

# Welcome to this Public Meeting



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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.
  - In the “Reactions” menu, select the “raise hand” option. The host will call on you to ask your question or make your comment.

# 2019 Triennial Review Proposed Updates to Water Quality Standards Public Meeting

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September 13, 2021



# Meeting Agenda

- Review of Control of Water Pollution and Surface-Water Use Law
- Review of federal requirement for Triennial Review
- Changes based on EPA recommendations
- Changes identified by GA EPD
- Changes based on public comment
- Items not being adopted at this time
- Triennial Review Timeline
- Questions and Comments



# Control of Water Pollution and Surface-Water Use

## O.C.G.A § 12-5-21. Declaration of policy; legislative intent

(a) It is declared... “that the water resources of the state shall be utilized prudently for the maximum benefit of the people, in order to restore and maintain a reasonable degree of purity in the waters of the state and an adequate supply of such waters, and to require where necessary reasonable usage of the waters of the state and reasonable treatment of sewage, industrial wastes, and other wastes prior to their discharge into such waters...”





# Review and Revision of Water Quality Standards

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- **[40 CFR § 131.20](#) State review and revision of water quality standards.**
- **(a) *State review.*** The State shall from time to time, but at least once every 3 years, hold public hearings for the purpose of reviewing applicable water quality standards adopted pursuant to §§ 131.10 through 131.15 and Federally promulgated water quality standards and, as appropriate, modifying and adopting standards.
- **(b) *Public participation.*** The State shall hold one or more public hearings for the purpose of reviewing water quality standards as well as when revising water quality standards, in accordance with provisions of State law and EPA's public participation regulation (40 CFR part 25). The proposed water quality standards revision and supporting analyses shall be made available to the public prior to the hearing.

# EPA recommendations

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Adding the following EPA recommended criteria to 391-3-6-.03 (5)(e)(iii): General Criteria for All Waters

- 2009 EPA Acrolein Aquatic Life Criteria

- Acrolein (CAS RN1 107-02-8)

(a) Freshwater

3.0  $\mu\text{g/L}$

- 2012 EPA Carbaryl Aquatic Life Criteria

- Carbaryl (CAS RN1 63-25-2)

(a) Freshwater

2.1  $\mu\text{g/L}$

(b) Coastal and Estuarine Waters

1.6  $\mu\text{g/L}$





## GA EPD Identified Changes

- Replace “Use Classifications” with “Designated Uses”
- Add Recreation Definitions
- Add Water Effect Ratio to Metal Equations
- Add Site Specific Metal Criteria Based on BLM and WER
- Propose Drinking Water and Fishing Bacteria Criteria
- Propose Lakes Oconee and Sinclair Criteria



A person with blonde hair in a ponytail, wearing a red and black plaid shirt and a yellow life vest, is seen from behind, paddling a green kayak on a river. The sun is low in the sky, creating a warm, golden glow and reflecting on the water's surface. The background shows a hazy, overcast sky.

# Recreation definitions

## Primary and Secondary Recreation

- Adding definitions to 391-3-6-.03(3)(l) and (n) for clarification:
  - "Primary contact recreation" is full immersion contact with water where there is significant risk of ingestion that includes, but is not limited to, swimming, diving, white water boating (class 3+), water skiing, and surfing.
  - "Secondary contact recreation" is incidental contact with the water not involving a significant risk of water ingestion such as canoeing, fishing, kayaking, motor boating, rowing, tubing, splashing, wading, and occasional swimming.



