



THE SCIENCE OF READYSM

ENVIRONMENTAL RESOURCES MANAGEMENT (ERM)

BELLA VISTA TRAFALGAR ROAD FIRE — PHASE I REMEDIAL ACTION

Daily Summary

Bella Vista, Arkansas

May 21, 2019

Project #111327

1.0 Introduction

Environmental Resources Management (ERM) requested that CTEH conduct air monitoring in the community surrounding the Trafalgar Road Fire located in Bella Vista, Arkansas during the Phase I Remedial Action. CTEH arrived on-site on May 15, 2019 and began air monitoring operations. Activities were comprised of real-time air monitoring.

This report summarizes air monitoring data collected from May 21, 2019 07:00 CDT to May 22, 2019 07:00 CDT.

2.0 Air Monitoring and Sampling Methods

CTEH developed and implemented an Air Monitoring and Sampling, Noise Monitoring, and Hazard Communication Plan (SAP) to document and quantify the release of fugitive emissions (if any) produced by the fire. All instrumentation was calibrated at least once per day or per manufacturer's recommendations. Target analytes were measured as carbon monoxide (CO), nitrogen dioxide (NO₂), 2.5-micron particulate matter (PM_{2.5}), sulfur dioxide (SO₂), and volatile organic compounds (VOCs) using handheld instruments such as RAE Systems MultiRAEs and TSI SidePak™ AM520 Aerosol Monitors.

Hand-held air monitoring consisted of roaming air monitoring in the surrounding community. Additionally, fixed monitoring locations were established for periodic visitation by field personnel to track trends in air quality (if any). All hand-held air monitoring was conducted in the breathing zone.

3.0 Air Monitoring Results

Figures 1 – 6 in **Attachment A** depicts the site location and hand-held monitoring locations for this reporting period.

Table 1 summarizes the results for hand-held air monitoring readings and **Table 2** summarizes hand-held air monitoring results by their respecting fixed real-time location (FRT).

Table 1: Community Monitoring Hand-Held Real-Time Air Monitoring Results

Location	Analyte	Instrument	# of Readings	# of Detections	Detection Range
Community Monitoring	CO	MultiRAE	212	0	< 1 ppm
	PM _{2.5}	AM520	207	207	0.001 – 0.12 mg/m ³
	PM _{2.5}	DustTrak	2	2	0.011 – 0.011 mg/m ³
	Sound Level	SLM	3	3	64.7 – 69 db(A)
	VOCs	MultiRAE	210	0	< 0.1 ppm

¹Maximum detections preceded by the "<" symbol are considered non-detections below the limit of detection (LoD) value to the right.

Table 2: Fixed Monitoring Location Air Monitoring Results

Location Code	Analyte	Instrument	# of Readings	# of Detections	Average of Detections	Detection Range
AS-005	PM _{2.5}	AM520	1	1	0.086 mg/m ³	0.086 mg/m ³
FRT-001	CO	MultiRAE	10	0	-	< 1 ppm
	PM _{2.5}	AM520	10	10	0.019 mg/m ³	0.006 - 0.12 mg/m ³
	VOCs	MultiRAE	8	0	-	< 0.1 ppm
FRT-002	CO	MultiRAE	10	0	-	< 1 ppm
	PM _{2.5}	AM520	10	10	0.006 mg/m ³	0.003 - 0.013 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm
FRT-003	CO	MultiRAE	9	0	-	< 1 ppm
	PM _{2.5}	AM520	9	9	0.008 mg/m ³	0.002 - 0.013 mg/m ³
	VOCs	MultiRAE	9	0	-	< 0.1 ppm
FRT-004	CO	MultiRAE	13	0	-	< 1 ppm
	PM _{2.5}	AM520	11	11	0.012 mg/m ³	0.003 - 0.036 mg/m ³
	VOCs	MultiRAE	13	0	-	< 0.1 ppm
FRT-005	CO	MultiRAE	11	0	-	< 1 ppm
	PM _{2.5}	AM520	10	10	0.02 mg/m ³	0.006 - 0.072 mg/m ³
	VOCs	MultiRAE	11	0	-	< 0.1 ppm
FRT-006	CO	MultiRAE	10	0	-	< 1 ppm
	PM _{2.5}	AM520	10	10	0.024 mg/m ³	0.002 - 0.048 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm
FRT-007	CO	MultiRAE	9	0	-	< 1 ppm
	PM _{2.5}	AM520	9	9	0.01 mg/m ³	0.005 - 0.027 mg/m ³
	VOCs	MultiRAE	8	0	-	< 0.1 ppm
FRT-008	CO	MultiRAE	9	0	-	< 1 ppm
	PM _{2.5}	AM520	9	9	0.012 mg/m ³	0.005 - 0.02 mg/m ³
	VOCs	MultiRAE	9	0	-	< 0.1 ppm

