Poe Springs County Park EPD Restoration Efforts

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- Shoreline Restoration
- Longleaf Pine Restoration
- Rain Gardens
- SAV Plantings
- Septic System Retrofits
- Educational Signage

Riparian Buffer at the Lodge

Left: The river front behind the Lodge was historically mowed to the water's edge, which contributed to erosion and provided minimal habitat for wildlife. Native vegetation was planted through a series of workshops in 2005.

Right: A healthy vegetative buffer now provides habitat and prevents soil erosion.

LEFT: TRAIL BETWEEN LODGE AND BOAT RAMP WITH NO BUFFER IN 2005!

RIGHT: LOOKING TOWARDS THE LODGE FROM THE RIVER IN 2005- YOU CAN SEE THE ROAD TO THE BOAT RAMP!

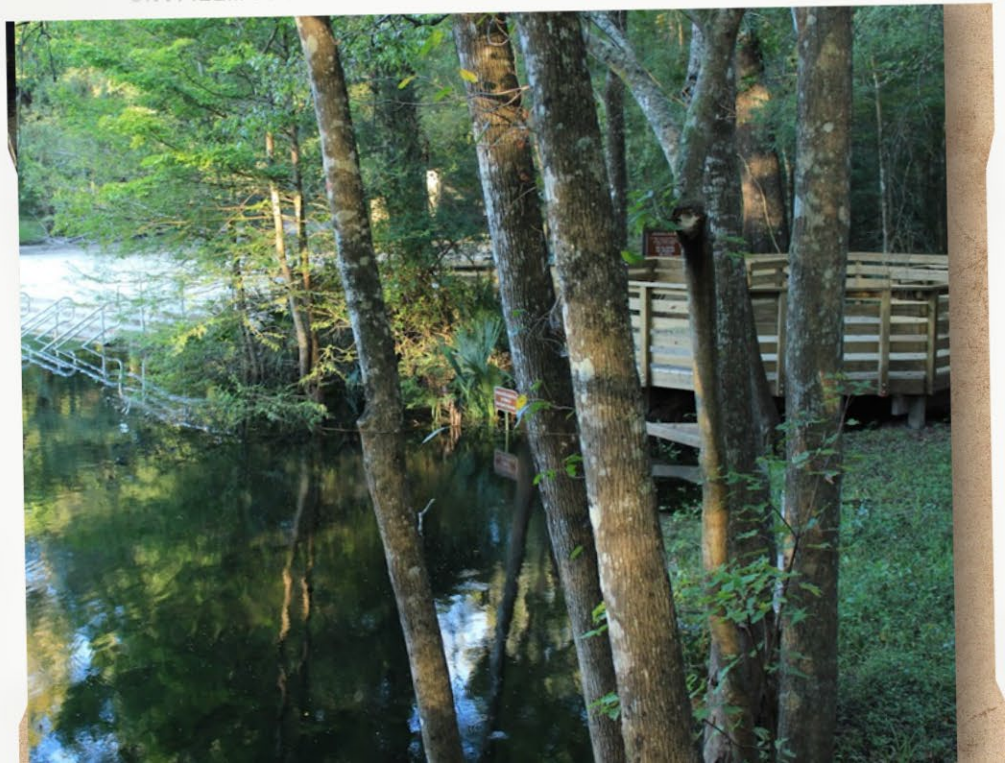
POE SPRING RUN AND RIVERBANK

This picture shows the Santa Fe River upstream of the spring run and illustrates erosion and the lack of vegetation along the river in 2005. This area now has healthy trees and shrubs that provide habitat and shade.

Over the course of three workshops, community members helped placed biologs and downed tree branches along the river's edge to prevent erosion. Native vegetation was planted on the bank to establish a healthy root system that helps keep soil and biologs in place.

Native vegetation was strategically planted to direct people towards designated entry and exit points along the river. This limits erosion and reduces impacts from recreation.

