



Blood lead levels in Trail Fall 2023

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Land Acknowledgement

We recognize and acknowledge that we are collectively gathered on the traditional, ancestral, and unceded territories of all the Interior Region First Nations. This region is also home to 15 Chartered Métis Communities. It is with humility that we continue to strengthen our relationships with First Nation, Métis, and Inuit peoples across the Interior.

Ktunaxa, Secwépemc, Syilx, Sinixt



Objective

- Overview of blood lead (Pb) levels tested in fall 2023
- Comparison of mean blood Pb levels in 2023 to previous years



Who was tested in 2023?

- Children aged 6-36 months, living in City of Trail or Rivervale (Area 2/3)
- Children aged 6-36 months living in Warfield, Oasis, Casino and Waneta (Area 1)



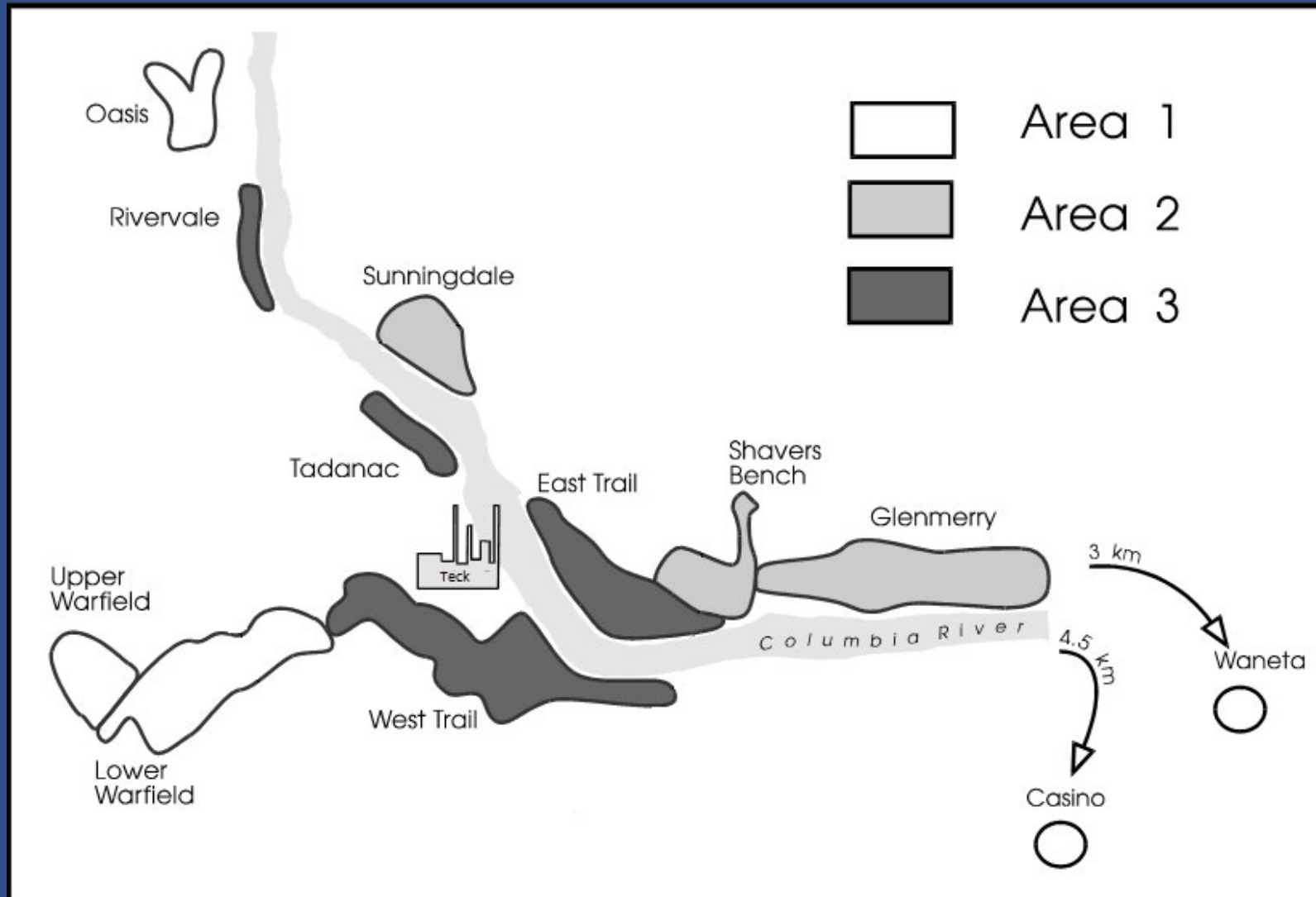
Additional Testing

These results do not contribute to the yearly analysis

- Children new to the area, up to the age of 5 years old
- Children with previous enhanced support follow up who are now over 36 months old
- Children whose parents requested testing for their child from outside target area and age range

