Communicating the Risks of Cyanotoxins in Drinking Water



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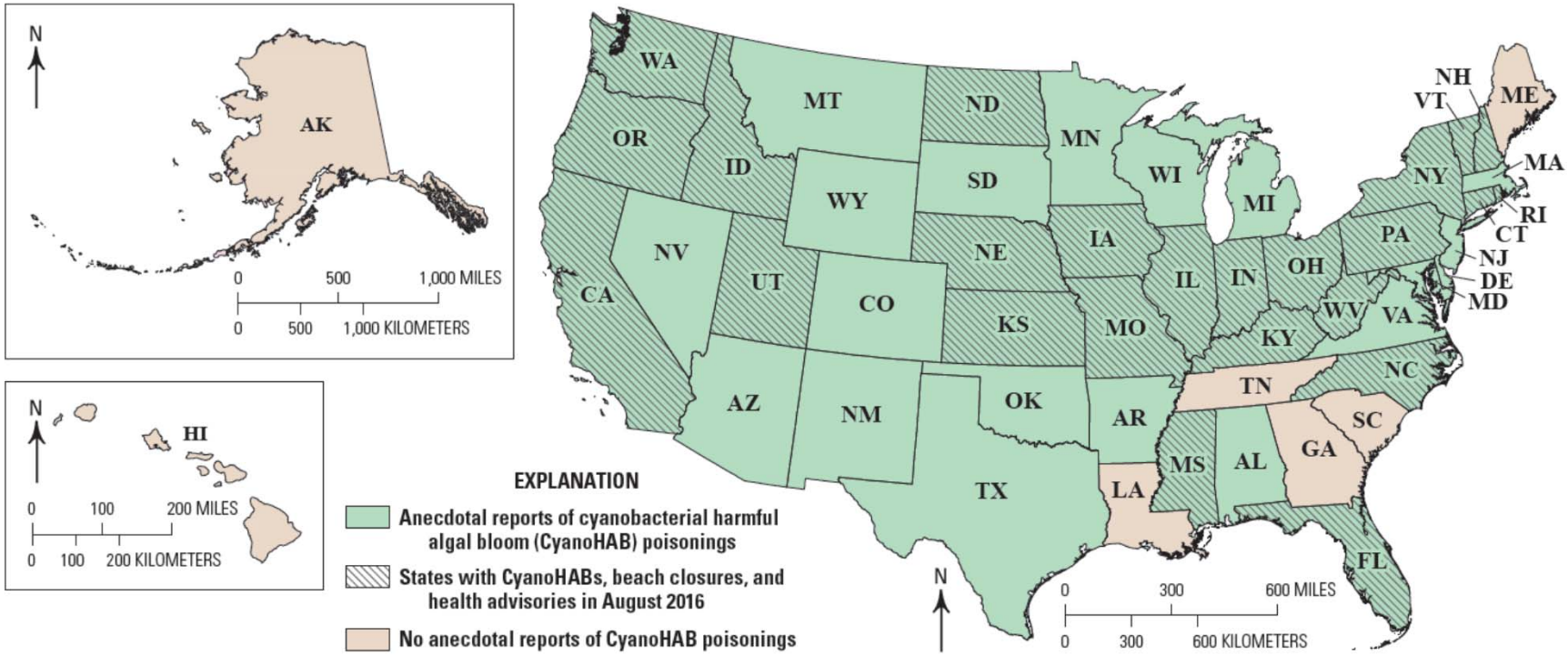
June 6, 2017

Presentation Overview

- Overview of risk communication needs and challenges
- Introduction to EPA's Cyanotoxin Drinking Water Risk Communication Toolbox
- Overview of Toolbox contents

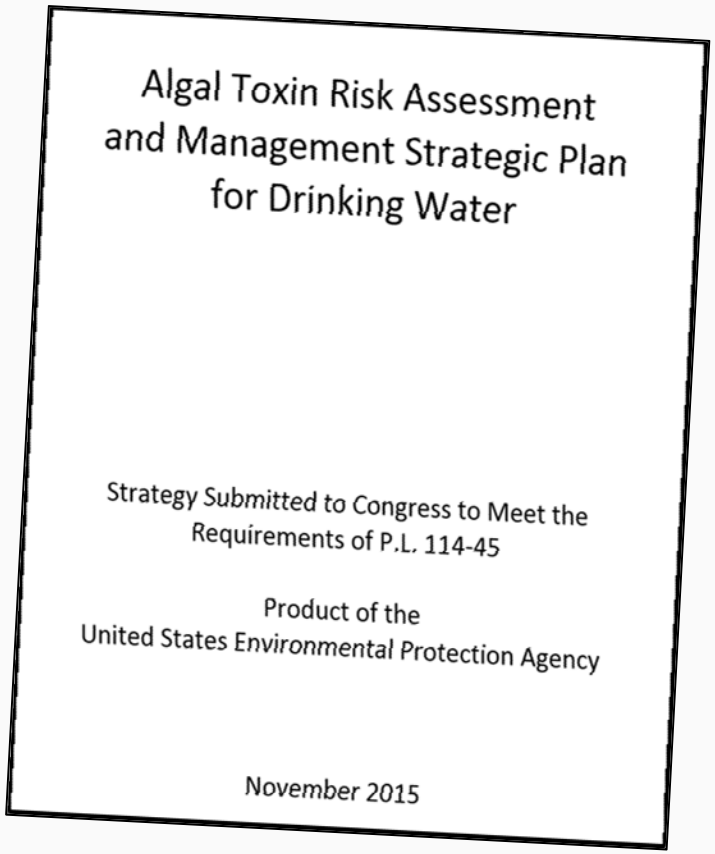
Blooms are widespread across the country



Courtesy of USGS, Graham and others, 2016, USGS OFR 2016-1174
http://dx.doi.org/10.3133/ofr20161174

Algal Toxin Risk Assessment and Management Strategic Plan for Drinking Water

- Includes steps and timelines for:
  - Assessing human health effects
  - Developing list of algal toxins of concern
  - Publishing Health Advisories
  - Assessing treatment options
  - Developing analytical and monitoring approaches
  - Summarizing the causes of HABs
  - Recommending source water protection actions
  - Strengthening collaboration and outreach