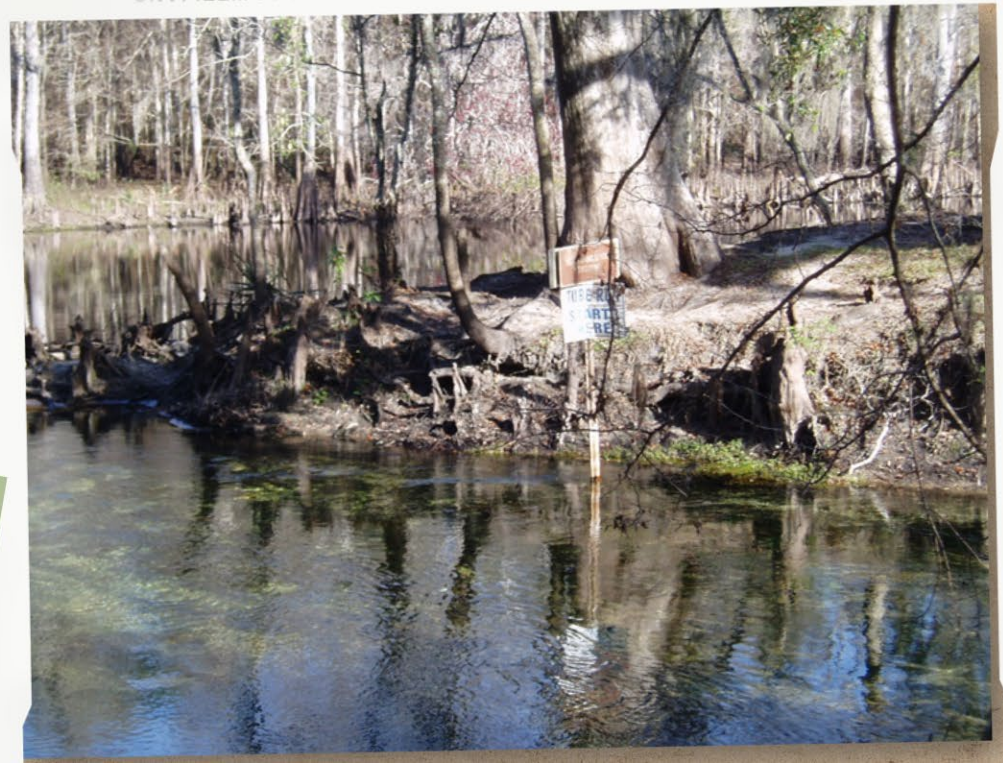
LEFT: ERODED POINT BY SPRING ENTRANCE IN 2005



RIGHT: HERE IS THE POINT IN 2022 AFTER PALMETTOS, CYPRESS, AND OTHER VEGETATION WAS USED TO STABILIZE IT IN 2005.

Eroded bank on spring run in 2005. This is where the new "Low Dissolved Oxygen Springs" sign is today.

LEFT: VEGETATED POINT WHERE SPRING RUN JOINS RIVER IN 2022



RIGHT: ERODING POINT WHERE SPRING RUN JOINS RIVER IN 2005

BOARDWALK TO POE SPRING

Left: During the 2005 workshops, native trees and shrubs were planted along the boardwalk to provide shade. This reduces water temperatures, shades out algae, and creates habitat.

Right: The plantings have flourished and new species continue to "volunteer" in this area, creating a diverse forested wetland community. The boardwalk was replaced in 2021 and is now elevated to allow floodwaters to freely flow into this wetland and help alleviate flooding.

Longleaf Pines Restoration

- Longleaf pines were planted in 2011 and 2012.
- In March 2014 a three acre portion of the area was planted with Longleaf pines and Wiregrass.

