

No Iowa Lead Monitoring Design Value 2022-2024

Due to data loss associated with a sampling instrument change there is not enough data to determine the attainment status for lead for the 2019-2021, 2020-2022, 2021-2023 and 2022-2024 Design Value periods. Summaries of data collected will continue and Lead Design Value Reports will resume when the data is available. This report contains details regarding the levels measured at the site for the 2022 through 2024 period.

A design value is a tool that can be used to understand pollution levels at a specific location. A design value may be set for any pollutant. The U.S. EPA's official definition is explained this way: "a design value is the mathematically determined pollutant concentration at a particular site that must be reduced to, or maintained at or below the National Ambient Air Quality Standard to assume attainment." The design value number tells us how a particular site or area compares with the National Ambient Air Quality Standards (NAAQS).

The EPA design value for lead is the highest 3-month rolling average for the most recent three years and must be based on complete data. EPA promulgated new lower lead standards on October 15, 2008. A monitoring site must have a design value less than or equal to $0.15 \mu\text{g}/\text{m}^3$ to be considered "in attainment" with the lead NAAQS. Additional information on the lead pollution and regulatory actions is available here: <http://www.epa.gov/lead-air-pollution>

Iowa Lead Design Value Completeness

The form of the National Ambient Air Quality Standard (NAAQS) for lead (Pb) requires three years of complete data for attainment designations. New samplers were installed at the site on December 9, 2021. On January 10, 2022 it was discovered that the primary sampler was not configured correctly and the secondary sampler had failed to hold calibration. The secondary sampler failed its first monthly verification for both temperature and flow rate. Data capture for the month of December was 20% (1 of 5 scheduled samples).

40 CFR Part 50, Appendix R states “The Pb NAAQS is met at a monitoring site when the identified design value is valid and less than or equal to 0.15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). **A Pb design value that meets the NAAQS (*i.e.*, 0.15 $\mu\text{g}/\text{m}^3$ or less), is considered valid if it encompasses 36 consecutive valid 3-month site means (specifically for a 3-year calendar period and the two previous months).**

Iowa Lead Design Value Completeness (continued)

Federal regulations permit the use of data substitution techniques that can be used to validate data considered incomplete. The data substitution tests are diagnostic and can be used to confirm that “that there is a very high likelihood if not certainty that the original mean (the one with less than 75% data capture) reflects the true over/under NAAQS-level status for that 3-month period.”