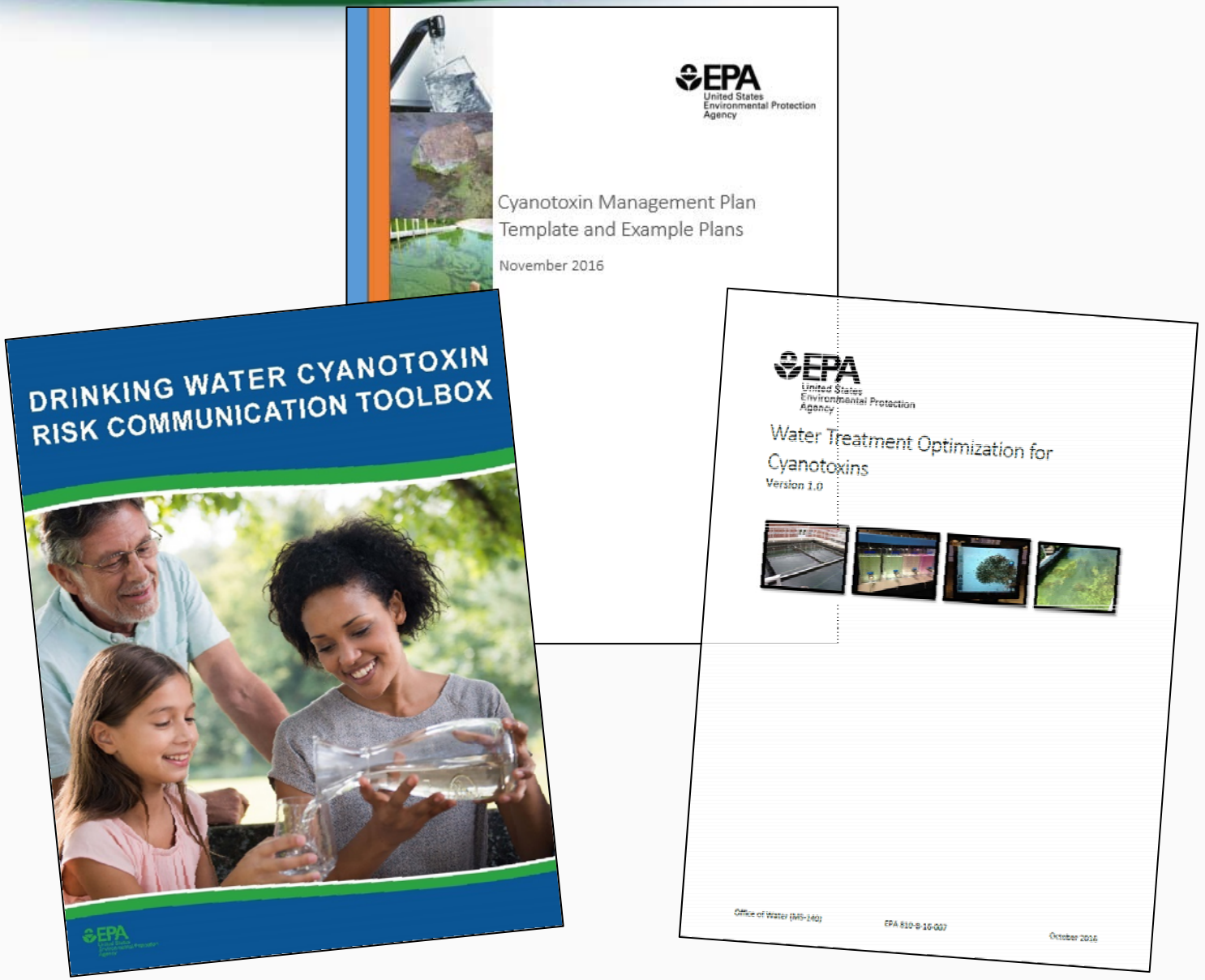
Risk communication tools identified as a need

- April 29th, 2016 Public Meeting: Updates and feedback on drinking water and cyanotoxin activities
- Regional HABs Workshops

Key Messages from Stakeholders: April 29, 2016 Public Meeting

1. Lessons learned on managing cyanotoxins during 2015
   - Important to develop a plan accounting for competing priorities
   - Collaboration is needed with all stakeholders impacted by blooms
   - **Open communication across all stakeholders including multiple levels of government, multiple users of source waters, and customers**
2. Remaining needs
   - **Better understanding of risk communication**
   - Predictive tools
   - Treatment and mitigation strategies
   - Monitoring and methods

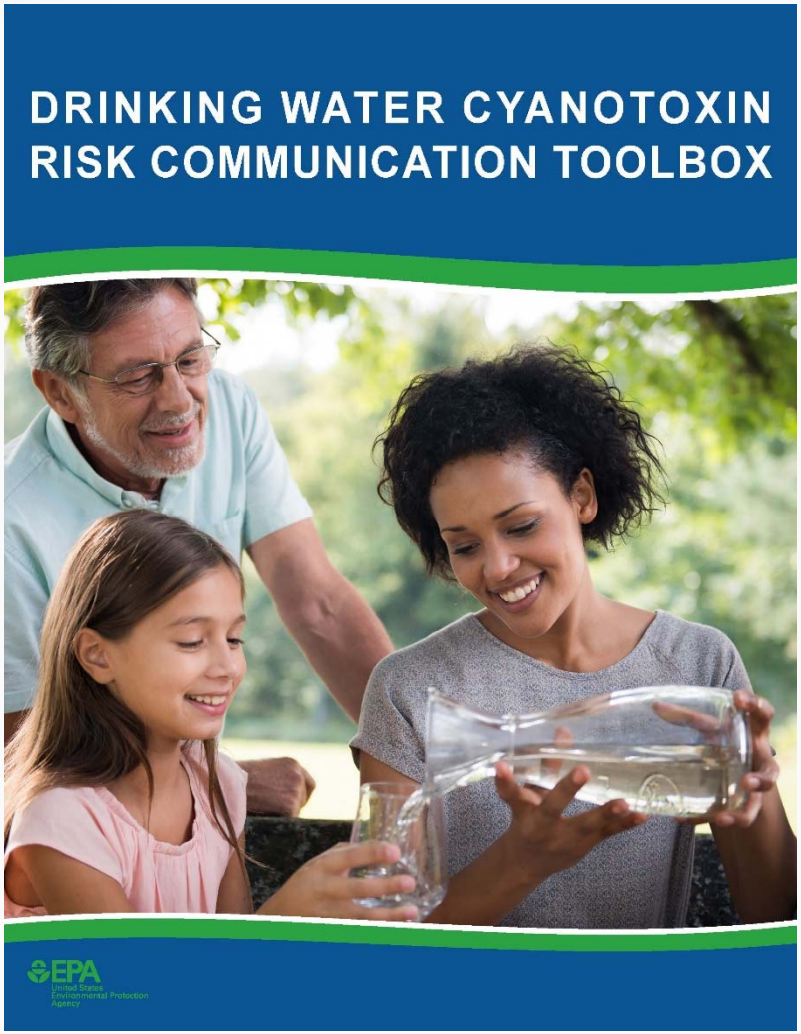
Recent EPA tools to address risks of cyanotoxins in drinking water



