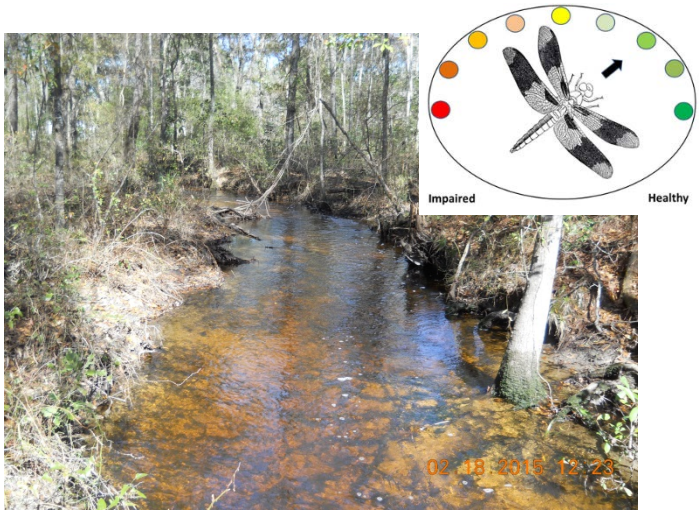
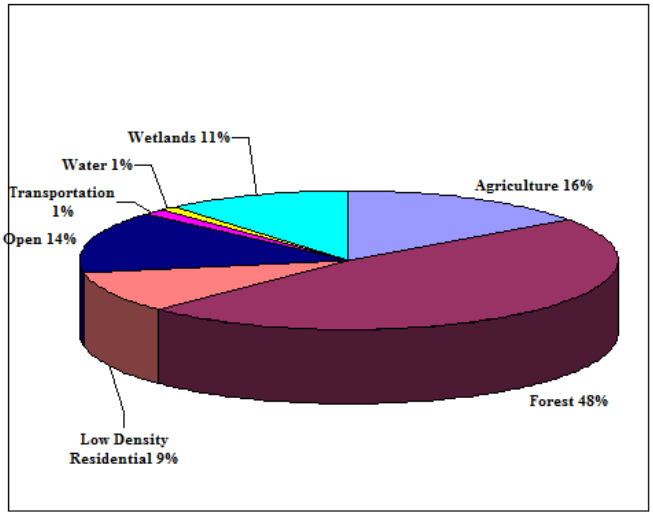
Waterbody: Patty Sink Drain



Basin: Patty Sink

Patty Sink Drain is a slightly tannic, nitrogen-limited stream that flows south and eventually drains into Patty Sink and the Floridan Aquifer.

As shown in the following pie chart, approximately 26% of land use in Patty Sink's 10,167 acre watershed is agricultural, residential, or transportation. 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 sampling was conducted to determine the health of Patty Sink Drain and met the collection and analysis requirements of the Florida Department of Environmental Protection (FDEP).

Results

Nutrients

According to FDEP requirements, Numeric Nutrient Criteria (NNC) (expressed as an annual geometric mean) cannot be exceeded more than once in a three year period. Due to low water conditions, four temporally independent samples per year have never been collected from this station. Even though staff was not able to collect the required amount of samples per calendar year, some conclusions can be made. Based on 17 samples (collected 2007-2015) the geometric mean of total phosphorus (0.07 mg/L) and total nitrogen (0.49 mg/L) would meet NNC criteria. Based on the three samples collected in 2015, total nitrogen (0.55 mg/L) and total phosphorus (0.10 mg/L) met the NNC.

Fecal Coliforms and Escherichia coli (E. coli)

Patty Sink has a history of fecal coliform levels exceeding the 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. The recently adopted *E. coli* water quality limit of > 126 in 10% of samples collected over a 30 day period was exceeded (190/100 mL) for the second quarter of 2015. Since the watershed is

relatively undeveloped, elevated *E. coli* levels are probably the result of wildlife in the area.

Other Parameters

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

Conclusions

Based on ongoing sampling, total phosphorus and total nitrogen levels were low when compared to other streams in Florida. The recently adopted *E. coli* water quality limit of > 126 in 10% of samples collected over a 30 day period was exceeded (190/100 mL) for the second quarter of 2015. Other water quality parameters appear to be normal for the area and no other impairments were noted.

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 station 5.

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