



Relicensing Brief: WATER RESOURCES

- Georgia Power maintained a routine water quality monitoring program for Lake Jackson between the 1980s and Fall 2017. Water quality parameters included nutrients, oxygen demanding constituents, pH, temperature, turbidity, alkalinity, dissolved oxygen, specific conductivity, and hardness. Lake Jackson has exhibited good overall water quality conditions throughout this monitoring period.
- Lake Jackson's waters typically stay well mixed for most of the year (fall to spring). The lake thermally stratifies in the summertime. Georgia Power's historical water quality data indicate normal seasonal patterns with highest dissolved oxygen concentrations in the winter months and lowest during summer months.
- Lake Jackson is a popular recreation destination and a popular fishery comprised of a diversity of sport- and gamefishes.
- Georgia Environmental Protection Division (EPD) classifies the section of the Ocmulgee River from Lloyd Shoals Dam to Wise Creek as drinking water use, which it is currently meeting. Georgia EPD classifies water use for Lake Jackson from the South River at Georgia Highway 36, from the Yellow River at Georgia Highway 36, and from the Alcovy River at Newton Factory Road Bridge to Lloyd Shoals Dam as recreation use.
- Based on Georgia EPD's 2016 Water Quality in Georgia report, the Yellow River arm, South River arm, Tussahaw Creek arm, Alcovy River arm, and dam pool reaches of Lake Jackson were listed as not supporting their designated uses for recreation. The designation was due to non-point source and urban runoff contamination for polychlorinated biphenyls (PCBs), chlordane, and Trophic Weighted Residue Value of mercury in fish tissue (TWR). A fish consumptive guidance has been issued for Lake Jackson by Georgia EPD, and Total Maximum Daily Loads were established in 1998 for chlordane and PCB and in 2002 for TWR.
- Georgia EPD's chlorophyll-*a* standard for Lake Jackson is set at a concentration not to exceed 20 µg/L. Chlorophyll-*a* is a green pigment found in algae and green plants that is vital for photosynthesis and serves as an indicator of nutrient levels in a waterbody. The chlorophyll-*a* standard is monitored by sampling and analyzing lake water at a location approximately 2 miles downstream of the confluence of the South and Yellow Rivers at the junction of Butts, Newton, and Jasper Counties at a frequency of more than once in a five-year period.
- There are several other water quality standards set for Lake Jackson by Georgia EPD that include pH, total nitrogen, phosphorus loading, dissolved oxygen, fecal coliform, and water temperature.
- Georgia EPD has limited maximum phosphorus loading standards at four major tributaries of Jackson Lake: South River at Island Shoals, Yellow River at GA Highway 212, Alcovy River at Newton Factory Bridge Road, and Tussahaw Creek at Fincherville Road.

Bottom Line Take Away: Lake Jackson supports its designated uses for drinking water and is a popular recreational destination with a diverse fishery.

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