

The logo for CTEH, consisting of the letters 'CTEH' in a bold, white, sans-serif font with a registered trademark symbol, set against a dark blue rectangular background.

CTEH[®]

THE SCIENCE OF READYSM

**ENVIRONMENTAL RESOURCES
MANAGEMENT (ERM)
BELLA VISTA TRAFALGAR ROAD FIRE –
PHASE I REMEDIAL ACTION**

**Daily Summary
Bella Vista, Arkansas
May 24, 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 24, 2019 07:00 CDT to May 25, 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	234	0	< 1 ppm
	PM _{2.5}	AM520	235	235	0.001 – 0.059 mg/m ³
	Sound Level	SLM	4	4	68.9 – 69.7 db(A)
	VOCs	MultiRAE	235	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	CO	MultiRAE	6	0	-	< 1 ppm
	PM2.5	AM520	1	1	0.03 mg/m ³	0.03 mg/m ³
	VOCs	MultiRAE	3	0	-	< 0.1 ppm
FRT-001	CO	MultiRAE	10	0	-	< 1 ppm
	PM2.5	AM520	10	10	0.027 mg/m ³	0.007 - 0.04 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm
FRT-002	CO	MultiRAE	10	0	-	< 1 ppm
	PM2.5	AM520	10	10	0.024 mg/m ³	0.008 - 0.036 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm
FRT-003	CO	MultiRAE	10	0	-	< 1 ppm
	PM2.5	AM520	10	10	0.025 mg/m ³	0.003 - 0.036 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm
FRT-004	CO	MultiRAE	9	0	-	< 1 ppm
	PM2.5	AM520	9	9	0.025 mg/m ³	0.002 - 0.035 mg/m ³
	VOCs	MultiRAE	9	0	-	< 0.1 ppm
FRT-005	CO	MultiRAE	7	0	-	< 1 ppm
	PM2.5	AM520	12	12	0.026 mg/m ³	0.001 - 0.041 mg/m ³
	VOCs	MultiRAE	9	0	-	< 0.1 ppm
FRT-006	CO	MultiRAE	9	0	-	< 1 ppm
	PM2.5	AM520	9	9	0.024 mg/m ³	0.001 - 0.042 mg/m ³
	VOCs	MultiRAE	9	0	-	< 0.1 ppm
FRT-007	CO	MultiRAE	10	0	-	< 1 ppm
	PM2.5	AM520	10	10	0.025 mg/m ³	0.007 - 0.037 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm
FRT-008	CO	MultiRAE	8	0	-	< 1 ppm
	PM2.5	AM520	9	9	0.025 mg/m ³	0.008 - 0.036 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	13	0	-	< 1 ppm
	PM2.5	AM520	13	13	0.029 mg/m ³	0.01 - 0.051 mg/m ³
	VOCs	MultiRAE	12	0	-	< 0.1 ppm
FRT-010	CO	MultiRAE	10	0	-	< 1 ppm
	PM2.5	AM520	10	10	0.027 mg/m ³	0.009 – 0.039 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm
FRT-011	CO	MultiRAE	11	0	-	< 1 ppm
	PM2.5	AM520	10	10	0.025 mg/m ³	0.007 - 0.036 mg/m ³
	VOCs	MultiRAE	11	0	-	< 0.1 ppm
FRT-012	CO	MultiRAE	10	0	-	< 1 ppm
	PM2.5	AM520	10	10	0.025 mg/m ³	0.006 - 0.036 mg/m ³
	VOCs	MultiRAE	10	0	-	< 0.1 ppm
FRT-013	CO	MultiRAE	9	0	-	< 1 ppm
	PM2.5	AM520	9	9	0.03 mg/m ³	0.008 - 0.059 mg/m ³
	VOCs	MultiRAE	9	0	-	< 0.1 ppm
FRT-014	CO	MultiRAE	11	0	-	< 1 ppm
	PM2.5	AM520	11	11	0.026 mg/m ³	0.007 - 0.039 mg/m ³
	VOCs	MultiRAE	11	0	-	< 0.1 ppm
FRT-015	CO	MultiRAE	8	0	-	< 1 ppm
	PM2.5	AM520	9	9	0.023 mg/m ³	0.003 - 0.04 mg/m ³
	VOCs	MultiRAE	9	0	-	< 0.1 ppm

