Table S1. Diversity and ecology of algae and cyanobacteria in the Hula Lake / Hula Nature Reserve over 1938–2013.

Species	Hab	T	Oxy	D	S total	Sap	Hal	pH	Aut-Het	Tro	pH range	1938	1944	1951	1953	1958	2007	2008	2009	2010	2011	2013
Cyanobacteria																						
Anabaena contorta Bachmann 1921	P	-	st–str	-	-	-	-	-	-	-	-	0	0	0	0	1	0	0	0	0	0	0
Anabaena sp. Bory ex Bornet & Flahault, 1886, nom. cons.	P–B	-	-	-	-	-	-	-	-	e	6.0–7.8	0	0	0	0	0	0	0	0	0	0	0
Anabaenopsis circularis (G.S.West) Woloszynska & V.V.Miller 1923	P	-	st	-	-	-	-	-	-	-	-	0	0	0	0	0	0	1	1	1	1	0
Arthrospira platensis Gomont 1892	P	-	st	-	2.5	b–a	mh	-	-	e	-	0	0	0	0	0	0	1	1	1	0	1
Chroococcus turgidus (Kützing) Nägeli 1849	P–B, S	-	aer	-	0.8	x–b	hl	alf	-	e	8.1	0	0	0	0	0	1	0	0	0	0	1
Chrysosporum bergii (Ostenfeld) E.Zapomelová, O.Skácelová, P.Pumann, R.Kopp & E.Janecek 2012	P	-	-	-	-	-	-	-	-	e	-	0	0	0	0	0	0	0	0	0	1	1
Chrysosporum ovalisporum (Forti) E.Zapomelová, O.Skácelová, P.Pumann, R.Kopp & E.Janecek 2012	P	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	1	1	1	1	1	1
Cyanocatena imperfecta (Cronberg & Weibull) Joosten 2006	P	-	-	-	-	-	-	-	-	me	-	0	0	0	0	0	1	1	0	1	1	0
Dolichospermum planctonicum (Brunnthaler) Wacklin, L.Hoffmann & Komárek 2009	P–B	-	st–str	-	1.7	b–o	-	-	-	e	-	0	0	0	0	0	0	1	1	0	0	0

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Dolichospermum spiroides (Klebhan) Wacklin, L.Hoffmann & Komárek 2009	P–B	-	st–str	-	2.0	b	i	-	-	e	-	0	0	0	0	0	1	1	1	1	1	1
Gloeocapsopsis sp.Geitler ex Komárek 1993	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	1	0	0	0	0	0
Gomphosphaeria sp. Kützing 1836	P	-	-	-	-	-	-	-	-	e	-	0	0	0	0	0	0	1	0	0	0	0
Limnococcus limneticus (Lemmermann) Komárková, Jezberová, O.Komárek & Zapomelová	P–B	-	-	-	1.65	b–o	i	acf	-	om	7.9–8.1	0	0	0	0	0	1	1	1	1	1	1
Limnolyngbya circumcreta (G.S.West) X.Li & R.Li. 2016	P–B	-	-	-	1.6	b–o	-	-	-	-	-	0	0	0	0	0	0	0	1	0	1	1
Merismopedia convoluta Brébisson ex Kützing 1849	P–B	-	-	-	2.5	b–a	-	-	-	om	-	0	1	0	0	0	0	0	0	0	0	0
Merismopedia elegans A.Braun ex Kützing 1849	P–B, Ep	-	-	-	1.7	b–o	i	ind	-	ot	9.0	0	1	0	0	0	0	0	0	0	0	0
Merismopedia glauca (Ehrenberg) Kützing 1845	P–B	-	-	-	1.75	b–o	i	ind	-	om	7.9–11	0	1	0	0	1	1	1	1	1	1	0
Merismopedia minima G.Beck 1897	B,S	-	aer	-	-	-	-	-	-	ot	-	0	0	0	0	0	1	1	1	1	1	1
Merismopedia tranquilla (Ehrenberg) Trevisan 1845	P–B	-	-	-	1.8	o–a	i	ind	-	me	8.1-8.9	0	0	0	0	0	0	0	1	1	0	0
Microcystis aeruginosa (Kützing) Kützing 1846	P–B	-	-	-	2.1	b	hl	acf	-	e	8.1	0	1	0	0	1	1	0	0	0	0	0
Microcystis botrys Teiling 1942	P	-	-	-	2.3	b	-	-	-	e	-	0	0	0	0	0	0	1	1	1	0	0
Microcystis flosaquae (Wittrock) Kirchner 1898	P–B	-	-	-	2.0	b	i	-	-	e	6.6–7.7	0	1	0	0	0	1	1	1	1	1	1
Microcystis marginata (Meneghini) Kützing 1846	P–B	-	-	-	1.4	o–b	-	-	-	e	-	0	1	0	0	0	0	0	0	0	0	0
Microcystis smithii Komárek & Anagnostidis 1995	P–B	-	-	-	-	-	-	-	-	e	-	0	1	0	0	1	0	1	1	1	1	1