Location Code	Analyte	Instrument	# of Readings	# of Detections	Average of Detections	Detection Range
FRT-009	CO	MultiRAE	9	0	-	< 1 ppm
	PM2.5	AM520	9	9	0.017 mg/m ³	0.004 - 0.035 mg/m ³
	VOCs	MultiRAE	9	0	-	< 0.1 ppm
FRT-010	CO	MultiRAE	10	0	-	< 1 ppm
	PM2.5	AM520	10	10	0.009 mg/m ³	0.004 – 0.015 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm
FRT-011	CO	MultiRAE	6	0	-	< 1 ppm
	PM2.5	AM520	6	6	0.008 mg/m ³	0.006 - 0.012 mg/m ³
	VOCs	MultiRAE	6	0	-	< 0.1 ppm
FRT-012	CO	MultiRAE	7	0	-	< 1 ppm
	PM2.5	AM520	8	8	0.008 mg/m ³	0.006 - 0.011 mg/m ³
	VOCs	MultiRAE	9	0	-	< 0.1 ppm
FRT-013	CO	MultiRAE	10	0	-	< 1 ppm
	PM2.5	AM520	9	9	0.005 mg/m ³	0.001 - 0.009 mg/m ³
	VOCs	MultiRAE	8	0	-	< 0.1 ppm
FRT-014	CO	MultiRAE	7	0	-	< 1 ppm
	PM2.5	AM520	7	7	0.008 mg/m ³	0.006 - 0.012 mg/m ³
	VOCs	MultiRAE	7	0	-	< 0.1 ppm
FRT-015	CO	MultiRAE	10	0	-	< 1 ppm
	PM2.5	AM520	9	9	0.011 mg/m ³	0.004 - 0.034 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm

¹Maximum detections preceded by the "<" symbol are considered non-detections below the limit of detection (LoD) value to the right.

² Particulate matter averages are provided for additional context. Due to the uneven temporal distribution of particulate matter monitoring data at these locations, averages may be biased and are not directly comparable to National Ambient Air Quality Standards (NAAQS).

4.0 Weather Conditions

Attachment B contains a wind rose depicting wind speed and direction for this reporting period.