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

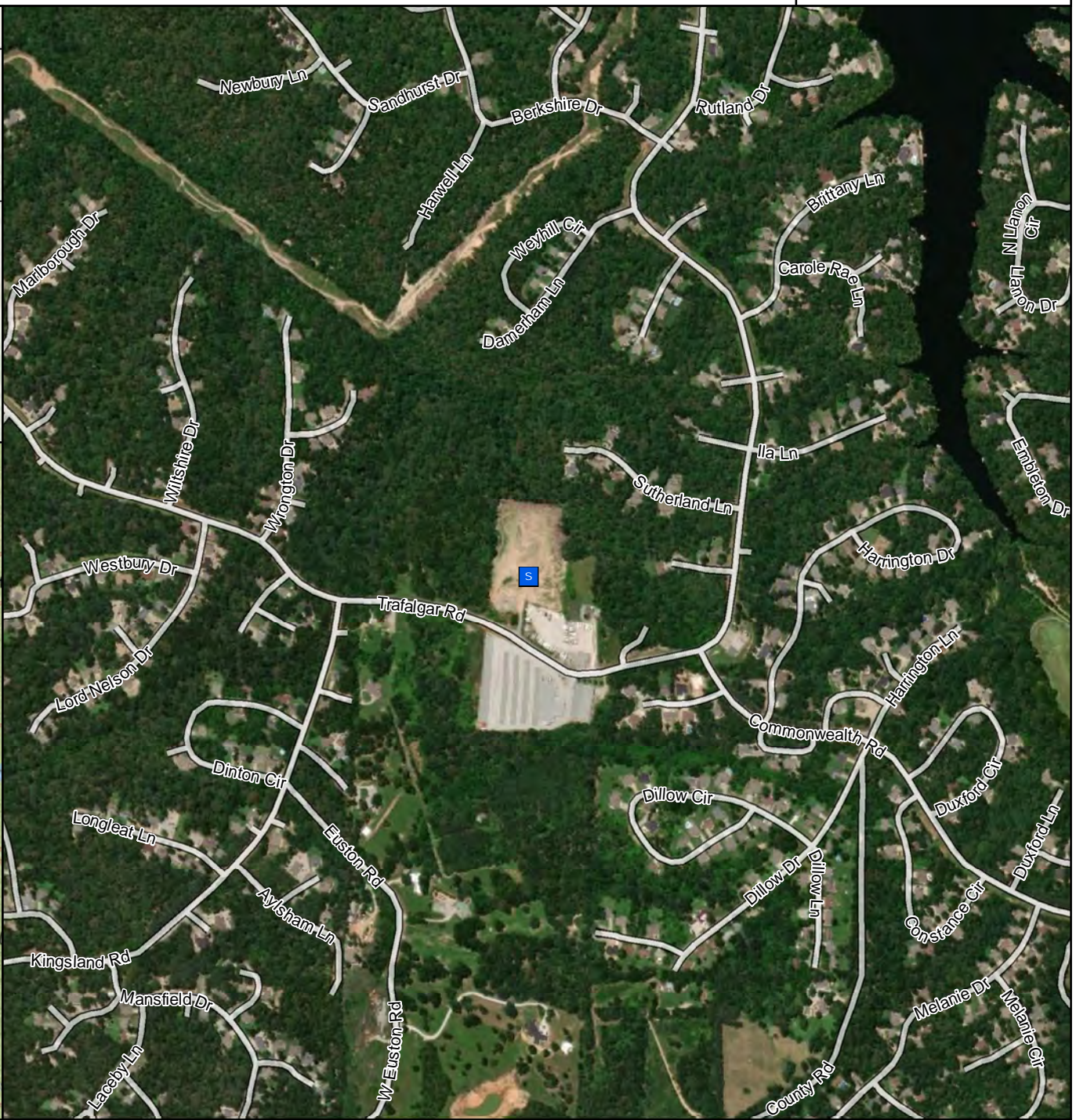
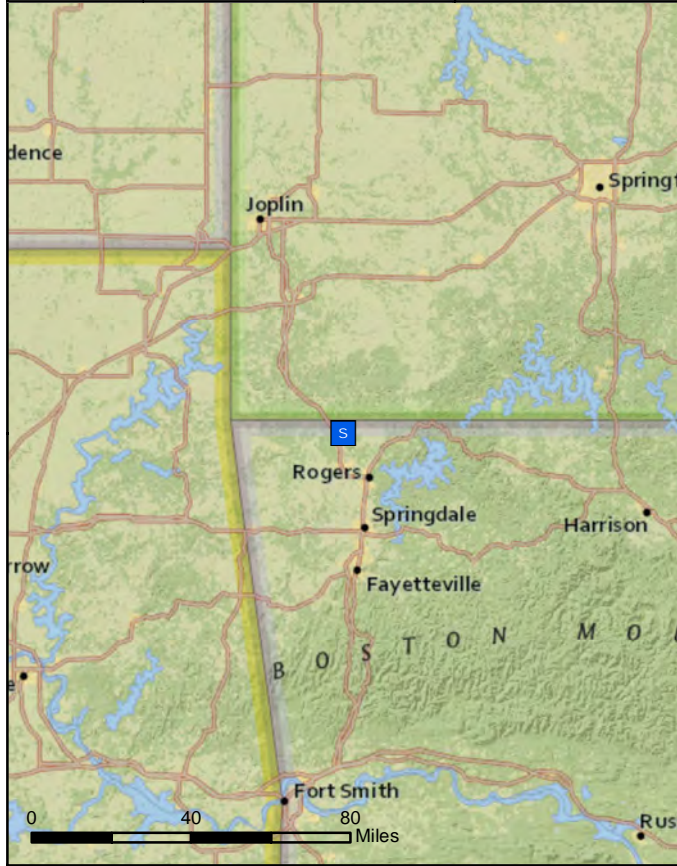
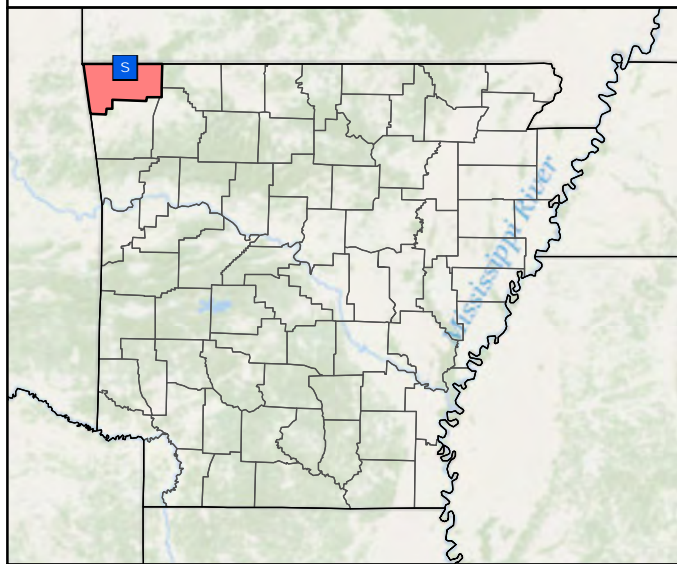
² Particulate matter averages are provided for additional context. Due to the uneven temporal distribution of particulate matter monitoring data at these locations, averages may be biased and are not directly comparable to National Ambient Air Quality Standards (NAAQS).

