

Harmful Algal Bloom Response - West Virginia

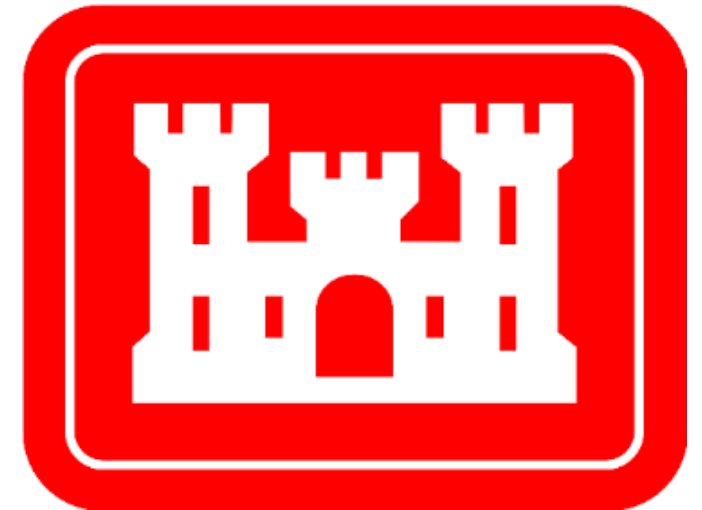


Mindy Neil, Assistant Director
Division of Water and Waste Management

