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Genomic and Microscopic Analysis of Ballast Water in the Great Lakes Region

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Supplementary Materials A. Phytoplankton Taxa Identified by Light Microscopy

Table S1. Microscopic Phytoplankton Counts in Ballast Water from Indiana Harbor, Indiana.

Sample No.	**#003**	**#005**	**#009**	**#013**	**#015**	**#026**	**#031**	**#035**	**#037**	**#040**	**#042**	**#043**
Collected by	American Spirit	M/V Burns Harbor	M/V American Spirit	Burns Harbor	American Integrity	American Spirit	American Integrity	American Spirit	American Spirit	American Integrity	American Integrity	American Integrity
Date	2-October-2016	4-October-2016	25-November-2016	3-April-2017	25-April-2017	27-June-2017	27-July-2017	22-August-2017	6-September-2017	13-September-2017	20-September-2017	25-September-2017
[redacted]												
Achnanthes		4	1.25					2.67	18	1.5	13.33	5
Actinastrum			8									
Amphiprora			2									
Amphora			3	0.4					2.33	1.5		1
Ankistrodesmus	1.33		1		0.4							
Asterionella		3.33	18.67	10.63			6	6	10	8		
Chaetoceros		1								3		
Coconeis			5	0.16	1.6							
Coscinodiscus		1	1.67	0.4			1					
Cyclotella	18.67	4.33	9.4	2.04	5.2		16	21	20.5	10.5	2.67	5.33
Cymbella	2.67		3.83	0.4	1.6				3			3
Detonula			35.17	0.48	6.8		8	8	7		31.5	8
Diatoma												
Diploneis			1.33		0.8							
Eunotia												
Fragillaria 1	31.33	3	26.4	3.15	24.8		13	101.33	36	206	171.67	
Fragillaria 2			6		21.6							
Fragillaria 3			9		1.2							
Frustulia			3									
Gomphonema			13				1					
Grammatophora			4									

Leptocylindrus			1				1	10.67	63.75	24	6	
Licmophora	1.33		1.75		0.4							
Luticola							1					
Melosira			13.67		12.8			4	4	1	4	1
Sample No.	**#003**	**#005**	**#009**	**#013**	**#015**	**#026**	**#031**	**#035**	**#037**	**#040**	**#042**	**#043**
Collected by	American Spirit	M/V Burns Harbor	M/V American Spirit	Burns Harbor	American Integrity	American Spirit	American Integrity	American Spirit	American Spirit	American Integrity	American Integrity	American Integrity
Date	2-October-2016	4-October-2016	25-November-2016	3-April-2017	25-April-2017	27-June-2017	27-July-2017	22-August-2017	6-September-2017	13-September-2017	20-September-2017	25-September-2017
Navicula 1	48.67	1		0.69	4.8		6	6.67	19.75	9		6
Navicula 2				1.55	12							
Navicula 3				0.4	2.4							
Navicula 4				0.5	1.2							
Navicula 5												
Nitzschia	4		5	4.05	1.6		12	37.67	27.33	56		10.33
Nitzschia 2												
Pinnularia			4.5				1			1	1.5	
Plagiogramma			27.33									
Pleurosigma			1	0.72	1.2			1			2	1
Pseudonitzschia												
Rhizosolenia			4.5	1.32						1		
Skeletonema											2	
Surirella				0.08	1.2							
Synedra	1.33	18	7.83	0.51	2		3	1	3	1.5	1	1.5
Tabellaria			1	5.94	6		3					
[redacted]												
Aulocaseira							14	2	71	59.5	11	3.5
Chlamydomonas							1					17
Chlorella									42			
Closterium					0.4			1.67				
Cosmarium		2		25.8				2			4	2

Cryptomonas			3		0.8	2	7	13.33	20.3	13	7.33	13
Crucigenia	0.67			2.8			3		14.67			
Dinobyon		25	5.5			21.67	34	1.33		5	10	12
Sample No.	**#003**	**#005**	**#009**	**#013**	**#015**	**#026**	**#031**	**#035**	**#037**	**#040**	**#042**	**#043**
Collected by	American Spirit	M/V Burns Harbor	M/V American Spirit	Burns Harbor	American Integrity	American Spirit	American Integrity	American Spirit	American Spirit	American Integrity	American Integrity	American Integrity
Date	2-October-2016	4-October-2016	25-November-2016	3-April-2017	25-April-2017	27-June-2017	27-July-2017	22-August-2017	6-September-2017	13-September-2017	20-September-2017	25-September-2017
Dysmorphococcus		24										
Golenkinia		1.5						2	2	1		2
Gonium	0.67	742.5										
Kirchnereilla								3		1		
Lagerheimia							2	2			1	2
Leptocylindrus			3									2.67
Malomonas											1	
Monoraphidium											1	1
Nephroselmis												
Pandorina								12		36	15	31.5
Paulinella												
Pediastrum	8		7.5		10	16	8	16.67	52		22	20
Phacus										1	1	1
Psammodictyon			1									
Quadricoccus				0.41				16	8	12	6	
Rapdidiopsis								2		1		
Raphidophyte									7.25	4		
Rhizocloniu m	0.67					1.5				2.5		

Rhodamonas									4			
Scenedesmus	7.33	218.11	4	1.632	6.4	2	9	12.67	31	23	6	13
Scenedesmus 2		174										
Selenastrum			1									
Staurastrum												
Teleaulaxacuta							10	20.33	33	3	3	17.33
Trachelomonas		1	2					1				
Treubaria								1	2			
Ulothrix				4.208		3						
Sample No.	**#003**	**#005**	**#009**	**#013**	**#015**	**#026**	**#031**	**#035**	**#037**	**#040**	**#042**	**#043**
Collected by	American Spirit	M/V Burns Harbor	M/V American Spirit	Burns Harbor	American Integrity	American Spirit	American Integrity	American Spirit	American Spirit	American Integrity	American Integrity	American Integrity
Date	2-October-2016	4-October-2016	25-November-2016	3-April-2017	25-April-2017	27-June-2017	27-July-2017	22-August-2017	6-September-2017	13-September-2017	20-September-2017	25-September-2017
[redacted]												
Anabaena							45	9	352			
Anabaenopsis				2.64								
Aphanizomenon				10.76					44	2	73	
Aphanocapsa	256	100		2.4			88	39	433.07	649	430.67	28
Aphanothece				2.8	14.8			221.67	125.6		90	1596
Chroococcus	5.33	13.75					9	58		8	11	340
Coelastrum								2				124
Coelosphaerium		132.5					7	43				
Cylindrospermopsis							17	23				
Merismopedia				101.6			9		172	16		

Micractinium							34	48						18
Microcystis									322					7.5
Oocystis	2.67	12.2				9.5	1	5.5		15		26		5.5
Planktolyngbya	4													
Pseudanabaena		12.5	31			19	34	49.33	1471.4	13.5		103		
Rapidophyte									6			16.33		2.33
Ceratiumhirundinella				0.54						1				
Glenodinium		1.25	4											
Gymnodinium				1.54								1		
Heterocapsa rotundata		1.25						1						
Karlodinium														
Peridinium										4				
Prorocentrummicans														
Prorocentrum Minimum	1.33	17.5												
Unknown Dinoflagellates						1	3	3	9.67	7.5				

Table S2. Microscopic Phytoplankton Counts in Ballast Water from Burns Harbor, Indiana.

Sample No.	**#002**	**#007**	**#008**	**#011**	**#012**	**#013**	**#017**	**#021**	**#024**	**#027**	**#030**	**#033**	**#039**	**#048**	**#050**
Collected by	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	American Spirit	M/V Burns Harbor

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Date	1-October-2016	30-October-2016	17-November-2016	24-December-2016	3-December-2016	3-April-2017	9-May-2017	17-May-2017	13-June-2017	7-May-2017	26-July-2017	10-August-2017	13-September-2017	12-October-2017	13-October-2017
	Average/mL														
Diatoms															
Achnanthes			5		4.2					8		2	2		72
Actinastrum				2											
Amphiprora				5.33											
Amphora			4				0.4						1	3	2
Ankistrodesmus				43.83			4.4					24			
Asterionella	18	7.11	266		9.51	2.56		11	4	3	37		2.5		3
Chaetoceros	2	1.33	4				0.4						5.5		
Coconeis		1.33	3	1.67	1.3	0.08									
Coscinodiscus	18	0.67	11.33		0.4	0.08	0.4								
Cyclotella	14.13	2.44	12.33	21	2.27	1.92	340	12.67	4.5	27	30	89	78	7.5	
Cymbella		2	7	8	0.91	0.12	0.4	0.67				1	2	3	7
Detonula	3		2		8.39		500	10.17				59	6	15	2
Diatoma		8.22	125.67		13.6										34.5
Diploneis															
Encyonema															3
Eunotia			1	115.4											
Fragillaria 1	32.5	197.78	533	14	25.94	0.32	0.8	1.17	1	2		10	142.67	38.5	100
Fragillaria 2				23	12.4	0.24									
Fragillaria 3															
Frustulia			4												
Gomphonema															
Grammatophora	2		2		0.8										
Leptocylindrus				8				23.17	1			2	3	3.5	
Licmophora	1.67		3		0.4										2
Luticola			1												
Melosira		1.11	19.67	46.33	1.33			0.67			76			28	
Navicula 1	25.75	33.33	124.33	2	5.76	0.214	1.7	9.7	4	7	14	4	6		60
Sample No.	**#002**	**#007**	**#008**	**#011**	**#012**	**#013**	**#017**	**#021**	**#024**	**#027**	**#030**	**#033**	**#039**	**#048**	**#050**
Collected by	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	American Spirit	M/V Burns Harbor

