

South Wake Landfill Update

South Wake Citizens Committee
September 27, 2023



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wakegov.com

Overview



**Improvements & Investments
by GFL and Wake County**

Odor Reporting Trends

Town Metrics

Communications

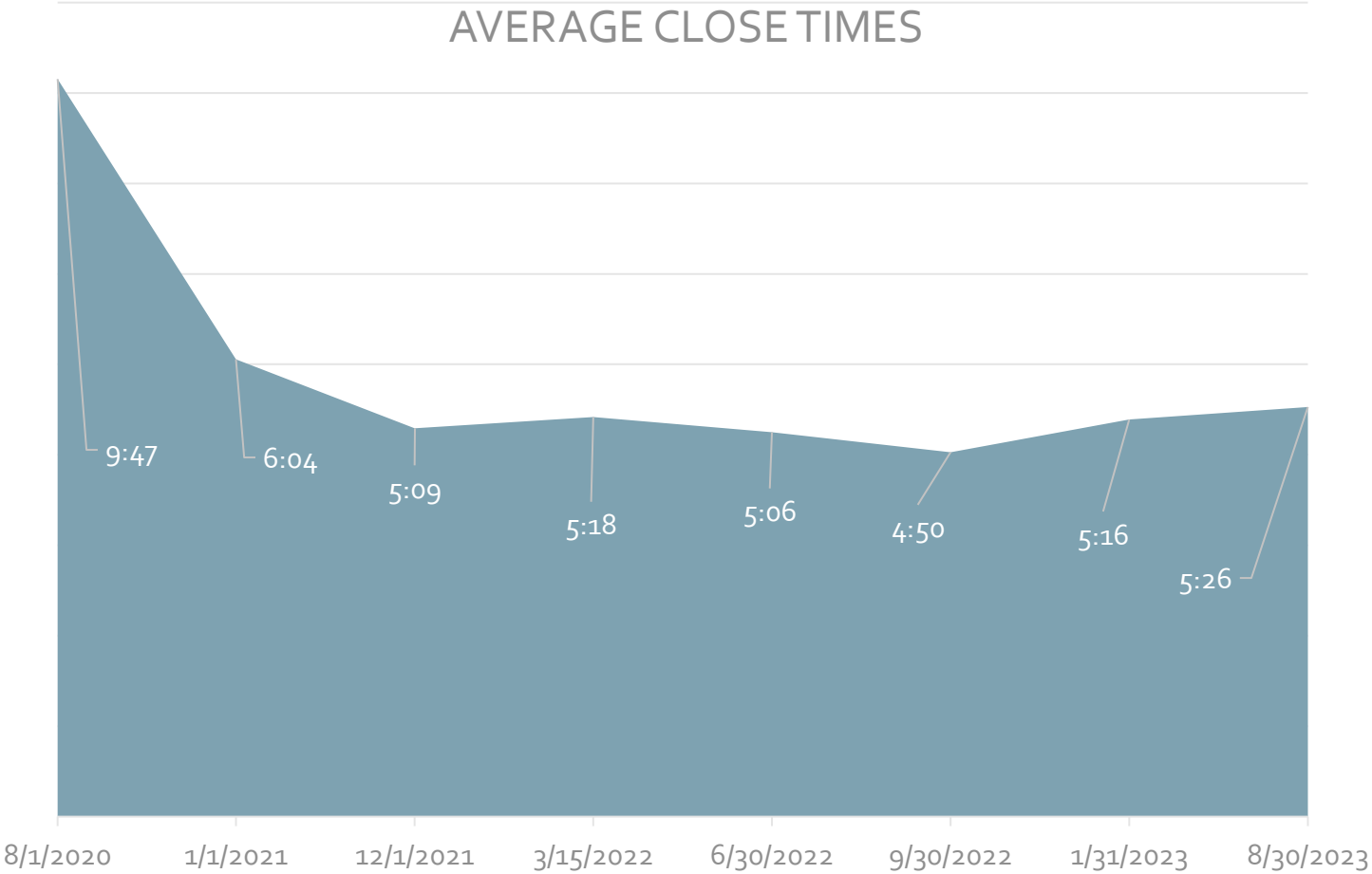


GFL Improvements & Investments

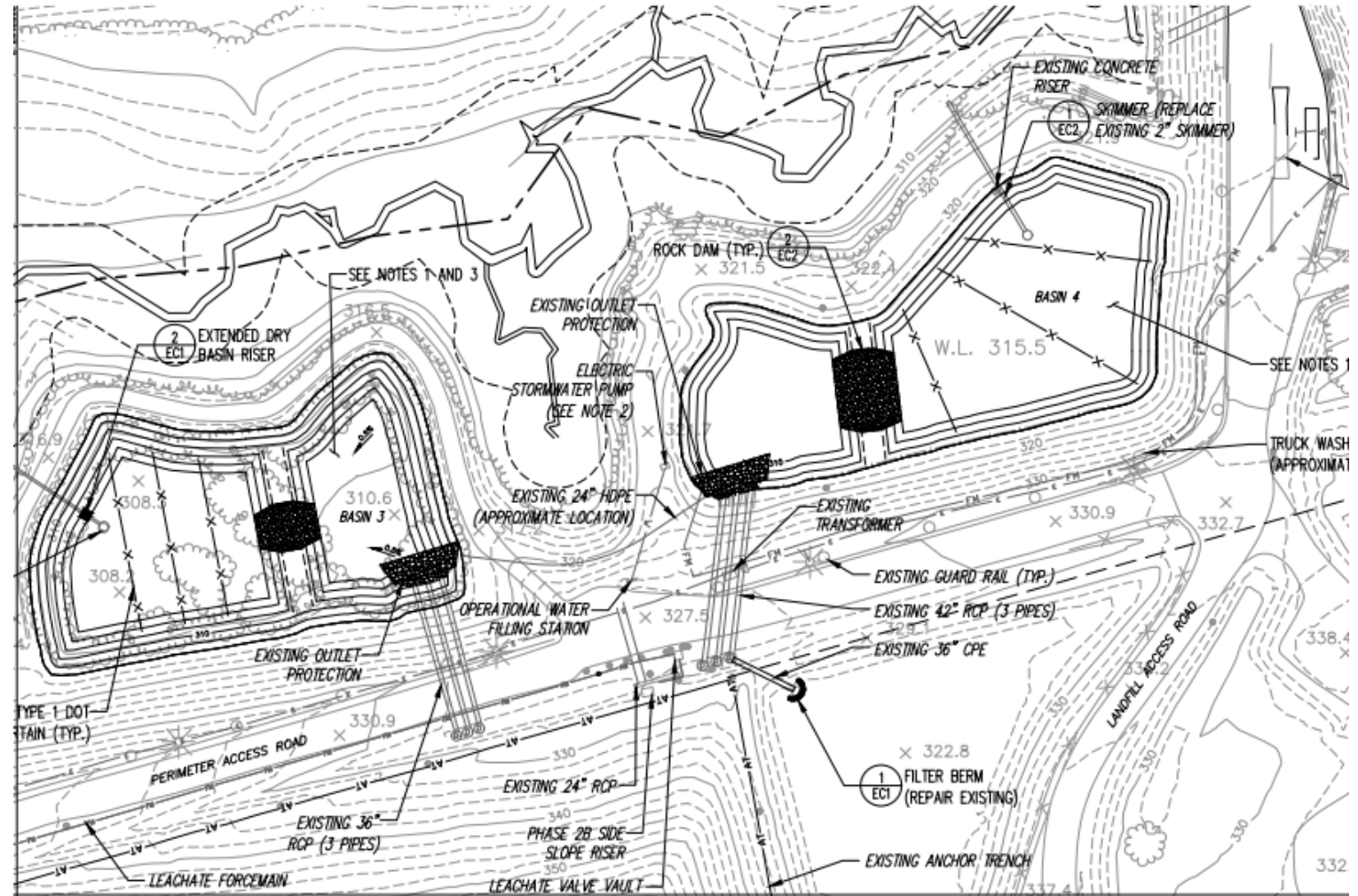
Operational Update – GFL

Consistent Closure Times

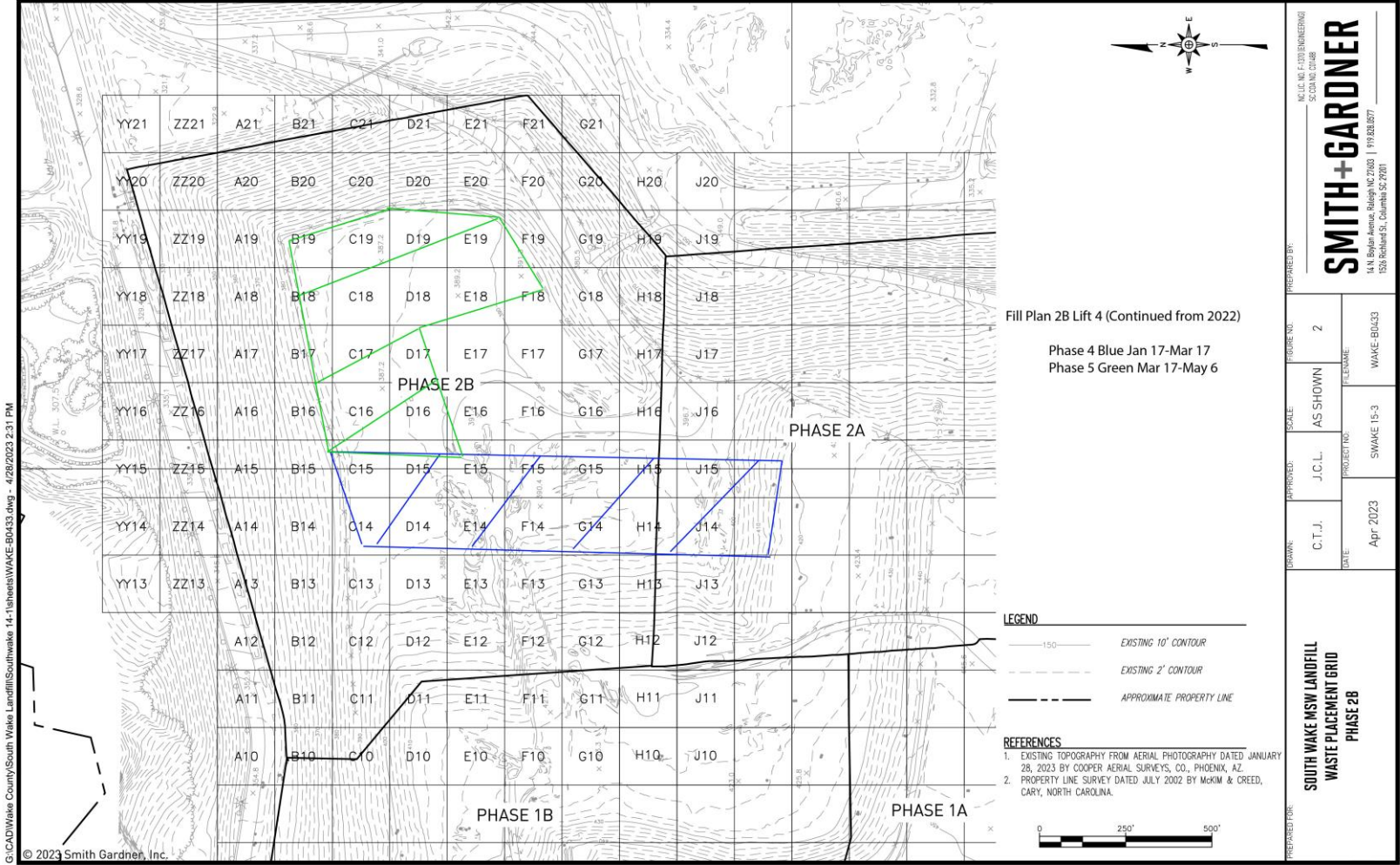
August average:
5:26 p.m.

