

# Harmful Algae Report

All data between 9/1/2011 and 10/13/2011

University of Delaware Citizen Monitoring Program

Water Body Tributary Site	Date	Time	Smpl Dpth	Name	Comment if ID uncertain	Abundance	MC/L
<b>Assawoman Bay</b>							
<u>Roy Creek</u>							
BA01: Keenwick on Bay, Roy Creek							
	9/13/2011	8:42	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	10/11/2011	8:50	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	10/11/2011	8:50	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Present	
<b>Atlantic Ocean</b>							
RWPM14: Tower Rd Ocean, Delaware Seashore State Park							
	9/15/2011	8:50	Surfc	<i>Chaetoceros spp. (T)</i>		Rare	0.004
	9/15/2011	8:50	Surfc	<i>Ditylum spp. (T)</i>		Rare	0.001
	9/15/2011	8:50	Surfc	<i>Prorocentrum triestinum (B)</i>		Very Rare	
	9/15/2011	8:50	Surfc	<i>Rhizosolenia spp. (T)</i>		Rare	0.001
	9/15/2011	8:50	Surfc	<i>Scrippsiella sp. (B)</i>		Very Rare	
	9/22/2011	8:58	Surfc	<i>Chaetoceros spp. (T)</i>		Present	0.032
	9/22/2011	8:58	Surfc	<i>Ditylum spp. (T)</i>		Rare	0.001
	9/22/2011	8:58	Surfc	<i>Heterocapsa triquetra (B)</i>		Very Rare	
	9/22/2011	8:58	Surfc	<i>Karenia papilionacea (T)</i>		Very Rare	
	9/22/2011	8:58	Surfc	<i>Karenia sp. (T)</i>		Very Rare	
	9/22/2011	8:58	Surfc	<i>Prorocentrum minimum (T)</i>		Very Rare	
	9/22/2011	8:58	Surfc	<i>Prorocentrum scutellum (B)</i>		Rare	0.001
	9/22/2011	8:58	Surfc	<i>Prorocentrum triestinum (B)</i>		Very Rare	
	9/22/2011	8:58	Surfc	<i>Rhizosolenia spp. (T)</i>		Very Rare	
RWPM8: Cape Henlopen State Park Beach (2)							
	9/27/2011	9:20	Surfc	<i>Ditylum spp. (T)</i>		Very Rare	
	9/27/2011	9:20	Surfc	<i>Heterocapsa rotundata (B)</i>		Rare	0.001
	9/27/2011	9:20	Surfc	<i>Heterocapsa triquetra (B)</i>		Rare	0.001
	9/27/2011	9:20	Surfc	<i>Prorocentrum scutellum (B)</i>		Very Rare	
	9/27/2011	9:20	Surfc	<i>Pseudo-nitzschia spp. (T)</i>		Rare	0.002
RWPMVIII: Town of Fenwick							
	9/15/2011	8:15	Surfc	<i>Chaetoceros spp. (T)</i>		Rare	0.003
	9/15/2011	8:15	Surfc	<i>Ditylum spp. (T)</i>		Rare	0.002
	9/15/2011	8:15	Surfc	<i>Prorocentrum minimum (T)</i>		Very Rare	
	9/15/2011	8:15	Surfc	<i>Prorocentrum scutellum (B)</i>		Very Rare	
	9/15/2011	8:15	Surfc	<i>Prorocentrum triestinum (B)</i>		Very Rare	
	9/15/2011	8:15	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Very Rare	
	9/15/2011	8:15	Surfc	<i>Pseudo-nitzschia spp. (T)</i>		Very Rare	
	9/15/2011	8:15	Surfc	<i>Scrippsiella sp. (B)</i>		Very Rare	
	9/22/2011	8:20	Surfc	<i>Ditylum spp. (T)</i>		Rare	0.002
	9/22/2011	8:20	Surfc	<i>Karenia papilionacea (T)</i>		Rare	0.001

