. Preferred scenario ref 58.5)	Ml/d	2	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	6FP	Potable Water Exported	6BL+ (6. Preferred scenario ref 58.6)	Ml/d	2	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35
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	7FP	Deployable Output	7BL+ 8BL+ (6. Preferred scenario ref 58.7) + (6. Preferred scenario ref 58.1)		2	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48	14.48
	-	-	-	-	2					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	9FP	Raw water losses, treatment works losses and operational use	9BL+ (6. Preferred scenario ref 60.1)+(6. Preferred scenario ref 58.4)	Ml/d	2	0.7	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
	10FP	Outage allowance	10BL+ (6. Preferred scenario ref 60.2)	Ml/d	2	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68

Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

Table 8: Final planning water demand

	Row Ref	Component	Derivation / Impact of preferred options	Unit	Decimal places	2016/17	For info 2017-18	For info 2018-19	For info 2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
Consumption	19FP	Water Delivered Measured Non Household	Calculated BL+Preferred options	Ml/d	2	2.48	2.18	2.15	2.15	2.14	2.14	2.14	2.14	2.14
	20FP	Water Delivered Unmeasured Non Household	Calculated BL+Preferred options	Ml/d	2	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	21FP	Water Delivered Measured Household	Calculated BL+Preferred options	Ml/d	2	2.95	2.92	3.00	3.08	3.17	3.23	3.30	3.35	3.39
	22FP	Water Delivered Unmeasured Household	Calculated BL+Preferred options	Ml/d	2	2.76	2.63	2.56	2.50	2.43	2.36	2.29	2.23	2.16
	23FP	Measured Non Household - Consumption	19FP-34FP	Ml/d	2	2.46	2.17	2.14	2.14	2.14	2.13	2.13	2.14	2.13
	24FP	Unmeasured Non Household - Consumption	20FP-35FP	Ml/d	2	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	25FP	Measured Household - Consumption	21FP-36FP	Ml/d	2	2.78	2.83	2.91	2.99	3.07	3.13	3.20	3.25	3.29
	26FP	Unmeasured Household - Consumption	22FP-37FP	Ml/d	2	2.60	2.55	2.49	2.42	2.35	2.29	2.23	2.16	2.09
	27 -	Percentage of consumption driven by climate change	n/a in FP	-	1	-	-	-	-	-	-	-	-	-
	28 -	Volume of consumption driven by climate change	n/a in FP	-	1		-	-	-	-	-	-	-	-
PCC and consumption by component	29FP	Measured Household - PCC	(25FP*1,000,000)/(51FP*1,000)	l/h/d	1	134.6	133.6	132.8	132.0	130.7	128.8	127.4	126.1	124.8
	29.1FP	Measured toilet flushing	Input brief explanation here	l/h/d	1	32.5	32.4	32.3	32.3	32.1	31.8	31.6	31.5	31.3
	29.2FP	Measured personal washing	Input brief explanation here	l/h/d	1	64.5	64.3	64.1	64.0	63.7	63.3	63.0	62.7	62.4
	29.3FP	Measured clothes washing	Input brief explanation here	l/h/d	1	11.3	11.2	11.1	10.9	10.6	10.3	10.0	9.8	9.5
	29.4FP	Measured dish washing	Input brief explanation here	l/h/d	1	7.7	7.3	7.2	7.1	6.9	6.6	6.4	6.2	6.0
	29.5FP	Measured miscellaneous internal use	Input brief explanation here	l/h/d	1	10.2	10.0	9.9	9.8	9.6	9.3	9.1	8.9	8.8
	29.6FP	Measured external use	Input brief explanation here	l/h/d	1	8.4	8.3	8.2	8.0	7.8	7.5	7.3	7.1	6.8
	30FP	Unmeasured Household - PCC	(26FP*1,000,000)/(52FP*1,000)	l/h/d	1	150.0	149.3	148.6	147.9	146.7	145.6	144.6	143.6	142.6
	30.1FP	Unmeasured toilet flushing	Input brief explanation here	l/h/d	1	37.5	37.5	37.4	37.3	37.1	37.0	36.9	36.7	36.6
	30.2FP	Unmeasured personal washing	Input brief explanation here	l/h/d	1	71.5	71.4	71.1	70.9	70.7	70.5	70.3	70.1	69.9
	30.3FP	Unmeasured clothes washing	Input brief explanation here	l/h/d	1	10.8	10.5	10.3	10.1	9.8	9.5	9.3	9.0	8.7
	30.4FP	Unmeasured dish washing	Input brief explanation here	l/h/d	1	10.0	9.9	9.8	9.6	9.4	9.2	9.0	8.8	8.6
	30.5FP	Unmeasured miscellaneous internal use	Input brief explanation here	l/h/d	1	11.7	11.7	11.6	11.6	11.4	11.3	11.2	11.1	10.9
	30.6FP	Unmeasured external use	Input brief explanation here	l/h/d	1	8.4	8.4	8.4	8.3	8.2	8.1	8.0	7.9	7.8
	31FP	Average Household - PCC	((25FP+26FP)*1,000,000))/(51FP+52FP*1,000)	l/h/d	1	141.66	140.6	139.7	138.7	137.2	135.4	133.9	132.5	131.1