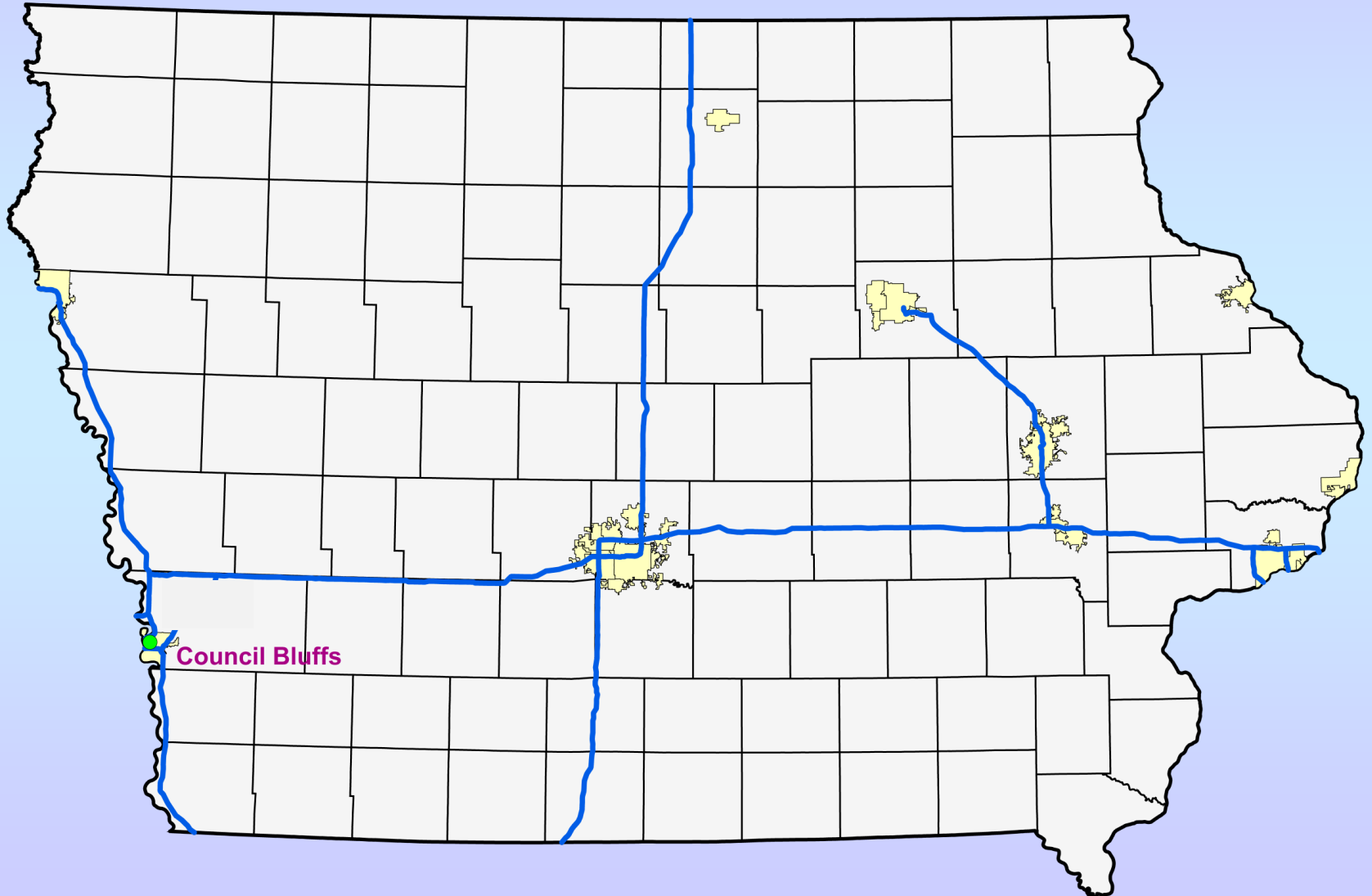
“The “below NAAQS level” test is as follows: Data substitution will be performed for each month of the 3-month period that has less than 75 percent but at least 50 percent data capture; **if any month has less than 50% data capture then the 3-month mean can not utilize this substitution test.**”

Due to the 20% data capture rate in December, 2021 this test cannot be utilized to validate the design value.

Iowa Lead Monitoring Site (2024)

AQS Site ID	Site Name	Location	County
19-155-0011	Griffin Pipe	Council Bluffs	Pottawattamie