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>Atlantic Ocean</b>							
RWPMVIII: Town of Fenwick							
	9/22/2011	8:20	Surfc	<i>Prorocentrum minimum</i> (T)		Rare	0.001
	9/22/2011	8:20	Surfc	<i>Prorocentrum triestinum</i> (B)		Very Rare	
	9/22/2011	8:20	Surfc	<i>Pseudo-nitzschia</i> spp. (T)		Very Rare	
<b>Broadkill River</b>							
BR01: Broadkill river @ PEL dock.							
	9/1/2011	8:55	Net	<i>Chaetoceros</i> spp. (T)			
	9/1/2011	8:55	Net	<i>Ditylum</i> spp. (T)			
	9/1/2011	8:55	Net	<i>Heterosigma akashiwo</i> (T)			
	9/1/2011	8:55	Net	<i>Rhizosolenia</i> spp. (T)			
	9/1/2011	8:55	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	9/1/2011	8:55	Surfc	<i>Rhizosolenia</i> spp. (T)		Present	
	9/7/2011	8:55	Net	<i>Chaetoceros</i> spp. (T)			
	9/7/2011	8:55	Net	<i>Ditylum</i> spp. (T)			
	9/7/2011	8:55	Net	<i>Heterocapsa rotundata</i> (B)			
	9/7/2011	8:55	Net	<i>Prorocentrum scutellum</i> (B)			
	9/7/2011	8:55	Net	<i>Rhizosolenia</i> spp. (T)			
	9/7/2011	8:55	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	9/7/2011	8:55	Surfc	<i>Heterocapsa</i> sp. (B)		Present	
	9/7/2011	8:55	Surfc	<i>Prorocentrum minimum</i> (T)		Present	
	9/14/2011	8:55	Net	<i>Ditylum</i> spp. (T)			
	9/14/2011	8:55	Net	<i>Heterocapsa</i> sp. (B)			
	9/14/2011	8:55	Net	<i>Karlodinium veneficum</i> (T)			
	9/14/2011	8:55	Net	<i>Prorocentrum scutellum</i> (B)			
	9/14/2011	8:55	Net	<i>Prorocentrum triestinum</i> (B)			
	9/14/2011	8:55	Net	<i>Pseudo-nitzschia</i> spp. (T)			
	9/14/2011	8:55	Net	<i>Rhizosolenia</i> spp. (T)			
	9/14/2011	8:55	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	9/14/2011	8:55	Surfc	<i>Heterocapsa</i> sp. (B)		Present	
	9/14/2011	8:55	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	9/21/2011	8:55	Net	<i>Protoperidinium quinquecorne</i> (B)			
	9/21/2011	8:55	Surfc		No HABs found		
	9/28/2011	8:55	Net	<i>Prorocentrum scutellum</i> (B)			
	9/28/2011	8:55	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	10/12/2011	8:56	Net	<i>Chaetoceros</i> spp. (T)			
	10/12/2011	8:56	Net	<i>Heterocapsa rotundata</i> (B)			
	10/12/2011	8:56	Net	<i>Pseudo-nitzschia</i> spp. (T)			
	10/12/2011	8:56	Net	<i>Rhizosolenia</i> spp. (T)			
	10/12/2011	8:56	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
BR20: Broadkill River at Milton tidal pond							
	9/14/2011	7:10	Surfc		No HABs found		
	10/12/2011	11:10	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	

### Diamond Pond

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.