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



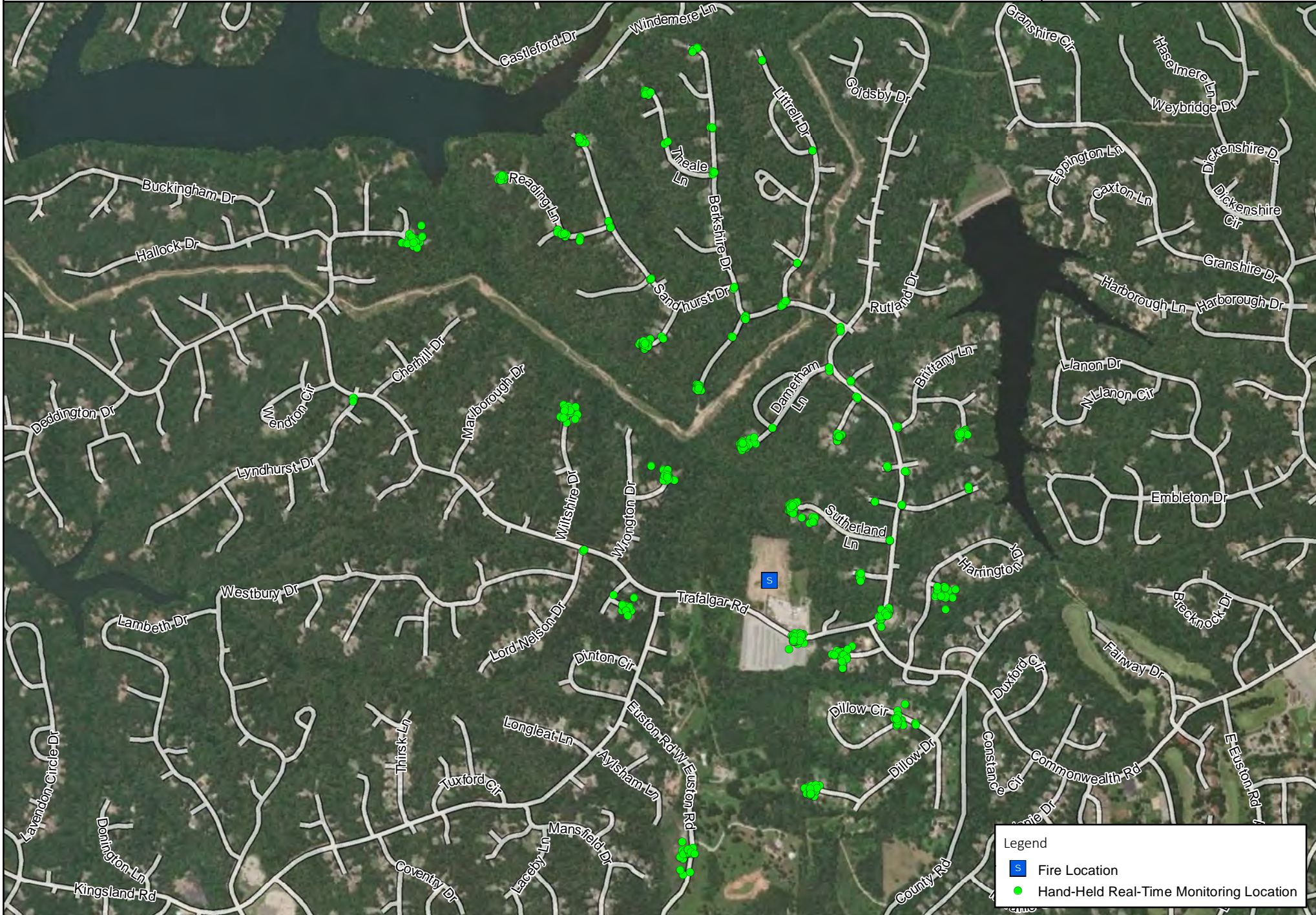
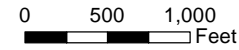


