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June 14, 2024

Mr. Brian Hutchins
Air Quality Bureau
Department of Natural Resources - Environmental Services Division
6200 Park Ave Suite 200
Des Moines, IA 50321

Re: Comments on the 2024 Air Monitoring Network Plan

Dear Mr. Hutchins,

The Iowa Environmental Council (IEC) offers the following comments on the Iowa Ambient Air 2024 Network Plan, noticed for public comment on May 16, 2024. These comments represent the views of the Iowa Environmental Council, an alliance of more than 100 organizations, over 500 individual members, and an at-large board of farmers, business owners, and conservationists. IEC works to build a safe, healthy environment and sustainable future for Iowa. Our members care about air and water quality across the state, and they hike, recreate, and enjoy the outdoors in Iowa and beyond.

I. Ambient Air Standards

Air pollution is a well-recognized threat to public health and environmental quality.¹ Two key criteria air pollutants can affect asthma: ozone (found in smog) and particle pollution (found in haze, smoke, and dust). When ozone and particle pollution are in the air, adults and children with asthma are more likely to have symptoms.² The NAAQS for 8-hour ozone is 70 ppb (parts per billion), with an annual PM_{2.5} standard of 9.0 µg/m³ (micrograms per cubic meter), and a 24-hour PM_{2.5} standard of 35 µg/m³.^{3,4} In 2023, Iowa air monitoring showed exceedance of the ozone standard 122 times and the 24-hour PM_{2.5} standard was exceeded 45 times (see Table 2).⁵

¹ Stern, *History of Air Pollution Legislation in the United States*; 32 J. AIR POLLUTION CONTROL ASS'N 44–61 (1982).

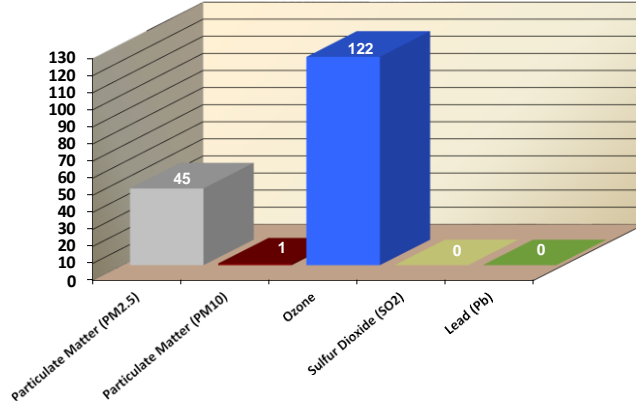
² <https://www.airnow.gov/sites/default/files/2018-03/asthma-flyer.pdf>

³ <https://www.epa.gov/ground-level-ozone-pollution/ozone-national-ambient-air-quality-standards-naaqs>

⁴ <https://www.epa.gov/pm-pollution/national-ambient-air-quality-standards-naaqs-pm>

⁵ https://www.iowadnr.gov/Portals/idnr/uploads/air/monitoring/NAAQS_Exceedances_2023.pdf

Table 2. Iowa NAAQS Exceedances, 2023
(Reported through December 8th)



The challenge in an air monitoring network is addressing “gaps in health protection that can occur for criteria pollutants and HAPs near strong local sources” because air monitoring is often insufficient.⁶ There are gaps nationwide and in Iowa between health protection and atmospheric research. Inadequate monitoring of emission, air quality, and health relationships can “result in inappropriate SIPs [State Implementation Plans], gaming, or paralysis by analysis.”⁷ Although states, in the SIP process, have more leeway in developing *monitoring*, a state must act to ensure that its monitoring plan is protective of public health—not to simply “ensure compliance” by failing to look closer at public health concerns.⁸

II. Air Monitor Locations and Asthma in Iowa

It is critical that Iowa specifically investigate, *to at least some extent*, the ambient air where peoples’ health may currently be particularly harmed by pollution. IEC used U.S. EPA’s Environmental Justice screening and mapping tool⁹ to identify areas of the state with high rates of asthma. On each area with high asthma rates, IEC superimposed the location of any current air monitor on the image and identified by a red circle (see Appendix A).

Each of the 13 identified communities contains at-risk populations with asthma rates higher than 80% of the population nationally. Four of the communities have at-risk populations with asthma rates higher than 95% of the population nationally, with at-risk populations in Ames at 99%, Iowa City at 96%, Cedar Falls at 98% and Waterloo at 97%.

