

# BNCARE.ORG

BLOOMINGTON NORMAL COMMUNITY  
AIR RESEARCH AND EDUCATION

## 2025 Project Report

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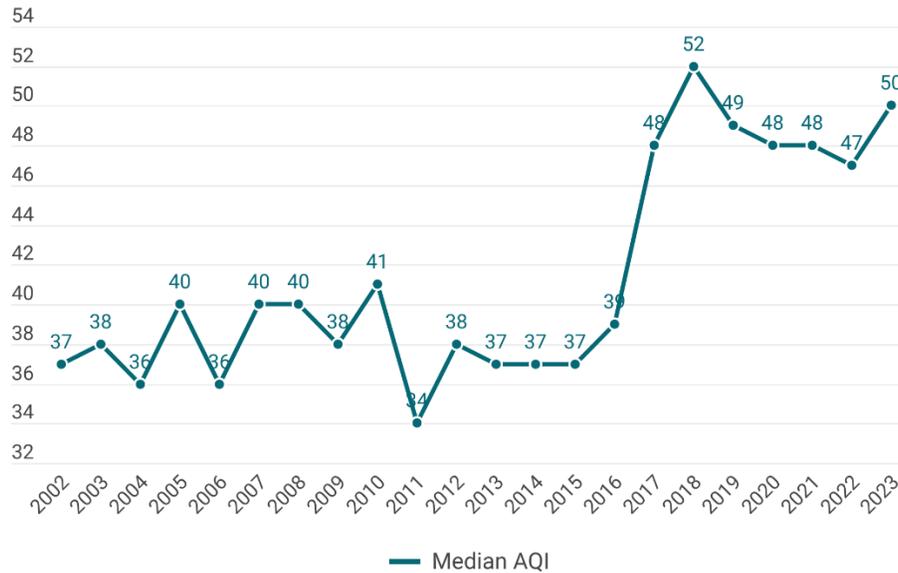


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## I. Historical Aspects of Air Quality in Bloomington-Normal

### McLean County Median AQI 2002-2023



**Figure 1.** The historical Air Quality Index (AQI) median from 2002-2023. An AQI less than 50 signals “good” air quality.

AQI Basics for Ozone and Particle Pollution			
Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

**Photo 2.** AQI Basics from the U.S. Environmental Protection Agency (EPA)

## II. Project Updates

BNCARE was a project that was established under the partnership of the EAC, NAACP, and ISU in which we wanted to establish a community air education program that measured the air quality in EJ regions of BN. With only one EPA grade air quality monitor located on ISU's campus we developed the project that would place three stationary monitors and also have portable air quality monitors to measure air quality in other parts of the community. Our monitors also measure four pollutants including VOCs, NO<sub>2</sub>, PM<sub>2.5</sub>, and Ozone. The EPA grant was submitted in March [2022] and after we were notified about our winning proposal, we officially ordered equipment in fall 2023 and began installation in fall spring 2024. Over the summer 2024, three stationary air quality monitors were installed at Fairview Park, a BNWRD site near Stark Construction, and on an adjacent property of Mt. Pisgah Baptist Church. The project officially launched on September 18, 2025.



**Photo 3.** Group picture at the project launch at the Mt. Pisgah stationary monitor on September 18, 2024

## Stationary Monitoring Sites



Fairview



BNWRD



Mt. Pisgah

Figure 4. Stationary monitoring sites in West Bloomington and North Normal.

### Program Objectives

- Establish monitors at three sites
- Launch BNCARE program to the community
- Establish opportunities for program workshops
- Link more community members to the website

### Quality Control Activities

- Co-location test
  - 72-hour co-location test with good results
- Monthly data calibration
  - Provided by the equipment vendor to minimize variations
- Regular equipment maintenance
  - Check air flowrates
  - Replace filters, sensors, and pumps
- Continuous data verification and validation
  - Alerts for high, low, and missing numbers
  - Site visits to check equipment
  - Comparison with U.S. EPA air quality monitor

**Programmatic Events**

<b>Type of Event</b>	<b>Age Group</b>	<b>Number Served (N)</b>	<b>Themes</b>
Camps, Summer Programs	Youth	~150	Hands-on approaches are essential
Courses and Student Clubs	Young Adults	26	Long-term partnerships and continued engagement are key
Invited Presentations	Adults and Seniors	38	Provide more historical aspects about air quality for discussion
Fairs, Markets, Community Events	General Population	150+	People enjoy actively learning about air quality; health impacts and links are generally unknown by general public

### III. Data from September 2024 – November 2025

#### 1) Air Quality Concerns Survey

- Two surveys were completed in September 2024 and aggregate data is below.

