



Bottling Spring Water: Filling a Need or Draining our Resources?

Case Study: Seven Springs

Date of State Qualifying Event:
June 11, 2024

**Santa Fe FFA
16213 NW US HWY 441
Alachua, FL 32615
386-462-1125**

Summary

Relevant Course Instruction: Santa Fe High School Agriscience Department

Agriculture, Food and Natural Resources Directed Study (13 students) - Focused on how to develop and present a professional presentation offering potential solutions to a current issue

Agriscience Foundations (90 students) - Evaluated the management of renewable resources and effects of environmental regulations

Animal Science and Services (30 students) - Investigated environmental issues pertinent to our area and discussed potential implications on the agriculture industry

Horticulture Science and Services (20 students) - Instructed on best management practices for water use and effective water conservation techniques utilized in industry

Agritechnology (17 students) - Focused on the role of government agencies, particularly the water management districts, within the natural resources industry

Who is involved with the issue?

Suwannee River Water Management District (SRWMD): This government agency is responsible for issuing water use permits within its jurisdiction. The governing board was responsible for approving the permit for Seven Springs after they were advised to do so by an administrative judge (News Service of Florida, 2023).

Florida Springs Council: This group asserts that the permit should never have been granted, through a lawsuit, as it was not in the “public interest,” which is required by current Florida water law (Florida Springs Council, 2023).

Gilchrist County Commission: This commission lacked authority in the decision to grant this permit, but they benefit from its issuance. The bottling plant and its associated activities provide roughly \$500,000 to the county budget (Turner, 2021).

Private Landowners: In the state of Florida, springs are either owned and regulated by the state, or owned by private landowners. However, under the Florida Water Resources Act, private landowners do not own the waters on their land. (FDEP, 2024).

Producers: Due to the quantity authorized to be withdrawn by the bottling plant in a predominantly rural area, agriculturalists fear permit denial for producers due to prior established use by BlueTriton. Additionally, aquifer depletion may lead to increased costs for producers as they may need to have wells modified to account for a lower water table (University of Chicago Energy Policy Institute, 2019).

BlueTriton: BlueTriton is the parent company for Nestlé and owns the bottling plant at Seven Spring. The company provides jobs to over 900 people in the state and asserts that they help the communities in which they work by providing jobs, disaster relief, and donations (BlueTriton, n.d.). If the plant were to close, bottling would cease and employees would have to find alternative employment.

General public: Citizens are concerned with the amount of waste that manufacturing and filling water bottles produces, requiring at least twice as much water to produce a plastic water bottle as the amount of water contained in the bottle (Royte, 2009, 140). Beyond just water consumption out of the springs, single use plastic bottles are also of concern to the public (Lindwall, 2020).

What is the nature of the issue? This issue is an environmental concern. Bottling Permits of this nature allow for extractions of large amounts of water and support an industry that bolsters single-use plastic consumption. One of the major concerns of excess water extraction is volume reduction of the Floridan Aquifer, which runs beneath Florida and Southern Georgia. Floridians depend on this aquifer as its water source for everything: from household use to irrigation in lawns (Heggie, 2020). Withdrawing large amounts of water from the aquifer can result in lowering of the water table and reduced surface water supplies (Groundwater Foundation, 2022). Further, reduced aquifer volume poses a threat to the agricultural industry, as many farmers rely on groundwater for irrigation or to maintain their ranching or dairy operations (Wade & Borisova, 2022). According to the Department of Environmental Protection, the Santa Fe River Basin is currently impaired and is under a Basin Management Action Plan (FDEP, 2012), which is a written set of strategies aimed at restoring a body of water to health (Florida Department of Environmental Protection, 2023). Due to the already impaired nature of the river, many citizens are concerned with further environmental degradation associated with water bottling.