Interagency collaboration

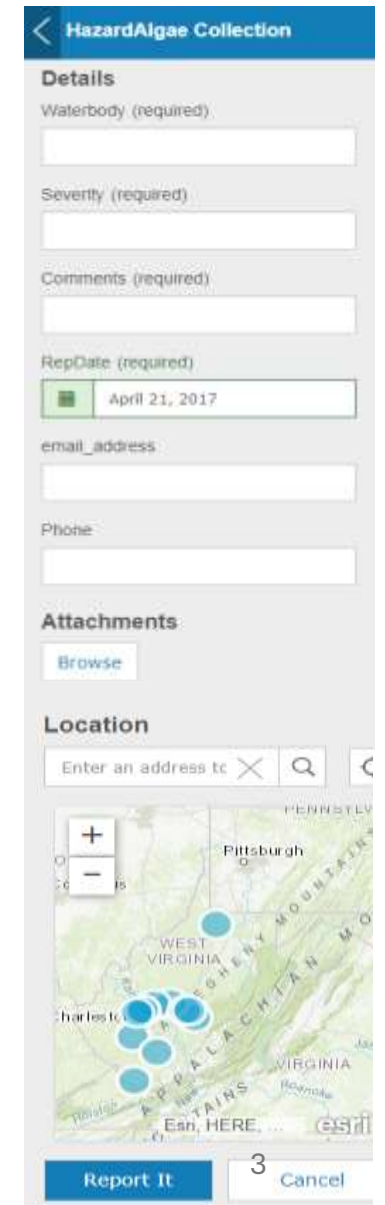
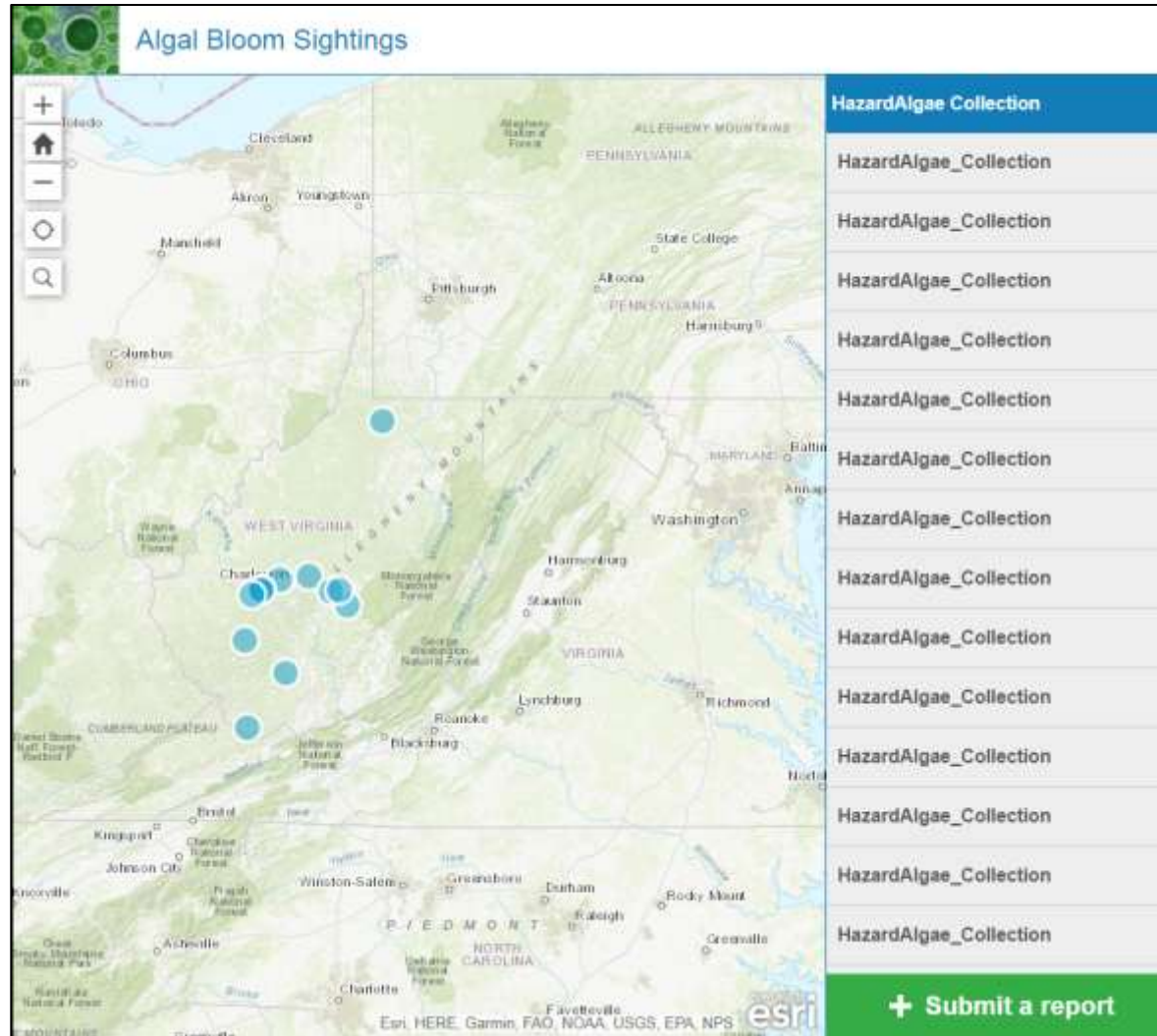
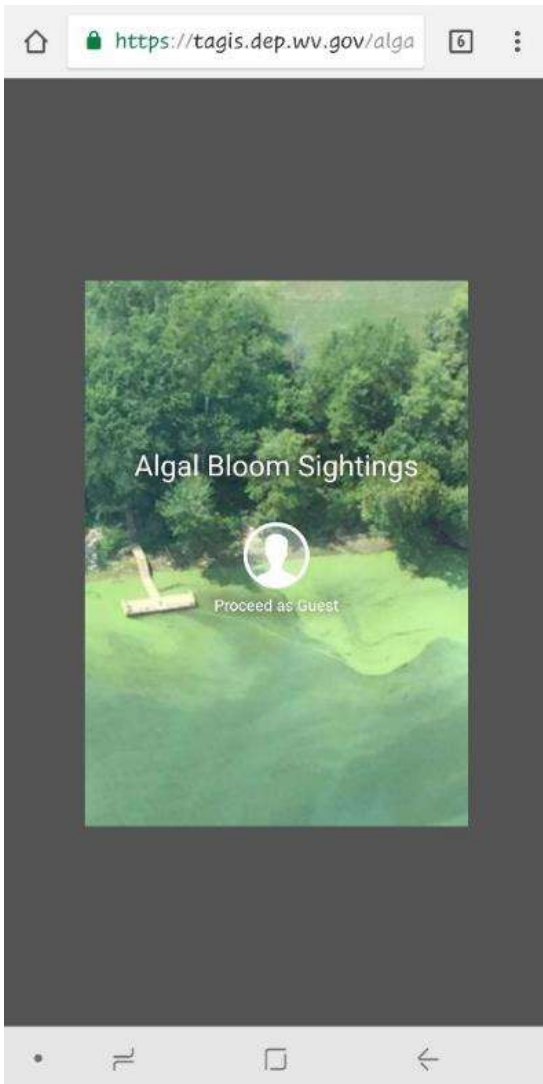