Risk Communication Toolbox

Developed with input from:

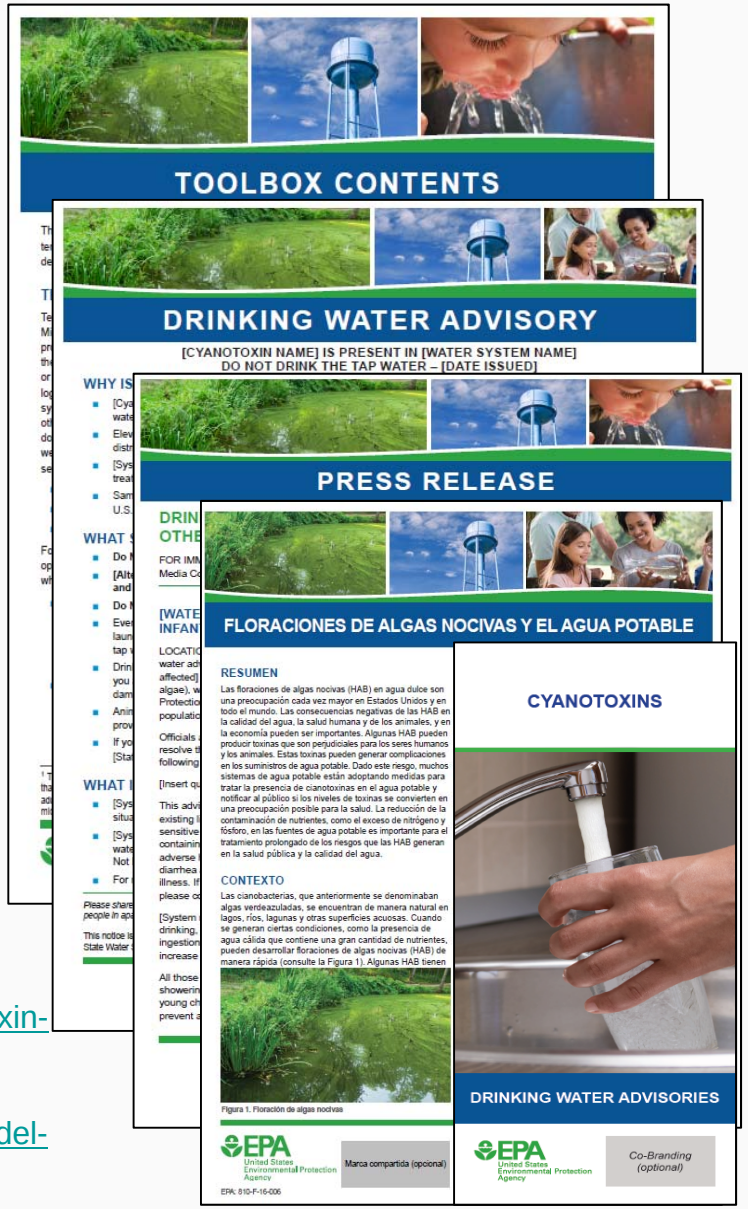
- Multiple States
- Several public water systems
- Centers for Disease Control and Prevention
- American Water Works Association
- Association of State Drinking Water Administrators
- Water Research Foundation
- American Public Health Laboratories



Available online at:
https://www.epa.gov/ground-water-and-drinking-water/drinking-water-cyanotoxin-risk-communication-toolbox

Purpose

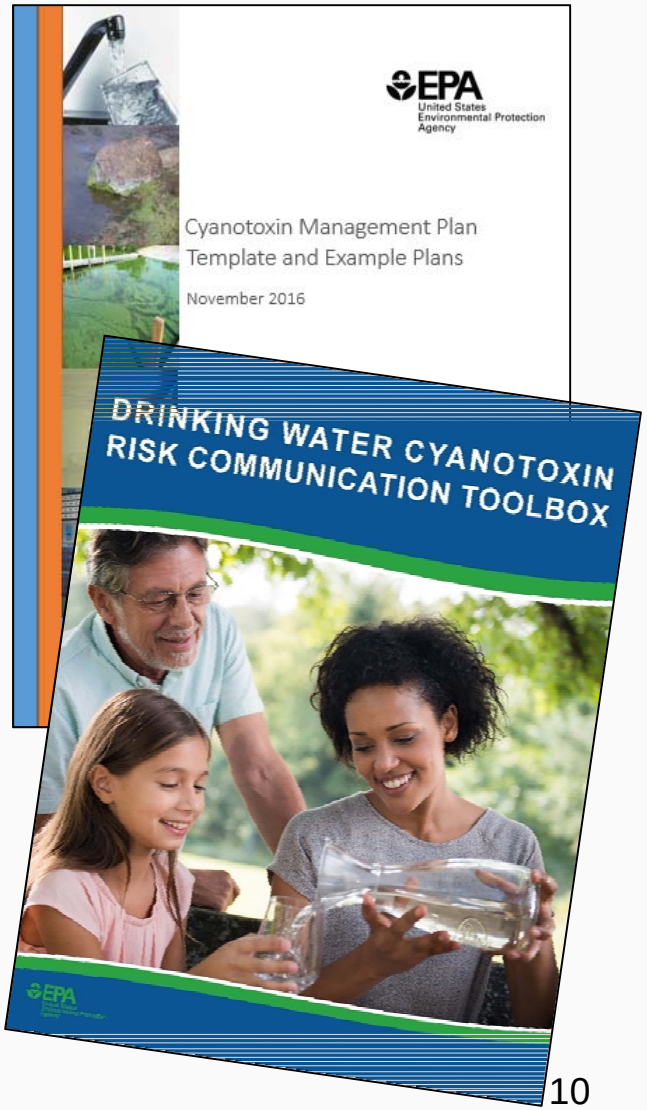
- Ready-to-use, web-based “one-stop shop” for communicating risks of cyanotoxins in drinking water
- Tools including fillable templates, general information and graphics for local and state governments and drinking water systems
- Public is target audience
- Key tools available in English and Spanish