# Water Effect Ratio additions

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- Adding Water Effects Ratio (WER) multiplier WER to the metal freshwater aquatic life criteria equations to 391-3-6-.03 (5)(e)(ii): General Criteria for All Waters

## Cadmium

acute criteria =  $WER * (e^{(0.9789[\ln(\text{hardness})] - 3.866)}) (1.136672 - [(\ln \text{hardness})(0.041838)]) \mu\text{g/L}$

chronic criteria =  $WER * (e^{(0.7977[\ln(\text{hardness})] - 3.909)}) (1.101672 - [(\ln \text{hardness})(0.041838)]) \mu\text{g/L}$





# Bacteria Criteria

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- Proposing E. coli and enterococci criteria for Drinking Water and Fishing to 391-3-6-.03(6)(a)(i) and (6)(c)(i).
- Recreation designated use currently has E. coli and enterococci criteria.
- These proposed criteria were calculated based on a study in EPA's [Exposure Factors Handbook, Chapter 3](#). Based on the water ingestion rates from this study, bacteria criteria for winter-time secondary contact recreation are 2.1 times higher than bacteria criteria for primary contact recreation.
- The following slide lists the proposed bacteria criteria for Fishing and Drinking Water designated uses that will replace the seasonal fecal coliform criteria currently in the rules.



## Bacteria Criteria for Drinking Water and Fishing Designated Uses:

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- Primary contact recreation bacteria criteria in May-October
  - E. coli: not to exceed 30-day geometric mean of 126 counts per 100 mL. No more than 10% excursion frequency of 410 STV
  - Enterococci (coastal and estuarine waters): not to exceed 30-day geometric mean of 35 counts per 100 mL. No more than 10% excursion frequency of 130 STV.
- Secondary contact recreation bacteria criteria in November-April:
  - E. coli: not to exceed 30-day geometric mean of 265 counts per 100 mL. No more than 10% excursion frequency of 861 STV.
  - Enterococci (coastal and estuarine waters): not to exceed 30-day geometric mean of 74 counts per 100 mL. No more than 10% excursion frequency of 273 STV.
- Removed Non-human source Bacteria Criteria



# Lakes Oconee and Sinclair

- Adding Lakes Oconee and Sinclair to 391-3-6-.03(17): Specific Criteria for Lakes and Major Lake Tributaries.
- We are adopting site specific chlorophyll *a* and pH criteria for Lakes Oconee and Sinclair.
- Once chlorophyll *a* criteria are adopted, nutrient limits will be implemented in NPDES permits where necessary to ensure chlorophyll *a* criteria is met.
- EPD plans to adopt numeric nutrient criteria for these lakes in the future, once NPDES permit limits have been implemented.

# Lake Oconee

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(g) Lake Oconee: Those waters impounded by Wallace Dam and upstream on the Oconee River as well as other impounded tributaries to an elevation of 436 feet mean sea level corresponding to the normal pool elevation of Lake Oconee.

- (i) Chlorophyll *a*: For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed the chlorophyll *a* concentrations at the locations listed below more than once in a five-year period:
  1. Oconee Arm at Highway 44: 26 µg/L
  2. Richland Creek Arm: 15 µg/L
  3. Upstream from the Wallace Dam Forebay: 18 µg/L
- (ii) pH: within the range of 6.0 – 9.0 standard units.
- (iii) Bacteria: *E. coli* shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).
- (iv) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).
- (v) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).





# Lake Sinclair



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(h) Lake Sinclair: Those waters impounded by Sinclair Dam and upstream on the Oconee River as well as other impounded tributaries to an elevation of 340 feet mean sea level corresponding to the normal pool elevation of Lake Sinclair.

- (ii) Chlorophyll  $\alpha$ : For the months of April through October, the average of monthly mid-channel photic zone composite samples shall not exceed the chlorophyll a concentrations at the locations listed below more than once in a five-year period:
  1. Oconee River Arm Midlake: 14  $\mu\text{g/L}$
  2. Little River and Murder Creek Arm upstream from Hwy 441: 14  $\mu\text{g/L}$
  3. Upstream from the Sinclair Dam Forebay: 10  $\mu\text{g/L}$
- (iii) pH: within the range of 6.0 – 9.0 standard units.
- (iv) Bacteria: E. coli shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(i).
- (v) Dissolved Oxygen: A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times at the depth specified in 391-3-6-.03(5)(g).
- (vi) Temperature: Water temperature shall not exceed the Recreation criterion as presented in 391-3-6-.03(6)(b)(iv).