Why is this issue important now? This issue is increasingly relevant because scientists are discovering the extent of the damages done by these water extractions. Increased water extractions done by BlueTriton have only further cemented the damages to the Santa Fe River (Valle, n.d.). While the use permit has been approved since 1998, the recent renewal in 2023 has come under scrutiny as opponents argue the validity of the original permitting process (Lyons, 2021). Historically, the bottling plant pumped an average of 387,000 gallons per day at its peak. Currently, the permit allows 984,000 gallons per day to be extracted (Sampson, 2021). According to the Florida Springs Institute, the lower Santa Fe River flow rate decreased 29% between the years 2000 and 2019 (Salisbury, 2021). With the river already impaired, this permit has drawn huge amounts of public attention as concern for the river and our local environment grows.

Summary

How can the issue be defined? This can be defined as an environmental issue as referenced in the Focusing on Agricultural Issues Instructional Material (Purdue University, 2014). The minimum flow level (MFL) is the point at which any further withdrawals could have significant harmful effects on water resources or ecology (Borisova et al., 2021). The Santa Fe River is already below its MFL (How Can We Better Understand Low River Flows as Climate Changes?, 2015). According to the Florida Department of Environmental Protection, when BlueTriton is fully operational, the pumping authorized under this permit will cause a 4 percent reduction in flows on top of pre-existing damage (Florida Springs Council, 2023).

What is the historical background of the issue? Before 1972, Florida followed the common law eastern riparian doctrine that gave landowners the right to use water on and under their property as they pleased (Borisova et al., 2021). However, as the population grew and disputes were challenged in courts, the legislature needed to act. In 1972, the Florida Water Resources Act was passed, and is largely still in place today (Borisova et al., 2021). This act established that all water in Florida, including groundwater, is a public resource that is managed by water management districts (FDEP, 2024). In 1998, a permit was issued allowing Seven Springs Water Company to pump and bottle around one million gallons of water per day from the Springs on their property. This did not initially present an issue because the company's equipment only allowed them to extract 265,000 gallons a day. In 2019, the Seven Springs bottling plant was purchased by Nestlé, allowing them to pump 984,000 gallons per day as a result of equipment upgrades and increases in capital (Murciano, 2021). On March 31st, 2021, Blue Triton acquired Nestlé. Later that year, water management officials approved a permit for Blue Triton to pump almost one million gallons per day from the springs, which followed a two year battle led by environmentalists opposed to the permit (Sampson, 2021).

What caused the issue? Discourse surrounding this issue began when Nestlé was bought out by the bottling company Blue Triton. Nestlé originally had a permit granting them permission to 1.152 million gallons a day (T. Roberts, Personal communication, March 27, 2024). However, this limit was never reached because Nestlé lacked the resources to do so. BlueTriton possesses all necessary resources to reach the limit and has been pumping this maximum amount since the buy-out. After years of allowing this permit to stand, the effects and damages to the ecosystem are now becoming increasingly visible and scientists have agreed that the pumping limit should be reconsidered (News Service of Florida, 2023). It is also contested that this permit does not pass the “Three Prong Test”, which asserts that a given consumptive use permit “must be reasonable and beneficial, must not interfere with existing legal users, and must be consistent with the public interest” (§ 373.223, F.S.). Passage of this test is required in order for permits to be legally approved. (Seven Springs Water Company v. Suwannee River Water Management, 2020). Opponents argue this permit is not “consistent with the public interest” and thus, should not have been approved.

What are the risks? Opponents to the permit cite that allowing this permit to stand will result in irreversible damages to the environment and its overall ecosystem (Currell & Katz, 2022). Runoff from factories, such as the ones utilized to bottle water at Seven Springs, may contribute to excess nitrogen levels in water (Garrett, 2021). Additionally, overpumping of our springs may pose risk to local flora and fauna as well as residents or producers of the region who rely on groundwater systems for drinking water and irrigation (Tatum, 2021). The water is being bottled in single use plastic bottles. Over time, microplastics can detach and be consumed by humans through ingestion and inhalation (Woychik, 2023). There are also many documented adverse impacts of chemicals used in plastic on human health, including cancer (Shabani, 2023). In addition, these bottles are being shipped in, which consumes oil, a nonrenewable resource, increasing the carbon footprint of the plant (Gleick, 2010).