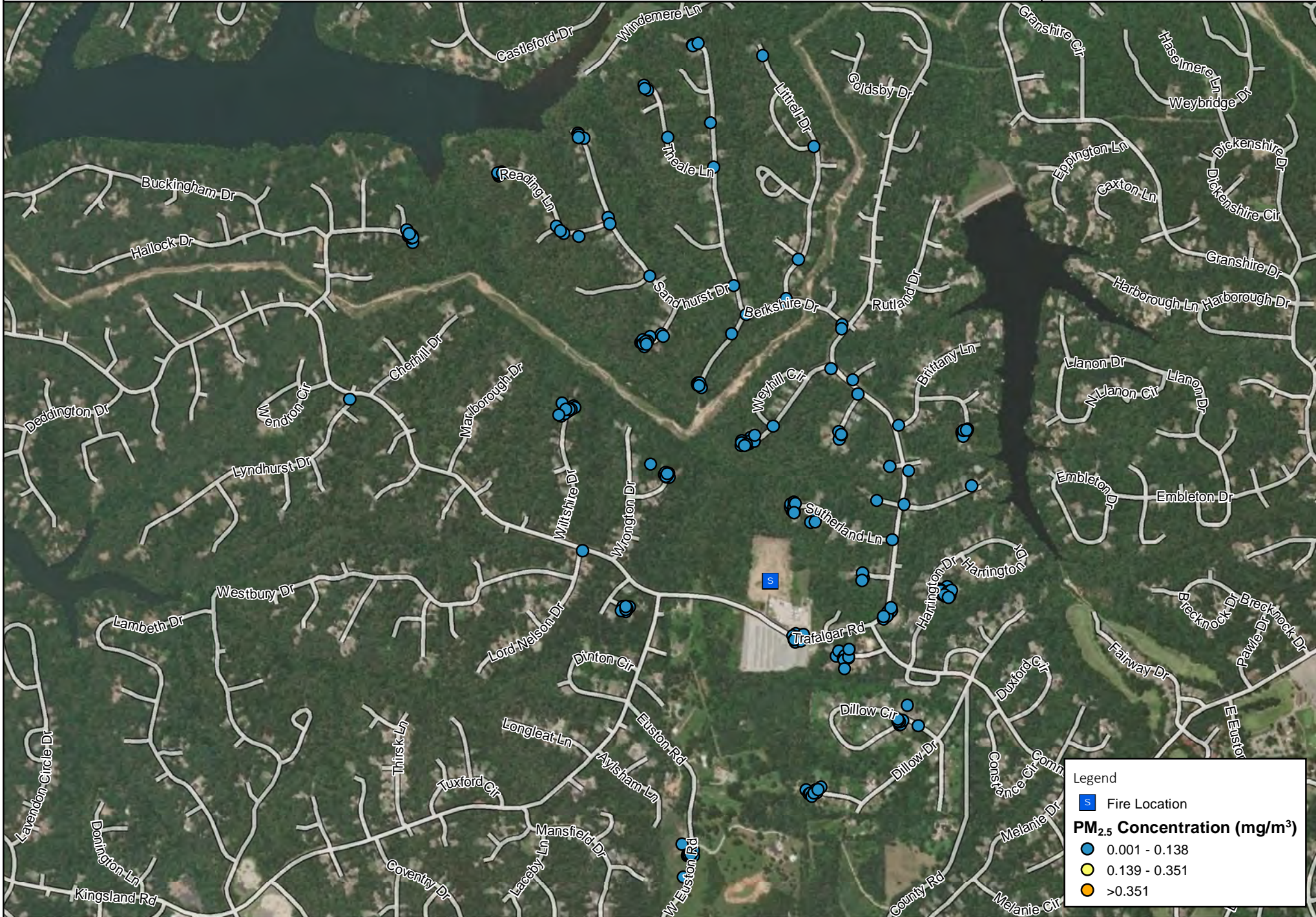


Figure 3: Real-Time Air Monitoring Locations (PM_{2.5})