	32FP	Water Taken Unbilled	Calculated BL+Preferred options	Ml/d	1	0.21	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	33FP	Distribution System Operational Use	Calculated BL+Preferred options	Ml/d	1	0.08	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Leakage	34FP	Measured Non Household - USPL	Calculated BL+Preferred options	Ml/d	2	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	35FP	Unmeasured Non Household - USPL	Calculated BL+Preferred options	Ml/d	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	36FP	Measured Household - USPL	Calculated BL+Preferred options	Ml/d	2	0.17	0.09	0.09	0.09	0.09	0.10	0.10	0.10	0.10
	37FP	Unmeasured Household - USPL	Calculated BL+Preferred options	Ml/d	2	0.16	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07
	38FP	Void Properties - USPL	Calculated BL+Preferred options	Ml/d	2	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
	39FP	Distribution Losses	Calculated BL+Preferred options	Ml/d	2	1.13	1.03	1.03	1.03	0.99	0.94	0.90	0.85	0.81
	40FP	Total Leakage	Sum(34FP:39FP)	Ml/d	2	1.50	1.22	1.22	1.22	1.17	1.13	1.09	1.05	1.00
	41FP	Total Leakage	(40FP*1,000,000)/(48FP*1,000)	l/prop/d	2	80.72	64.73	63.95	63.13	60.01	57.03	54.19	51.52	48.99
Customer: Properties	42FP	Measured Non Household - Properties	Input (total, excluding voids)	000's	2	1.28	1.30	1.30	1.30	1.31	1.31	1.31	1.32	1.32
	43FP	Unmeasured Non Household - Properties	Input (total, excluding voids)	000's	2	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
	44FP	All void non-households - properties	Input (voids in each year)	000's	2	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	45FP	Measured Household - Properties (excl voids)	Pre-plan year = input. Forecast years = Previous year 45FP + sum(45.1FP:45.6FP)	000's	2	10.87	11.11	11.43	11.77	12.18	12.55	12.90	13.20	13.46
	45.1FP	New properties	Input (new builds in each year)	000's	2	0.09	0.20	0.23	0.25	0.29	0.27	0.25	0.22	0.18
	45.2FP	Meter optants - properties	Input (meter optants in each year)	000's	2	0.14	0.12	0.11	0.10	0.11	0.11	0.10	0.10	0.09
	45.3FP	Compulsory metering - properties	Input (compulsory meters in each year)	000's	2									
	45.4FP	Metering on change of occupancy - properties	Input (change of occupancy meters in each year)	000's	2									
	45.5FP	Selective metering properties	Input (selective meters in each year)	000's	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	45.6FP	Other changes to existing metering - properties	Input (other changes to meters in each year)	000's	2	0.00	-0.08	-0.01	-0.01	0.01	-0.01	-0.01	-0.01	-0.01
	45.7FP	Measured void households - properties	Input (voids in each year)	000's	2	0.46	0.54	0.55	0.56	0.55	0.56	0.57	0.58	0.59
	46FP	Unmeasured households - properties (excl void)	Input (total)	000's	2	5.53	5.41	5.31	5.21	5.12	5.02	4.92	4.82	4.74
	47FP	Unmeasured void households - properties	Input (voids in each year)	000's	2	0.25	0.24	0.23	0.23	0.21	0.21	0.20	0.20	0.19
	48FP	Total Resource Zone Properties (incl voids)	SUM(42FP:45FP)+45.7FP+46FP+47FP	000's	2	18.60	18.81	19.04	19.28	19.58	19.85	20.11	20.32	20.50
Customer: Po	49FP	Measured Non Household - Population	Input (total)	000's	2	0.54	0.54	0.55	0.56	0.57	0.58	0.60	0.61	0.62
	50FP	Unmeasured Non Household - Population	Input (total)	000's	2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	51FP	Measured Household - Population	Input (total)	000's	2	20.65	21.18	21.89	22.63	23.52	24.33	25.10	25.77	26.37
	52FP	Unmeasured Household - Population	Input (total)	000's	2	17.35	17.08	16.73	16.39	16.05	15.73	15.39	15.06	14.68
	53FP	Total Resource Zone Population	49FP+Sum(50FP:52FP)	000's	2	38.55	38.81	39.16	39.58	40.13	40.65	41.09	41.43	41.66
Occup	54FP	Measured Household - Occupancy Rate (average) (excl voids)	51FP/45FP	h/prop	1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0
	55FP	Unmeasured Household - Occupancy Rate	52BL/46BL	h/prop	1	3.1	3.2	3.1	3.1	3.1	3.1	3.1	3.1	3.1
Mete	56FP	Total Household Metering penetration (excl. voids)	45FP/45FP+46FP	%	0	66%	67%	68%	69%	70%	71%	72%	73%	74%
	57FP	Total Household Metering penetration (incl. voids)	45FP/(45FP+45.7FP+46FP+47FP)	%	0	64%	64%	65%	66%	67%	68%	69%	70%	71%

