

Harmful Algae Report

All data between 8/11/2017 and 9/1/2017

University of Delaware Citizen Monitoring Program

Water Body Tributary Site	Date	Time	Sample Depth	Name	Comment if ID uncertain	Abundance	MC/L
Atlantic Ocean							
RWPM14: Tower Rd Ocean, Delaware Seashore State Park							
	8/16/2017	10:20	Surfc	"Gymnodinioid" sp. (S)	25-40 um Grn	Present	
				<i>Chaetoceros</i> spp. (T)		Present	
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Karenia papilionacea</i> (T)		Rare	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Kryptoperidinium foliaceum</i> (B)		Rare	
				<i>Prorocentrum triestinum</i> (B)		Present	
				<i>Rhizosolenia</i> spp. (T)		Rare	
	8/24/2017	10:15		"Gymnodinioid" sp. (S)	10-15 um Grn	Present	
				<i>Heterocapsa rotundata</i> (B)		Common	0.100
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Prorocentrum triestinum</i> (B)		Present	
				<i>Scrippsiella</i> sp. (B)		Rare	
	8/31/2017	9:50		"Gymnodinioid" sp. (S)	10-15 um Grn	Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Prorocentrum triestinum</i> (B)		Present	
Broadkill River							
<u>Broadkill River</u>							
BR01: Broadkill river @ PEL dock.							
	8/16/2017	8:50	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
		8:51	Net	<i>Chaetoceros</i> spp. (T)			
				<i>Karlodinium veneficum</i> (T)			
	8/23/2017	10:09	Surfc	"Gymnodinioid" sp. (S)	25-40 um Grn	Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Prorocentrum triestinum</i> (B)		Present	
		10:13	Net	<i>Akashiwo sanguinea</i> (T)			
				<i>Chaetoceros</i> spp. (T)			
				<i>Heterocapsa rotundata</i> (B)			
				<i>Karlodinium veneficum</i> (T)			
				<i>Rhizosolenia</i> spp. (T)			
	8/30/2017	9:50	Surfc	<i>Heterocapsa lanceolata</i> (B)		Present	
		9:51	Net	"Gymnodinioid" sp. (S)	25-40 um Grn		
				<i>Akashiwo sanguinea</i> (T)			
				<i>Fibrocapsa japonica</i> (T)			
				<i>Karlodinium veneficum</i> (T)			
				<i>Rhizosolenia</i> spp. (T)			
BR20: Broadkill River at Milton tidal pond							
	8/23/2017	6:30	Surfc		No HABs found		
<u>Diamond Pond</u>							
BR48: Diamond Pond at Spillway							
	8/23/2017	7:15	Surfc		No HABs found		

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Abundance Levels: Not Found: Looked for, but no cells found; Very Rare: < 0.001 MC/L; Rare 0.001 - 0.01 MC/L; Present: 0.01 - 0.1 MC/L; Common: 0.1 - 1 MC/L; Many: 1 - 10 MC/L; Abundant: 10 - 100 MC/L; Very Abundant: > 100 MC/L.