Microcystis viridis (A.Braun) Lemmermann 1903	P–B	-	-	-	2.2	b	-	-	-	e	-	0	1	0	0	0	1	1	1	0	0	0
Microcystis wesenbergii (Komárek) Komárek ex Komárek 2006	P–B	-	-	-	1.9	o–a	-	-	-	e	-	0	0	0	0	0	1	1	1	1	1	1
Nostoc verrucosum Vaucher ex Bornet & Flahault 1886	-	-	-	-	-	-	-	-	-	-	-	0	1	0	0	0	0	0	0	0	0	0
Pseudanabaena limnetica (Lemmermann) Komárek 1974	P–B	-	-	-	2.2	b	-	alf	-	e	7.9–8.1	0	0	0	0	0	0	0	1	0	0	0
Pseudanabaena persicina (Reinke ex Gomont) Anagnostidis 2001	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	1	1
Radiocystis geminata Skuja 1948	P	-	-	-	-	-	-	-	-	me	-	0	0	0	0	0	0	1	0	0	1	0
Radiocystis sp. H.Skuja, 1948	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	1	0	0	0	0	0
Raphidiopsis raciborskii (Woloszynska) Aguilera, Berrendero Gómez, Kastovsky, Echenique & Salerno 2018	P	-	-	-	2.1	b	-	-	-	me	-	0	0	0	0	0	1	0	0	0	1	1
Rhodomonas sp. G.Karsten, 1898	P	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	1	0	0	1	1	1
Romeria leopoliensis (Raciborski) Koczwara 1932	P	-	st	-	1.5	o–b	-	-	-	e	-	0	0	0	0	0	0	0	0	0	1	0
Romeria sp. M.Koczwara, 1932	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	1	0
Schizothrix sp. Kützing ex Gomont, 1892	-	-	-	-	-	-	-	-	-	-	8.0	0	0	0	0	0	0	0	1	0	0	0
Synechocystis aquatilis Sauvageau 1892	P–B	wa rm	-	-	1.6	b–o	-	alb	-	om	8.1	0	1	0	0	0	0	0	0	0	0	0
Woronichinia fusca (Skuja) Komárek & Hindák 1988	P	-	-	-	1.7	b–o	-	-	-	-	-	0	0	0	0	0	0	0	1	1	1	0
Bacillariophyta																						
Acanthoceras zachariasii (Brun) Simonsen 1979	P	-	st–str	-	1.4	o–b	i	ind	-	-	-	0	0	1	0	0	0	0	0	0	0	0

Amphora ovalis (Kützing) Kützing 1844	B	temp	st–str	sx	1.5	b	i	alf	ate	e	6.2–9.0	0	0	1	0	0	0	0	0	0	0	0
Aulacoseira granulata (Ehrenberg) Simonsen 1979	P–B	temp	st–str	es	2.0	b	i	alf	ate	e	5.8–9.4	0	0	1	0	1	1	1	1	0	1	1
Aulacoseira granulata var. *angustissima* (O.Müller) Simonsen 1979	P	temp	st–str	es	2.1	b	i	alf	ate	e	5.8–9.4	0	0	0	0	0	1	1	1	1	1	1
Aulacoseira islandica (O.Müller) Simonsen 1979	P–B	cool	st–str	es	2.0	b	i	ind	ate	o–e	8.0	1	0	1	0	0	0	0	0	0	0	0
Bacillaria paxillifera (O.F.Müller) T.Marsson 1901	P–B	-	st–str	es	2.3	a	mh	ind	ate	e	6.8–7.6	0	0	0	0	1	0	0	0	0	0	0
Cocconeis lineata Ehrenberg 1849	P–B	temp	st–str	sx	1.2	b	i	alf	ate	e	6.3–9.5	0	0	1	0	0	0	0	0	0	0	0
Cocconeis placentula var. *placentula* Ehrenberg 1838	P–B	temp	st–str	es	1.35	o	i	alf	ate	me	7.4–8.1	1	0	1	0	0	1	1	1	1	1	0
Cocconeis placentula var. *euglypta* (Ehrenberg) Grunow 1884	P–B	temp	st–str	sx	1.3	b	i	alf	ate	om	5.5–9.0	0	0	1	0	0	0	0	0	0	0	0
Craticula cuspidata (Kutzing) D.G.Mann 1990	B	temp	st–str	es	2.45	a	i	alf	-	me	6.3–9.0	0	0	1	0	0	0	0	0	0	0	0
Cyclotella meneghiniana Kützing 1844	P–B	temp	st–str	sp	2.8	a	hl	alf	hne	e	5.5–9.0	1	0	1	0	0	1	1	1	1	1	1
Cymatopleura elliptica (Brébisson) W.Smith 1851	P–B	temp	st–str	-	1.4	b	i	alf	ate	e	5.7–8.5	0	0	1	0	0	0	0	0	0	0	0

