

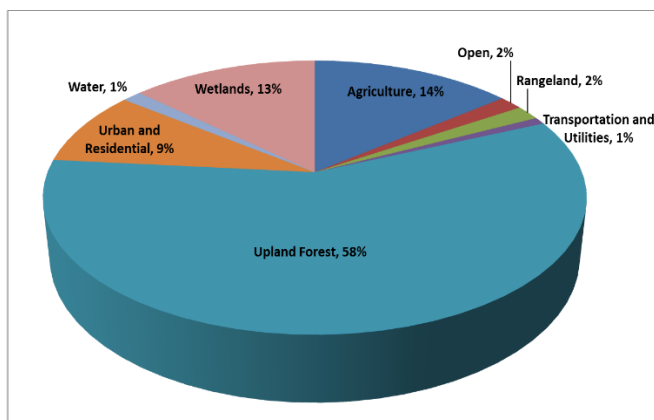
Waterbody: Patty Sink Drain



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 28% of land use in Patty Sink's 12,975 acre watershed is agriculture, open land, rangeland, transportation, utilities, urban and residential. 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 meet 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 number of samples per calendar year, some conclusions can be made. For illustrative purposes, individual data points were plotted to determine any possible trends (Figures 1 and 2). With few exceptions, individual values did not exceed the instream criteria for total phosphorus or total nitrogen.

Fecal Coliforms and Escherichia coli (E. coli)

Patty Sink Drain has a history of fecal coliform levels exceeding the Class III water quality standard (400/100 mL in at least 10% of the samples). *E. coli* standards have now supplanted fecal coliform standards in Florida. The *E. coli* water quality limit of > 410 in 10% of samples collected over a 30-day period have been exceeded three times (Figure 3) since *E. coli* sampling started (1st quarter of 2015). Since the watershed is relatively undeveloped,

elevated *E. coli* levels are probably the result of wildlife or livestock (i.e., cattle) in the area. There have been no exceedances since 2018.

Other Parameters

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

Conclusions

Total phosphorus and total nitrogen levels appear to meet the Numeric Nutrient Criteria. *E. coli* water quality limits were exceeded during the sampling period, but levels have been below Class III water quality standards since 2018. 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.LeonCountyWater.org

[Click here to access the results for all water quality stations sampled in 2021.](#)

[Click here for a map of the watershed – Sample Site 5.](#)

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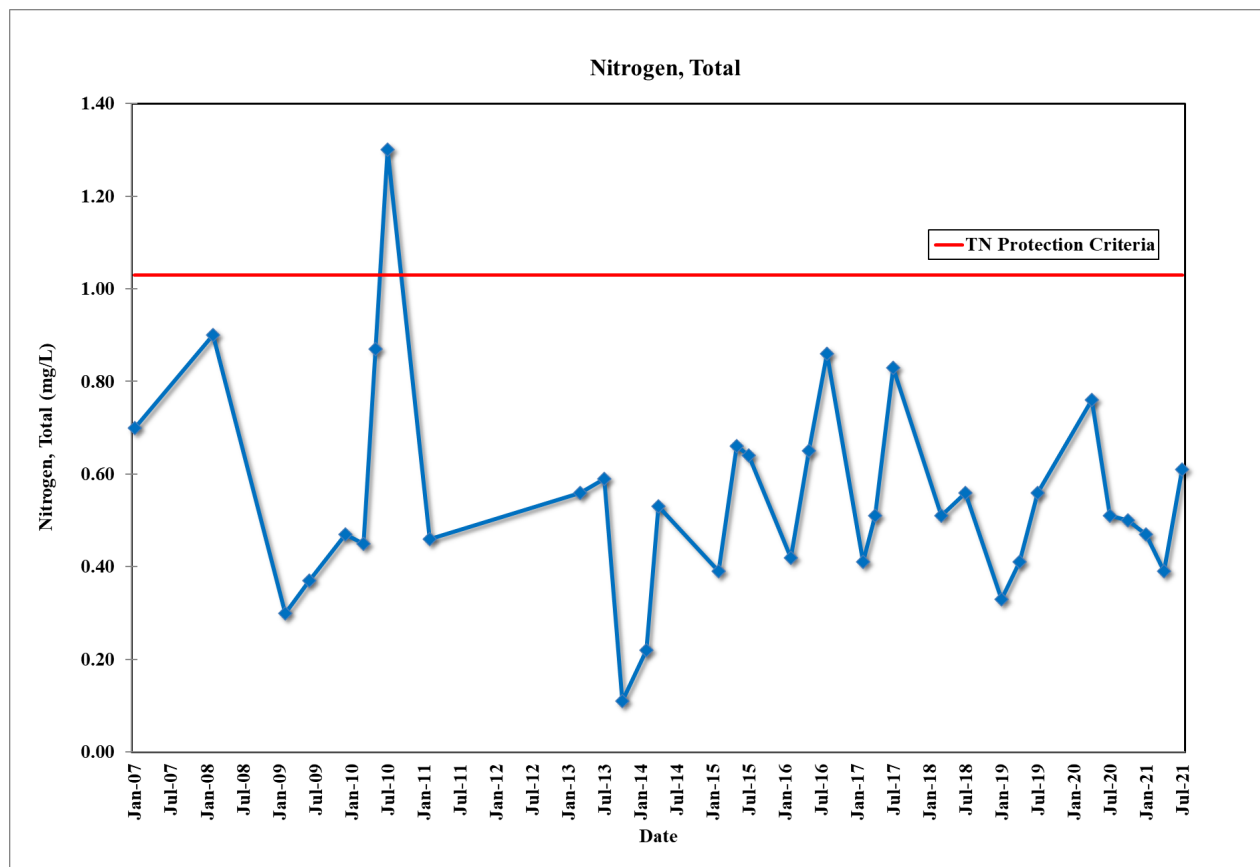