Of the 13 communities with at-risk populations, five (Ames, Burlington, Dubuque, Fort Dodge and Ottumwa) do not have *any* monitors for either Ozone or PM 2.5. Only Cedar Rapids, Davenport and Des Moines have both Ozone and PM 2.5 monitors. However, as shown in Table 1 below, only Davenport has Ozone and PM 2.5 monitors located in an area with an at-risk population experiencing asthma at rates greater than 80% of the population nationally.

⁶ Chow et al., *Critical Review Discussion: Will the Circle Be Unbroken: A History of the U.S. National Ambient Air Quality Standards*, 57 J. AIR & WASTE MANAG. ASS’N. 1151, 1160 (2007).

⁷ *Id.* at 1159.

⁸ Title 40 – Protection of Environment - Code of Federal Regulation, 40 C.F.R. pt. 58, Appendix D at 1.1.1.

⁹ U.S. EPA, “EJScreen: EPA’s Environmental Justice Screening and Mapping Tool (Version 2.2),” available at <https://ejscreen.epa.gov/mapper/> (last visited June 5, 2024).

Table 1. Correlation of Iowa Ambient Air Monitoring Sites and High Asthma Rates

City	Site	Address	County	Ozone Monitor	PM 2.5 Monitor	Ozone Monitor in >80%	PM 2.5 Monitor in >80%
Ames				No	No	No	No
Burlington				No	No	No	No
Cedar Rapids	Public Health	500 11th St. NW	Linn	Yes	Yes	No	No
Council Bluffs	Franklin School	3130 C Ave.	Pottawattamie	No	Yes	No	No
Davenport	Jefferson School	10th St. & Vine St.	Scott	Yes	Yes	Yes	Yes
Davenport	Hayes School	622 South Concord St	Scott	No	Yes	No	No
Des Moines	Health Dept.	1907 Carpenter	Polk	Yes	Yes	No	No
Des Moines	Public Works	5885 NE 14th	Polk	No	Yes	No	No
Dubuque				No	No	No	No
Fort Dodge				No	No	No	No
Iowa City	Hoover School	2200 East Court	Johnson	No	Yes	No	No
Ottumwa				No	No	No	No
Sheldahl	Southern Crossroads	15795 NW 58th St	Polk	Yes	No	No	No
Sioux City	Irving School	901 Floyd Blvd.	Woodbury	No	Yes	No	No
Waterloo/ Cedar Falls	Water Tower	Vine St. & Steely	Black Hawk	No	Yes	No	Yes

Current monitoring does not necessarily mean that Ozone levels are within safe levels where adverse health impacts are occurring. The ozone and PM 2.5 monitors are clearly not in locations with the most significant rates of asthma, and are not adequately capturing the public health impacts on at-risk populations.

III. Air Monitoring Network

The Clean Air Act requires every state to establish a network of air monitoring stations for criteria pollutants, using criteria set by EPA for their location and operation. The monitoring stations in this network are called the State and Local Air Monitoring Stations (SLAMS). State and local agencies use another type of monitor, the Special Purpose Monitor (SPM), to fulfill very specific or short-term monitoring goals.¹⁰

Iowa has a continuing duty to ensure that its air monitoring is consistent with statutory and regulatory obligations. As a part of those obligations, Iowa must complete both network

¹⁰ 40 C.F.R. § 58.20.

assessments¹¹ and network plans.¹² Those processes detail monitoring purpose and compliance with minimum monitoring requirements. Minimum monitoring requirements rely on population, measured concentrations, and air pollution emissions data.¹³ Critically, they establish that Iowa must place monitors to protect at-risk communities.

In the planning and assessment process, Iowa must design a monitoring system that enables protection of public health: the network “must be designed with a variety of types of monitoring sites.”¹⁴ That variety must include sites that are designed to capture the highest concentration of a pollutant at micro to neighborhood scale. Iowa may also define other sites as appropriate, for example, sites that detail the public health impacts or lack thereof of pollutant exposure.¹⁵

Iowa must also develop monitoring to address at-risk populations—such as populations that experience high levels of environmentally-related disease like asthma. Iowa must develop sites in at-risk communities to monitor fine particulate matter. In network plans, Iowa must submit to the EPA by the 2025 planning year a “PM2.5 network design to address at-risk communities.”¹⁶ Moreover, Appendix D is clear that “[a]t least one monitoring station is to be sited at neighborhood or larger scale in an area of expected maximum concentration.”¹⁷ The neighborhood scale is most important scale. In areas with “additional required SLAMS, a monitoring station is to be sited in an at-risk community with poor air quality, particularly where there are anticipated effects from sources in the area.”¹⁸

