

Harmful Algae Report

All data between 7/29/2011 and 8/13/2011

University of Delaware Citizen Monitoring Program

| Water Body Tributary Site | Date | Time | Smpl Dpth | Name | Comment if ID uncertain | Abundance | MC/L |
|--|-----------|------|--------------|--|----------------------------|-----------|-------|
| Assawoman Bay | | | | | | | |
| <u>Roy Creek</u> | | | | | | | |
| BA01: Keenwick on Bay, Roy Creek | | | | | | | |
| | 8/9/2011 | 8:32 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| Atlantic Ocean | | | | | | | |
| RWPM14: Tower Rd Ocean, Delaware Seashore State Park | | | | | | | |
| | 8/3/2011 | 8:30 | Surfc | <i>Ceratium pentagonum</i> (B) | | Very Rare | |
| | 8/3/2011 | 8:30 | Surfc | <i>Chaetoceros</i> spp. (T) | | Rare | 0.001 |
| | 8/3/2011 | 8:30 | Surfc | <i>Prorocentrum scutellum</i> (B) | | Very Rare | |
| | 8/3/2011 | 8:30 | Surfc | <i>Prorocentrum triestinum</i> (B) | | Present | 0.014 |
| | 8/3/2011 | 8:30 | Surfc | <i>Pseudo-nitzschia</i> spp. (T) | | Rare | 0.004 |
| | 8/3/2011 | 8:30 | Surfc | <i>Rhizosolenia</i> spp. (T) | | Present | 0.055 |
| RWPM8: Cape Henlopen State Park Beach (2) | | | | | | | |
| | 8/11/2011 | 9:30 | Surfc | <i>Chaetoceros</i> spp. (T) | | Present | 0.016 |
| | 8/11/2011 | 9:30 | Surfc | <i>Prorocentrum minimum</i> (T) | | Rare | 0.001 |
| | 8/11/2011 | 9:30 | Surfc | <i>Prorocentrum</i> sp. (T) | | Very Rare | |
| | 8/11/2011 | 9:30 | Surfc | <i>Prorocentrum triestinum</i> (B) | | Present | 0.017 |
| | 8/11/2011 | 9:30 | Surfc | <i>Pseudo-nitzschia</i> spp. (T) | | Present | 0.011 |
| | 8/11/2011 | 9:30 | Surfc | <i>Rhizosolenia</i> spp. (T) | | Rare | 0.008 |
| | 8/11/2011 | 9:30 | Surfc | <i>Scrippsiella</i> sp. (B) | | Very Rare | |
| RWPMVIII: Town of Fenwick | | | | | | | |
| | 8/3/2011 | 8:07 | Surfc | <i>Amphidinium</i> spp. (T) | | Very Rare | |
| | 8/3/2011 | 8:07 | Surfc | <i>Chaetoceros</i> spp. (T) | | Rare | 0.001 |
| | 8/3/2011 | 8:07 | Surfc | <i>Ditylum</i> spp. (T) | | Rare | 0.001 |
| | 8/3/2011 | 8:07 | Surfc | <i>Karenia papilionacea</i> (T) | | Rare | 0.001 |
| | 8/3/2011 | 8:07 | Surfc | <i>Prorocentrum minimum</i> (T) | | Very Rare | |
| | 8/3/2011 | 8:07 | Surfc | <i>Prorocentrum scutellum</i> (B) | | Rare | 0.002 |
| | 8/3/2011 | 8:07 | Surfc | <i>Prorocentrum triestinum</i> (B) | | Present | 0.012 |
| | 8/3/2011 | 8:07 | Surfc | <i>Protoperdinium quinquecorne</i> (B) | | Rare | 0.001 |
| | 8/3/2011 | 8:07 | Surfc | <i>Pseudo-nitzschia</i> spp. (T) | | Present | 0.018 |
| | 8/3/2011 | 8:07 | Surfc | <i>Rhizosolenia</i> spp. (T) | | Present | 0.011 |
| | 8/3/2011 | 8:07 | Surfc | <i>Scrippsiella</i> sp. (B) | | Present | 0.015 |
| Broadkill River | | | | | | | |
| BR01: Broadkill river @ PEL dock. | | | | | | | |
| | 8/3/2011 | 9:00 | Net | " <i>Gymnodinioid</i> " sp. (S) | 25-40 um Grn | | |
| | 8/3/2011 | 9:00 | Net | <i>Akashiwo sanguinea</i> (T) | | | |
| | 8/3/2011 | 9:00 | Net | <i>Chaetoceros</i> spp. (T) | | | |
| | 8/3/2011 | 9:00 | Net | <i>Ditylum</i> spp. (T) | | | |
| | 8/3/2011 | 9:00 | Net | <i>Heterocapsa rotundata</i> (B) | | | |

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.