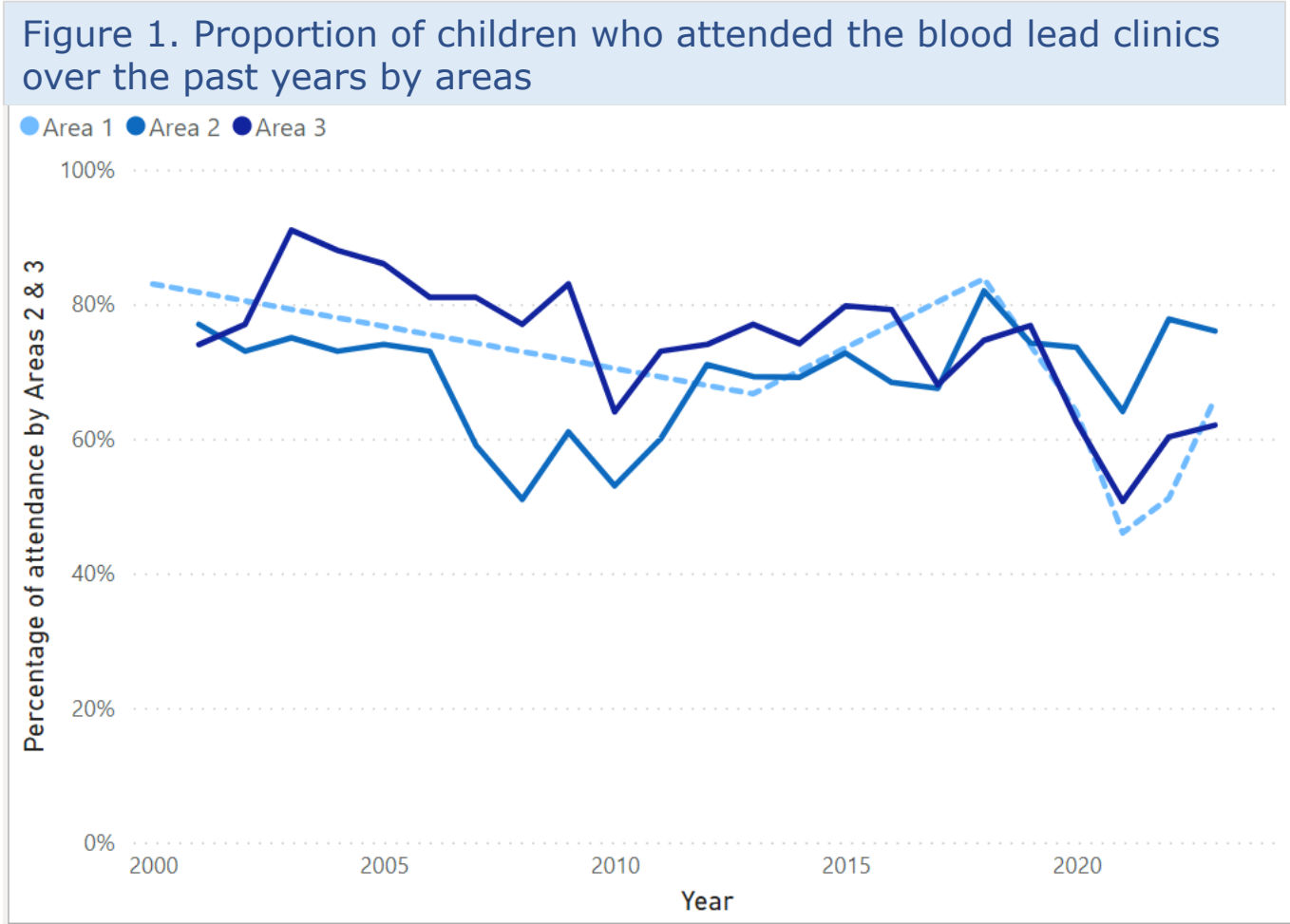


"Areas" and Neighbourhoods

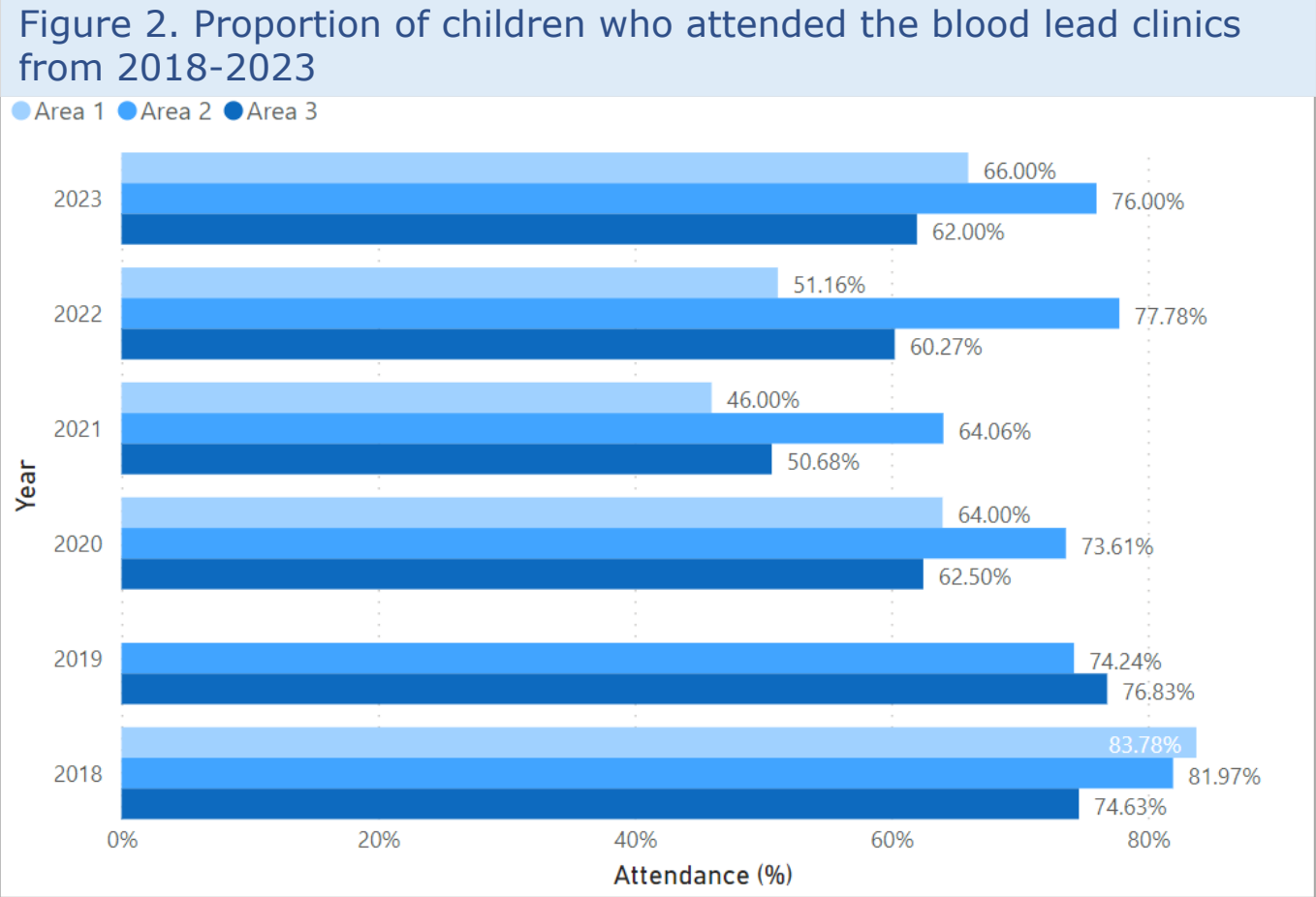


Participation By Target Areas (6-36 months old)

- No. of samples collected in 2023: 106
- No of children participated in 2023: 110



Participation By Target Areas contd.