west virginia department of environmental protection



WVDEP HAB Reporting Pathways

- tagis.dep.wv.gov/algae – web-based reporting app

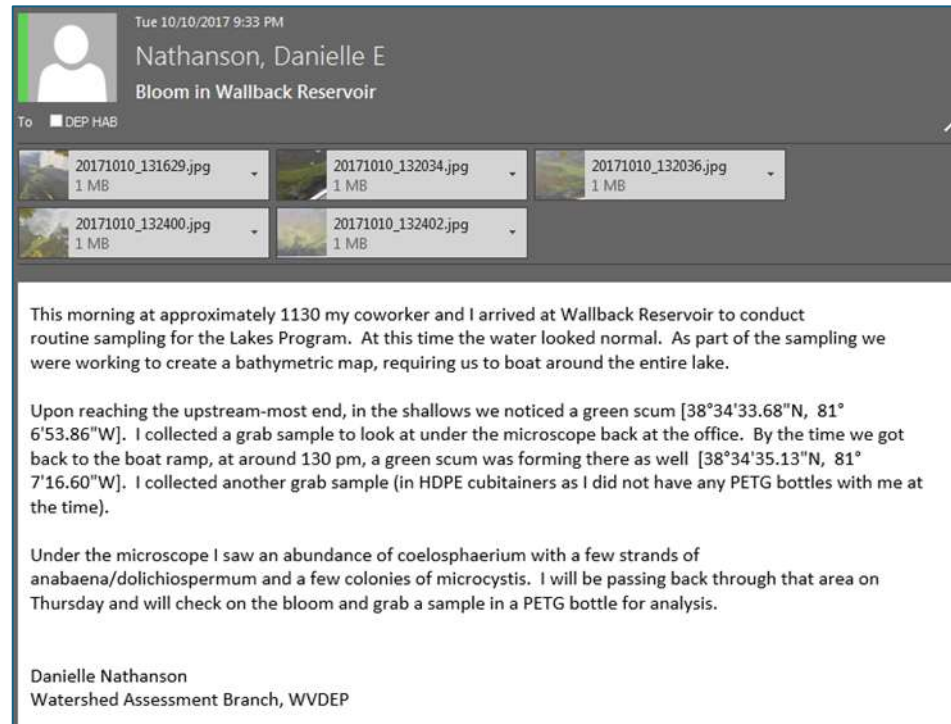
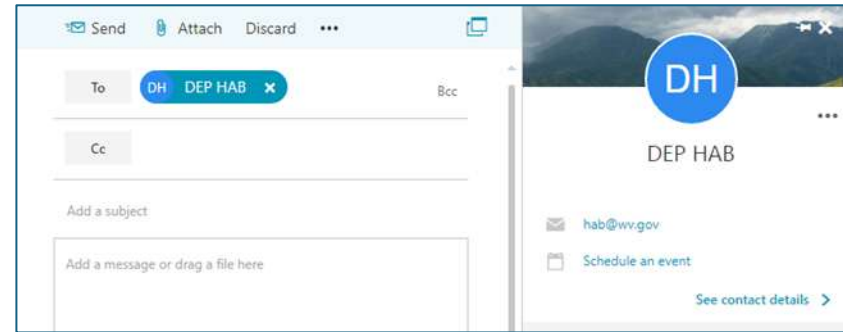