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 |
|--|-----------|-------|--------------|---|----------------------------|-----------|--------|
| Broadkill River | | | | | | | |
| BR01: Broadkill river @ PEL dock. | | | | | | | |
| | 8/3/2011 | 9:00 | Net | <i>Heterocapsa sp. (B)</i> | | | |
| | 8/3/2011 | 9:00 | Net | <i>Heterosigma akashiwo (T)</i> | | | |
| | 8/3/2011 | 9:00 | Net | <i>Prorocentrum minimum (T)</i> | | | |
| | 8/3/2011 | 9:00 | Net | <i>Prorocentrum triestinum (B)</i> | | | |
| | 8/3/2011 | 9:00 | Net | <i>Pseudo-nitzschia spp. (T)</i> | | | |
| | 8/3/2011 | 9:00 | Net | <i>Rhizosolenia spp. (T)</i> | | | |
| | 8/3/2011 | 9:00 | Net | <i>Scrippsiella sp. (B)</i> | | | |
| | 8/3/2011 | 9:00 | Surfc | <i>Chaetoceros spp. (T)</i> | | Present | |
| | 8/3/2011 | 9:00 | Surfc | <i>Heterocapsa rotundata (B)</i> | | Present | |
| | 8/3/2011 | 9:00 | Surfc | <i>Heterocapsa sp. (B)</i> | | Present | |
| | 8/3/2011 | 9:00 | Surfc | <i>Heterosigma akashiwo (T)</i> | | Present | |
| | 8/3/2011 | 9:00 | Surfc | <i>Prorocentrum minimum (T)</i> | | Present | |
| | 8/3/2011 | 9:00 | Surfc | <i>Prorocentrum triestinum (B)</i> | | Present | |
| | 8/10/2011 | 9:00 | Net | <i>Chaetoceros spp. (T)</i> | | | |
| | 8/10/2011 | 9:00 | Net | <i>Rhizosolenia spp. (T)</i> | | | |
| | 8/10/2011 | 9:00 | Surfc | <i>Chaetoceros spp. (T)</i> | | Common | 0.150 |
| | 8/10/2011 | 9:00 | Surfc | <i>Heterocapsa rotundata (B)</i> | | Present | |
| | 8/10/2011 | 9:00 | Surfc | <i>Prorocentrum triestinum (B)</i> | | Present | |
| | 8/10/2011 | 9:00 | Surfc | <i>Protoperidinium quinquecorne (B)</i> | | Present | |
| BR20: Broadkill River at Milton tidal pond | | | | | | | |
| | 8/10/2011 | 7:00 | Surfc | <i>Kryptoperidinium foliaceum (B)</i> | | Common | 0.110 |
| <u>Diamond Pond</u> | | | | | | | |
| BR48: Diamond Pond | | | | | | | |
| | 8/10/2011 | 10:42 | Surfc | <i>(Unknown) (B*)</i> | tiny filament | Abundant | 77.000 |
| | 8/10/2011 | 10:42 | Surfc | <i>Anabaena spp. (T)</i> | | Many | 2.900 |
| | 8/10/2011 | 10:42 | Surfc | <i>Aphanizomenon spp. (T)</i> | | Abundant | 11.000 |
| | 8/10/2011 | 10:42 | Surfc | <i>Microcystis spp. (T)</i> | | Abundant | 51.700 |
| <u>Old Mill Creek</u> | | | | | | | |
| BR21: Old Mill Creek downstream from Red Mill Pond | | | | | | | |
| | 8/10/2011 | 12:15 | Surfc | <i>Chaetoceros spp. (T)</i> | | Common | 0.180 |
| | 8/10/2011 | 12:15 | Surfc | <i>Heterosigma akashiwo (T)</i> | | Common | 0.700 |
| | 8/10/2011 | 12:15 | Surfc | <i>Kryptoperidinium foliaceum (B)</i> | | Present | |
| | 8/10/2011 | 12:15 | Surfc | <i>Protoperidinium quinquecorne (B)</i> | | Common | 0.130 |
| <u>Prime Hook Creek</u> | | | | | | | |
| BR03: Prime Hook Creek at Boat Ramp at Refuge Headquarters | | | | | | | |
| | 8/10/2011 | 11:35 | Surfc | <i>Amphidinium spp. (T)</i> | | Present | |
| | 8/10/2011 | 11:35 | Surfc | <i>Anabaena spp. (T)</i> | | Abundant | 76.700 |
| | 8/10/2011 | 11:35 | Surfc | <i>Gyrodinium instriatum (B)</i> | | Present | |
| | 8/10/2011 | 11:35 | Surfc | <i>Heterocapsa rotundata (B)</i> | | Present | |