Iowa’s network assessment must ensure that monitoring provides an adequate assessment of whether and how air quality impacts susceptible populations. “The network assessment must consider the ability of existing and proposed sites to support air quality characterization for areas with relatively high populations of susceptible individuals (e.g., *children with asthma*) and other at-risk populations.”¹⁹

Iowa law does not constrain Iowa’s ability to execute a monitoring scheme that effectively complies with the purpose and black-letter requirements of federal regulation. The DNR Director is to “determine by field studies and sampling the quality of atmosphere and the degree of air pollution” and both “conduct and encourage” research on air pollution and its *causes, effects, abatement, control, and prevention.*²⁰ Likewise, the Environmental Protection Commission has the broad authority to “adopt, amend, or repeal ambient air quality standards for the atmosphere of this state on the basis of providing air quality necessary to protect the public health and welfare” and take other measures “as necessary to assure attainment and maintenance of ambient

¹¹ 40 C.F.R. § 58.10(d).

¹² 40 C.F.R. § 58.10(a) (1).

¹³ 40 C.F.R. pt. 58, Appendix D.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ 40 C.F.R. 58.10(b) (14).

¹⁷ Appendix D to Part 58, Title 40 at 4.7.1(b).

¹⁸ *Id.*

¹⁹ 40 C.F.R. § 58.10(d) (emphasis added).

²⁰ IOWA CODE § 455B.134 (4–5) (2024) (emphasis added).

air quality standards.”²¹ While SF 2370 modifies, in part, the duties of Iowa air quality professionals, it does not meaningfully change the simple requirements and options under Iowa law.²² Ensuring compliance with federal air quality standards is a key duty. In fact, the duty to protect the public health is paramount not only federal law but also Iowa law.

IV. Recommendations

At-risk, susceptible populations often cluster together and tend to be closest to sources of pollution. As documented using the Environmental Justice screening tool, Iowa has areas of the state with at-risk populations experiencing extremely high asthma rates. Federal regulations require the network assessment to “consider the ability of existing and proposed sites to support air quality characterization for areas with relatively high populations of susceptible individuals (e.g., *children with asthma*) and other at-risk populations.”²³ Numerous communities in Iowa have susceptible populations, but not air quality monitoring stations. As such, Iowa needs to expand the ozone and PM 2.5 monitoring network to address these at-risk populations.

IEC requests that the SLAMS network be expanded to include ozone and PM 2.5 monitors in all of the areas identified with asthma rates higher than 80% of the national population. In the alternative, SPM ozone and PM 2.5 monitors need to be located in these areas with high rates of asthma.

Thank you for the opportunity to comment. If you have questions or we can clarify these comments further, please feel free to contact us.

Sincerely,

/s/ Steve Guyer

Steve Guyer
Energy Policy Counsel
Iowa Environmental Council

/s/ Michael Schmidt

Michael Schmidt
Staff Attorney
Iowa Environmental Council

/s/ Nathan Spindler-Krage

Nathan Spindler-Krage
Law Clerk
Iowa Environmental Council

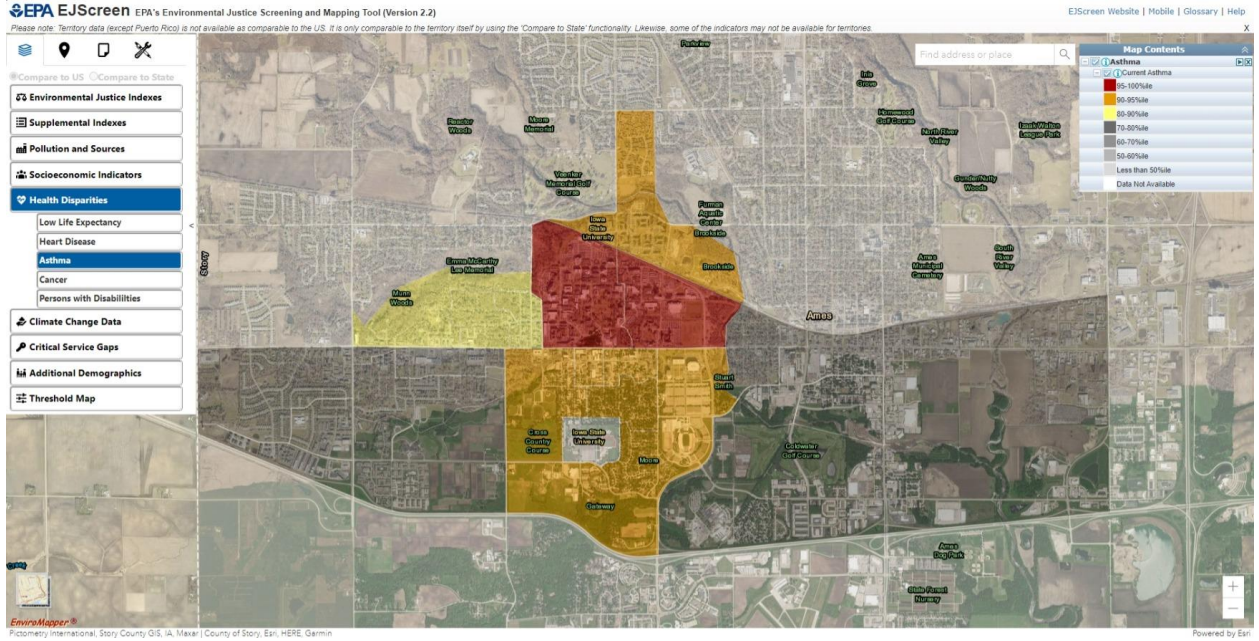
²¹ IOWA CODE § 455B.133 (1–3) (2024).