# Site Specific Criteria based on Biotic Ligand Model and Water Effect Ratio

- Adding 391-3-6-.03(18) Site Specific Metal Criteria based on Biotic Ligand Models and Water Effect Ratio
  - The Biotic Ligand Model (BLM) is a metal bioavailability model that uses receiving water body characteristics and monitoring data to develop site-specific water quality criteria. A study plan and findings shall be submitted and approved that conforms to the requirements outlined in the *2007 Aquatic Life Ambient Freshwater Quality Criteria-Copper 2007 Revision EPA-822-R-07-001*.
  - A Water Effect Ratio (WER) is site specific and is the ratio of the toxicity of a metal in site water to the toxicity of the same metal in standard laboratory. A study plan and findings shall be submitted and approved that conforms to the requirements outlined in the *1994 Interim Guidance on Determination and Use of Water Effect Ratios for Metals EPA-823-B-94-001*. If the WER is for Copper, the *Interim Guidance* may be complemented with the *2001 Streamline Water Effect Ratio Procedure for Discharges of Copper EPA-822-R-01-005*.

# Public Comment Based Changes

- Changes of Designated Uses to Recreation
  - Recognize current use is primary recreation.
  - Broad community support with no significant stakeholder opposition
  - Community has made or plans to make financial investments to promote the use current





# Public Input

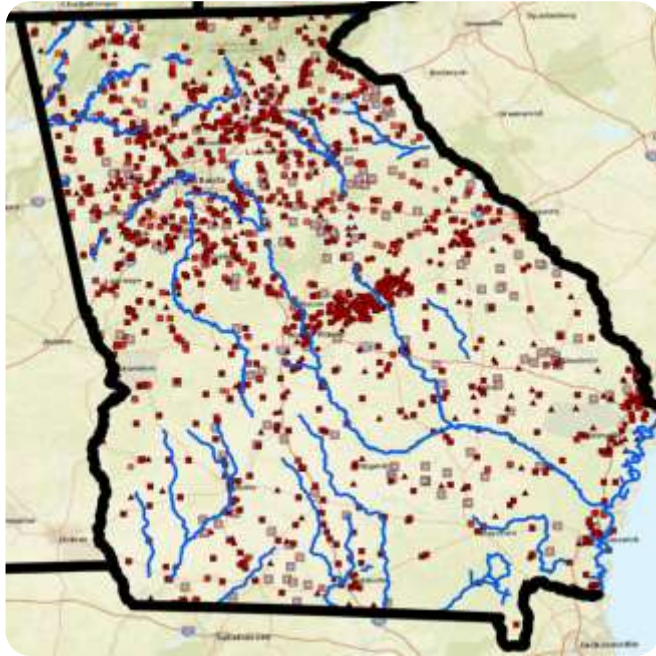
- As part of the Triennial Review process, EPD solicited and considered public comment regarding potential changes to water quality standards.
- Nominating parties worked closely with EPD staff to gather relevant information needed to assess the water bodies nominated for designated use change to recreation.
- EPD is recommending designated use change for all waterbodies for which we have received a complete nomination package.
- EPD will continue to work with nominators to gather information for waterbodies for which we have incomplete nomination packages or for which more time is needed for stakeholder engagement
- This entire process is a work in progress. EPD will be soliciting nominator input for the revision of our *Draft Guidance for Changing a Designated Use* document. EPD anticipates a smoother and more user-friendly process in the next Triennial Review if we receive similar nominations.



# Designated Use Change

- Public nominated 2662 river miles
- EPD prioritized waterbodies (804 river miles)
- EPD recommending 14 waterbody segments (407 miles) based on evaluation of nomination packages received
  - These waterbodies met all requirements for a designated use change to recreation:
    - Year-round primary contact recreation
    - Planned or current investments
    - Stakeholder and/or community support
  - No stakeholder opposition
- Waterbodies with incomplete nomination packages and on-going stakeholder discussions, as well as those not prioritized for evaluation under the 2019 Triennial Review can be considered in the upcoming 2022 Triennial Review. EPD will also consider any newly nominated waterbodies at that time.