| | 8/10/2011 | 11:35 | Surfc | <i>Karlodinium veneficum (T)</i> | | Present | |
| | 8/10/2011 | 11:35 | Surfc | <i>Kryptoperidinium foliaceum (B)</i> | | Common | 0.210 |

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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|--|-----------|-------|--------------|---|----------------------------|---------------|---------|
| Broadkill River | | | | | | | |
| <u>Prime Hook Creek</u> | | | | | | | |
| BR03: Prime Hook Creek at Boat Ramp at Refuge Headquarters | | | | | | | |
| | 8/10/2011 | 11:35 | Surfc | <i>Oxyrrhis marina</i> (B*) | | Abundant | 24.000 |
| | 8/10/2011 | 11:35 | Surfc | <i>Protoperidinium quinquecorne</i> (B) | | Present | |
| <u>Red Mill Pond</u> | | | | | | | |
| BR56: Red Mill Pond - Sycamore Drive | | | | | | | |
| | 8/3/2011 | 7:30 | Surfc | <i>Anabaena</i> spp. (T) | | Many | 7.300 |
| | 8/3/2011 | 7:30 | Surfc | <i>Aphanizomenon</i> spp. (T) | | Many | 9.100 |
| | 8/3/2011 | 7:30 | Surfc | <i>Microcystis</i> spp. (T) | | Many | 4.900 |
| | 8/3/2011 | 7:30 | Surfc | <i>Snowella</i> spp. (T) | | Many | 1.000 |
| | 8/10/2011 | 11:27 | Surfc | <i>Anabaena</i> spp. (T) | | Common | 0.880 |
| | 8/10/2011 | 11:27 | Surfc | <i>Aphanizomenon</i> spp. (T) | | Very Abundant | 110.000 |
| | 8/10/2011 | 11:27 | Surfc | <i>Microcystis</i> spp. (T) | | Common | 0.600 |
| | 8/10/2011 | 11:27 | Surfc | <i>Microcystis</i> v <i>small</i> spp (T) | | Common | 0.810 |
| <u>Wagamon's Pond</u> | | | | | | | |
| BR44: Wagamon's Pond, Milton | | | | | | | |
| | 8/10/2011 | 8:50 | Surfc | <i>Aphanizomenon</i> spp. (T) | | Present | |
| | 8/10/2011 | 8:50 | Surfc | <i>Lyngbya</i> (T) | | Present | |
| Delaware Bay | | | | | | | |
| DB01: End of Cape Shores pier | | | | | | | |
| | 8/2/2011 | 8:28 | Surfc | <i>Chaetoceros</i> spp. (T) | | Common | 0.180 |
| | 8/2/2011 | 8:28 | Surfc | <i>Fibrocapsa japonica</i> (T) | | Present | |
| | 8/2/2011 | 8:28 | Surfc | <i>Heterocapsa</i> sp. (B) | | Present | |
| | 8/2/2011 | 8:28 | Surfc | <i>Heterosigma akashiwo</i> (T) | | Present | |
| | 8/2/2011 | 8:28 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/2/2011 | 8:28 | Surfc | <i>Prorocentrum triestinum</i> (B) | | Present | |
| | 8/2/2011 | 8:28 | Surfc | <i>Rhizosolenia</i> spp. (T) | | Common | 0.110 |
| | 8/9/2011 | 8:31 | Surfc | <i>Chaetoceros</i> spp. (T) | | Common | 0.150 |
| | 8/9/2011 | 8:31 | Surfc | <i>Heterocapsa</i> sp. (B) | | Present | |
| <u>Canary Creek</u> | | | | | | | |
| BR19: Canary Creek at New Road | | | | | | | |
| | 8/11/2011 | 11:20 | Surfc | <i>Chaetoceros</i> spp. (T) | | Common | 0.210 |
| | 8/11/2011 | 11:20 | Surfc | <i>Rhizosolenia</i> spp. (T) | | Present | |
| BR40: Canary Creek at Pilottown Rd | | | | | | | |
| | 8/10/2011 | 9:00 | Surfc | <i>Chaetoceros</i> spp. (T) | | Present | |
| | 8/10/2011 | 9:00 | Surfc | <i>Heterocapsa rotundata</i> (B) | | Present | |
| | 8/10/2011 | 9:00 | Surfc | <i>Heterocapsa</i> sp. (B) | | Present | |
| | 8/10/2011 | 9:00 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| Dirickson Creek | | | | | | | |
