

# Harmful Algae Report

All data between 7/23/2015 and 8/6/2015

University of Delaware Citizen Monitoring Program

Water Body Tributary Site	Date	Time	Sample Depth	Name	Comment if ID uncertain	Abundance	MC/L
<b>Atlantic Ocean</b>							
RWPM14: Tower Rd Ocean, Delaware Seashore State Park							
	8/5/2015	8:15	Surfc	<i>Ceratium pentagonum (B)</i>		Very Rare	
				<i>Chaetoceros spp. (B)</i>		Rare	0.006
				<i>Dinophysis norvegica (T)</i>		Very Rare	
				<i>Ditylum spp. (T)</i>		Very Rare	
				<i>Karenia papilionacea (T)</i>		Very Rare	
				<i>Karlodinium veneficum (T)</i>		Present	
				<i>Prorocentrum scutellum (B)</i>		Very Rare	
				<i>Prorocentrum triestinum (B)</i>		Present	
RWPM8: Cape Henlopen State Park Beach (2)							
	7/29/2015	9:20	Surfc	<i>Chaetoceros spp. (B)</i>		Rare	0.003
				<i>Dinophysis norvegica (T)</i>		Very Rare	
				<i>Eutreptiella sp. (B)</i>		Common	0.263
				<i>Heterocapsa rotundata (B)</i>		Present	
				<i>Karenia papilionacea (T)</i>		Very Rare	
				<i>Prorocentrum scutellum (B)</i>		Very Rare	
				<i>Prorocentrum triestinum (B)</i>		Present	
				<i>Rhizosolenia spp. (T)</i>		Very Rare	
				<i>Scrippsiella sp. (B)</i>		Rare	0.002
RWPMVIII: Town of Fenwick							
	8/5/2015	8:10	Surfc	" <i>Gymnodinoid</i> " <i>sp. (S)</i>	25-40 um Grn	Common	0.163
				<i>Ceratium fusus (B)</i>		Very Rare	
				<i>Ceratium pentagonum (B)</i>		Rare	0.002
				<i>Chaetoceros spp. (B)</i>		Present	
				<i>Dinophysis acuminata (T)</i>		Very Rare	
				<i>Dinophysis norvegica (T)</i>		Very Rare	
				<i>Ditylum spp. (T)</i>		Very Rare	
				<i>Heterocapsa rotundata (B)</i>		Present	
				<i>Karenia papilionacea (T)</i>		Very Rare	
				<i>Prorocentrum scutellum (B)</i>		Rare	0.002
				<i>Prorocentrum triestinum (B)</i>		Present	
				<i>Rhizosolenia spp. (T)</i>		Rare	0.002
				<i>Scrippsiella sp. (B)</i>		Rare	0.002
<b>Broadkill River</b>							
<u>Broadkill River</u>							
BR01: Broadkill river @ PEL dock.							
	7/29/2015	8:50	Net	<i>Akashiwo sanguinea (T)</i>			
				<i>Heterocapsa rotundata (B)</i>			
				<i>Heterosigma akashiwo (T)</i>			
				<i>Karlodinium veneficum (T)</i>			
				<i>Prorocentrum triestinum (B)</i>			
			Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
				<i>Heterosigma akashiwo (T)</i>		Present	
				<i>Karlodinium veneficum (T)</i>		Present	

Name subscripts: (B) - nontoxic bloom former; (B\*) - nontoxic bloom former reported only at levels > 10 MC/L; (S) - cell similar to a known toxic cell; (T) - potentially toxic cell. MC/L - Million Cells per Liter.