Row Ref	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45
19FP	2.14	2.14	2.14	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.14	2.14	2.14	2.14	2.14	2.14	2.14	2.15
20FP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
21FP	3.43	3.46	3.49	3.51	3.53	3.55	3.57	3.58	3.60	3.62	3.64	3.66	3.69	3.73	3.76	3.80	3.84	3.88	3.92	3.96
22FP	2.09	2.03	1.97	1.91	1.86	1.82	1.77	1.73	1.69	1.65	1.62	1.58	1.54	1.52	1.49	1.46	1.44	1.41	1.39	1.36
23FP	2.13	2.13	2.13	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.14	2.14
24FP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
25FP	3.33	3.36	3.38	3.40	3.42	3.44	3.46	3.47	3.49	3.51	3.52	3.54	3.57	3.61	3.65	3.68	3.72	3.76	3.80	3.83
26FP	2.03	1.97	1.90	1.85	1.80	1.75	1.71	1.67	1.63	1.59	1.55	1.51	1.48	1.46	1.43	1.40	1.38	1.35	1.32	1.30
27 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29FP	123.6	122.4	121.3	120.2	119.2	118.2	117.3	116.4	115.5	114.8	113.9	113.2	112.8	112.8	112.6	112.5	112.5	112.4	112.4	112.3
29.1FP	31.1	30.9	30.8	30.6	30.4	30.3	30.2	30.0	29.9	29.8	29.7	29.6	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6
29.2FP	62.1	61.9	61.6	61.4	61.1	60.9	60.6	60.4	60.2	60.0	59.8	59.6	59.5	59.4	59.2	59.2	59.1	59.1	59.0	59.0
29.3FP	9.3	9.0	8.8	8.7	8.5	8.4	8.2	8.1	8.0	7.8	7.7	7.6	7.5	7.5	7.5	7.5	7.5	7.4	7.4	7.4
29.4FP	5.8	5.6	5.4	5.2	5.0	4.9	4.7	4.5	4.4	4.3	4.1	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
29.5FP	8.7	8.6	8.5	8.4	8.3	8.2	8.1	8.0	7.9	7.9	7.8	7.7	7.7	7.7	7.8	7.8	7.8	7.8	7.9	7.9
29.6FP	6.6	6.4	6.2	6.0	5.8	5.7	5.5	5.3	5.1	5.0	4.8	4.7	4.6	4.6	4.6	4.5	4.5	4.5	4.5	4.5
30FP	141.5	140.6	139.6	138.7	137.8	136.9	136.1	135.0	134.1	133.3	132.4	131.6	131.2	131.1	131.1	131.0	130.9	130.8	130.8	130.7
30.1FP	36.5	36.3	36.2	36.1	35.9	35.8	35.7	35.5	35.4	35.3	35.2	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0
30.2FP	69.7	69.5	69.3	69.1	68.9	68.7	68.5	68.3	68.1	67.9	67.7	67.5	67.4	67.3	67.3	67.2	67.1	67.0	66.9	66.8
30.3FP	8.4	8.2	7.9	7.6	7.4	7.1	7.0	6.6	6.3	6.2	6.1	5.9	5.8	5.8	5.8	5.8	5.8	5.9	5.9	5.9
30.4FP	8.4	8.3	8.1	8.0	7.8	7.7	7.5	7.4	7.3	7.1	7.0	6.9	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
30.5FP	10.8	10.7	10.5	10.4	10.3	10.1	10.0	9.9	9.7	9.6	9.5	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
30.6FP	7.7	7.6	7.6	7.5	7.5	7.5	7.4	7.3	7.2	7.1	7.0	6.9	6.9	6.9	7.0	6.9	6.9	6.9	6.9	6.9
31FP	129.8	128.5	127.3	126.1	125.0	123.9	122.9	121.8	120.8	120.0	119.0	118.2	117.7	117.5	117.3	117.1	116.9	116.8	116.6	116.5
32FP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
33FP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
34FP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
