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- Please **keep your microphones muted** except when you are speaking. This will help us minimize background noise and feedback.
- Please take a moment to **open the Participants list and rename yourself** to show your full name and affiliation, so we have that for our records. You should see a “Rename” option next to your name (or click on “More” to find this option).
- **This meeting is being recorded** to document any questions or comments received during our time together.
- To make a comment or ask a question, please either:
 - Indicate you would like to make a comment using the Chat feature.
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2025 Triennial Review Opening Hearing

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GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION





Clean Water Act

- “Federal Water Pollution Control Act” also known as Clean Water Act or CWA. (Pub. L. 92-500, as amended ([33 U.S.C. 1251](#) et seq.))
- Objective
 - Restore and maintain the chemical, physical, and biological integrity of the waters of the United States
 - Achieved through water quality standards that define the use of the waterbody and the criteria necessary to protect the use
- Goal: fishable/swimmable

Water Quality Standards

- Established to
 - Protect public health and welfare
 - Enhance the quality of the water
 - Provide water quality for the protection and propagation of fish, shellfish, and wildlife and for recreation in and on the water
- Need to be
 - Scientifically defensible
 - Protective of existing aquatic life and designated use
 - Compatible with existing guidance
- Consist of
 - Designated Uses
 - Water Quality Criteria to protect those uses
 - Antidegradation Policy



Designated Uses

- GA R&R Rule 391-3-6-.03 (4) defines types of designated uses:
 - Drinking Water Supplies
 - Recreation
 - Fishing, Propagation of Fish, Shellfish, Game and Other Aquatic Life (“Fishing”)
 - Wild River
 - Scenic River
 - Coastal Fishing
- All of Georgia’s designated uses meet the CWA fishable/swimmable goal



Water Quality Criteria

- Georgia's water quality criteria are listed in:
 - 391-3-6-.03(5) – General criteria for all waters
 - Narrative: free from visible sewage/debris, scum, objectionable color/odor, turbidity due to human causes, toxic substances in toxic amounts
 - Numeric: magnitude, duration and frequency limits for priority pollutants
 - 391-3-6-.03(6) – Specific Use criteria for
 - Dissolved oxygen
 - pH
 - Temperature
 - Bacteria



