

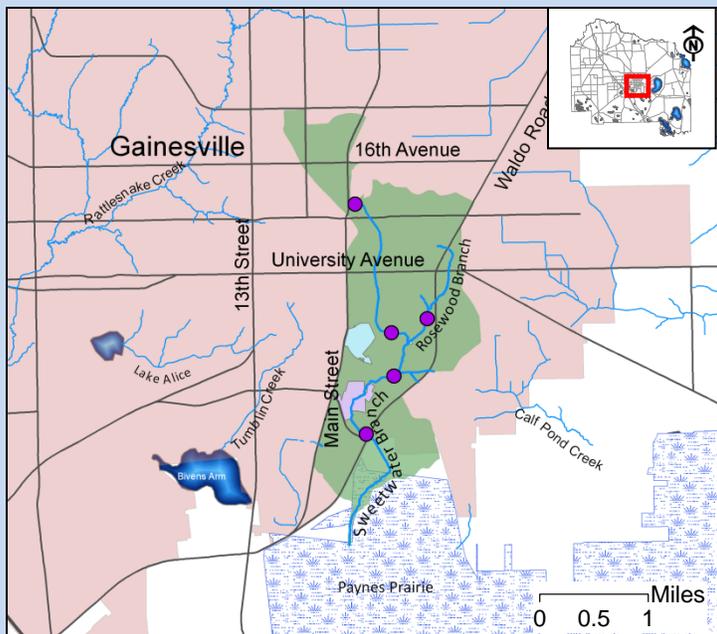


# Sweetwater Branch Watershed



## Fun Facts

- The Sweetwater Branch Watershed encompasses 3.3 square miles of central Gainesville.
- Major landuse is classified as 60% low density residential, 20% commercial, 14% mixed forests and wetlands.
- Headwaters are located near NW 23<sup>rd</sup> Ave. and NW 6<sup>th</sup> St. and extend east to Waldo Rd.
- The GRU wastewater reclamation facility (WRF) discharges treated effluent into the creek.



**Figure 2.** Map of Sweetwater Branch watershed (green), Gainesville city limits (beige), CSX property (blue), and GRU Main St. WRF (light purple). Sampling locations are indicated in purple.

## In-stream biology

Biological survey efforts in 2001 indicted sections along Sweetwater Branch range from healthy to impaired. However, surveys from 2009 indicate that bank stabilization at the old landfill has improved habitat. All of the upper reaches of the stream were impaired primarily because of sand and silt smothering resulting from high stormwater flow and associated erosion. Altered management of stormwater flows in lower sections of Sweetwater Branch has increased macroinvertebrate diversity from 2001 to 2009. In general, Sweetwater Branch lacks good quality in-stream habitat and adequate riparian buffers.

**The Creek can be viewed and enjoyed at** Sweetwater Park, the Duck Pond neighborhood, Alachua County's Sweetwater Preserve, the Paynes Prairie State Park, and soon the new Depot Ave. Stormwater Park.

### Ways you can help!

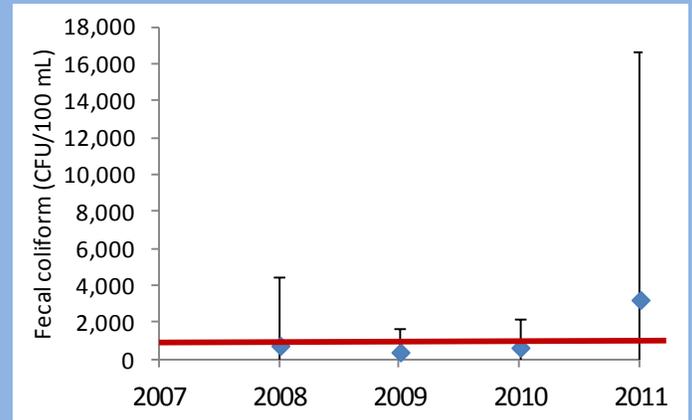
- Dispose of oils and chemicals properly at the Hazardous Waste Collection Center.
- Properly maintain your septic system.
- Scoop, bag, and trash pet waste.
- Use fertilizers and pesticides sparingly, or not at all.
- Keep grass clippings out of storm drains, put it back on the lawn or bag it.
- Report illicit discharges or dumping to 246-6800.
- VOLUNTEER!