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Water Body Tributary Site	Date	Time	Smpl Dpth	Name	Comment if ID uncertain	Abundance	MC/L
<b>Broadkill River</b>							
<u>Diamond Pond</u>							
BR48: Diamond Pond							
	9/14/2011	11:17	Surfc	<i>Anabaena spp. (T)</i>		Common	0.250
	9/14/2011	11:17	Surfc	<i>Cylindrospermopsis (T)</i>		Common	0.400
	9/14/2011	11:17	Surfc	<i>Microcystis spp. (T)</i>		Common	0.500
	10/12/2011	10:55	Surfc		No HABS found		
<u>Old Mill Creek</u>							
BR21: Old Mill Creek downstream from Red Mill Pond							
	9/14/2011	12:35	Surfc	<i>Aphanizomenon spp. (T)</i>		Common	0.250
	9/14/2011	12:35	Surfc	<i>Chattonella subsalsa (T)</i>		Present	
	9/14/2011	12:35	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/14/2011	12:35	Surfc	<i>Protoperdinium quinquecorne (B)</i>		Present	
	10/12/2011	12:20	Surfc	<i>Chaetoceros spp. (T)</i>		Present	
	10/12/2011	12:20	Surfc	<i>Cylindrospermopsis (T)</i>		Common	0.120
	10/12/2011	12:20	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	10/12/2011	12:20	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Present	
<u>Prime Hook Creek</u>							
BR03: Prime Hook Creek at Boat Ramp at Refuge Headquarters							
	9/14/2011	12:07	Surfc	<i>Chattonella subsalsa (T)</i>		Common	0.100
	9/14/2011	12:07	Surfc	<i>Cylindrospermopsis (T)</i>		Common	0.120
	9/14/2011	12:07	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	9/14/2011	12:07	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Present	
	9/14/2011	12:07	Surfc	<i>Protoperdinium quinquecorne (B)</i>		Present	
	9/28/2011	12:20	Surfc	<i>Chattonella cf. verruculosa (T)</i>		Many	8.800
	9/28/2011	12:20	Surfc	<i>Chattonella subsalsa (T)</i>		Common	
	9/28/2011	12:20	Surfc	<i>Heterosigma akashiwo (T)</i>		Very Abundant	561.000
	9/28/2011	12:20	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Abundant	20.700
	10/12/2011	11:50	Surfc	<i>Amphidinium spp. (T)</i>		Common	0.540
	10/12/2011	11:50	Surfc	<i>Chattonella cf. verruculosa (T)</i>		Many	4.600
	10/12/2011	11:50	Surfc	<i>Cylindrotheca closterium (B*)</i>		Abundant	10.600
	10/12/2011	11:50	Surfc	<i>Heterosigma akashiwo (T)</i>		Common	0.480
	10/12/2011	11:50	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	10/12/2011	11:50	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Many	1.300
	10/12/2011	11:50	Surfc	<i>Skeletonema spp. (B*)</i>		Very Abundant	320.000
<u>Wagamon's Pond</u>							
BR44: Wagamon's Pond, Milton							
	10/13/2011	14:00	Surfc	<i>Lyngbya (T)</i>		Present	
	10/13/2011	14:00	Surfc	<i>Oscillatoria spp. (B)</i>		Present	
<b>Delaware Bay</b>							
DB01: End of Cape Shores pier							
	9/13/2011	8:42	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/13/2011	8:42	Surfc	<i>Heterocapsa sp. (B)</i>		Present	

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<b>Delaware Bay</b>							
DB01: End of Cape Shores pier							
	9/13/2011	8:42	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Present	
	9/27/2011	9:50	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/27/2011	9:50	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	10/12/2011	9:40	Surfc		No HABs found		
F343: Lewes/Cape May Ferry							
	9/10/2011	12:04	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	
	9/10/2011	12:04	Surfc	<i>Chaetoceros spp. (T)</i>		Present	0.017
	9/10/2011	12:04	Surfc	<i>Heterocapsa triquetra (B)</i>		Many	1.980
	9/10/2011	12:04	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/10/2011	12:04	Surfc	<i>Prorocentrum minimum (T)</i>		Present	
	9/10/2011	12:04	Surfc	<i>Prorocentrum scutellum (B)</i>		Present	
	9/10/2011	12:04	Surfc	<i>Prorocentrum sp. (T)</i>		Present	
	9/10/2011	12:04	Surfc	<i>Prorocentrum triestinum (B)</i>		Present	
	9/10/2011	12:04	Surfc	<i>Scrippsiella sp. (B)</i>		Present	
F344: Lewes/Cape May Ferry							
	9/10/2011	12:08	Surfc	<i>Heterocapsa triquetra (B)</i>		Many	2.120
	9/10/2011	12:08	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/10/2011	12:08	Surfc	<i>Prorocentrum minimum (T)</i>		Present	
	9/10/2011	12:08	Surfc	<i>Prorocentrum scutellum (B)</i>		Present	
	9/10/2011	12:08	Surfc	<i>Prorocentrum triestinum (B)</i>		Present	
FEEE: Lewes/Cape May Ferry							
	9/17/2011	11:50	Surfc	<i>Chaetoceros spp. (T)</i>		Rare	0.005
	9/17/2011	11:50	Surfc	<i>Ditylum spp. (T)</i>		Rare	0.001
	9/17/2011	11:50	Surfc	<i>Heterocapsa rotundata (B)</i>		Rare	0.001
	9/17/2011	11:50	Surfc	<i>Heterocapsa sp. (B)</i>		Very Rare	
	9/17/2011	11:50	Surfc	<i>Heterocapsa triquetra (B)</i>		Present	0.044
	9/17/2011	11:50	Surfc	<i>Karlodinium veneficum (T)</i>		Rare	0.003
	9/17/2011	11:50	Surfc	<i>Prorocentrum minimum (T)</i>		Very Rare	
	9/17/2011	11:50	Surfc	<i>Prorocentrum scutellum (B)</i>		Very Rare	
	9/17/2011	11:50	Surfc	<i>Prorocentrum sp. (T)</i>		Very Rare	
	9/17/2011	11:50	Surfc	<i>Pseudo-nitzschia spp. (T)</i>		Rare	0.001
	9/17/2011	11:50	Surfc	<i>Rhizosolenia spp. (T)</i>		Very Rare	
	9/17/2011	11:50	Surfc	<i>Scrippsiella sp. (B)</i>		Very Rare	