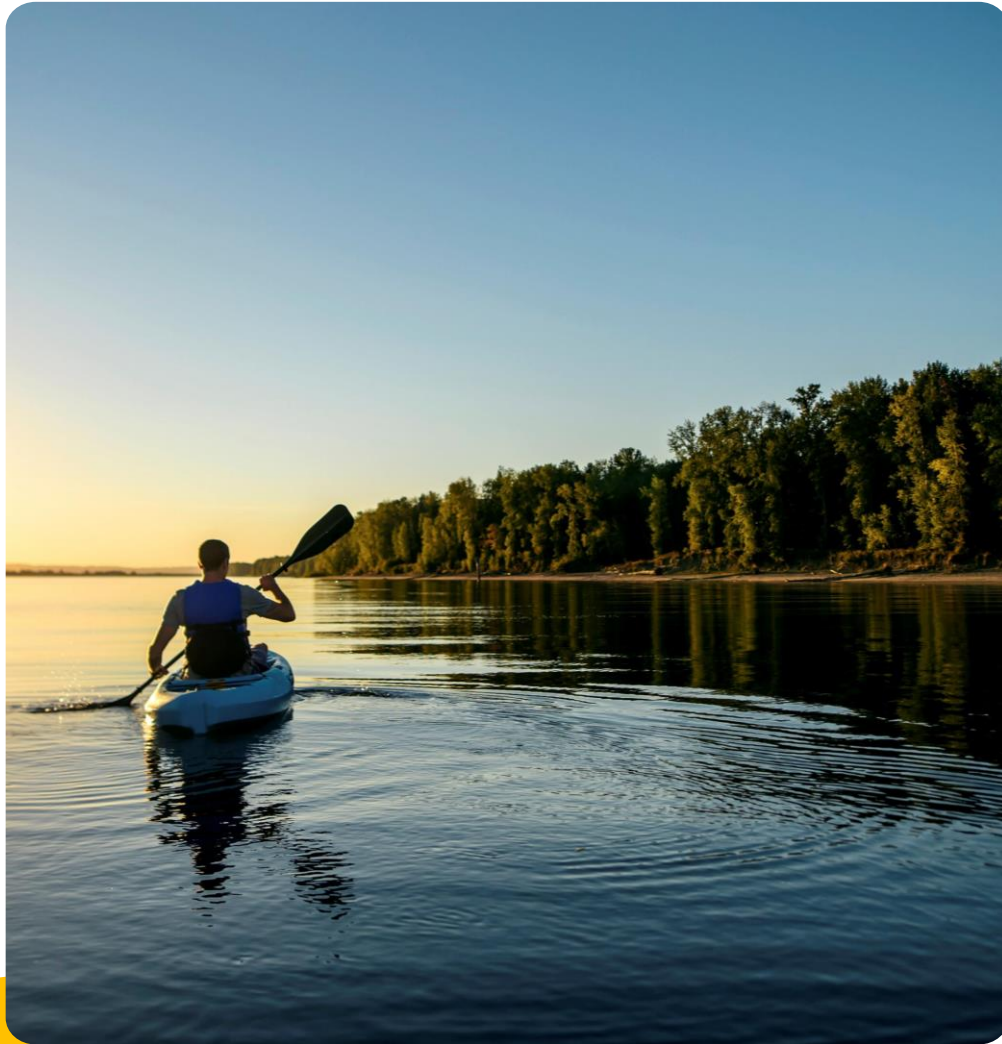
Antidegradation policy

- Protection of existing uses 40 CFR 131.12(a)(1)
- 3 tiers of water quality 391-3-6-.03(2)(b) and 40 CFR 131.12
 - Tier 1: Protection of existing designated uses (applies to all waters)
 - Tier 2: Protection of waters of a higher quality than their designated use (All waters of GA are Tier 2 or higher)
 - Antidegradation analysis required
 - Tier 3: Protection of Outstanding Natural Resource Waters (ONRW)
 - Except for temporary changes, water quality cannot be lowered in these waters

Current Status of Water Quality Standards

- [Latest EPA approved version](#)
 - 2019 Triennial Review
 - Approved August 31, 2022
- 2022 Triennial Review
 - Adoption by Board of Natural Resources postponed for updates and further public review.
 - Public meeting April 21, 2025
- 2025 Triennial Review
 - Now open





Cooperative Federalism

- States responsibilities:
 - establishing, reviewing, and revising water quality standards consistent with provisions in the CWA and 40 CFR 130.
- Federal responsibilities (via US EPA):
 - reviewing and, approving or disapproving, State-adopted water quality standards.
 - issuing recommendations for National Water Quality Criteria for States to consider for adoption or use as guidance for state-specific criteria

Triennial Review

- 40 CFR 131.20 requires states to review and revise water quality standards from time to time, but at least once every three years
- 40 CFR 131.20 (b) requires states to hold one or more public hearings for the purpose of reviewing and revising water quality standards
- Updates to water quality standards may be needed if there is:
 - Change in water quality conditions
 - Change in water body uses
 - New scientific information



Items Under Consideration for 2025 Triennial Review

EPA national criteria recommendations:

- [2018 Aquatic Life Criteria for Aluminum](#)
- [2019 Recreational Criteria or Swimming Advisories for Cyanotoxins](#)
- [2021 Ambient Water Quality Criteria to Address Nutrient Pollution in Lakes and Reservoirs](#)
- [2024 Aquatic Life Criteria for Perfluorooctanoic Acid \(PFOA\)](#)
- [2024 Aquatic Life Criteria for Perfluorooctane Sulfonate \(PFOS\)](#)
- [2024 Draft Human Health Criteria for PFOA, PFOS, and PFBS](#)

Public comments:

- Designated use change to recreation for Chattahoochee River in Columbus, GA

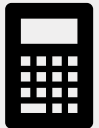
Internal recommendations:

- Site specific criteria for Lakes

Aluminum



EPA recommended updated Aluminum Aquatic Life Criteria in 2018.