Gopher Tortoise Habitat Management Area at Poe Springs Park

Alachua County, Florida

Legend

- Project Area

Treatment Areas

Control

- Bahiagrass
- Nut Sedge, Bermudagrass

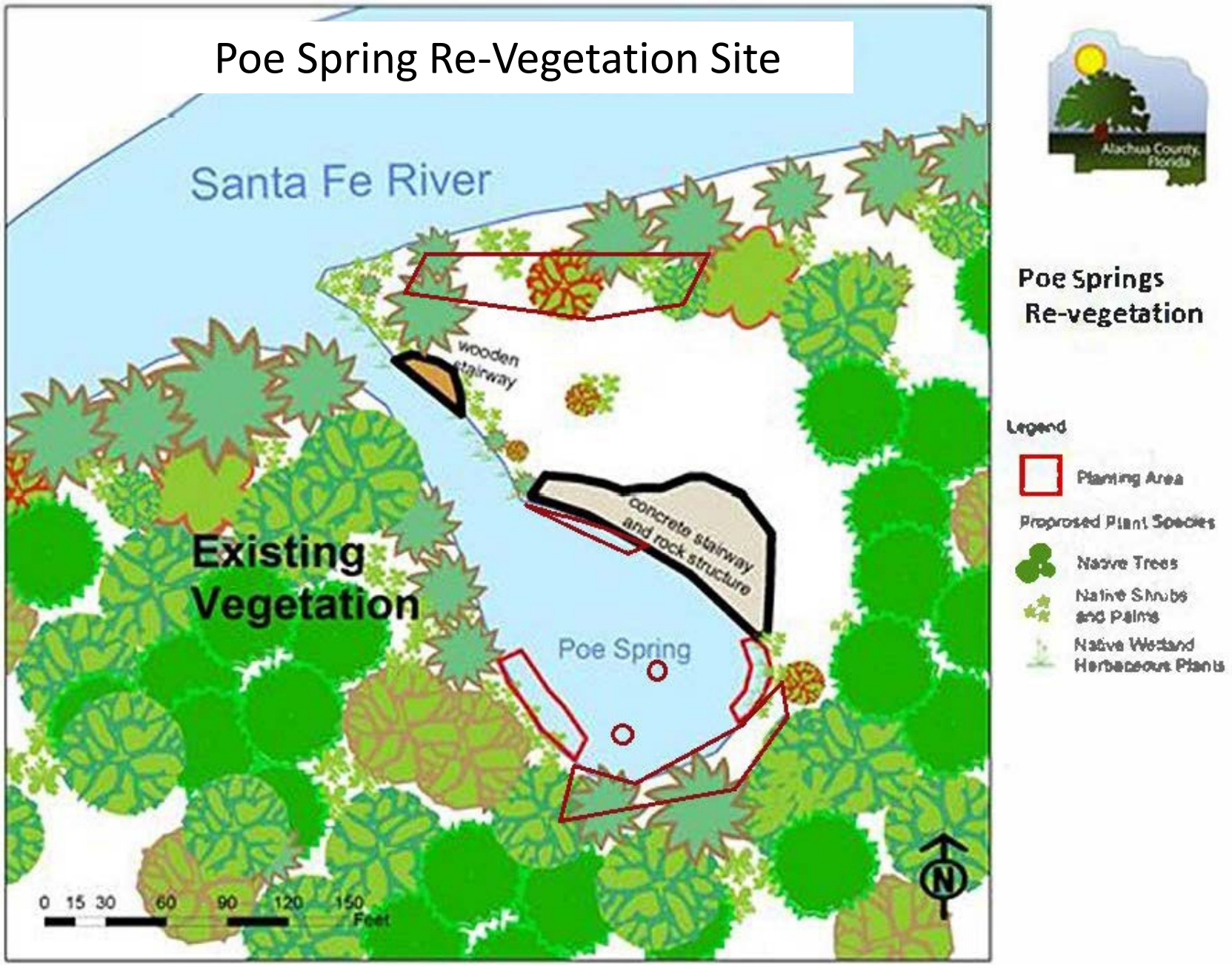
Gopher Burrows

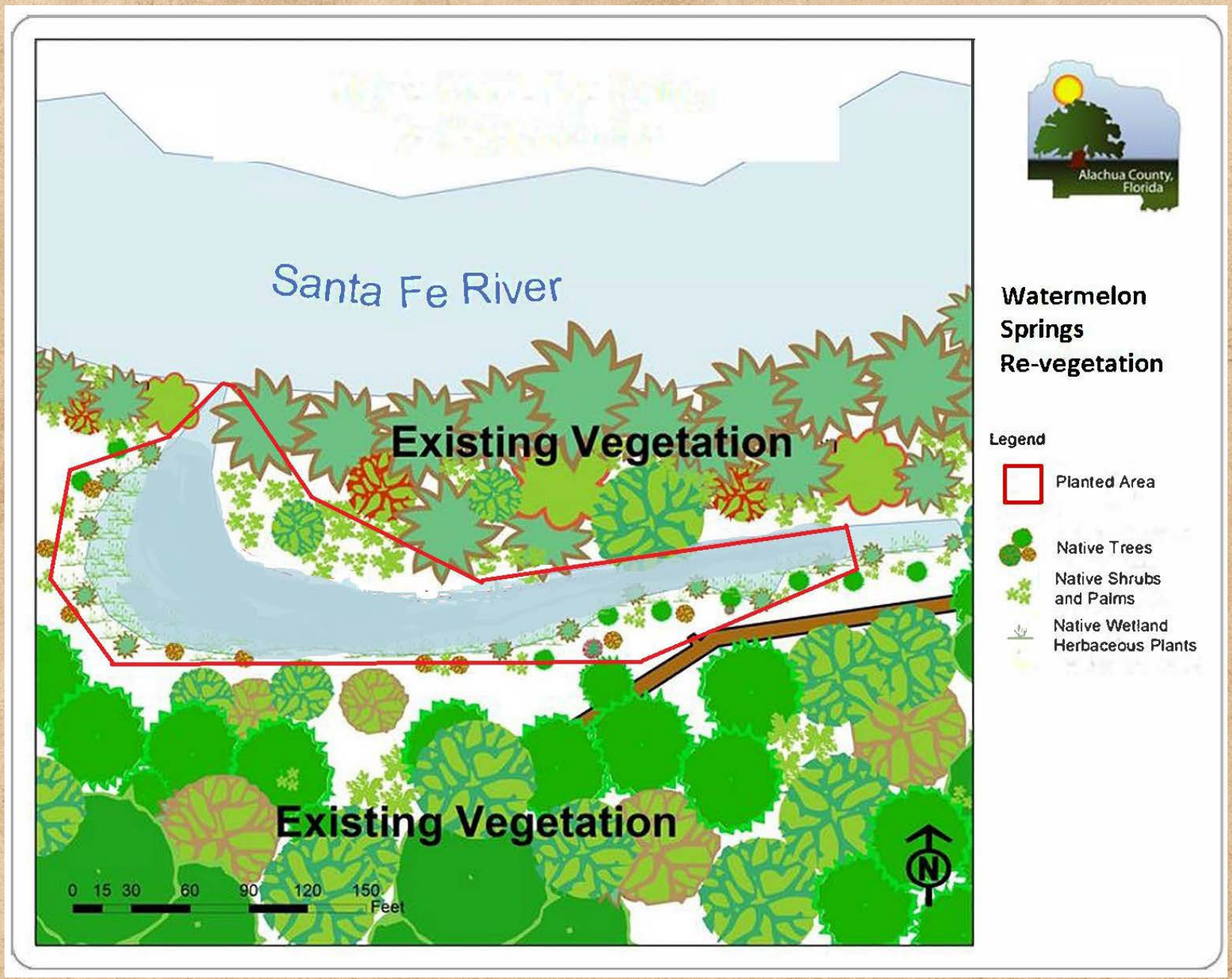
- Abandoned
- Occupied
- Presumed Occupied
- Property Boundary
- County Boundary