Cymbella aspera (Ehrenberg) Cleve 1894	B	-	st–str	es	0.3	x	i	neu	ats	e	-	0	0	1	0	0	0	0	0	0	0	0
Diatoma elongata (Lyngbye) C.Agardh 1824	P–B	-	st–str	-	-	a	hl	alf	ats	me	-	0	0	0	0	0	0	0	0	1	0	0
Encyonema elginense (Krammer) D.G.Mann 1990	B	temp	st–str	sx	1.5	o–b	hb	acf	ats	om	5.5–9.0	0	0	1	0	0	0	0	0	0	0	0
Encyonema minutum (Hilse) D.G.Mann 1990	B	temp	st–str	sx	1.2	o	i	ind	ate	m	4.9–8.9	0	0	1	0	0	0	0	0	0	0	0
Fragilaria crotonensis Kitton 1869	P–B	temp	st–str	es	1.5	o–b	i	alf	ate	m	5.7–8.9	0	0	0	0	0	1	0	0	0	1	0
Fragilaria rumpens (Kützing) G.W.F.Carlson 1913	P–B	eterm	st–str	es	1.6	b–o	i	ind	hne	om	6.5–8.8	0	0	0	0	0	1	1	1	1	1	1
Fragilariforma virescens (Ralfs) D.M.Williams & Round 1988	P–B	temp	st–str	es	1.0	x–o	hb	ind	ats	om	4.6–7.5	0	0	1	0	0	0	0	0	0	0	0
Gomphonema coronatum Ehrenberg 1841	B	-	st	-	1.4	o–b	i	ind	-	om	7.33	0	0	1	0	0	0	0	0	0	0	0
Gomphonema gracile Ehrenberg 1838	B	temp	st–str	es	0.8	x–b	i	alf	ats	m	6.4–8.6	0	0	1	0	0	0	0	0	0	0	0
Gomphonema acuminatum Ehrenberg 1832	B	-	-	-	-	-	i	-	-	-	5.7–7.8	0	0	0	0	0	1	1	1	0	1	1
Gyrosigma acuminatum (Kützing) Rabenhorst 1853	B	temp	st–str	es	1.95	o–a	i	alf	ate	me	6.3–9.5	0	0	0	0	0	0	0	1	1	1	1
Iconella capronii (Brébisson & Kitton) Ruck & Nakov 2016	P–B, S	-	st	-	2.0	b	i	ind	-	me	-	1	0	1	0	0	0	0	0	0	0	0

Lindavia bodanica (Eulenstein ex Grunow) T.Nakov, Guillory, Julius, Theriot & Alverson 2015	P	-	st–str	-	1.0	o	i	ind	ats	ot	6.89	0	0	1	0	0	0	0	0	0	0	0
Lindavia comta (Kützing) Nakov, Gullory, Julius, Theriot & Alverson 2015	P	temp	st	sx	1.2	o	i	alf	hne	om	6.0–7.8	0	0	1	0	0	0	0	0	0	0	0
Melosira varians C.Agardh 1827	P–B	temp	st–str	es	2.1	b	hl	ind	hne	me	5–9	0	0	0	0	0	0	1	1	1	0	0
Neidium productum (W.Smith) Cleve 1894	P–B	temp	st–str	sx	0.9	x–b	i	ind	ats	ot	-	0	0	1	0	0	0	0	0	0	0	0
Nitzschia acicularis (Kützing) W.Smith 1853	P–B	temp	st	es	2.7	a–o	i	alf	hce	e	6.8–8.1	0	0	1	0	0	0	0	0	0	0	0
Nitzschia holsatica Hustedt 1924	P–B	-	-	es	2.3	b	i	ind	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Nitzschia sigmoidea (Nitzsch) W.Smith 1853	P–B	-	st–str	-	2.5	b–a	i	alf	ate	e	6.2–8.8	0	0	0	0	0	0	0	0	1	0	0
Pantocsekiella polymorpha (B.Meyer & H.Håkansson) K.T.Kiss & E.Ács 2016	P	-	st	-	-	-	-	-	-	-	7.3	0	0	0	0	0	0	0	0	0	1	0
Rhoicosphenia abbreviata (C.Agardh) Lange-Bertalot 1980	B	temp	st–str	es	1.9	o–a	i	alf	ate	me	6.5–8.6	0	0	0	0	0	0	1	0	1	1	0
Rhopalodia sp. O.Müller, 1895, nom. cons.	B	temp	st	-	-	-	-	alf	-	-	7.6–9	0	0	0	0	0	0	0	0	0	0	0
Surirella librile (Ehrenberg) Ehrenberg 1845	P–B	temp	st–str	-	2.1	b	i	alf	ate	e	8.0	0	0	1	0	0	1	0	0	0	1	0
Surirella ovalis Brébisson 1838	P–B	-	st–str	es	3.0	a	mh	alf	ate	e	-	0	0	0	0	0	0	1	0	0	0	0

Surirella robusta Ehrenberg 1841	P–B	temp	st–str	es	1.2	o	I	ind	ats	ot	7.6–9.5	0	0	0	0	0	0	0	0	0	1	1
Tabellaria flocculosa (Roth) Kützing 1844	P–B	eterm	st–str	es	0.6	o–x	i	acf	ats	ot	4.5–8.0	0	0	0	0	0	1	0	1	0	0	0
Tabularia affinis (Kützing) Snoeijs 1992	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	1	1	1	1
Ulnaria acus (Kützing) Aboal 2003	P–B	warm	st–str	es	1.85	o–a	i	alf	ate	me	7.1–7.8	0	0	1	0	0	1	1	1	1	1	1
Ulnaria capitata (Ehrenberg) Compère 2001	P–B	-	st–str	es	2.0	b	i	alf	ats	e	-	0	0	1	0	0	0	0	0	0	0	0
Ulnaria ulna (Nitzsch) Compère 2001	P–B	temp	st–str	es	2.4	b–a	i	alf	ate	e	5–9.5	1	0	1	0	0	1	1	1	1	1	1
Cryptophyta																						
Cryptomonas curvata Ehrenberg 1832	P	-	-	-	2.4	b–a	i	-	-	-	-	0	0	0	0	0	0	1	1	1	1	0
Cryptomonas sp. Ehrenberg, 1831	P	-	-	-	2.2	b	-	-	hne	-	7.7–9.0	0	0	0	0	0	1	1	1	1	1	1
Euglenozoa																						
Discoplastis spathirhyncha (Skuja) Triemer 2006	P	-	st–str	-	2.7	a–o	i	-	-	-	-	0	0	0	0	0	0	0	0	0	0	1
Euglena agilis H.J.Carter 1856	P	-	-	-	-	-	-	-	-	e	-	0	0	0	0	0	0	0	0	0	1	1
Euglena deses Ehrenberg 1834	P–B, S	warm	st–str	-	2.2	b	mh	ind	-	-	6.0–8.3	0	0	1	0	0	0	0	0	0	0	0
Euglena ehrenbergii G.A.Klebs 1883	P–B	eterm	st–str	-	2.3	b	-	ind	-	-	6.0–8.6	0	0	0	0	0	0	0	1	0	0	1
Euglena sp. Ehrenberg, 1830	P	-	-	-	2.5	b–a	-	-	-	e	-	0	0	0	0	0	1	1	1	1	0	0
Euglena viridis (O.F.Müller) Ehrenberg 1830	P–B, S	eterm	st–str	-	4.0	i	mh	ind	-	-	4.0–8.5	0	0	0	0	0	0	0	0	0	0	1