²² See Iowa SF 2370 (May 17, 2024), <https://www.legis.iowa.gov/legislation/BillBook?ga=90&ba=SF2370> (establishing that the department is not required to use air dispersion modeling for making findings for a minor source or minor modification of a major stationary source unless required by law).

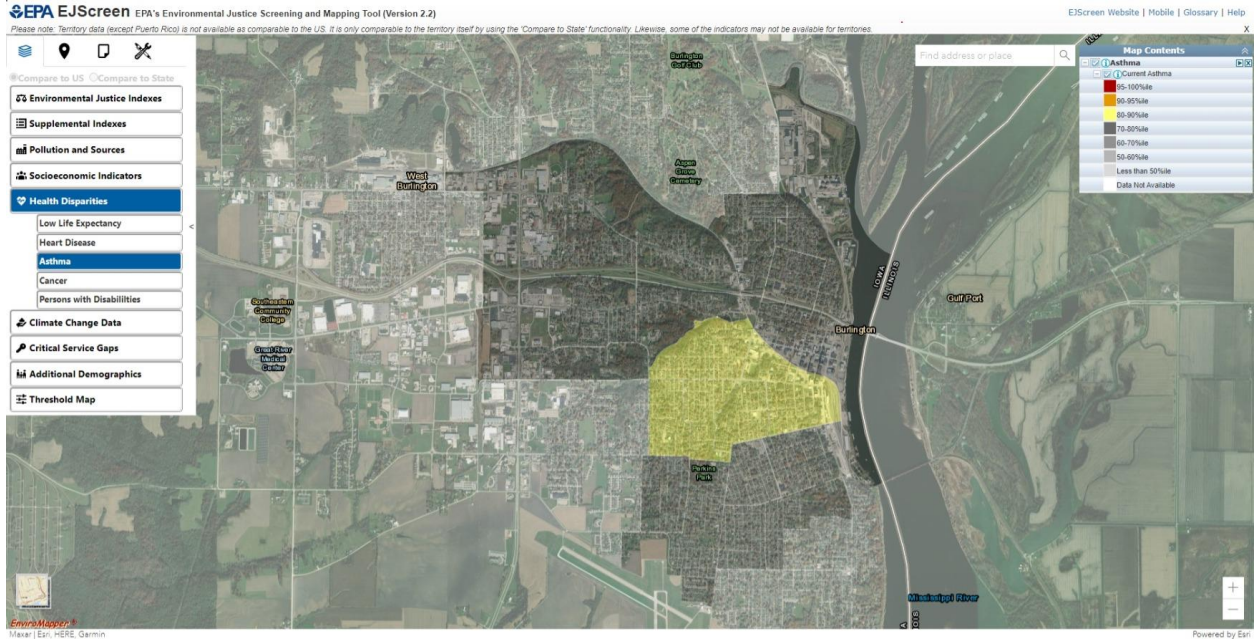
²³ 40 C.F.R. § 58.10(d) (emphasis added).