What are the benefits? The springs are an incredible resource for clean, fresh drinking water, which becomes ever increasingly important as the world population continues to grow. Proponents argue that tapping this resource in a sustainable manner is a great economic opportunity. By allowing BlueTriton to bottle water out of Ginnie Springs, the company is incentivized to protect the water in order to protect their investment. BlueTriton also employs local residents in job roles such as warehouse workers, forklift operators, and PLC technicians (BlueTriton, 2024). In addition to employment, BlueTriton gives back to the communities where it works (BlueTriton Brands — About Us, n.d.). Bottled water produced at the plant also has the lowest water use of any other packaged beverage that consumers may otherwise purchase (International Bottled Water Association, 2024). According to Gilchrist County Administrator Bobby Crosby, this particular bottling water plant is a significant source of income for Gilchrist County (Turner, 2021). Beyond that, the water being bottled at Ginnie Springs represents less than 0.5% of water consumption in the water management district (T. Roberts, personal communication, March 27, 2024), which proponents argue is insignificant in comparison to the economic value of the plant.

References

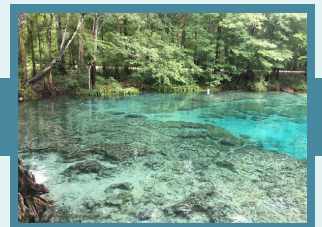
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Forum Presentations

Date	Location	Organization	Number of Attendees
03/19/2024	Alachua, FL	Santa Fe FFA Alumni	32
03/25/2024	Alachua, FL	Alachua Soil and Water Conservation District	21
03/26/2024	High Springs, FL	Florida Springs Institute	14
04/05/2024	Alachua, FL	Soil and Water Engineering Technology Inc.	19
04/09/2024	Alachua, FL	Alachua County Farm Bureau Board of Directors	23
04/11/2024	Alachua, FL	Alachua LIONS Club	25
04/22/2024	Alachua, FL	Alachua County Farm Bureau Women's Committee	9
04/25/2024	Alachua, FL	Farm Credit of Florida - Alachua	11
05/02/2024	Alachua, FL	Alachua County Department of Environmental Protection	15



Forum Documentation



Alachua County Farm Bureau
16206 NW 163rd Lane
Alachua, FL 32615

09 April 2024

Mr. Brian Skipper & the Santa Fe FFA Ag Issues Forum Group
Alachua, FL 32615

Dear Mr. Skipper & Forum,

The Alachua County Farm Bureau Board of Directors would like to extend our thanks for taking time to attend our monthly meeting this evening and share your presentation regarding the recent approval for the bottling of water from Ginnie Springs. The Board believes that not only is it important to protect our natural resources, but also to be aware of how they both positively and negatively impact the surrounding areas. Thank you, again, for reaching out and sharing with our group.

Sincerely,

Richard Feagle
President
Alachua County Farm Bureau Federation

Alachua County Farm Bureau Board of Directors:

Students presented to local farmers and agriculturalists who rely on our water resources.

"I enjoyed hearing the perspective of local farmers and how water use may impact their operations." - Savannah Eckert, Team Member



Soil and Water Engineering Inc.:

This monthly meeting of environmental and engineering professionals provided insight into the environmental regulations regarding water use.



SOIL & WATER ENGINEERING TECHNOLOGY, INC.

April 11, 2024

Mr. Brian Skipper, Agricultural Teacher/FFA Adviser
Santa Fe High School
16213 NW US Highway 441
Alachua, FL 32615

RE: FFA Student Presentation

Dear Mr. Skipper:

Our monthly agricultural networking group enjoyed and was very impressed by your FFA students' presentation last Friday (April 8th) in the "Tea Room" at Conestoga's restaurant in Alachua. The format of the presentation was very well structured with each student taking on the role of individuals from advocacy groups, government agencies, technical experts, and private landowners. They did an excellent job presenting how each of these groups are involved and/or affected by the debate over if a water bottling plant should continue being permitted to withdraw groundwater from the Florida aquifer. It was clear the student did extensive research on all aspects of the issue and rehearsed their individual presentations well.