Euglenaformis proxima (P.A.Dangeard) M.S.Bennett & Triemer 2014	P–B	eterm	st–str	-	3.5	p–a	mh	ind	-	e	6.8–8.8	0	0	0	0	0	1	1	1	1	1	0
Euglenaria anabaena (Mainx) Karnkowska & E.W.Linton 2010	P–B	warm	st	-	2.3	b	-	-	-	-	-	0	0	0	0	0	0	0	0	0	1	0
Lepocinclis acus (O.F.Müller) B.Marin & Melkonian 2003	P	eterm	st	-	2.2	b	i	ind	-	e	2.2	0	0	0	0	1	1	1	1	1	1	1
Lepocinclis oxyuris (Schmarda) B.Marin & Melkonian 2003	P–B	-	st–str	-	2.6	a–o	mh	ind	-	e	7.0	0	0	0	0	0	0	0	1	1	1	1
Lepocinclis spirogyroides B.Marin & Melkonian 2003	P–B	-	st–str	-	2.4	b–a	i	ind	-	e	7.6	0	0	1	0	0	0	0	0	0	0	0
Lepocinclis tripteris (Dujardin) B.Marin & Melkonian 2003	P–B	eterm	st–str	-	2.55	b–a	mh	ind	-	-	5.1–8.7	1	0	1	0	0	0	1	0	0	1	0
Lepocinclis Perty, 1849 nom. cons.	P	warm	st	-	-	-	-	alf	-	e	7.8–8.0	0	0	0	0	0	1	1	1	0	1	1
Monomorphina pyrum (Ehrenberg) Mereschkowsky 1877	P–B	eterm	st–str	-	2.35	b	mh	ind	-	e	5.5–9.5	0	0	1	0	0	0	1	1	1	1	1
Phacus alatus G.A.Klebs 1883	P	-	st	-	1.6	b–o	i	ind	-	-	7.0–7.5	0	0	1	0	0	0	0	0	0	0	0
Phacus caudatus Hübner 1886	P–B	eterm	st–str	-	2.3	b	i	alf	-	e	7.9	0	0	0	0	1	1	1	0	0	1	0
Phacus curvicauda Svirenko 1915	P–B	-	st	-	2.25	b	i	ind	-	e	7.4	0	0	0	0	0	0	0	1	1	1	1
Phacus longicauda (Ehrenberg) Dujardin 1841	P–B	-	st	-	2.8	a–o	i	ind	-	e	7.0–7.2	0	0	0	0	0	1	1	1	1	0	0
Phacus orbicularis Hübner 1886	P–B	-	st–str	-	2.45	b–a	i	ind	-	e	7.0–7.6	0	0	1	0	0	0	0	0	0	0	0
Phacus sp.	P	-	-	-	-	-	-	ind	-	e	7.2	0	0	0	0	0	1	1	0	0	0	0
Strombomonas sp. Deflandre, 1930	P	-	-	-	2.2	b	-	-	-	-	-	0	0	0	0	0	0	0	0	0	1	1
Trachelomonas hispida (Perty) F.Stein 1878	P–B	eterm	st–str	-	2.2	b	i	acf	-	-	6.9	0	0	1	0	0	0	0	0	0	0	0

Trachelomonas sp. Ehrenberg, 1834	P	-	-	-	2.3	b	-	-	-	-	6.9–8.8	0	0	0	0	0	1	0	1	1	1	1
Miozoa																						
Ceratium hirundinella (O.F.Müller) Dujardin 1841	P	-	st–str	-	1.3	o	i	-	-	e	-	1	0	0	0	0	1	0	1	0	0	0
Durinskia oculata (F.Stein) Gert Hansen & G.Flaim 2007	P	-	st	-	-	-	-	-	-	-	-	0	0	1	0	0	1	1	1	1	1	1
Glenodinium sp. Ehrenberg 1836	P	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	1	0	1	0
Glochidinium penardiforme (Er.L emmermann) Boltovskoy 2000	P	-	st	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	1
Gymnodinium sp. F.Stein, 1878	P	-	-	-	1.5	o–b	-	-	-	-	-	0	0	0	0	0	1	0	1	1	1	1
Naiadinium polonicum (Woloszynska) Carty 2014	P	-	st	-	1.3	o	i	-	-	e	-	0	0	0	0	0	1	1	0	0	0	0
Peridiniopsis cunningtonii Lemmermann 1907	P	-	st	-	-	-	-	-	-	-	-	0	0	0	0	0	1	1	0	1	0	1
Peridinium bipes F.Stein 1883	P	-	st–str	-	1.6	b–o	oh	-	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Peridinium willei Huitfeldt-Kaas 1900	P	-	st	-	1.5	o–b	-	-	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Ochrophyta (Chrysophyceae)																						
Dinobryon divergens O.E.Imhof 1887	P–B	-	st–str	-	1.45	o–b	i	ind	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Ochromonas sp. Vysotskii [Wysotzki, Wyssotzki] 1887	P	-	-	-	1.4	o–b	-	-	-	-	-	0	0	0	0	0	0	0	1	0	0	0
Ochrophyta (Eustigmatophyceae)																						
Goniochloris sp. Geitler, 1928	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	1	1	1	1	0	0
Pseudostaurastrum limneticum (Borge) Couté & Rousselin, nom. inval. 1975	P	-	st–str	-	1.5	o–b	-	-	-	e	-	0	0	0	0	0	0	0	1	0	0	0