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Water Body Tributary Site	Date	Time	Sample Depth	Name	Comment if ID uncertain	Abundance	MC/L
Broadkill River							
<u>Old Mill Creek</u>							
BR21: Old Mill Creek downstream from Red Mill Pond							
	8/23/2017	10:07	Surfc	<i>Aphanizomenon spp. (T)</i>		Common	0.250
				<i>Kryptoperidinium foliaceum (B)</i>		Present	
				<i>Microcystis spp. (T)</i>		Many	9.000
<u>Red Mill Pond</u>							
BR54: Red Mill Pond outlet at Rt 1							
	8/23/2017	11:09	Surfc	<i>(Unknown) (B*)</i>	Thin cyano straight	Abundant	57.200
				<i>Aphanizomenon spp. (T)</i>		Many	1.000
				<i>Microcystis spp. (T)</i>		Very Abundant	103.400
Delaware Bay							
<u>Canary Creek</u>							
BR19: Canary Creek at New Road							
	8/22/2017	9:15	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
				<i>Microcystis spp. (T)</i>		Many	1.250
				<i>Protoperdinium quinquecorne (B)</i>		Present	
BR40: Canary Creek at Pilottown Rd							
	8/22/2017	6:40	Surfc		No HABs found		
<u>Delaware Bay</u>							
DB01: End of Cape Shores pier							
	8/15/2017	8:50	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	
				<i>Heterocapsa rotundata (B)</i>		Present	
				<i>Protoperdinium quinquecorne (B)</i>		Present	
	8/23/2017	8:51		<i>Heterocapsa rotundata (B)</i>		Common	0.113
				<i>Prorocentrum triestinum (B)</i>		Present	
				<i>Rhizosolenia spp. (T)</i>		Present	
	9/1/2017	8:50		<i>Heterocapsa lanceolata (B)</i>		Present	
				<i>Heterocapsa rotundata (B)</i>		Present	
				<i>Karlodinium veneficum (T)</i>		Present	
				<i>Prorocentrum triestinum (B)</i>		Present	
				<i>Rhizosolenia spp. (T)</i>		Present	
Indian River							
<u>Indian River</u>							
IR02a: Rosedale crabbing pier							
	8/22/2017	11:01	Surfc	<i>Akashiwo sanguinea (T)</i>		Common	0.250
				<i>Gyrodinium instriatum (B)</i>		Many	1.200
				<i>Heterosigma akashiwo (T)</i>		Common	0.100
IR11: Pot Nets Seaside Pier							
	8/21/2017	10:40	Surfc	<i>Heterocapsa lanceolata (B)</i>		Present	
				<i>Karlodinium veneficum (T)</i>		Present	
				<i>Prorocentrum triestinum (B)</i>		Present	
				<i>Scrippsiella sp. (B)</i>		Present	
IR24: Iron Branch - County road 331 at bridge							
	8/22/2017	10:35	Surfc	<i>Gyrodinium instriatum (B)</i>		Many	3.080
				<i>Heterosigma akashiwo (T)</i>		Present	
				<i>Karlodinium veneficum (T)</i>		Common	0.100
IR36: James Farm, base of Pasture Point Knee deep 150 yds from shore							
	8/22/2017	7:35	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	

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Indian River							
<u>Pepper Creek</u>							
IR33: Pepper Creek marina							
	8/24/2017	13:25	Surfc	<i>Akashiwo sanguinea</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Many	5.670
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Scrippsiella</i> sp. (B)		Present	
IR35: Pepper Creek at Rd 330.							
	8/24/2017	13:45	Surfc	<i>Gyrodinium instriatum</i> (B)		Many	3.960
IR51: Pepper Creek, Creekside							
	8/22/2017	7:30	Surfc	<i>Gyrodinium instriatum</i> (B)		Many	9.240
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
<u>Vines Creek</u>							
IR38: Vines Lane							
	8/22/2017	9:49	Surfc	<i>Gyrodinium instriatum</i> (B)		Common	0.800
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Prorocentrum triestinum</i> (B)		Present	
<u>White Creek</u>							
IR32: Holly Terrace Acres Canal Dead End, White Creek							
	8/14/2017	8:30	Surfc	<i>Gyrodinium instriatum</i> (B)		Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
	8/21/2017	9:15		<i>Chloromorun toxicum</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Many	5.280
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Kryptoperidinium foliaceum</i> (B)		Many	1.980
				<i>Prorocentrum minimum</i> (T)		Present	
				<i>Scrippsiella</i> sp. (B)		Common	0.238
	8/28/2017	8:38		<i>Akashiwo sanguinea</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Many	5.940
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Peridinium</i> sp. (B)	25um flat green	Present	
				<i>Protoperidinium quinquecorne</i> (B)		Present	
				<i>Scrippsiella</i> sp. (B)		Common	0.163
Little Assawoman Bay							
<u>Dirickson Creek</u>							
LA03: Mulberry Landing							
	8/21/2017	7:07	Surfc	<i>Chaetoceros</i> spp. (T)		Common	0.225
				<i>Chloromorun toxicum</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Common	0.200
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Protoperidinium quinquecorne</i> (B)		Present	
				<i>Scrippsiella</i> sp. (B)		Present	
LA09: Dirickson Creek at Road 381 bridge.							
	8/21/2017	7:43	Surfc	(Unknown) sp. (B*)	5-10 um Obl/Grn	Abundant	35.200
				<i>Kryptoperidinium foliaceum</i> (B)		Many	1.100
<u>Jefferson Creek</u>							
SB10E: Russell Canal east dead end							

