

City of
Gainesville

Addressing Multiple Regulatory Requirements

Shane Williams | Supervising Engineer - Stormwater

You May Have Noticed Some Changes Recently...



New(ish) water
quality rules



Resiliency



Preemption





2016 – Springs and Aquifer Protection Act
2022 – Clean Waterways Act
2023 – HB1379

All Three Acts have Requirements that Impacted the City. Result:

- More Reporting
- More chance for unexpected headaches
- A few calls to Kevin
- Some new approaches/projects

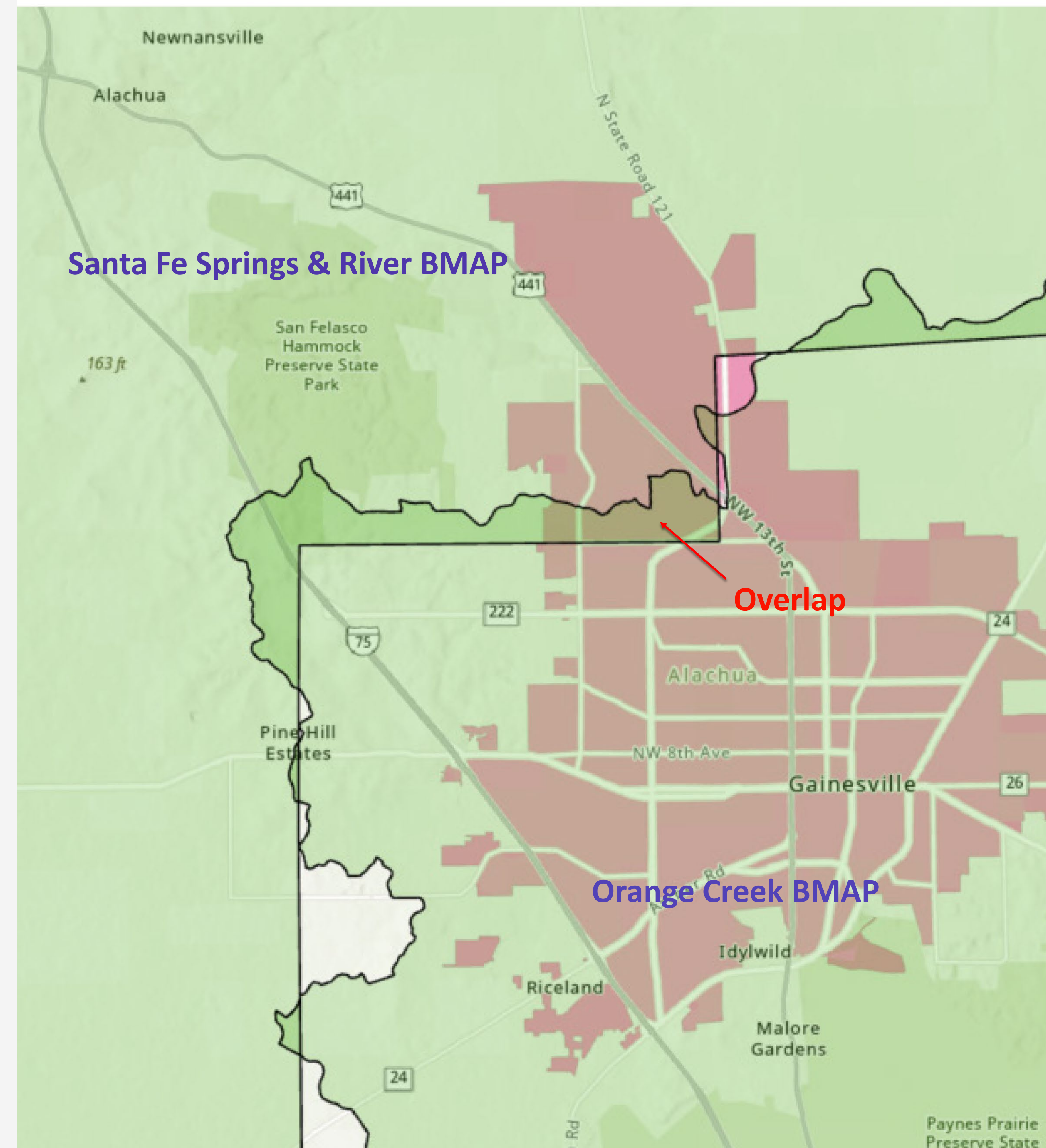


Springs and Aquifer Protection Act

- New impaired waters with contributing areas = more load reductions required
- Springs BMAP boundaries encompass large areas and can overlap with surface watersheds and BMAP areas.
- New methods of calculating nitrogen load
- Passed in 2016 but City wasn't involved in a springs BMAP until now.