How concerned are you about the air quality in your community? (1 = not concerned, 10 = very concerned)	Are you interested in learning more about outdoor air quality in your community? (10 = very interested, 1 = not interested)	Are you interested in learning how to use an outdoor air quality monitor at no cost to you? (10 = very interested, 1 = not interested)	Are you interested in participating in a community-led outdoor air quality monitoring and educational program? (10 = very interested, 1 = not interested)
8.75	5	4	4

- *Qualitative Feedback included:*
  - Concerns about the Bloomington Regional Airport impact on air quality; and lack of knowledge about the severity and causes of air quality issues.
  - There was a question regarding how bad is the air quality, what are the main sources of pollution, historical charts on the AQI and how is air quality measured.

#### 2) Tree Corps Data

- 5,443 native seedling trees planted in McLean County in 2025
- 21 native saplings planted free of charge for homeowners in Bloomington and Normal environmental justice areas



### 3) Air Monitor Aggregate Data

Figure 1. PM2.5 Results-Daily Average Data from September 1, 2024 – November 30, 2025

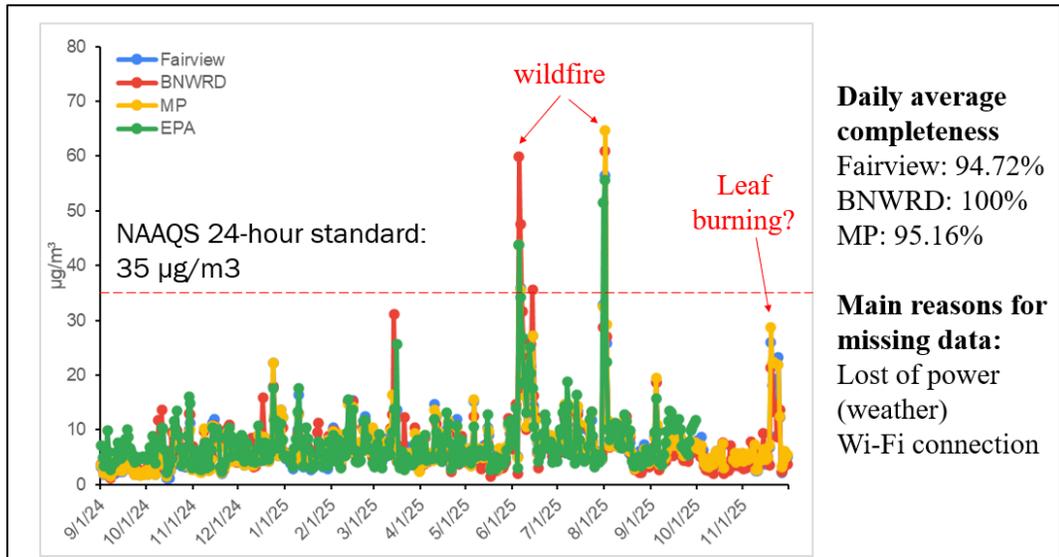


Figure 2. NO2 Results-Daily Average Data from September 1, 2024– November 30, 2025