Appendix A

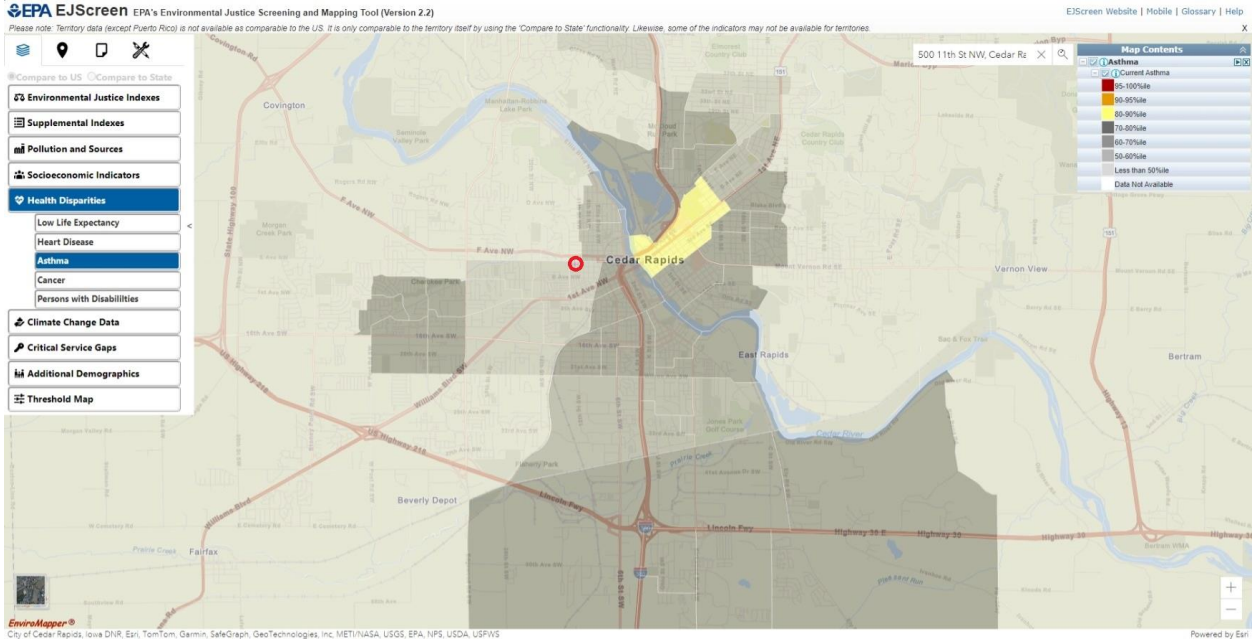
1. Ames – No Air Monitor



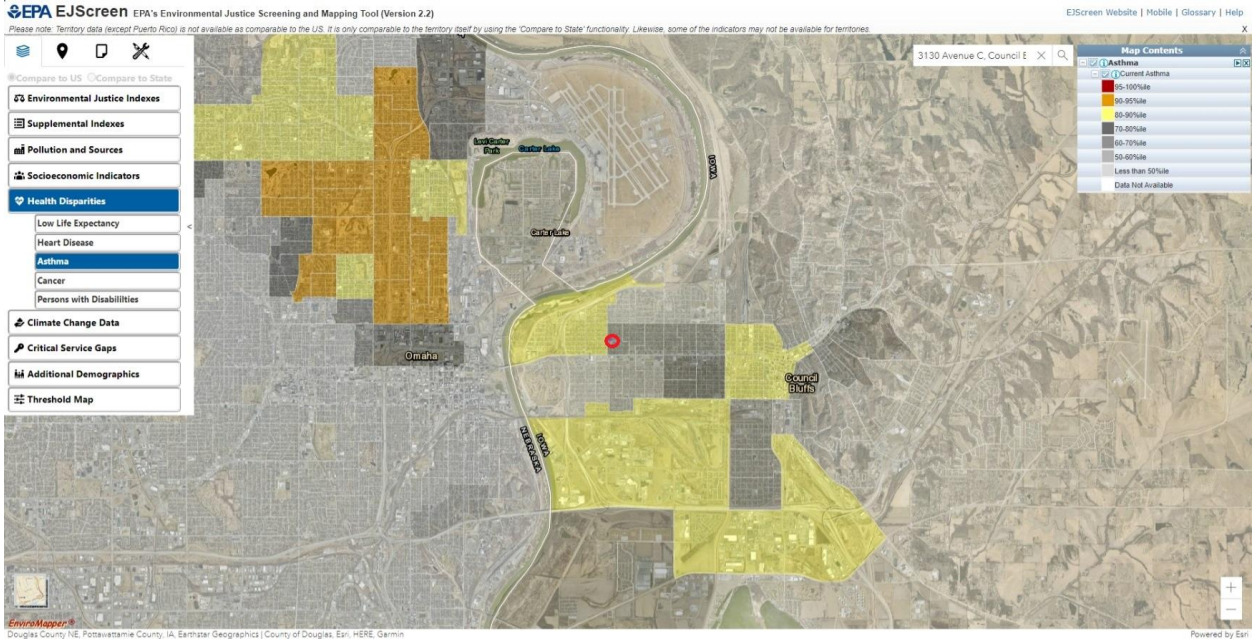
2. Burlington – No Air Monitor