Date	1-October-2016	30-October-2016	17-November-2016	24-December-2016	3-December-2016	3-April-2017	9-May-2017	17-May-2017	13-June-2017	7-May-2017	26-July-2017	10-August-2017	13-September-2017	12-October-2017	13-October-2017
	Average/mL														
Navicula 2				7.5	3.07		0.4								

Navicula 3				3	3.16		0.8								
Navicula 4				4	1.2										
Navicula 5				12											
Nitzschia	3	4	13	2	1.07	0.8	2.4	12.67	7.5	5	20	39	15	18.5	8
Nitzschia 2				2											
Pinnularia			1				0.4				5		1		1
Plagiogramma			1	2											
Pleurosigma		1	2									1		1	
Pseudonitzschia															
Rhizosolenia						0.08	0.8		5			4	1.33	1	
Skeletonema															
Surirella			2	7											
Synedra		0.67	12.33	4	1.6		0.8	3.5			5		1	1	2.5
Tabellaria			4		11.33	1.413	3	15	4		22.5	2			
Teleaulaxacuta															
Thalassiosira											11	57	61.5		
Green Algae															
Aulocaseira													16	21	
Chlamydomonas														16.5	41
Closterium									1						
Cosmarium	4					5.92					14				
Cryptomonas	2	1.33		2			1.28	5.33							
Crucigenia					0.67								4		
Dinobyon	2	8					0.8		1	75	43	26	12	7.5	10
Diploneis															
Dysmorphococcus															
Sample No.	**#002**	**#007**	**#008**	**#011**	**#012**	**#013**	**#017**	**#021**	**#024**	**#027**	**#030**	**#033**	**#039**	**#048**	**#050**
Collected by	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	America n Spirit	M/V Burns Harbor
Date	1-October-2016	30-October-2016	17-November-2016	24-December-2016	3-December-2016	3-April-2017	9-May-2017	17-May-2017	13-June-2017	7-May-2017	26-July-2017	10-August-2017	13-September-2017	12-October-2017	13-October-2017
							Average/mL								
Golenkinia										2		1	1		
Gonium	76														

Kirchnereilla				2											
Lagerheimia												1			
Leptocylindrus				20							85			3.5	4
Monoraphidium															
Nephroselmis				2											
Pandorina															15
Paulinella			1		8										
Pediastrum		5.33	7				2.8			60					
Phacus															
Psammodictyon	6														
Quadricoccus						0.32							4		
Raphidiopsis													1.33		
Raphidophyte				14.5		0.08			3						1.5
Rhizoclonium					4	9.952			7			5			
Rhodomonas										1					
Scenedesmus	12.5	5.33	7				0.44		4	6		10	16.67		
Scenedesmus 2															
Selenastrum						0.16									
Spirogyra*															
Staurastrum															
Teleaulaxacuta										25			14.5	45.5	39.5
Trachelomonas	4						0.4								
Treubaria									2			1			
Ulothrix			9.5									11		39	
Sample No.	**#002**	**#007**	**#008**	**#011**	**#012**	**#013**	**#017**	**#021**	**#024**	**#027**	**#030**	**#033**	**#039**	**#048**	**#050**
Collected by	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	M/V Burns Harbor	American Spirit	M/V Burns Harbor
Date	1-October-2016	30-October-2016	17-November-2016	24-December-2016	3-December-2016	3-April-2017	9-May-2017	17-May-2017	13-June-2017	7-May-2017	26-July-2017	10-August-2017	13-September-2017	12-October-2017	13-October-2017
	Average/mL														
Cyanobacteria															
Anabaena															
Anabaenopsis						2.36									
Aphanizomenon				12		0.96									
Aphanocapsa		61.64	248	24		0.08				947			378.3		283

Aphanothece							1.56					2640				189		
Chroococcus					6.4		1.12			5		22	67			20		3
Coelastrum														6.67		6.67		
Coelosphaerium																		
Cylindrospermopsis																21		
Merismopedia	8			8			1.24					194					12	12
Microcystis																		
Oocystis	2											91				4		
Planktolyngbya	1	0.89																
Pseudanabaena								0.9	24	46						64	33.4	5
Dinoflagellates																		
Ceratiumhirundinella							0.214									3		1
Glenodinium		0.67	1	2														
Gymnodinium							0.08											
Heterocapsarotunda ta	2						0.13											
Karlodinium								3.2										
Peridinium			1		0.4			0.53								2.5		
Prorocentrummicans		0.67		2			0.08											
Prorocentrum Minimum	5.2		1															
Unknown Dinoflagellates												3	17	5		8.67	1	6

Table S3. Microscopic Phytoplankton Counts in Ballast Water from Monroe, Michigan.

Sample No.	**#001**	**#004**	**#006**	**#018**	**#020**	**#025**
Collected by	American Spirit	American Integrity	American Integrity	American Spirit	American Integrity	American Integrity
Date	9-September-2016	5-October-2016	13-October-2016	28-September-2016	17-May-2017	23-June-2017
			Average/mL			
Diatoms						
Achnanthes		227.25	2	1	72	40.5
Actinastrum						

Amphiprora		2.5				1
Amphora		2			1	
Ankistrodesmus					19	
Asterionella	24.5	6	2	2.3	2	2
Chaetoceros				0.5		
Coconeis				2		
Coscinodiscus		10.67	7	217	1	
Cyclotella	24.67	42.5	27.38	1.3	99.67	18.33
Cymbella	11.5	9			1.27	
Detonula	14				14.8	
Diatoma		20	10			
Diploneis						1
Eunotia						
Fragillaria 1	7	23.5	1.13	2.15	1.5	2
Fragillaria 2						
Fragillaria 3						
Frustulia						
Gomphonema						
Grammatophora		10	3			
Leptocylindrus					88	
Licmophora		4.5	1			
Sample No.	**#001**	**#004**	**#006**	**#018**	**#020**	**#025**
Collected by	American Spirit	American Integrity	American Integrity	American Spirit	American Integrity	American Integrity
Date	9-September-2016	5-October-2016	13-October-2016	28-September-2016	17-May-2017	23-June-2017
			Average/mL			
Luticola						
Melosira	18.33	48.67			20	4
Navicula 1	52.33	69	24.88	5.3	5.4	4.67
Navicula 2						
Navicula 3						

Navicula 4						
Navicula 5						
Nitzschia	1	4		2.5	4.4	3.33
Nitzschia 2						
Pinnularia		2			0.4	
Plagiogramma		8	1			
Pleurosigma	2.5					
Pseudonitzschia						
Rhizosolenia						
Skeletonema	48		39			
Surirella		6			0.7	
Synedra	5	6	1	1.3		
Tabellaria				6.4	2	

Green Algae						
Closterium						1
Cosmarium		12	2			
Cryptomonas	2	25	2		5	9.67
Crucigenia			4		4	
Sample No.	**#001**	**#004**	**#006**	**#018**	**#020**	**#025**
Collected by	American Spirit	American Integrity	American Integrity	American Spirit	American Integrity	American Integrity
Date	9-September-2016	5-October-2016	13-October-2016	28-September-2016	17-May-2017	23-June-2017
			Average/mL			
Dinobyon				3		
Dysmorphococcus						
Golenkinia	1					
Gonium		16.3			4	
Kirchnereilla						
Leptocylindrus						
Nephroselmis		6				

Pandorina				4.5		
Paulinella						
Pediastrum	83.33	36.67				8
Phacus						
Psammodictyon		6				
Quadricoccus						
Raphidophyte						
Rhizoclonium		2		1		
Scenedesmus	6.67	81	16.13	1.83	7.47	8
Scenedesmus 2						
Selenastrum						
Staurastrum		6				
Trachelomonas		3				59.33
Treubaria		4				
Ulothrix	228	55.25				1
Sample No.	**#001**	**#004**	**#006**	**#018**	**#020**	**#025**
Collected by	American Spirit	American Integrity	American Integrity	American Spirit	American Integrity	American Integrity
Date	9-September-2016	5-October-2016	13-October-2016	28-September-2016	17-May-2017	23-June-2017
			Average/mL			
Cyanobacteria						
Anabaena	12					
Anabaenopsis	26					
Aphanizomenon		160	36			
Aphanocapsa	300		128			
Aphanothece						
Chroococcus			12.5		4	
Coelosphaerium		18				6
Merismopedia	148	24		10.7	1.6	
Microcystis	572					
Oocystis	8					

Planktolyngbya		8				
Pseudanabaena		82		75	134	70
Dinoflagellates						
Ceratiumhirundinella	2	12				
Glenodinium	1	13				
Gymnodinium						
Heterocapsarotundata						
Karlodinium						
Peridinium	2					1
Prorocentrummicans						
Prorocentrum Minimum	2.67	3				
Unknown Dinoflagellates						3

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Table S4. Microscopic Phytoplankton Counts in Ballast Water from St. Clair, Michigan.