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<b>Broadkill River</b>							
<u>Broadkill River</u>							
BR01: Broadkill river @ PEL dock.							
	8/5/2015	8:50	Net	<i>Akashiwo sanguinea</i> (T)			
				<i>Chaetoceros</i> spp. (B)			
				<i>Heterocapsa rotundata</i> (B)			
				<i>Scrippsiella</i> sp. (B)			
			Surfc	<i>Scrippsiella</i> sp. (B)		Present	
BR20: Broadkill River at Milton tidal pond							
	7/29/2015	6:15	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Common	0.475
<u>Old Mill Creek</u>							
BR21: Old Mill Creek downstream from Red Mill Pond							
	7/29/2015	11:48	Surfc	<i>Aphanizomenon</i> spp. (T)		Many	3.000
				<i>Various pennates</i> spp. (B*)		Abundant	10.100
<u>Prime Hook Creek</u>							
BR03: Prime Hook Creek at Boat Ramp at Refuge Headquarters							
	7/29/2015	11:18	Surfc	<i>Anabaena</i> spp. (T)		Very Abundant	108.000
				<i>Chaetoceros</i> spp. (B)		Many	1.400
				<i>Chloromorom toxicum</i> (T)		Present	
				<i>Eutreptiella</i> sp. (B)		Many	2.860
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Kryptoperidinium foliaceum</i> (B)		Common	0.175
				<i>Peridinium</i> sp. (B)	40 um olive green	Abundant	10.600
<u>Red Mill Pond</u>							
BR54: Red Mill Pond outlet at Rt 1							
	7/29/2015	8:40	Surfc	(Unknown) (B*)	Thin cyano straight	Abundant	74.800
				<i>Aphanizomenon</i> spp. (T)		Abundant	30.800
				<i>Cylindrospermopsis</i> (T)		Many	4.400
				<i>Microcystis</i> spp. (T)		Abundant	22.000
				<i>Planktolyngbya</i> sp. (B*)		Abundant	22.000
<u>Wagamon's Pond</u>							
BR44: Wagamon's Pond on Northern Shoreline, Milton							
	7/29/2015	9:00	Surfc	<i>Lyngbya</i> (T)		Present	
<b>Delaware Bay</b>							
<u>Canary Creek</u>							
BR40: Canary Creek at Pilottown Rd							
	7/29/2015	7:01	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
<u>Delaware Bay</u>							
DB01: End of Cape Shores pier							
	7/28/2015	8:51	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	8/4/2015	8:36		" <i>Gymnodinioid</i> " sp. (S)	25-40 um Grn	Present	
<b>Indian River</b>							
<u>Indian River</u>							
IR04: Warwick Cove							
	7/27/2015	9:50	Surfc	<i>Chloromorom toxicum</i> (T)		Common	0.113
				<i>Gyrodinium instriatum</i> (B)		Present	
				<i>Heterocapsa rotundata</i> (B)		Present	

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<b>Indian River</b>							
<u>Indian River</u>							
IR04: Warwick Cove	7/27/2015	9:50	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.138
IR11: Pot Nets Seaside Pier	7/27/2015	10:30	Surfc	<i>Akashiwo sanguinea</i> (T)		Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Prorocentrum triestinum</i> (B)		Present	
IR24: Iron Branch - County road 331 at bridge	7/27/2015	9:25	Surfc	<i>Gyrodinium instriatum</i> (B)		Many	1.075
				<i>Heterosigma akashiwo</i> (T)		Present	
IR36: James Farm, base of Pasture Point Knee deep 150 yds from shore	7/28/2015	7:45	Surfc	" <i>Gymnodinioid</i> " sp. (S)	10-15 um Grn	Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Protoperidinium quinquecorne</i> (B)		Present	
IR39: North side of Inlet at Wheelchair fishing platform under new bridge.	7/29/2015	7:45	Surfc	" <i>Gymnodinioid</i> " sp. (S)	25-40 um Grn	Common	0.100
				<i>Ceratium pentagonum</i> (B)		Very Rare	
				<i>Chaetoceros</i> spp. (B)		Common	0.238
				<i>Dinophysis acuminata</i> (T)		Very Rare	
				<i>Dinophysis norvegica</i> (T)		Very Rare	
				<i>Ditylum</i> spp. (T)		Very Rare	
				<i>Heterocapsa rotundata</i> (B)		Common	0.113
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Karenia papilionacea</i> (T)		Very Rare	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Prorocentrum scutellum</i> (B)		Rare	0.003
				<i>Prorocentrum triestinum</i> (B)		Present	
				<i>Rhizosolenia</i> spp. (T)		Very Rare	
				<i>Scrippsiella</i> sp. (B)		Present	
<u>Vines Creek</u>							
IR38: Vines Lane	7/28/2015	7:45	Surfc	<i>Chloromorom toxicum</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Present	
				<i>Heterocapsa rotundata</i> (B)		Common	0.100
				<i>Karlodinium veneficum</i> (T)		Present	
<u>White Creek</u>							
IR32: Holly Terrace Acres Canal Dead End, White Creek	7/27/2015	8:10	Surfc	<i>Chattonella subsalsa</i> (T)		Common	0.288
				<i>Chloromorom toxicum</i> (T)		Common	0.500
				<i>Gyrodinium instriatum</i> (B)		Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Peridinium</i> sp. (B)	25um flat green	Present	
				<i>Prorocentrum triestinum</i> (B)		Present	
				<i>Protoperidinium quinquecorne</i> (B)		Present	