N

0 100 200 300 400 Feet

Poe Spring Re-Vegetation Site

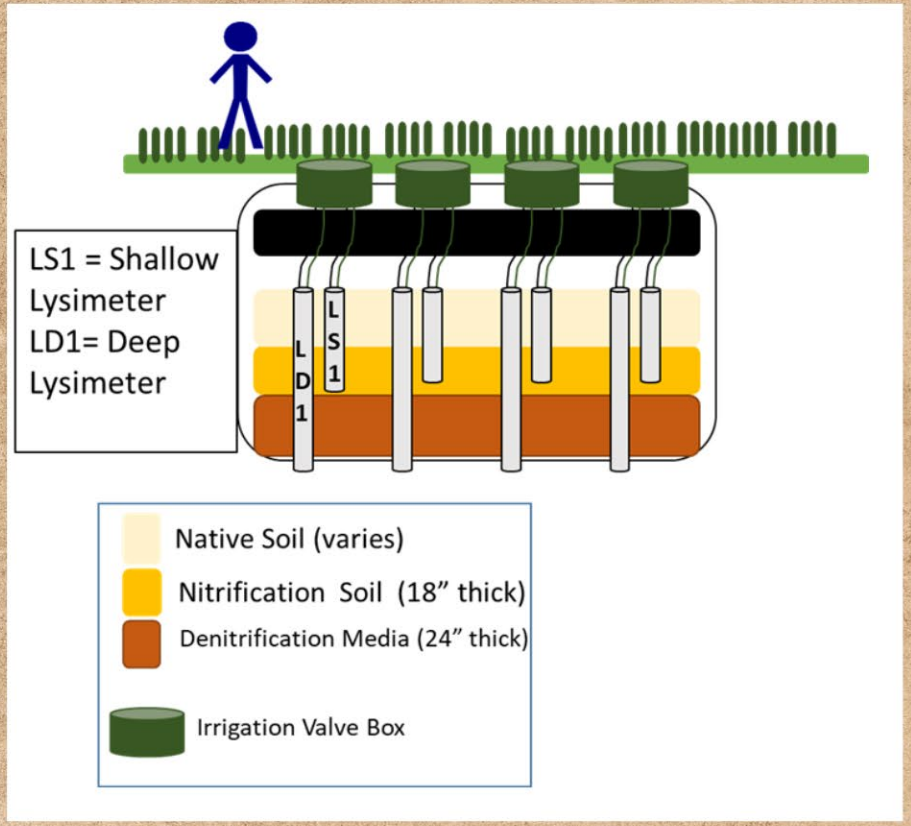



Santa Fe River
Existing Vegetation
Existing Vegetation
0 15 30 60 90 120 150
Feet
N
Alachua County, Florida
Watermelon Springs Re-vegetation
Legend
Planted Area
Native Trees
Native Shrubs and Palms
Native Wetland Herbaceous Plants

THE SEPTIC SYSTEMS AT THE LODGE AND CONCESSION WERE UPGRADED TO NUTRIENT REDUCING SYSTEMS THANKS TO GRANT FUNDS FROM SRWMD IN 2019 INTO 2020.

POE SEPTIC SAMPLING

Piping installation for Drainfield Infiltration Chambers for the Concession Building OSTDS



POE SEPTIC SAMPLING

Challenging to get samples across all sites, not enough flow to collect from the denitrification zone at deeper depths.

Observing reduction of nitrogen- only two samples collected from deeper lysimeters, one nitrate value below detection and the other 4.29 mg/L.

More sample events are needed to determine the effectiveness of the system

Protecting Springs with Septic System Upgrades

Poe Springs

Poe Springs is an Outstanding Florida Spring, from which millions of gallons of groundwater flows into the Santa Fe River every day. The spring provides important habitat for a wide variety of plants and animals. The springs that feed into the Santa Fe River are critical to the flow and health of the river, which provides important wildlife habitat and recreational opportunities that support the local economy.

Preventing Algae in our Springs

Water quality in local springs has declined over the years. An increase in nutrients, like nitrogen and phosphorus, and decreased flows are some of the main issues. Nutrient pollution from landscaping fertilizers, agriculture, sewage systems, and traditional septic systems contributes to excessive algae growth in our springs.

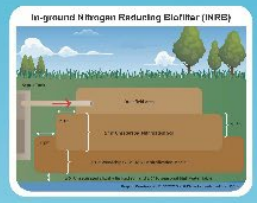
You can prevent nutrient pollution by eliminating fertilizer in your yard, keeping grass clippings and leaf litter out of the street (where they may be washed into storm drains that lead to water bodies), and by planting native and Florida Friendly plants that require less water and no fertilizer.

Why is algae harmful to springs?

- Chokes out native plants
- Harms habitat
- Decreases food available for wildlife
- Can lead to the closure of swimming areas

Retrofitting Septic Systems

Wastewater from septic tanks flows through a drainfield and filters down through soil before entering groundwater in the aquifer. Properly maintained septic systems are designed to remove harmful bacteria and viruses as water flows through the system. However, traditional septic systems do little to protect groundwater and springs from nutrient pollution, regardless of maintenance.



The drainfields at Poe have been updated to In-ground Nitrogen Reducing Biofilter (INRB) systems. The INRB includes a sand layer where oxygen is present and a second layer of finer sand and wood chips that stays wet and un-oxygenated. INRB systems reduce nitrogen by facilitating the nitrogen cycle and turning the nitrate pollution into harmless nitrogen gas. This protects our water by reducing the amount of nitrogen that reaches the aquifer below, and which flows to the springs. Alachua County is collecting water quality samples to document the effectiveness of the new drainfields.

Septic System Best Management Practices

- Have your system inspected every 2-3 years and pumped as recommended by a professional.
- Flush only the 3 P's (pee, poop and paper). Other items may clog or damage your system.
- Avoid dumping chemicals down sinks or toilets.
- Don't wash fats and greases down your sink. Let grease cool, wipe pans out, and dispose in the trash.
- Don't park or drive over your drainfield and avoid planting trees in the area.
- Reduce water use to avoid straining your system.

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