Available online at:
https://www.epa.gov/ground-water-and-drinking-water/drinking-water-cyanotoxin-risk-communication-toolbox
and
https://espanol.epa.gov/espanol/caja-de-herramientas-para-la-comunicacion-del-riesgo-de-cianotoxinas-en-el-agua-potable

Intended Uses

- Toolbox provides specific materials for communication
- Use in conjunction with a Cyanotoxin Management Plan
  - Communication strategy and the process for when and how to communicate, should be developed as part of the Cyanotoxin Management Plan



EPA's Health Advisories for Cyanotoxins Used as Example

- U.S. EPA's national drinking water Health Advisory levels are used as example cyanotoxin levels that inform public communication decisions in the toolbox.
- Templates are editable to include state and local action levels.

chemical	10-day advisory	
	Bottle-fed infants and pre-school children	School-age children and adults
microcystins	0.3 µg/L	1.6 µg/L
cylindrospermopsin	0.7 µg/L	3 µg/L

Risk Communication Toolbox Contents - Templates

Templates – Editable, fillable and ready to use

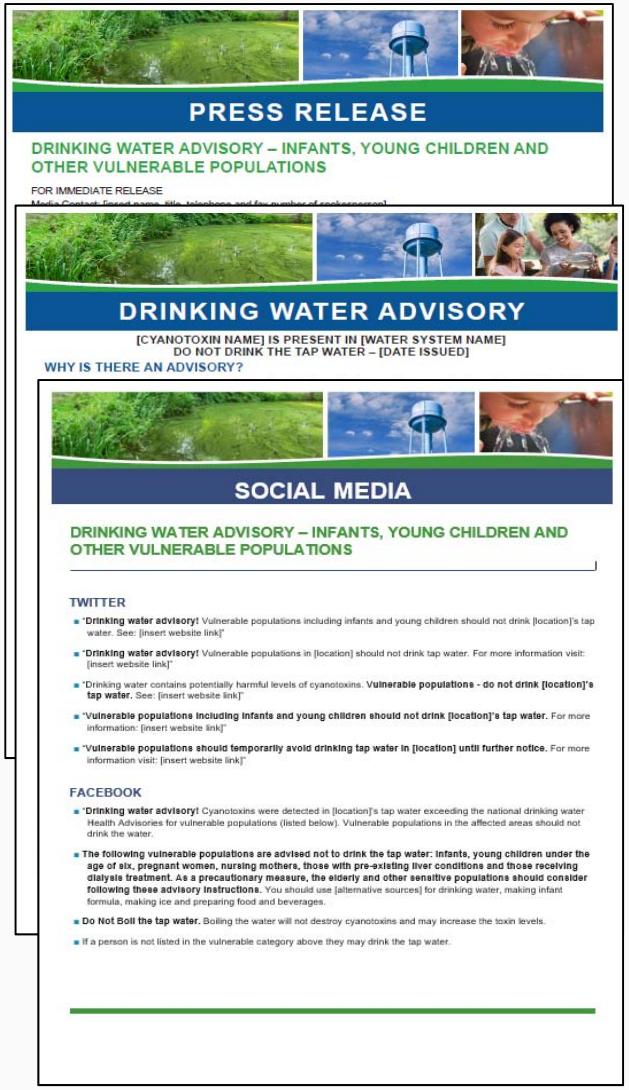
- Press releases
- Drinking Water Advisories (available in Spanish)
- Social media and text alerts (available in Spanish)

Template Options

-Available in editable pdf or word formats

-3 scenarios per template, based on the level of toxins occurring and the population impacted:

- **Everyone:** > U.S. EPA's Health Advisory level for everyone
- **Vulnerable Populations:** > EPA's Health Advisory level for infants and young children under the age of six, but ≤ to the Health Advisory level for children six years and older through adults;
- **Advisory Lifted:** ≤ EPA's Health Advisory level for everyone



Available online at: https://www.epa.gov/ground-water-and-drinking-water/drinking-water-cyanotoxin-risk-communication-toolbox-templates

Risk Communication Toolbox Contents – Template Examples

PRESS RELEASE

DRINKING WATER ADVISORY – INFANTS, YOUNG CHILDREN AND OTHER VULNERABLE POPULATIONS

FOR IMMEDIATE RELEASE
Media Contact: [insert name, title, telephone and fax number of spokesperson]

[WATER SYSTEM] ISSUES DO NOT DRINK ADVISORY FOR [CYANOTOXIN NAME] FOR INFANTS, YOUNG CHILDREN AND OTHER VULNERABLE POPULATIONS

LOCATION [Month Date, Year] – Officials from [local/state agency] have issued a Do Not Drink and Do Not Boil drinking water advisory for infants, young children under the age of six and other vulnerable populations (listed below) in [area affected] until further notice. [Cyanotoxin name], a toxin produced by cyanobacteria (formerly known as blue-green algae), was recently detected in the tap water at [levels and/or ranges] on [dates]. This exceeds the U.S. Environmental Protection Agency's national Health Advisory levels for vulnerable populations that is set at [level]. Therefore, vulnerable populations (listed below) in the affected areas should not drink the water.

Officials are working closely with local and state public health and/or emergency response agencies to address and resolve the situation. [System name] is working quickly to reduce [cyanotoxin name] levels in tap water by taking the following actions: [list actions such as adjusting treatment, changing source…].