### Canary Creek

BR40: Canary Creek at Pilottown Rd							
	9/14/2011	9:10	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	10/12/2011	9:30	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	

### **Dirickson Creek**

#### Dirickson Pond

LA38: Hamlet at Dirickson Pond							
	9/13/2011	8:15	Surfc	<i>Anabaena spp. (T)</i>		Present	
	9/13/2011	8:15	Surfc	<i>Aphanizomenon spp. (T)</i>		Abundant	66.000

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Water Body Tributary Site	Date	Time	Smpl Dpth	Name	Comment if ID uncertain	Abundance	MC/L
<b>Dirickson Creek</b>							
<u>Dirickson Pond</u>							
LA38: Hamlet at Dirickson Pond							
	9/13/2011	8:15	Surfc	<i>Microcystis spp. (T)</i>		Present	
	9/13/2011	8:15	Surfc	<i>Navicula (small) (B*)</i>		Abundant	14,300
	10/11/2011	8:05	Surfc	<i>Anabaena spp. (T)</i>		Common	0.120
	10/11/2011	8:05	Surfc	<i>Aphanizomenon spp. (T)</i>		Many	2,400
	10/11/2011	8:05	Surfc	<i>Cylindrospermopsis (T)</i>		Common	0.750
<b>Indian River</b>							
<u>Assawoman Canal</u>							
IR50: Assawoman Canal at N end, marina dock							
	9/13/2011	8:00	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	0.068
	9/13/2011	8:00	Surfc	<i>Gyrodinium instriatum (B)</i>		Present	
	9/13/2011	8:00	Surfc	<i>Prorocentrum minimum (T)</i>		Present	
	10/11/2011	8:00	Surfc		No HABs found		
<u>Bethany Loop Canal</u>							
IR62: Loop Canal, Pa Ave terminus, Bethany Beach							
	9/12/2011	7:50	Surfc	<i>Chattonella cf. verruculosa (T)</i>		Common	0.140
	9/12/2011	7:50	Surfc	<i>Chattonella subsalsa (T)</i>		Many	1.100
	9/12/2011	7:50	Surfc	<i>Gyrodinium instriatum (B)</i>		Present	
	9/12/2011	7:50	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/12/2011	7:50	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Present	
	9/12/2011	7:50	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Common	0.110
	9/12/2011	7:50	Surfc	<i>Scrippsiella sp. (B)</i>		Present	
	10/10/2011	8:05	Surfc	<i>Ceratium pentagonum (B)</i>		Present	0.012
	10/10/2011	8:05	Surfc	<i>Chattonella cf. verruculosa (T)</i>		Present	
	10/10/2011	8:05	Surfc	<i>Heterosigma akashiwo (T)</i>		Many	8.100
	10/10/2011	8:05	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	10/10/2011	8:05	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Present	
	10/10/2011	8:05	Surfc	<i>Prorocentrum minimum (T)</i>		Common	0.190
	10/10/2011	8:05	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Present	
<u>Indian River</u>							
IR04: Warwick Cove							
	9/12/2011	10:15	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/12/2011	10:15	Surfc	<i>Navicula (small) (B*)</i>		Abundant	22.000
	10/10/2011	10:07	Surfc	<i>Gyrodinium instriatum (B)</i>		Present	
IR07: Holt's Landing State Park							
	9/13/2011	7:40	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	10/11/2011	8:50	Surfc		No HABs found		
IR11: Pot Nets Seaside Pier							
	9/12/2011	10:53	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/12/2011	10:53	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/12/2011	10:53	Surfc	<i>Prorocentrum scutellum (B)</i>		Present	