Attachment A

CTEH Air Sampling and Monitoring Locations



Figure 1: Incident Location
Bella Vista Refuse Fire

0 500 1,000 2,000 Feet



Project: 111327
Client: ERM
City: Bella Vista, AR
County: Benton

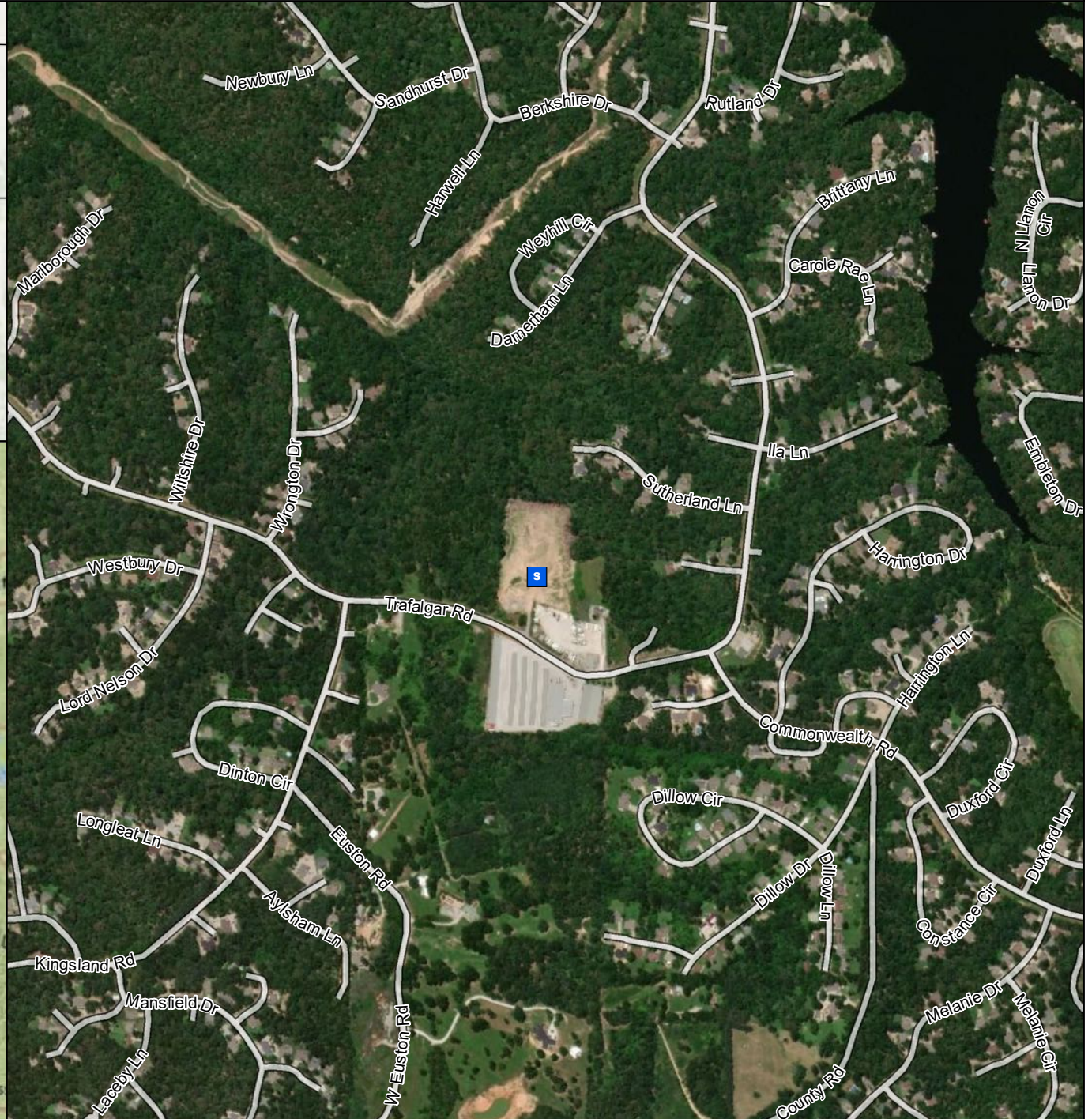
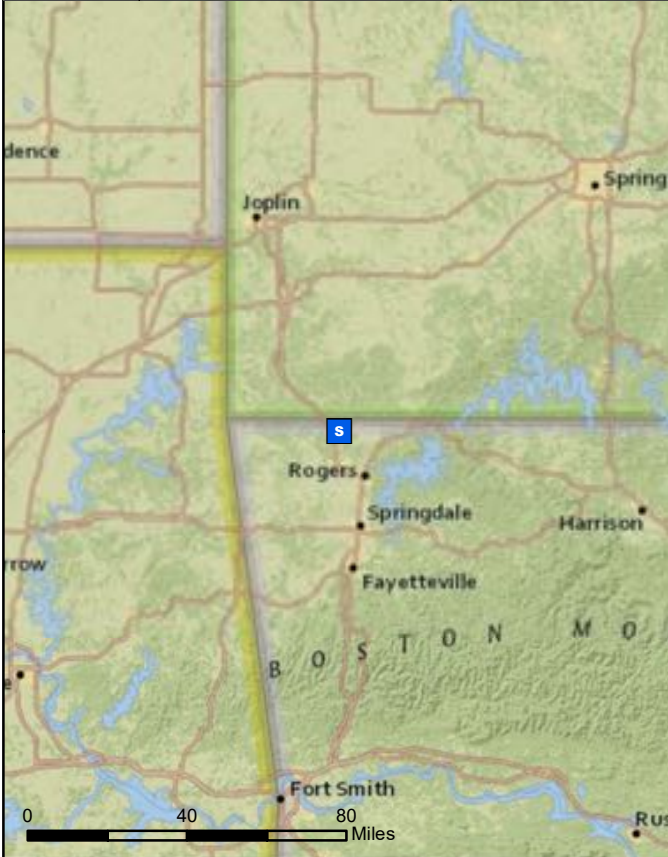
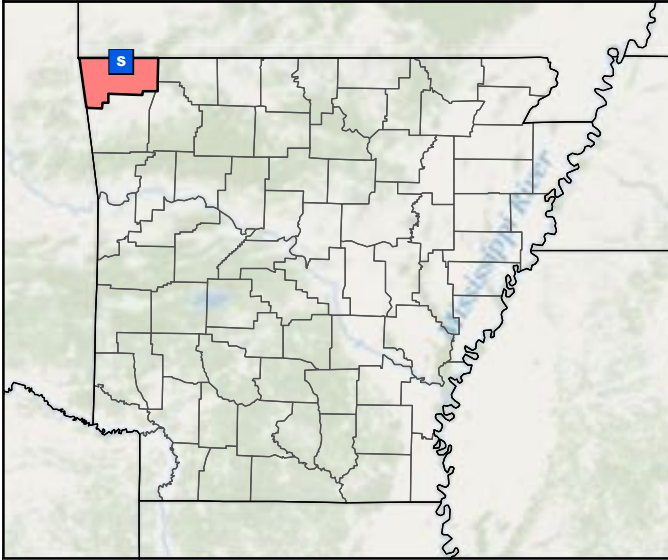