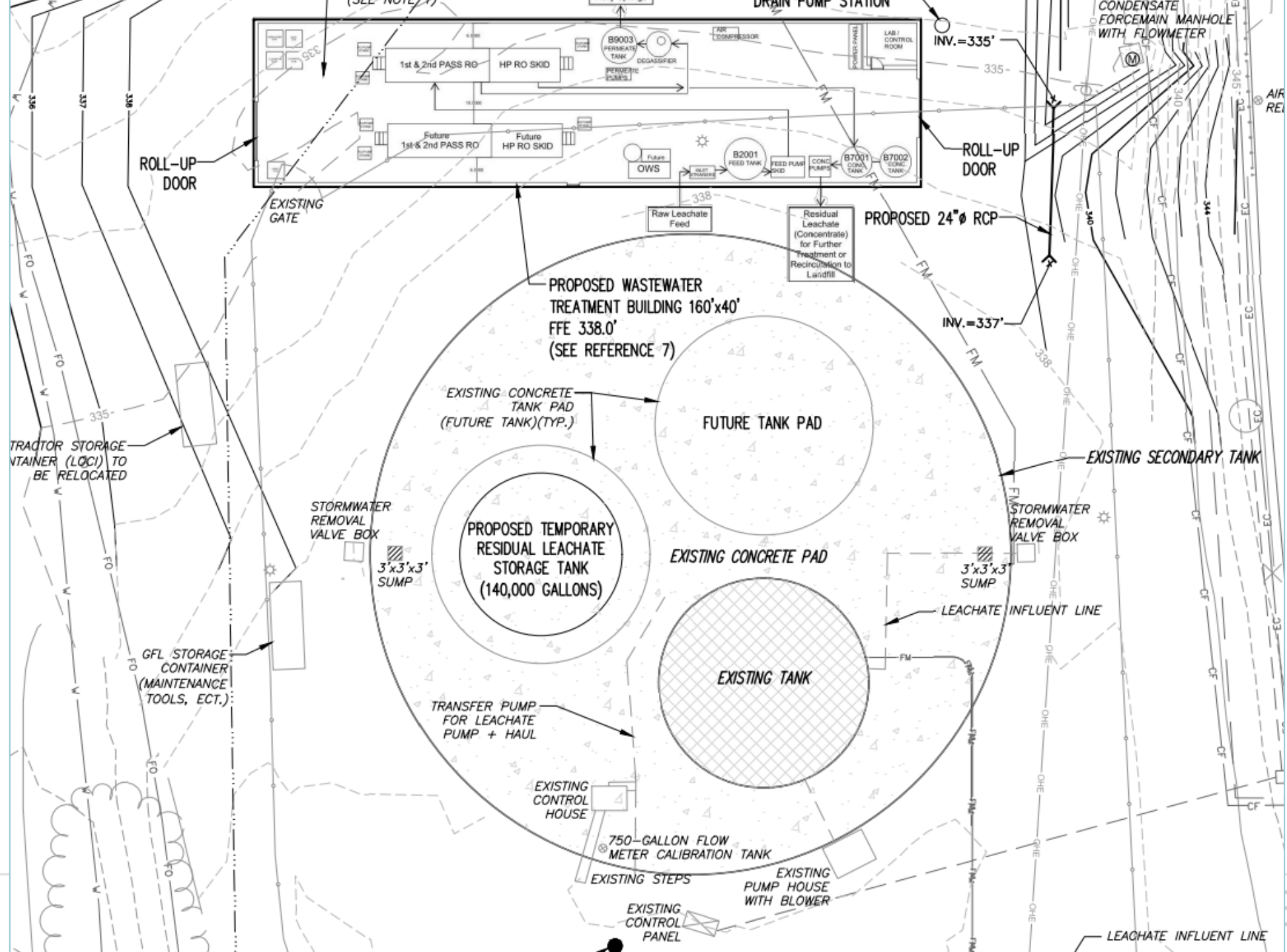


Sedimentation Basin Improvements: COMPLETE







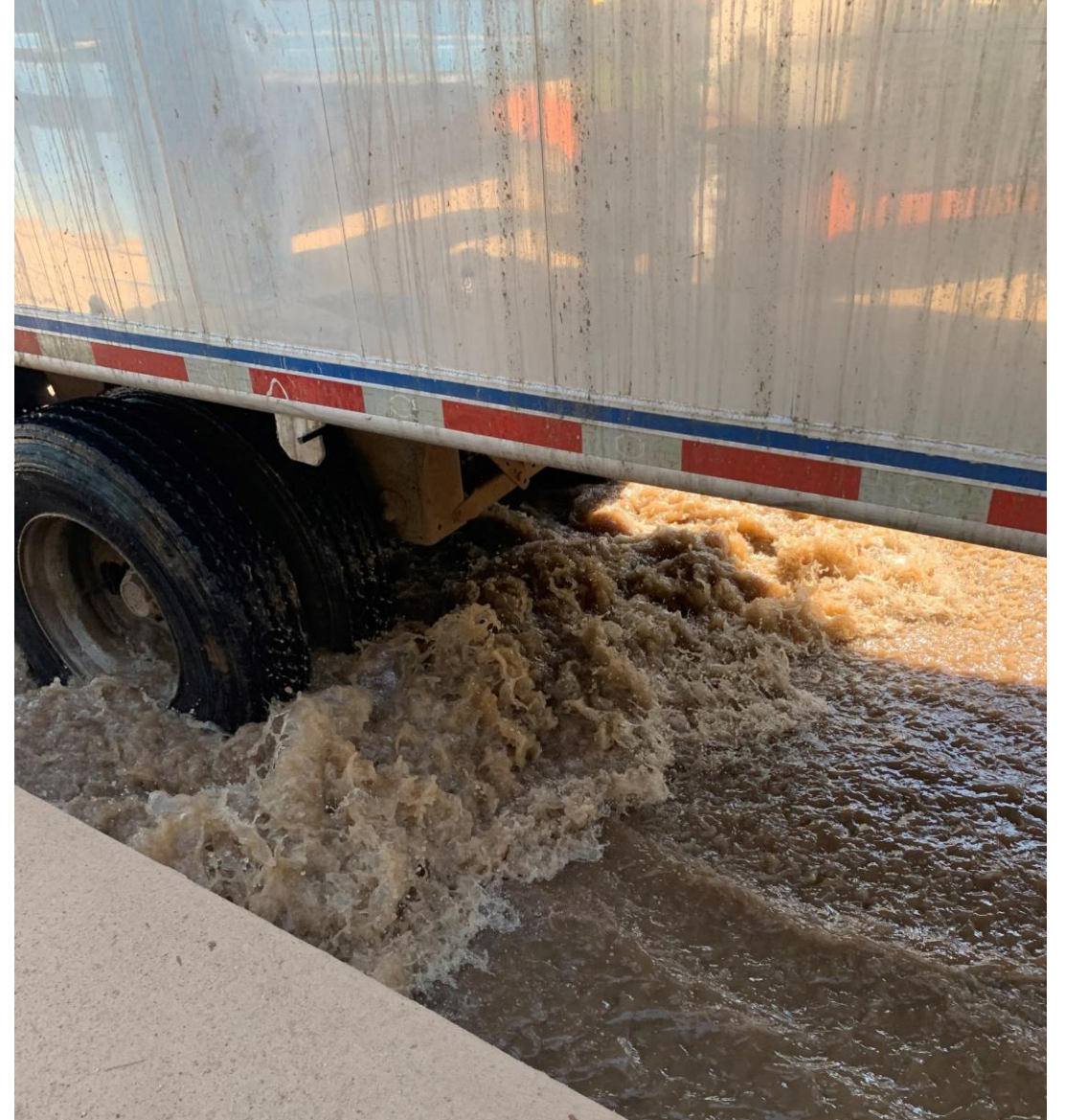