Sample No.	**#016**	**#019**	**#023**	**#049**	**#051**
Collected by	American Integrity	American Integrity	American Integrity	American Integrity	American Integrity
Date	1-May-2017	14-May-2017	6-June-2017	15-October-2017	22-October-2017
		Average/mL			
DIATOMS					
Achnanthes		81.33	15.3	5	11
Actinastrum		16			
Amphiprora					
Amphora	0.6	1.33			1
Ankistrodesmus	2.8				
Asterionella		0.67			
Chaetoceros					
Coconeis	0.4				
Coscinodiscus	0.4				1
Cyclotella	136	12.67	12	3.5	6
Cymbella	1.4	2.67	6	1	1
Detonula	20.4	6.67	9.67	11	6
Diatoma					
Diploneis	0.4				
Eunotia					
Fragillaria 1	25.6	4.67		9	6
Fragillaria 2					
Fragillaria 3					
Frustulia					
Gomphonema					
Grammatophora					
Leptocylindrus		413.3	4	2	
Licmophora	0.4	0.67	2		
Luticola					
Melosira	4	1.33			

Navicula 1	11.2	20.67	20	5	12
Navicula 2	0.8				
Sample No.	**#016**	**#019**	**#023**	**#049**	**#051**
Collected by	American Integrity	American Integrity	American Integrity	American Integrity	American Integrity
Date	1-May-2017	14-May-2017	6-June-2017	15-October-2017	22-October-2017
		Average/mL			
Navicula 3	1.2				
Navicula 4	0.6				
Navicula 5					
Nitzschia	2		3.67	2	
Nitzschia 2					
Pinnularia				1	
Plagiogramma					
Pleurosigma			2	1	
Pseudonitzschia	0.8				
Rhizosolenia					
Skeletonema					
Surirella					
Synedra	2.4		0.67	2	
Tabellaria	1.1	10			
Teleaulaxacuta		1.33			
Thalassiosira					

Green Algae					
Aulocaseira		22.67			
Chlamydomonas	0.8			2.5	20
Closterium	1.2				
Cosmarium	0.8				
Cryptomonas		4.67	0.67	1	1
Crucigenia		2.67			
Dinobyon			2	42	8
Diploneis					

Dysmorphococcus					
Golenkinia					
Sample No.	**#016**	**#019**	**#023**	**#049**	**#051**
Collected by	American Integrity	American Integrity	American Integrity	American Integrity	American Integrity
Date	1-May-2017	14-May-2017	6-June-2017	15-October-2017	22-October-2017
		Average/mL			
Gonium					
Kirchnereilla					
Lagerheimia					
Leptocylindrus					
Monoraphidium					
Nephroselmis					
Pandorina					
Paulinella					
Pediastrum	7.6				
Phacus					
Psammodictyon					
Quadricoccus					
Raphidiopsis					
Raphidophyte					2
Rhizoclonium			4		
Rhodomonas					
Scenedesmus	4.4	10.67	40.3	9	2
Scenedesmus 2					
Selenastrum					
Spirogyra*					
Staurastrum					
Teleaulaxacuta				9	10
Trachelomonas					
Treubaria					
Ulothrix			0.67		
Sample No.	**#016**	**#019**	**#023**	**#049**	**#051**

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Collected by	American Integrity	American Integrity	American Integrity	American Integrity	American Integrity
Date	1-May-2017	14-May-2017	6-June-2017	15-October-2017	22-October-2017
		Average/mL			
Cyanobacteria					
Anabaena					
Anabaenopsis					
Aphanizomenon					
Aphanocapsa					132
Aphanothece					
Chroococcus	3.2				
Coelastrum					
Coelosphaerium					
Cylindrospermopsis					
Merismopedia				12	
Microcystis					
Oocystis					
Planktolyngbya					
Pseudanabaena				33.4	33.4
Dinoflagellates					
Ceratium hirundinella					
Glenodinium					
Gymnodinium					
Heterocapsa rotundata					
Karlodinium					
Peridinium		0.67			
Prorocentrum micans					
Prorocentrum Minimum					
Unidentified Dinoflagellates		1.33	2.33	1	

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Table S5. Microscopic Phytoplankton Counts in Ballast Water from Detroit, Michigan.

Sample No.	**#010**	**#020**	**#028**	**#032**	**#047**
Collected by	American Integrity	American Integrity	American Integrity	American Integrity	American Integrity
Date	1-December-2016	17-May-2017	4-July-17	7-August-2017	9-October-2017
			Average/mL		
Diatoms					
Achnanthes	3.33	5	4	4	2
Actinastrum			6		
Amphiprora					
Amphora	0.44				
Ankistrodesmus		8	7	10	
Asterionella	0.4		7	4	
Chaetoceros	0.22				
Coconeis			1		
Coscinodiscus	4.2		1		
Cyclotella	1.33	7	34	14	11.33
Cymbella	1.78		2	1	2
Detonula			22		2
Diatoma					
Diploneis			1		
Eunotia	0.89				
Fragillaria 1	1.6		2	1	8
Fragillaria 2					
Fragillaria 3					
Frustulia					
Gomphonema	0.4				
Grammatophora					
Leptocylindrus		454			
Licmophora	1.2				2
Luticola					
Melosira	0.4	3			
Navicula 1	36.67	12	7	5.5	44

Navicula 2					
Sample No.	**#010**	**#020**	**#028**	**#032**	**#047**
Collected by	American Integrity	American Integrity	American Integrity	American Integrity	American Integrity
Date	1-December-2016	17-May-2017	4-July-17	7-August-2017	9-October-2017
		Average/mL			
Navicula 3					
Navicula 4					
Navicula 5					
Nitzschia	0.4	6	5	1	
Nitzschia 2					
Pinnularia	0.4				
Plagiogramma	0.44				
Pleurosigma	0.22				
Pseudonitzschia	0.16				
Rhizosolenia	0.22			1	
Skeletonema					
Surirella					
Synedra	0.8	3			
Tabellaria				4	4
Teleaulaxacuta					3
Thalassiosira				6	4
				9	
Green Algae					
Aulocaseira					
Chlamydomonas		1			52
Closterium					
Cosmarium					2
Cryptomonas		2		2	
Crucigenia				9	
Dinobyon	1.78		75	4	
Diploneis					
Dysmorphococcus					

Golenkinia			2	2	
Sample No.	**#010**	**#020**	**#028**	**#032**	**#047**
Collected by	American Integrity	American Integrity	American Integrity	American Integrity	American Integrity
Date	1-December-2016	17-May-2017	4-July-17	7-August-2017	9-October-2017
			Average/mL		
Gonium		2		10	
Kirchnereilla	0.22				
Lagerheimia					
Leptocylindrus					
Monoraphidium					
Nephroselmis					
Pandorina	6.4				
Paulinella					
Pediastrum			60	53	18
Phacus					
Psammodictyon					
Quadricoccus					8
Raphidiopsis					
Raphidophyte					2
Rhizoclonium					
Rhodomonas			1		
Scenedesmus	1.78		6	37	7.67
Scenedesmus 2					
Selenastrum					
Spirogyra*					
Staurastrum	0.4				
Synura					18
Teleaulaxacuta			75	2	12.33
Trachelomonas					
Treubaria					
Ulothrix				9	

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Sample No.	#010	#020	#028	#032	#047
Collected by	American Integrity	American Integrity	American Integrity	American Integrity	American Integrity
Date	1-December-2016	17-May-2017	4-July-17	7-August-2017	9-October-2017
		Average/mL			
Cyanobacteria					
Anabaena					
Anabaenopsis					
Aphanizomenon			40	1309	
Aphanocapsa			16	479	
Aphanothece					
Chroococcus			17	44	
Coelastrum					53
Coelosphaerium					
Cylindrospermopsis					
Merismopedia			194	439	
Microcystis				1918	
Oocystis			91	9	
Planktolyngbya					16
Pseudanabaena	11				
Dinoflagellates					
Ceratium hirundinella					
Glenodinium					
Gymnodinium					
Heterocapsa rotundata					
Karlodinium					
Peridinium					
Prorocentrum micans					
Prorocentrum Minimum					
Unidentified Dinoflagellates		4	3	3	6.33

Table S6. Microscopic Phytoplankton Counts from Ashtabula, Ohio.

Sample No.	**#034**	**#036**	**#044**	**#045**
Collected by	American Spirit	American Spirit	American Spirit	American Spirit
Date	14-August-2017	30-August-2017	27-September-2017	2-October-2017
		Average/mL		
Diatoms				
Achnanthes	5	1		38
Actinastrum				
Amphiprora				
Amphora	1	1		2
Ankistrodesmus	3	10	19	
Asterionella				
Chaetoceros				
Coconeis				
Coscinodiscus	1	2	2	
Cyclotella	11	23.33	261	38
Cymbella	2	3	4	3
Detonula	2		4	22
Diatoma				
Diploneis				
Eunotia				
Fragillaria 1	3.33	2	112	3
Fragillaria 2				
Fragillaria 3				
Frustulia				
Gomphonema				
Grammatophora				
Leptocylindrus	55.33	14.33		
Licmophora				

Luticola				
Melosira	5	2	15	
Navicula 1	11.67	16.5	47	44
Navicula 2				
Navicula 3				
Sample No.	**#034**	**#036**	**#044**	**#045**
Collected by	American Spirit	American Spirit	American Spirit	American Spirit
Date	14-August-2017	30-August-2017	27-September-2017	2-October-2017
		Average/mL		
Navicula 4				
Navicula 5				
Nitzschia	11.33	2	38	15
Nitzschia 2				
Pinnularia				
Plagiogramma				
Pleurosigma	1	1	1	
Pseudonitzschia				
Rhizosolenia				
Skeletonema	2	24		
Surirella				
Synedra	1	3		
Tabellaria	5.5			
Teleaulaxacuta				
Thalassiosira			106	1
Green Algae				
Aulocaseira	24	34	98	26.5
Chlamydomonas			11	30.5
Closterium	2			
Cosmarium		2	12	4
Cryptomonas	3.33	4.5	32	13
Crucigenia	2.5	3.5		
Dinobyon	5	2	51	16.5

