UD CITIZEN MONITORING PROGRAM

UNIVERSITY OF DELAWARE
EARTH, OCEAN & ENVIRONMENT

Sea Grant Delaware

DELAWARE CENTER FOR THE INLAND BAYS
Research. Educate. Restore.

DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL

Harmful Algal Blooms (HABs)

HABs Facts:

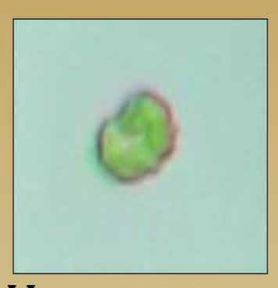
- **Harmful Algal Blooms (HABs) are a growing problem in U.S. coastal waters, as well as around the world.**
- **Some HABs produce toxins that can kill fish or contaminate shellfish resources. Others produce so much biomass as to disrupt aquatic life through low dissolved oxygen or smothering. At present, there are few to no practical remediation strategies depending on the scope of the water body affected. Reductions of nutrients entering water bodies should limit the extent of blooms of many species.**
- **The best thing that researchers, resource managers and public health officials can do is to monitor for the presence of HABs and respond to events in a coordinated fashion to minimize their potential effects to public health and aquatic resources.**
- **These cells have been seen locally. The red highlighted cells have been shown to contain some toxin in DE.**

DELAWARE'S LEAST WANTED:

POTENTIAL FISH KILLERS


CHATTONELLA CF. VERRUCULOSA


CHATTONELLA SUBSALSA


HETEROSIGMA AKASHIWO


FIBROCAPSA JAPONICA


KARENIA PAPILIONACEA


KARENIA BREVIS

ALEXANDRIUM SPP.


AMPHIDINIUM SPP.


KARLODINIUM VENEFICUM

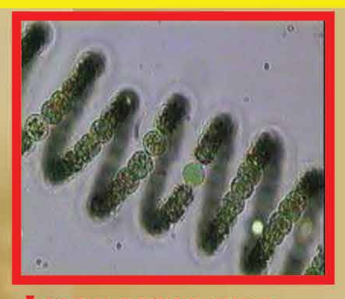

DINOPHYSIS ACUMINATA

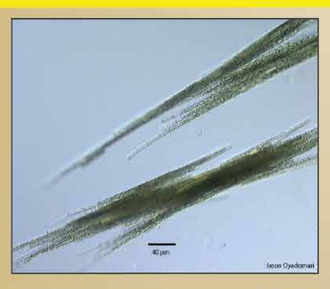

PROROCENTRUM MINIMUM


PROROCENTRUM SCUTELLUM


PSEUDONITZSCHIA SPP.

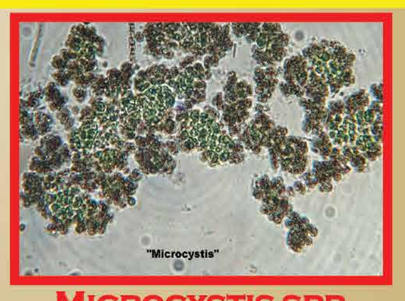
POTENTIAL SHELLFISH CONTAMINATORS


ANABAENA SPP.



APHANIZOMENON SPP.

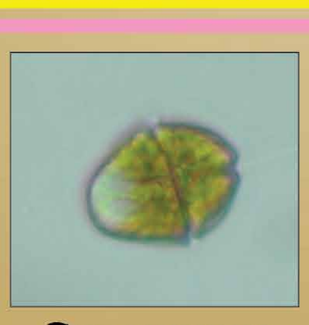

CYLINDROSPERMOPSIS SPP.



MICROCYSTIS SPP.


SNOWELLA SP.

POTENTIAL FRESH WATER TOXIFIERS


GYRODINIUM INSTRIATUM


HETEROCAPSA ROTUNDATA


KRYPTOPERIDINIUM FOLIACEUM


CHAETOCEROS SPP.

NEW!

IMPAIRS FUNCTION OF WATERFOWL FEATHERS !!!


AKASHIWO SANGUINEA

POTENTIAL NUISANCE BIOMASS ACCUMULATORS