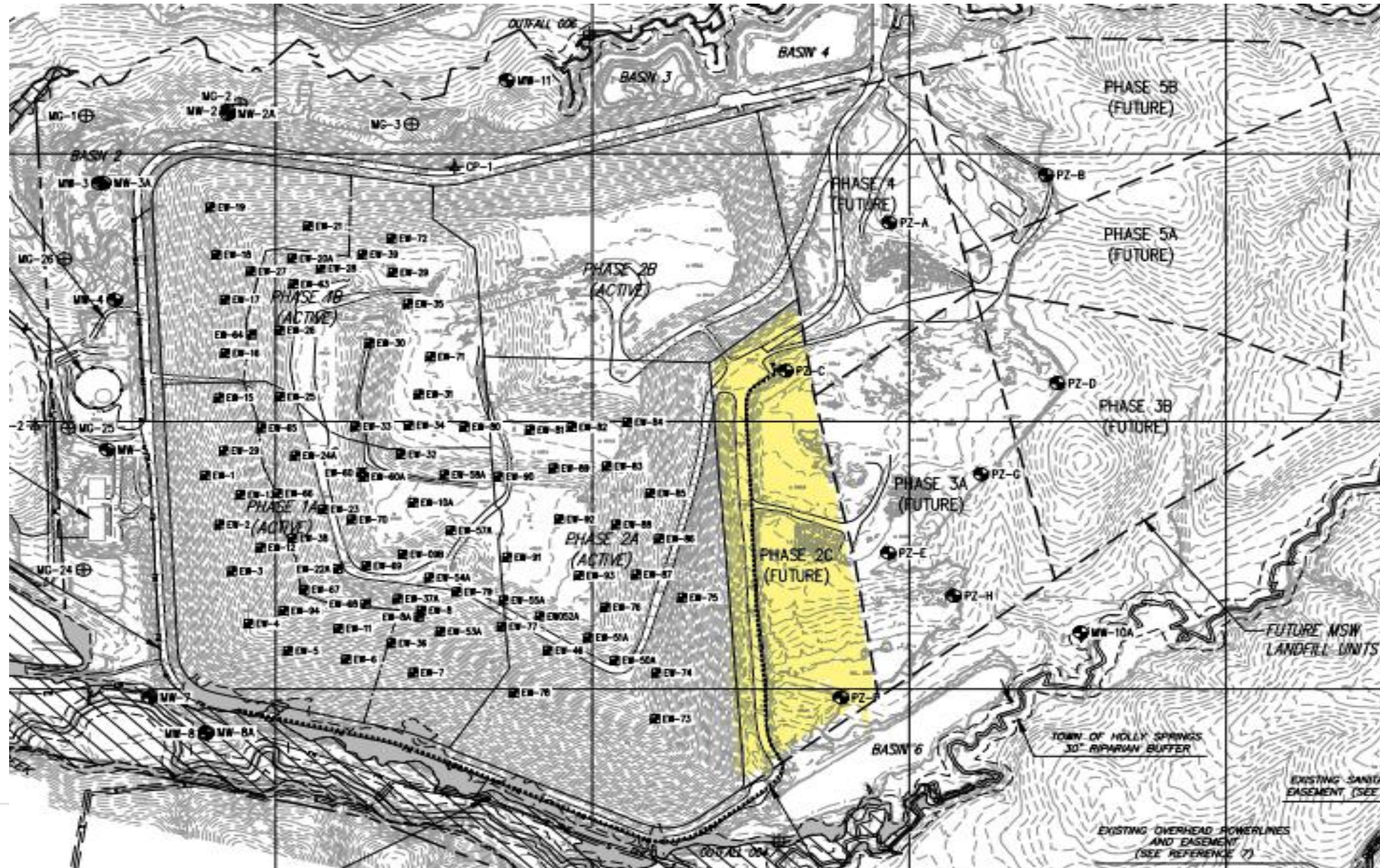












A faint, light blue outline of Wake County is centered in the background of the slide.