Diploneis				
Dysmorphococcus				
Golenkinia				1
Gonium				
Kirchnereilla	1	2.5		2
Sample No.	**#034**	**#036**	**#044**	**#045**
Collected by	American Spirit	American Spirit	American Spirit	American Spirit
Date	14-August-2017	30-August-2017	27-September-2017	2-October-2017
		Average/mL		
Lagerheimia				
Leptocylindrus				
Mallomonas			9	
Monoraphidium			1	
Nephroselmis				
Pandorina			17	21
Paulinella				
Pediastrum	18	48		
Phacus				
Psammodictyon				
Pyrophacus			1	
Quadricoccus	8	20		
Raphidiopsis		2		
Raphidophyte			27	7
Rhizoclonium	1			
Rhodomonas				
Scenedesmus	6	14	135	30
Scenedesmus 2				
Selenastrum				
Spirogyra*				
Staurastrum		4		
Synura			24	
Tabellaria				4

Teleaulaxacuta	23.67	12	357	66.5
Trachelomonas				
Treubaria				
Ulothrix	10			
Sample No.	**#034**	**#036**	**#044**	**#045**
Collected by	American Spirit	American Spirit	American Spirit	American Spirit
Date	14-August-2017	30-August-2017	27-September-2017	2-October-2017
		Average/mL		
Cyanobacteria				
Anabaena			131	
Anabaenopsis				
Aphanizomenon			269	
Aphanocapsa	86		1905	662
Aphanothece	304		1	
Chroococcus	10.33		73	
Coelastrum			79	
Coelosphaerium				
Cylindrospermopsis				
Merismopedia			98	48
Micractinium			4	
Microcystis	312			
Oocystis			8	4
Planktolyngbya				
Pseudanabaena			286	3
Dinoflagellates				
Ceratium hirundinella	1		1	
Glenodinium				
Gymnodinium				
Heterocapsa rotundata				
Karlodinium				
Peridinium	4			2

Prorocentrum micans				
Prorocentrum Minimum			4	
Unidentified Dinoflagellates	7.33		25	1

Table S7. Microscopic Phytoplankton Counts in Ballast Water from Essexville Michigan, Two Harbors Minnesota and Superior Wisconsin.

Sample No.	**#022**	**#052**	**#053**
Collected by	American integrity	American Spirit	American Spirit
Location	Essexville, MI	Two Harbors	Superior, WI
Date	7-June-2017	23-October-2017	31-October-2017
		Average/mL	
Diatoms			
Achnanthes	13		12
Actinastrum			
Amphiprora			
Amphora			1
Ankistrodesmus	59		
Asterionella	41		
Chaetoceros			6
Coconeis			
Coscinodiscus	2		
Cyclotella	142	5	9.5
Cymbella	2	2	2
Detonula	41		9
Diatoma			
Diploneis	1		
Eunotia			
Fragillaria 1			20
Fragillaria 2			
Fragillaria 3			

Frustulia			
Gomphonema			
Grammatophora			
Sample No.	**#022**	**#052**	**#053**
Collected by	American integrity	American Spirit	American Spirit
Location	Essexville, MI	Two Harbors	Superior, WI
Date	7-June-2017	23-October-2017	31-October-2017
		Average/mL	
Leptocylindrus	21		4
Licmophora	1		2
Luticola			
Melosira			
Navicula 1	30	2	15
Navicula 2			
Navicula 3			
Navicula 4			
Navicula 5			
Nitzschia	12	1	4.5
Nitzschia 2			
Pinnularia			
Plagiogramma			
Pleurosigma	2		2
Pseudonitzschia			
Rhizosolenia			
Skeletonema			
Surirella	2		
Synedra	7		
Tabellaria	20		1
Teleaulaxacuta			
Thalassiosira			
Sample No.	**#022**	**#052**	**#053**
Collected by	American integrity	American Spirit	American Spirit

Location	Essexville, MI	Two Harbors	Superior, WI
Date	7-June-2017	23-October-2017	31-October-2017
		Average/mL	
Green Algae			
Aulocaseira	946		13.5
Chlamydomonas	4	3	
Closterium	2		
Cosmarium			
Cryptomonas	31	3	5
Crucigenia			
Dinobyon	4		
Diploneis			
Dysmorphococcus			
Golenkinia			
Gonium	7		
Kirchnereilla	7		
Lagerheimia	2		
Leptocylindrus			
Monoraphidium			
Nephroselmis			
Pandorina	9		9
Paulinella			
Pediastrum	12		
Phacus			
Psammodictyon			
Quadricoccus			8
Sample No.	**#022**	**#052**	**#053**
Collected by	American integrity	American Spirit	American Spirit
Location	Essexville, MI	Two Harbors	Superior, WI
Date	7-June-2017	23-October-2017	31-October-2017
		Average/mL	
Raphidiopsis			3

Raphidophyte			1
Rhizoclonium	6		2.5
Rhodomonas			
Scenedesmus	59	2	
Scenedesmus 2			
Selenastrum	1		
Spirogyra*	25		
Staurastrum	2		
Teleaulaxacuta	13	5	34.5
Trachelomonas	3		
Treubaria			
Ulothrix			
Cyanobacteria			
Anabaena	170		48
Anabaenopsis			
Aphanizomenon	616		17.5
Aphanocapsa			63
Aphanothece			
Chroococcus	4		
Sample No.	**#022**	**#052**	**#053**
Collected by	American integrity	American Spirit	American Spirit
Location	Essexville, MI	Two Harbors	Superior, WI
Date	7-June-2017	23-October-2017	31-October-2017
		Average/mL	
Coelastrum			
Coelosphaerium	7		
Cylindrospermopsis			
Leptolyngbya		3	6
Merismopedia	4		

Microcystis			
Oocystis	7		
Planktolyngbya			
Pseudanabaena	298	234	150
Dinoflagellates			
Ceratium hirundinella			
Glenodinium			
Gymnodinium			
Heterocapsa rotundata			1
Karlodinium			
Peridinium			
Prorocentrum micans			
Prorocentrum Minimum	1		1
Unidentified Dinoflagellates	25		2.5

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Supplementary Materials: B

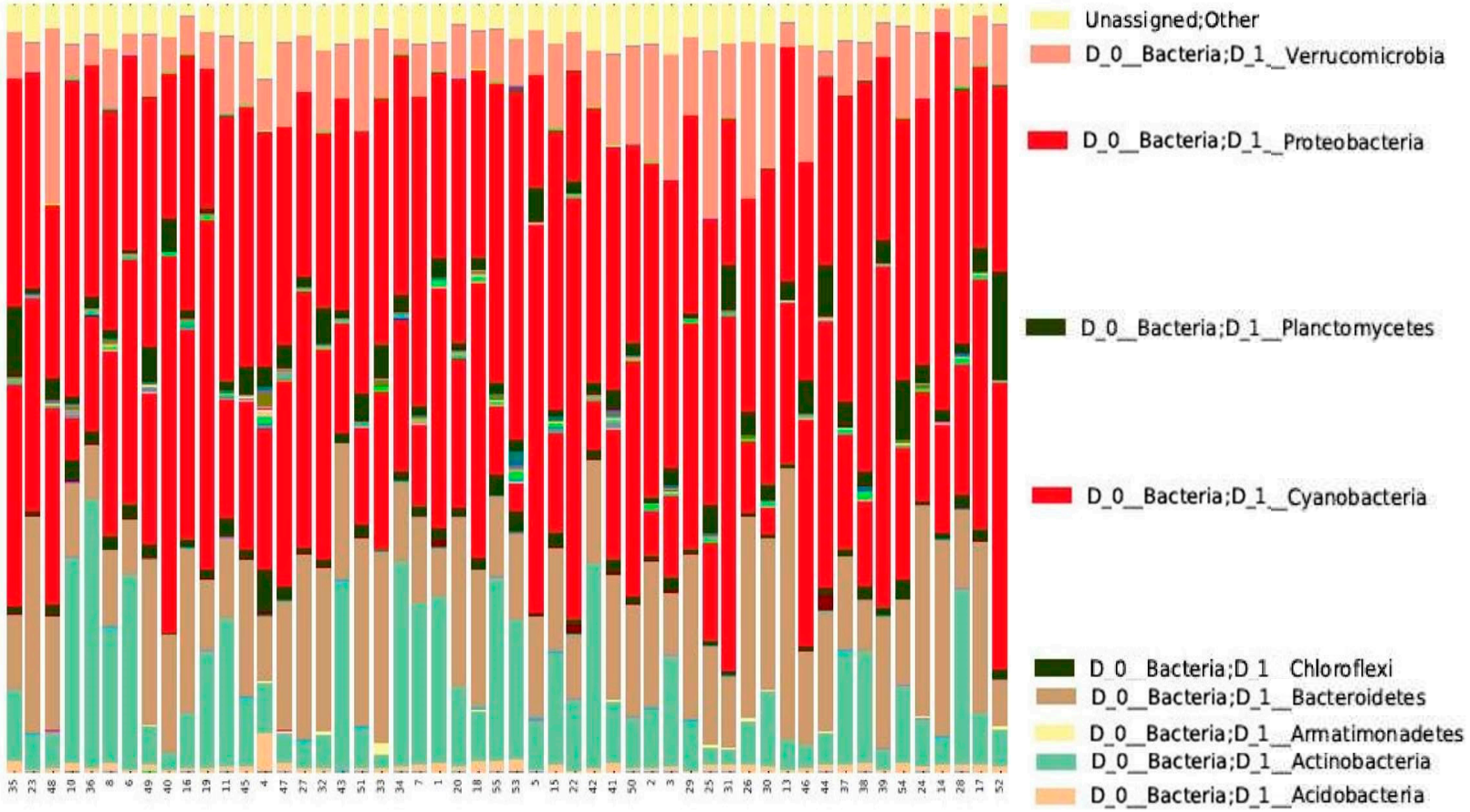

Figure S1. Alpha Diversity at Phylum Level. [Sample Number (1–55)].