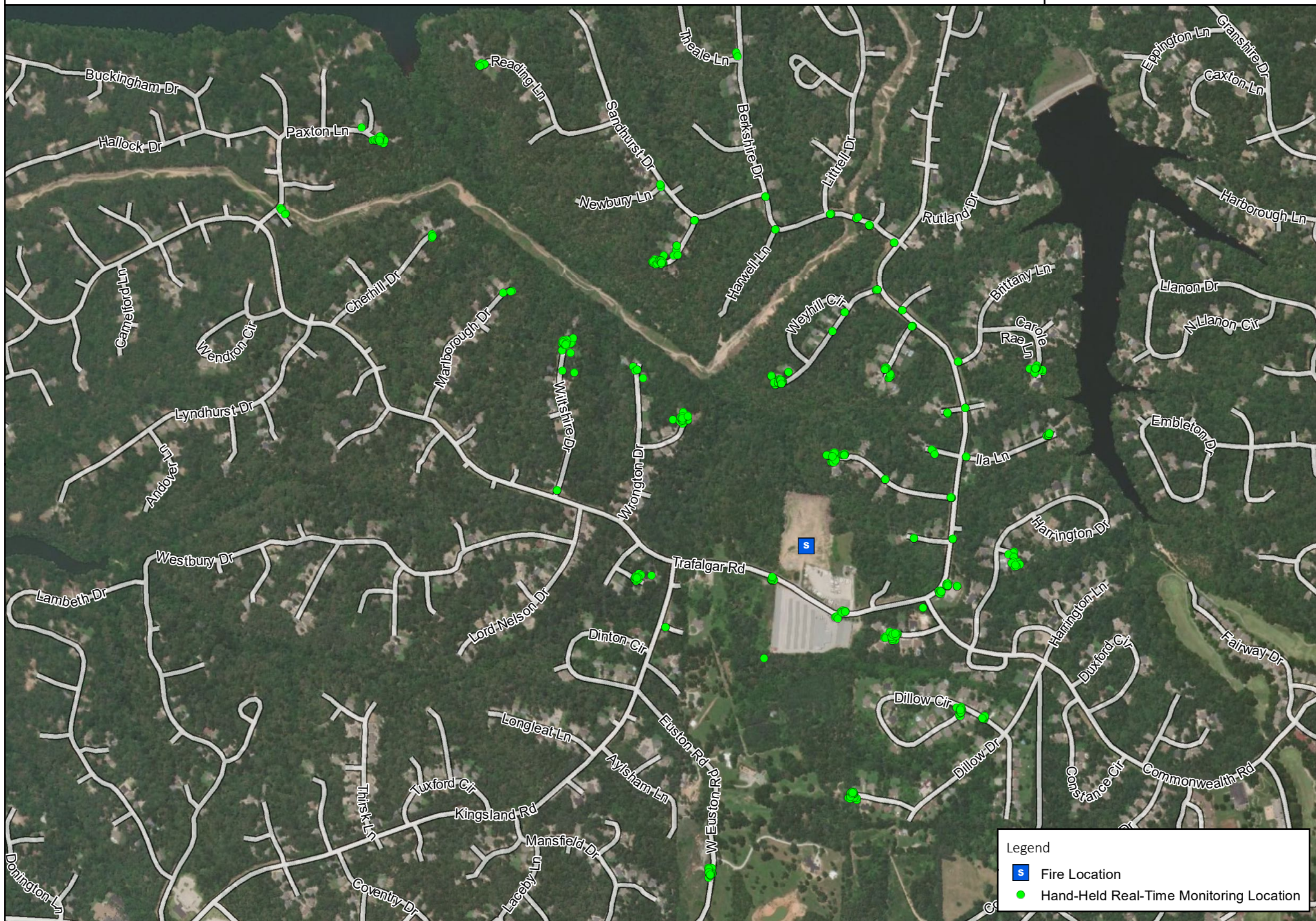
Figure 2: Hand-Held Real-Time Air Monitoring Locations