Bella Vista Trafalgar Road Fire



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

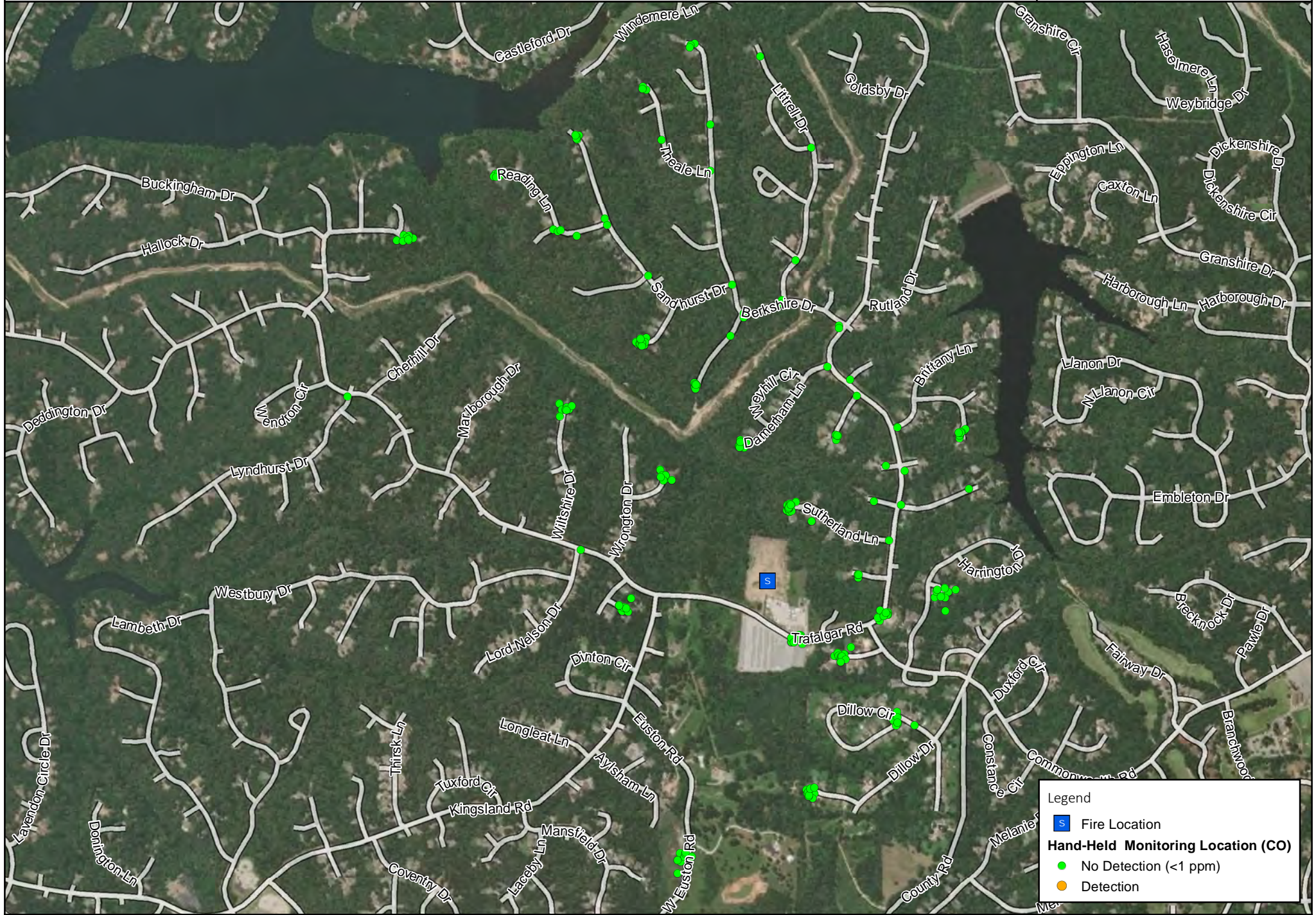


