



ENVIRONMENTAL PROTECTION DIVISION

**Richard E. Dunn, Director**

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**EPD Director's Office**

2 Martin Luther King, Jr. Drive  
Suite 1456, East Tower  
Atlanta, Georgia 30334  
404-656-4713

Aug 05, 2020

Mr. Matt Windom  
Executive Director  
Carroll County Water Authority  
556 Old Bremen Road  
Carrollton, GA 30117

Re: Water Quality Certification  
Joint Public Notice SAS-2009-00042  
Indian Creek Reservoir  
Tallapoosa River Basin  
Carroll County

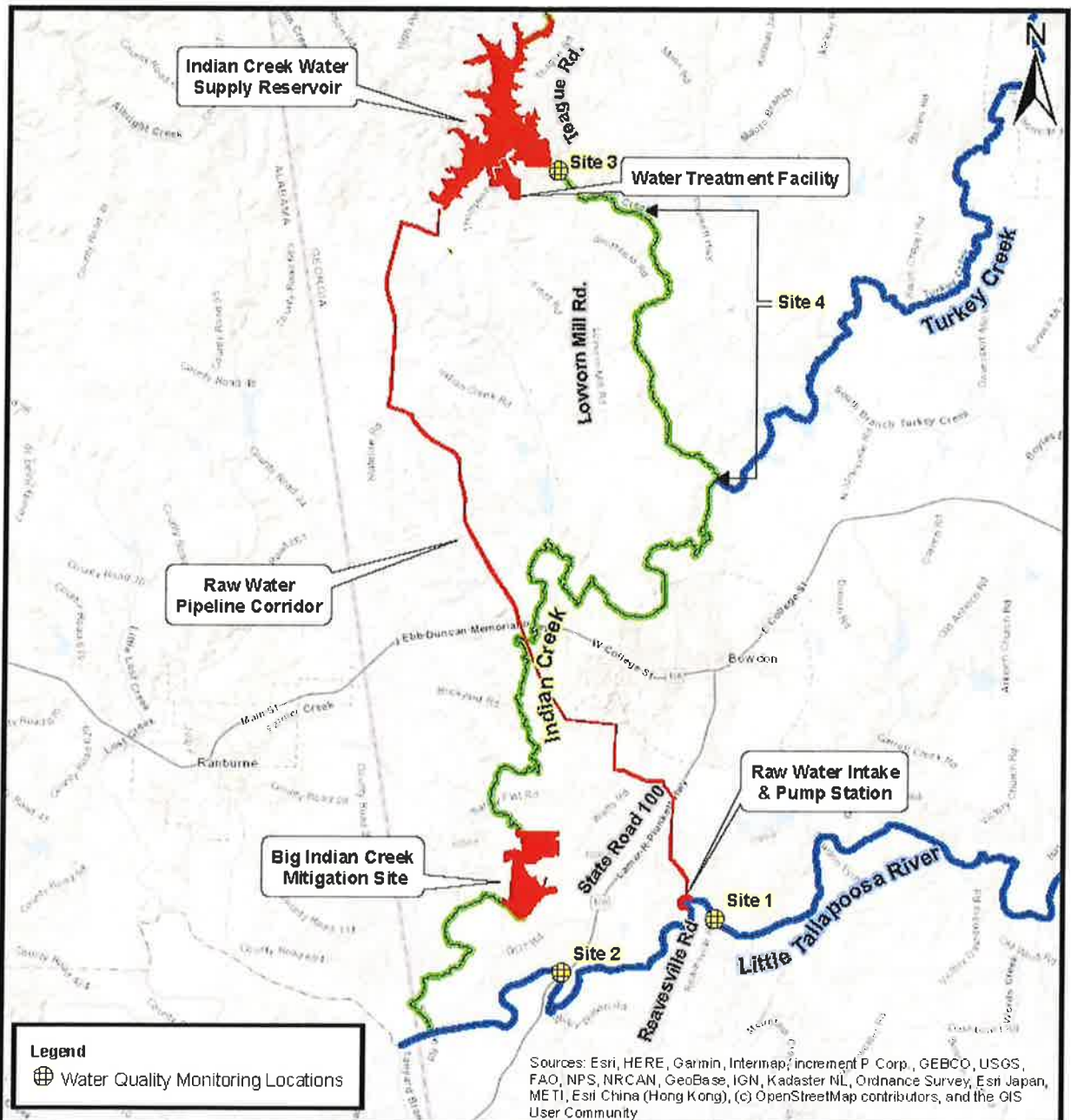
Dear Mr. Windom:

In accordance with Section 401 of the Federal Clean Water Act, 33 U.S.C. § 1341, the State of Georgia has evaluated the Indian Creek Reservoir project submitted by the Carroll County Water Authority (CCWA), an applicant for a federal permit or license to conduct activity in, on, or adjacent to the waters of the State of Georgia.