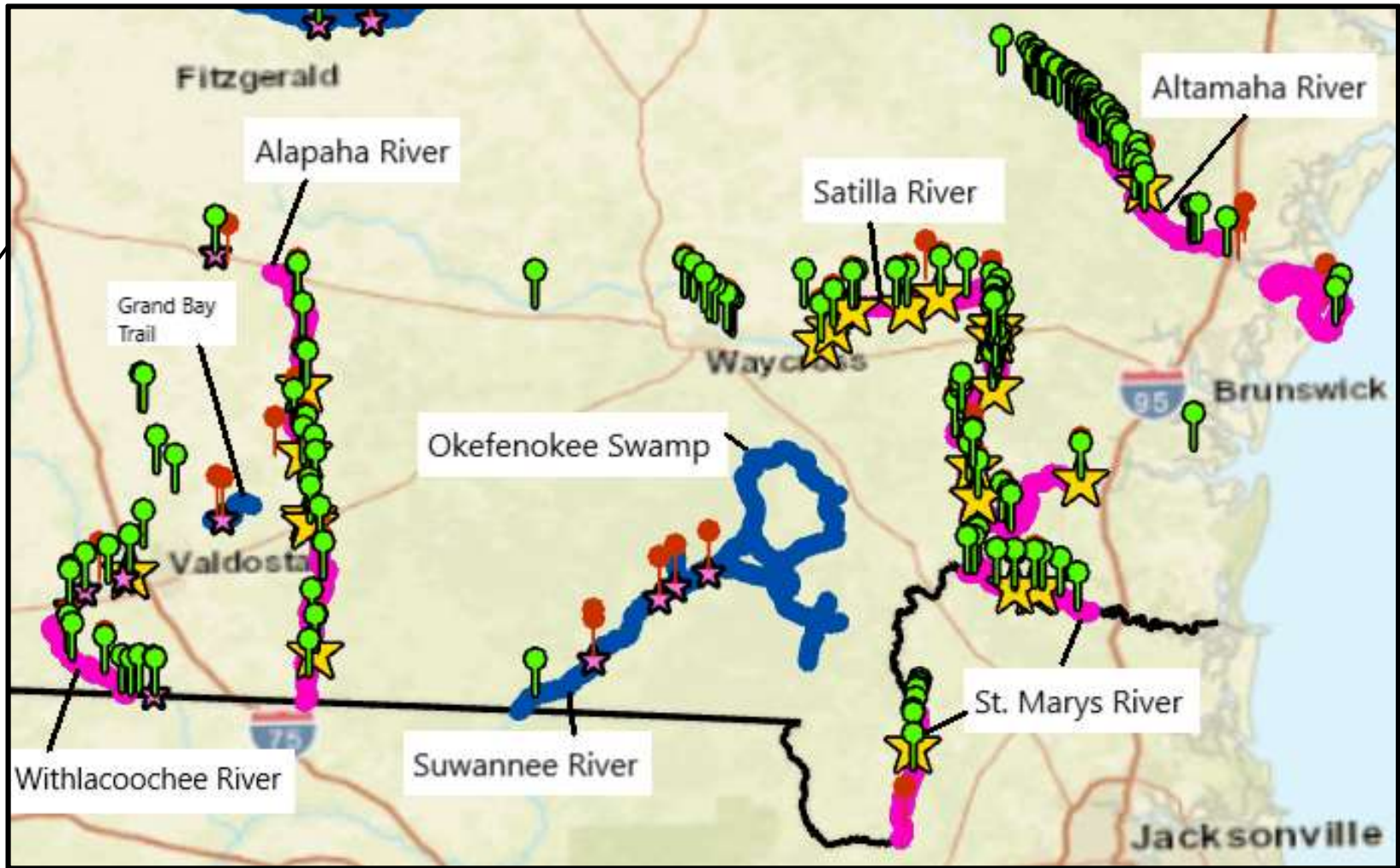
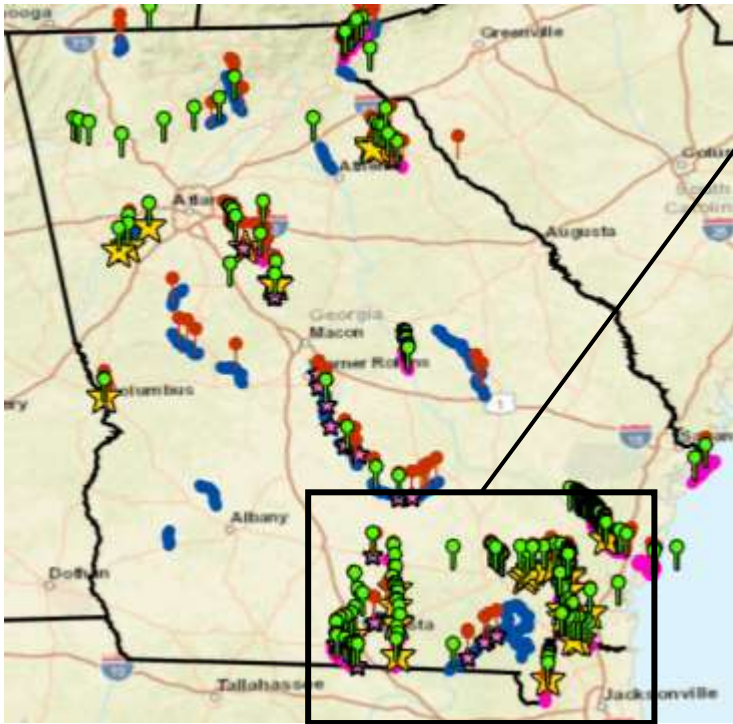
# Prioritization of Nominated Waterbodies