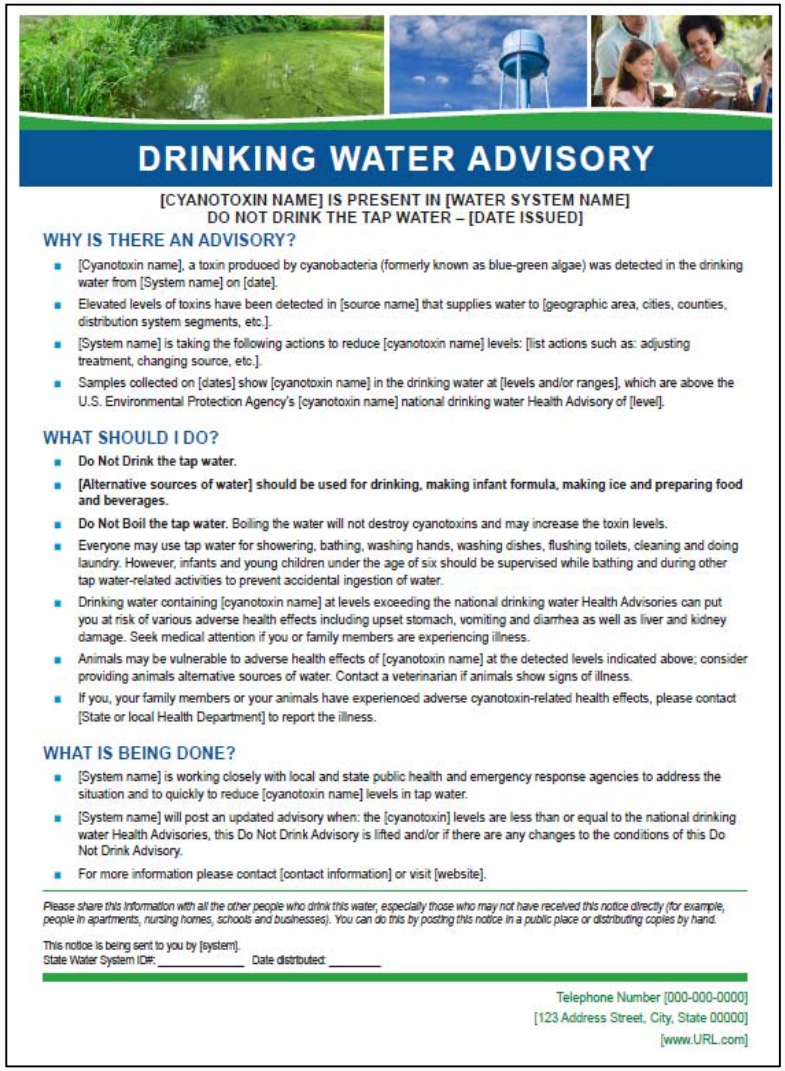
[Insert quote here from local official]

This advisory applies to infants, children under the age of six, pregnant women, nursing mothers, those with pre-existing liver conditions and those receiving dialysis treatment. As a precautionary measure, the elderly and other sensitive populations should use an alternate water source. Vulnerable populations, as listed above, who drink water containing [cyanotoxin name] at levels exceeding the national drinking water Health Advisories are at risk of various adverse health effects of [cyanotoxin name]. Possible adverse health effects include upset stomach, vomiting and diarrhea as well as liver and kidney damage. Seek medical attention if you or your family members are experiencing illness. If you, your family members, or your animals have experienced adverse cyanotoxin-related health effects, please contact [State or local Health Department] to report the illness.

[System name] is recommending that vulnerable consumers, as described above, use [alternative sources of water] for drinking, making infant formula, making ice and preparing food and beverages and use precautions against accidental ingestion of tap water until further notice. Do not to boil the water, as boiling water does not remove cyanotoxins and may increase toxin levels.

All those individuals not listed in the vulnerable category may drink the tap water. Everyone may use tap water for showering, bathing, washing hands, washing dishes, flushing toilets, cleaning and doing laundry. However, infants and young children under the age of six should be supervised while bathing and during other tap water-related activities to prevent accidental ingestion of water.

Telephone Number [000-000-0000]
[123 Address Street]
[City, State 00000]
[www.URL.com]



DRINKING WATER ADVISORY

[CYANOTOXIN NAME] IS PRESENT IN [WATER SYSTEM NAME]
DO NOT DRINK THE TAP WATER – [DATE ISSUED]

WHY IS THERE AN ADVISORY?

- [Cyanotoxin name], a toxin produced by cyanobacteria (formerly known as blue-green algae) was detected in the drinking water from [System name] on [date].
- Elevated levels of toxins have been detected in [source name] that supplies water to [geographic area, cities, counties, distribution system segments, etc.].
- [System name] is taking the following actions to reduce [cyanotoxin name] levels: [list actions such as: adjusting treatment, changing source, etc.].
- Samples collected on [dates] show [cyanotoxin name] in the drinking water at [levels and/or ranges], which are above the U.S. Environmental Protection Agency's [cyanotoxin name] national drinking water Health Advisory of [level].

WHAT SHOULD I DO?

- **Do Not Drink the tap water.**
- **[Alternative sources of water] should be used for drinking, making infant formula, making ice and preparing food and beverages.**
- **Do Not Boil the tap water.** Boiling the water will not destroy cyanotoxins and may increase the toxin levels.
- Everyone may use tap water for showering, bathing, washing hands, washing dishes, flushing toilets, cleaning and doing laundry. However, infants and young children under the age of six should be supervised while bathing and during other tap water-related activities to prevent accidental ingestion of water.
- Drinking water containing [cyanotoxin name] at levels exceeding the national drinking water Health Advisories can put you at risk of various adverse health effects including upset stomach, vomiting and diarrhea as well as liver and kidney damage. Seek medical attention if you or family members are experiencing illness.
- Animals may be vulnerable to adverse health effects of [cyanotoxin name] at the detected levels indicated above; consider providing animals alternative sources of water. Contact a veterinarian if animals show signs of illness.
- If you, your family members or your animals have experienced adverse cyanotoxin-related health effects, please contact [State or local Health Department] to report the illness.

WHAT IS BEING DONE?

- [System name] is working closely with local and state public health and emergency response agencies to address the situation and to quickly to reduce [cyanotoxin name] levels in tap water.
- [System name] will post an updated advisory when: the [cyanotoxin] levels are less than or equal to the national drinking water Health Advisories, this Do Not Drink Advisory is lifted and/or if there are any changes to the conditions of this Do Not Drink Advisory.
- For more information please contact [contact information] or visit [website].

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools and businesses). You can do this by posting this notice in a public place or distributing copies by hand.