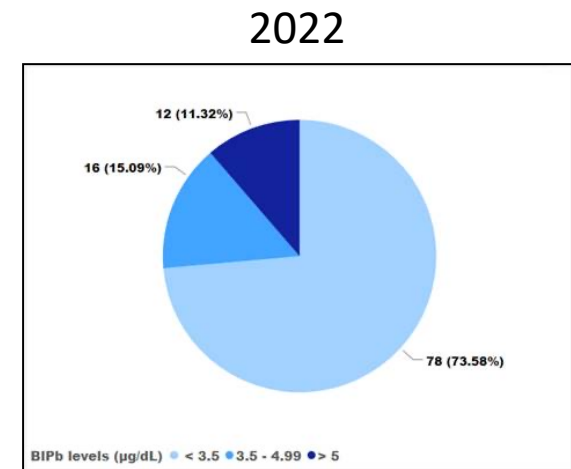
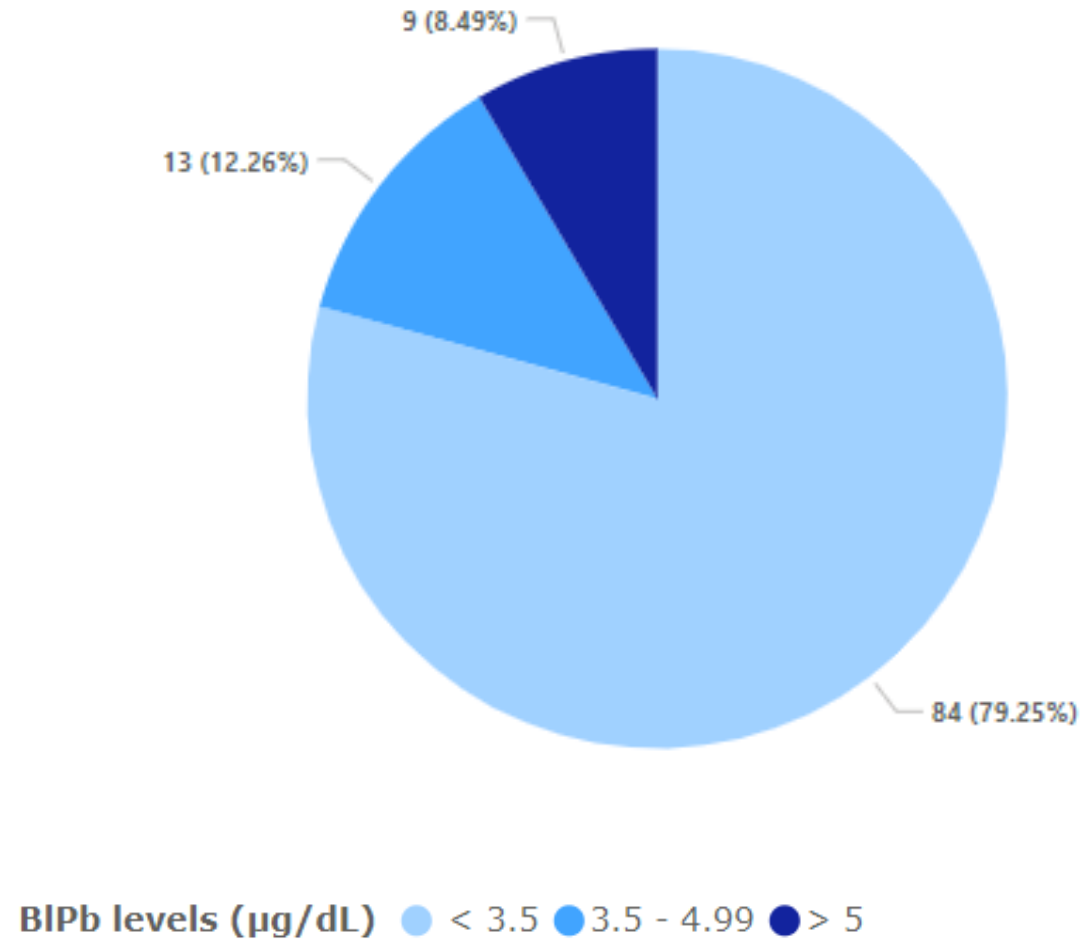


