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**Phytoplankton Monitoring Network (PMN)**

**Better Understanding of Harmful Algal Blooms Through Volunteer Monitoring**

[**https://coastalscience.noaa.gov/science-areas/stressor-impacts-mitigation/pmn/**](https://coastalscience.noaa.gov/science-areas/stressor-impacts-mitigation/pmn/)

[Submit Data](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/data/submit-data-regions/)

[Explore Data](https://www.ncei.noaa.gov/erddap/tabledap/bedi_PMN.html)

The National Phytoplankton Monitoring Network (PMN) is a community-based network of volunteers monitoring marine phytoplankton and harmful algal blooms (HABs). PMN recognizes the interrelationships between humans and coastal ecosystems while providing volunteer citizen scientists with meaningful opportunities for hands-on science engagement. The PMN enhances the Nation’s ability to respond to and manage the growing threat posed by HABs by collecting important data for species composition and distribution in coastal waters and creating working relationships between volunteers and professional marine biotoxin researchers.

[](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/about%22%20%5Co%20%22National%20Phytoplankton%20Monitoring%20Network%20Project)

**[About PMN](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/about%22%20%5Co%20%22National%20Phytoplankton%20Monitoring%20Network%20Project)**

[Learn more about the PMN program goals, history, and staff.](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/about%22%20%5Co%20%22National%20Phytoplankton%20Monitoring%20Network%20Project)

[](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/volunteering/%22%20%5Co%20%22Volunteering%20with%20PMN)

**[Volunteering / Training](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/volunteering/%22%20%5Co%20%22Volunteering%20with%20PMN)**

[Information and tools for new and current PMN volunteers.](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/volunteering/%22%20%5Co%20%22Volunteering%20with%20PMN)

[](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/data/%22%20%5Co%20%22PMN%20Data)

**[Access Data](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/data/%22%20%5Co%20%22PMN%20Data)**

[Submit current data collections and view historical data.](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/data/%22%20%5Co%20%22PMN%20Data)

[](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/image-gallery/%22%20%5Co%20%22PMN%20Image%20Gallery)

**[Image Gallery](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/image-gallery/%22%20%5Co%20%22PMN%20Image%20Gallery)**

[Plankton images collected in the field as well as volunteer pics.](https://coastalscience.noaa.gov/research/stressor-impacts-mitigation/pmn/image-gallery/%22%20%5Co%20%22PMN%20Image%20Gallery)

NCCOS delivers ecosystem science solutions for stewardship of the nation’s ocean and coastal resources to sustain thriving coastal communities and economies.

Example for ATLANTIC REGION 1 DATA ENTRY

* PMN ATLANTIC REGION 1 DATA ENTRY
* New Hampshire, Massachusetts, Rhode Island, Connecticut, New York
* **john.doe@noaa.gov** [Switch account](https://accounts.google.com/AccountChooser?continue=https://docs.google.com/forms/d/e/1FAIpQLSdxp8oY0MHZSHQn8hedTQF9d8rNOyvcPCfnsJ1OQP9uEDO7rA/viewform?usp%3Dpp_url%26entry.924558164%3DNA%26entry.1222314615%3DNA%26entry.1708153084%3DNA%26entry.1076822634%3DNA%26entry.881420653%3DNA%26entry.2129160865%3DNA%26entry.764256533%3DNA%26entry.319195464%3DNA%26entry.1688364111%3DNone%26entry.490265759%3DNone%26entry.1624525648%3DNone%26entry.755003300%3DNone%26entry.1808853510%3DNone%26entry.1215386481%3DNA%26entry.91322681%3DNA%26entry.1660088797%3DNA%2BFiles&service=wise)
*
* Draft saved
* \* Required
* Email\*
* If you do not see your PMN ID or site name listed, please exit data entry form and contact PMN for activation. Email: pmn@noaa.gov
* Please choose your PMN ID from the list below:\*
* MA51
* Next
* Page 1 of 30
* Clear form
* Never submit passwords through Google Forms.
* PMN ATLANTIC REGION 1 DATA ENTRY
* **john.doe@noaa.gov** [Switch account](https://accounts.google.com/AccountChooser?continue=https://docs.google.com/forms/d/e/1FAIpQLSdxp8oY0MHZSHQn8hedTQF9d8rNOyvcPCfnsJ1OQP9uEDO7rA/formResponse&service=wise)
*
* Draft saved
* \* Required
* MA51 sites
* \*
* Town Pier

PMN ATLANTIC REGION 1 DATA ENTRY

**john.doe@noaa.gov** [Switch account](https://accounts.google.com/AccountChooser?continue=https://docs.google.com/forms/d/e/1FAIpQLSdxp8oY0MHZSHQn8hedTQF9d8rNOyvcPCfnsJ1OQP9uEDO7rA/formResponse&service=wise)