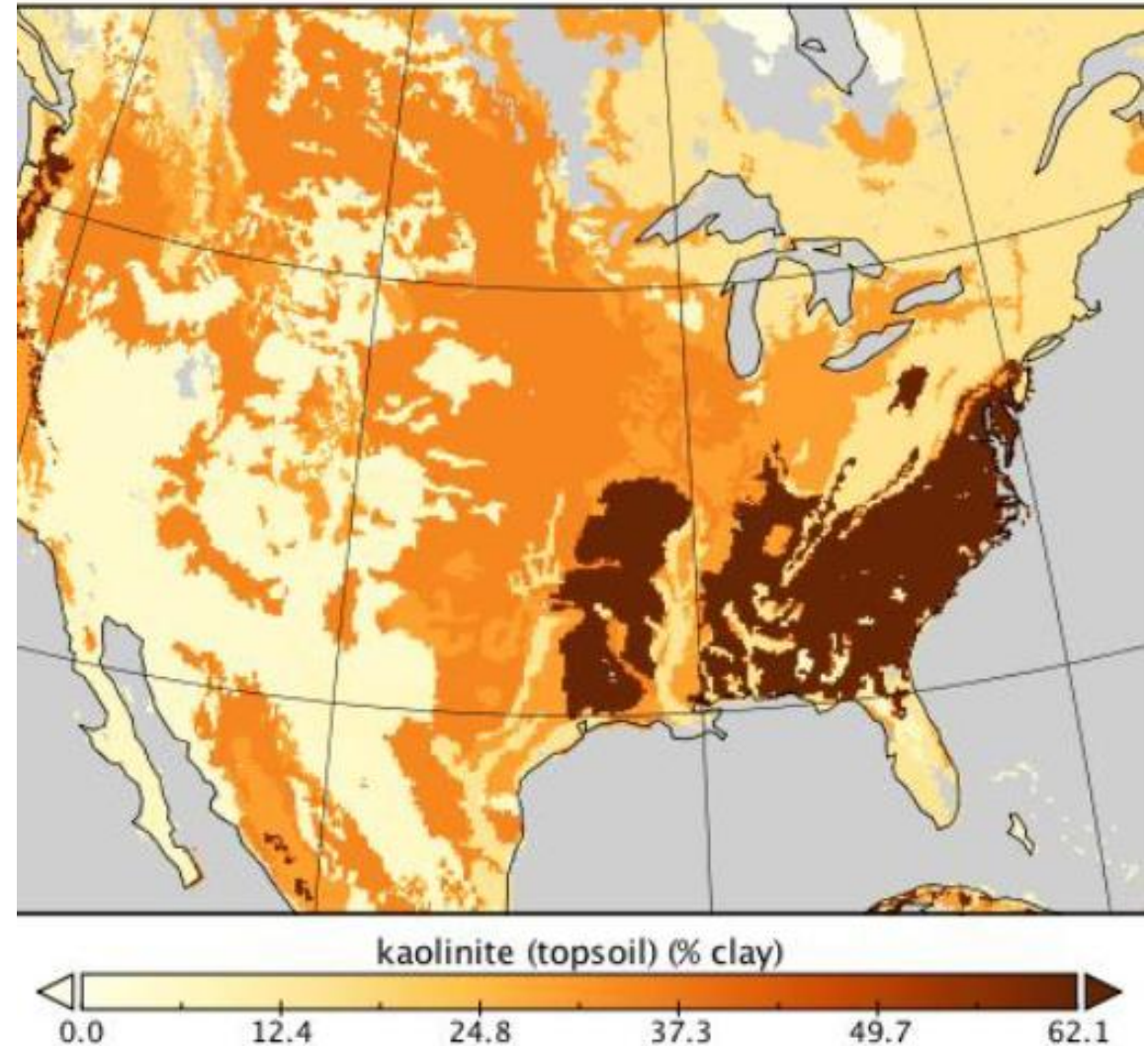
EPA's Recommended Criteria are determined using a Criteria Calculator that requires site-specific hardness, pH, and Dissolved Organic Carbon (DOC) for a waterbody.