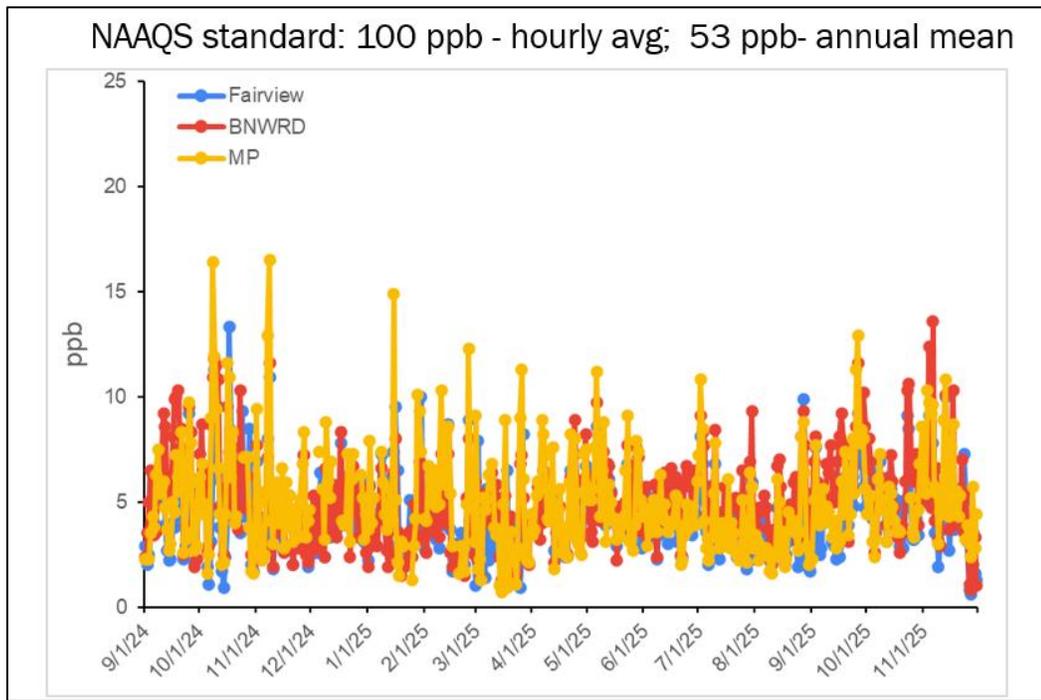


Figure 3. VOC Results-Daily Average Data from September 1, 2024– November 30, 2025

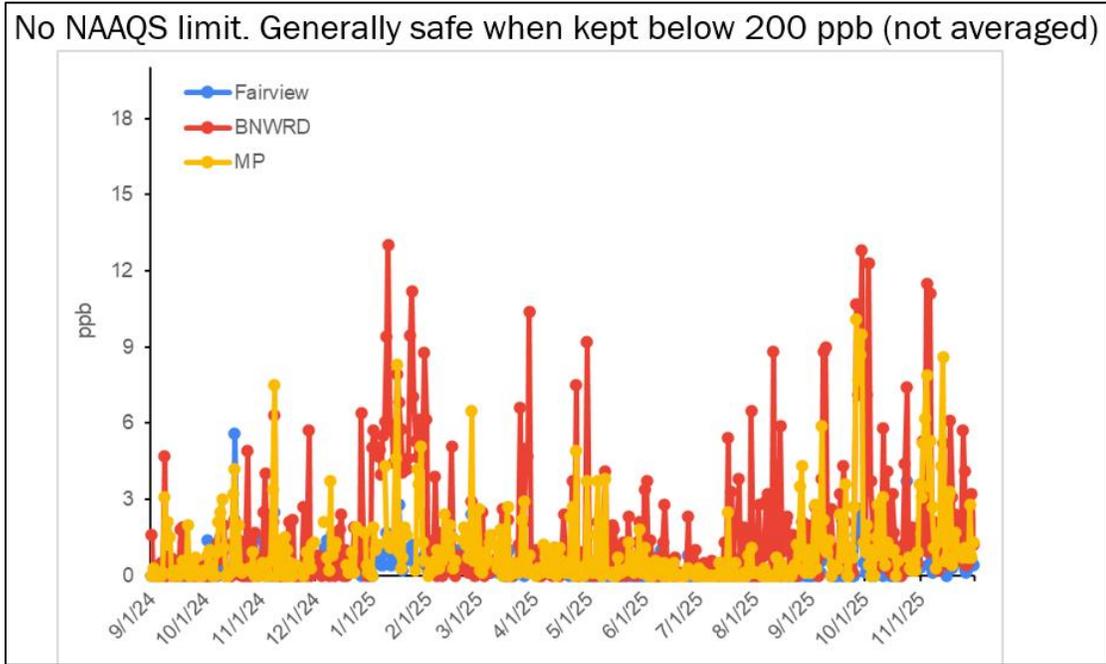
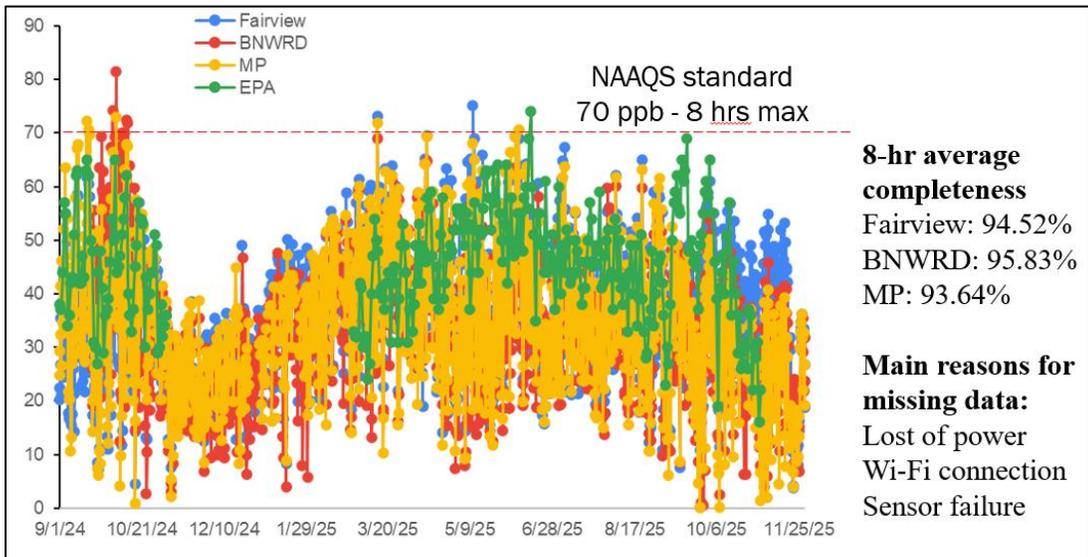