WVDEP HAB Reporting Pathways

- **hab@wv.gov** – an email group:
 - multiple state agencies
 - federal government agencies
 - 3rd parties (ex.: drinking water facilities)

- **Direct reporting** to WVDEP staff (normally from WVDNR)

- **WVDEP Spill Line 1-800-642-3074** – potential HAB reports forwarded to WVDEP staff

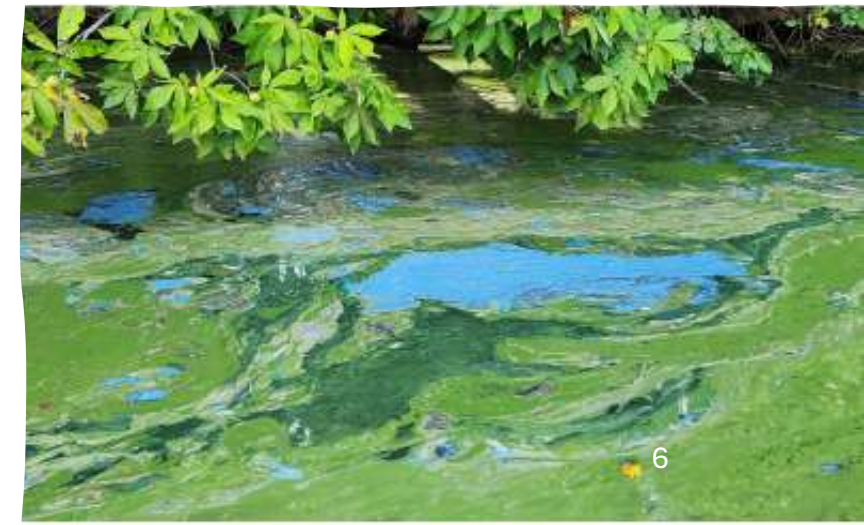


WVDEP HAB Reporting Pathways

- **Email/Mail** Algal Bloom Report Form available on go.wv.gov/algae

Algal Bloom Report Form			
<p>Please provide information about the potential blue-green algae bloom observed. Information can be entered into this electronic form and saved on your computer using Word or Adobe Reader (version 9+).</p> <p>Please save and email a completed copy of this form to HAB@wv.gov.</p> <p>You are encouraged to include digital photographs as additional email attachments (close-up, and landscape showing extent and location of algal bloom).</p>			
Algal bloom Location:			
Water body:	Date bloom observed: / /		
County (optional):	Drinking water source? Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>		
Publicly Owned Lake? Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>	Attached map with algal bloom location noted (e.g. Google Map image)? Yes <input type="checkbox"/> No <input type="checkbox"/> Digital photos attached? Yes <input type="checkbox"/> No <input type="checkbox"/>		
Report Completed By:			
Name:	Organization:		
Title:	Phone: () - ext.	Email:	
Algal Bloom Description and Sampling Information:			
Please describe the location of the algal bloom in the water body (e.g. center of lake, at the boat dock, at the beach):			
Do you notice any colors in the water column? Yes <input type="checkbox"/> No <input type="checkbox"/>			
If yes, please check any colors you see, or describe the color(s) below:			
Green <input type="checkbox"/> Blue <input type="checkbox"/> Red <input type="checkbox"/> Rust <input type="checkbox"/> Brown <input type="checkbox"/> Milky White <input type="checkbox"/> Purple <input type="checkbox"/>			
Please describe below:			
Please estimate the size (sq. feet) or the extent of algal bloom below:			
Can you see a surface scum (an accumulation at the surface) or algae floating near the water surface? (Algae floating at the surface can look like grass clippings, green cottage cheese curds, or spilled paint.) Yes <input type="checkbox"/> No <input type="checkbox"/> Uncertain <input type="checkbox"/>			
Is the algal bloom near a public beach? If yes, please specify the beach name or location below. Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>			
Is the algal bloom near a drinking water intake? (Specify water system name if known) Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>			
Were samples taken? Yes <input type="checkbox"/> No <input type="checkbox"/>			
If yes, what type of samples; when and where were they collected; and where were they sent for analysis?			
Do you know if other water quality information is available? (Specify what data is available and where) Yes <input type="checkbox"/> No <input type="checkbox"/>			