Wake County Improvements & Investments

Expansion of LFG System

Envirosuite

- 15 new wells (120+ wells)
- Extensive header piping

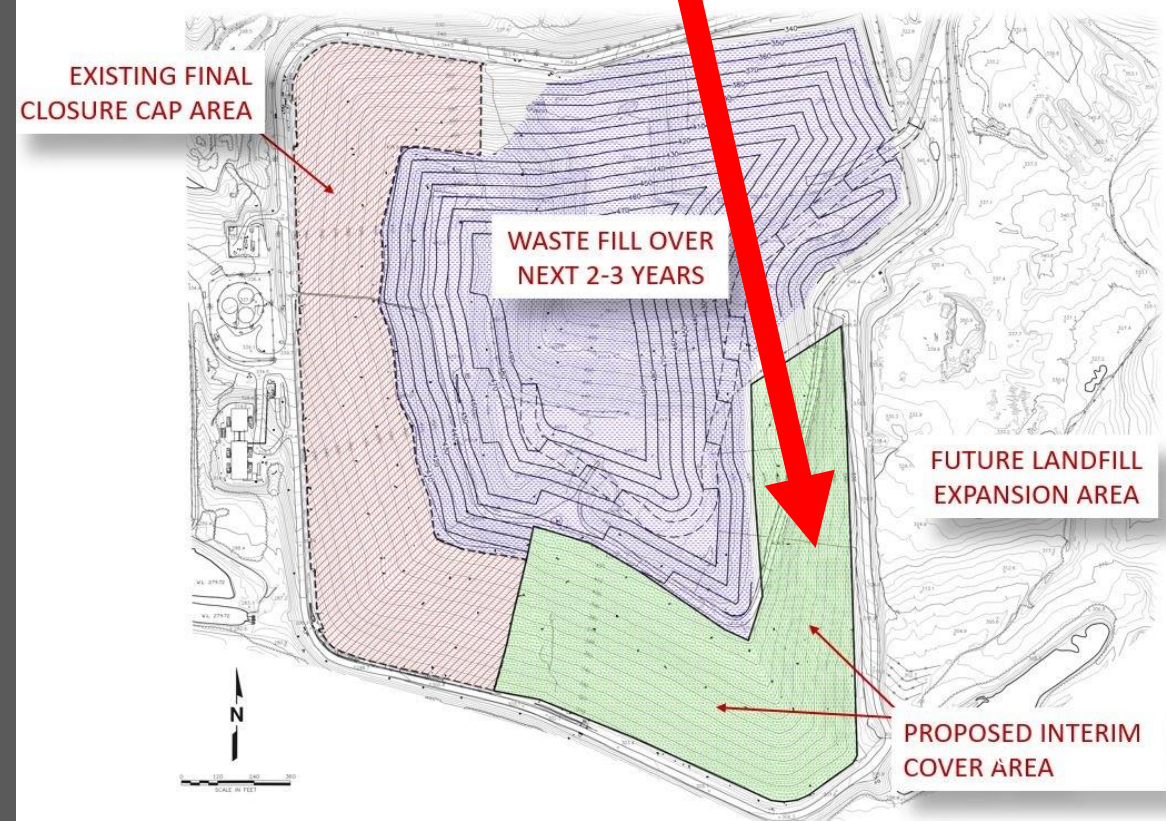
Continued Envirosuite and LOCI contracting



Interim Cover

Investing **\$3.7 million** –
Construction nearing
completion

Projected to invest more than
\$13 million over the next
decade



New Mattress Shredding Program

- Program started 8/28
- Reduces mattresses to “shreds” for more effective disposal
- Reduces “opportunity” for mattresses to create leachate outbreaks
- Over 200 mattresses 1st week



Renewable Natural Gas under Development

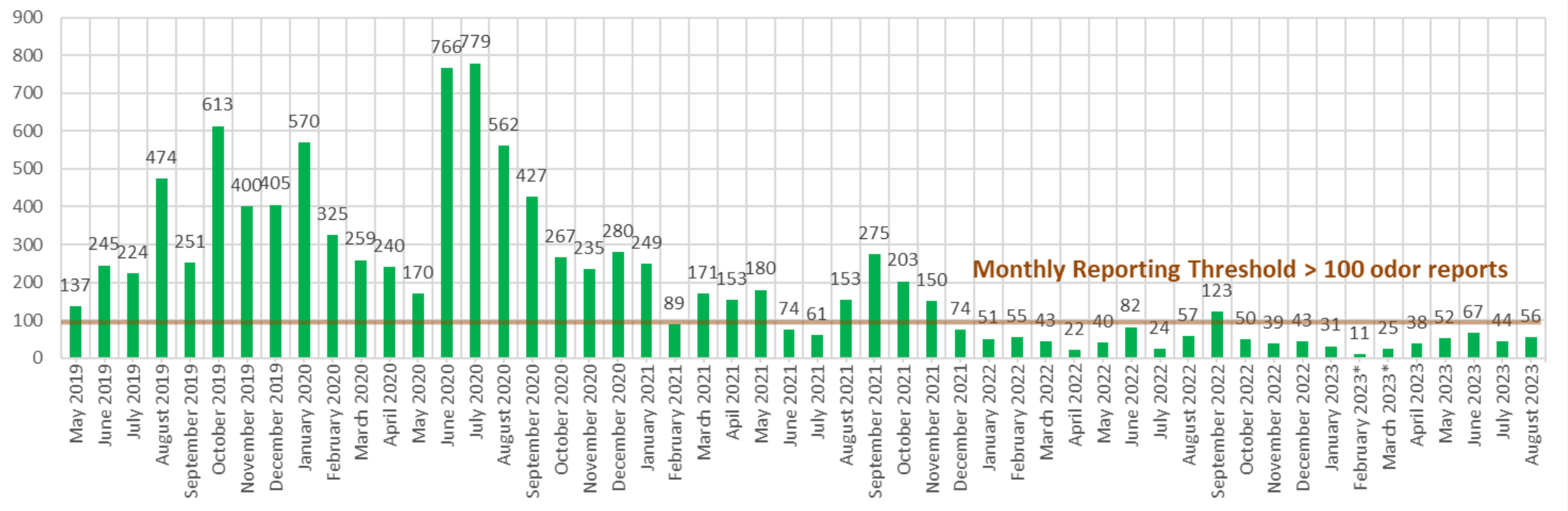
- New Contract with Ingenco (now called Archaea and owned by BP) for a Renewable Natural Gas plant by the end of 2024
 - Converting landfill gas (50% methane) to natural gas (98+% methane) by removing impurities and injecting into natural gas pipeline
 - Existing pipeline in an easement on South Wake property
- Existing power plant will continue to produce power until the new facility is constructed/operational



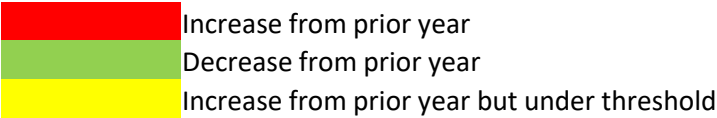
Odor Reporting Trends

Odor Reporting Trends

South Wake Landfill
Odor Reports per Month (Likely)
MAY 2019 - August 2023
* Odor Reporting system down 2/15/23-3/9/23

