

South Wake Landfill Odor Management and Control Plan

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Topics/Agenda

- On-site Landfill Superintendent Introduction & Recent On-site Changes
- Immediate Next Steps – Timeline/Schedule
- Phase 2B & LFG Collection System Expansion Status Update
- Community Engagement Discussion
- Odor Reporting Status and Planned Metric
- Other OMCP Metrics



GFL - Operational Update

- George Metcalf - Landfill Superintendent, Introduction
- GFL has continued to close the site nightly with dirt and tarps as committed since July 28th, 2020.
- Full dirt closure of the waste footprint was achieved on both Labor Day and Christmas. Goal for our team on major Holiday's.
- Revised operational practices are in place now and we are applying odor controlling agents directly to the roads of the site to reduce odor emissions from tire tracking.
- New NCM linear odor control misting system installed.



Reduced Working Face

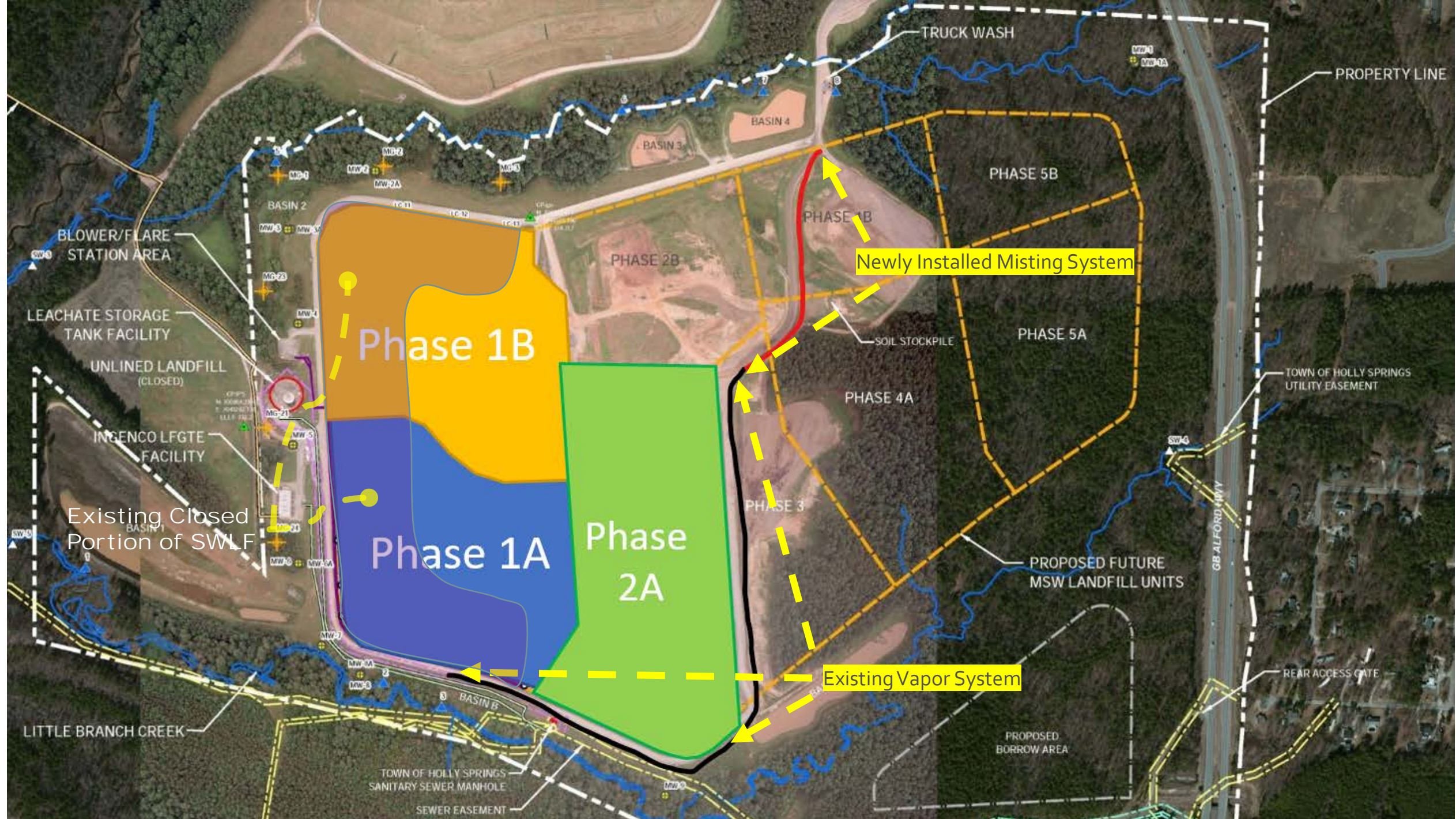
Overview – New Odor Neutralizing System



- Installed in late November of 2020, the system is currently being evaluated and adjusted to ensure optimal influence on odor mitigation.
- System provides an additional 1,000 linear feet of coverage around the North Eastern section of the site (HWY 55), adjoining the existing OCM system.
- Strategically placed to provide a barrier for possible odor emissions when we move into Cell 2B in the Spring of 2021.
- Neutralizer latches onto odor molecules and follows with wind direction.