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<b>Indian River</b>							
<u>Indian River</u>							
IR11: Pot Nets Seaside Pier							
	9/12/2011	10:53	Surfc	<i>Prorocentrum triestinum (B)</i>		Present	
	9/12/2011	10:53	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Present	
	10/10/2011	11:42	Surfc	<i>Chaetoceros spp. (T)</i>		Common	0.280
IR20: Bay Colony							
	9/13/2011	7:50	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
IR36B: James Farm, Pasture Point By Boat							
	9/13/2011	8:20	Surfc	<i>Heterocapsa sp. (B)</i>		Present	
	9/13/2011	8:20	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/13/2011	8:20	Surfc	<i>Pseudo-nitzschia spp. (T)</i>		Common	0.200
	10/13/2011	8:05	Surfc	<i>Chaetoceros spp. (T)</i>		Common	0.120
	10/13/2011	8:05	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
IR39: North side of Inlet at Wheelchair fishing platform under new bridge.							
	9/8/2011	8:10	Surfc	<i>Chaetoceros spp. (T)</i>		Present	0.023
	9/8/2011	8:10	Surfc	<i>Ditylum spp. (T)</i>		Very Rare	
	9/8/2011	8:10	Surfc	<i>Karlodinium veneficum (T)</i>		Rare	0.003
	9/8/2011	8:10	Surfc	<i>Prorocentrum minimum (T)</i>		Rare	0.001
	9/8/2011	8:10	Surfc	<i>Prorocentrum triestinum (B)</i>		Rare	0.001
	9/8/2011	8:10	Surfc	<i>Pseudo-nitzschia spp. (T)</i>		Rare	0.002
	9/8/2011	8:10	Surfc	<i>Rhizosolenia spp. (T)</i>		Very Rare	
	9/8/2011	8:10	Surfc	<i>Scrippsiella sp. (B)</i>		Rare	0.001
	9/27/2011	8:32	Surfc	<i>Dinophysis acuminata (T)</i>		Very Rare	
	9/27/2011	8:32	Surfc	<i>Ditylum spp. (T)</i>		Very Rare	
	9/27/2011	8:32	Surfc	<i>Heterocapsa triquetra (B)</i>		Rare	0.004
	9/27/2011	8:32	Surfc	<i>Prorocentrum triestinum (B)</i>		Very Rare	
	9/27/2011	8:32	Surfc	<i>Pseudo-nitzschia spp. (T)</i>		Rare	0.002
	9/27/2011	8:32	Surfc	<i>Scrippsiella sp. (B)</i>		Rare	0.001
	10/11/2011	8:30	Surfc	<i>Chaetoceros spp. (T)</i>		Many	1.130
	10/11/2011	8:30	Surfc	<i>Dinophysis acuminata (T)</i>		Very Rare	
	10/11/2011	8:30	Surfc	<i>Ditylum spp. (T)</i>		Very Rare	
	10/11/2011	8:30	Surfc	<i>Karenia papilionacea (T)</i>		Very Rare	
	10/11/2011	8:30	Surfc	<i>Prorocentrum minimum (T)</i>		Very Rare	
	10/11/2011	8:30	Surfc	<i>Prorocentrum scutellum (B)</i>		Very Rare	
	10/11/2011	8:30	Surfc	<i>Prorocentrum sp. (T)</i>		Very Rare	
	10/11/2011	8:30	Surfc	<i>Prorocentrum triestinum (B)</i>		Very Rare	
	10/11/2011	8:30	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Very Rare	
	10/11/2011	8:30	Surfc	<i>Pseudo-nitzschia spp. (T)</i>		Rare	0.007
	10/11/2011	8:30	Surfc	<i>Rhizosolenia spp. (T)</i>		Rare	0.001
	10/11/2011	8:30	Surfc	<i>Scrippsiella sp. (B)</i>		Very Rare	

Vines Creek

IR38: Vines Lane

9/13/2011	7:30	Surfc	<i>Akashiwo sanguinea (T)</i>	Common	0.120
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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.