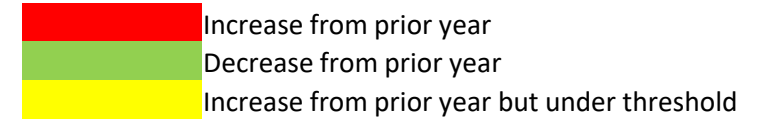


Comparing Odor Reports for the Same Month in Different Years



Month to Month Odor Reports (Likely)		
	% change from 2018 to 2019	% change from 2019 to 2020
January	389%	548%
February	647%	190%
March	266%	144%
April	243%	400%
May	879%	24%
June	155%	213%
July	87%	248%
August	265%	19%
September	128%	70%
October	676%	-56%
November	1718%	-41%
December	125%	-31%
Totals	275%	57%

Comparing Odor Reports for the Same Month in Different Years



Month to Month Odor Reports (Likely)						
	% change from 2018 to 2019	% change from 2019 to 2020	% change from 2020 to 2021	% change from 2021 to 2022	% change from 2022 to 2023	
January	389%	548%	-56%	-80%	-39%	January
February	647%	190%	-73%	-38%	-80%	February
March	266%	144%	-34%	-75%	-42%	March
April	243%	400%	-36%	-86%	73%	April
May	879%	24%	6%	-78%	30%	May
June	155%	213%	-90%	11%	-18%	June
July	87%	248%	-92%	-61%	83%	July
August	265%	19%	-73%	-63%	-2%	August
September	128%	70%	-36%	-55%		September
October	676%	-56%	-24%	-75%		October
November	1718%	-41%	-36%	-74%		November
December	125%	-31%	-74%	-42%		December
Totals	275%	57%	-62%	-66%		Totals



Town Metrics

Town Metrics

Working with the Holly Springs Town Council and staff, we established three metrics:

1. Daily odor reports
2. Monthly odor reports
3. Distance of reports from the landfill

Town Metrics – Daily Odor Reports

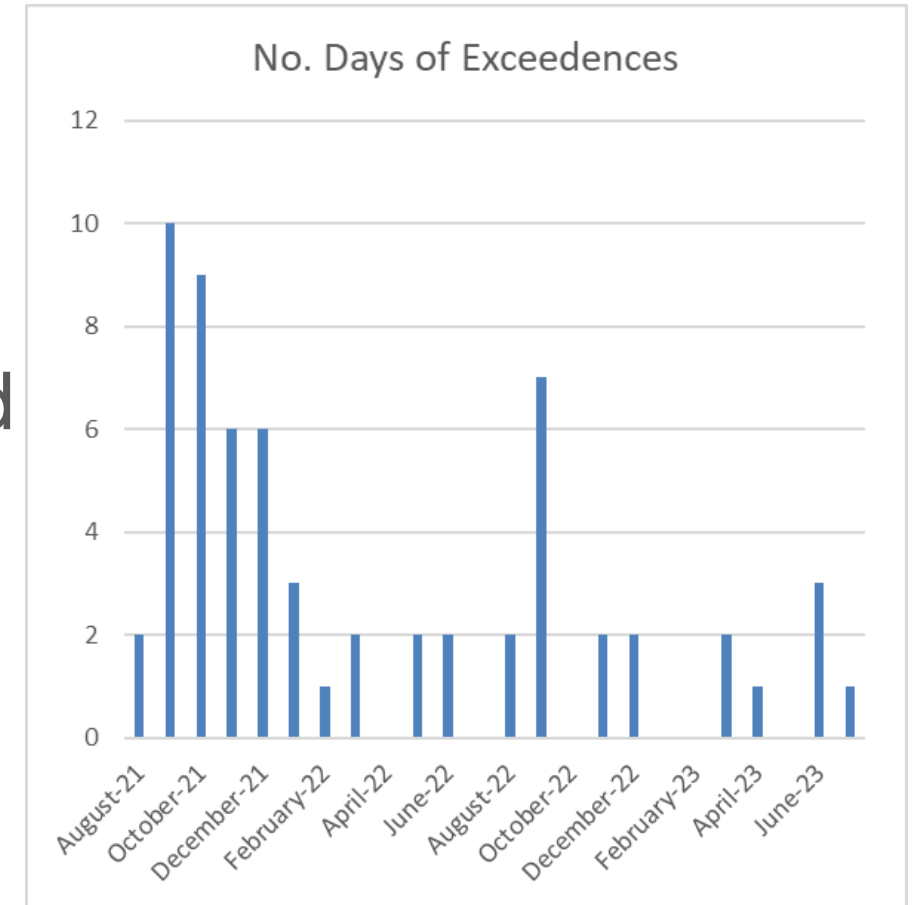
Thresholds

24 odor reports in a day

OR 5 in an hour

Site Odor Evaluation form completed and provided to Town for days meeting above criteria

We use the data to guide our efforts to minimize odor



Town Metrics – Monthly Odor Reports

Thresholds

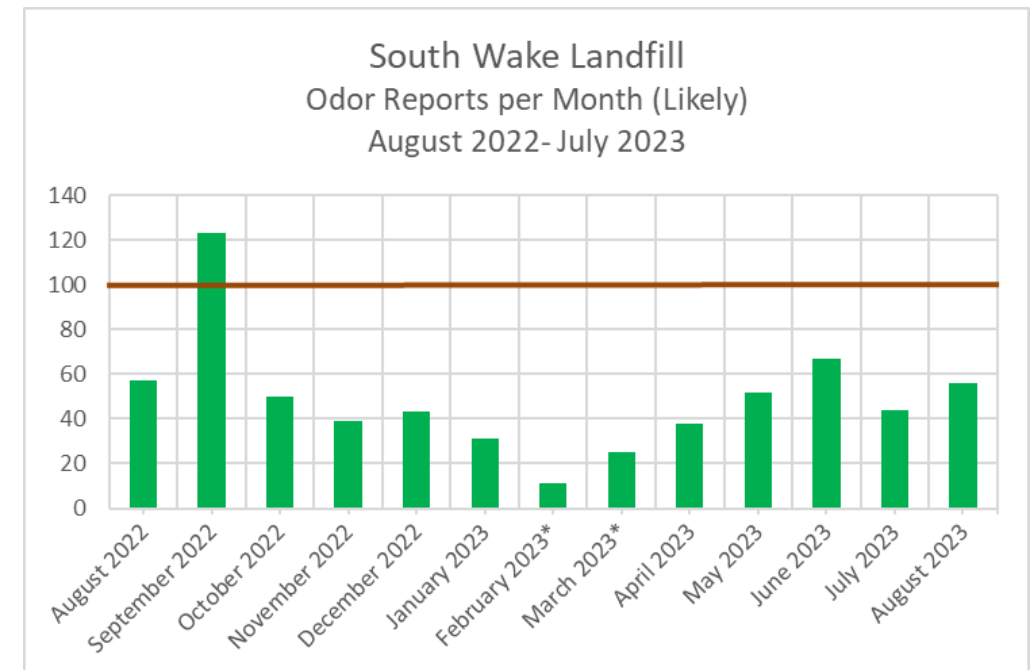
100 odor reports likely attributable to the landfill