Iowa Lead Monitor Location



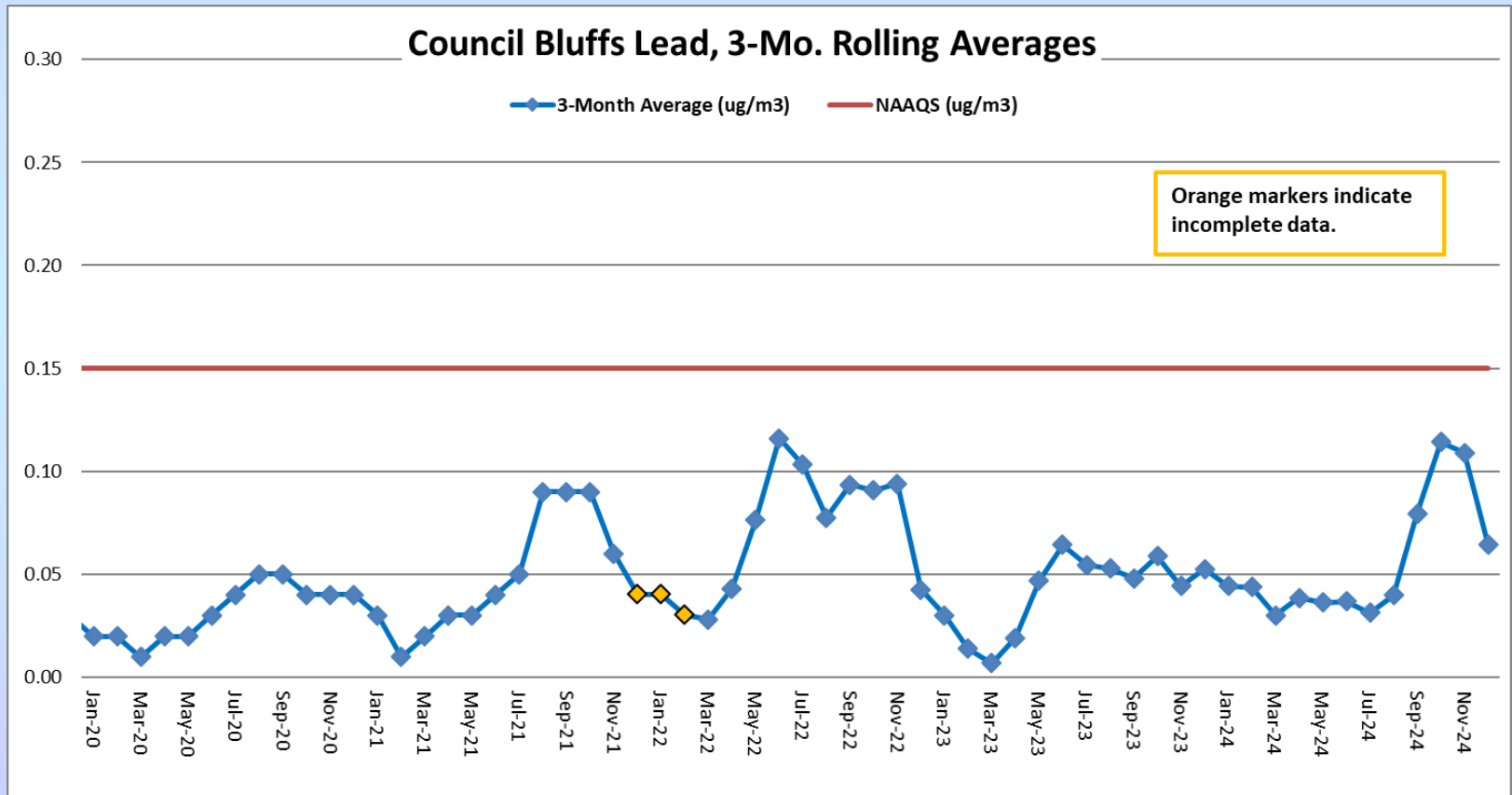
Lead Design Value

Iowa Lead Design Value 2024 (not available)				
County	City	EPA Site ID	3 yr Period	Design Value 3-year Maximum of 3-month Rolling Averages
Pottawattamie	Council Bluffs	19-155-0011	2022-2024	0.12*
Design Values Greater Than 0.15 µg/m ³ Indicate Non-Attainment with the NAAQS				
* Indicates incomplete data				

*No Design Value for lead is available due to insufficient data capture in 2021. No exceedances of the standard were measured over the 2022-2024 period.