This notice is being sent to you by [system].
State Water System ID#: _____ Date distributed: _____

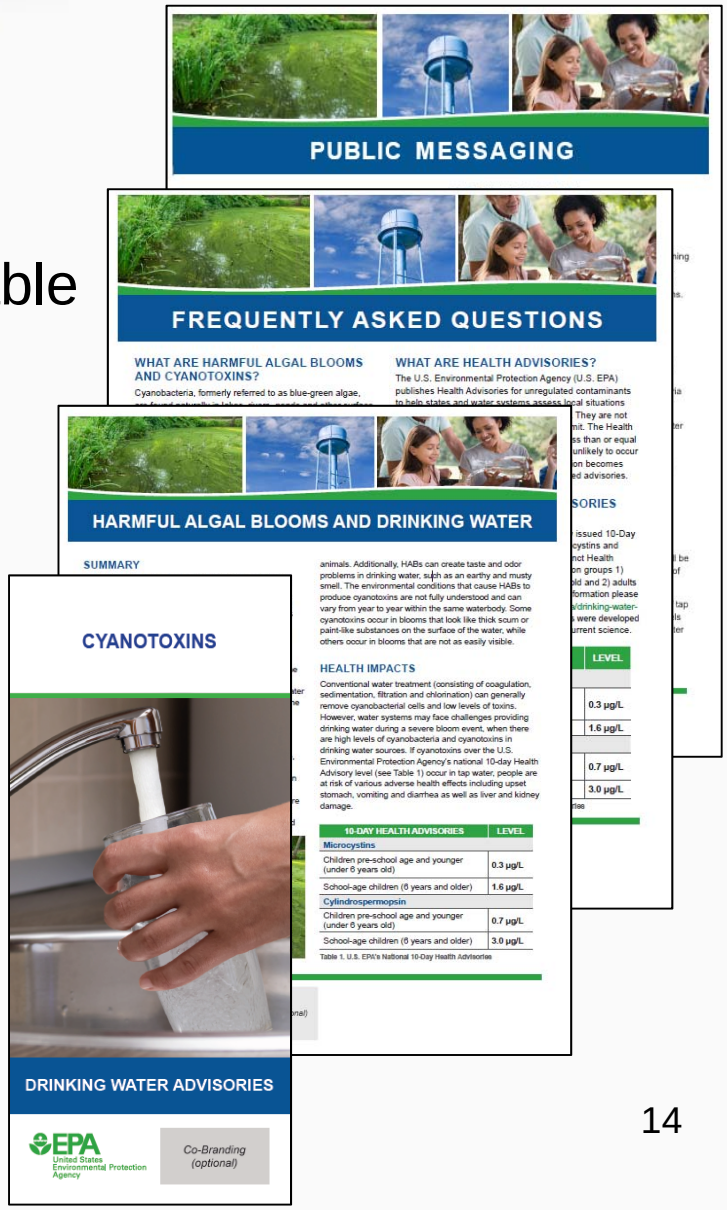
Telephone Number [000-000-0000]
[123 Address Street, City, State 00000]
[www.URL.com]

Available online at: https://www.epa.gov/ground-water-and-drinking-water/drinking-water-cyanotoxin-risk-communication-toolbox-templates

Risk Communication Toolbox Contents – General information

General information

- Public messaging
- Frequently Asked Questions (available in Spanish)
- Factsheets (available in Spanish)
- Co-branding option available

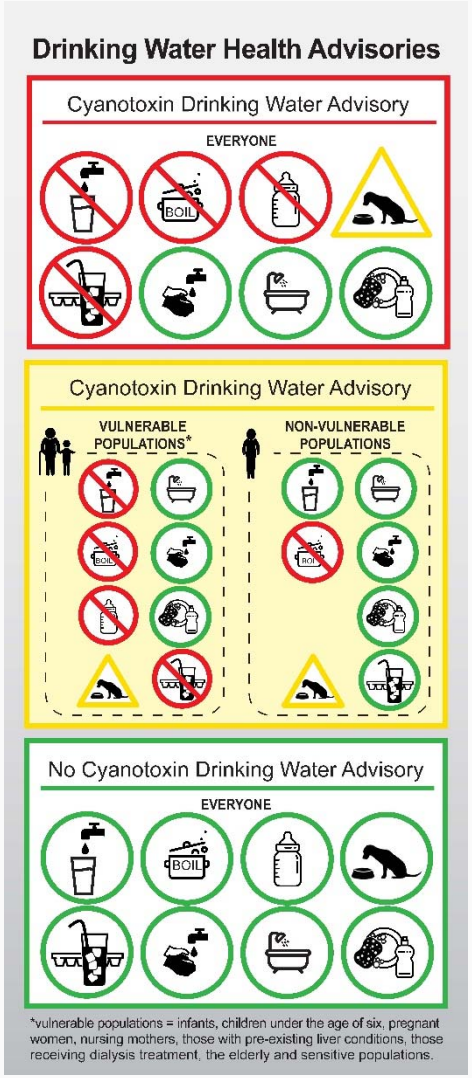


Available online at:
https://www.epa.gov/ground-water-and-drinking-water/drinking-water-cyanotoxin-risk-communication-toolbox-general

Risk Communication Toolbox Contents - Graphics

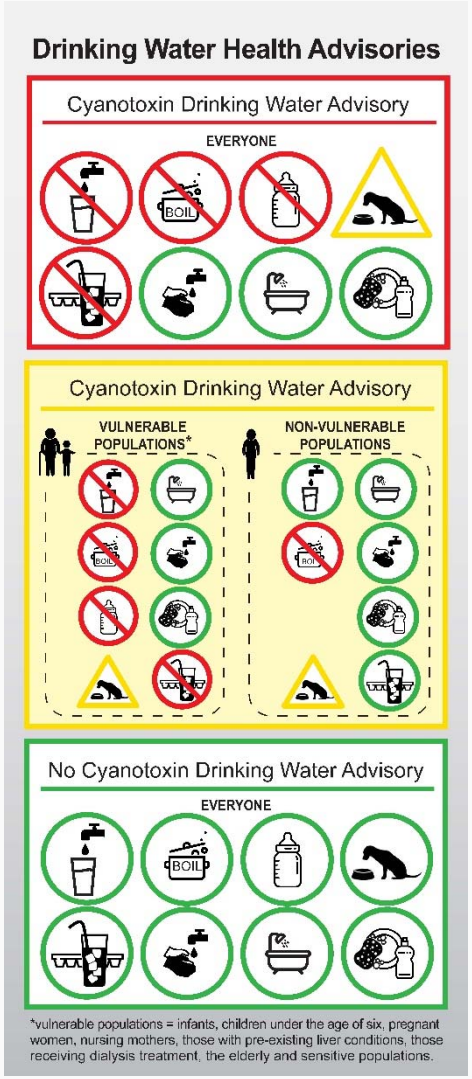
Graphics

- Menu of multiple downloadable options
- 4 styles to help communicate key messages
- From over 20 graphics to choose