**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>Vines Creek</u>							
IR38: Vines Lane							
	9/13/2011	7:30	Surfc	<i>Navicula (small) (B*)</i>		Abundant	33.000
	10/11/2011	8:00	Surfc	<i>Anabaena spp. (T)</i>		Common	0.120
	10/11/2011	8:00	Surfc	<i>Aphanizomenon spp. (T)</i>		Many	2.400
	10/11/2011	8:00	Surfc	<i>Cylindrospermopsis (T)</i>		Common	0.750
	10/11/2011	8:00	Surfc	<i>Prorocentrum triestinum (B)</i>		Present	
<u>White Creek</u>							
IR32: Holly Terrace Acres Canal Dead End, White Creek							
	9/6/2011	8:33	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	
	9/6/2011	8:33	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/6/2011	8:33	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Present	
	9/6/2011	8:33	Surfc	<i>Prorocentrum minimum (T)</i>		Many	1.640
	9/6/2011	8:33	Surfc	<i>Prorocentrum triestinum (B)</i>		Present	
	9/6/2011	8:33	Surfc	<i>Protoperidinium quinquecornu (B)</i>		Present	
	9/6/2011	8:33	Surfc	<i>Scrippsiella sp. (B)</i>		Common	0.375
	9/12/2011	9:13	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	9/12/2011	9:13	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/12/2011	9:13	Surfc	<i>Prorocentrum minimum (T)</i>		Common	0.600
	9/12/2011	9:13	Surfc	<i>Scrippsiella sp. (B)</i>		Common	0.190
	9/19/2011	8:28	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/19/2011	8:28	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	9/19/2011	8:28	Surfc	<i>Prorocentrum minimum (T)</i>		Present	
	9/19/2011	8:28	Surfc	<i>Scrippsiella sp. (B)</i>		Present	
	9/26/2011	8:39	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/26/2011	8:39	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	9/26/2011	8:39	Surfc	<i>Prorocentrum triestinum (B)</i>		Present	
	9/26/2011	8:39	Surfc	<i>Scrippsiella sp. (B)</i>		Present	
	10/10/2011	9:25	Surfc		No HABs found		
<b>Little Assawoman Bay</b>							
LA45: Fenwick Island Bayside							
	9/20/2011	8:50	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	
	9/20/2011	8:50	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	10/11/2011	8:03	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
<u>Assawoman Canal</u>							
LA10: Assawoman Canal @ Kent Ave Bridge							
	9/12/2011	7:35	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	0.050
	9/12/2011	7:35	Surfc	<i>Chattonella cf. verruculosa (T)</i>		Present	
	9/12/2011	7:35	Surfc	<i>Fibrocapsa japonica (T)</i>		Present	
	9/12/2011	7:35	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/12/2011	7:35	Surfc	<i>Heterocapsa sp. (B)</i>		Present	
	9/12/2011	7:35	Surfc	<i>Karlodinium veneficum (T)</i>		Present	

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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.