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<b>Indian River</b>							
<u>White Creek</u>							
IR32: Holly Terrace Acres Canal Dead End, White Creek							
	8/3/2015	7:00	Surfc	<i>Chattonella subsalsa</i> (T)		Common	0.600
				<i>Chloromorom toxicum</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Common	0.738
				<i>Heterocapsa rotundata</i> (B)		Common	0.150
				<i>Heterosigma akashiwo</i> (T)		Common	0.225
				<i>Karlodinium veneficum</i> (T)		Common	0.100
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Peridinium sp.</i> (B)	25um flat green	Common	0.263
				<i>Prorocentrum triestinum</i> (B)		Present	
				<i>Protoperidinium quinquecorne</i> (B)		Common	0.123
				<i>Scrippsiella sp.</i> (B)		Common	0.175
<b>Little Assawoman Bay</b>							
<u>Dirickson Creek</u>							
LA03: Mulberry Landing							
	7/27/2015	7:01	Surfc	<i>Akashiwo sanguinea</i> (T)		Present	
				<i>Heterocapsa rotundata</i> (B)		Common	0.175
				<i>Karlodinium veneficum</i> (T)		Present	
LA09: Dirickson Creek at Road 381 bridge.							
	7/27/2015	7:43	Surfc	<i>Gyrodinium instriatum</i> (B)		Common	0.113
				<i>Heterocapsa rotundata</i> (B)		Common	0.600
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Karlodinium veneficum</i> (T)		Common	0.563
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
<u>Jefferson Creek</u>							
SB10E: Russell Canal east dead end							
	7/28/2015	8:29	Surfc	" <i>Gymnodinioid</i> " sp. (S)	10-15 um Grn	Common	0.438
				<i>Chloromorom toxicum</i> (T)		Present	
				<i>Fibrocapsa japonica</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Present	
				<i>Heterocapsa rotundata</i> (B)		Common	0.563
				<i>Karlodinium veneficum</i> (T)		Common	0.213
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
	8/4/2015	8:04		" <i>Gymnodinioid</i> " sp. (S)	25-40 um Grn	Present	
				<i>Chloromorom toxicum</i> (T)		Present	
				<i>Fibrocapsa japonica</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Present	
				<i>Heterocapsa rotundata</i> (B)		Common	0.450
				<i>Karlodinium veneficum</i> (T)		Common	0.225
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Protoperidinium quinquecorne</i> (B)		Present	
SB10W: Russell Canal west dead end							
	7/28/2015	8:49	Surfc	" <i>Gymnodinioid</i> " sp. (S)	10-15 um Grn	Common	0.138
				<i>Chattonella subsalsa</i> (T)		Common	0.100
				<i>Chloromorom toxicum</i> (T)		Common	0.338
				<i>Fibrocapsa japonica</i> (T)		Common	0.975
				<i>Gyrodinium instriatum</i> (B)		Present	