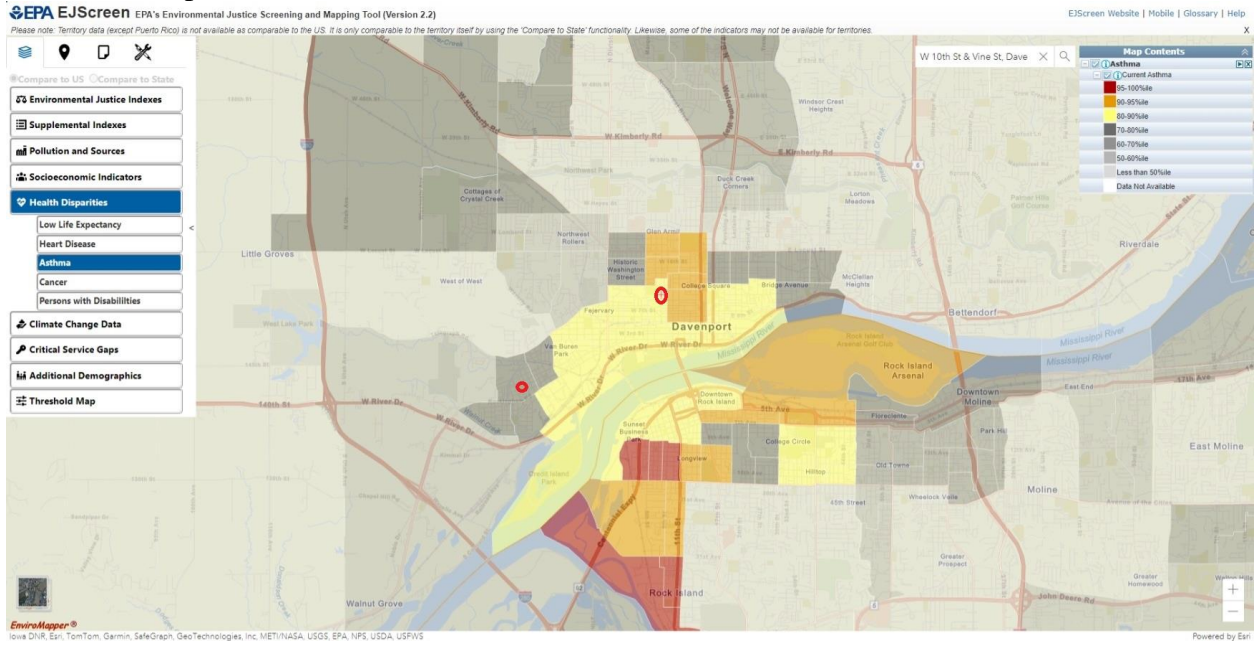
3. Cedar Rapids – Air Monitor Location



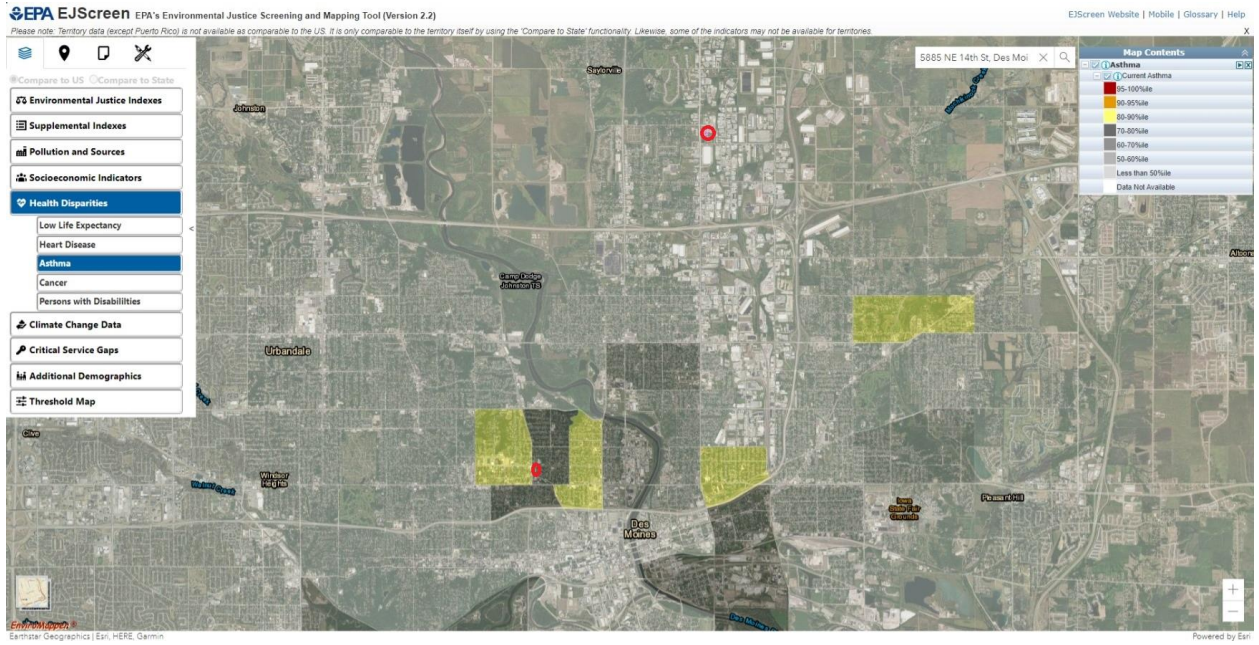
4. Council Bluffs – Air Monitor Location