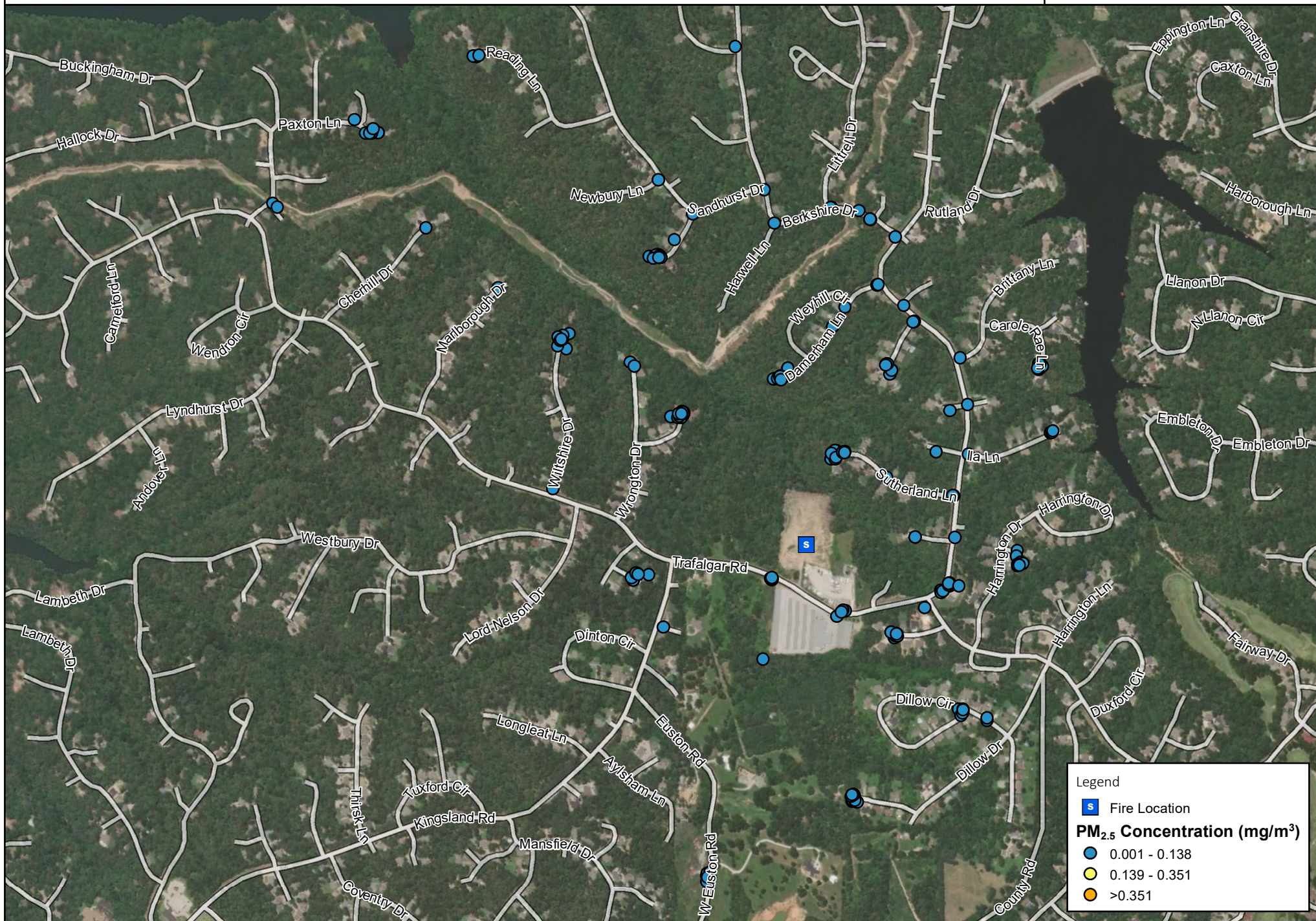
Bella Vista Trafalgar Road Fire

0 500 1,000 Feet



Project: 111327
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Legend

S Fire Location

PM_{2.5} Concentration (mg/m³)