\* Required

Sample data- Atlantic Region 1

New Hampshire, Massachusetts, Rhode Island, Connecticut, New York

Date sample was collected\*

Click arrow below to view calendar or enter date as MM/DD/YYYY

Date

Time collected\*

Please be sure to indicate AM or PM using drop down box

Time



**:**



AM

Water Temperature (Celsius)\*



Your answer

Air Temperature (Celsius)\*



Your answer

Salinity (ppt)\*



Your answer

TARGET SPECIES\*

Please check one box for each line (will stay highlighted as pink until all lines have a check mark)

None

YES (1 cell up to ~60% of slide coverage)

Elevated (>60% slide coverage)

Akashiwo sanguinea

Alexandrium spp.

Ceratium furca

Chaetoceros spp.

Cochlodinium spp.

Dinophysis spp.

Prorocentrum spp.

Pseudo-nitzschia spp.

Akashiwo sanguinea

Alexandrium spp.

Ceratium furca

Chaetoceros spp.

Cochlodinium spp.

Dinophysis spp.

Prorocentrum spp.

Pseudo-nitzschia spp.

OPTIONAL DATA- Although the following information is all optional, each question requires a response. Please leave NA as your response if you do not have data.

WEATHER\*

Sunny

Partly cloudy

Mostly cloudy

Cloudy

Rain

NA

Wind direction\*

N

NE

E

SE

S

SW

W

NW

NA

Wind speed\*

0-5 MPH

5-10 MPH

10-15 MPH

15-20 MPH

25+ MPH

NA

Tide\*

Incoming

Full high tide

Outgoing

Dead low tide

NA

For the following items, please leave NA if you do not have data. Each line must have either a numerical value or NA to be valid.

Please convert your values for dissolved oxygen, barometric pressure and secchi depth to the units listed if necessary.

pH\*



Dissolved oxygen (ppm)\*



Barometric pressure (mmHg)\*



Secchi depth (cm)- please convert from (m) to (cm)\*



Please check any of the following groups that you may have also observed and the relative abundance of each. If you don't know/can't ID, please leave NONE as response for each group.\*

None

Yes

Elevated

Centric diatoms

Pennate diatoms

Dinoflagellates

Cyanobacteria

Zooplankton

Centric diatoms

Pennate diatoms

Dinoflagellates

Cyanobacteria

Zooplankton

Which single group of organisms was the MOST dominant overall on your slide? If you're not sure or don't know, please leave NA as your response.\*

Centric diatoms

Pennate diatoms

Dinoflagellates

Cyanobacteria

Zooplankton

NA

Please indicate any phytoplankton you can identify by name and its relative abundance. If you're not sure/can't ID, please leave all boxes empty.

YES (1 cell up to ~60% of slide coverage)

Elevated (>60% slide coverage)

Skeletonema

Coscinodiscus

Odontella

Ditylum

Navicula

Nitzschia

Asterionellopsis

Thalassiosira

Thalassionema

Protoperidinium

Rhizosolenia

Eucampia

Hemiaulus

Triceratium

Pleurosigma

Guinardia

Licomorpha

Leptocylindrus

Bacillaria

Skeletonema

Coscinodiscus

Odontella

Ditylum

Navicula

Nitzschia

Asterionellopsis

Thalassiosira

Thalassionema

Protoperidinium

Rhizosolenia

Eucampia

Hemiaulus

Triceratium

Pleurosigma

Guinardia

Licomorpha

Leptocylindrus

Bacillaria

If you can identify other phytoplankton not listed above, please write in name(s) below. If not, please leave NA.\*



Please indicate any zooplankton/other you can identify by name. If you're not sure/can't ID, please leave NA as your response.\*

Nauplius

Zoea

Copepod

Tintinnid

Ciliate

Rotifer

pollen

NA

Other:



 Do you have any PHOTOS? Send to pmn@noaa.gov\*

Do you have any photos to send? Remember, if possible, you should be taking photos of all target organisms (and any unknowns) for confirmation purposes. You can make a single PDF of all photos labeled with IDs, a PowerPoint presentation of all photos labeled with IDs, or send as individual image files labeled with IDs. Please email photos to pmn@noaa.gov

Yes

No

Any final observations or comments?\*

Please enter any additional observations you may have (water color, smell, other organisms seen, etc) using the "Other' response.

NO

Other:



PLEASE take a moment to review your data entry above for accuracy. "NO" will allow you to review your entries. Once submitted, it cannot be edited but must be re-entered. If re-entered, please type "Correct data" in comments section.\*

ARE YOU READY TO SUBMIT YOUR DATA?

Yes

No