Blood Pb Level Threshold

- There is no safe blood Pb level threshold
- Canadian children 3-5 years old had geomean blood Pb levels at 0.50 $\mu\text{g}/\text{dL}$ in 2018/19 **
 - ** note that Trail children's geomean reflects ages 6-36 months (age when higher BL is expected)
- BCCDC uses 5 $\mu\text{g}/\text{dL}$ as exposure investigation levels (EILs) for children (aged 0-18 years), and women aged 19-49.
- In BC, blood Pb levels that meet or exceed the defined EILs will prompt further follow up by public health agencies.
- The US CDC uses the term Blood Lead Reference Value. Previously, this was 5 $\mu\text{g}/\text{dL}$ until 2021 when it was decreased to 3.5 $\mu\text{g}/\text{dL}$.

Range of Blood Pb Levels

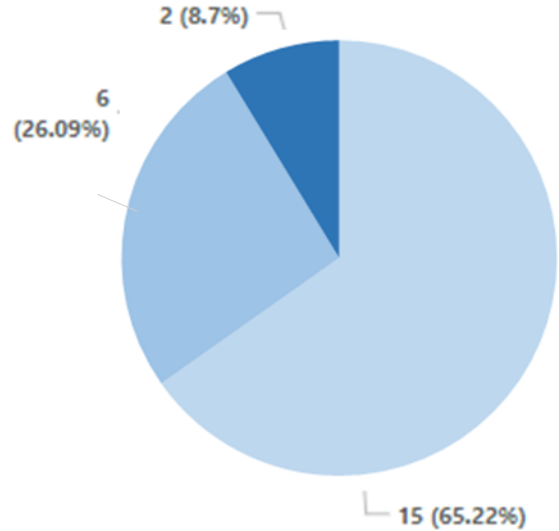
Figure 3. Proportion of children stratified by blood lead levels for 2023 (n= 106)



Blood Pb levels

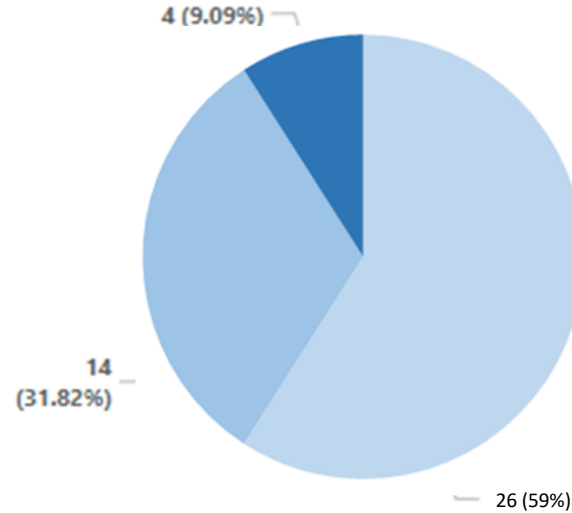
Figure 4. Proportion of children stratified by blood lead levels for three areas in 2023

Area 1 (n=23)