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<b>Little Assawoman Bay</b>							
<u>Jefferson Creek</u>							
SB10W: Russell Canal west dead end							
	7/28/2015	8:49	Surfc	<i>Heterocapsa rotundata</i> (B)		Common	0.400
				<i>Karlodinium veneficum</i> (T)		Common	0.238
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Protoperidinium quinquecorne</i> (B)		Present	
	8/4/2015	8:23		<i>Akashiwo sanguinea</i> (T)		Present	
				<i>Chloromorom toxicum</i> (T)		Present	
				<i>Fibrocapsa japonica</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Common	0.525
				<i>Heterocapsa rotundata</i> (B)		Common	0.625
				<i>Heterosigma akashiwo</i> (T)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Scrippsiella sp.</i> (B)		Present	
<u>Little Assawoman Bay</u>							
LA46: Fenwick Island Tide Gauge							
	7/28/2015	9:15	Surfc	"Gymnodinoid" sp. (S)	10-15 um Grn	Present	
				<i>Akashiwo sanguinea</i> (T)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
<b>Rehoboth Bay</b>							
ML: Massey's Landing							
	7/29/2015	9:00	Surfc	"Gymnodinoid" sp. (S)	25-40 um Grn	Common	
				<i>Chaetoceros spp.</i> (B)		Common	0.125
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Karlodinium veneficum</i> (T)		Present	
				<i>Prorocentrum triestinum</i> (B)		Present	
	8/5/2015	11:55		"Gymnodinoid" sp. (S)	25-40 um Grn	Common	0.113
				<i>Chaetoceros spp.</i> (B)		Common	0.475
				<i>Fibrocapsa japonica</i> (T)		Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Prorocentrum scutellum</i> (B)		Present	
				<i>Scrippsiella sp.</i> (B)		Present	
<u>Bald Eagle Creek</u>							
RB64: Torquay Canal, west side of Land's End near UD Site #1							
	7/27/2015	9:20	Surfc	<i>Akashiwo sanguinea</i> (T)		Present	
				<i>Heterocapsa rotundata</i> (B)		Present	
				<i>Heterosigma akashiwo</i> (T)		Many	1.063
				<i>Karlodinium veneficum</i> (T)		Common	0.138
				<i>Kryptoperidinium foliaceum</i> (B)		Present	
				<i>Peridinium sp.</i> (B)	25um flat green	Present	
				<i>Protoperidinium quinquecorne</i> (B)		Present	
	8/3/2015	9:00		<i>Chloromorom toxicum</i> (T)		Present	
				<i>Gyrodinium instriatum</i> (B)		Present	
				<i>Heterocapsa rotundata</i> (B)		Common	0.213
				<i>Heterosigma akashiwo</i> (T)		Many	1.663
				<i>Karlodinium veneficum</i> (T)		Common	0.213
				<i>Kryptoperidinium foliaceum</i> (B)		Present	

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<b>Rehoboth Bay</b>							
<u>Bald Eagle Creek</u>							
RB64: Torquay Canal, west side of Land's End near UD Site #1							
	8/3/2015	9:00	Surfc	<i>Scrippsiella sp. (B)</i>		Present	
<u>Guinea Creek</u>							
RB06: Guinea Creek (Winding Creek Village)							
	7/27/2015	8:15	Surfc	<i>(Unknown) sp. (B*)</i>	5-15 um grn trdrp flag	Abundant	11.000
				<i>Akashiwo sanguinea (T)</i>		Present	
				<i>Gyrodinium instriatum (B)</i>		Present	
				<i>Heterocapsa rotundata (B)</i>		Present	
				<i>Heterosigma akashiwo (T)</i>		Present	
				<i>Karlodinium veneficum (T)</i>		Present	
				<i>Kryptoperidinium foliaceum (B)</i>		Present	
<u>Love Creek</u>							
RB34: Love Creek at Rt 24 Bridge							
	7/28/2015	11:24	Surfc	<i>Chloromorom toxicum (T)</i>		Many	3.960
				<i>Cylindrotheca closterium (B*)</i>		Abundant	19.580
				<i>Gyrodinium instriatum (B)</i>		Common	0.600
				<i>Karlodinium veneficum (T)</i>		Present	

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