35FP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36FP	0.10	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
37FP	0.07	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
38FP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
39FP	0.79	0.77	0.75	0.73	0.71	0.69	0.67	0.65	0.63	0.61	0.60	0.58	0.56	0.54	0.53	0.51	0.50	0.48	0.47	0.45
40FP	0.98	0.96	0.94	0.92	0.90	0.89	0.87	0.85	0.83	0.81	0.80	0.78	0.76	0.75	0.73	0.72	0.70	0.69	0.67	0.66
41FP	47.59	46.26	45.00	43.75	42.51	41.38	40.27	39.18	38.10	37.05	36.09	35.14	34.20	33.28	32.37	31.54	30.73	29.93	29.14	28.36
42FP	1.32	1.32	1.33	1.33	1.33	1.33	1.34	1.34	1.34	1.34	1.35	1.35	1.35	1.36	1.36	1.36	1.36	1.37	1.37	1.37
43FP	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
44FP	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
45FP	13.71	13.92	14.10	14.27	14.43	14.58	14.72	14.85	14.99	15.12	15.26	15.39	15.52	15.65	15.78	15.91	16.03	16.16	16.28	16.39
45.1FP	0.18	0.16	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.12	0.12	0.12	0.12
45.2FP	0.07	0.06	0.05	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
45.3FP																				
45.4FP																				
45.5FP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.6FP	-0.01	-0.01	0.00	0.00	0.00	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
45.7FP	0.59	0.60	0.60	0.60	0.60	0.61	0.61	0.62	0.62	0.63	0.64	0.64	0.65	0.65	0.66	0.66	0.67	0.67	0.68	0.68
46FP	4.67	4.62	4.57	4.54	4.52	4.51	4.50	4.49	4.49	4.48	4.47	4.46	4.46	4.45	4.44	4.44	4.43	4.42	4.41	4.41
47FP	0.19	0.18	0.18	0.18	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
48FP	20.68	20.84	20.98	21.12	21.26	21.41	21.55	21.69	21.82	21.96	22.09	22.23	22.36	22.49	22.62	22.75	22.87	23.00	23.12	23.23
49FP	0.63	0.64	0.65	0.66	0.68	0.69	0.71	0.73	0.75	0.76	0.78	0.79	0.81	0.82	0.83	0.84	0.85	0.86	0.87	0.89
50FP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51FP	26.93	27.43	27.88	28.31	28.71	29.10	29.47	29.84	30.21	30.56	30.93	31.29	31.66	32.02	32.37	32.73	33.09	33.44	33.78	34.12
52FP	14.33	13.99	13.64	13.34	13.06	12.81	12.56	12.34	12.14	11.93	11.73	11.51	11.30	11.10	10.91	10.71	10.51	10.32	10.13	9.95
53FP	41.89	42.06	42.17	42.31	42.45	42.60	42.74	42.91	43.10	43.26	43.43	43.60	43.76	43.94	44.12	44.28	44.45	44.62	44.79	44.96
54FP	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1
55FP	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7	2.7	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.3
56FP	75%	75%	76%	76%	76%	76%	77%	77%	77%	77%	77%	78%	78%	78%	78%	78%	78%	79%	79%	79%
57FP	72%	72%	72%	73%	73%	73%	74%	74%	74%	74%	74%	74%	75%	75%	75%	75%	75%	75%	76%	76%