| <u>Dirickson Pond</u> | | | | | | | |
| LA38: Hamlet at Dirickson Pond | | | | | | | |
| | 8/9/2011 | 7:45 | Surfc | <i>Aphanizomenon</i> spp. (T) | | Common | |

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| Water Body Tributary Site | Date | Time | Smpl Dpth | Name | Comment if ID uncertain | Abundance | MC/L |
|--|-----------|-------|--------------|---|----------------------------|-----------|--------|
| Dirickson Creek | | | | | | | |
| <u>Dirickson Pond</u> | | | | | | | |
| LA38: Hamlet at Dirickson Pond | | | | | | | |
| | 8/9/2011 | 7:45 | Surfc | <i>Navicula (small) (B*)</i> | | Abundant | 13.200 |
| Indian River | | | | | | | |
| <u>Assawoman Canal</u> | | | | | | | |
| IR50: Assawoman Canal at N end, marina dock | | | | | | | |
| | 8/9/2011 | 7:55 | Surfc | <i>Akashiwo sanguinea (T)</i> | | Common | 0.110 |
| | 8/9/2011 | 7:55 | Surfc | <i>Heterocapsa rotundata (B)</i> | | Present | |
| | 8/9/2011 | 7:55 | Surfc | <i>Karlodinium veneficum (T)</i> | | Present | |
| | 8/9/2011 | 7:55 | Surfc | <i>Prorocentrum triestinum (B)</i> | | Common | 0.150 |
| | 8/9/2011 | 7:55 | Surfc | <i>Protoperidinium quinquecorne (B)</i> | | Present | |
| <u>Bethany Loop Canal</u> | | | | | | | |
| IR62: Loop Canal, Pa Ave terminus, Bethany Beach | | | | | | | |
| | 8/8/2011 | 7:50 | Surfc | <i>Chattonella cf. verruculosa (T)</i> | | Common | 0.110 |
| | 8/8/2011 | 7:50 | Surfc | <i>Chattonella subsalsa (T)</i> | | Present | |
| | 8/8/2011 | 7:50 | Surfc | <i>Fibrocapsa japonica (T)</i> | | Present | |
| | 8/8/2011 | 7:50 | Surfc | <i>Gyrodinium instriatum (B)</i> | | Common | 0.300 |
| | 8/8/2011 | 7:50 | Surfc | <i>Kryptoperidinium foliaceum (B)</i> | | Present | |
| | 8/8/2011 | 7:50 | Surfc | <i>Protoperidinium quinquecorne (B)</i> | | Common | 0.210 |
| <u>Indian River</u> | | | | | | | |
| IR04: Warwick Cove | | | | | | | |
| | 8/8/2011 | 10:14 | Surfc | <i>Chattonella cf. verruculosa (T)</i> | | Present | |
| | 8/8/2011 | 10:14 | Surfc | <i>Heterocapsa sp. (B)</i> | | Present | |
| | 8/8/2011 | 10:14 | Surfc | <i>Karlodinium veneficum (T)</i> | | Present | |
| | 8/8/2011 | 10:14 | Surfc | <i>Protoperidinium quinquecorne (B)</i> | | Present | |
| IR07: Holt's Landing State Park | | | | | | | |
| | 8/8/2011 | 7:30 | Surfc | <i>Akashiwo sanguinea (T)</i> | | Present | |
| | 8/8/2011 | 7:30 | Surfc | <i>Heterocapsa sp. (B)</i> | | Present | |
| | 8/8/2011 | 7:30 | Surfc | <i>Karlodinium veneficum (T)</i> | | Present | |
| | 8/8/2011 | 7:30 | Surfc | <i>Prorocentrum triestinum (B)</i> | | Present | |
| IR11: Pot Nets Seaside Pier | | | | | | | |
| | 8/8/2011 | 10:55 | Surfc | <i>Chaetoceros spp. (T)</i> | | Present | |
| | 8/8/2011 | 10:55 | Surfc | <i>Heterocapsa rotundata (B)</i> | | Present | |
| | 8/8/2011 | 10:55 | Surfc | <i>Heterocapsa sp. (B)</i> | | Present | |
| | 8/8/2011 | 10:55 | Surfc | <i>Kryptoperidinium foliaceum (B)</i> | | Present | |
| | 8/8/2011 | 10:55 | Surfc | <i>Prorocentrum triestinum (B)</i> | | Present | |
| | 8/8/2011 | 10:55 | Surfc | <i>Rhizosolenia spp. (T)</i> | | Present | |
| IR20: Bay Colony | | | | | | | |