It was a great format and I strongly encourage you to have them do this presentation in front of as many folks as possible, and in particular it would be great if the Suwannee River Management District Board got to see it.

Regards,

Del Bottcher, Ph.D., P.E.
President

Forum Documentation

March 19, 2024

To Whom It May Concern:

This letter is in reference to the Santa Fe FFA Agricultural Issues Forum Presentation that occurred on March 19, 2024.

The audience was the Santa Fe FFA Alumni, which consists of parents, past Santa Fe students, and community stakeholders. The event was well attended, with 36 guests present.

I would like to commend the team on all of their hard work researching and crafting their presentation on the water bottling plant in our community. As someone who lives on the river, I was very interested in the topic, and learned about both the pros and cons of bottling spring water.

I am excited to see how this team performs at the convention this summer.

Sincerely,

Beth Ceilley
President, Santa Fe FFA Alumni
239-410-4295

Santa Fe FFA Alumni:

Students presented to alumni and stakeholders, many of whom live on, or rely on, the Santa Fe River and feel compelled to protect it.



Alachua Soil and Water Conservation District:

The conservation district provided excellent insight into efforts taken by the local government to manage and protect our soil and water resources.

"It was interesting to hear how the river has been historically impacted by human activities and learn what we can do to preserve it." - Leila Ceilley, Team Member



Alachua
Soil & Water Conservation District

5709 NW 13th Street, Suite B
Gainesville, Florida 32653
352 372-4668

March 25, 2024

Mr. Brian Skipper, Advisor
Santa Fe FFA Chapter

Mr. Skipper,

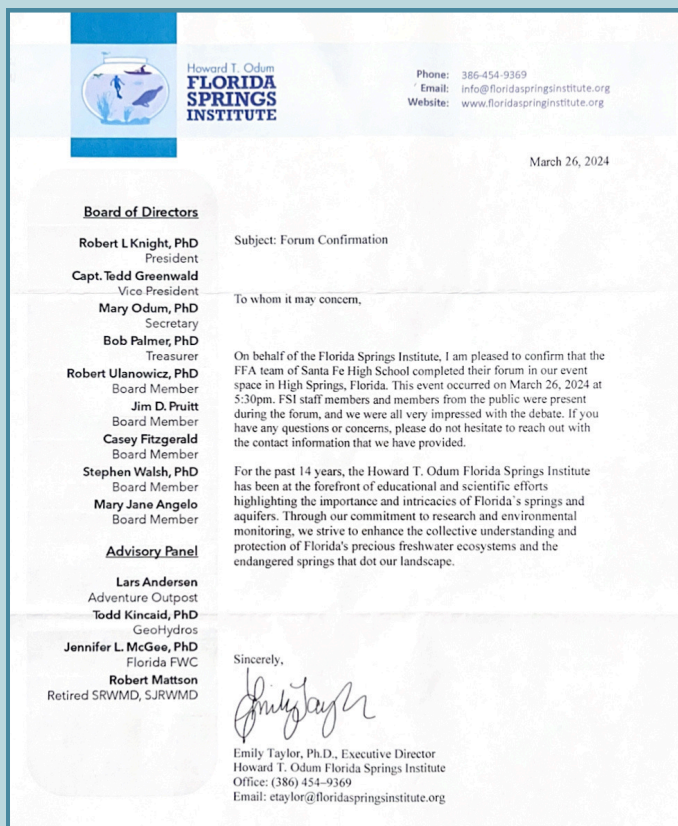
The Alachua Soil and Water Conservation District wishes to express our thanks to you and the members of the Ag Issues Forum team for their presentation at our March 2024 meeting regarding the permitting of the bottled water facility at Ginnie Springs in Gilchrist County. We also extend to you and your team our best wishes as you compete in this leadership event.

Sincerely,

A handwritten signature in blue ink, appearing to read "W. Boyer".