HABs





ALSO HABs

WVDEP HAB Response Activities



Respond to reports or field observed bloom

Monitoring field vehicles have HAB Sampling Kit: gloves, forms, sample containers, instructions, photos of select bloom appearances

May train and equip Environmental Enforcement Inspectors



In-house Algae Identification



In-house toxin testing

Currently w/Abraxis-Gold Standard Diagnostics test strips for Microcystin and Cylindrospermopsin

Previously used mBio/Light Deck Diagnostics unit

Future? in-house ELISA testing capabilities



Present information about HABs to:

Master Naturalist program

WV Association of Sanitarians

WV RAIN

Inter/intra-agency



Sampling Kits for HABs

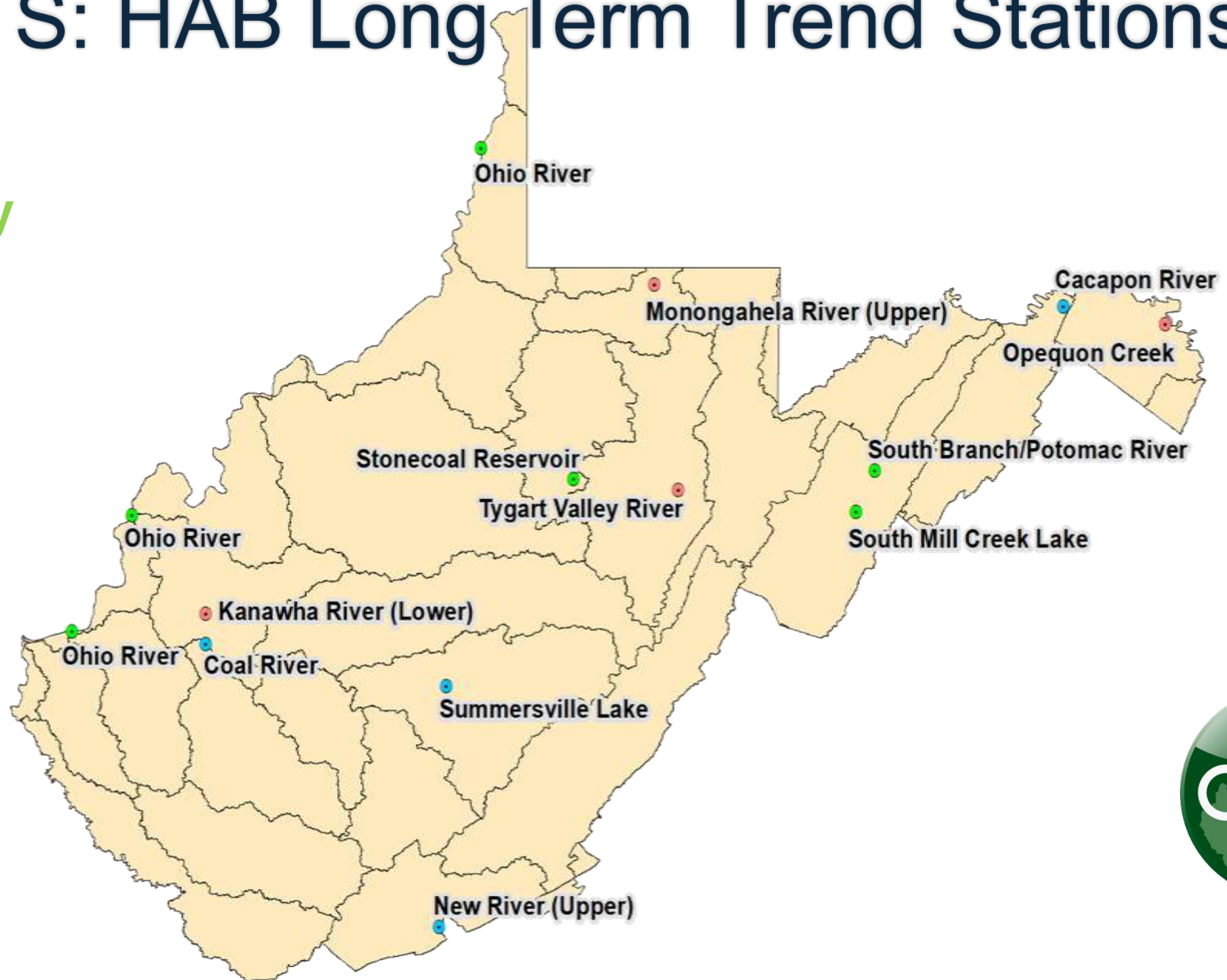


HABLTTS: HAB Long Term Trend Stations

HAB History

Nutrients

Neither



Response Plans

- Agency Responsibilities
- Sampling Techniques
- Threshold Advisory Levels
- Notifications

DRINKING WATER

DRINKING WATER Threshold Level	Microcystin* (µg/L)	Anatoxin-a (µg/L)	Cylindrospermopsin (µg/L)	Saxitoxin* (µg/L)
DO NOT DRINK Children under age 6 and sensitive populations	0.3	20	0.7	0.3
DO NOT DRINK Children aged 6 or older and adults	1.6	20	3.0	1.6
DO NOT USE*	20	300	20	3

*DO NOT USE thresholds are based on the Elevated Recreational Public Health Advisory.
 **The microcystins threshold is intended to be applied to total concentrations of all reported variants/congeners of microcystins.
 ***The saxitoxins threshold is intended to be applied to total concentrations of all reported variants and will be calculated using saxitoxin toxicity equivalency factors.

RECREATIONAL WATERS

RECREATIONAL Threshold Level	Microcystin* (µg/L)	Anatoxin-a (µg/L)	Cylindrospermopsin (µg/L)	Saxitoxin* (µg/L)
General Informational Signage	<6	<80	<5	<0.8
Recreational Public Health Watch Advisory	6	80	5	0.8
Recreational Public Health Warning Advisory	20	300	20	3

*Microcystin and saxitoxin thresholds are intended to be applied to total concentrations of all reported variants/congeners of those cyanotoxins.