Row Ref	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
19FP	2.15	2.14	2.15	2.15	2.15	2.15	2.16	2.15	2.16	2.16	2.16	2.16	2.16	2.17	2.17
20FP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
21FP	3.99	4.00	4.04	4.08	4.12	4.16	4.20	4.24	4.28	4.33	4.37	4.41	4.45	4.50	4.54
22FP	1.34	1.32	1.30	1.28	1.26	1.25	1.23	1.22	1.20	1.19	1.17	1.15	1.13	1.12	1.10
23FP	2.14	2.13	2.14	2.14	2.14	2.14	2.15	2.14	2.15	2.15	2.15	2.15	2.15	2.16	2.16
24FP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
25FP	3.87	3.88	3.92	3.96	4.00	4.03	4.07	4.11	4.15	4.19	4.24	4.28	4.32	4.36	4.41
26FP	1.28	1.26	1.24	1.22	1.20	1.18	1.17	1.16	1.14	1.13	1.11	1.09	1.07	1.06	1.04
27 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28 -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29FP	112.2	111.4	111.4	111.5	111.5	111.5	111.6	111.6	111.6	111.7	111.7	111.7	111.8	111.8	111.8
29.1FP	29.7	29.5	29.5	29.5	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6	29.6
29.2FP	58.9	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.9	58.9	58.9
29.3FP	7.4	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.4	7.4
29.4FP	4.0	3.8	3.8	3.8	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
29.5FP	7.9	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
29.6FP	4.4	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.4	4.4	4.4	4.4	4.4
30FP	130.6	130.6	130.6	130.5	130.5	130.4	130.3	130.3	130.2	130.2	130.2	130.2	130.3	130.3	130.3
30.1FP	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.0	35.1
30.2FP	66.8	66.7	66.6	66.5	66.4	66.3	66.2	66.1	66.0	65.9	65.8	65.7	65.6	65.6	65.5
30.3FP	5.9	6.0	6.0	6.0	6.1	6.1	6.1	6.1	6.2	6.2	6.3	6.3	6.4	6.4	6.5
30.4FP	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.9
30.5FP	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
30.6FP	6.9	7.0	7.0	7.0	6.9	7.0	7.0	7.0	6.9	7.0	7.0	7.0	7.1	7.1	7.1
31FP	116.3	115.5	115.5	115.4	115.4	115.3	115.3	115.2	115.2	115.1	115.1	115.1	115.0	115.0	114.9
32FP	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
33FP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
34FP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
35FP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
36FP	0.12	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14
37FP	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
38FP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02
39FP	0.45	0.45	0.45	0.45	0.45	0.45	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
40FP	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66	0.66
41FP	28.22	28.07	27.94	27.80	27.67	27.53	27.40	27.27	27.14	27.01	26.88	26.74	26.61	26.48	26.35
42FP	1.37	1.38	1.38	1.38	1.39	1.39	1.39	1.39	1.40	1.40	1.40	1.40	1.41	1.41	1.41
43FP	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
44FP	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
45FP	16.51	16.63	16.75	16.86	16.98	17.09	17.21	17.32	17.44	17.56	17.68	17.80	17.92	18.04	18.16
45.1FP	0.12	0.12	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.12	0.12	0.12	0.12	0.12	0.12
45.2FP	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
45.3FP															
45.4FP															
45.5FP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.6FP	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
45.7FP	0.69	0.69	0.70	0.70	0.71	0.71	0.72	0.72	0.73	0.73	0.74	0.74	0.75	0.75	0.76
46FP	4.40	4.39	4.38	4.38	4.37	4.36	4.35	4.35	4.34	4.33	4.32	4.32	4.31	4.30	4.29
47FP	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
48FP	23.35	23.47	23.59	23.70	23.82	23.93	24.05	24.16	24.28	24.40	24.52	24.64	24.76	24.88	25.01
49FP	0.90	0.91	0.92	0.93	0.95	0.97	0.98	0.99	1.00	1.01	1.02	1.03	1.03	1.04	1.04
50FP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
51FP	34.47	34.81	35.15	35.50	35.84	36.18	36.52	36.87	37.21	37.57	37.93	38.29	38.66	39.03	39.39
52FP	9.78	9.61	9.46	9.32	9.20	9.08	8.98	8.88	8.77	8.65	8.51	8.37	8.23	8.10	7.99
53FP	45.15	45.34	45.53	45.75	45.98	46.22	46.48	46.73	46.98	47.22	47.46	47.69	47.92	48.17	48.42
54FP	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2
55FP	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9
56FP	79%	79%	79%	79%	80%	80%	80%	80%	80%	80%	80%	80%	81%	81%	81%
57FP	76%	76%	76%	76%	76%	77%	77%	77%	77%	77%	77%	77%	77%	78%	78%

Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

Table 9: Final planning water supply

	Row Ref	Component	Derivation	Unit	Decimal places	2016/17	For info 2017/18	For info 2018/19	For info 2019/20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33	2033-34	2034-35	2035-36	2036-37	2037-38	2038-39	2039-40	2040-41	2041-42	2042-43	2043-44	2044-45	2045-46	2046-47	2047-48	2048-49	2049-50	2050-51	2051-52	2052-53	2053-54	2054-55	2055-56	2056-57	2057-58	2058-59	2059-60
005	11FP	Distribution Input	16FP+20FP+21FP+22FP+32FP+33FP+39FP	Ml/d	2	9.63	9.05	9.03	9.05	9.02	8.97	8.93	8.87	8.80	8.75	8.70	8.64	8.58	8.53	8.48	8.44	8.39	8.35	8.32	8.28	8.25	8.23	8.22	8.22	8.21	8.21	8.21	8.21	8.21	8.22	8.21	8.23	8.25	8.27	8.30	8.33	8.35	8.38	8.41	8.43	8.46	8.49	8.51	8.54
	12FP	Water Available For Use (own sources)	7FP-(9FP+10FP)	Ml/d	2	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11	13.11
	13FP	Total Water Available For Use	12FP+(23FP-33FP)-(5FP+6FP)	Ml/d	2	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07	13.07
	14FP	Target headroom (climate change component)	Input	Ml/d	2	0.00	0.00	-0.02	0.01	-0.02	-0.05	0.04	-0.03	0.03	0.01	0.02	0.02	0.00	0.03	0.02	0.03	0.02	0.01	0.00	0.01	0.04	0.02	0.03	0.03	0.03	0.04	0.05	0.03	0.04	0.05	0.03	0.05	0.05	0.06	0.05	0.04	0.04	0.04	0.05	0.05	0.04	0.05	0.05	0.05
	15FP	Target headroom (All other components)	Input	Ml/d	2	0.00	0.00	1.30	1.27	1.30	1.30	1.26	1.27	1.23	1.20	1.15	1.15	1.11	1.08	1.05	1.02	1.00	0.98	0.97	0.94	0.92	0.91	0.88	0.88	0.85	0.84	0.84	0.82	0.81	0.81	0.78	0.78	0.76	0.76	0.76	0.74	0.74	0.73	0.73	0.71	0.70	0.68	0.68	0.67
	16FP	Target Headroom	14FP+15FP	Ml/d	2	0.00	0.00	1.28	1.28	1.28	1.25	1.30	1.24	1.26	1.21	1.17	1.17	1.11	1.10	1.08	1.04	1.02	1.00	0.97	0.95	0.96	0.94	0.91	0.91	0.90	0.88	0.87	0.86	0.86	0.84	0.83	0.83	0.82	0.81	0.80	0.79	0.78	0.78	0.77	0.75	0.75	0.73	0.73	0.73
	17FP	Available Headroom	13FP-11FP	Ml/d	2	3.44	4.02	4.04	4.02	4.05	4.10	4.14	4.20	4.27	4.32	4.37	4.43	4.49	4.54	4.59	4.63	4.68	4.72	4.75	4.79	4.83	4.85	4.85	4.85	4.86	4.86	4.86	4.86	4.86	4.85	4.86	4.84	4.82	4.80	4.77	4.74	4.72	4.69	4.66	4.64	4.61	4.58	4.56	4.53
	18FP	Supply Demand Balance	17FP-16FP	Ml/d	2	3.44	4.02	2.76	2.74	2.77	2.85	2.84	2.96	3.01	3.11	3.20	3.27	3.38	3.44	3.51	3.59	3.66	3.72	3.78	3.84	3.87	3.91	3.93	3.94	3.96	3.98	3.99	4.00	4.01	4.01	4.03	4.01	4.00	3.99	3.97	3.95	3.94	3.91	3.89	3.89	3.86	3.85	3.82	3.80

