

Table 3-1 Groundwater use in the UTRSPA (m³/day)

Groundwater Use	Agricultural	Commercial	Construction	Dewatering	Industrial	Institutional	Miscellaneous	Recreational	Remediation	Water Supply	Non-Permitted	Total
Black Creek/Avon River	0	0	0	0	0	0	0	0	0	147	1249	1396
Cedar Creek	0	0	0	0	0	0	953	0	0	22243	315	23511
Flat Creek	0	0	0	0	0	0	0	0	0	0	352	352
Middle Thames River	114.8	3241.1	0	2882	5130.4	0	0	0	0	518.1	1576	13462
North Thames River/ Medway River	117	563.2	0	0	5328.8	0	4255	0	0	257.9	1,838	12360
North Thames River/Whirl Creek	150.7	0	0	78.5	0	0	0	0	0	2335	1,592	4156
Reynolds Creek	28.7	840.6	0	0	0	0	0	0	0	240.8	741	1851
Thames River Above Ingersoll	0	224.3	0	60559.1	3084	0	0	0	194.5	6846.8	898	71807
Thames River Above Pittock Reservoir	395.4	1277.7	0	0	0	0	0	0	0	2307	1,606	5586
Trout Creek/North Thames River	30.2	1405.9	0	8182	12977.8	0	0	0	0	3231.9	1,175	27003
Upper Avon River	0	0	16.4	0	94.7	500	0	0	0	12149.4	774	13535
Waubuno Creek/Thames River Tributaries	292.9	1084.2	0	0	4319.3	0	872.8	235.3	0	2000.4	1,678	10483
Thames R. between the Forks and Dutton*	3439	2423	0	0	720	0	0	0	0	1755	2002	10339
Total	4569	11060	16	71702	31655	500	6081	235	195	54032	15796	195841

* Subwatershed Thames R. between the Forks and Dutton crosses over the Upper and Lower Thames boundary, and as such numbers reported are for both source protection authorities in this subwatershed. This subwatershed was not evaluated in Tier 2, and numbers are taken from the Tier 1 water budget. All other data from Tier 2 water budget.

Table 3-3 Tier 2 water budget summary (m³/day)

Sub-watershed	Q _{ET}	Q _P	Q _{sw-out}	Q _{sw-in}	Q _{gw-out}	Q _{gw-in}	Q _{gw-c}
Black Creek/Lower Avon River	321458	587618	836929	571377	29030	13133	173
Upper Avon River	202505	365341	162080	0	26957	2246	12787
Trout Creek/North Thames River above St Marys	412700	740400	1265692	939029	96077	40435	18317
Medway Creek/North Thames river above London	875592	1542140	1929678	1265692	184723	82339	10454
Cedar Cr.	138789	231627	92317	0	32054	41299	23155
Reynolds Cr	247516	417016	168107	0	49162	19008	1123
Thames R. above Ingersoll	296796	517286	497000	336989	46181	64541	70762
Middle Thames R.	483021	798152	312437	0	96768	45274	9158
Thames River above Pittock	354842	600867	244672	0	87782	25056	3974
Waubuno Creek/Dorchester	439767	820562	1416685	1036733	129514	61862	8813
Whirl Creek/North Mitchell	473232	835064	360969	0	30067	538358	2419
Flat Creek/Glengowan	193512	344411	511397	360969	15120	19094	0
Thames R. between the Forks and Dutton*	1167292	1998777	4224578	3402509	-	-	10337
<p>* The subwatershed Thames R. between the Forks and Dutton crosses over the Upper and Lower Thames boundary and, as such, numbers reported are for both source protection authorities in this subwatershed. Numbers from this subwatershed derived from Tier 1 analysis</p>							

Table 3-5 Surface water potential for stress based on Tier 1 stress assessment (Month of August)