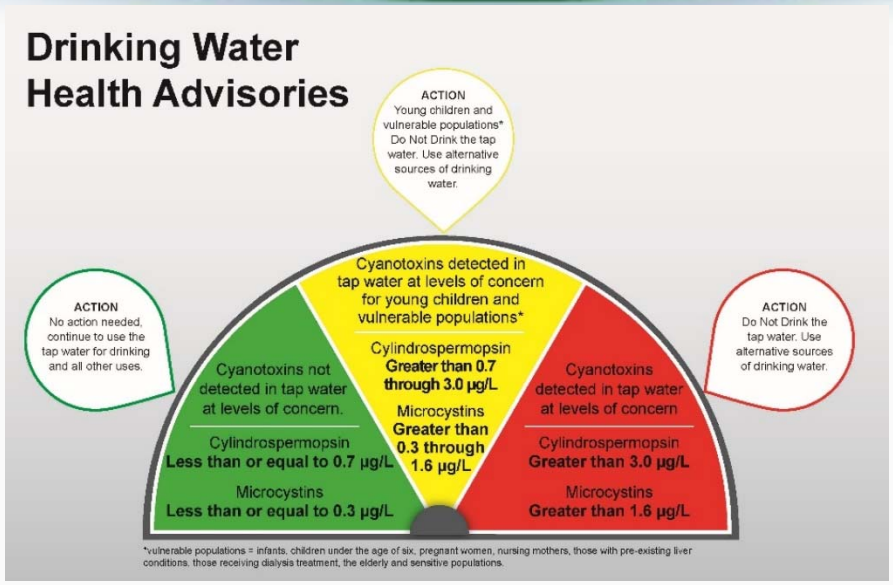


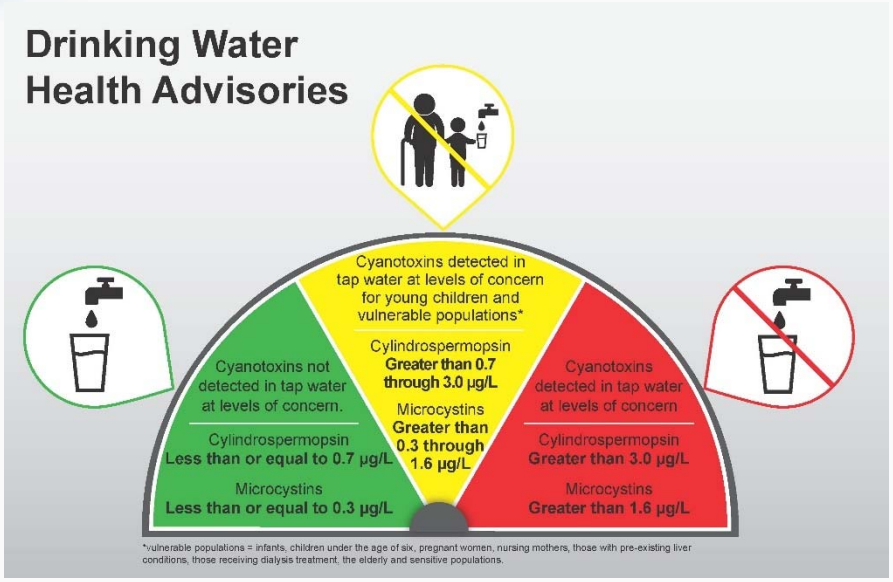
Available online at: https://www.epa.gov/ground-water-and-drinking-water/drinking-water-cyanotoxin-risk-communication-toolbox-graphics

