

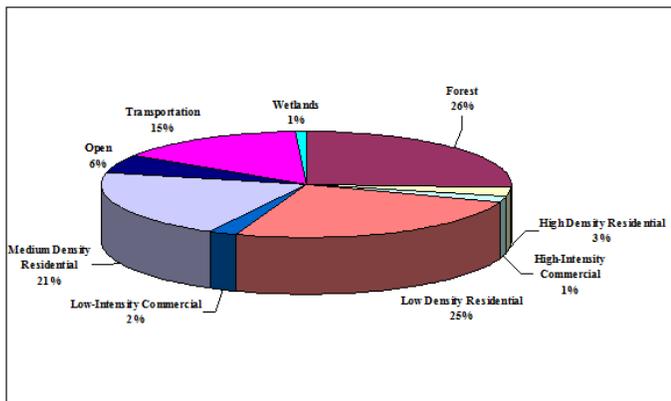
Waterbody: Lexington Creek



Basin: Lake Jackson

Lexington Creek is a moderately altered stream located in the northern part of Tallahassee and drains into Fords Arm of Lake Jackson. The watershed extends to Thomasville Road at I-10 on the east, and is bounded by Maclay Road and Live Oak Plantation Road on the north and south, respectively.

As shown in the following pie chart, residential, commercial, and transportation uses make up approximately 67% of the 1,803 acre watershed. Increases in stormwater runoff and waterbody nutrient loads can often be attributed to these types of land uses.



Background

Healthy, well-balanced stream communities may be maintained with some level of human activity, but

excessive human disturbance may result in waterbody degradation. Human stressors may include increased inputs of nutrients, sediments, and/or other contaminants from watershed runoff, adverse hydrologic alterations, undesirable removal of habitat or riparian buffer vegetation, and introduction of exotic plants and animals. Water quality standards are designed to protect designated uses of the waters of the state (e.g., recreation, aquatic life, fish consumption), and exceedances of these standards are associated with interference of the designated use.

Methods

Surface water was collected to determine the health of Lexington Creek and met the requirements of the Florida Department of Environmental Protection (FDEP).

Results

Nutrients

According to FDEP requirements, Numeric Nutrient Criteria (expressed as an annual geometric mean) cannot be exceeded more than once in a three year period. The nutrient thresholds and results are found in Table 1. Due to low water conditions, four temporally independent samples per year could not be collected from this station from 2006-2008, 2011-2013 and 2015. The State criteria were not exceeded for either parameter when sampling requirements were met.

Table1. FDEP's total nitrogen and phosphorus criteria for streams applied to Lexington Creek.

Lexington Tributary	Total Nitrogen Threshold 1.03 mg/L	Total Phosphorus Threshold 0.18 mg/L
2007	-	-
2008	0.43	0.15

Lexington Tributary	Total Nitrogen Threshold 1.03 mg/L	Total Phosphorus Threshold 0.18 mg/L
2009	0.13	0.14
2010	0.42	0.15
2011-2013	-	-
2014	0.33	0.12
2015	-	-

However, based on two sampling events in 2015, the geometric mean of total phosphorus (0.19 mg/L) slightly exceeded the 0.18 mg/L threshold.

Fecal Coliforms and Escherichia coli (E. coli)

Lexington Creek has a history of fecal coliform levels exceeding Class III water quality standard (400/100 mL in at least 10% of the samples). Recently, *E. coli* standards supplanted fecal coliform standards in Florida as an indicator of bacterial contamination. The recently adopted *E. coli* water quality limit of > 126 in 10% of samples collected over a 30 day period was exceeded for the first (240/100 mL) and second (470/100 mL) quarters of 2015. Aging septic tanks, leaking sewer lines or possibly wildlife could be contributing to the elevated coliform levels.

Other Parameters

Other water quality parameters appear to be normal for the area and no impairments were noted.

Conclusions

When sampling requirements were met, Lexington Creek met the nutrient thresholds for the East Panhandle region. Based on two sampling events in 2015, the geometric mean of total phosphorus exceeded the 0.18 mg/L threshold. *E. coli* bacteria exceeded Class III water quality standards in 2015.

Aging septic tanks, leaking sewer lines or possibly wildlife could be contributing to the elevated coliform levels.

Thank you for your interest in maintaining the quality of Leon County's water resources. Please feel free to contact us if you have any questions.

Contact and resources for more information

www.LeonCountyFL.gov/WaterResources

[Click here to access the results for all water quality stations sampled in 2015.](#)

[Click here for map of watershed – Sample site 26.](#)

Johnny Richardson, Water Resource Scientist
(850) 606-1500

Richardsonjo@leoncountyfl.gov