Pseudostaurastrum sp. Chodat, 1921	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	1	1	1	1
Pseudostaurastrum spinosum (Pascher) Bourrelly 1952	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	1	1	1	1	1
Tetraëdriella jovetii (Bourrelly) Bourrelly 1968	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	1	0	1	1
Tetraëdriella regularis (Kützing) Fott 1967	P	-	st–str	-	1.8	o–a	-	-	-	e	-	0	0	0	0	0	1	1	1	1	1	1
Tetraëdriella spinigera Skuja 1948	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	1	0	0	0
Ochrophyta (Synurophyceae)																						
Mallomonas helvetica Pascher 1913	P	-	st	-	-	-	-	-	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Mallomonas sp. Perty 1852	P	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	1	0	0	0
Synura uvella Ehrenberg 1834	P–B	-	st	-	1.9	o–a	-	-	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Ochrophyta (Xanthophyceae)																						
Centritractus belonophorus (Schmidle) Lemmermann 1900	P	-	st–str	-	1.3	o	-	-	-	e	-	0	0	1	0	0	0	0	0	0	0	0
Isthmochloron sp. Skuja 1948	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	1	1	0	0	0	0
Ophiocytium arbuscula (A.Braun ex Kützing) Sande Lacoste & Suringar 1861	P	-	st	-	1.0	o	-	-	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Ophiocytium majus Nägeli 1849	P	-	st	-	1.5	o–b	-	-	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Ophiocytium sp. Nägeli, 1849, nom. cons.	P	-	-	-	-	-	-	-	-	e	-	0	0	0	0	0	0	0	1	0	0	0
Polygoniochloris tetragona (Pascher) H.Ettl 1977	P	-	-	-	0.7	o–x	-	-	-	-	-	0	0	0	0	0	0	0	0	1	0	0
Pseudogoniochloris tripus (Pascher) L.Krienitz, E.Hegewald, O.L.Reymond & T.Peschke 1993	-	-	-	-	1.0	o	-	-	-	-	-	0	0	0	0	0	0	0	1	1	1	1

Pseudopolyedriopsis skujae Hollerbach Gollerbach 1962	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	1	0	0
Tetraplektron sp. Fott 1957	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	1	1	1	0	0
Chlorophyta																						
Actidesmium hookeri Renisch 1875	P	-	st	-	1.0	o	-	-	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Actinastrum hantzschii Lagerheim 1882	P–B	-	st–str	-	2.3	b	i	-	-	-	7.3–8.3	0	0	1	0	0	1	1	1	1	1	0
Acutodesmus acutiformis (Schröder) Tsarenko & D.M.John 2011	P–B	-	st–str	-	1.8	o–a	-	-	-	e	6.8	0	0	0	0	0	0	1	1	1	1	1
Ankistrodesmus arcuatus Korshikov 1953	P–B	-	st–str	-	2.1	b	i	-	-	-	-	0	0	0	0	0	0	0	0	0	0	1
Ankistrodesmus falcatus (Corda) Ralfs 1848	P–B	-	st–str	-	2.3	b	hb	-	-	e	7.9	0	0	1	0	0	1	1	0	1	1	1
Aphanochaete repens A.Braun 1850	P–B	-	st	-	2.0	b	-	-	-	-	7.7	0	0	1	0	0	0	0	0	0	0	0
Chlamydomonas sp. Ehrenberg, 1833, nom. cons.	P	-	-	-	2.8	a–o	-	-	-	e	7.7	0	0	0	0	0	1	1	1	1	1	0
Chlorella sp. Beyerinck [Beijerinck] 1890, nom. cons.	P	-	-	-	-	-	-	-	-	e	-	0	0	0	0	0	0	0	0	0	0	0
Cladophora fracta (O.F.Müller ex Vahl) Kützing 1843	P–B	-	st–str	-	2.3	b	-	-	-	e	-	0	0	1	0	0	0	0	0	0	0	0
Closteriopsis longissima (Lemmermann) Lemmermann 1899	P	-	st–str	-	1.8	o–a	i	-	-	e	-	0	0	1	1	0	0	0	0	0	0	0
Coelastrum astroideum De Notaris 1867	P	-	st–str	-	2.2	b	-	-	-	e	-	0	0	0	0	0	0	1	1	1	1	1
Coelastrum microporum Nägeli 1855	P–B	-	st–str	-	2.3	b	i	ind	-	e	8.1–9.5	0	0	1	0	0	1	1	1	0	0	0
Coelastrum pseudomicroporum Korshikov 1953	P	-	-	-	1.9	o–a	-	-	-	-	-	0	0	0	0	0	0	1	0	0	0	0