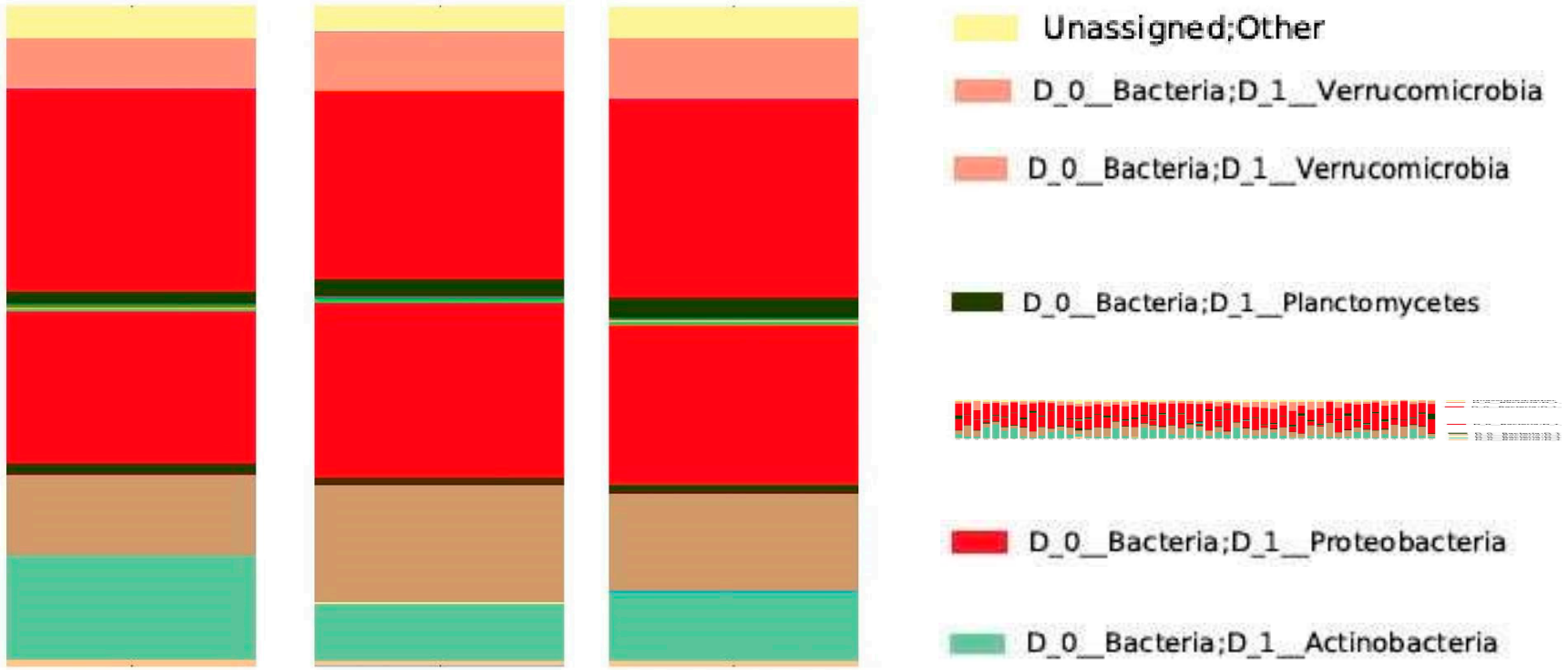

Figure S2. Alpha Diversity Categorized by Water Temperature at Phylum Level.

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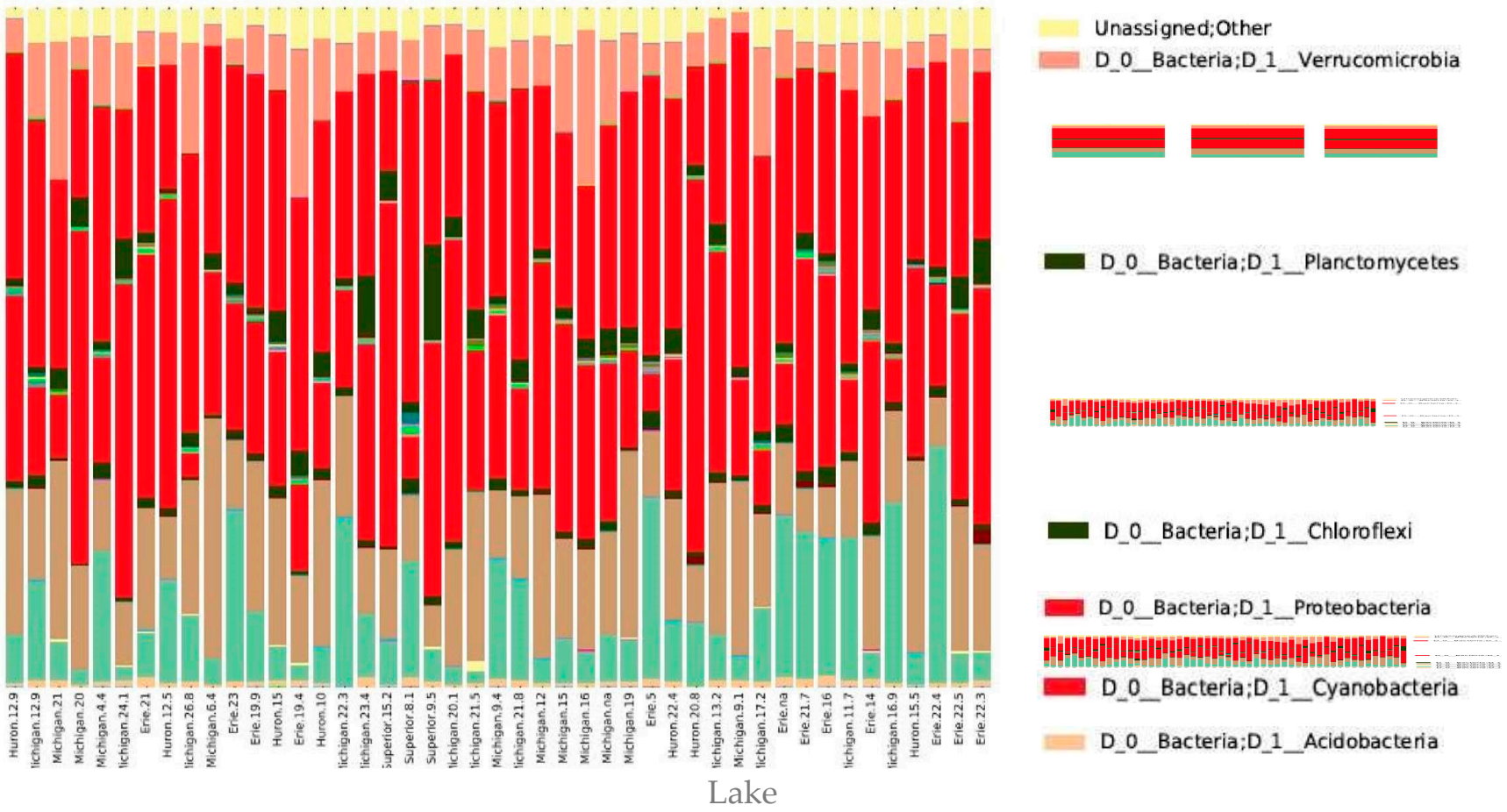

Figure S3. Alpha Diversity categorized by Lake at Phylum Level.