Figure 1. Total nitrogen results for Patty Sink Drain.

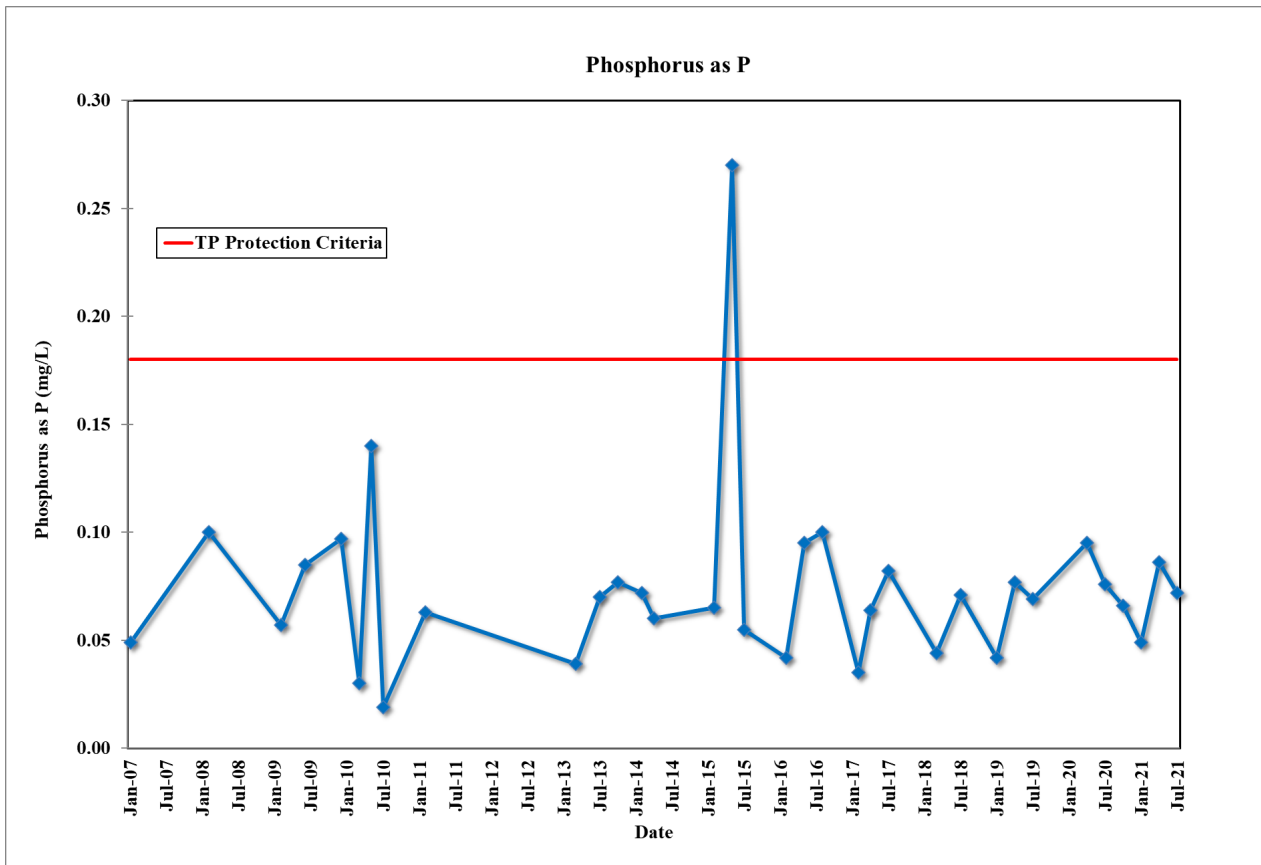


Figure 2. Total phosphorus