OR 200 total odor reports in a month 5 in an hour

Report generated by consultants

County and GFL use info to consider how we can prevent future issues

Haven't hit the threshold in 2023



Town Metrics – Distance of Odor Reports from the Landfill

Monthly report includes:

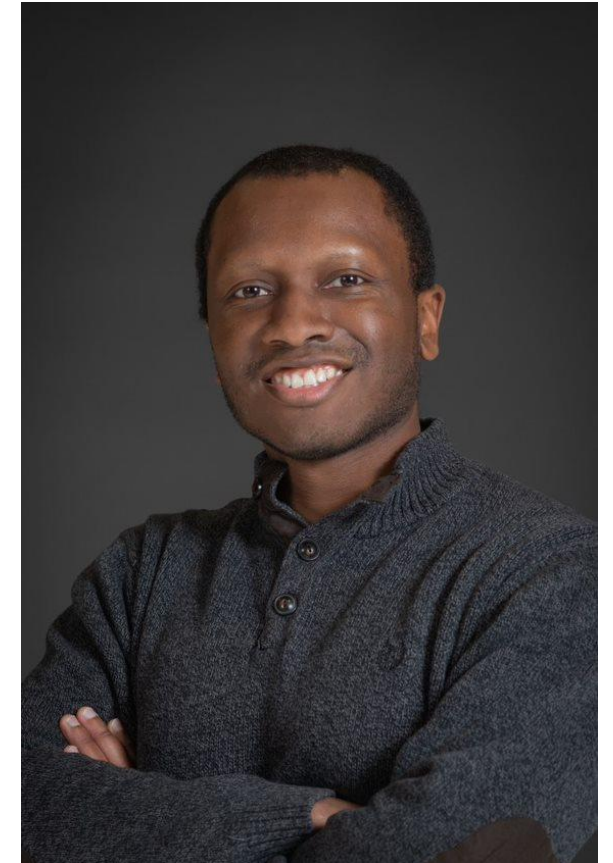
Distance Metric Summary													
Distance	Weighted Metric %	Aug '22	Sept '22	Oct '22	Nov '22	Dec '22	Jan '23	Feb '23	Mar '23	Apr '23	May '23	June '23	July '23
		Weighted %	Weighted %	Weighted %									
> 0.5 miles	> 70%	91%	88%	92%	93%	93%	47%	95%	80%	90%	96.3%	81.5%	84%
0.5 – 1 mile	<20%	8%	11%	7%	6%	7%	49%	5%	19%	8%	3.2%	16.6%	14%
1 – 2 miles	<8%	1%	1%	1%	1%	0%	4%	0%	1%	2%	0.4%	1.9%	2%
2 – 3 miles	<1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.1%	0.0%	0%
3+ miles	<1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.0%	0%



Communications

New Solid Waste Communications Consultant

- North Carolina born & bred
- N.C. A&T graduate
- 12 years communications experience – government, news, hospitality, marketing
- Author and editor of numerous books!



Weekly Landfill Odor Forecast

Weekly Landfill Odor Forecast



Marcus F Thompson

To Cassie Hack; Freddie Rodriguez - Holly Springs Solid Waste Manager; J. Scott Chase; John Roberson; Matt Calabria; Melissa Harden; Paige Scott;
 Randy Harrington - Holly Springs Town Manager; Stacy Beard; Stephanie Wells

Reply

Reply All

Forward



Mon 8/21/2023 2:40 P

I'm Marcus Thompson, the new communications consultant assigned to serve the Wake County Solid Waste team. I'll be taking over these weekly Monday Odor Forecast emails.

For the week ahead, maintenance and project work at the landfill is not expected to significantly affect the potential for prolonged odors.

In fact, there's significant progress on two projects that in the long-term will help enhance landfill operations and thus positively impact our ongoing efforts to mitigate odor.

- Our contractor has begun to lay down the liner for the interim cover at the landfill and will continue work on Saturdays to expedite the progress. I've included a photo of their progress on the east slope. It's looking great!
- Starting next Monday, Aug. 28, all mattresses and box springs must be taken to the South Wake Landfill's [new shredder](#). This shredder will help reduce the space these items fill in the landfill and the air pockets they often create in our waste. Bulky waste, like mattresses and box springs, is one of the most difficult and costly waste streams to process and are a common cause of increased landfill operation costs and decrease landfill lifespans.

Here's how forecasted winds could potentially affect neighbors this week:

- **Tuesday morning:** Slight potential for odor toward Forest Springs
- **Wednesday morning and afternoon:** Slight potential for odor toward Forest Springs

Please let us know if there are any questions or concerns. I look forward to working with all of you!

Marcus Thompson

Senior Communications Consultant

[Communications Office](#)

919.986.9370

300 S. Salisbury St., Raleigh, NC 27601



Summer Newsletter – Sent Sept. 8



Wake County invests \$3.7 million to help control landfill gases and odors

Construction of state-of-the-art cover to be complete by end of the year

You've spoken and we've listened! Odor reports have remained at record lows over the last year thanks to new innovations that have been applied at the South Wake Landfill. Since 2020, Wake County has invested over \$6 million to ensure the reduction of odors produced from the landfill. This includes \$1.8 million in landfill gas improvements, \$550,000 in environmental odor reduction and over \$3.7 million in a [brand new](#) project that is expected to further reduce odor reports by up to 30%.

In April, the Wake County Board of Commissioners approved funding for a new project to install a temporary water- and windproof fabric cover to help control gas and odors. Installation started July 1. The cover will stretch 9 acres wide and will protect the surface of the landfill, minimize water infiltration and prevent additional odors from escaping. Eventually, the liner will be installed over nearly 15 acres, and 80% of it will cover the southern slope of the landfill.



