

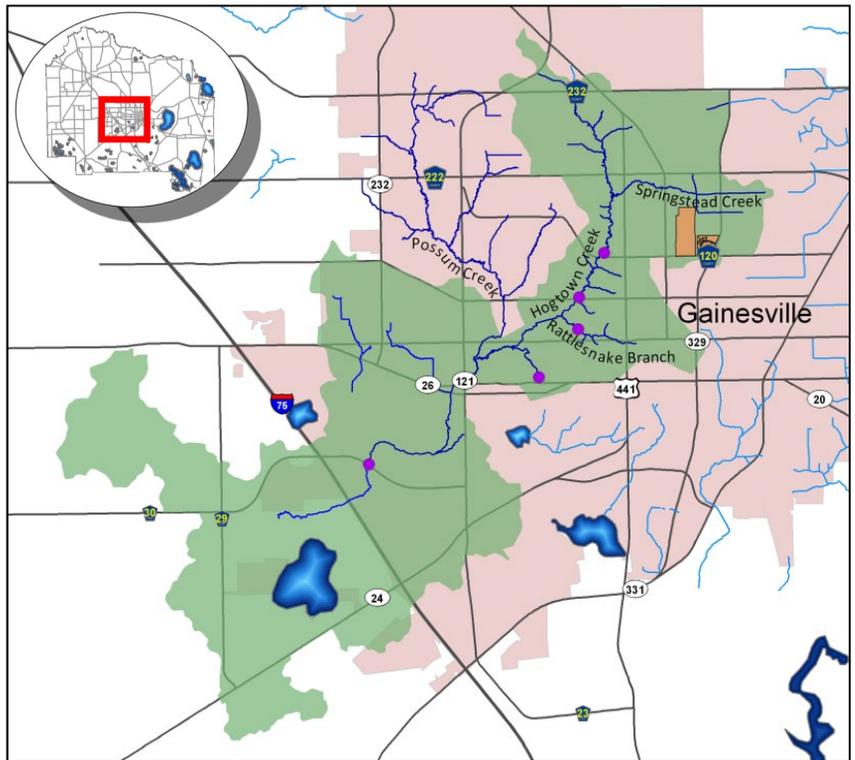


Hogtown Creek

Fact Sheet

The Watershed

- Hogtown Creek watershed is ~ 21 square miles.
- Hogtown Creek flows through Hogtown Prairie and recharges the Floridan aquifer via Haile Sink.
- The Hogtown Creek watershed is 65% residential, with pockets of commercial and natural land use.



Map of Hogtown Creek watershed (green) with sampling sites (purple circles).

Potential Pollution

- Urban stormwater has high velocity flows, which causes streambed and bank erosion, which transports sediments that harm streamside vegetation and habitat for in-stream biota, such as macroinvertebrates.
- Naturally occurring phosphorus from the Hawthorne Group formations may contribute to elevated phosphorus levels due to increased cutting and scouring from stormwater flows.
- Failing septic systems, wastewater infrastructure, wildlife, and pets introduce fecal material, which is a source of nitrogen, phosphorus, and fecal coliform bacteria including *E. coli*.



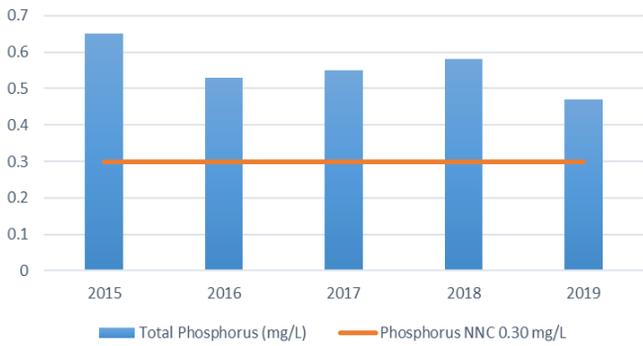
Hogtown Creek as it enters Haile Sink.

In-Stream Biology

Biological surveys of Hogtown Creek were conducted at three locations on the creek and indicated that the stream had a healthy population of benthic macroinvertebrates with ample habitat at all locations. The 2014 survey scored Hogtown Creek as healthy for the Stream Condition Index (SCI). It was noted that periphyton abundance has increased at Haile Sink, suggesting increased nutrient availability.

Water Quality

Hogtown Creek Total Phosphorus



Hogtown Creek Total Nitrogen

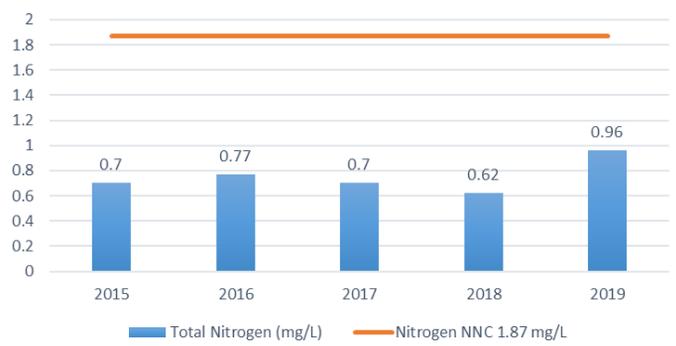


Figure 1. Annual geometric mean of A) total phosphorus (TP) and B) total nitrogen (TN) with numeric nutrient criteria (NNC) denoted by orange line.

Nutrients: The FDEP water quality rule on nutrient standards went into effect February 2016. As a result, Hogtown Creek is above the Numeric Nutrient Criteria (NNC) threshold for total phosphorus (TP) but not for total nitrogen (TN). Potential phosphorus sources are the erosion of phosphorus rich soils that compose the Hawthorn clays, which underlay the stream bed. Residential fertilizer inputs could be another source of TP. It does not appear that the elevated TP concentrations are influencing the stream biota.

Hogtown Creek *E. coli* Concentration

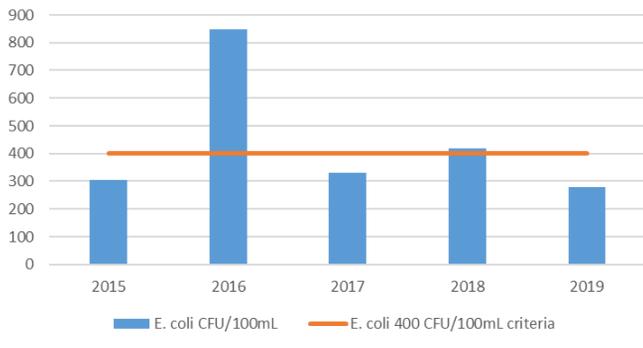


Figure 2. Annual geometric mean of *E. coli* coliform colony forming units (CFU)/100 mL.

Bacteria: Measuring *Escherichia coli* is the more accurate method of determining fecal contamination of streams. The state standard for a single sample is 400 colony forming units (CFU)/100 mL. Hogtown Creek has been listed as impaired for fecal coliform since it frequently exceeds this standard. Possible sources of this bacteria include urban campers, domestic and wild animal waste, leakage from sanitary sewer lines, faulty private sewer connections and overflows, persistence and regrowth of bacteria in creek sediments, and failing septic systems.

Current Human Impacts

- Stormwater runoff contaminates the creek in residential areas with fertilizers from lawn and garden use.
- Roadway runoff contaminates creeks with traces of petroleum products, oil and grease from automobiles, and sediment.
- Sediments from in-stream erosion increases total suspended solids concentrations of the creek and causes habitat smothering.



Hog Sink.