results for Patty Sink Drain.

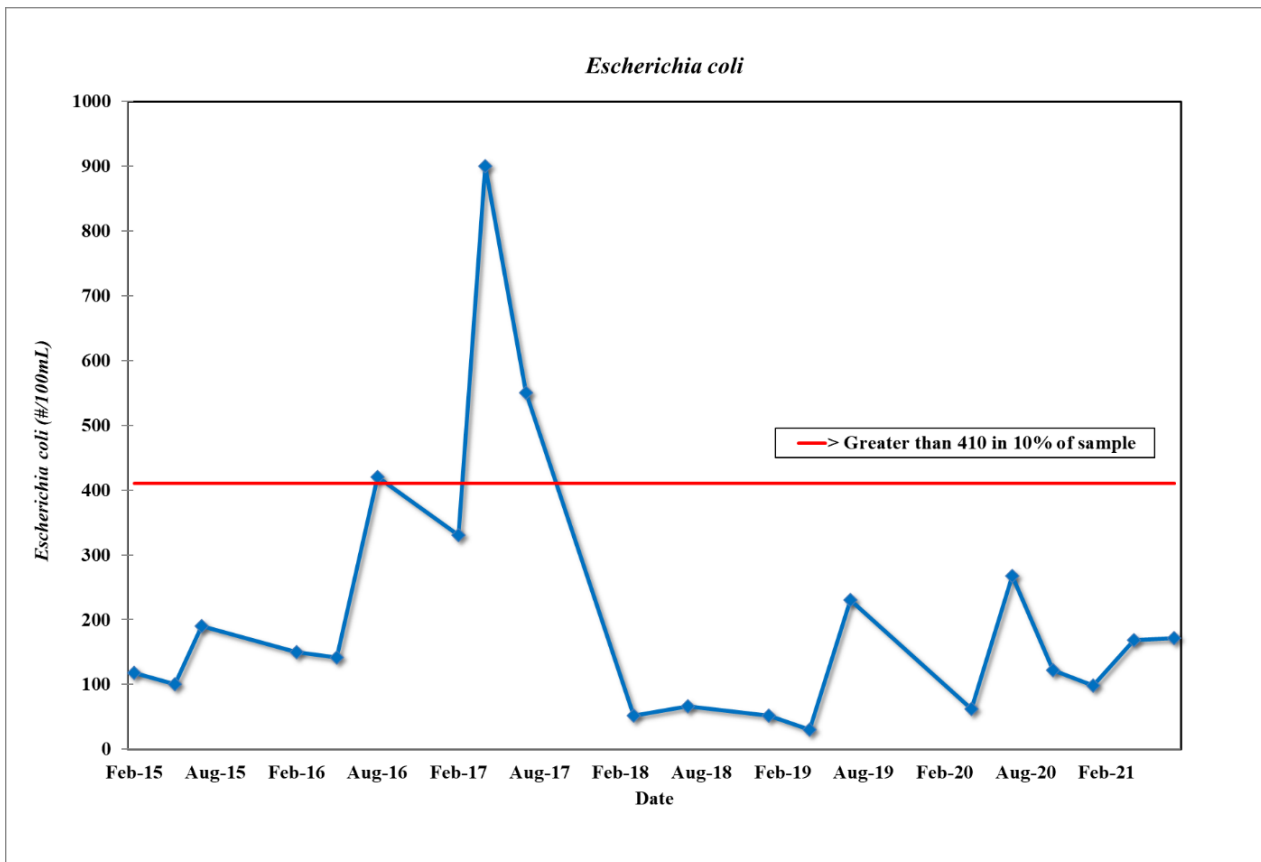


Figure 3. *E. coli* results for Patty Sink Drain.