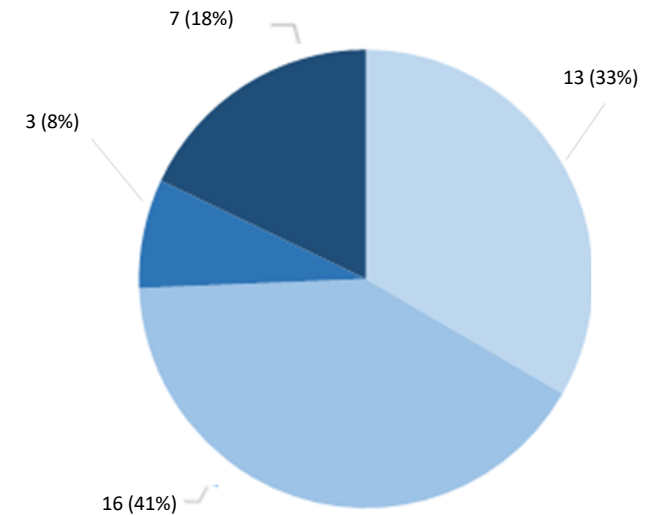
BIPb levels ($\mu\text{g}/\text{dL}$) <2 2-3.99 4-5.99

Area 2 (n=44)



BIPb levels ($\mu\text{g}/\text{dL}$) <2 2-3.99 4-5.99

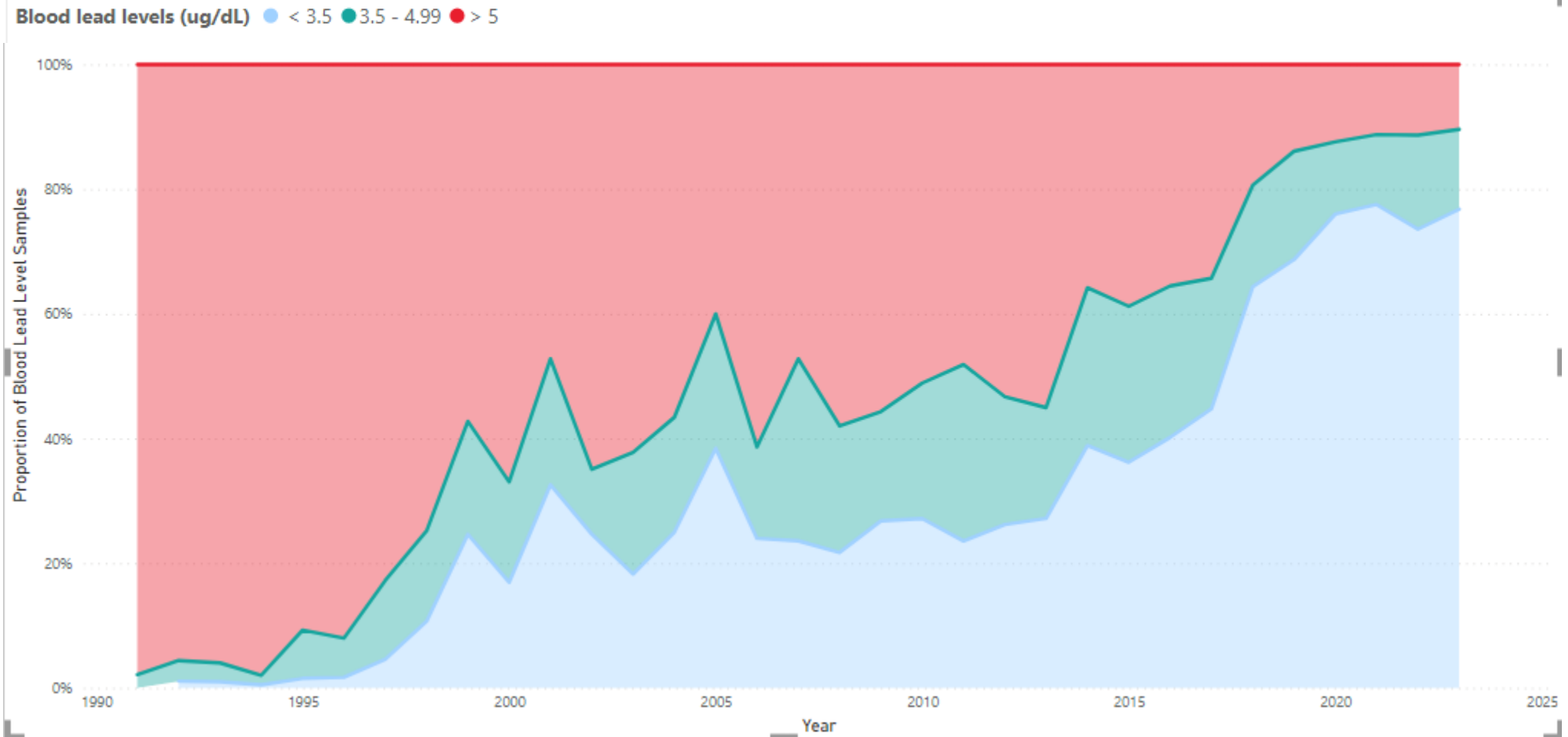
Area 3 (n=39)