Our South Wake Landfill takes in the garbage from more than 1.2 million residents and thousands of businesses in Wake County. Over the next 11 years, we're projected to invest more than \$13 million in solutions to mitigate bad odors. But, as always, **let us know if you smell something!** We rely on your odor reports to identify problems at the landfill and track our odor-fighting efforts.



New shredder program

The South Wake Landfill has a new shredder program! Every week, commercial trash haulers bring an average of 80-100 mattresses and box springs to the landfill each day. These bulky items take up space in the landfill and create air pockets in our waste. Our new, giant shredder machine is now going to help "cut" down on that!

As of Aug. 28, haulers have to drop off all mattresses and box springs at the South Wake Landfill shredder first!

PLEASE NOTE: Residents can continue to bring mattress and box springs to our convenience centers.

Check out the video to see how it works!

[Watch the Video](#)

Why is it so hard to recycle right?

All 11 Wake County convenience centers offer mixed recycling collection, but a growing percentage of the material being put in those containers doesn't belong in the mix. From April 2020 to April 2023, the contamination rate in our recycling program rose to 13.8%. Contaminants can damage the equipment used at recycling sorting centers, cause injury to recycling workers, and decrease the economic value of the paper, metals, glass and plastics that manufacturers want.

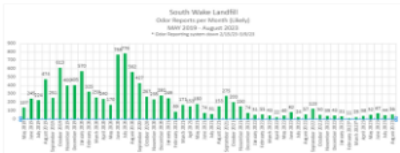
Wake County Solid Waste staff collaborated with the County's Innovation team to better understand how residents experience recycling at convenience centers. The year-long project included surveys of nearly 1,800 customers at six convenience centers and in-depth interviews with residents and site attendants. The project team experimented with using outreach staff to answer questions at the convenience center off of Durham Road/N.C. 98 in Wake Forest ([Site 8](#)) and tried out new signage at the convenience center on Battle Bridge Road east of Raleigh ([Site 5](#)).

We learned that residents want to recycle correctly, but need better information about what materials to bring and how to prepare them. Plastic waste is especially confusing because many plastic items are stamped with a recycling symbol, but very little of it is designed to be recycled! Survey respondents told us that they rely on signage at the sites and [wake.gov](#) for clear, consistent guidance on recycling. The Contamination Reduction Project research phase has ended, but we will use our new understanding to improve signage at our convenience centers and update our webpages over the next few months.



Positive trends continue in odor reporting data

Feedback from our neighboring communities, continued investment in odor-reducing innovation and the diligent work of our solid waste team has yielded continuous positive results over the last few years. As evidenced in the graph below, we have made significant progress in mitigating potential odors and we will continue to strive to keep the number of future reports down.



As always, we encourage more feedback, so if you smell the landfill, [please take the time to let us know!](#) We use this data to measure which odor-fighting tactics are working and, if we see a sudden spike in reports, it alerts us to look for problems.

Salutations from your new Solid Waste Communications Consultant

Hello! I am Marcus Thompson, the new solid waste communications consultant.

I'm glad you took the time to read the latest edition of our newsletter! I will be continuing the effort to keep you informed about everything happening at the South Wake Landfill and remain available to help with answering your questions and concerns. As stated before, constructive feedback from our neighbors is always welcome and helpful. After all, healthy communication with each other is how we grow!

If you need anything you can feel free to contact me by phone at 919-986-9370 or [by email](#).

We are always at your service and happy to help!



Learn more about the South Wake Landfill —

We strive to keep residents well informed on activities taking place at the landfill and welcome all feedback. If have

South Wake Landfill Citizens Committee

We're meeting Wednesday, Sept. 27, from 6:30-8 p.m. The meeting will be held as a hybrid, so you can join us online or we'd love to see you in person! You can also view past presentations [here](#).

[Get Involved](#)

Ever wondered what happens to your trash when it leaves the curb?



Find out with a **FREE** tour of the South Wake Landfill! You'll learn everything Wake County does to fight odors, protect the environment and support public health while processing the garbage from more than 1.1 million residents.

Spots are limited, so sign up today. Got a group of 10 or more interested in taking the tour? Let us know and we'll schedule a private tour on our bus.

Rather tour from the comfort of your couch? Check out our [virtual tour](#), which includes access to behind-the-scenes areas and drone footage.

[Take a Tour](#)

Wake County Solid Waste Management

Telephone: 919-856-6424

Address: Wake County, Solid Waste

Summer Newsletter – Great reach!

Email Performance

See how your emails are doing with your audience. [Compare your results to the industry average.](#)

Sent

2945

Open Rate

73.9%

Click Rate

3%

i

	Original	Resend	Total		Original	Resend	Total
Opens	1910	263	2173	Clicks	75	12	87
Sent	2945	1028	3973	Did Not Open	1018	765	1783
Bounces	17	0	17	Unsubscribed	12	1	13
Successful Deliveries	2928	1028	3956	Spam Reports	0	0	0
Desktop Open Percentage			96%	Mobile Open Percentage			4%



EPA Visit

EPA Visit

Visit from the Environmental Protection Agency to see innovative South Wake (SW) Landfill.

SW is one of about 30 landfills using this level of tech to monitor odors & landfill gas

The EPA was so impressed they plan to come back!



EPA Visit

“We all appreciate the time you took to share the impressive operation you are overseeing at the South Wake Landfill site.”

**Lara P. Phelps, Director
U.S. Environmental Protection Agency**



Moldova Delegation Visit

Friday, Nov. 4





WAKE COUNTY





Our Work to Control Odors Never Ends

Our goal is to **minimize the frequency and duration of odor issues** around the landfill

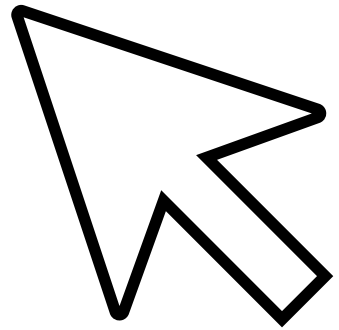
We're committed to **investing in the latest technology** and **implementing the best operational practices**



Easy Web Address



wake.gov/landfill





Thank You