

# Harmful Algae Report

All data between 6/2/2014 and 6/19/2014

University of Delaware Citizen Monitoring Program

Water Body Tributary Site	Date	Time	Smpl Name Dpth	Comment if ID uncertain	Abundance	MC/L
<b>Broadkill River</b>						
BR01: Broadkill river @ PEL dock.						
	6/4/2014	8:50	Net	<i>Ceratium pentagonum (B)</i>		
	6/4/2014	8:50	Net	<i>Chaetoceros spp. (T)</i>		
	6/4/2014	8:50	Net	<i>Dinophysis acuminata (T)</i>		
	6/4/2014	8:50	Net	<i>Heterocapsa rotundata (B)</i>		
	6/4/2014	8:50	Net	<i>Karlodinium veneficum (T)</i>		
	6/4/2014	8:50	Net	<i>Prorocentrum gracile (B)</i>		
	6/4/2014	8:50	Net	<i>Prorocentrum minimum (T)</i>		
	6/4/2014	8:50	Net	<i>Rhizosolenia spp. (T)</i>		
	6/4/2014	8:50	Surfc		No HABs found	
	6/11/2014	8:45	Net	<i>Ceratium pentagonum (B)</i>		
	6/11/2014	8:45	Net	<i>Chaetoceros spp. (T)</i>		
	6/11/2014	8:45	Net	<i>Ditylum spp. (T)</i>		
	6/11/2014	8:45	Net	<i>Karlodinium veneficum (T)</i>		
	6/11/2014	8:45	Net	<i>Prorocentrum minimum (T)</i>		
	6/11/2014	8:45	Net	<i>Prorocentrum scutellum (B)</i>		
	6/11/2014	8:45	Net	<i>Pseudo-nitzschia spp. (T)</i>		
	6/11/2014	8:45	Net	<i>Rhizosolenia spp. (T)</i>		
	6/11/2014	8:45	Surfc	<i>Dinophysis acuminata (T)</i>	Present	
	6/11/2014	8:45	Surfc	<i>Gyrodinium instriatum (B)</i>	Present	
BR20: Broadkill River at Milton tidal pond						
	6/11/2014	6:20	Surfc		No HABs found	
<u>Old Mill Creek</u>						
BR21: Old Mill Creek downstream from Red Mill Pond						
	6/11/2014	12:35	Surfc	<i>Kryptoperidinium foliaceum (B)</i>	Present	
<u>Prime Hook Creek</u>						
BR03: Prime Hook Creek at Boat Ramp at Refuge Headquarters						
	6/11/2014	12:05	Surfc	<i>Kryptoperidinium foliaceum (B)</i>	Abundant	16.900
	6/11/2014	12:05	Surfc	<i>Protooperidinium quinquecorne (B)</i>	Present	
<b>Delaware Bay</b>						
DB01: End of Cape Shores pier						
	6/4/2014	9:23	Surfc	<i>Ceratium pentagonum (B)</i>	Present	
	6/17/2014	9:50	Surfc	<i>Chaetoceros spp. (T)</i>	Common	0.200
	6/17/2014	9:50	Surfc	<i>Heterocapsa rotundata (B)</i>	Present	
	6/17/2014	9:50	Surfc	<i>Heterosigma akashiwo (T)</i>	Present	
<u>Canary Creek</u>						
BR40: Canary Creek at Pilottown Rd						
	6/10/2014	11:02	Surfc	<i>Amphidinium spp. (T)</i>	Present	

Name subsripts: (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.

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.