Figure 4. Ozone Results-8 Hour Average Data from September 1, 2024– November 30, 2025



## VI. Outreach Materials

### 1) Educational



## 2) Workshops

- July 7, 2025, 8 in attendance at the Ecology Action Center



## V. Future Directions

### 1. Expand Presentations

- Family event at the Bloomington Public Library (Date TBD)
- Plan for summer programming events
  - McLean County Fair, Summer camps, Unity Community Center, Boys and Girls Club, Farmer's Market, PrideFest, Juneteenth, NAACP Health Fair
- Asthma Awareness Month (May 2026)

### 2. Explore clinical emergency department data

- Variables include ED-coding focused on respiratory or cardiovascular conditions compared to the AQI

### 3. Prepare manuscripts for publication

- Data trends in Air Quality
- Educational Practices for Air Quality
- BNCARE Project Evaluation

### 4. Presentation at National Conference

- Two abstracts were submitted to the Air & Waste Management Association for June 2026 in Austin, Texas

### 5. Future Research Opportunities, Funding, and Site Placement

- Future Research
  - Agricultural impacts with air quality
- Future Air Monitoring Sites: Boys and Girls Club
- Funding Opportunities
  - Discussions are ongoing for ways in which to extend project funding which ends on July 31, 2026.

### 6. Coalition Building

The groups listed below will be invited, or have already indicated interest, in serving on the Clean Air Coalition for McLean County. Spring 2026 will involve meetings to unpack the current data and trends that are observed in the county to seek feedback and guidance for next steps.



## BNCARE Team Contacts

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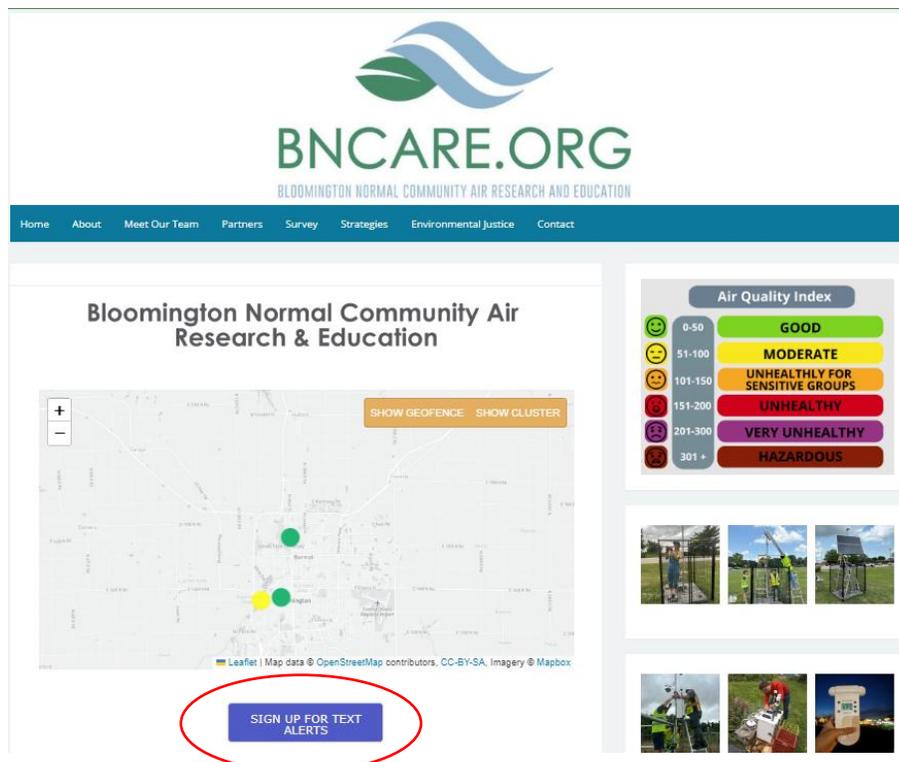
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## Ways to become Involved