| | 8/8/2011 | 7:55 | Surfc | | No HABs found | | |
| IR36B: James Farm, Pasture Point By Boat | | | | | | | |
| | 8/10/2011 | 9:55 | Surfc | <i>Chaetoceros spp. (T)</i> | | Present | |
| | 8/10/2011 | 9:55 | Surfc | <i>Heterocapsa rotundata (B)</i> | | Present | |

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| Water Body Tributary Site | Date | Time | Smpl Dpth | Name | Comment if ID uncertain | Abundance | MC/L |
|--|-----------|------|--------------|---|----------------------------|-----------|-------|
| Indian River | | | | | | | |
| <u>Indian River</u> | | | | | | | |
| IR36B: James Farm, Pasture Point By Boat | | | | | | | |
| | 8/10/2011 | 9:55 | Surfc | <i>Heterocapsa sp. (B)</i> | | Present | |
| | 8/10/2011 | 9:55 | Surfc | <i>Heterosigma akashiwo (T)</i> | | Present | |
| | 8/10/2011 | 9:55 | Surfc | <i>Prorocentrum triestinum (B)</i> | | Present | |
| | 8/10/2011 | 9:55 | Surfc | <i>Scrippsiella sp. (B)</i> | | Present | |
| IR39: North side of Inlet at Wheelchair fishing platform under new bridge. | | | | | | | |
| | 8/11/2011 | 7:30 | Surfc | <i>Ceratium pentagonum (B)</i> | | Very Rare | |
| | 8/11/2011 | 7:30 | Surfc | <i>Chaetoceros spp. (T)</i> | | Present | 0.018 |
| | 8/11/2011 | 7:30 | Surfc | <i>Dinophysis acuminata (T)</i> | | Very Rare | |
| | 8/11/2011 | 7:30 | Surfc | <i>Ditylum spp. (T)</i> | | Rare | 0.001 |
| | 8/11/2011 | 7:30 | Surfc | <i>Karenia papilionacea (T)</i> | | Very Rare | |
| | 8/11/2011 | 7:30 | Surfc | <i>Prorocentrum micans (B)</i> | | Very Rare | |
| | 8/11/2011 | 7:30 | Surfc | <i>Prorocentrum minimum (T)</i> | | Rare | 0.001 |
| | 8/11/2011 | 7:30 | Surfc | <i>Prorocentrum scutellum (B)</i> | | Rare | 0.002 |
| | 8/11/2011 | 7:30 | Surfc | <i>Prorocentrum triestinum (B)</i> | | Present | 0.029 |
| | 8/11/2011 | 7:30 | Surfc | <i>Protoperidinium quinquecorne (B)</i> | | Very Rare | |
| | 8/11/2011 | 7:30 | Surfc | <i>Pseudo-nitzschia spp. (T)</i> | | Present | 0.028 |
| | 8/11/2011 | 7:30 | Surfc | <i>Rhizosolenia spp. (T)</i> | | Present | 0.013 |
| | 8/11/2011 | 7:30 | Surfc | <i>Scrippsiella sp. (B)</i> | | Very Rare | |
| <u>Vines Creek</u> | | | | | | | |
| IR38: Vines Lane | | | | | | | |
| | 8/9/2011 | 7:15 | Surfc | <i>Akashiwo sanguinea (T)</i> | | Present | |
| | 8/9/2011 | 7:15 | Surfc | <i>Gyrodinium instriatum (B)</i> | | Present | |
| | 8/9/2011 | 7:15 | Surfc | <i>Heterocapsa sp. (B)</i> | | Present | |
| | 8/9/2011 | 7:15 | Surfc | <i>Karlodinium veneficum (T)</i> | | Present | |
| <u>White Creek</u> | | | | | | | |
| IR32: Holly Terrace Acres Canal Dead End, White Creek | | | | | | | |
| | 8/1/2011 | 8:25 | Surfc | <i>Akashiwo sanguinea (T)</i> | | Present | |
| | 8/1/2011 | 8:25 | Surfc | <i>Chattonella cf. verruculosa (T)</i> | | Present | |
| | 8/1/2011 | 8:25 | Surfc | <i>Chattonella subsalsa (T)</i> | | Present | |
| | 8/1/2011 | 8:25 | Surfc | <i>Heterocapsa rotundata (B)</i> | | Common | 0.180 |
| | 8/1/2011 | 8:25 | Surfc | <i>Heterosigma akashiwo (T)</i> | | Present | |
| | 8/1/2011 | 8:25 | Surfc | <i>Kryptoperidinium foliaceum (B)</i> | | Common | 0.130 |