Coelastrum pulchrum Schmidle 1892	P–B	-	st–str	-	-	-	-	-	-	e	-	0	0	1	0	0	0	0	0	0	0	0
Coelastrum sphaericum Nägeli 1849	P–B	-	st–str	-	1.4	o–b	i	-	-	e	-	0	0	1	1	0	0	0	0	0	0	0
Comasiella arcuata var. *platydisca* (G.M.Smith) E.Hegewald & M.Wolf 2010	P–B	-	st–str	-	1.9	o–a	i	-	-	e	-	0	0	0	1	0	0	0	0	0	0	0
Crucigenia quadrata Morren 1830	P–B	-	st–str	-	1.9	o–a	i	acf	-	e	-	0	0	0	0	0	1	0	1	0	1	0
Crucigenia tetrapedia (Kirchner) Kuntze 1898	P–B	-	st–str	-	2.0	b	i	ind	-	e	6.9	0	0	1	1	0	0	0	0	0	0	0
Crucigenia smithii (Bourrelly) Komárek 1974	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	1	0	0	0	0
Desmodesmus bicaudatus (Dedusenko) P.M.Tsarenko 2000	P–B	-	st–str	-	2.2	b	-	-	-	-	-	0	0	0	0	0	0	0	1	0	0	0
Desmodesmus bicellularis (Chodat) S.S.An, T.Friedl & E.Hegewald 1999	P–B	-	st	-	2.0	b	-	-	-	-	-	0	0	0	0	0	0	0	1	1	0	0
Desmodesmus denticulatus (Lagerheim) S.S.An, T.Friedl & E.Hegewald 1999	P–B	-	st–str	-	1.8	o–a	i	ind	-	e	7.4–9.1	0	0	0	0	0	1	1	1	1	1	1
Desmodesmus magnus (Meyen) Tsarenko 2000	P	-	-	-	2.1	b	i	-	-	e	-	0	0	1	0	0	0	0	0	0	0	0
Desmodesmus maximus (West & G.S.West) Hegewald 2000	P–B	-	st	-	2.0	o–a	-	-	-	e	-	0	0	0	0	0	1	1	1	1	1	1
Desmodesmus opoliensis (P.G.Richter) E.Hegewald 2000	P–B	-	st–str	-	2.2	b	-	alb	-	e	7.3–8.4	0	0	0	0	0	1	0	1	1	1	1
Desmodesmus perforatus (Lemmermann) E.Hegewald 2000	P–B	-	st–str	-	-	-	-	-	-	e	-	0	0	1	0	0	0	0	0	0	0	0

Desmodesmus protuberans (F.E.Fritsch & M.F.Rich) E.Hegewald 2000	P–B	-	st–str	-	-	-	-	alb	-	e	8.1	0	0	0	0	0	0	0	0	1	0	0
Desmodesmus spinosus (Chodat) E.Hegewald 2000	P–B	-	st–str	-	1.4	o–b	-	alf	-	e	7.6	0	0	0	0	0	1	0	0	0	0	0
Dictyosphaerium ehrenbergianum Nägeli 1849	P–B	-	st–str	-	1.5	o–b	-	-	-	e	7.3–11	0	0	0	0	0	0	0	0	0	0	1
Didymogenes anomala (G.M.Smith) Hindák 1974	P	-	-	-	1.8	o–a	-	-	-	-	-	0	0	0	0	0	0	0	1	0	1	0
Eudorina elegans Ehrenberg 1832	P	-	st–str	-	2.3	b	i	-	-	e	6.1–7.0	0	0	1	0	1	0	0	1	0	1	1
Gloeocystis sp. Nägeli 1849	B	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	1	0	0
Golenkinia radiata Chodat 1894	P–B	-	st–str	-	1.9	o–a	i	-	-	e	-	0	0	1	0	0	1	0	0	0	0	1
Gonium pectorale O.F.Müller 1773	P	-	st	-	2.8	a–o	i	-	-	e	-	0	0	1	0	0	1	0	1	0	0	0
Hariotina reticulata P.A.Dangeard 1889	P–B	-	st–str	-	1.8	o–a	i	-	-	e	-	0	0	1	0	0	1	1	1	0	1	1
Hydrodictyon reticulatum (Linnaeus) Bory 1824	P–B	-	st	-	1.8	o–a	-	-	-	e	8.9	0	0	1	0	0	0	0	0	0	0	0
Kirchneriella lunaris (Kirchner) Möbius 1894	P–B	-	st–str	-	1.8	o–a	i	-	-	e	8.0	0	0	1	0	0	0	0	0	0	0	0
Kirchneriella obesa (West) West & G.S.West 1894	P–B	-	st–str	-	1.8	o–a	i	-	-	e	8.1	0	0	0	0	0	0	1	0	0	0	0
Koliella longiseta (Vischer) Hindák 1963	P	-	st	-	2.0	b	i	-	-	-	-	0	0	0	0	0	1	0	0	0	1	1
Lacunastrum gracillimum (West & G.S.West) H.McManus 2011	P	-	-	-	2.1	b	-	alf	-	e	7.7–8.0	0	0	0	0	0	0	1	0	0	0	0
Lagerheimia citriformis (J.W.Snow) Collins 1909	P–B	-	st–str	-	-	-	-	-	-	-	-	0	0	0	0	0	1	1	0	0	0	1
Lemmermannia tetrapedia (Kirchner) Lemmermann 1904	P–B	-	st–str	-	2.0	b	i	ind	-	e	6.9	0	0	0	0	0	1	1	1	1	1	1