Company:	Essex & Suffolk Water
Resource Zone Name:	Blyth
Resource Zone Number:	3
Planning Scenario Name:	Dry Year Annual Average
Chosen Level of Service:	Planned

Table 10: Drought plan links and Deployable Output Overview

10.1 Planning scenarios					10.2 Water resources management plan								10.3 Drought plan						10.4 Demand	
Drought Scenarios	**Drought Description**	**Drought Severity**	**Plan in which scenario is used (highlights overlaps)**		**WRMP DO of Sources (not including drought measures)**	**WRMP Additional Yield from Drought Supply Measures (eg drought permits or orders)**			**WRMP Impact on DO of drought plan Demand Restrictions (eg TUBs)**			**WRMP DO Levels of Service**	**Drought Plan Additional Yield from Further Supply Measures (eg drought permits or orders)**			**Drought Plan Impact on DO of Further Demand Restrictions (eg TUBs)**			**Unrestricted Demand**	**Restricted Demand**
			WRMP	Drought Plan	DO (Ml/d)	Description	Marginal Benefit (Ml/d)	DO (Ml/d)	Description	Marginal Benefit (Ml/d)	DO (Ml/d)	DO (Ml/d)	Description	Marginal Benefit (Ml/d)	DO (Ml/d)	Description	Marginal Benefit (Ml/d)	DO (Ml/d)	**Ml/d**	**Ml/d**
Historic Droughts	1997	0.5% chance in any given year	Y	Y	14.7	None	N/A	14.7	Level 1 and 2 Demand Restrictions	Not known	14.7	14.7	Drought Plan Drought Actions	0.56	14.7	Level 1 and 2 Demand Restrictions	Not known	14.7	9.63	8.47
Additional Drought Scenarios	200	Severe Drought	Y	Y	14.7	None	N/A	14.7	Level 1 and 2 Demand Restrictions	Not known	14.7	14.7	Drought Plan Drought Actions	0.56	14.7	Level 1 and 2 Demand Restrictions	Not known	14.7	9.63	8.47

Reported DO for WRMP tables highlighted in yellow

10.5 Summary report

WRMP DO Overview

DO Approach - The Blyth WRZ only contains groundwater sources. The standard UKWIR methodology (1995) entitled "A Methodology for the Determination of Outputs for Groundwater Sources" was used to determine the DO of the groundwater sources. The regional groundwater model was used to determine the DO at groundwater sources during a 1 in 200-year drought scenario. This is outlined in sections 3.6 and 3.7 of the WRMP.
LoS - the planned levels of service for our customers are 1 in 20 years for temporary use bans, 1 in 50 years for drought order bans, and 1 in 250 years for pressure reduction.
Constraint on DO - our deployable output is licence-constrained.
Critical Year - our worst historical drought year in Suffolk is 1997.
Data length & quality - The data length and quality varies between sources.
Approach to drought severity - estimation of drought severity was carried out using analysis of rainfall data and Tabony tables, outlined in section 2.9.1 of the WRMP.