| | 8/1/2011 | 8:25 | Surfc | <i>Prorocentrum minimum (T)</i> | | Common | 0.200 |
| | 8/1/2011 | 8:25 | Surfc | <i>Prorocentrum triestinum (B)</i> | | Present | |
| | 8/1/2011 | 8:25 | Surfc | <i>Protoperidinium quinquecorne (B)</i> | | Common | 0.310 |
| | 8/1/2011 | 8:25 | Surfc | <i>Scrippsiella sp. (B)</i> | | Common | 0.980 |
| | 8/8/2011 | 9:05 | Surfc | <i>Akashiwo sanguinea (T)</i> | | Present | |
| | 8/8/2011 | 9:05 | Surfc | <i>Chattonella subsalsa (T)</i> | | Common | 0.200 |
| | 8/8/2011 | 9:05 | Surfc | <i>Cochlodinium sp. (T)</i> | | Present | |
| | 8/8/2011 | 9:05 | Surfc | <i>Gyrodinium instriatum (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 |
|---|----------|------|--------------|--|----------------------------|-----------|--------|
| Indian River | | | | | | | |
| <u>White Creek</u> | | | | | | | |
| IR32: Holly Terrace Acres Canal Dead End, White Creek | | | | | | | |
| | 8/8/2011 | 9:05 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/8/2011 | 9:05 | Surfc | <i>Kryptoperidinium foliaceum</i> (B) | | Common | 0.150 |
| | 8/8/2011 | 9:05 | Surfc | <i>Protopteridinium quinquecorne</i> (B) | | Present | |
| | 8/8/2011 | 9:05 | Surfc | <i>Scrippsiella sp.</i> (B) | | Common | 0.120 |
| Little Assawoman Bay | | | | | | | |
| LA45: Fenwick Island Bayside | | | | | | | |
| | 8/9/2011 | 8:11 | Surfc | <i>Heterocapsa rotundata</i> (B) | | Present | |
| | 8/9/2011 | 8:11 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| <u>Assawoman Canal</u> | | | | | | | |
| LA10: Assawoman Canal @ Kent Ave Bridge | | | | | | | |
| | 8/8/2011 | 7:30 | Surfc | <i>Akashiwo sanguinea</i> (T) | | Present | |
| | 8/8/2011 | 7:30 | Surfc | <i>Heterocapsa rotundata</i> (B) | | Present | |
| | 8/8/2011 | 7:30 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/8/2011 | 7:30 | Surfc | <i>Protopteridinium quinquecorne</i> (B) | | Present | |
| <u>Dirickson Creek</u> | | | | | | | |
| LA03: Mulberry Landing | | | | | | | |
| | 8/8/2011 | 8:05 | Surfc | <i>Karlodinium veneficum</i> (T) | | Common | 0.100 |
| LA09: Dirickson Creek at Road 381 bridge. | | | | | | | |
| | 8/8/2011 | 8:35 | Surfc | <i>Gyrodinium instriatum</i> (B) | | Present | |
| | 8/8/2011 | 8:35 | Surfc | <i>Heterocapsa sp.</i> (B) | | Present | |
| | 8/8/2011 | 8:35 | Surfc | <i>Karlodinium veneficum</i> (T) | | Common | 0.280 |
| | 8/8/2011 | 8:35 | Surfc | <i>Kryptoperidinium foliaceum</i> (B) | | Present | |
| <u>Jefferson Creek</u> | | | | | | | |
| SB10E: Russell Canal east dead end | | | | | | | |
| | 8/2/2011 | 7:55 | Surfc | <i>Akashiwo sanguinea</i> (T) | | Present | |
| | 8/2/2011 | 7:55 | Surfc | <i>Chattonella cf. verruculosa</i> (T) | | Present | |
| | 8/2/2011 | 7:55 | Surfc | <i>Chattonella subsalsa</i> (T) | | Common | 0.458 |
| | 8/2/2011 | 7:55 | Surfc | <i>Fibrocapsa japonica</i> (T) | | Common | 0.960 |
| | 8/2/2011 | 7:55 | Surfc | <i>Heterocapsa rotundata</i> (B) | | Present | |
| | 8/2/2011 | 7:55 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/2/2011 | 7:55 | Surfc | <i>Kryptoperidinium foliaceum</i> (B) | | Present | |