The State has examined the information regarding the Indian Creek Reservoir project provided to it by the Carroll County Water Authority and by assisting consultants Andrea P. Gray, LLC and Eco-Tech Consultants. In accordance with that information, the State of Georgia issues this Section 401 certification to the Carroll County Water Authority. This Section 401 water quality certification is subject to the following terms and conditions:

1. All work performed during construction will be done in a manner so as not to violate applicable water quality standards.
2. The applicant will maintain continuous water quality monitoring stations at three monitoring sites, which will include: the existing United States Geological Survey (USGS) stream gage located at the State Route 100/Little Tallapoosa River crossing, approximately 2.75 miles downstream of the project's Little Tallapoosa River intake; a new gage which CCWA will contract with USGS to install and monitor at the Reavesville Road/Little Tallapoosa River crossing, approximately 0.5 mile upstream of the project's Little Tallapoosa River intake; and, a new gage which CCWA will contract with USGS to install and monitor on Indian Creek at a location just upstream of Teague Road, approximately 0.25 miles downstream of the Indian Creek Reservoir dam discharge.

- a. The continuous monitoring station shall be installed once the Clean Water Act Section 404 Permit for the project is issued by the U.S. Army Corps of Engineers, Savannah District (Corps), and shall be operational for two years prior to land disturbance for project construction, to enable the collection of baseline, construction phase, and operational phase data. Water quality monitoring shall continue for at least 10 years after the start of the project construction phase or for three years after the reservoir has filled and reservoir operation has begun, whichever term is greater. As appropriate, the applicant shall consult with Dr. Elizabeth Booth of the EPD Watershed Planning and Monitoring Program ([Elizabeth.Booth@dnr.ga.gov](mailto:Elizabeth.Booth@dnr.ga.gov), or 404-463-4929) regarding the location and function of the continuous monitoring stations.
  - b. The continuous monitoring stations shall collect data on discharge (stream/river flow), temperature, dissolved oxygen and pH at a minimum 30-minute recording interval.
  - c. The continuous water quality monitoring equipment and stream gauge shall be installed and operated to provide real-time data via a public website.
  - d. The continuous water quality monitoring data shall only be evaluated for compliance with water quality standards during periods of measurable stream flow.
3. The applicant will conduct biomonitoring annually for the same duration cited for water quality monitoring in Condition 2-a, at a total of four sampling locations to be established as follows: in two reaches of the Little Tallapoosa River - one in the vicinity of the existing United States Geological Survey (USGS) stream gage located at the State Route 100/Little Tallapoosa River crossing, approximately 2.75 miles downstream of the project's Little Tallapoosa River intake, and another in the vicinity of the new gage which CCWA will have installed at the Reavesville Road/Little Tallapoosa River crossing, approximately 0.5 mile upstream of the project's Little Tallapoosa River intake; in two reaches of Indian Creek – one in the section of Indian Creek located just upstream of Teague Road and downstream of the Indian Creek Reservoir dam discharge, and another location selected along Indian Creek between the Lovvorn Mill Road crossing and the confluence of Indian Creek with Turkey Creek, with potential locations to include the Lovvorn Mill Road crossing, the Smithfield Road crossing, or any other accessible site situated above the Turkey Creek confluence. Continuous water quality monitoring locations and biomonitoring locations are illustrated on Figure 1 – Project Location Map.
- a. Biological monitoring of fish, benthic macroinvertebrates, periphyton and physical habitat will be performed at all four biomonitoring stations cited above. Benthic macroinvertebrate and physical habitat monitoring will be conducted according to Macroinvertebrate Biological Assessment of Wadeable Streams in Georgia (GADNR, 2007). Periphyton samples will be collected concurrently with benthic macroinvertebrate and physical monitoring according to Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton,



**Figure 1**  
**Project Location Map**  
 Carroll County Water Authority  
 Indian Creek Water Supply Reservoir  
 Water Quality Monitoring Plan  
 Carroll County, Georgia

0 0.5 1 2 Miles

**Eco-Tech**  
 CONSULTANTS

Image / Source: USGS Topographic Data  
 250K Rome, Atlanta, Greenville, Athens, Pickens, Macon  
 Print Date: 9/10/2019



Benthic Macroinvertebrates and Fish, Section 6 (USEPA, 1999; EPA-841-B-99-002), excepting changes in procedures which will occur according to the stream protocols amended by GADNR where applicable (GADNR, 2007). Collection of fish specimens and data will occur according to Standard Operating Procedures for Conducting Biomonitoring on Fish Communities in Wadeable Streams in Georgia (GADNR, 2020).