Walt Boyer, Chairman

Forum Documentation



Florida Springs Institute:

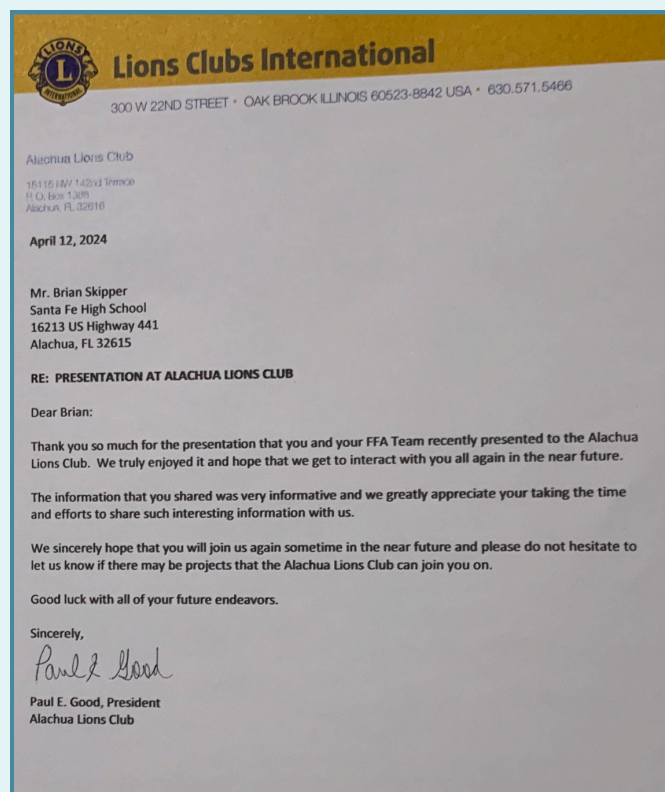
The FSI has spent decades fighting for our springs and educating the public to better preserve our resources.

"After presenting to this group, I feel like I understand in better detail how this issue impacts my community as a whole." - Layla Parris, Team Member

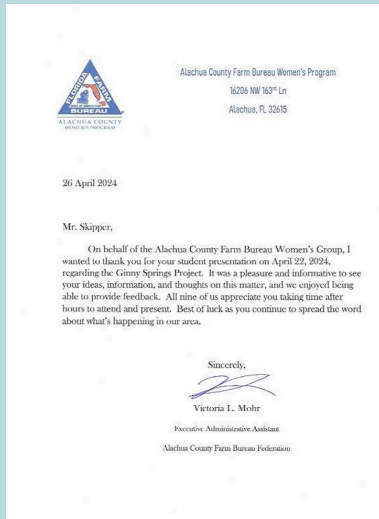


Alachua LIONS Club:

The LIONS club, made up of local community members, was very supportive of our presentation. Members were apt to share memories of the springs and river prior to current development.



Forum Documentation



Alachua County Farm Bureau Women's Committee:

After presenting to the Board of Directors, we were enthusiastically referred to the Women's Committee for further input.



Alachua County Department of Environmental Protection:

The Department of Environmental Protection is responsible for oversight for state owned springs and helped the students understand what measures can be taken to protect our water.



Alachua County Environmental Protection Department

Stephen Hofstetter, Director

August 29, 2024

To: Whom it May Concern

The Ag Issues Forum team presented "Bottling Spring Water: Filling a Need or Draining our Resources" to the Alachua County Environmental Protection Department on May 2, 2024. There were 15 people in the audience, and we were all impressed with the professionalism of the students. They did a great job engaging us in a productive discussion after the performance. These students did an excellent job tackling a divisive topic with diplomacy and tact. Please contact me at 352-264-6829 or Sgreco@alachuacounty.us for additional information.

Sincerely,

Stacie Greco, Water Resources Program Manager

14 NE 1st St. ■ Gainesville, FL 32601 ■ Tel. (352) 264-6800 ■ Fax (352) 264-6852
E-Mail: epd-reception@alachuacounty.us ■ Home Page: <http://alachuacounty.us/depts/EPD/Pages/EPD.aspx>



Farm Credit of Florida - Alachua:

Farm Credit is a longtime supporter of FFA and was eager to learn from our students about the bottling plant in our community.