Crossing Boundaries

- Orange Creek Boundary based topography
- Santa Fe was based on Water Management District Boundary
- Proposed for BMAP: Priority Focus Areas modeled with NSILT but other areas modeled with a surface runoff loading model
- Most of the “controllable” sources are in the overlap...and in the surface watershed of Orange Creek
- City was initially looking at a 4,000 lb allocation
- For final BMAP: All areas modeled with NSILT. City allocation about 200 lbs.



New Focus on Septic Systems

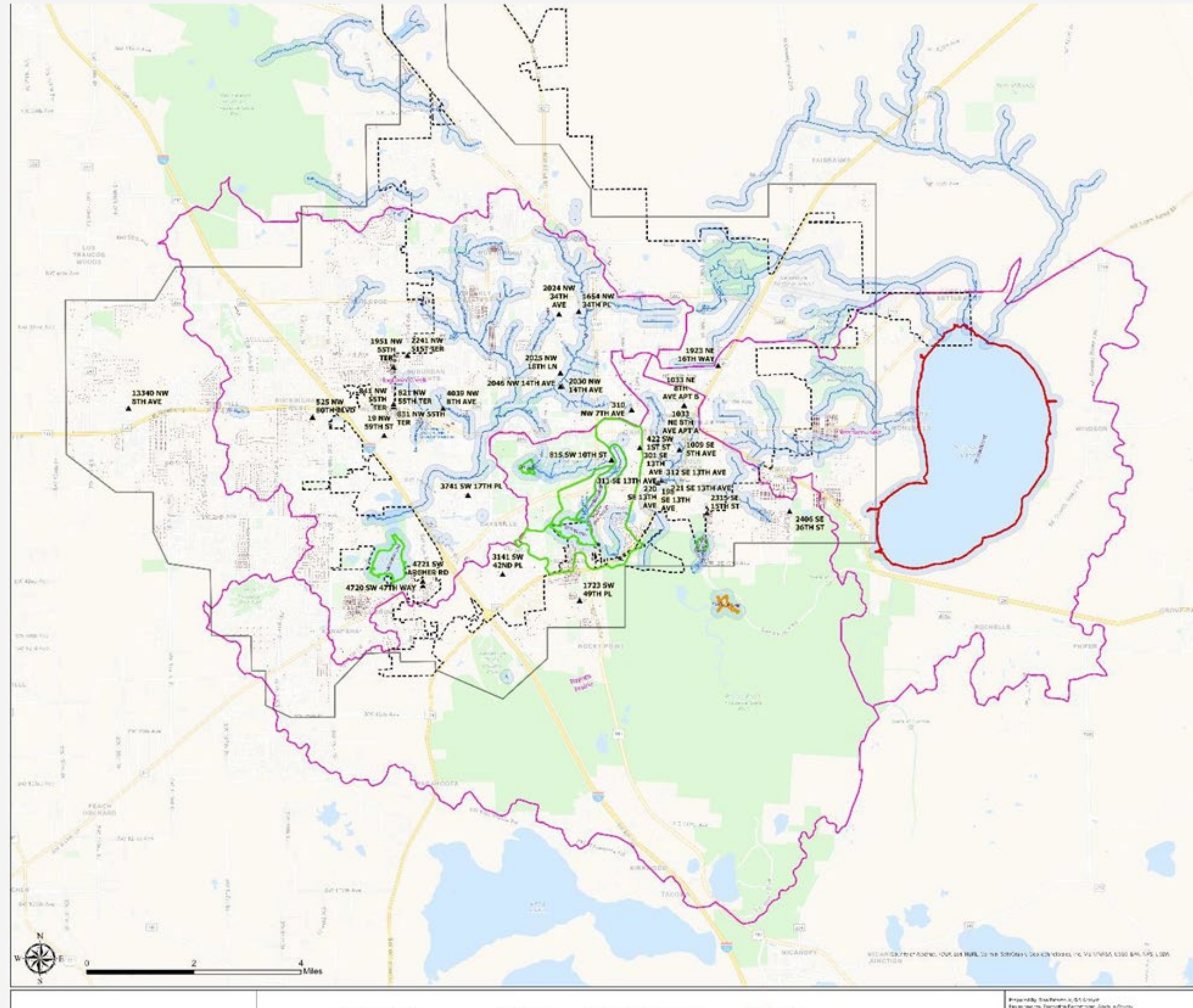
- Springs and Aquifer Protection Act required Onsite Sewage Treatment and Disposal Systems (OSTDS) remediation plans is Springs BMAPS
- Clean Waterways Act effectively required them in even more BMAPs when FDEP determined one was necessary
- OSTDS are privately owned – not feasible to negotiate with each and every property owner