- b. Field sampling will be performed during optimal periods based on seasonal biotic activity and stream/river water levels as appropriate. Monitoring for macroinvertebrates and physical habitat will occur during October through February. Fish and periphyton sampling in Indian Creek will occur during May through October. Fish and periphyton sampling in the Little Tallapoosa River will be dictated by river water levels as to allow use of the wadeable streams protocol if practical. This wadeable streams protocol requires that at least 75% of the river within the sample reach be wadeable and accessible to wading sampling gear. As such, fish sampling in the Little Tallapoosa River will occur only in the August – October time frame when river flows are at the annual low. This sampling will include some amount of shoal/riffle habitat as is available in the sampling reach in order to effectively collect fluvial specialist fish species which may be present in these habitats, and the target sampling reach should be sited as to facilitate the availability of this shoal/riffle habitat type. In the event that the Little Tallapoosa River sampling reaches are largely non-wadeable, then the EPA National Rivers and Streams Assessment 2018-2019: Field Operations Manual – Non-Wadeable (USEPA, 2017; EPA-841-B-17-003b.) sampling protocol may be substituted, while continuing to use the metrics and scoring associated with the Georgia DNR Standard Operating Procedures for Conducting Biomonitoring on Fish Communities in Wadeable Streams. If the non-wadeable river sampling option is necessary, then an expanded sampling window of May through October may be used to ensure that water levels in the Little Tallapoosa River are high enough for boat accessibility.
- c. In addition to the continuous water quality monitoring cited in Condition 2, in situ water quality measurements will be taken for water temperature, dissolved oxygen (DO), pH, turbidity, and specific conductance at all locations and occasions of biomonitoring.
- d. At the end of the minimum ten-year biomonitoring period cited in Condition 2 above, the applicant will undertake coordination with the Georgia DNR Environmental Protection Division (EPD) and Wildlife Resources Division (WRD) to determine whether any additional biomonitoring will be required for the project. The determination for any potential additional biomonitoring will be informed by the achievement of performance standards and subject to the environmental regulatory judgment of EPD and WRD.

4. By March 31 of each year the applicant shall provide EPD with a monitoring report discussing the data collected related to Conditions 2 and 3 above. In this report the currently submitted annual data will be presented in context with all other prior years' data. Annually reported monitoring data will be compiled and presented in appropriate graphic and summary table format, and not simply as bulk raw data. Stream discharge data will be presented as hydrographs with notation of the dates of specific monitoring events as have occurred during the reporting year.

Relative to the project's fisheries and macroinvertebrate biomonitoring, baseline and deviation from baseline status will be determined as follows:

For Indian Creek fisheries IBI biomonitoring, the baseline condition score will be determined by averaging IBI index scores over both sites and Years 1 and 2 prior to land disturbance. A negative deviation from baseline condition is defined to occur when the index score, averaged over both Indian Creek monitoring sites, is 20% or more lower than the baseline score in any individual year. For Little Tallapoosa River fisheries IBI biomonitoring, an upstream-vs-downstream baseline condition value will be calculated as the upstream index score minus the downstream index score averaged over the 2-year pre-construction baseline period (BDIF = Difference Before). After water withdrawal from the Little Tallapoosa begins, the value of the upstream index score minus the downstream index score (ADIF = Difference After) will be calculated each year. A negative deviation from baseline condition is defined to occur when ADIF-minus-BDIF exceeds 8 IBI monitoring points.

For Indian Creek Macroinvertebrate Multi-Metric Index (MMI) biomonitoring, the baseline condition score will be determined by averaging MMI index scores over both sites and Years 1 and 2 prior to land disturbance. A negative deviation from baseline condition is defined to occur when the index score, averaged over both Indian Creek monitoring sites, is 20% or more lower than the baseline score in any individual year. For Little Tallapoosa River macroinvertebrate MMI biomonitoring, an upstream-vs-downstream baseline condition value will be calculated as the upstream index score minus the downstream index score averaged over the 2-year pre-construction baseline period (BDIF = Difference Before). After water withdrawal from the Little Tallapoosa begins, the value of the upstream index score minus the downstream index score (ADIF = Difference After) will be calculated each year. A negative deviation from baseline condition is defined to occur when ADIF-minus-BDIF exceeds 12 MMI monitoring points.

If any negative deviations per Condition 3 are documented, EPD will review the data in consultation with WRD, and will determine if any modifications to reservoir operation, such as adjustment of flow conditions downstream of the dam by altering the rate and/or depth of the discharge from the reservoir, are warranted. The monitoring report should be sent to the EPD Watershed Protection Branch, Watershed Planning and Monitoring Program, 2 M.L.K., Jr. Drive S.W., Suite 1152, Atlanta, GA 30334.

5. The applicant must act promptly to address any violations of water quality standards caused by or related to the operation of the reservoir by promptly notifying EPD of any water quality

standards violations and consulting with EPD to investigate and resolve any associated issues.

6. The applicant must notify Georgia EPD of any modifications to the proposed activity including, but not limited to, modifications to the construction or operation of any facility.
7. The applicant must notify the Georgia Environmental Protection Division of any new, updated, or modified applications for federal permits or licenses for the Indian Creek Reservoir project related to activity in, on, or adjacent to waters of the State of Georgia.

The Georgia Environmental Protection Division may invalidate or revoke this certification for failure to comply with any of these terms or conditions. This certification does not waive any other permit or other legal requirement applicable to this project or relieve the applicant of any obligation or responsibility for complying with the provisions of any other federal, state, or local laws, ordinances, or regulations.

It is your responsibility to submit this certification to the appropriate federal agency. If you have any questions regarding this certification, please contact Stephen Wiedl at [Stephen.Wiedl@dnr.ga.gov](mailto:Stephen.Wiedl@dnr.ga.gov)/404-651-8459.

Sincerely,



Richard E. Dunn, Director  
Environmental Protection Division