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Little Assawoman Bay							
<u>Jefferson Creek</u>							
SB10E: Russell Canal east dead end							
	8/15/2017	7:16	Surfc	"Gymnodinioid" sp. (S)	10-15 um Grn	Present	
				<i>Chattonella subsalsa</i> (T)		Present	
				<i>Chloromorom toxicum</i> (T)		Common	0.875
				<i>Heterosigma akashiwo</i> (T)		Common	0.100
				<i>Karlodinium veneficum</i> (T)		Present	
	8/22/2017	7:56		<i>Chattonella subsalsa</i> (T)		Many	1.140
				<i>Chloromorom toxicum</i> (T)		Many	1.390
				<i>Gyrodinium instriatum</i> (B)		Common	0.163
				<i>Karlodinium veneficum</i> (T)		Common	0.175
				<i>Protoperidinium quinquecorne</i> (B)		Present	
	8/29/2017	7:44		<i>Chattonella subsalsa</i> (T)		Many	3.960
				<i>Chloromorom toxicum</i> (T)		Common	0.515
				<i>Gyrodinium instriatum</i> (B)		Many	1.320
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
SB10W: Russell Canal west dead end							
	8/15/2017	7:09	Surfc	<i>Chattonella subsalsa</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
	8/22/2017	8:13		<i>Chattonella subsalsa</i> (T)		Present	
				<i>Chloromorom toxicum</i> (T)		Common	0.175
				<i>Gyrodinium instriatum</i> (B)		Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Karlodinium veneficum</i> (T)		Common	0.100
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Protoperidinium quinquecorne</i> (B)		Present	
	8/29/2017	7:49		<i>Chattonella subsalsa</i> (T)		Present	
				<i>Chloromorom toxicum</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Present	
<u>Little Assawoman Bay</u>							
LA46: Fenwick Island Tide Gauge							
	8/22/2017	10:17	Surfc	<i>Chloromorom toxicum</i> (T)		Common	0.175
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Karlodinium veneficum</i> (T)		Common	0.100
				<i>Prorocentrum triestinum</i> (B)		Present	
Rehoboth Bay							
<u>Bald Eagle Creek</u>							
RB64: Torquay Canal, west side of Land's End near UD Site #1							
	8/14/2017	10:17	Surfc	<i>Chattonella subsalsa</i> (T)		Abundant	14.520
				<i>Fibrocapsa japonica</i> (T)		Common	0.175
				<i>Gyrodinium instriatum</i> (B)		Many	1.980
				<i>Heterosigma akashiwo</i> (T)		Common	0.622
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Peridinium</i> sp. (B)	25um flat green	Present	
				<i>Protoperidinium quinquecorne</i> (B)		Present	