Panoramic View- Odor Misting System



Immediate Next Steps Identified During BOC Work Session on 9/14/20

	<u>Commence By</u>	<u>Complete By</u>
Incorporate Bottom-of-Cell Infrastructure in Phase 2B	Completed	
LFG System Expansion (Part I – Vertical LFG Extraction Wells)	Completed	
LFG System Expansion (Part II – Horizontal Collectors, etc.)	1/15/21	3/31/21
Contract for Outreach Coordinator Efforts	10/15/20	6/30/21
Hire FTE for Outreach Coordination Efforts		7/1/21
Expand SEM into Phase 2A	Complete	Ongoing
Piloting of Odor Masking/Neutralizing Products	Initialized	Ongoing
Evaluate Use of Drone Technology	11/1/20	Ongoing
Evaluation of Interim Covers	1/1/21	3/31/21



Phase 2B Construction





Phase 2A LFG Collection Construction



Immediate Community Engagement, Outreach, and Communication Actions

- Objective: Launch survey to be shared widely within the Holly Springs/Apex community and with communities in closest proximity to the landfill.
- Goal: To ascertain which channels, platforms would best be suited for an ongoing communications strategy focused on public outreach and education, as well as gain insight into the types of information residents are curious about.
- Survey completion goal: 125 respondents by February 15.

Immediate Community Engagement, Outreach, and Communication Actions

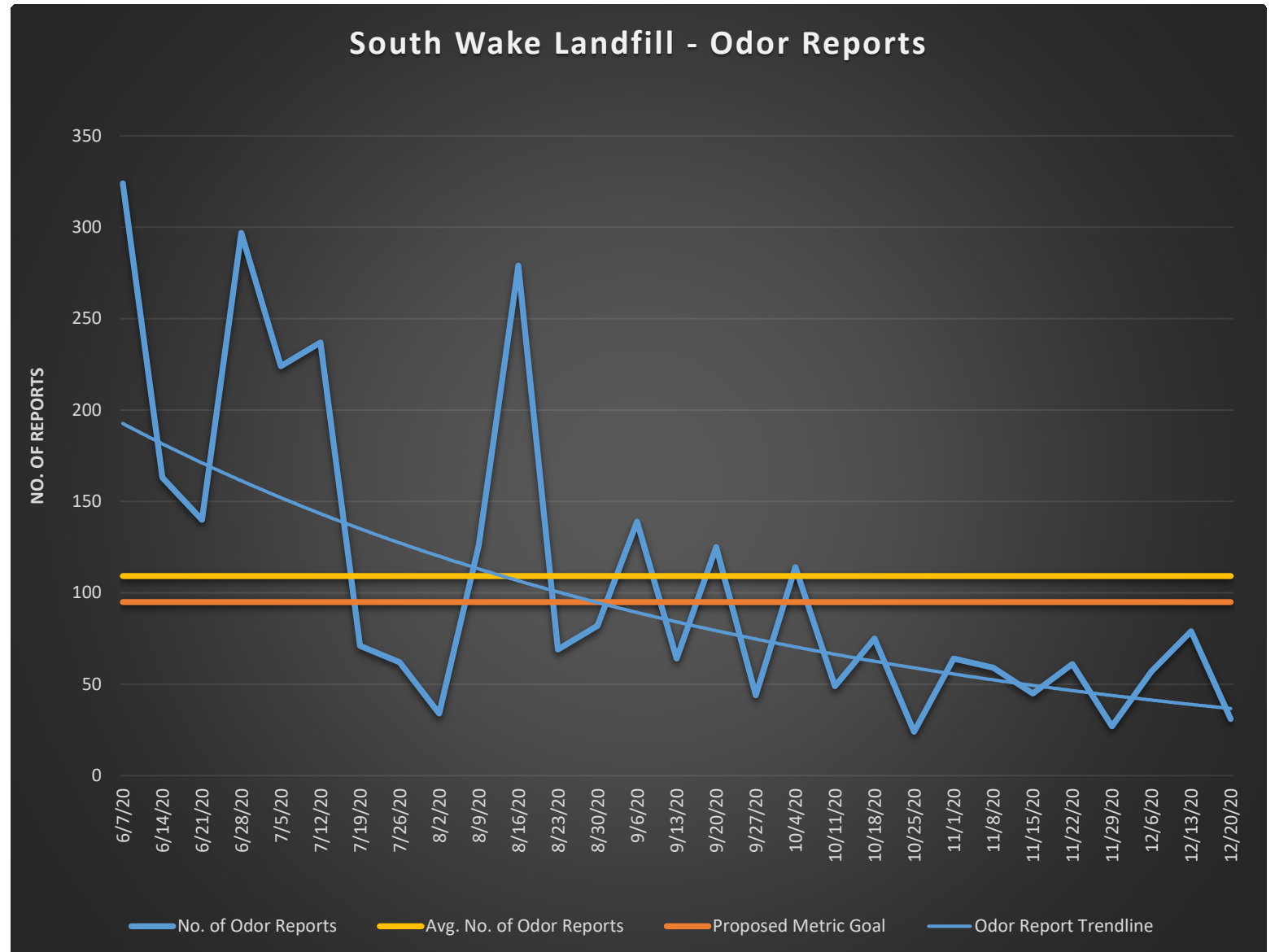
- Promoting on social media, web channels, email marketing, and physical collateral, including direct mail, posters/lawn signs