EPD started analyzing DOC in all ambient monitoring samples in 2021. EPD started analyzing paired total and dissolved aluminum in water quality samples in 2022 to understand aluminum distribution and composition throughout the state.

Aluminum

- Georgia has a lot of naturally occurring aluminum.
 - Kaolin is a hydrated aluminum silicate.
- EPD is collecting instream aluminum data and associated parameters to look for trends based on ecoregion
- Monitoring staff is working to identify if high levels of aluminum are due to a point source or due to underlying geology
 - Alum is an aluminum salt used as a flocculant by water treatment plants
 - Compare aluminum data upstream and downstream of treatment plants to determine natural levels of aluminum



Bioavailable Aluminum

- EPA recommended criteria is for total recoverable aluminum
- This includes forms of aluminum bound to suspended solids, which are not biologically available to aquatic species under natural conditions.
- ASTM D8596-24 is a recently developed lab method for determining bioavailable aluminum in water with suspended solids.
- This method is not yet approved for 40 CFR part 136 and can't be applied to effluent limits for NPDES permittees.

Cyanobacteria and Cyanotoxins

- 2019 EPA cyanotoxin magnitude recommendation:

Microcystins	Cylindrospermopsin
8 µg/L	15 µg/L

- States have the option to adopt cyanotoxin criteria or to issue swim advisories if magnitude is exceeded.
- Georgia Power developed a sampling protocol based on visual observation of blue-green algae events. Observation of dense blooms will trigger toxin sampling.
- EPD has disseminated this protocol to other lake managers for their use.
- Swim advisories will be issued when cyanotoxins are present above the EPA recommended magnitude.



Cyanobacteria and Cyanotoxins

- EPD disseminated an informational flyer to be posted by lake managers at the start of each growing season.
- EPD has developed a [HABs Story Map](#).
- EPD will determine how to incorporate swimming advisories into our rules and/or listing methodology.

Harmful Algal Blooms may be present. “When in doubt, stay out.”

GA EPD is sharing information on Harmful Algal Blooms (HAB) to protect you and your pets. If you see a bloom, please use caution.

An HAB is caused naturally by blue-green algae (cyanobacteria) collecting in open water that can become harmful. People and animals that touch, swallow or breath-in toxins from this water can become sick, sometimes suddenly. Not all blooms are harmful and they can be short-lived.

How To Identify A Potential [HAB](#)



- Water discoloration (bright green, blue, brown, or red tint)
- Water cloudiness below the surface
- Water may resemble pea soup or spilled green/blue-green paint and have thick mat-like collections of floating scum
- Stressed or dead fish

What Should You Do If You See A Possible Harmful Algal Bloom?

- Keep children and pets away from the bloom. Do not swim or wade through algal scum. Avoid playing fetch with pets in the water near the bloom.
- If you or your animals come into contact with an algal bloom, don't swallow or inhale the water and wash with fresh water and soap afterward. Wash animals' fur thoroughly before allowing them to lick themselves.
- Do not drink, cook, or shower with untreated water from lakes, ponds, or streams.
- Do not drive your boat, water ski, or jet ski through a bloom.
- Do not fish from lakes, ponds, or rivers where floating algal scum is found.
- Avoid exposure to irrigation water drawn from untreated sources.
- If you or an animal begin to have a rash, vomiting, diarrhea, respiratory or nervous system problems, call or visit a healthcare provider soon and be sure to mention the possibility of contacting an HAB.
- Report any possible HAB to nearby rangers, or workers in charge of the lake.



Lake Numeric Nutrient Criteria

- 2021 EPA criteria recommendations consist of models that states can use to generate numeric nutrient (N & P) and chlorophyll criteria for lakes
- The criteria models are based on national data but allow flexibility for states to incorporate local data to account for unique local conditions.