**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>Assawoman Canal</u>							
LA10: Assawoman Canal @ Kent Ave Bridge							
	9/12/2011	7:35	Surfc	<i>Prorocentrum triestinum (B)</i>		Present	
	9/12/2011	7:35	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Present	
	10/10/2011	7:40	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	0.025
	10/10/2011	7:40	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
<u>Dirickson Creek</u>							
LA03: Mulberry Landing							
	9/12/2011	8:10	Surfc	<i>Prorocentrum minimum (T)</i>		Present	
	10/10/2011	8:20	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	0.025
	10/10/2011	8:20	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
LA09: Dirickson Creek at Road 381 bridge.							
	9/12/2011	8:45	Surfc	<i>Gyrodinium instriatum (B)</i>		Many	1.100
	9/12/2011	8:45	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	9/12/2011	8:45	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Present	
	9/12/2011	8:45	Surfc	<i>Prorocentrum minimum (T)</i>		Present	
	9/12/2011	8:45	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Present	
	10/10/2011	8:53	Surfc	<i>Chattonella cf. verruculosa (T)</i>		Present	
	10/10/2011	8:53	Surfc	<i>Gyrodinium instriatum (B)</i>		Abundant	16.100
	10/10/2011	8:53	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
<u>Jefferson Creek</u>							
SB10E: Russell Canal east dead end							
	9/6/2011	7:48	Surfc	<i>Chattonella subsalsa (T)</i>		Present	
	9/6/2011	7:48	Surfc	<i>Gyrodinium instriatum (B)</i>		Common	0.500
	9/6/2011	7:48	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/6/2011	7:48	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	9/6/2011	7:48	Surfc	<i>Karlodinium veneficum (T)</i>		Common	0.350
	9/6/2011	7:48	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Common	0.413
	9/6/2011	7:48	Surfc	<i>Prorocentrum minimum (T)</i>		Present	
	9/6/2011	7:48	Surfc	<i>Scrippsiella sp. (B)</i>		Present	
	9/13/2011	7:52	Surfc	<i>Gyrodinium instriatum (B)</i>		Present	
	9/13/2011	7:52	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	9/13/2011	7:52	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/13/2011	7:52	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Present	
	9/13/2011	7:52	Surfc	<i>Protoperidinium quinquecorne (B)</i>		Present	
	9/20/2011	7:50	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	
	9/20/2011	7:50	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/20/2011	7:50	Surfc	<i>Heterocapsa sp. (B)</i>		Present	
	9/20/2011	7:50	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	9/27/2011	7:47	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	9/27/2011	7:47	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/27/2011	7:47	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Present	

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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.

**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							
	9/27/2011	7:47	Surfc	<i>Protoperidinium quinquecorne</i> (B)		Present	
	10/11/2011	7:52	Surfc	<i>Amphidinium spp.</i> (T)		Present	
	10/11/2011	7:52	Surfc	<i>Gyrodinium instriatum</i> (B)		Present	
	10/11/2011	7:52	Surfc	<i>Heterosigma akashiwo</i> (T)		Present	
	10/11/2011	7:52	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Common	0.180
SB10W: Russell Canal west dead end							
	9/6/2011	8:05	Surfc	<i>Gyrodinium instriatum</i> (B)		Present	
	9/6/2011	8:05	Surfc	<i>Heterocapsa rotundata</i> (B)		Common	0.200
	9/6/2011	8:05	Surfc	<i>Heterosigma akashiwo</i> (T)		Common	0.213
	9/6/2011	8:05	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.375
	9/6/2011	8:05	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	9/13/2011	8:07	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	9/20/2011	8:07	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	9/20/2011	8:07	Surfc	<i>Heterocapsa sp.</i> (B)		Present	
	9/27/2011	8:00	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	9/27/2011	8:00	Surfc	<i>Protoperidinium quinquecorne</i> (B)		Present	
	10/11/2011	8:07	Surfc	<i>Chattonella cf. verruculosa</i> (T)		Present	
<b>Rehoboth Bay</b>							
ML: Massey's Landing							
	9/12/2011	11:13	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	9/12/2011	11:13	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	10/10/2011	11:59	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
RB07: West Bay Park							
	9/13/2011	8:30	Surfc	<i>Akashiwo sanguinea</i> (T)		Present	0.012
	9/13/2011	8:30	Surfc	<i>Heterocapsa rotundata</i> (B)		Present	
	9/13/2011	8:30	Surfc	<i>Heterocapsa sp.</i> (B)		Present	
	10/11/2011	8:30	Surfc	<i>Chattonella cf. verruculosa</i> (T)		Present	
	10/11/2011	8:30	Surfc	<i>Heterosigma akashiwo</i> (T)		Present	
<u>Bald Eagle Creek</u>							
RB64: Torquay Canal, west side of Land's End near UD Site #1							
	9/6/2011	9:25	Surfc	<i>Chattonella cf. verruculosa</i> (T)		Common	0.388
	9/6/2011	9:25	Surfc	<i>Fibrocapsa japonica</i> (T)		Common	0.363
	9/6/2011	9:25	Surfc	<i>Karlodinium veneficum</i> (T)		Common	0.363
	9/6/2011	9:25	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	9/6/2011	9:25	Surfc	<i>Scrippsiella sp.</i> (B)		Present	
	9/12/2011	8:25	Surfc	<i>Chattonella cf. verruculosa</i> (T)		Common	0.410
	9/12/2011	8:25	Surfc	<i>Fibrocapsa japonica</i> (T)		Common	0.410
	9/12/2011	8:25	Surfc	<i>Heterosigma akashiwo</i> (T)		Abundant	29.900
	9/12/2011	8:25	Surfc	<i>Karlodinium veneficum</i> (T)		Present	
	9/12/2011	8:25	Surfc	<i>Kryptoperidinium foliaceum</i> (B)		Present	
	9/12/2011	8:25	Surfc	<i>Prorocentrum minimum</i> (T)		Present	