Immediate Community Engagement, Outreach, and Communication Actions

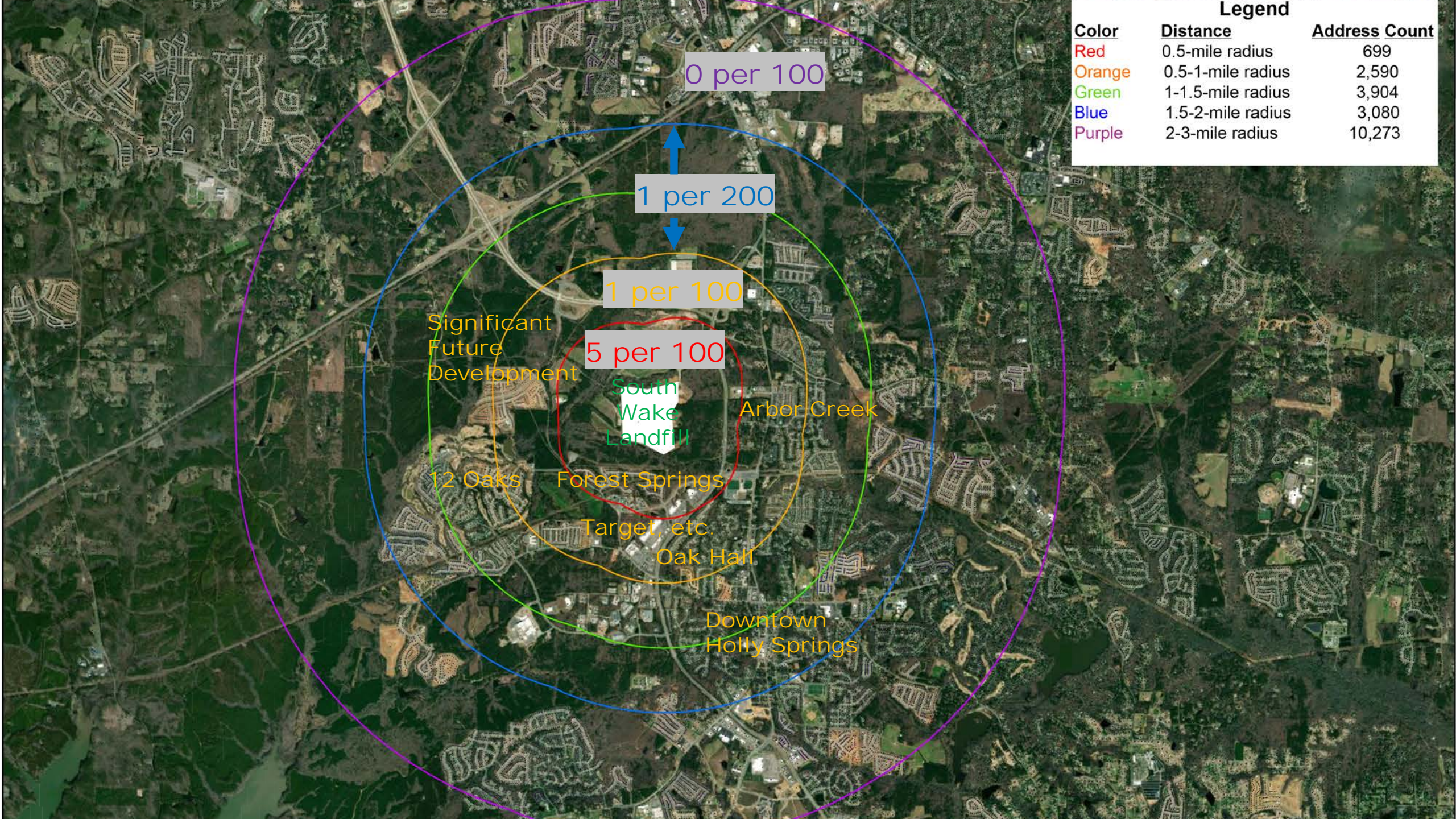
- January 4 – launch survey
- February 15 – close survey
- February 26 – deliver findings of survey in final report, along with recommendations for moving forward in implementing strategic communications plan
- March thru May – Develop strategic communications plan
- May thru June – Start Hiring process for SW Communications Specialist
- July 2021 – FT SW Communications Specialist on-board to carry out Strategic Communications Plan