| | 8/2/2011 | 7:55 | Surfc | <i>Leptocylindrus spp.</i> (B*) | | Abundant | 44.000 |
| | 8/2/2011 | 7:55 | Surfc | <i>Scrippsiella sp.</i> (B) | | Present | |
| | 8/9/2011 | 7:59 | Surfc | <i>Akashiwo sanguinea</i> (T) | | Present | |
| | 8/9/2011 | 7:59 | Surfc | <i>Fibrocapsa japonica</i> (T) | | Present | |
| | 8/9/2011 | 7:59 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/9/2011 | 7:59 | Surfc | <i>Kryptoperidinium foliaceum</i> (B) | | Present | |
| | 8/9/2011 | 7:59 | Surfc | <i>Scrippsiella sp.</i> (B) | | Present | |
| SB10W: Russell Canal west dead end | | | | | | | |
| | 8/2/2011 | 8:12 | Surfc | <i>Chattonella cf. verruculosa</i> (T) | | 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 |
|--|-----------|-------|--------------|---|----------------------------|-----------|--------|
| Little Assawoman Bay | | | | | | | |
| <u>Jefferson Creek</u> | | | | | | | |
| SB10W: Russell Canal west dead end | | | | | | | |
| | 8/2/2011 | 8:12 | Surfc | <i>Fibrocapsa japonica</i> (T) | | Common | 0.100 |
| | 8/2/2011 | 8:12 | Surfc | <i>Karlodinium veneficum</i> (T) | | Common | 0.140 |
| | 8/2/2011 | 8:12 | Surfc | <i>Leptocylindrus</i> spp. (B*) | | Abundant | 38.000 |
| | 8/9/2011 | 8:17 | Surfc | <i>Fibrocapsa japonica</i> (T) | | Present | |
| | 8/9/2011 | 8:17 | Surfc | <i>Heterosigma akashiwo</i> (T) | | Present | |
| | 8/9/2011 | 8:17 | Surfc | <i>Karlodinium veneficum</i> (T) | | Common | 0.240 |
| | 8/9/2011 | 8:17 | Surfc | <i>Kryptoperidinium foliaceum</i> (B) | | Present | |
| | 8/9/2011 | 8:17 | Surfc | <i>Prorocentrum minimum</i> (T) | | Present | |
| Rehoboth Bay | | | | | | | |
| ML: Massey's Landing | | | | | | | |
| | 8/8/2011 | 11:15 | Surfc | <i>Chaetoceros</i> spp. (T) | | Present | |
| | 8/8/2011 | 11:15 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/8/2011 | 11:15 | Surfc | <i>Protoperidinium quinquecorne</i> (B) | | Present | |
| RB07: West Bay Park | | | | | | | |
| | 8/9/2011 | 8:30 | Surfc | <i>Akashiwo sanguinea</i> (T) | | Present | |
| | 8/9/2011 | 8:30 | Surfc | <i>Chattonella cf. verruculosa</i> (T) | | Present | |
| | 8/9/2011 | 8:30 | Surfc | <i>Heterocapsa</i> sp. (B) | | Present | |
| | 8/9/2011 | 8:30 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/9/2011 | 8:30 | Surfc | <i>Scrippsiella</i> sp. (B) | | Present | |
| <u>Bald Eagle Creek</u> | | | | | | | |
| RB64: Torquay Canal, west side of Land's End near UD Site #1 | | | | | | | |
| | 8/1/2011 | 8:00 | Surfc | <i>Chattonella cf. verruculosa</i> (T) | | Many | 1.500 |
| | 8/1/2011 | 8:00 | Surfc | <i>Chattonella subsalsa</i> (T) | | Many | 9.200 |
| | 8/1/2011 | 8:00 | Surfc | <i>Fibrocapsa japonica</i> (T) | | Common | 0.160 |
| | 8/1/2011 | 8:00 | Surfc | <i>Heterocapsa rotundata</i> (B) | | Present | |
| | 8/1/2011 | 8:00 | Surfc | <i>Heterosigma akashiwo</i> (T) | | Present | |
| | 8/1/2011 | 8:00 | Surfc | <i>Kryptoperidinium foliaceum</i> (B) | | Present | |
| Fish kill: | 8/8/2011 | 8:20 | Surfc | <i>Akashiwo sanguinea</i> (T) | | Present | |
| . | 8/8/2011 | 8:20 | Surfc | <i>Karlodinium veneficum</i> (T) | | Common | 0.100 |