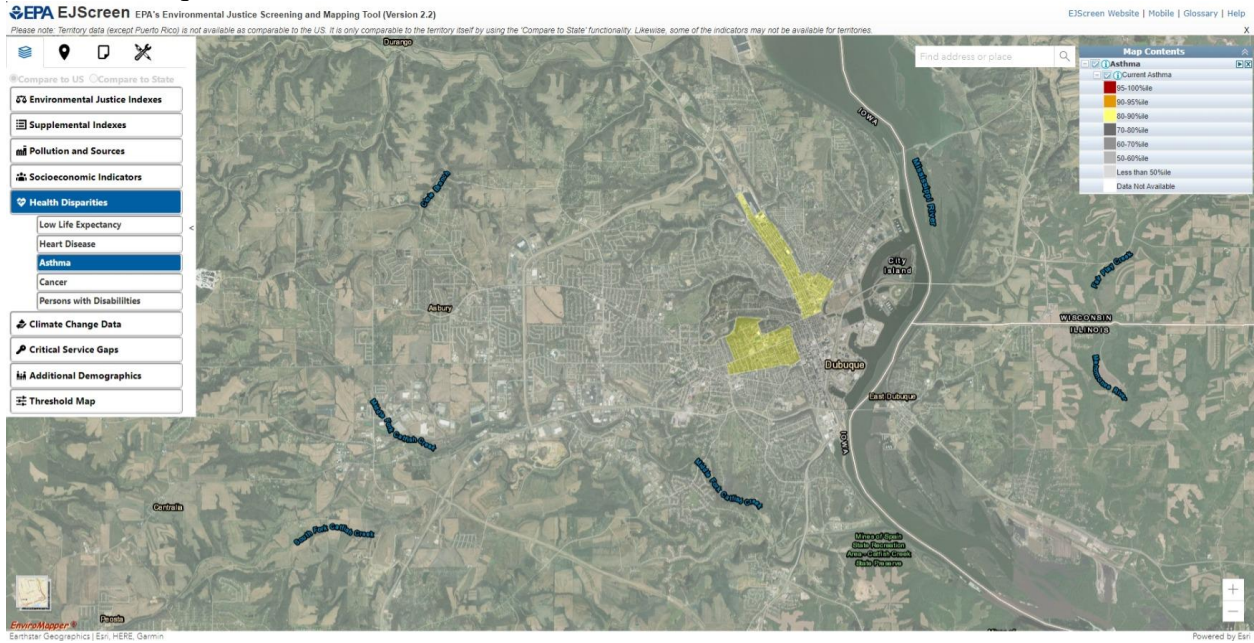
5. Davenport – Air Monitor Locations



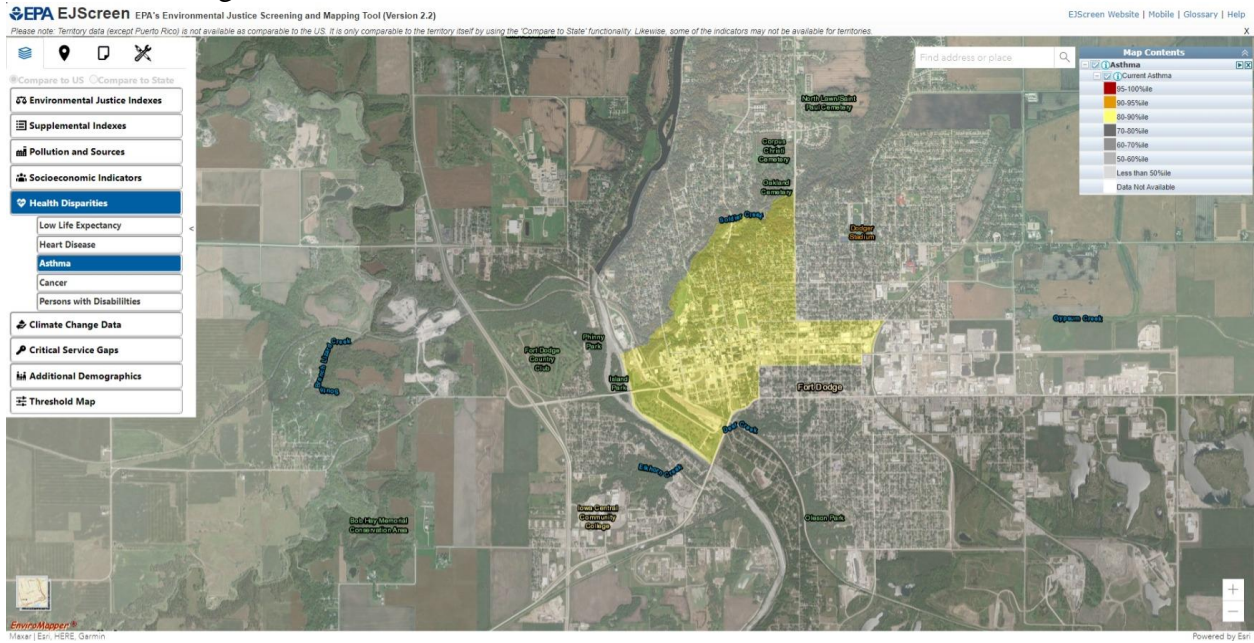
6. Des Moines – Air Monitor Locations