Recent Odor Reporting Stats



OBJECTIVE: Reduce Frequency and Intensity of Off-site Odor Detections

- Odor Reports: record and track number of valid Odor Reports compiled by *Envirosuite* platform, and calculate number of reports within certain radii of the landfill.
 - **Close Proximity Goal**: < 35 valid reports **per week** originating within 0.5 mile radius, which is equivalent to **5 reports per 100 addresses** (700 addresses as of October 2020)
 - **Mid-Range Proximity Goal**: < 25 valid reports **per week** originating between 0.5 and 1.0 mile radius, which is equivalent to **1 report per 100 addresses** (2,600 addresses as of October 2020)
 - **Long-Range Proximity Goal**: < 35 valid reports **per week** originating between 1 and 2 mile radius, which is equivalent to **1 report per 200 addresses** (7,000 addresses as of October 2020)



Color	Distance	Address Count
Red	0.5-mile radius	699
Orange	0.5-1-mile radius	2,590
Green	1-1.5-mile radius	3,904
Blue	1.5-2-mile radius	3,080
Purple	2-3-mile radius	10,273

0 per 100

1 per 200

1 per 100

5 per 100

Significant
Future
Development

South
Wake
Landfill

Arbor Creek

12 Oaks

Forest Springs

Target, etc.

Oak Hall

Downtown
Holly Springs

LFG Collection and Control System

Metrics (to meet or, in most cases, exceed industry standards)

- LFG System Runtime/Downtime
- Average LFG Methane Content
- Average LFG Recovery (Flow) Rate
- LFG System Efficiency/Wellfield Coverage

Odor Neutralizing System & Landfill Surface Observations

Metrics (to meet or, in most cases, exceed industry standards)

- Quantity of Neutralizing/Masking Product
- Consumed Cover Integrity
- Working Face Dimensions and Cover Practices
- Equipment Runtime

Odor/Air Monitoring

Metrics (to meet or, in most cases, exceed industry standards)

- Surface Emissions Monitoring
- LFG Constituent Monitoring
- Odor Investigations

