

Table S1: Sampling of parameters showing sites and sampling methods used throughout the experiment.

Parameter	Sites	Sampling
Temperature, conductivity, DO, pH, turbidity (Hydrolab water quality logger)	1-4	1 m intervals through water column
Total nutrient concentrations Total dissolved nutrient concentrations	1-4	Surface – bucket collections, duplicates Bottom - van Dorn sampler, duplicates
Nitrate/nitrite, ammonium, FRP concentrations	1-4	Surface – bucket collections, duplicates Bottom - van Dorn sampler, duplicates (only at Site 3)
Chlorophyll <i>a</i> concentrations	1-4	Surface – bucket collections in triplicate Bottom - van Dorn sampler, triplicates (only at Site 3)
Phytoplankton enumeration & identification	1, 4	Surface bucket sample, one replicate After nutrient addition experiment, Sites 2, 3 were also included with surface bucket sample, one replicate
Zooplankton densities	1-4	Surface - Schindler traps (2 replicates combined) Bottom – Schindler traps (only Site 3)
¹⁵ N values	1, 2	Surface – bucket collections in triplicate (POM) Settling chambers – 2 replicates Porewater – 2 replicates

Only Site 3 had the full suite of nutrient parameters measured at near the bottom, while at the shallow Sites 1, 2 and 4, only dissolved inorganic nutrients were sampled in bottom waters.

Table S2: Mean (\pm SD) total biovolumes of genera with a biovolume $>100,000 \text{ mm}^3 \text{ l}^{-1}$ over the duration of the study and across all sites in Gold Creek reservoir.

Genus	Group	Mean total biovolumes ($\text{mm}^3 \text{ l}^{-1}$)
<i>Gonyostomum semen</i>	Raphidophyte	41.7 ± 60.1
<i>Trachelomonas</i> spp.	Euglenoid	0.91 ± 0.70
Unidentified unicellular flagellated algae	Unknown	0.45 ± 0.56
<i>Synedra</i> spp.	Diatom	0.33 ± 0.41
<i>Peridinium</i> spp.	Dinoflagellate	0.28 ± 0.51
<i>Cryptomonas</i> spp.	Cryptophyte	0.26 ± 0.15
<i>Peridinium</i> spp. (small)	Dinoflagellate	0.22 ± 0.54
<i>Gymnodinium</i> spp.	Dinoflagellate	0.17 ± 0.19
Unidentified Raphidophytes	Raphidophyte	0.16 ± 0.24
<i>Cyclotella</i> spp.	Diatom	0.12 ± 0.06
<i>Planktolyngbya minor</i>	Cyanobacteria	0.11 ± 0.08
<i>Monoraphidium</i> spp.	Green algae	0.11 ± 0.16
<i>Euglena</i> spp.	Euglenoid	0.10 ± 0.13

Table S3: Summary of PCA showing explanatory variables. Variables with greatest explanatory power are shaded.

Variable	Dim 1			Dim 2			Dim 3		
	Value	Cont. (%)	Cos2	Value	Cont. (%)	Cos2	Value	Cont. (%)	Cos2
Temperature	-0.954	20	0.91	0.103	1	0.01	-0.025	0	0.00
Conductivity	-0.901	18	0.81	0.203	3	0.04	0.275	8	0.08
DO	-0.796	14	0.63	0.500	17	0.25	-0.080	1	0.01
pH	-0.912	18	0.83	0.267	5	0.07	-0.006	0	0.00
Turbidity	0.797	14	0.64	0.079	0	0.01	-0.428	20	0.18
Nitrite/Nitrate	0.695	11	0.48	0.404	11	0.16	0.192	4	0.04
FRP	0.084	0	0.01	0.904	57	0.82	-0.182	4	0.03
Ammonium	0.487	5	0.24	0.285	6	0.08	0.774	64	0.60