# Water Quality

**Flow:** Average annual flow as harmonic mean (2008-2011) in Sweetwater Branch downstream of the GRU Main St. water reclamation facility (WRF) at SR-331 is 8.7 cfs. The Main St. WRF treats wastewater from eastern Gainesville. About 67% of this base flow is provided by the WRF. Sweetwater Branch recharges the Floridan aquifer at Alachua sink in Paynes Prairie. During periods of drought flow into the prairie is sustained by Sweetwater Branch's consistent flow.

**Nutrients:** The proposed FDEP water quality nutrient standards will be effective in 2012. Sweetwater Branch will be considered impaired for total phosphorus (TP) when the rule becomes effective. Major sources of TP in the watershed include naturally occurring phosphorus minerals in the Hawthorn Group formations that are eroded by high velocities in stormwater flows and runoff fertilizer used on lawns. Phosphorus has large annual variation and has increased over the past three years. The annual geometric mean of total nitrogen (TN) decreased from 2008 and currently is not above the proposed rule. Nitrogen sources include the GRU Main St. WRF, wildlife, failing septic systems, failing wastewater infrastructure, urban campers, and pet waste.

**Bacteria:** Sweetwater Branch was listed as impaired for fecal coliform, an indicator for the possible presence of pathogens, by FDEP. State standards are 800 cfu/100mL for a single sample, which is frequently exceeded in Sweetwater Branch. Possible sources of these bacteria include both domestic and wild animal waste, leakage from sanitary sewer lines, faulty private sanitary sewer connections, and failing septic tanks.



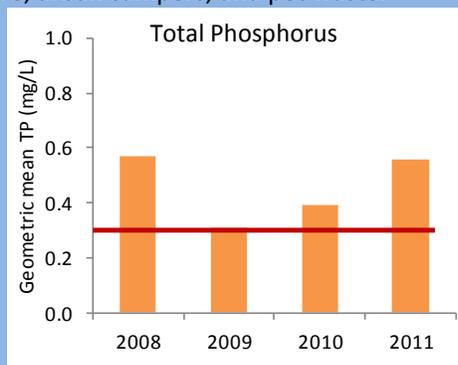
**Figure 4.** Geometric mean of fecal coliform abundance in Sweetwater Branch data collected by Alachua County Environmental Protection Department. (red line indicates 800 CFU/100mL, error bars indicate standard deviation).

## Current Human Impacts

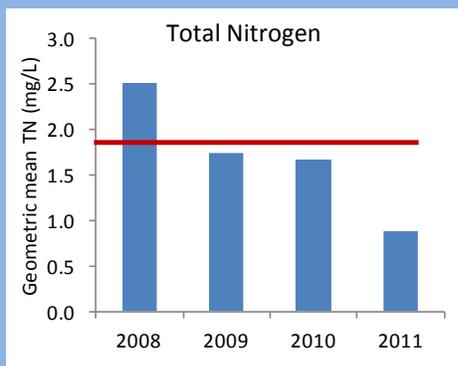
- Urban stormwater runoff from downtown Gainesville
- Aging sewer lines in downtown Gainesville
- Urban campers and domestic pet depositing waste near streams
- Increased flow from GRU Main St. WRF

## Historical Human Impacts

- The streambed of Sweetwater Branch is littered with materials from natural and accelerated erosion at the former city landfill adjacent to the creek.
- Groundwater at the former CSX site has been remediated for volatile organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs).



a)



b)

**Figure 3.** Annual geometric mean of a) total phosphorus (TP) and b) total Nitrogen (TN) data collected by Alachua County Environmental Protection Department. FDEP nutrient standards for the North Central eco region are represented by the red line a) TP of 0.30mg/L and b) TN of 1.87 mg/L.



**Figure 5.** Alligator in Sweetwater Branch by SR-331.

## To learn more:

- You can read the Sweetwater Branch section of the Creeks and Biorecognition Report at [www.Alachucountywater.org](http://www.Alachucountywater.org).
- Visit the St. Johns River Water Management District website at [www.SJRWMD.com](http://www.SJRWMD.com)
- Visit [www.gainesvillecreeks.org](http://www.gainesvillecreeks.org)