Lemmermannia triangularis (Chodat) C.Bock & Krienitz 2013	P–B	-	st–str	-	2.2	b	-	-	-	e	-	0	0	0	0	0	1	1	1	0	1	1
Messastrum gracile (Reinsch) T.S.Garcia 2016	P–B	-	st–str	-	1.9	o–a	-	-	-	-	-	0	0	0	0	0	1	0	1	0	1	1
Micractinium pusillum Fresenius 1858	P–B	-	st–str	-	2.6	a–o	-	-	-	e	-	0	0	0	0	0	1	1	0	0	1	0
Monactinus simplex (Meyen) Corda 1839	P–B	-	st–str	-	2.0	b	-	-	-	e	-	0	0	1	0	0	1	1	1	1	1	1
Monoraphidium contortum (Thuret) Komárková-Legnerová 1969	P–B	-	st–str	-	2.2	b	i	-	-	-	-	0	0	1	0	0	1	1	1	1	1	1
Monoraphidium minutum (Nägeli) Komárková-Legnerová 1969	P–B	-	st–str	-	2.5	b–a	i	-	-	e	-	0	0	0	0	0	1	0	0	1	0	1
Mucidosphaerium pulchellum (H.C.Wood) C.Bock, Proschold & Krienitz 2011	P–B	-	st–str	-	2.3	b	i	ind	-	e	7.8–9.3	0	0	0	0	0	1	1	1	1	1	0
Nephrochlamys subsolitaria (G.S.West) Korshikov 1953	P	-	-	-	-	-	-	-	-	e	-	0	0	0	0	0	1	0	1	0	1	1
Nephrocytium lunatum West 1892	P–B	-	st	-	2.0	b	-	-	-	-	-	0	0	0	0	0	0	0	1	0	1	0
Oedogonium sp. Link ex Hirn 1900	B	-	-	-	-	-	-	alb	-	-	7.7–8.3	0	0	0	0	0	0	0	0	0	1	0
Oocystis lacustris Chodat 1897	P–B	-	st–str	-	1.7	b–o	hl	-	-	e	-	0	0	0	0	0	1	1	1	1	1	1
Pandorina morum (O.F.Müller) Bory 1826	P	-	st	-	2.3	b	i	-	-	e	5.9	1	0	1	0	0	1	1	1	0	0	0
Pectinodesmus pectinatus (Meyen) E.Hegewald, M.Wolf, Al.Keller, Friedl & Krienitz 2010	P–B	-	st–str	-	-	-	-	-	-	-	-	1	0	1	0	0	0	0	0	0	0	0
Pediastrum duplex Meyen 1829	P	-	st–str	-	2.1	b	i	ind	-	e	7.5–8.1	0	0	0	0	0	1	1	1	1	1	1

Pseudopediastrum boryanum (Turpin) E.Hegewald 2005	P–B	-	st–str	-	2.1	b	i	ind	-	e	8.1	0	0	0	0	0	1	1	1	1	1	1
Quadrigula sp. Printz, 1916	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	1	0	1	0	0	1
Radiococcus nimbatus (De Wildeman) Schmidle 1902	-	-	-	-	1.4	o–b	-	-	-	-	-	0	0	0	0	0	1	1	1	1	1	0
Scenedesmus bijugus (Turpin) Lagerheim 1893	P	-	-	-	-	-	-	alb	-	e	8.4–9.0	0	0	0	0	0	1	1	1	1	1	1
Sphaerocystis schroeteri Chodat 1897	P	-	-	-	1.5	o–b	i	ind	-	e	8.2–8.3	0	0	0	0	0	1	0	0	1	1	0
Stauridium tetras (Ehrenberg) E.Hegewald 2005	P–B	-	st–str	-	2.1	b	i	ind	-	e	8.3	0	0	1	1	0	1	1	1	1	1	1
Stichococcus bacillaris Nägeli 1849	P–B, S	-	-	-	2.3	b	-	-	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Tetradesmus lagerheimii M.J.Wynne & Guiry 2016	P–B	-	st–str	-	2.15	b	i	ind	-	e	8.3	0	0	0	0	0	1	1	1	1	1	1
Tetradesmus wisconsinensis G.M.Smith 1913	P	-	st	-	-	-	-	-	-	-	-	0	0	1	0	0	0	0	0	0	0	0
Tetraëdron caudatum (Corda) Hansgirg 1888	P–B	-	st–str	-	2.0	b	i	ind	-	e	-	0	0	0	0	0	1	1	1	1	1	1
Tetraëdron minimum (A.Braun) Hansgirg 1889	P–B	-	st–str	-	2.1	b	i	alf	-	e	8.0	0	0	0	0	0	1	1	1	1	1	1
Tetraëdron trigonum (Nägeli) Hansgirg 1888	P	-	-	-	2.0	b	-	-	-	e	-	0	0	0	0	0	1	0	0	0	0	0
Tetraselmis cordiformis (H.J.Carter) F.Stein 1878	P	-	st–str	-	2.4	b–a	-	-	-	e	-	0	0	0	0	0	1	0	0	0	1	0
Tetrastrum heteracanthum (Nordstedt) Chodat 1895	P	-	-	-	1.9	o-a	-	-	-	e	-	0	0	0	0	0	0	0	1	0	0	0
Tetrastrum staurogeniiforme (Schröder) Lemmermann 1900	P–B	-	st–str	-	2.2	b	i	-	-	e	-	0	0	0	0	0	0	1	1	1	1	1
Tetrastrum sp. Chodat, 1895	P	-	-	-	-	-	-	-	-	e	-	0	0	0	0	0	1	0	0	0	0	0
Treubaria setigera (W.Archer) G.M.Smith 1933	P	-	st	-	1.7	b–o	oh	-	-	-	-	0	0	0	0	0	0	1	0	0	1	1