Other Interesting Data



WETTEST YEARS ON RECORD			RDU
1	59.10"	1996	
2	58.52"	2018	
3	55.19"	2020	
4	54.59"	2015	
5	54.50"	2014	
6	54.19"	1989	

Rain Data

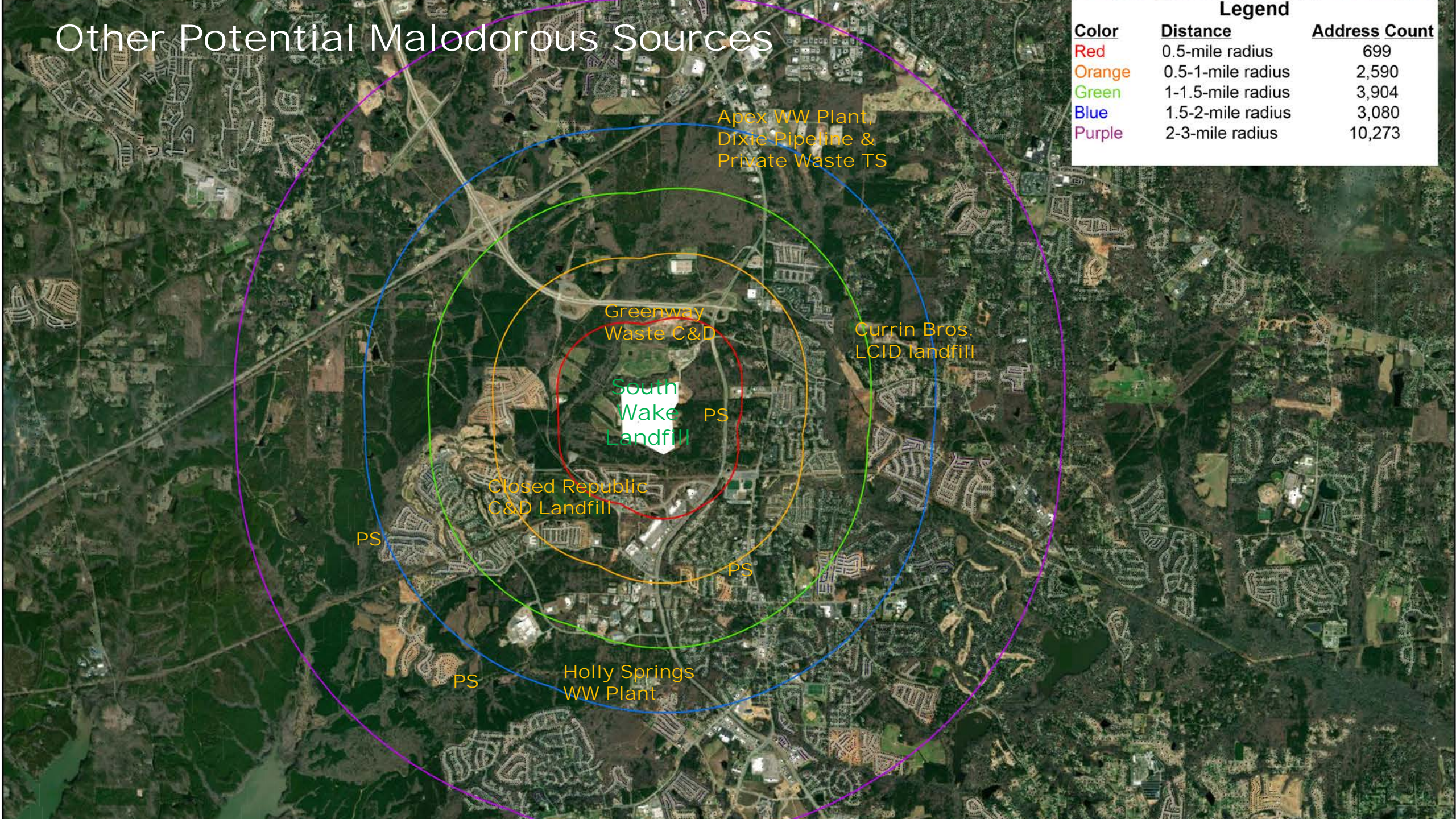
- WRAL reports 2 of the top 3 wettest years are 2018 and 2020
- Rain impacts many issues at a landfill – increased LFG production, ability to cover, improvement project delays, etc.

Odor Report Statistics

- 75% of reports evaluated “potentially from SWLF”
- 25% of reports evaluated “most likely not from SWLF”

Other Potential Malodorous Sources

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A stylized, semi-transparent map of Wake County is centered in the background of the slide. The map is a light blue color, matching the background, and shows the county's irregular shape. The text "Questions and Discussion" is overlaid on the map in a large, white, sans-serif font.

Questions and Discussion