Legend

- Fire Location

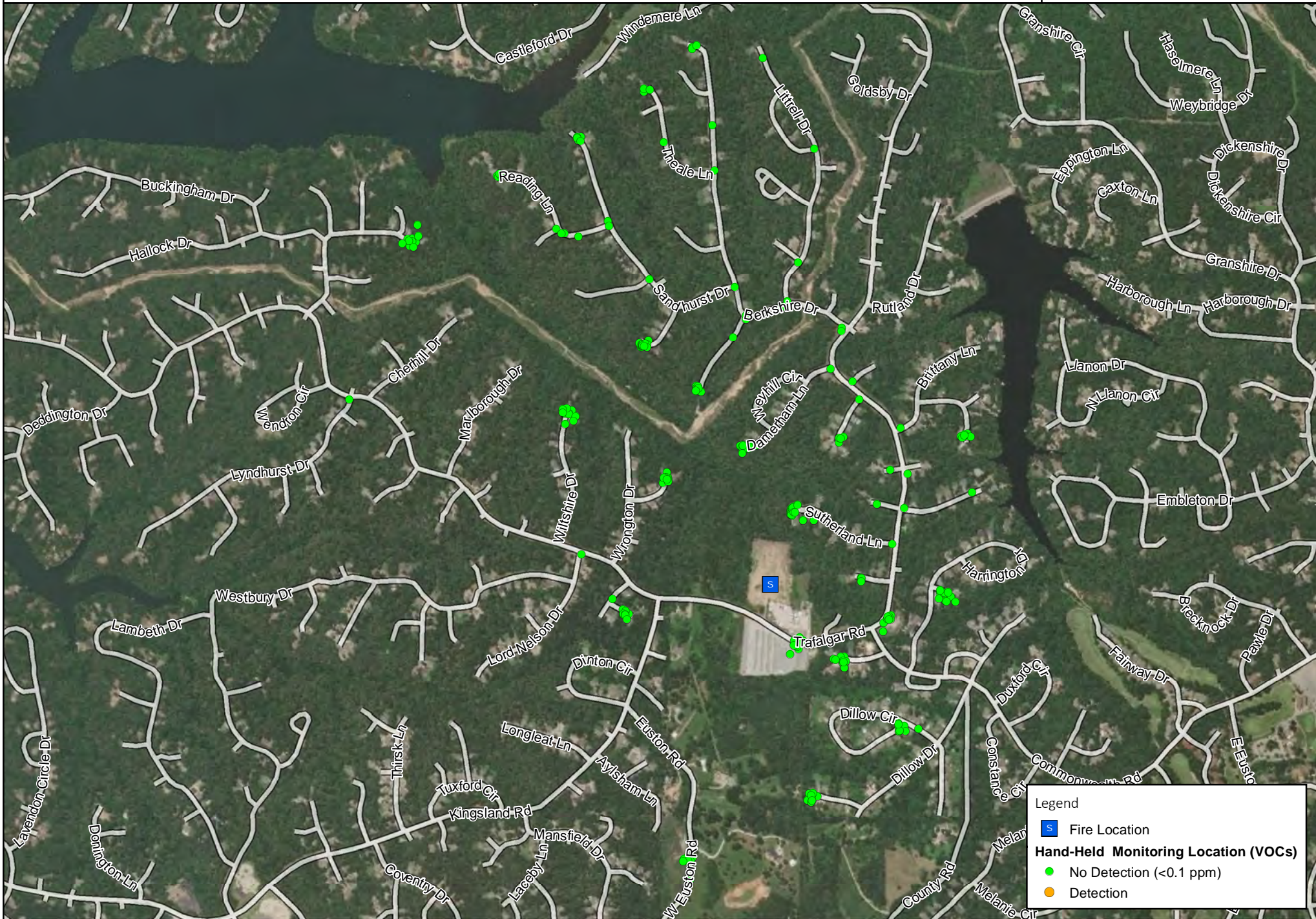
PM_{2.5} Concentration (mg/m³)