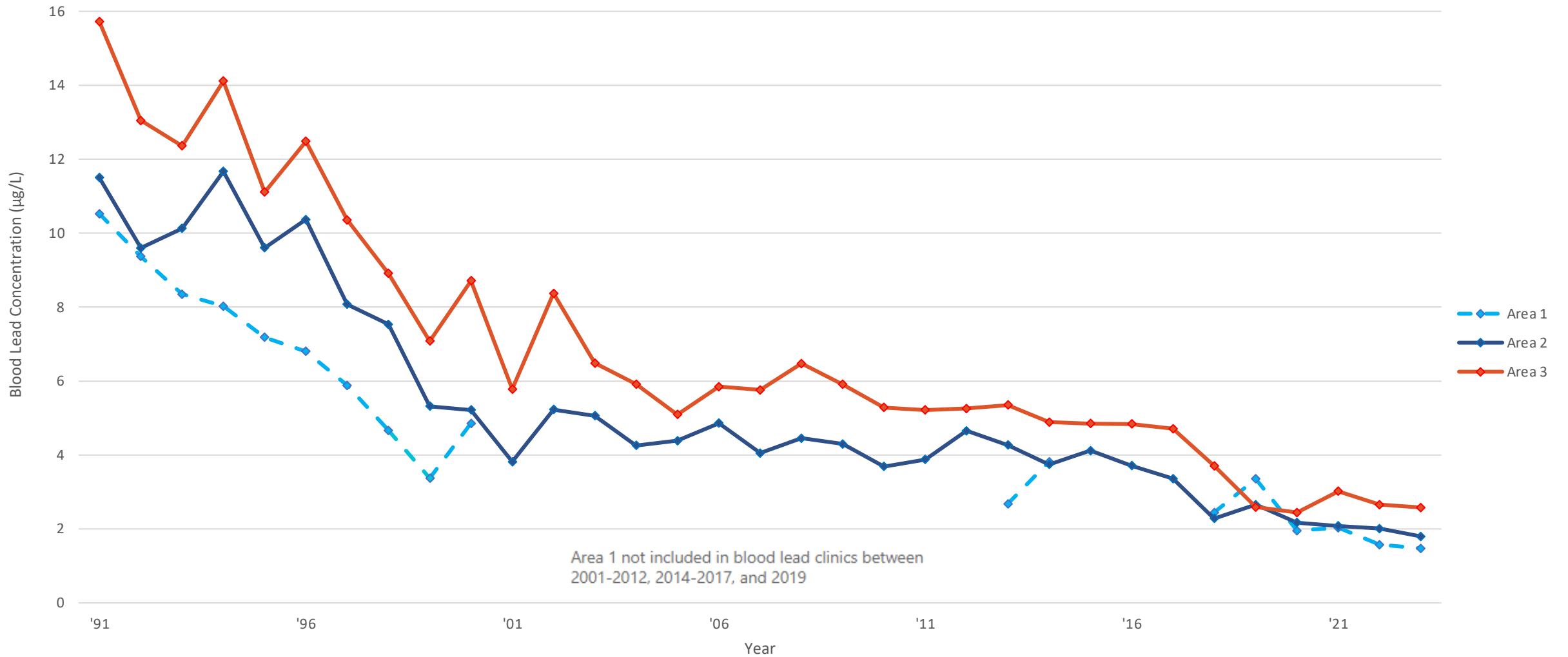
BIPb levels ($\mu\text{g}/\text{dL}$) <2 2-3.99 4-5.99 >6