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Water Body	Date	Time	Sample	Name	Comment if	Abundance	MC/L
<u>Tributary</u>			<u>Depth</u>		<u>ID uncertain</u>		
<u>Site</u>							
Rehoboth Bay							
<u>Bald Eagle Creek</u>							
RB64: Torquay Canal, west side of Land's End near UD Site #1							
	8/14/2017	10:17	Surfc	<i>Scrippsiella sp. (B)</i>		Present	
	8/21/2017	10:48		<i>Chattonella subsalsa (T)</i>		Present	
				<i>Fibrocapsa japonica (T)</i>		Present	
				<i>Gyrodinium instriatum (B)</i>		Present	
				<i>Karlodinium veneficum (T)</i>		Present	
				<i>Kryptoperidinium foliaceum (B)</i>		Present	
	8/28/2017	13:30		<i>Chattonella subsalsa (T)</i>		Common	0.150
				<i>Chloromorom toxicum (T)</i>		Common	0.163
				<i>Fibrocapsa japonica (T)</i>		Present	
				<i>Gyrodinium instriatum (B)</i>		Common	0.125
				<i>Heterocapsa rotundata (B)</i>		Present	
				<i>Heterosigma akashiwo (T)</i>		Present	
				<i>Karlodinium veneficum (T)</i>		Common	0.100
				<i>Kryptoperidinium foliaceum (B)</i>		Present	
				<i>Prorocentrum triestinum (B)</i>		Present	
				<i>Scrippsiella sp. (B)</i>		Present	
<u>Guinea Creek</u>							
RB06: Guinea Creek (Winding Creek Village)							
	8/21/2017	7:40	Surfc	"Gymnodinioid" sp. (S)	10-15 um Grn	Present	
				(Unknown) sp. (B*)	5-10 um Obl/Grn	Abundant	48.400
				<i>Gyrodinium instriatum (B)</i>		Common	0.150
				<i>Heterocapsa rotundata (B)</i>		Present	
				<i>Karlodinium veneficum (T)</i>		Common	0.100
<u>Love Creek</u>							
RB34: Love Creek at Rt 24 Bridge							
	8/21/2017	10:24	Surfc	<i>Chattonella subsalsa (T)</i>		Present	
				<i>Chloromorom toxicum (T)</i>		Common	0.200
				<i>Gyrodinium instriatum (B)</i>		Present	
				<i>Heterocapsa lanceolata (B)</i>		Present	
				<i>Heterocapsa rotundata (B)</i>		Present	
				<i>Heterosigma akashiwo (T)</i>		Common	0.100
				<i>Karlodinium veneficum (T)</i>		Common	0.125
				<i>Kryptoperidinium foliaceum (B)</i>		Present	
RB80: Upper Love Creek at Webb Landing							
	8/21/2017	10:02	Surfc	(Unknown) sp. (B*)	5-10 um Obl/Grn	Abundant	26.400
				<i>Chloromorom toxicum (T)</i>		Common	0.125
				<i>Gyrodinium instriatum (B)</i>		Present	
				<i>Heterosigma akashiwo (T)</i>		Common	0.150
				<i>Karlodinium veneficum (T)</i>		Common	0.150
Rehoboth Beach							
<u>Lake Gerar</u>							
RL10: Lake Gerar bridge							
	8/21/2017	7:02	Surfc	<i>Anabaena spp. (T)</i>		Many	1.125
				<i>Aphanizomenon spp. (T)</i>		Abundant	52.800
				<i>Scenedesmus sp. (B*)</i>		Abundant	13.640
<u>Silver Lake</u>							

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Water Body	Date	Time	Sample Name	Comment if ID uncertain	Abundance	MC/L
<u>Tributary</u> Site			Depth			

Rehoboth Beach

Silver Lake

RL01: Silver Lake, Lake Drive Bridge

8/21/2017	7:30	Surfc	(Unknown) (B*)	Thin cyano coiled	Abundant	66.000
			(Unknown) (B*)	Thin cyano straight	Very Abundant	123.200
			<i>Aphanizomenon spp. (T)</i>		Very Abundant	118.800
			<i>Cylindrospermopsis (T)</i>		Abundant	26.400

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