Site Specific Lake Criteria

- Georgia has been using watershed and lake models to develop site specific chlorophyll a and nutrient criteria for various lakes in Georgia.
- EPD has developed criteria for 11 lakes
- 17 lakes do not have criteria
- EPD is evaluating available data to select the next lakes for criteria development



PFAS

Per- and Polyfluoroalkyl Substances (PFAS) are a group of manufactured chemicals that have been in use since the 1940s.

- Useful properties of PFAS include heat, cold, water, and stain resistance
- Used in fire fighting foams, chrome plating, grease-resistant paper for food packaging, non-stick cookware, varnishes, sealants, and stain and water-repellant used on carpets and other fabrics

Known as “forever chemicals” because they break down very slowly and can build up in people, animals, and the environment over time.

- Many exposure routes including drinking water contaminated with PFAS and eating certain foods that may contain PFAS, including fish

PFAS exposure may be harmful to human health.

- Reproductive effects, developmental effects or delays in children, increased cancer risk, reduced immune function, increased cholesterol and/or obesity risk, disruption of hormone production

Aquatic Life Criteria Recommendation for PFOA and PFOS

Table 1. Final Recommended Freshwater Aquatic Life Water Quality Criteria for PFOA and PFOS

Criteria Component	Acute Water Column (CMC)¹ (mg/L)	Chronic Water Column (CCC)² (mg/L)	Invertebrate Whole-Body (mg/kg ww³)	Fish Whole-Body (mg/kg ww³)	Fish Muscle (mg/kg ww³)
PFOA Magnitude	3.1	0.10	1.18	6.49	0.133
PFOS Magnitude	0.071	0.00025	0.028	0.201	0.087
Duration	1-hour average	4-day average	Instantaneous	Instantaneous	Instantaneous
Frequency	Not to be exceeded more than once in three years, on average	Not to be exceeded more than once in three years, on average	Not to be exceeded	Not to be exceeded	Not to be exceeded

¹ Criterion Maximum Concentration.

² Criterion Continuous Concentration.

³ Wet Weight.

National Drinking Water Standards for PFAS

- In April 2024, EPA announced National Primary Drinking Water Regulation (NPDWR) for six PFAS.

Compound	Final MCL
PFOA	4.0 parts per trillion (ppt)
PFOS	4.0 ppt
PFHxS	10 ppt
PFNA	10 ppt
HFPO-DA (GenX Chemicals)	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index

- Maximum Contaminant Levels (MCLs) apply to public water systems under the Safe Drinking Water Act which protects treated drinking water.
- This is not a recommended water quality criteria under the Clean Water Act and will not be reflected in Georgia's Water Quality Standards in 391-3-6-.03.

2024 Draft PFAS Human Health Water Quality Criteria

Table 1. Draft Human Health Criteria (HHC) for Three PFAS.

PFAS	Water + Organism HHC (ng/L; ppt) ¹	Organism Only HHC (ng/L; ppt) ¹
PFOA	0.0009	0.0036
PFOS	0.06	0.07
PFBS	400	500

¹ Values are provided in ng/L units to aid in comparison to method detection limit (MDL).

EPA comment period closes April 25



Designated Use Updates

- A segment of Chattahoochee River in Columbus GA was nominated for a designated use change to include recreation in the 2019 Triennial Review
- EPD plans to move forward with a designated use change for this segment since it is used for year-round recreation.
- [Guidance for Recommending a Change in Designated Use](#) can be found on EPD's Water Quality Standards website.

Comments, Contacts, and WQS Webpage

- If you would like to submit official comments for any of the materials in this presentation, please send them in an email to:
epd.comments@dnr.ga.gov with the subject of 2025 Triennial Review
- Questions regarding Water Quality Standards and the Triennial Review Process can be sent to Gillian Batson at:
Gillian.Batson@dnr.ga.gov
- The EPD webpage dedicated to Water Quality Standards can be found at: <https://epd.georgia.gov/watershed-protection-branch/georgia-water-quality-standards>