Subwatershed	Code	Supply (Q ₅₀) (m ³ /day)	Reserve (Q ₉₀) (m ³ /day)	Demand (m ³ /day)	Percent Water Demand	Potential for stress
North Thames River/Whirl Cr.	01T	8251	907	1466	20%	Low
Flat Cr./North Thames Tributaries	02T	0	0	241	0%	Low
Black Cr./Avon River	03T	36202	20779	1464	9%	Low
Trout Cr.	04T	148349	91584	708	1%	Low
N. Thames/Medway R.	05T	293371	162346	17115	13%	Low
S. Thames R. above Pittock Reservoir	06T	161784	99878	3585	6%	Low
Cedar Cr.	07T	18749	8640	1692	17%	Low
Reynolds Cr./S. Thames R. above Ingersoll	08T	226757	157594	7548	11%	Low
Middle Thames R.	09T	51840	24970	2602	10%	Low
Waubuno Cr./Thames R. Tributaries	10T	396835	258854	23554	17%	Low
Thames R. between the Forks and Dutton*	11T*	933120	606874	29659	9%	Low

* Subwatershed 11T crosses over the Upper and Lower Thames boundary and, as such, numbers reported are for both source protection authorities in this subwatershed

Table 3-6a Tier 1 Groundwater potential for stress (Average Annual Conditions)

Subwatershed	Code	Q _{supply} (m ³ /day)	Q _{reserve} (m ³ /day)	Q _{demand} (m ³ /day)	Percent Water Demand	Potential For Stress
North Thames River/Whirl Cr.	01T	114872	11487	5609	5%	Low
Flat Cr./North Thames Tributaries	02T	38459	3846	352	1%	Low
S. Thames R. above Pittock Reservoir	06T	140934	14093	5757	5%	Low
Waubuno Cr./Thames R. Tributaries	10T	201081	20108	9153	5%	Low
Thames R. between the Forks and Dutton*	11T	445491	44549	10337	3%	Low

* Subwatershed 11T crosses over the Upper and Lower Thames boundary and, as such, numbers reported are for both source protection authorities in this subwatershed

Table 3-6b Tier 2 Groundwater potential for stress (Average Annual Conditions)

Subwatershed	Code	Q _{supply} (m ³ /day)		Q _{reserve} (m ³ /day)	Q _{demand} (m ³ /day)	Percent Water Demand (m ³ /day)	Potential for stress
		Inflow	Recharge				
Black Cr.	405	13133	49334	2938	1382	2%	Low
Avon River	404	2246	37152	2678	13565	37%	Significant
Trout Cr./North Thames River	406, 407, 408, 410	40435	97632	9590	19354	15%	Moderate
N. Thames/Medway R.	409, 411, 412, 413	82339	212026	18490	12269	4%	Low
Cedar Cr.	301, 302	41299	38102	3197	23501	31%	Significant
S. Thames R. above Ingersoll	304, 305	19008	71798	4925	1814	2%	Low
Reynolds Cr.	306	64541	85536	4666	71712	49%	Significant
Middle Thames R.	307	45274	127267	9677	10714	7%	Low

Table 3-7a Tier 1 Groundwater potential for stress (Maximum Monthly Conditions)

Subwatershed	T1 Code	Q _{supply} (m ³ /day)	Q _{reserve} (m ³ /day)	Q _{demand} (m ³ /day)	Percent Water Demand	Potential for Stress
North Thames River/Whirl Cr.	01T	114872	11487	7743	7%	Low
Flat Cr./North Thames Tributaries	02T	38459	3846	352	1%	Low
S. Thames R. above Pittock Reservoir	06T	140934	14093	13589	1%	Low
Waubuno Cr./Thames R. Tributaries	10T	201081	20108	12342	1%	Low
Thames R. between the Forks and Dutton*	11T	445491	44549	34032	11%	Low

Table 3-7b Tier 2 Groundwater potential for stress (Maximum Monthly Conditions)

Subwatershed	Code	Q _{supply} (m ³ /day)		Q _{reserve} (m ³ /day)	Q _{demand} (m ³ /day)	Percent Water Demand (m ³ /day)	Potential for stress
		Inflow	Recharge				
Black Cr.	405	13133	49334	2938	1382	2%	Low
N. Thames/Medway R.	409, 411, 412, 413	82339	212026	18490	33869	12%	Low
Reynolds Cr.	306	19008	71798	4925	3974	5%	Low
Middle Thames R.	307	45274	127267	9677	12355	8%	Low