| . | 8/8/2011 | 8:20 | Surfc | <i>Kryptoperidinium foliaceum</i> (B) | | Present | |
| . | 8/8/2011 | 8:20 | Surfc | <i>Protoperidinium quinquecorne</i> (B) | | Present | |
| . | 8/8/2011 | 8:20 | Surfc | <i>Scrippsiella</i> sp. (B) | | Present | |
| | 8/12/2011 | 9:24 | Surfc | (Unknown) (B*) | 2 um Grn sph | Abundant | 66.000 |
| | 8/12/2011 | 9:24 | Surfc | <i>Chattonella subsalsa</i> (T) | | Present | |
| | 8/12/2011 | 9:24 | Surfc | <i>Heterocapsa rotundata</i> (B) | | Present | |
| | 8/12/2011 | 9:24 | Surfc | <i>Heterosigma akashiwo</i> (T) | | Present | |
| | 8/12/2011 | 9:24 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/12/2011 | 9:24 | Surfc | <i>Kryptoperidinium foliaceum</i> (B) | | Present | |
| | 8/12/2011 | 9:24 | Surfc | <i>Protoperidinium quinquecorne</i> (B) | | Present | |
| RB70: Torquay Canal from shore West of UD site #1 | | | | | | | |
| | 8/12/2011 | 9:47 | Surfc | (Unknown) (B*) | 2 um Grn sph | Abundant | 88.000 |

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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 |
|---|-----------|-------|--------------|---|----------------------------|-----------|-------|
| Rehoboth Bay | | | | | | | |
| <u>Bald Eagle Creek</u> | | | | | | | |
| RB70: Torquay Canal from shore West of UD site #1 | | | | | | | |
| | 8/12/2011 | 9:47 | Surfc | <i>Fibrocapsa japonica</i> (T) | | Present | |
| <u>Guinea Creek</u> | | | | | | | |
| RB05: Mouth of Guinea Creek (Pot Nets Creekside) | | | | | | | |
| | 8/8/2011 | 11:35 | Surfc | " <i>Gymnodinioid</i> " sp. (S) | 10-15 um Grn | Present | |
| | 8/8/2011 | 11:35 | Surfc | <i>Akashiwo sanguinea</i> (T) | | Present | |
| | 8/8/2011 | 11:35 | Surfc | <i>Heterocapsa rotundata</i> (B) | | Present | |
| | 8/8/2011 | 11:35 | Surfc | <i>Prorocentrum triestinum</i> (B) | | Present | |
| | 8/8/2011 | 11:35 | Surfc | <i>Protoperidinium quinquecorne</i> (B) | | Present | |
| | 8/8/2011 | 11:35 | Surfc | <i>Scrippsiella</i> sp. (B) | | Present | |
| RB06: Guinea Creek (Winding Creek Village) | | | | | | | |
| | 8/8/2011 | 7:45 | Surfc | <i>Heterosigma akashiwo</i> (T) | | Present | |
| | 8/8/2011 | 7:45 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/8/2011 | 7:45 | Surfc | <i>Kryptoperidinium foliaceum</i> (B) | | Present | |
| | 8/8/2011 | 7:45 | Surfc | <i>Prorocentrum triestinum</i> (B) | | Present | |
| <u>Herring Creek</u> | | | | | | | |
| RB04: Herring Creek, Mid-Section | | | | | | | |
| | 8/9/2011 | 8:45 | Surfc | <i>Akashiwo sanguinea</i> (T) | | Present | |
| | 8/9/2011 | 8:45 | Surfc | <i>Scrippsiella</i> sp. (B) | | Present | |
| <u>Love Creek</u> | | | | | | | |
| RB34: Love Creek at Rt 24 Bridge | | | | | | | |
| | 8/8/2011 | 8:39 | Surfc | <i>Gyrodinium instriatum</i> (B) | | Common | 0.280 |
| | 8/8/2011 | 8:39 | Surfc | <i>Heterosigma akashiwo</i> (T) | | Present | |
| | 8/8/2011 | 8:39 | Surfc | <i>Karlodinium veneficum</i> (T) | | Present | |
| | 8/8/2011 | 8:39 | Surfc | <i>Prorocentrum triestinum</i> (B) | | Present | |

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