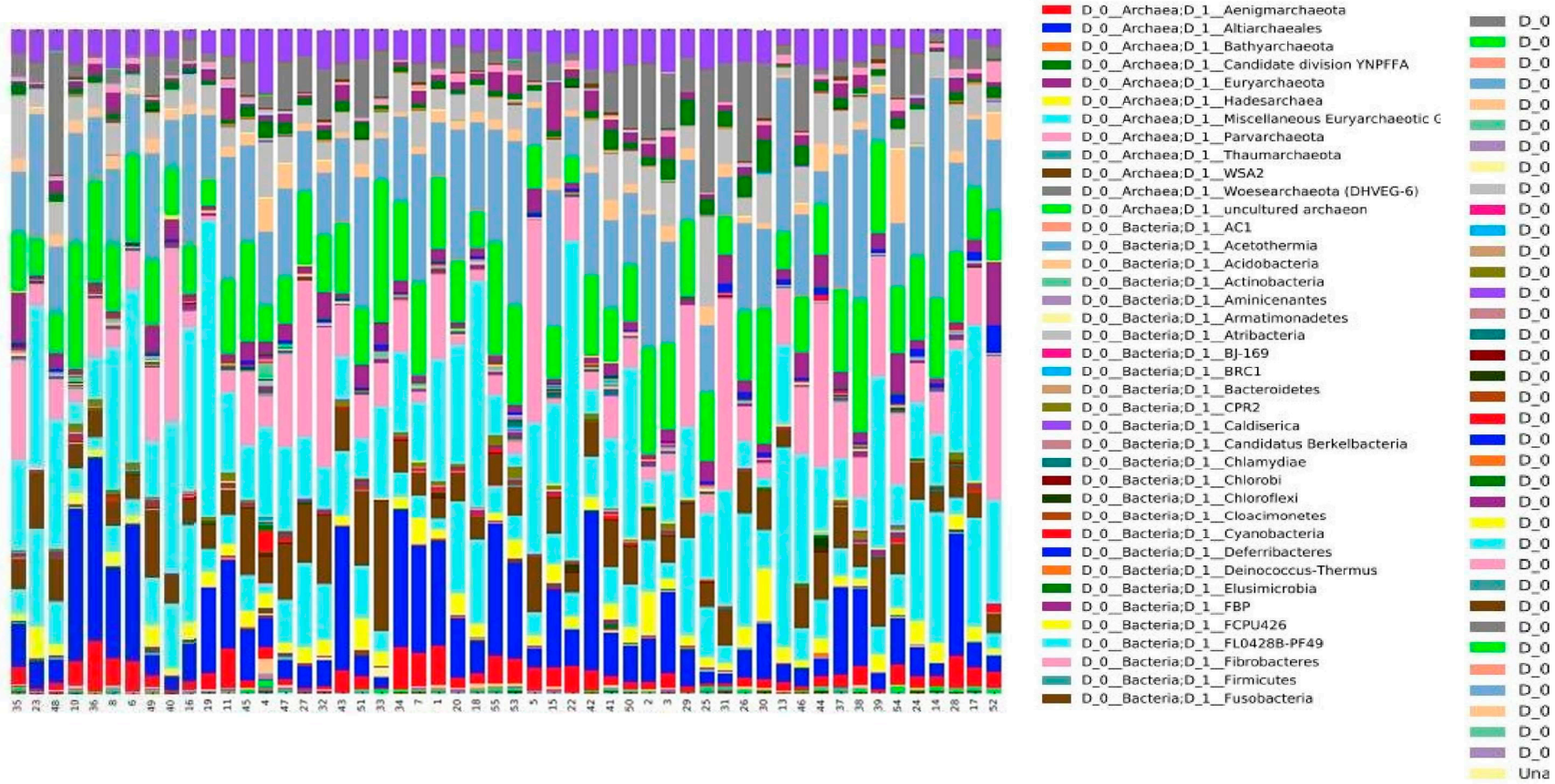

Figure S4. Alpha Diversity at Class Level.

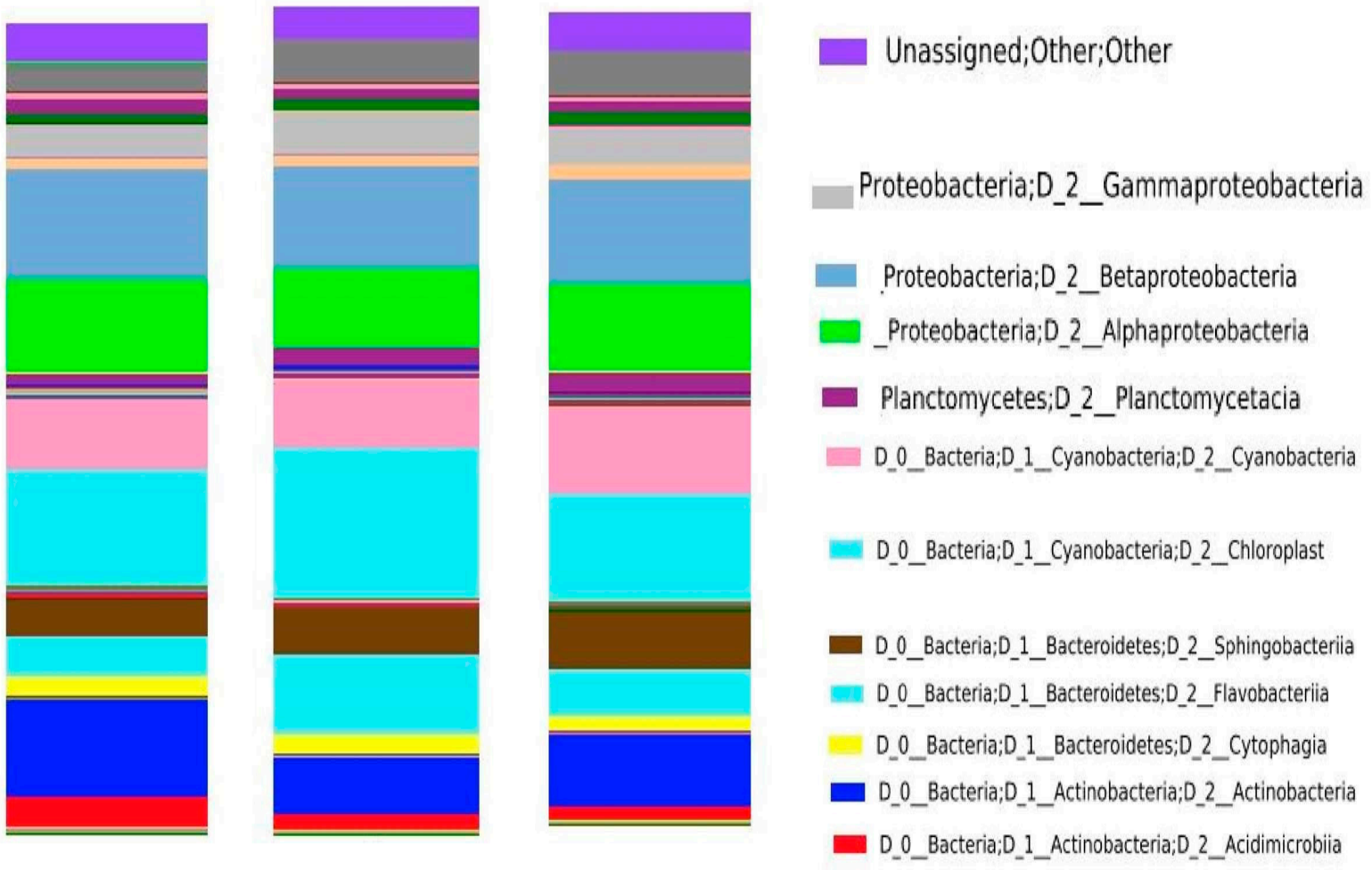

Figure S5. Alpha Diversity Categorized by Water Temperature at Class Level.

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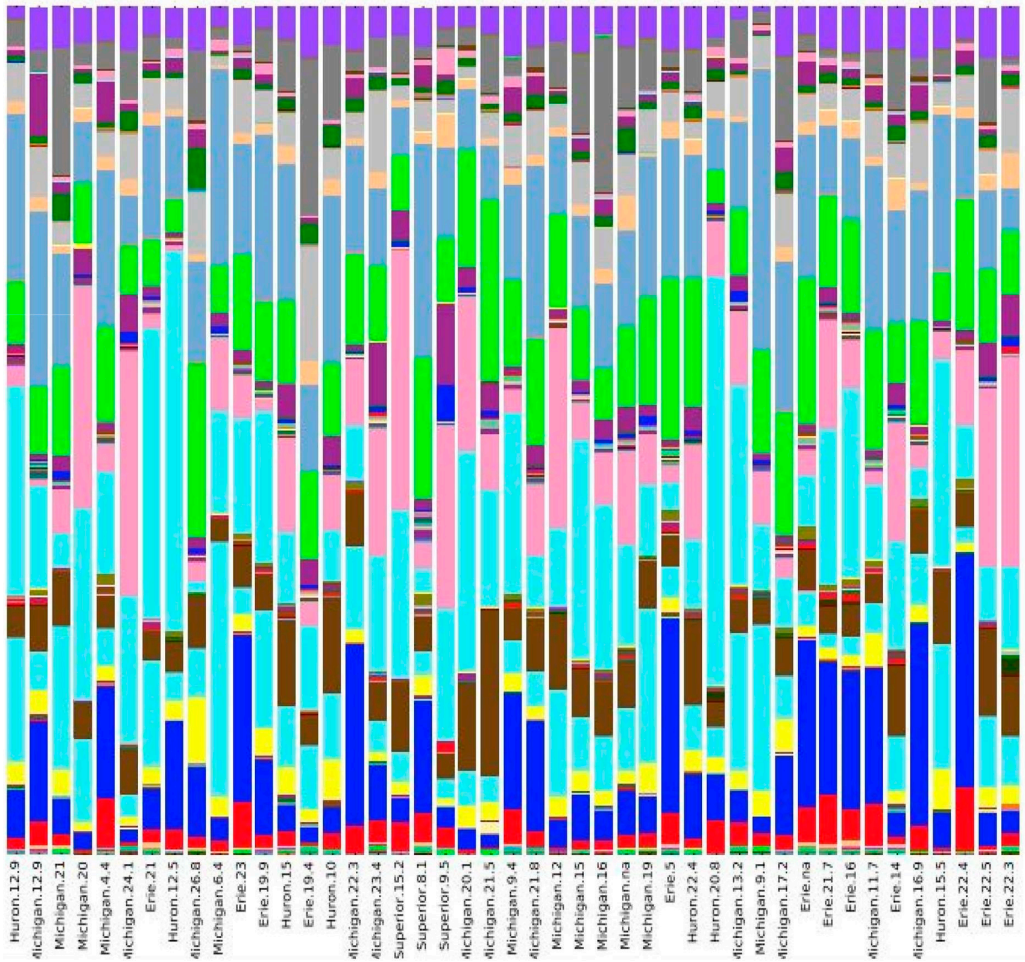