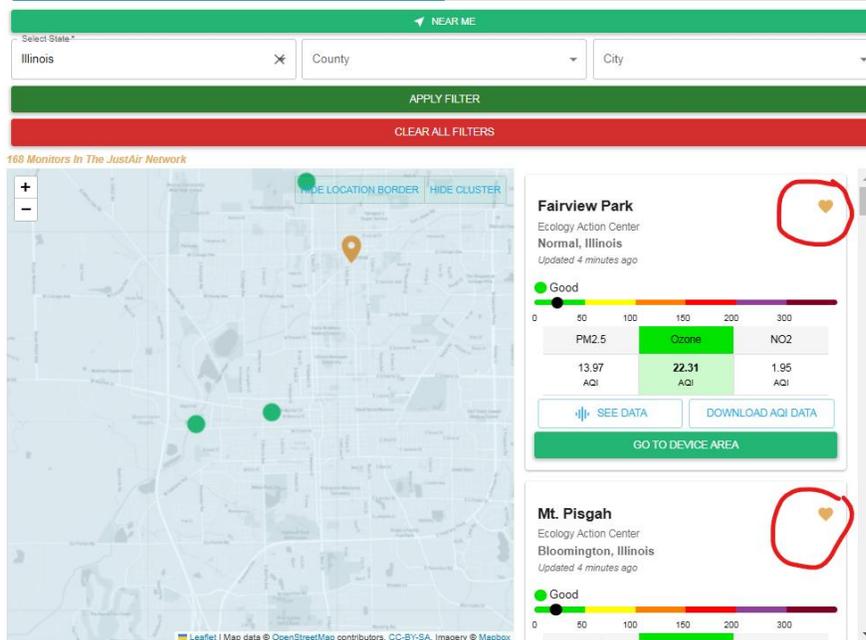
1. Share your air quality concerns by scanning the link below or clicking the link to access the survey.



2. Visit the BNCARE.org website to sign up for air quality alerts.

A screenshot of the BNCARE.org website. The header features the BNCARE.ORG logo and the tagline "BLOOMINGTON NORMAL COMMUNITY AIR RESEARCH AND EDUCATION". A navigation bar includes links for Home, About, Meet Our Team, Partners, Survey, Strategies, Environmental Justice, and Contact. The main content area is titled "Bloomington Normal Community Air Research & Education" and contains a map of the area with several colored markers. To the right of the map is an "Air Quality Index" legend with color-coded categories: GOOD (0-50), MODERATE (51-100), UNHEALTHY FOR SENSITIVE GROUPS (101-150), UNHEALTHY (151-200), VERY UNHEALTHY (201-300), and HAZARDOUS (301+). Below the map and legend, there are several small images showing air quality monitoring equipment. A blue button labeled "SIGN UP FOR TEXT ALERTS" is circled in red at the bottom of the page.

Sign up for alerts from the three air monitors (or any of your choosing) by clicking on the blue box that states, "Sign up for Text Alerts" when you are on the BNCARE.org website.



When you sign up for alerts, make sure you click on the 'heart' of the monitors you choose to follow. This will ensure you receive the proper alerts for those monitors.

3. Sign up for workshops related to asthma awareness and action planning
4. Request the portable monitors to measure air quality in real-time