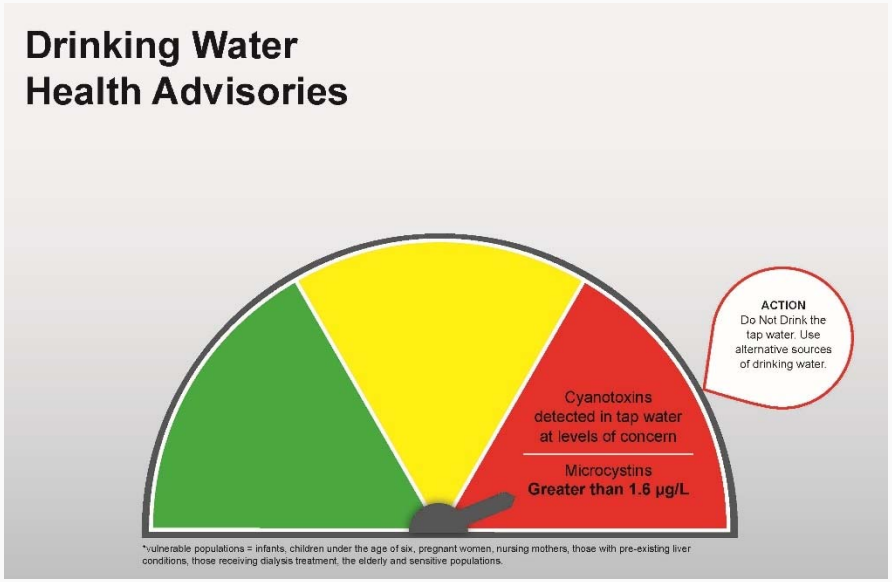
Icon style graphics

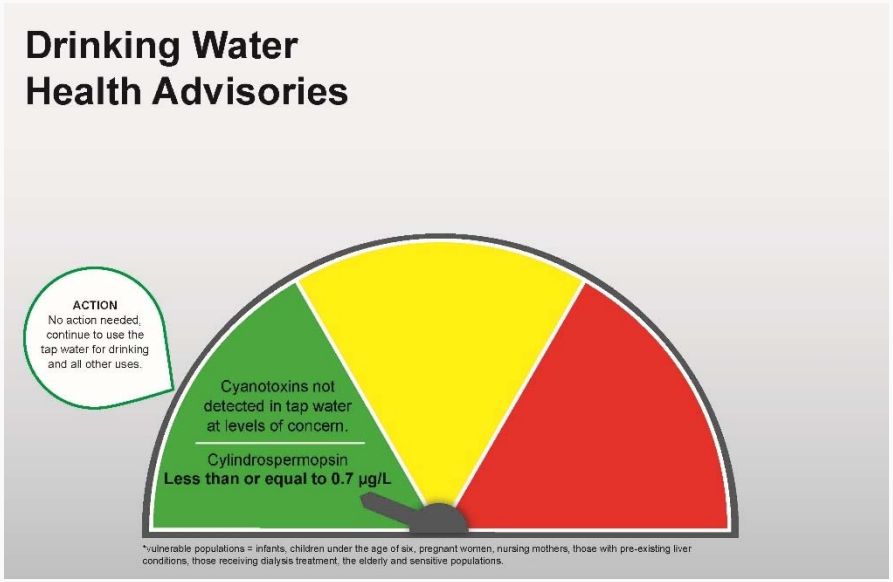


Speedometer style graphics

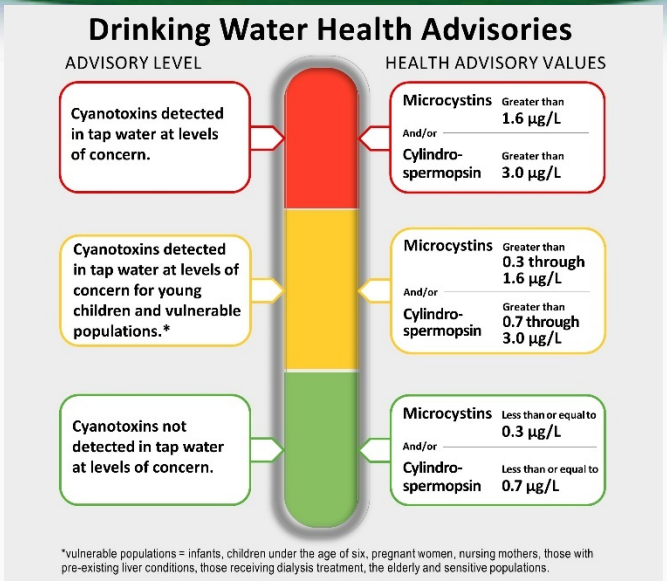


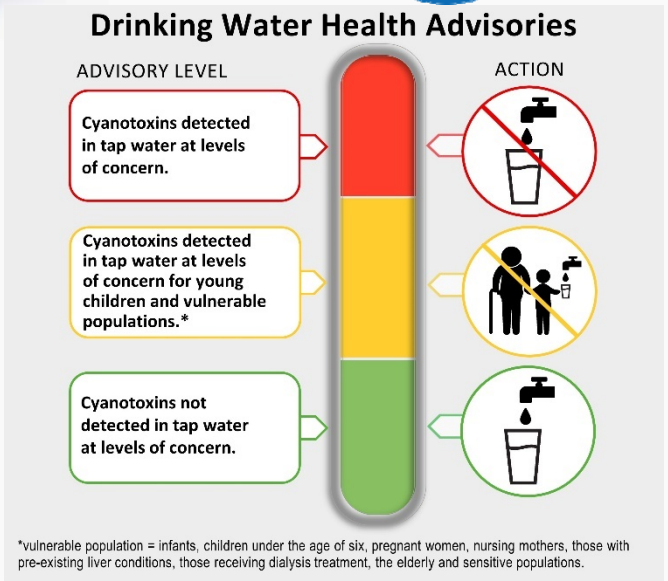


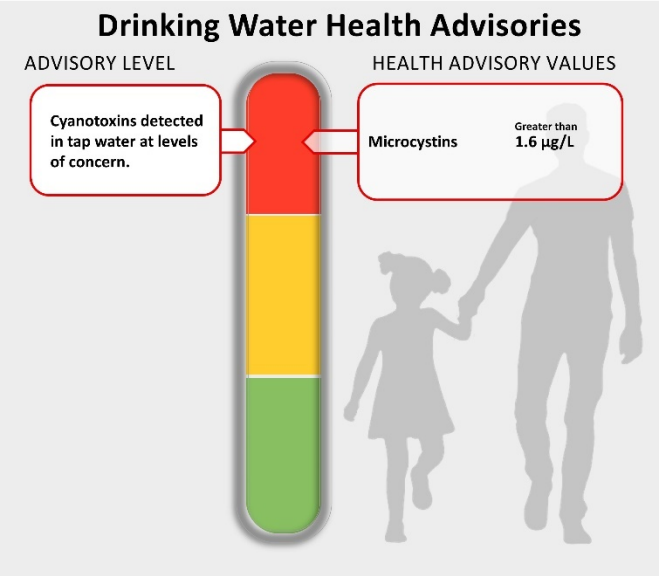


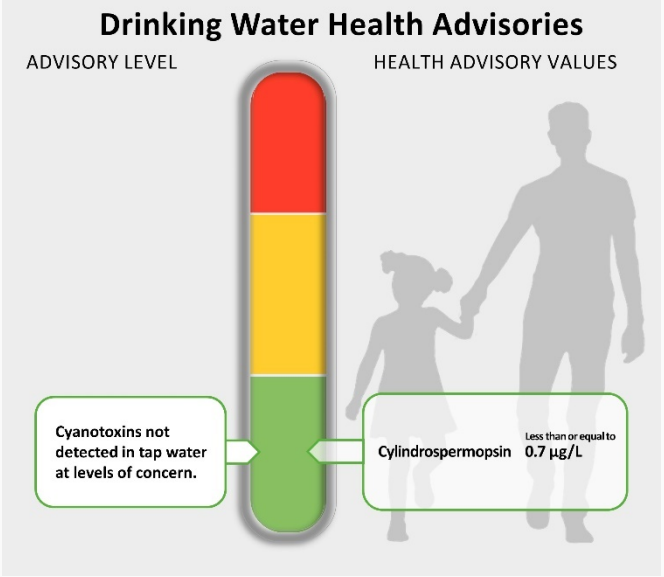


Thermometer style graphics









Stoplight style graphics

Conclusion

- Effectively communicating cyanotoxin risks in drinking water is important to protecting public health
- EPA's Cyanotoxin Drinking Water Risk Communication Toolbox can be customized to help communicate
- Tips for communicating:
  - Develop a communication strategy, including when/how to communicate and who to communicate to
  - Clear, concise and consistent messaging should be used across all communication products
  - Incorporate icons, color and other visuals
  - Keep messages simple and relevant to audiences, particularly if there are actions they need to take

Contact Information

Questions?

Katie Foreman

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Drinking Water Cyanotoxin Risk Communication Toolbox:

https://www.epa.gov/ground-water-and-drinking-water/drinking-water-cyanotoxin-risk-communication-toolbox

OGWDW cyanotoxins website:

https://www.epa.gov/ground-water-and-drinking-water/cyanotoxins-drinking-water

CyanoHABs website:

https://www.epa.gov/cyanohabs