- D_0__Bacteria;D_1__Microgenomates;D_2__uncultured bacterium
- D_0__Bacteria;D_1__Nitrospinae;D_2__Belgica2005-10-ZG-3
- D_0__Bacteria;D_1__Nitrospinae;D_2__MD2898-B26
- D_0__Bacteria;D_1__Nitrospinae;D_2__Nitrospinia
- D_0__Bacteria;D_1__Nitrospinae;D_2__P9X2b7H09
- D_0__Bacteria;D_1__Nitrospirae;D_2__Nitrospira
- D_0__Bacteria;D_1__Omnitrophica;Ambiguous_taxa
- D_0__Bacteria;D_1__Omnitrophica;D_2__Omnitrophica Incertae Sedis
- D_0__Bacteria;D_1__Omnitrophica;D_2__uncultured Omnitrophica bacterium
- D_0__Bacteria;D_1__Omnitrophica;D_2__uncultured Verrucomicrobia bacterium
- D_0__Bacteria;D_1__Omnitrophica;D_2__uncultured bacterium
- D_0__Bacteria;D_1__Omnitrophica;Other
- D_0__Bacteria;D_1__PAUC34f;D_2__uncultured bacterium
- D_0__Bacteria;D_1__PAUC34f;Other
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Adlerbacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Azambacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Campbellbacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Falkowbacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Giovannonibacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Jorgensenbacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Kuenenbacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Magasanikbacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Moranbacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Nomurabacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Uhrbacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Wolfebacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Yanofskybacteria
- D_0__Bacteria;D_1__Parcubacteria;D_2__Candidatus Yanofskybacteria bacterium
- D_0__Bacteria;D_1__Parcubacteria;D_2__Parcubacteria group bacterium GW2011
- D_0__Bacteria;D_1__Parcubacteria;D_2__Parcubacteria group bacterium GW2011
- D_0__Bacteria;D_1__Parcubacteria;D_2__Parcubacteria group bacterium GW2011
- D_0__Bacteria;D_1__Parcubacteria;D_2__groundwater metagenome
- D_0__Bacteria;D_1__Parcubacteria;D_2__microbial mat metagenome
- D_0__Bacteria;D_1__Parcubacteria;D_2__uncultured Parcubacteria group bacteriu
- D_0__Bacteria;D_1__Parcubacteria;D_2__uncultured anaerobic bacterium
- D_0__Bacteria;D_1__Parcubacteria;D_2__uncultured bacterium
- D_0__Bacteria;D_1__Parcubacteria;D_2__uncultured deep-sea bacterium
- D_0__Bacteria;D_1__Parcubacteria;D_2__uncultured organism
- D_0__Bacteria;D_1__Parcubacteria;D_2__uncultured soil bacterium
- D_0__Bacteria;D_1__Parcubacteria;D_2__wastewater metagenome
- D_0__Bacteria;D_1__Parcubacteria;Other
- D_0__Bacteria;D_1__Peregrinibacteria;D_2__Candidatus Peribacteria
- D_0__Bacteria;D_1__Peregrinibacteria;D_2__groundwater metagenome
- D_0__Bacteria;D_1__Peregrinibacteria;D_2__uncultured bacterium
- D_0__Bacteria;D_1__Peregrinibacteria;D_2__uncultured organism
- D_0__Bacteria;D_1__Peregrinibacteria;Other
- D_0__Bacteria;D_1__Planctomycetes;D_2__028H05-P-BN-P5
- D_0__Bacteria;D_1__Planctomycetes;D_2__BD7-11
- D_0__Bacteria;D_1__Planctomycetes;D_2__OM190
- D_0__Bacteria;D_1__Planctomycetes;D_2__Phycisphaerae
- D_0__Bacteria;D_1__Planctomycetes;D_2__Pla3 lineage
- D_0__Bacteria;D_1__Planctomycetes;D_2__Pla4 lineage
- D_0__Bacteria;D_1__Planctomycetes;D_2__Planctomycetacia
- D_0__Bacteria;D_1__Planctomycetes;D_2__vadinHA49

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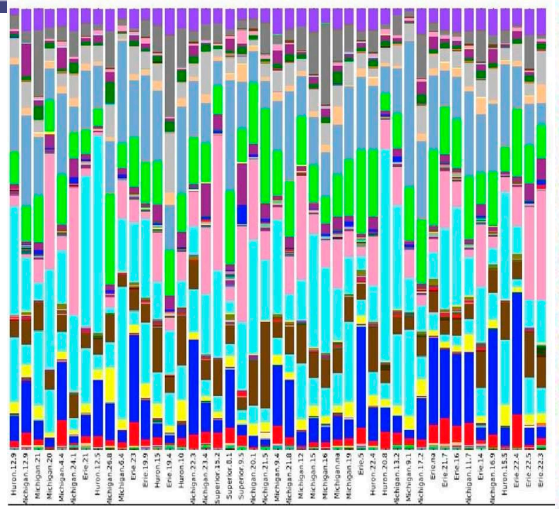

D_0__Bacteria;D_1__Verrucomicrobia;D_2__R76-B128
D_0__Bacteria;D_1__Verrucomicrobia;D_2__S-BQ2-57 soil group
D_0__Bacteria;D_1__Verrucomicrobia;D_2__Spartobacteria
D_0__Bacteria;D_1__Verrucomicrobia;D_2__UA11
D_0__Bacteria;D_1__Verrucomicrobia;D_2__Verrucomicrobia Incertae Sedis
D_0__Bacteria;D_1__Verrucomicrobia;D_2__Verrucomicrobiae
D_0__Bacteria;D_1__Verrucomicrobia;D_2__WCHB1-41
D_0__Bacteria;D_1__Verrucomicrobia;Other
D_0__Bacteria;D_1__WS2;D_2__bacterium enrichment culture clone Anammox_3
D_0__Bacteria;D_1__WS2;D_2__uncultured bacterium
D_0__Bacteria;D_1__WS2;D_2__uncultured prokaryote
D_0__Bacteria;D_1__WS2;Other
D_0__Bacteria;D_1__WS6;D_2__uncultured bacterium
D_0__Bacteria;D_1__WWE3;Ambiguous_taxa
D_0__Bacteria;D_1__WWE3;D_2__uncultured bacterium
D_0__Bacteria;D_1__WWE3;D_2__uncultured candidate division WWE3 bacterium
D_0__Bacteria;D_1__WWE3;Other
D_0__Bacteria;Other;Other
Unassigned;Other;Other

D_0__Bacteria;D_1__Elusimicrobia;D_2__Elusimicrobia
D_0__Bacteria;D_1__FBP;D_2__uncultured bacterium
D_0__Bacteria;D_1__FBP;D_2__uncultured soil bacterium
D_0__Bacteria;D_1__FCPU426;D_2__uncultured bacterium
D_0__Bacteria;D_1__FCPU426;D_2__uncultured microorganism
D_0__Bacteria;D_1__FCPU426;D_2__uncultured prokaryote
D_0__Bacteria;D_1__FL0428B-PF49;D_2__uncultured bacterium
D_0__Bacteria;D_1__Fibrobacteres;D_2__Chitinivibrionia
D_0__Bacteria;D_1__Fibrobacteres;D_2__Fibrobacteria
D_0__Bacteria;D_1__Firmicutes;D_2__BSA1B-03
D_0__Bacteria;D_1__Firmicutes;D_2__Bacilli
D_0__Bacteria;D_1__Firmicutes;D_2__Clostridia
D_0__Bacteria;D_1__Firmicutes;D_2__Erysipelotrichia
D_0__Bacteria;D_1__Firmicutes;D_2__Limnochordia
D_0__Bacteria;D_1__Firmicutes;D_2__Negativicutes
D_0__Bacteria;D_1__Firmicutes;Other
D_0__Bacteria;D_1__Fusobacteria;D_2__Fusobacteriia
D_0__Bacteria;D_1__GAL15;D_2__uncultured bacterium
D_0__Bacteria;D_1__Gemmatimonadetes;D_2__BD2-11 terrestrial group
D_0__Bacteria;D_1__Gemmatimonadetes;D_2__Gemmatimonadetes
D_0__Bacteria;D_1__Gemmatimonadetes;D_2__Longimicrobia
D_0__Bacteria;D_1__Gemmatimonadetes;D_2__MD2902-B12
D_0__Bacteria;D_1__Gemmatimonadetes;D_2__S0134 terrestrial group
D_0__Bacteria;D_1__Gracilibacteria;Ambiguous_taxa
D_0__Bacteria;D_1__Gracilibacteria;D_2__uncultured Epsilonproteobacteria bacterium
D_0__Bacteria;D_1__Gracilibacteria;D_2__uncultured Microgenomates group bacterium
D_0__Bacteria;D_1__Gracilibacteria;D_2__uncultured bacterium
D_0__Bacteria;D_1__Gracilibacteria;D_2__uncultured organism
D_0__Bacteria;D_1__Gracilibacteria;Other
D_0__Bacteria;D_1__Hydrogenedentes;Ambiguous_taxa
D_0__Bacteria;D_1__Hydrogenedentes;D_2__uncultured bacterium
D_0__Bacteria;D_1__Hydrogenedentes;D_2__uncultured organism
D_0__Bacteria;D_1__Hydrogenedentes;Other
D_0__Bacteria;D_1__Ignavibacteriae;D_2__Ignavibacteria
D_0__Bacteria;D_1__KSB3 (Modulibacteria);D_2__uncultured bacterium
D_0__Bacteria;D_1__KSB3 (Modulibacteria);D_2__uncultured organism
D_0__Bacteria;D_1__KSB3 (Modulibacteria);Other
D_0__Bacteria;D_1__LCP-89;D_2__uncultured bacterium
D_0__Bacteria;D_1__Latescibacteria;Ambiguous_taxa
D_0__Bacteria;D_1__Latescibacteria;D_2__Latescibacteria Incertae Sedis
D_0__Bacteria;D_1__Latescibacteria;D_2__uncultured Latescibacteria bacterium
D_0__Bacteria;D_1__Latescibacteria;D_2__uncultured Pelobacter sp.
D_0__Bacteria;D_1__Latescibacteria;D_2__uncultured bacterium
D_0__Bacteria;D_1__Latescibacteria;D_2__uncultured prokaryote
D_0__Bacteria;D_1__Latescibacteria;D_2__uncultured soil bacterium PBS-III-30
D_0__Bacteria;D_1__Latescibacteria;Other
D_0__Bacteria;D_1__Lentisphaerae;D_2__Lentisphaeria
D_0__Bacteria;D_1__Lentisphaerae;D_2__Oligosphaeria
D_0__Bacteria;D_1__MD2896-B216;D_2__uncultured bacterium
D_0__Bacteria;D_1__Microgenomates;D_2__Candidatus Amesbacteria
D_0__Bacteria;D_1__Microgenomates;D_2__Candidatus Collierbacteria
D_0__Bacteria;D_1__Microgenomates;D_2__Candidatus Levybacteria
D_0__Bacteria;D_1__Microgenomates;D_2__Candidatus Pacebacteria
D_0__Bacteria;D_1__Microgenomates;D_2__Candidatus Woesebacteria