**University of Delaware Citizen Monitoring Program**

Water Body Tributary Site	Date	Time	Smpl Dpth	Name	Comment if ID uncertain	Abundance	MC/L
<b>Delaware Bay</b>							
<u>Canary Creek</u>							
BR40: Canary Creek at Pilottown Rd							
	6/10/2014	11:02	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
<b>Indian River</b>							
<u>Assawoman Canal</u>							
IR50: Assawoman Canal at N end, Ocean View Marina							
	6/10/2014	7:15	Surfc	<i>Gyrodinium instriatum</i> (B)		Common	0.330
	6/10/2014	7:15	Surfc	<i>Heterocapsa rotundata</i> (B)		Common	0.240
	6/10/2014	7:15	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	6/10/2014	7:15	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	6/10/2014	7:15	Surfc	<i>Prorocentrum gracile</i> (B)		Present	
	6/10/2014	7:15	Surfc	<i>Prorocentrum minimum</i> (T)		Present	
<u>Bethany Loop Canal</u>							
IR62: Loop Canal, Pa Ave terminus, Bethany Beach							
	6/9/2014	7:30	Surfc	<i>Amphidinium spp.</i> (T)		Present	
	6/9/2014	7:30	Surfc	<i>Chloromorom toxicum</i> (T)		Present	
	6/9/2014	7:30	Surfc	<i>Gyrodinium instriatum</i> (B)		Common	0.460
	6/9/2014	7:30	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	6/9/2014	7:30	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	6/9/2014	7:30	Surfc	<i>Protoberidinium quinquecorne</i> (B)		Present	
<u>Indian River</u>							
IR11: Pot Nets Seaside Pier							
	6/9/2014	10:47	Surfc	<i>Heterocapsa triquetra</i> (B)		Present	
	6/9/2014	10:47	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
IR20: Bay Colony							
	6/9/2014	7:55	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	6/9/2014	7:55	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	6/9/2014	7:55	Surfc	<i>Prorocentrum minimum</i> (T)		Present	
IR36: James Farm, base of Pasture Point Knee deep 150 yds from shore							
	6/9/2014	7:55	Surfc	<i>Amphidinium spp.</i> (T)		Present	
	6/9/2014	7:55	Surfc	<i>Heterocapsa rotundata</i> (B)		Common	0.320
	6/9/2014	7:55	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.410
	6/9/2014	7:55	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	6/9/2014	7:55	Surfc	<i>Prorocentrum minimum</i> (T)		Present	
IR39: North side of Inlet at Wheelchair fishing platform under new bridge.							
	6/11/2014	7:30	Surfc	<i>Amphidinium spp.</i> (T)		Very Rare	
	6/11/2014	7:30	Surfc	<i>Ceratium pentagonum</i> (B)		Rare	0.002
	6/11/2014	7:30	Surfc	<i>Dinophysis acuminata</i> (T)		Very Rare	
	6/11/2014	7:30	Surfc	<i>Ditylum spp.</i> (T)		Very Rare	
	6/11/2014	7:30	Surfc	<i>Gyrodinium instriatum</i> (B)		Rare	0.001
	6/11/2014	7:30	Surfc	<i>Prorocentrum gracile</i> (B)		Rare	0.001
	6/11/2014	7:30	Surfc	<i>Prorocentrum micans</i> (B)		Present	0.011

Name subsripts: (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.

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.

**University of Delaware Citizen Monitoring Program**

Water Body Tributary Site	Date	Time	Smpl Dpth	Name	Comment if ID uncertain	Abundance	MC/L
<b>Indian River</b>							
<u>Indian River</u>							
IR39: North side of Inlet at Wheelchair fishing platform under new bridge.							
	6/11/2014	7:30	Surfc	<i>Prorocentrum minimum</i> (T)		Very Rare	
	6/11/2014	7:30	Surfc	<i>Prorocentrum scutellum</i> (B)		Rare	0.005
	6/11/2014	7:30	Surfc	<i>Prorocentrum</i> sp. (T)		Very Rare	
	6/11/2014	7:30	Surfc	<i>Pseudo-nitzschia</i> spp. (T)		Rare	0.002
	6/11/2014	7:30	Surfc	<i>Rhizosolenia</i> spp. (T)		Rare	0.001
	6/11/2014	7:30	Surfc	<i>Scrippsiella</i> sp. (B)		Very Rare	
<u>Vines Creek</u>							
IR38: Vines Lane							
	6/10/2014	7:45	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
<u>White Creek</u>							
IR32: Holly Terrace Acres Canal Dead End, White Creek							
	6/2/2014	8:25	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	6/2/2014	8:25	Surfc	<i>Heterosigma akashiwo</i> (T)		Many	1.450
	6/2/2014	8:25	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.130
	6/2/2014	8:25	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	6/2/2014	8:25	Surfc	<i>Prorocentrum minimum</i> (T)		Many	1.100
	6/9/2014	8:52	Surfc	<i>Prorocentrum minimum</i> (T)		Common	0.140
	6/16/2014	8:21	Surfc	<i>Chloromorom toxicum</i> (T)		Present	
	6/16/2014	8:21	Surfc	<i>Gyrodinium instriatum</i> (B)		Common	0.150
	6/16/2014	8:21	Surfc	<i>Heterosigma akashiwo</i> (T)		Present	
	6/16/2014	8:21	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	6/16/2014	8:21	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	6/16/2014	8:21	Surfc	<i>Prorocentrum minimum</i> (T)		Common	0.380
<b>Little Assawoman Bay</b>							
LA46: Fenwick Island Tide Gauge							
	6/10/2014	8:48	Surfc	<i>Akashiwo sanguinea</i> (T)		Present	
	6/10/2014	8:48	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	6/10/2014	8:48	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.100
<u>Assawoman Canal</u>							
LA10: Assawoman Canal S end, Kent Ave Bridge							
	6/9/2014	7:10	Surfc	<i>Gyrodinium instriatum</i> (B)		Present	
	6/9/2014	7:10	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
<u>Dirickson Creek</u>							
LA03: Mulberry Landing							
	6/9/2014	7:40	Surfc	<i>Akashiwo sanguinea</i> (T)		Present	
	6/9/2014	7:40	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.110
	6/9/2014	7:40	Surfc	<i>Prorocentrum minimum</i> (T)		Present	
LA09: Dirickson Creek at Road 381 bridge.							
	6/9/2014	8:11	Surfc	<i>Gyrodinium instriatum</i> (B)		Common	0.660
	6/9/2014	8:11	Surfc	<i>Karlodinium veneficum</i> (T)		Present	

Name subsripts: (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.