- 0.001 - 0.138
- 0.139 - 0.351
- >0.351

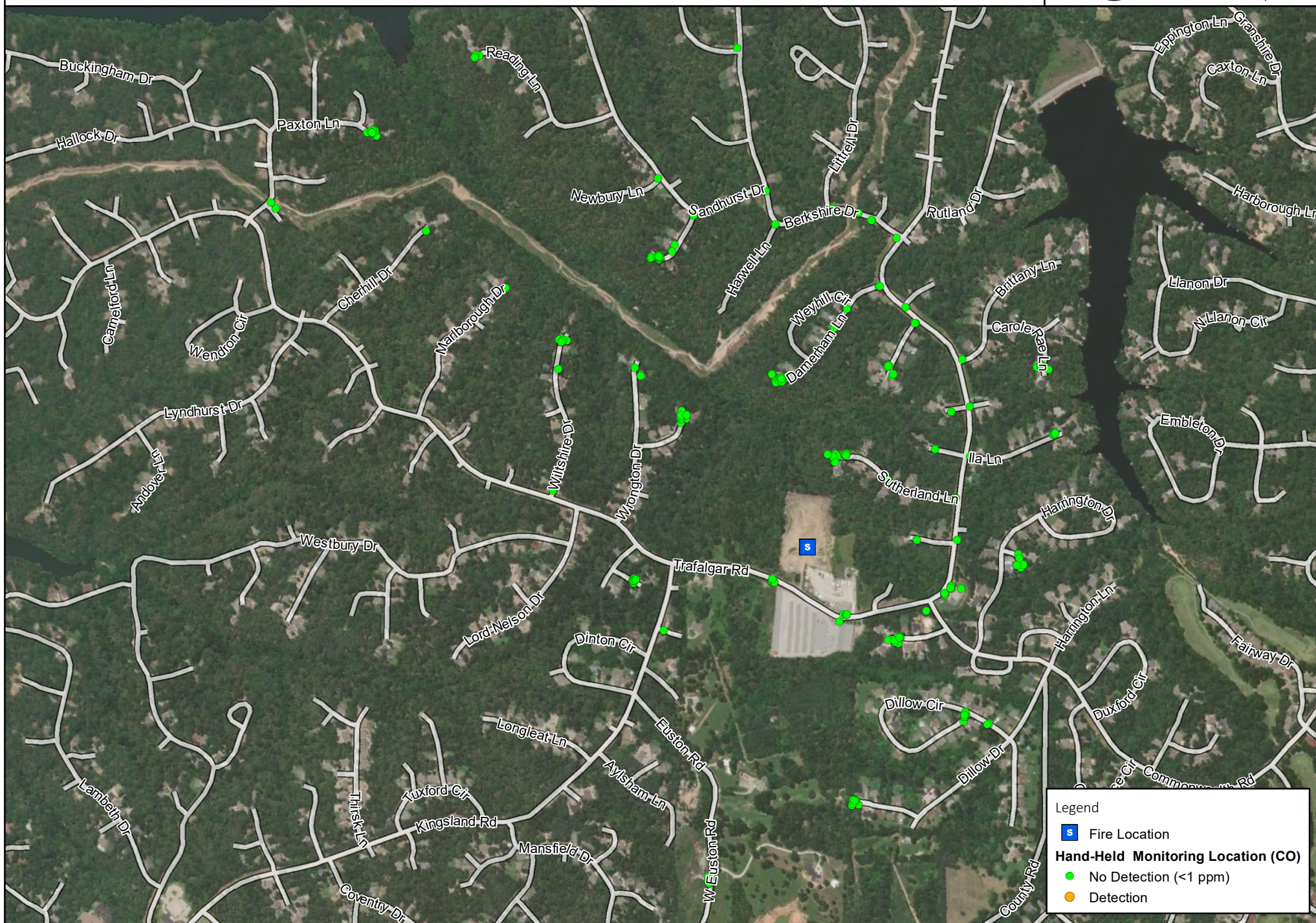