Bacteria;D_1__Acidobacteria;D_2__Subgroup 26
Bacteria;D_1__Acidobacteria;D_2__Subgroup 5
Bacteria;D_1__Acidobacteria;D_2__Subgroup 6
Bacteria;D_1__Acidobacteria;D_2__Subgroup 9
Bacteria;D_1__Acidobacteria;D_2__c5LKS83
Bacteria;D_1__Acidobacteria;Other
Bacteria;D_1__Actinobacteria;D_2__Acidimicrobiia
Bacteria;D_1__Actinobacteria;D_2__Actinobacteria
Bacteria;D_1__Actinobacteria;D_2__Coriobacteriia
Bacteria;D_1__Actinobacteria;D_2__FFCH16263
Bacteria;D_1__Actinobacteria;D_2__MB-A2-108
Bacteria;D_1__Actinobacteria;D_2__Nitriliruptoria
Bacteria;D_1__Actinobacteria;D_2__OPB41
Bacteria;D_1__Actinobacteria;D_2__Rubrobacteria
Bacteria;D_1__Actinobacteria;D_2__TakashiAC-B11
Bacteria;D_1__Actinobacteria;D_2__Thermoleophilia
Bacteria;D_1__Actinobacteria;Other
Bacteria;D_1__Aminicenantes;Ambiguous_taxa
Bacteria;D_1__Aminicenantes;D_2__uncultured bacterium
Bacteria;D_1__Aminicenantes;D_2__uncultured soil bacterium
Bacteria;D_1__Aminicenantes;Other
Bacteria;D_1__Armatimonadetes;D_2__Armatimonadia
Bacteria;D_1__Armatimonadetes;D_2__Chthonomonadetes
Bacteria;D_1__Armatimonadetes;D_2__Fimbriimonadia
Bacteria;D_1__Armatimonadetes;D_2__uncultured
Bacteria;D_1__Atribacteria;D_2__Atribacteria Incertae Sedis
Bacteria;D_1__Atribacteria;D_2__uncultured bacterium
Bacteria;D_1__BJ-169;D_2__uncultured bacterium
Bacteria;D_1__BRC1;D_2__soil bacterium WWH121
Bacteria;D_1__BRC1;D_2__uncultured Flaviramulus sp.
Bacteria;D_1__BRC1;D_2__uncultured bacterium
Bacteria;D_1__BRC1;D_2__uncultured organism
Bacteria;D_1__BRC1;D_2__uncultured soil bacterium PBS-III-18
Bacteria;D_1__BRC1;D_2__uncultured soil bacterium PBS-III-4
Bacteria;D_1__BRC1;Other
Bacteria;D_1__Bacteroidetes;D_2__Bacteroidetes BD2-2
Bacteria;D_1__Bacteroidetes;D_2__Bacteroidetes Incertae Sedis
Bacteria;D_1__Bacteroidetes;D_2__Bacteroidetes VC2.1 Bac22
Bacteria;D_1__Bacteroidetes;D_2__Bacteroidetes vadinHA17
Bacteria;D_1__Bacteroidetes;D_2__Bacteroidia
Bacteria;D_1__Bacteroidetes;D_2__Cytophagia
Bacteria;D_1__Bacteroidetes;D_2__Flavobacteriia
Bacteria;D_1__Bacteroidetes;D_2__SB-5
Bacteria;D_1__Bacteroidetes;D_2__SM1A07
Bacteria;D_1__Bacteroidetes;D_2__Sphingobacteriia
Bacteria;D_1__Bacteroidetes;D_2__WCHB1-32
Bacteria;D_1__Bacteroidetes;D_2__microbial mat metagenome
Bacteria;D_1__Bacteroidetes;Other
Bacteria;D_1__CPR2;D_2__uncultured Clostridium sp.
Bacteria;D_1__CPR2;D_2__uncultured bacterium
Bacteria;D_1__CPR2;D_2__uncultured eubacterium WCHB1-60
Bacteria;D_1__CPR2;D_2__uncultured microorganism
Bacteria;D_1__CPR2;Other
Bacteria;D_1__Caldiserica;D_2__Caldisericia
Bacteria;D_1__Candidatus Berkelbacteria;Ambiguous_taxa

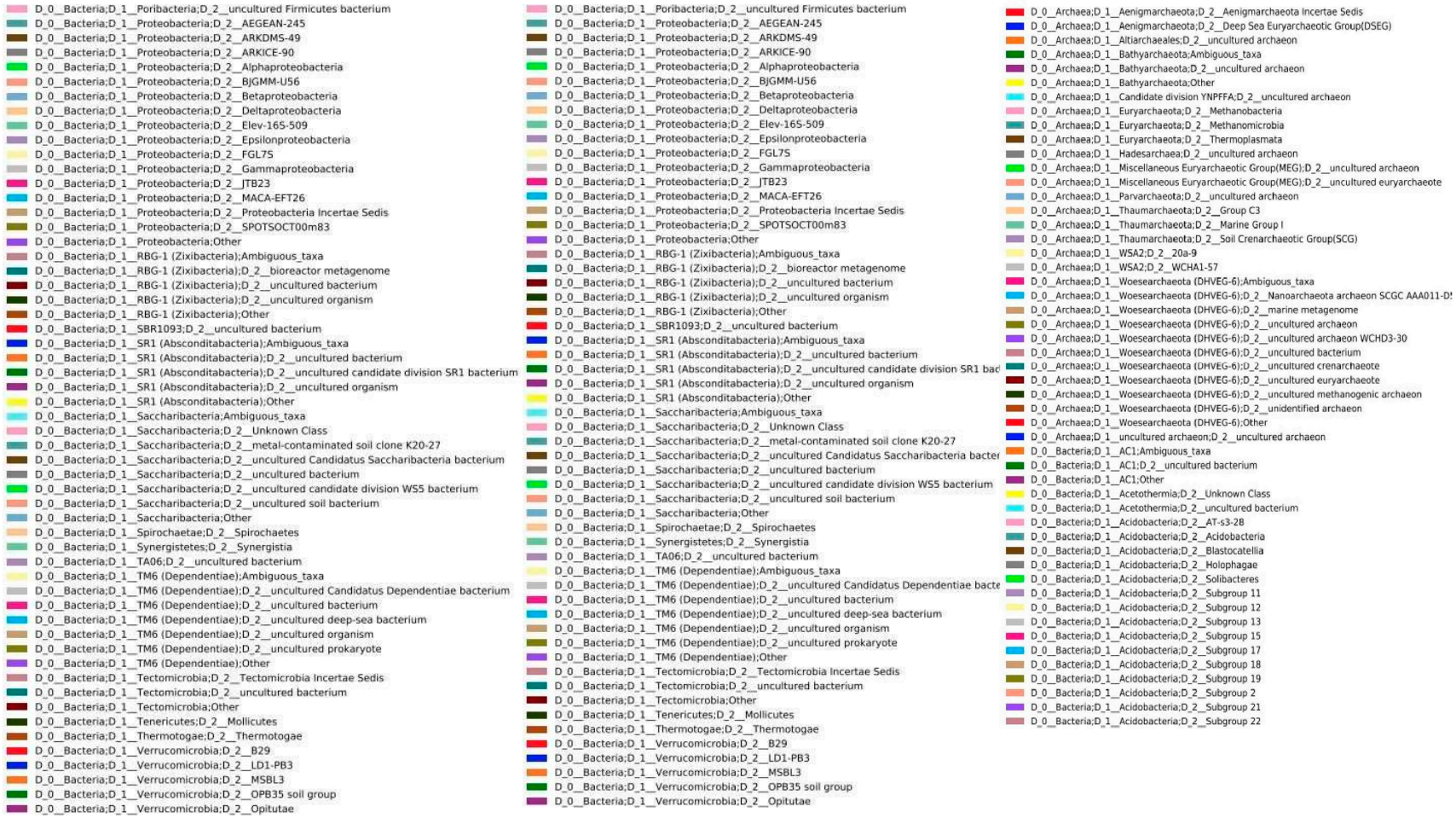

Figure S6. Diversity Categorized by Lake at Class Level.

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