Drought Plan Overview

The supply and demand side measures included within our Drought Plan are listed below, alongside their associated daily benefit (as a reduction in demand or increase in yield).

Additional Drought Scenarios

Drought scenarios chosen and justification - A severe (1 in 200 year) drought scenario was analysed for our groundwater sources using the regional groundwater model. This is outlined in section 3.7 of our WRMP.

Drought Supply Measures and Demand Restrictions Further Details

Demand – Appeals for restraint – 7% demand reduction
Demand – Temporary use ban – further 5% demand reduction
Demand – Drought order ban – further 2% demand reduction
Supply – Increase restricting daily quantity on Blyth Borehole 6 licence – 0.29Ml/d benefit
Supply – Reduction of compensation flows from Blyth Borehole 2 – up to 0.205Ml/d benefit between July and October
Supply – Tankering

Impact on Supply Demand

We have not included any supply side drought measures in WRMP deployable output assessments, but demand side restrictions are taken into account. Only Level 1 and 2 demand restrictions were enforced our worst historic drought.

Demands

We have used the Dry Year Distribution Input figures for base year 2016/17 as the Unrestricted Demand. Restricted Demand is the Unrestricted Demand minus the 12% demand reduction from Level 1 and 2 restrictions.

REF: WRMP19 Table instructions REVISED May 2017v16

2.3 Making changes to the WRP tables

Please see below slight changes to the WRP tables

Structure: no changes

Content: see below

Table	Row ref	Component	Derivaion	Unit	DP	What has been amended	Reasoning	
2	7BL	Deployable Output (baseline profile witho	sum(0.1Bl+0.2BL+0.3BL+0.4BL)	Ml/d	2	Formula has been removed, this row is **Input** from Supply data	DO is calculated for consistancy on Supply calculations, DO is not sum of licences	amended final v
9	11FP	Distribution Input	19FP+20FP+21FP+22FP+32FP+33FP+39FP	Ml/d	2	Void SPL removed row 38 from calculation, NWL/ESW following UKWIR/NRA WR1 demand forecasting methodology, void usage which inlcudes SPL is included in Water unbilled. So to	Consistency between WRP and water balance assumptions/calculations Following UKWIR/NRA WR1 demand forecasting methodology. Reflects WRMP report Void SPL ranges from 0.01% to 0.3% of DI	amended final v
4	11BL	Distribution input	19BL+20BL+21BL+22BL+32BL+33BL+3	Ml/d	2	As above	As above	amended final v
8	30FP	Unmeasured Household - PCC	(26FP*1,000,000)/(52FP*1,000)	l/h/d	1	Formula amended to 1 decimal place rather than 0 as per table requirement New '=ROUND((H10*1000000)/(H55*1000),1)	For consistency between BL/FB as well as complying with table requirements	
8	29FP	Measured Household - PCC	(25FP*1,000,000)/(51FP*1,000)	l/h/d	1	As above	For consistency between BL/FB as well as complying with table requirements	
2	8.21BL+	Total for the zone	Input (zero or negative number)	Ml/d	2	Row reference	The row reference is a duplicate of 8.2 ie there are two 8.2's so one has been amended to 8.21 to enable an accurate data load of the tables.	amended final v
7	1FP	Raw Water Abstracted	1BL	Ml/d	2	FP should be different than = BP Input from Final Supply demand (DI for BL and FP are different) which means BL and FP raw water abstracted will be different figures	Final plan DI + raw water imports - raw water exports + process losses should = Final Plan Raw water abstracted	amended final v
6	61.4	Change volume delivered to unmeasured households (input reductions as -ve)	-	Ml/d	2	The volume associated in the row if consumption rather than the previous water delivered, changes made due to the version 15 including SPL to the water delivered figure		
6	61.3	Change volume delivered to measured households (input reductions as -ve)	-	Ml/d	2	The volume associated in the row if consumption rather than the previous water delivered, changes made due to the version 15 including SPL to the water delivered figure		