HB 1379 Adds More Requirements

- HB 1379 requires responsible entities to report on projects that demonstrate how they intend to meet their five-year milestones
- All projects needed to fulfill milestones should be added, even if a funding source has not been identified.
- Later milestones are outside of our 5-year planning horizon



ConnectFree Program

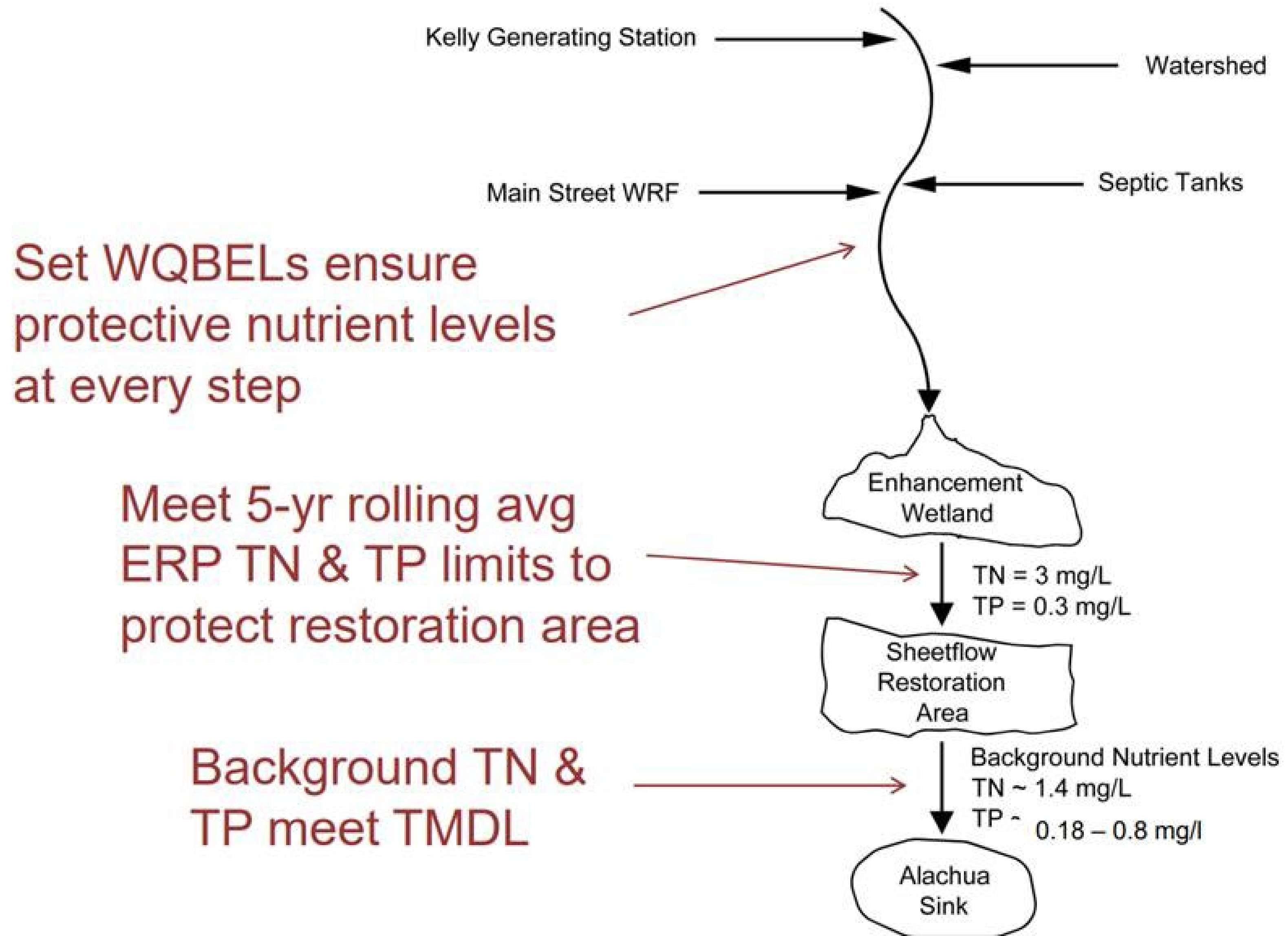


- Program began in 2003
- Assists with costs associated with the extension, construction, and connection to the City's water and wastewater systems
- 33 Projects as of 2024



Sweetwater Wetland Park - Paynes Prairie Sheet Flow Restoration

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Sweetwater Wetland Park – Paynes Prairie Sheet Flow Restoration

- Project accounts for 63,969 lbs of the 75,616 lbs of TN load reductions achieved to date in the Alachua Sink watershed
- Sum of potentially controllable sources = 68,670 lbs of TN (more on this in a minute)

Land Use Type or Source	AL	Percent Contribution
Forest/rural open	15,653	4.5%
Urban open	4,499	1.3%
Agriculture	10,818	3.1%
Low-density residential	12,837	3.7%
Medium-density residential	19,733	5.6%
High-density residential	8,225	2.3%
Transportation/communication	4,399	1.3%
Rangeland	1,246	0.4%
Water/wetland	51,991	14.8%
Septic tank	8,159	2.3%
Prairie Creek	212,748	60.7%
Subtotal	350,308	100%

Potentially Controllable Sources

An Alternative to OSTDS Upgrades

- Privately owned package plant – Working with owner to convert to lift station and connect to GRU
- This is our OSTDS remediation plan for Newnans Lake
- Will require grant funding – intention was to apply for Water Quality Improvement Grant



Finding More Load Reductions from Things we are Already Doing

We do a lot of street sweeping, and we do get credit for it

Can we get more credit?

Yearlong study underway with Geosyntec to quantify actual nutrient load removed

Hopefully achieve our allocation for Santa Fe River and any remaining for Newnans Lake



Where Things Stand Now

- New BMAPs, new focus on OSTDS, and need to identify specific projects outside of our planning horizon and without funding has required us to:
 - Look outside the box for more practical projects
 - Look at things we are already doing for additional credit
 - Look for projects that have large load reductions
- But there are more challenges on the horizon...

What Does the Future Bring?

- Funding: what will happen to the Water Quality Improvement Grants?
- Crediting: will FDEP accept street sweeping study results and how will they credit for package plant removal
- Internal nutrient dynamics of impaired waters
- Preemption



Package Plant Credit

- TMDL and subsequent load reduction allocations assume plant at full permitted capacity
- FDEP has indicated credit will be based on actual operating capacity which is less
- In practical terms this means that the by removing the plant, the other allocated sources could discharge more nutrients but this isn't reflected in the allocations
- Unless addressed in the crediting, City and other stakeholders will end up doing more than actually required

	Nutrient	Entity Required Reductions (lbs/yr)	Collaborative Required Reductions (lbs/yr)	2022 Milestone lbs/yr (50%)	2028 End of 2008 BMAP Check-In	2030 Milestone lbs/yr (100%)	Reductions Achieved as of Dec 2023 (lbs/yr) (entity contribution of total achieved reductions)	% Reductions Achieved as of Dec 2023 (lbs/yr)
Newnans Lake	TP	477		239	357.75	477	5887	100.00%
	TN	4,207		2,104	3155.25	4207	3227	76.71%
Alachua Sink	TN		206,235	103,118	154676	206,235	73,153 of 75,616	35.47%

Newnans Lake – Alachua Sink

- Prairie Creek is the outlet of Newnans Lake
- A portion of Prairie Creek flow reaches Alachua Sink
- 60.7% of the TN load to Alachua Sink comes from lake
- 81% of load in lake is internal recycling



Preemption – SB180

- Some BMAPs like Silver Springs require existing OSTDS to be upgraded but others like Sant Fe do not have this requirement
- Another OSTDS remediation plan strategy could be an ordinance requiring upgrade
- But SB180 likely prevents that from being done in Alachua County

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Questions

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