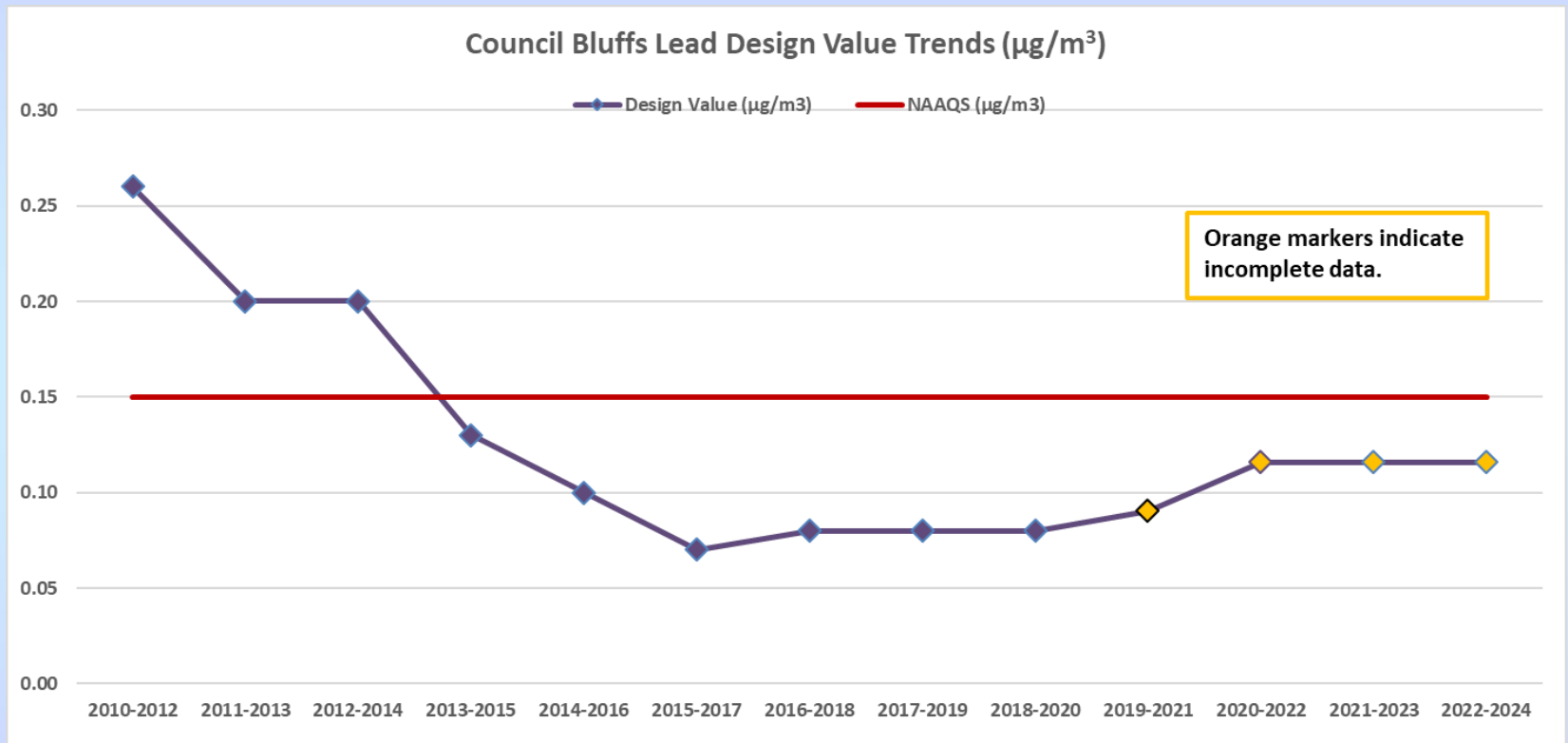
Council Bluffs Lead, 3-Month Rolling Averages (Concentration in $\mu\text{g}/\text{m}^3$)

3-Month Rolling Averages January, 2020-December, 2024



Iowa Lead Design Value Trends 2012-2024

(No Design Value for 2019-2021, 2020-2022, 2021-2023, and 2022-2024)



Web Resources

Iowa Real-time Data Reporting :

In Polk County:

<https://www.polkcountyiowa.gov/public-works/air-quality/air-quality-monitoring/current-aqi-real-time-data/>

In Linn County:

<https://www.linncountyiowa.gov/1429/Air-Quality>

Outside Polk and Linn Counties:

<https://shl.uiowa.edu/environmental-testing/air-quality>

Design Values for All Pollutants Nationwide:

<https://www.epa.gov/air-trends/air-quality-design-values>

Historical Air Pollution Data for Iowa and Other States:

<https://www.epa.gov/outdoor-air-quality-data>