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**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							
	9/12/2011	8:25	Surfc	<i>Scrippsiella sp. (B)</i>		Present	
	9/19/2011	8:04	Surfc		No HABS found		
	9/26/2011	8:00	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	
	9/26/2011	8:00	Surfc	<i>Heterosigma akashiwo (T)</i>		Many	3.300
	10/10/2011	8:37	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	0.025
	10/10/2011	8:37	Surfc	<i>Prorocentrum minimum (T)</i>		Present	
<u>Guinea Creek</u>							
RB05: Mouth of Guinea Creek (Pot Nets Creekside)							
	9/12/2011	11:35	Surfc		No HABS found		
	10/10/2011	12:17	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	10/10/2011	12:17	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	10/10/2011	12:17	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
RB06: Guinea Creek (Winding Creek Village)							
	9/13/2011	8:00	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	0.025
	9/13/2011	8:00	Surfc	<i>Gyrodinium instriatum (B)</i>		Present	
	9/13/2011	8:00	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	9/13/2011	8:00	Surfc	<i>Scrippsiella sp. (B)</i>		Present	
	10/10/2011	7:40	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	10/10/2011	7:40	Surfc	<i>Prorocentrum minimum (T)</i>		Present	
<u>Herring Creek</u>							
RB04: Herring Creek, Mid-Section							
	9/13/2011	8:45	Surfc	<i>Karlodinium veneficum (T)</i>		Present	
	10/11/2011	8:55	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	
	10/11/2011	8:55	Surfc	<i>Chaetoceros spp. (T)</i>		Present	
	10/11/2011	8:55	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
<u>Love Creek</u>							
RB34: Love Creek at Rt 24 Bridge							
	9/12/2011	8:45	Surfc	<i>Gyrodinium instriatum (B)</i>		Many	1.400
	9/12/2011	8:45	Surfc	<i>Heterocapsa rotundata (B)</i>		Present	
	9/12/2011	8:45	Surfc	<i>Kryptoperidinium foliaceum (B)</i>		Present	
	10/10/2011	8:57	Surfc	<i>Akashiwo sanguinea (T)</i>		Present	
	10/10/2011	8:57	Surfc	<i>Gyrodinium instriatum (B)</i>		Present	
	10/10/2011	8:57	Surfc	<i>Heterocapsa sp. (B)</i>		Present	
	10/10/2011	8:57	Surfc	<i>Heterosigma akashiwo (T)</i>		Present	
	10/10/2011	8:57	Surfc	<i>Karlodinium veneficum (T)</i>		Common	0.110
	10/10/2011	8:57	Surfc	<i>Prorocentrum minimum (T)</i>		Common	0.180
	10/10/2011	8:57	Surfc	<i>Prorocentrum triestinum (B)</i>		Common	0.110
	10/10/2011	8:57	Surfc	<i>Scrippsiella sp. (B)</i>		Present	

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**University of Delaware Citizen Monitoring Program**