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.

**University of Delaware Citizen Monitoring Program**

Water Body Tributary Site	Date	Time	Smpl Dpth	Name	Comment if ID uncertain	Abundance	MC/L
<b>Little Assawoman Bay</b>							
<u>Jefferson Creek</u>							
SB10E: Russell Canal east dead end							
	6/3/2014	8:01	Surfc	<i>Akashiwo sanguinea</i> (T)		Present	
	6/3/2014	8:01	Surfc	<i>Chattonella subsalsa</i> (T)		Present	
	6/3/2014	8:01	Surfc	<i>Gyrodinium instriatum</i> (B)		Present	
	6/3/2014	8:01	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	6/3/2014	8:01	Surfc	<i>Heterosigma akashiwo</i> (T)		Abundant	18.000
	6/3/2014	8:01	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.300
	6/3/2014	8:01	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	6/3/2014	8:01	Surfc	<i>Prorocentrum minimum</i> (T)		Present	
	6/10/2014	8:14	Surfc	<i>Heterocapsa rotundata</i> (B)		Common	0.100
	6/10/2014	8:14	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.150
	6/10/2014	8:14	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	6/10/2014	8:14	Surfc	<i>Protoperidinium quinquecorne</i> (B)		Present	
	6/10/2014	8:14	Surfc	<i>Scrippsiella</i> sp. (B)		Present	
	6/17/2014	8:10	Surfc	<i>Amphidinium</i> spp. (T)		Present	
	6/17/2014	8:10	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.150
SB10W: Russell Canal west dead end							
	6/3/2014	8:17	Surfc	<i>Chloromorom toxicum</i> (T)		Present	
	6/3/2014	8:17	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	6/3/2014	8:17	Surfc	<i>Heterosigma akashiwo</i> (T)		Present	
	6/3/2014	8:17	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.190
	6/10/2014	8:33	Surfc	<i>Chloromorom toxicum</i> (T)		Present	
	6/10/2014	8:33	Surfc	<i>Gyrodinium instriatum</i> (B)		Present	
	6/10/2014	8:33	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.100
	6/10/2014	8:33	Surfc	<i>Pleurochrysis carterae</i> (B*)		Abundant	50.200
	6/17/2014	8:25	Surfc	<i>Gyrodinium instriatum</i> (B)		Present	
	6/17/2014	8:25	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	6/17/2014	8:25	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.150
	6/17/2014	8:25	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
<b>Rehoboth Bay</b>							
RB07: West Bay Park							
	6/10/2014	8:55	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	6/10/2014	8:55	Surfc	<i>Heterocapsa triquetra</i> (B)		Present	
	6/10/2014	8:55	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
<u>Bald Eagle Creek</u>							
RB64: Torquay Canal, west side of Land's End near UD Site #1							
	6/2/2014	7:30	Surfc	<i>Heterosigma akashiwo</i> (T)		Common	0.510
	6/2/2014	7:30	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.200
	6/2/2014	7:30	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	6/2/2014	7:30	Surfc	<i>Prorocentrum minimum</i> (T)		Present	
	6/9/2014	8:05	Surfc	<i>Gyrodinium instriatum</i> (B)		Common	0.150

Name subsripts: (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.

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.

**University of Delaware Citizen Monitoring Program**

Water Body Tributary Site	Date	Time	Smpl Dpth	Name	Comment if ID uncertain	Abundance	MC/L
<b>Rehoboth Bay</b>							
<u>Bald Eagle Creek</u>							
RB64: Torquay Canal, west side of Land's End near UD Site #1							
	6/9/2014	8:05	Surfc	<i>Heterocapsa rotundata</i> (B)		Common	0.100
	6/9/2014	8:05	Surfc	<i>Heterosigma akashiwo</i> (T)		Present	
	6/9/2014	8:05	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	6/16/2014	7:25	Surfc	<i>Chloromorom toxicum</i> (T)		Present	
	6/16/2014	7:25	Surfc	<i>Gyrodinium instriatum</i> (B)		Common	0.360
	6/16/2014	7:25	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	6/16/2014	7:25	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Common	0.120
<u>Guinea Creek</u>							
RB06: Guinea Creek (Winding Creek Village)							
	6/9/2014	7:30	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
<u>Love Creek</u>							
RB34: Love Creek at Rt 24 Bridge							
	6/9/2014	8:35	Surfc	<i>Gyrodinium instriatum</i> (B)		Many	1.030
	6/9/2014	8:35	Surfc	<i>Heterocapsa rotundata</i> (B)		Common	0.400
	6/9/2014	8:35	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	6/9/2014	8:35	Surfc	<i>Prorocentrum gracile</i> (B)		Present	

Name subsripts: (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.

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.

**University of Delaware Citizen Monitoring Program**