Treubaria triappendiculata C.Bernard 1908	P–B	-	st–str	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	1	1
Volvox aureus Ehrenberg 1832	P	-	st	-	2.2	b	i	-	-	-	-	0	0	1	0	1	0	0	0	0	0	0
Willea rectangularis (A.Braun) D.M.John, M.J.Wynne & P.M.Tsarenko 2014	P	-	st–str	-	2.1	b	i	ind	-	e	7.8	0	0	0	0	0	1	1	1	1	1	1
Charophyta																						
Closterium acerosum Ehrenberg ex Ralfs 1848 var. *acerosum*	P–B	-	st–str	-	2.6	a–o	i	ind	-	e	7.9–11	0	0	0	0	0	0	0	1	1	1	1
Closterium acerosum var. *elongatum* West 1889	P–B	-	-	-	2.6	a–o	hl	ind	-	me	-	0	0	0	0	0	0	1	0	0	0	0
Closterium acutum Brébisson 1848	P–B	-	st–str	-	2.05	b	-	ind	-	m	-	0	0	0	0	0	1	1	1	1	1	0
Closterium leibleinii Kützing ex Ralfs 1848	P–B	-	st–str	-	2.6	a–o	-	ind	-	e	-	0	0	1	0	0	0	0	0	0	0	0
Closterium limneticum Lemmermann 1899	P	-	-	-	1.9	o–a	-	ind	-	e	-	0	0	0	0	0	1	0	0	0	0	0
Closterium moniliferum Ehrenberg ex Ralfs 1848	P–B	-	st–str	-	2.1	b	i	ind	-	me	7.7–8.3	0	0	0	0	0	0	0	0	1	0	0
Closterium pronum Brébisson 1856	P–B	-	st–str	-	-	-	i	ind	-	om	-	0	0	0	0	0	0	1	0	0	0	0
Cosmarium granatum Brébisson ex Ralfs 1848	P–B	-	st–str	-	1.2	o	i	ind	-	m	7.2–7.8	0	0	0	0	0	1	0	0	0	0	0
Cosmarium laeve Rabenhorst 1868	P–B	-	st–str	-	1.9	o–a	hb	ind	-	me	-	0	0	0	0	0	1	0	1	1	1	1
Elakatothrix gelatinosa Wille 1898	P	-	st–str	-	1.3	o	i	-	-	e	-	0	0	0	0	0	0	1	1	0	1	1
Spirogyra sp. Link, 1820, nom. cons.	P–B	-	-	-	-	-	-	alf	-	e	7.8	0	0	0	0	0	0	0	0	0	1	0
Staurastrum gracile Ralfs ex Ralfs 1848	P–B	-	st	-	1.3	o	i	acf	-	m	-	0	0	1	0	0	0	0	0	0	0	0

Staurastrum sp. Meyen ex Ralfs, 1848	-	-	-	-	1.6	b–o	-	-	-	-	-	0	0	0	0	0	1	1	1	0	0	0
Staurastrum tetracerum Ralfs ex Ralfs 1848	P–B	-	st–str	-	1.5	o–b	i	ind	-	m	-	0	0	0	0	0	0	1	1	0	0	0

Note: Habitat: P – planktonic, P–B – plankto benthic, B – benthic. Temperature: cool – cool water, temp – temperate temperature, eterm– eurythermic, warm – warm–water. Oxygenation & water moving (Oxygen): st – standing water, str – streaming water, st–str – low streaming water, aer - aerophiles. Halobity degree (Salinity): i – oligohalobes–indifferent, hl – halophiles, hb – halophobes, mh - masohalobes. Acidity (pH): alf – alkaliphiles, ind – indifferents; acf – acidophiles, alb, alkalibiontes. Organic pollution indicators according to Watanabe (D): sx – saproxenes, es – eurysaprobes, sp – saprophiles. Saprobity (Sap): x – xenosaprob, x–o – xeno–oligosaprob, o–x – oligo–xenosaprob, x–b – xeno–betamesosaprob, o – oligosaprob, o–b – oligo–beta–msosaprob, b–o – beta–oligosaprob, o–a – oligo–alpha–mesosaprob, b – beta–mesosaprob, b–a – beta–alpha–mesosaprob, a–o – alpha-oligosaprob, a – alpha-mesosaprob, i – i-eusaprob. Nitrogen uptake metabolism (Aut–Het): ats – nitrogen–autotrophic taxa, tolerating very small concentrations of organically bound nitrogen; ate – nitrogen–autotrophic taxa, tolerating elevated concentrations of organically bound nitrogen; hne – facultatively nitrogen–heterotrophic taxa, needing periodically elevated concentrations of organically bound nitrogen, hce – facultatively nitrogen–heterotrophic taxa, needing elevated concentrations of organically bound nitrogen. Trophic state (Tro): ot – oligotraphentic; om – oligo–mesotraphentic; m – mesotraphentic; me – meso–eutraphentic; e – eutraphentic; o–e – oligo–eutraphentic. "–" property is unknown.