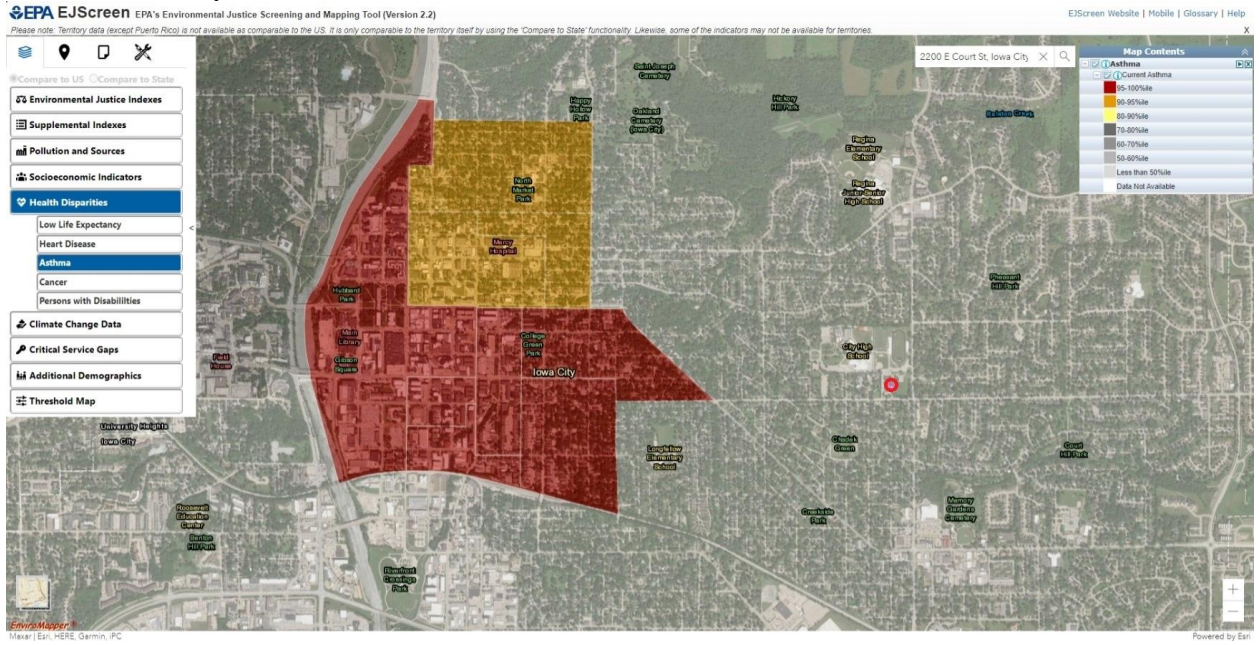
7. Dubuque – No Air Monitor



8. Fort Dodge – No Air Monitor



9. Iowa City – Air Monitor Location



10. Ottumwa – No Air Monitor