Have fun on the water, but know that blue-green algae are present in many of West Virginia's recreational waters. Their toxins may be, too.

Be alert! Avoid water that:

- Looks like spilled paint
- has surface scum, mats, or films
- is discolored or has colored streaks
- has green globs floating below the surface



Avoid swallowing water.

For more information, go to:

<http://oehs.wvdhhr.org/>
or
<http://go.wv.gov/algae>

Public Health Watch Advisory

A harmful algal bloom (HAB) is present and/or algal toxins have been detected in this area. Swimming and wading are not recommended for children, pregnant or nursing women, those with certain medical conditions, and pets.



For more information, go to:

<http://oehs.wvdhhr.org/>
or
<http://go.wv.gov/algae>

or
Contact your local health department

Public Health Warning Advisory

Algal toxins at UNSAFE levels have been detected in this area

Swimming, wading, and water activities that create spray are not recommended.



For more information, go to:

<http://oehs.wvdhhr.org/>
or
<http://go.wv.gov/algae>

or
Contact your local health department



Eating Fish Caught from Waters Affected by a Harmful Algal Bloom

A harmful algal bloom (HAB) is present and/or algal toxins have been detected in these waters. Some algal toxins can accumulate in fish tissues, particularly in organs such as the liver and kidneys.

Fish tissue monitoring and research have shown that fish fillets from fish caught in waters affected by a HAB should be safe to eat.

As a precaution, the following ACTIONS are RECOMMENDED:

- Remove and discard fat, skin, and internal organs before cooking.
- Rinse fillets with clean water before cooking or freezing to remove any contaminants from the cleaning process.
- Follow fish consumption advisories for West Virginia available at <http://www.wvdhhr.org/fish>

For more information on harmful algal blooms, go to:

<http://go.wv.gov/algae> or <https://oehs.wvdhhr.org/>
or contact your local health department