Survey Instrument for

bloomWatch & cyanoScope Cyanobacteria Monitoring Project

<u>bloomWatch</u>

The images below represent the data collection screens of the phone APP (revised Survey123-based APP) that will be utilized to collect important information on the location of potentially harmful cyanobacteria blooms, their size, prevailing weather and waterbody surface conditions, and if these waters are accessible to the public for recreational purposes.

| bloomWatch 🚳 | bloomWatch 🕲 | bloomWatch |
|--|--|--|
| Expand for information about blooms and this app: | Does waterbody have public access to any of the following? | What is the bloom size or extent? * Select one |
| blooms and this app: | Select all that apply | |
| sername | Boating Swimming Fishing | Greater than a football field |
| ur username will be publicly displayed next to any bmissions you make using this app. | Unsure | Between a football field and tennis co |
| omissions you make using this app. | Weather conditions: | Between a tennis court and car |
| | Select one | Less than a car |
| aterbody Name * | ^ | No bloom present |
| | Clear | General comments: |
| | Partly Cloudy | |
| ate * | Overcast | |
| Date | Rain | |
| elect Location * | | Photo 1 |
| | Surface conditions: | Photograph the areal extent of the bloom (waterbody |
| Y LLA | Select one | wide, along the shoreline, etc). If additional description necessary, enter in box below. |
| aterbody Type * | <u>^</u> | |
| lect one | Calm | |
| ^ | Ripples | |
| Estuary | Сһорру | - Photo 1 example: |
| Lake | White Caps | and the second sec |
| Ocean | | and the second |
| Pond | What is the bloom size or extent? * | the second second second second |
| River/Stream | Select one | NO. OF CALL OF TAXABLE PARTY |
| oes waterbody have public access to any of | × | |
| ne following? | al annual transmission | and Walk |
| bloomWa | tch 🖫 blo | pomWatch 🕲 |
| DIOOITIVVa | | |
| Photo 1 additional descripti | on: | |
| | | |
| | Photo 3 | 11 11 1 10 10 10 1 |
| | away, or in a clear glass | image of the bloom from < 3 feet is container at arm's length wearing |
| Photo 2 | waterproof gloves. If ad enter in box below. | dditional description is necessary, |
| Photograph the bloom from a stand | ng position 10-30 feet | |
| away. If additional description is neo below. | essary, enter in box | ro FT |
| | | |
| (6) F | ✓ Photo 3 exam | mple: |
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<u>cyanoScope</u>

These screenshots represent the image upload screens for microscopic images that are collected as a part of this program. Images will help determine if the bloom material are actually cyanobacteria that can be potentially toxic and the relative abundance and type of cyanobacteria present.



Step 1: cyanoScope images are uploaded by the user to the iNaturalist cyanoScope project page



Some Background on cyanoScope

Cyanobacteria are important members of the phytoplankton assemblages in lakes. In most situations these photosynthetic bacteria pose little risk to human health or the environmental integrity of lakes. However, when nitrogen and phosphorus concentrations are elevated and water temperatures warm, cyanobacteria can rapidly form dense and sometimes extensive blooms. Many species of cyanobacteria produce toxins that can cause symptoms in humans and other animals ranging from mild skin irritations and gastritis to debilitating illnesses and death. Given the current escalation in waterbody eutrophication and increases in temperatures due to global climate change, the frequency of cyanobacteria blooms is increasing. The public is beginning to become aware of these blooms through media accounts of lake closures, toxin exposures, and threats to drinking water intakes (e.g. cyanotoxins from Lake Erie in Toledo's drinking water supply in 2014). In addition to health concerns, blooms ...more \downarrow

Posted on February 04, 2016 02:22 PM by 🚔 bkreakie | 0 comments | Leave a comment

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| » Export with Hidden Co | oordinates |
| » Filter by Curator Ident | tification |
| » Identify Observations | |
| » New Journal Post | |
| | |

About

Valentines Day 2018

News: cyanoScope now has its own guide to the cyanobacteria. Please check it out: https://www.inaturalist.org/guides/6092

What is cyanoScope?

cyanoScope uses modern technologies and social media platforms to learn more about cyanobacteria.

By participating you will be helping ...more ↓

willbmisled created this project on September 22, 2015

Step 2: Microscopic images of cyanobacteria are georeferenced and placed on a location map

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|--|--|
| | Observed: Submitted: Jun 2, 2021 - 10:30 AM EDT Aug 24, 2021 - 10:06 PM EDT |
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Step 3: Microscopic images are taxonomically identified

Recent observations View All » Grid 📃 List Something... T. Something... Cenus Oscillatoria Something 2 ID

Step 4: Confirmed images are added to a list of observations