- EPD analyzed nominated waterbodies using both street view and satellite imagery.
- Waterbodies were prioritized if they did not display any of the following:
  - Human health concerns from non-point sources
    - Agricultural land, landfills, airports, urban areas, livestock, chicken houses, PFAS, hazardous waste sites
  - Dischargers within 10 miles
    - This refers to dischargers who have permit limits for bacteria or other pollutants of concern for human health.
    - This excludes 2 Chattahoochee segments explained later in this presentation
- Addition information requested from nominators to complete nomination packages.



# Recreation and Investment Location Data

- Primary\_Recreation\_coordinates\_sh...
  - Secondary\_recreation
  - Recreation\_Investments
- Does it support primary recreation?
- ☆ N
  - ★ Y





# Waterbodies Being Changed in 391-3-6-.03(14) to Include Recreation

- Alapaha River - Cherry Creek to Stateline
- Alapaha River - Willacoochee River to Dampier Branch
- Altamaha River - Doctors Creek to Butler River
- Broad River - Comer-Carlton Rd (Athens Hwy) to Mill Branch
- Broad River - Wildcat Bridge Rd. to Scull Shoal Creek
- Chattooga River - confluence with West Fork Chattooga to Tugalo Lake
- Little St. Simons Island - Littoral waters on the ocean and sound side of Little St. Simons Island
- Oconee River - Dead River to Flat Creek
- Satilla River - Alabaha River to Woodbine boat ramp at Hwy 17
- South River - Honey Creek (Henry County) to Lake Jackson at GA Hwy 36
- St. Marys River - Deep Creek to Boone Creek
- St. Marys River - Prospect Landing Rd. to Little St. Marys River
- Wassaw Sound - Open Sea and littoral waters of Wassaw and Little Tybee Islands
- Withlacoochee River - Tiger Creek to State Line

