

Table S1. Water quality parameters, dissolved carbon concentration and evasion fluxes from the stream, seasonal wetlands, riparian forest and groundwater measured in March 2021. Specific site locations are shown in Figure S1. Uncertainties in the measurements correspond to the precision reported by the different sensor manufacturers and laboratories. For the FCO₂ and FCH₄ values, the uncertainties reported correspond to the standard deviation between replicates. 'NA' correspond to measurements that could not be made due to crocodile risk or sensor failure. Specific site locations are shown in Figure S1.

Site	Latitude	Longitude	Temp °C	EC uS cm ⁻¹	pH	Q m ³ s ⁻¹	DOC g C m ⁻³	DIC g C m ⁻³	CO ₂ g C m ⁻³	CH ₄ g C m ⁻³	FCO ₂ g C m ⁻² d ⁻¹	FCH ₄ g C m ⁻² d ⁻¹
Stream												
A*	-12.8804	131.3005	29.56	183	6.95	0.28	7.51 ± 6.89	18.02 ± 7.21	3.71 ± 0.18	0.02	9.64 ± 2	0.05 ± 0.01
B	-12.88199	131.129	29.99	184	6.77	NA	2.24 ± 0.04	18.02 ± 7.21	3.52 ± 0.18	0.03	16.36 ± 0.7	0.14 ± 0.005
C	-12.88243	131.1289	30.21	188	7.12	NA	1.75 ± 0.04	19.22 ± 7.69	3.65 ± 0.18	NA	2.64 ± 1.9	0.13 ± 0.02
D	-12.88308	131.1282	30.72	183	6.61	NA	1.76 ± 0.04	18.02 ± 7.21	3.35 ± 0.17	0.02	9.1 ± 3.85	0.06 ± 0.03
E	-12.88308	131.1281	30.47	200	7.19	NA	1.81 ± 0.04	21.62 ± 8.65	3.69 ± 0.18	NA	17.57 ± 2.36	0.1
F	-12.88435	131.1284	29.78	211	6.9	NA	2.46 ± 0.05	20.42 ± 8.17	3.93 ± 0.20	0.02	29.64 ± 16.6	0.14 ± 0.09
G	-12.88572	131.1279	30.11	220	6.91	NA	1.51 ± 0.03	30.02 ± 12.01	NA	NA	NA	NA
H	-12.88687	131.1278	31.14	211	7.05	NA	2.25 ± 0.04	21.62 ± 8.65	2.88 ± 0.14	0.01	27.07 ± 9.2	0.08 ± 0.03
I	-12.88796	131.1292	30.4	222	7.08	NA	1.7 ± 0.03	18.02 ± 7.21	NA	NA	NA	NA
J	-12.88793	131.1297	30.3	222	7.03	NA	1.84 ± 0.04	14.41 ± 5.76	NA	NA	NA	NA
Wetland drain												
1	-12.88256	131.129	32.46	41	6.31	0.001	5.15 ± 0.1	6 ± 2.4	NA	NA	NA	NA
2	-12.88366	131.128	33.6	37	6.38	0.003	17.8 ± 0.36	4.8 ± 1.92	2.61 ± 0.13	0.03	14.42 ± 4.8	0.12 ± 0.04
3	-12.88814	131.129	32.13	42	5.9	0.01	2.4 ± 0.05	3.6 ± 1.44	1.95 ± 0.10	0.03	18.35 ± 1.9	0.24 ± 0.05
4	-12.88833	131.1295	37.2	65.8	6.71	0.002	3.9 ± 0.08	7.2 ± 2.88	2.45	NA	6.02 ± 3.2	0.04 ± 0.02
5	-12.88869	131.1305	32.28	122	6.71	0.001	4.81 ± 0.1	6 ± 2.4	NA	NA	NA	NA
6	-12.89209	131.1289	34.12	22	6.86	0.01	2.4 ± 0.05	42.04 ± 16.82	0.62	0	0.82	-0.01 ± 0.03
7	-12.89223	131.1328	31.3	11	5.77	0.04	1.82 ± 0.04	32.43 ± 12.97	1.99	0.03	11.65 ± 1.3	0.14 ± 0.02
Riparian Forest												
P1**	-12.88487	131.1287	28.5	656	6.59	NA	11.9 ± 14.04	10.9 ± 10.2	NA	NA	NA	NA
Groundwater												
P2*	-12.88801	131.1302	29.26	NA	7.11	NA	3.5 ± 0.07	54.64 ± 4.25	NA	NA	NA	NA

*The DOC and/or DIC values for these sites correspond to the mean of several values. In these cases the uncertainty correspond to the standard deviation of the measurements. Original values can be found in the Tables S2.

**The DOC values for this site correspond to the median of several values. In this specific case the median was preferred due to the presence of outliers. In this case the uncertainty correspond to the standard deviation of the measurements. Original values can be found in the Tables S2.