- 0.001 - 0.138
- 0.139 - 0.351
- >0.351



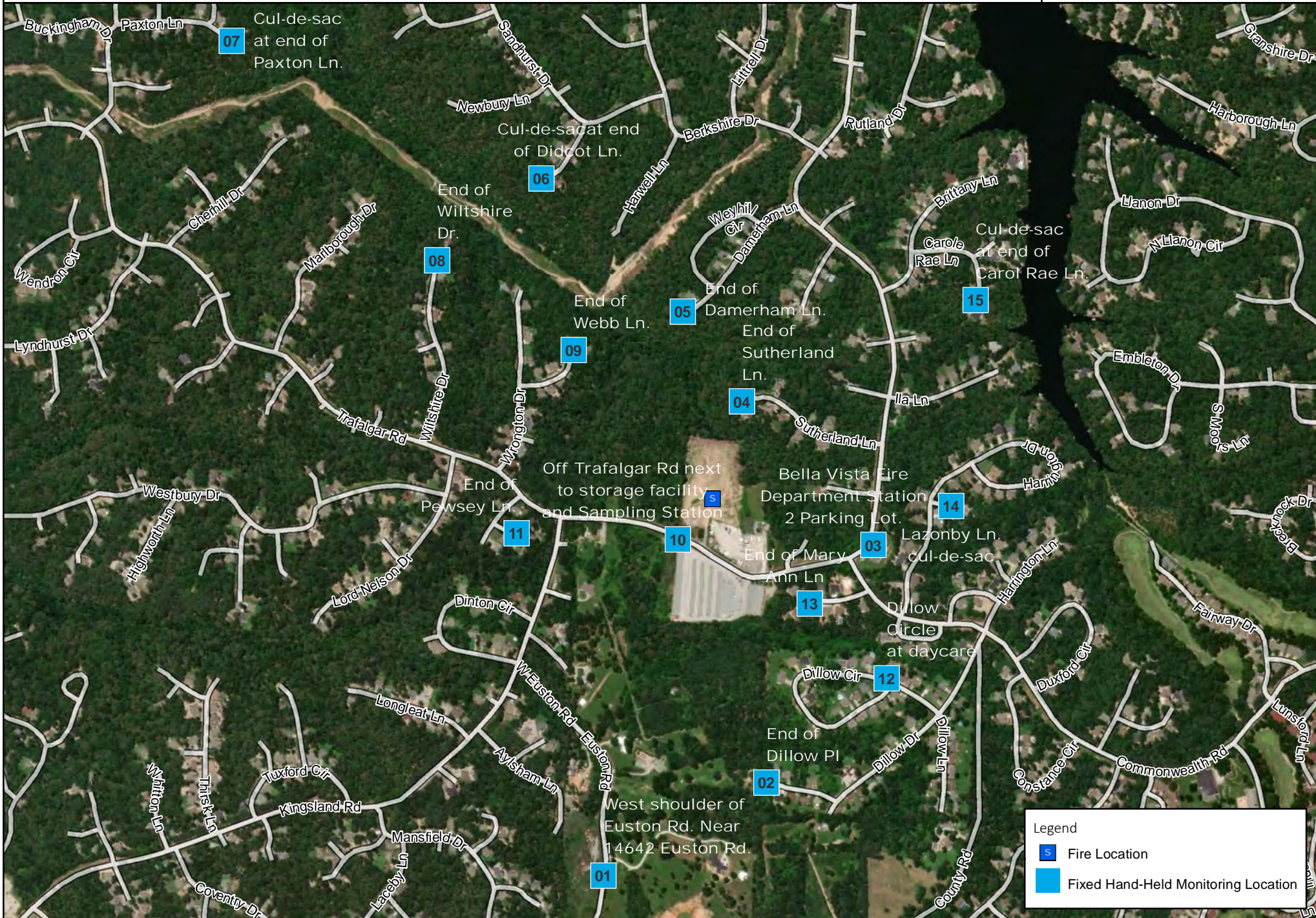
Legend

- Fire Location
- Hand-Held Monitoring Location (CO)**
 - No Detection (<1 ppm)
 - Detection



Legend

- Fire Location
- Hand-Held Monitoring Location (VOCs)**
 - No Detection (<0.1 ppm)
 - Detection





Attachment B

Meteorological Conditions

Project #111327
 May 24, 2019 07:00 to May 25, 2019 07:00
 N

- 2.2 - 4.7 mph
- 4.7 - 7.2 mph
- 7.2 - 9.7 mph
- 9.7 - 12.1 mph
- 12.1 - 14.6 mph