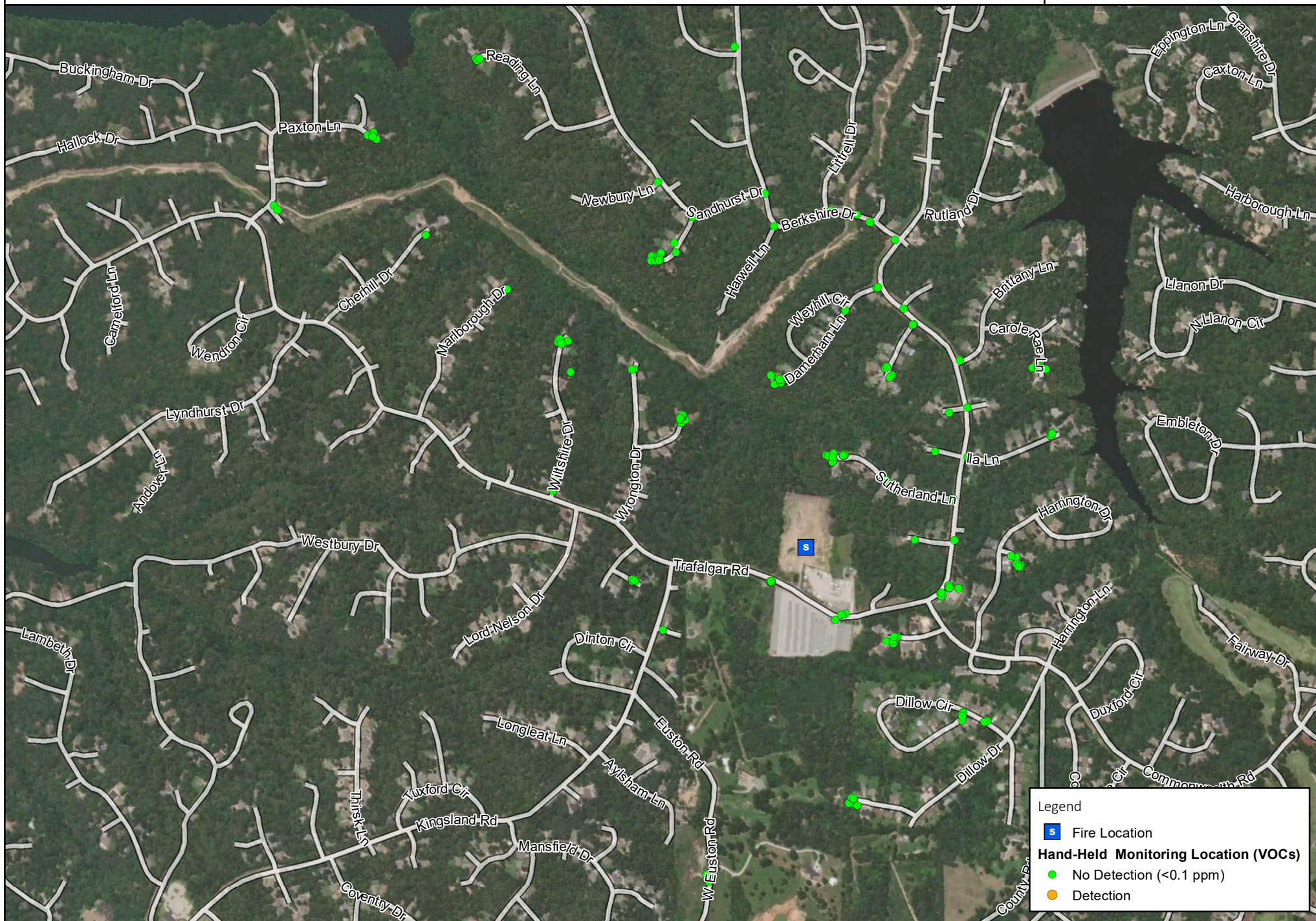
Figure 5: Real-Time Air Monitoring Locations (VOCs)