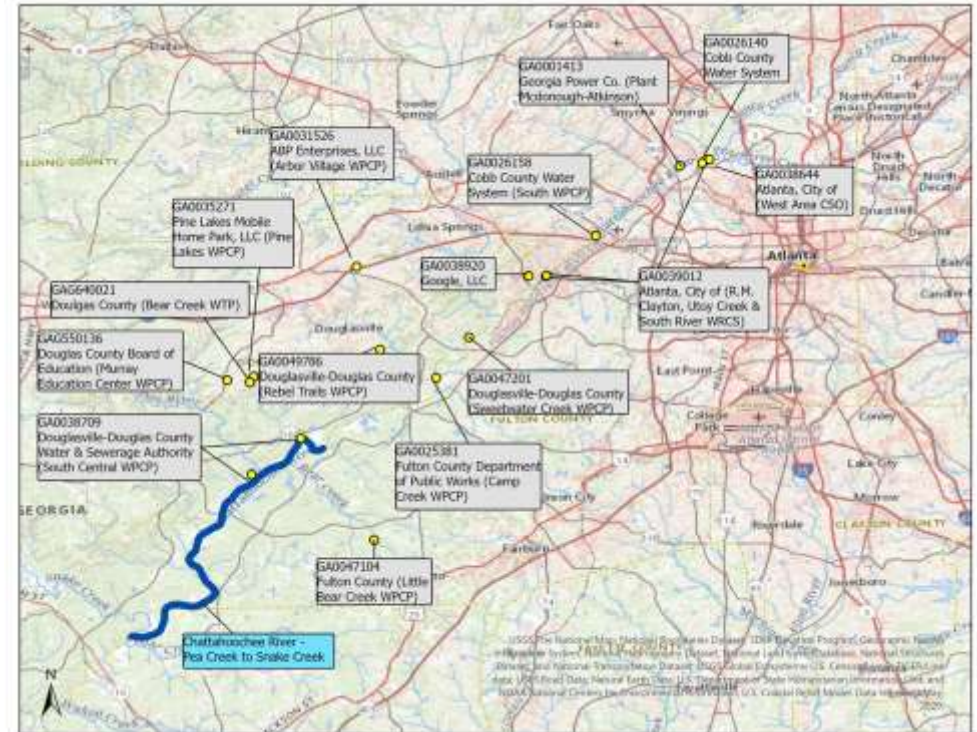


<https://arcg.is/1i0ezv>

# Stakeholder Engagement

- EPD prioritized two Chattahoochee River segments despite the presence of dischargers within 10 miles because both segments have well known year-round primary contact recreation, as well as community support and recreation investments.
- EPD held stakeholder meetings to inform affected dischargers of the proposed change.
- Complete nomination packages for both waterbodies included letters of concern from stakeholders.
- These segments are now being postponed until next Triennial Review to allow time for EPD and nominating parties to address stakeholder concerns.

Pea Creek to Snake Creek



North Highland Dam to Bull Creek



Waterbody	Missing Data		
	Documentation of year-round primary contact recreation	Location of investments on the waterbody	Community and stakeholder letters of support
Altamaha River - Savannah Highway to Doctors Creek			X
Banks Lake – Banks Lake	X	X	
Broad River - Scull Shoal Creek to Comer-Carlton Rd. (Athens Hwy)			X
Chattahoochee River Sweetwater Creek to Pea Creek			X
Chattooga River – Stateline to confluence with West Fork Chattooga	X		
West Fork Chattooga River - Confluence of Overflow Creek and Clear Creek to confluence with Chattooga River	X		
Conasauga River - Sugar Creek to Spring Creek	X		
Etowah River - Headwaters to Montgomery	X	X	X
Etowah River - Montgomery Creek to Lily Creek	X	X	X
Etowah River - Shoal Creek to Yellow Creek	X	X	X
Flint River - Flat Creek to Birch Creek	X	X	
Flint River - Sheep Rock Hollow to Potato Creek	X	X	
Flint River - Auchumpkee Creek to Patsiliga Creek	X	X	
Grand Bay Trail - Grand Bay Creek and Trail located within the Grand Bay WMA	X	X	
Ichawaynochaway Creek - Merrett Creek to Pachitla Creek	X	X	
Kinchafoonee Creek - Mossy Creek to Reedy Creek (Lee County)	X	X	
Little Ohoopsee River - Headwaters to Ohoopsee River	X		
North Oconee River - Jefferson Rd. (GA-15-ALT) to Curry Creek	X		
North Oconee River - Shankles Creek to Walton Creek	X		
Ocmulgee River - Lake Jackson Dam to Wise Creek	X		
Ocmulgee River - Wise Creek to Towaliga River	X		
Ocmulgee River - Thompson Mill Creek to Buck Creek	X		
Ocmulgee River - Bluff Creek to Crooked Creek	X		
Ocmulgee River - Mizell Creek to Fishing Creek	X		
Okefenokee Swamp - All waters within the boundaries of the Okefenokee National Wildlife Area	X		
Satilla River - Jamestown Landing to Alabaha River			X
South River - Panola Shoals to Honey Creek (Henry County)			X
Suwannee River - Suwannee River Sill to Stateline	X		
Withlacoochee River - Highway 37 to Tiger Creek to State Line			X
Yellow River - Brown Bridge Rd. to Porterdale Water Intake	X		
Yellow River - Porterdale Water Intake to Lake Jackson at Georgia Hwy 36	X		

# Incomplete Nomination Packages

- Nomination packages with missing data or packages which only document secondary contact recreation are considered incomplete.
- EPD will continue to work with nominators to gather missing data.
- EPD will help facilitate stakeholder engagement where necessary.
- If complete nomination packages are received, waterbodies may be considered for designated use change for 2022 Triennial Review.



# Draft Guidance for Changing a Designated Use

- EPD plans to update the designated use change process, criteria, and guidance document prior to the start of the next Triennial Review.
- EPD acknowledges the need for a more efficient process that will allow time for thorough evaluation of all nominations received regardless of land use.
- 2019 process helped iron out what information is needed from nominators and the timeframe required to engage with stakeholders.
- Feedback received from nominators during this process will be used to improve the guidance document and evaluation process.
- EPD will hold a virtual meeting in January 2022 to discuss the revised guidance document and proposed process.



# Items Not Being Adopted

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- [Aquatic Life Ambient Water Quality Criterion for Selenium - Freshwater 2016](#)
- [Final Aquatic Life Ambient Water Quality Criteria for Aluminum – Freshwater 2018](#)
- [Human Health Ambient Water Quality Criteria: 2015 Update](#)
- [Human Health Recreational Ambient Water Quality Criteria or Swimming Advisories for Microcystins and Cylindrospermopsin – 2019](#)



# Harmful Algal Bloom Swimming Advisories

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- EPD has developed a HABs Story map available on the GAEPD website:<https://www.arcgis.com/apps/MapJournal/index.html?appid=6ea9e19faf84448f8f00d6ea5228d11b>
- EPD held a virtual HABs meeting with lake managers and university researchers on April 16, 2021
- EPD developed an informational flyer that can be posted by lake managers
- EPD is working with lake managers on protocol for cyanotoxin sampling and a posting procedure for swim advisories.
- Swim advisories should be posted if visual observations and sampling indicate the presence of cyanotoxins above the advisory thresholds.





# Triennial Review Timeline

- Comment period closes September 17, 2021
- DNR Board Briefing October 28, 2021
- Final Public Hearing in mid-December
- DNR Board Adoption in January 2022
- Kickoff Hearing for 2022 Triennial Review in early 2022

# 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](mailto:epd.comments@dnr.ga.gov) with the subject of **2019 Triennial Review**  
by September 17, 2021.
- Questions regarding Water Quality Standards and the Triennial Review Process can be sent to Gillian Gilbert-Wason at:  
[Gillian.Wason@dnr.ga.gov](mailto:Gillian.Wason@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>