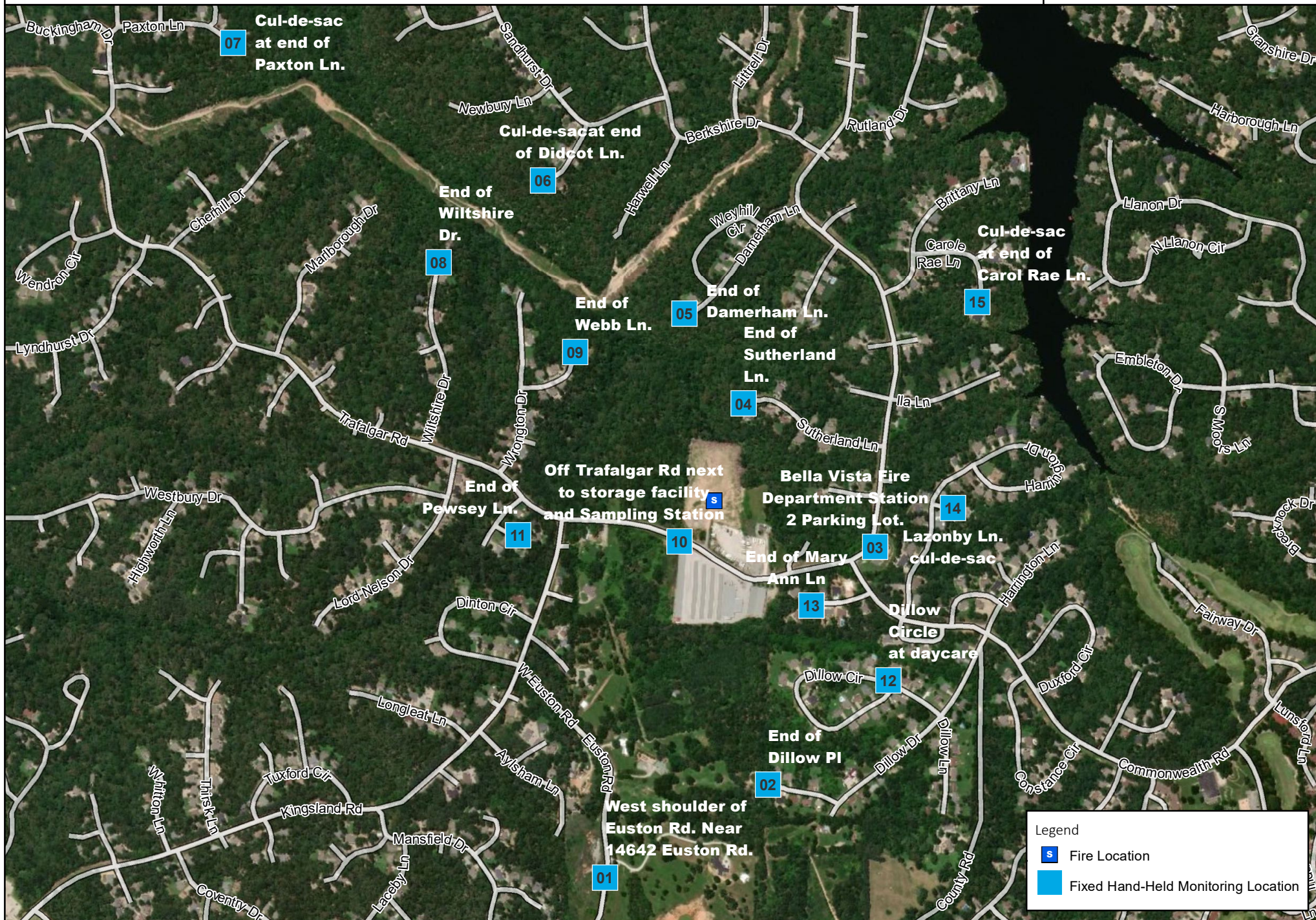
Bella Vista Trafalgar Road Fire

0 500 1,000 Feet



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Attachment B

Meteorological Conditions

Project #111327
May 21, 2019 07:00 - May 22, 2019 07:00

0.0 - 1.0 mph
1.1 - 2.0 mph
2.1 - 3.0 mph
3.1 - 4.0 mph
4.1 - 5.0 mph