Figure 5. Proportion blood Pb samples collected over the years for all areas by blood lead level concentrations



Trend of Blood Pb Geomean by Area



Blood Pb Levels in Trail, Canada & U.S. Data

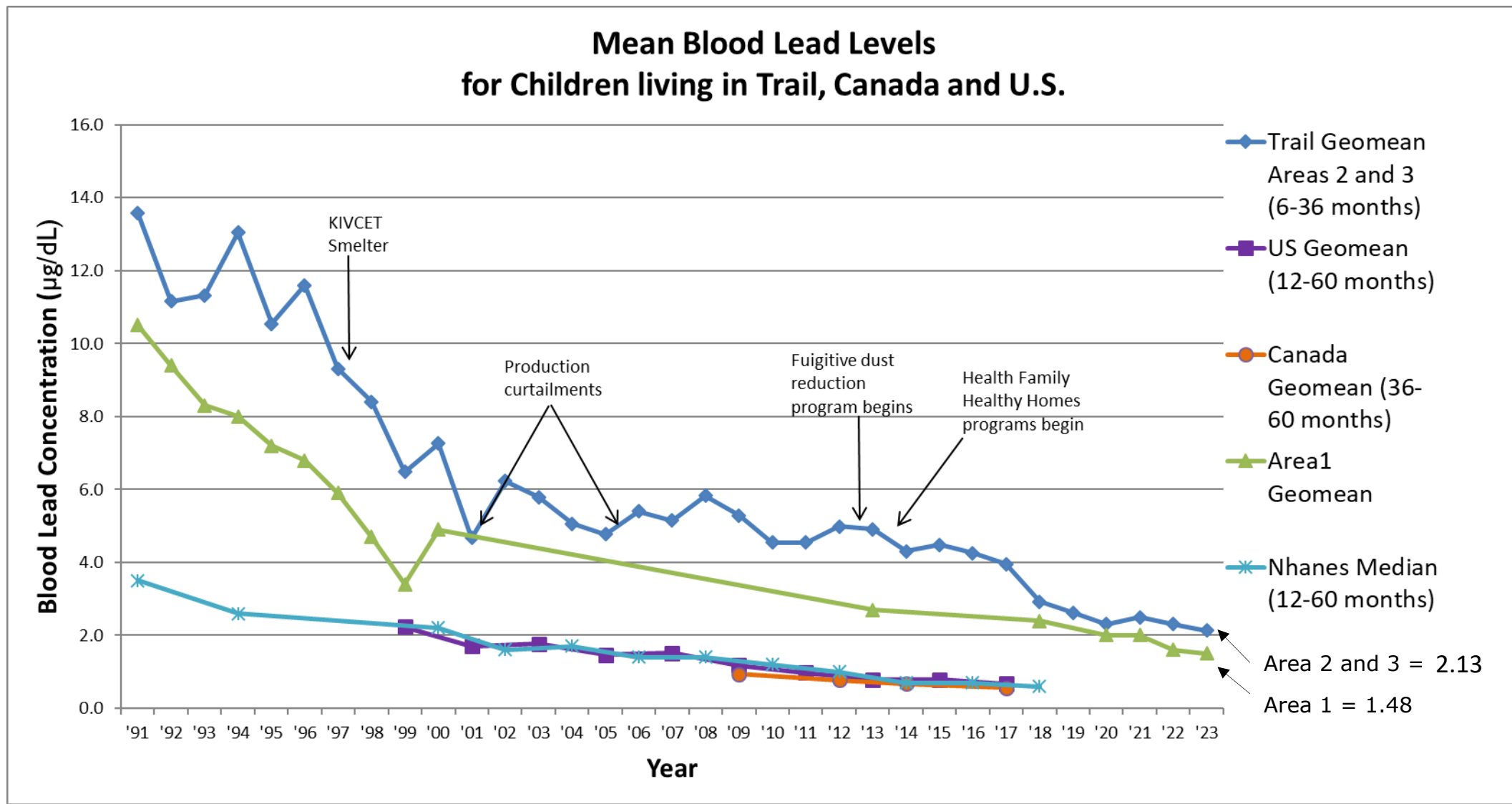
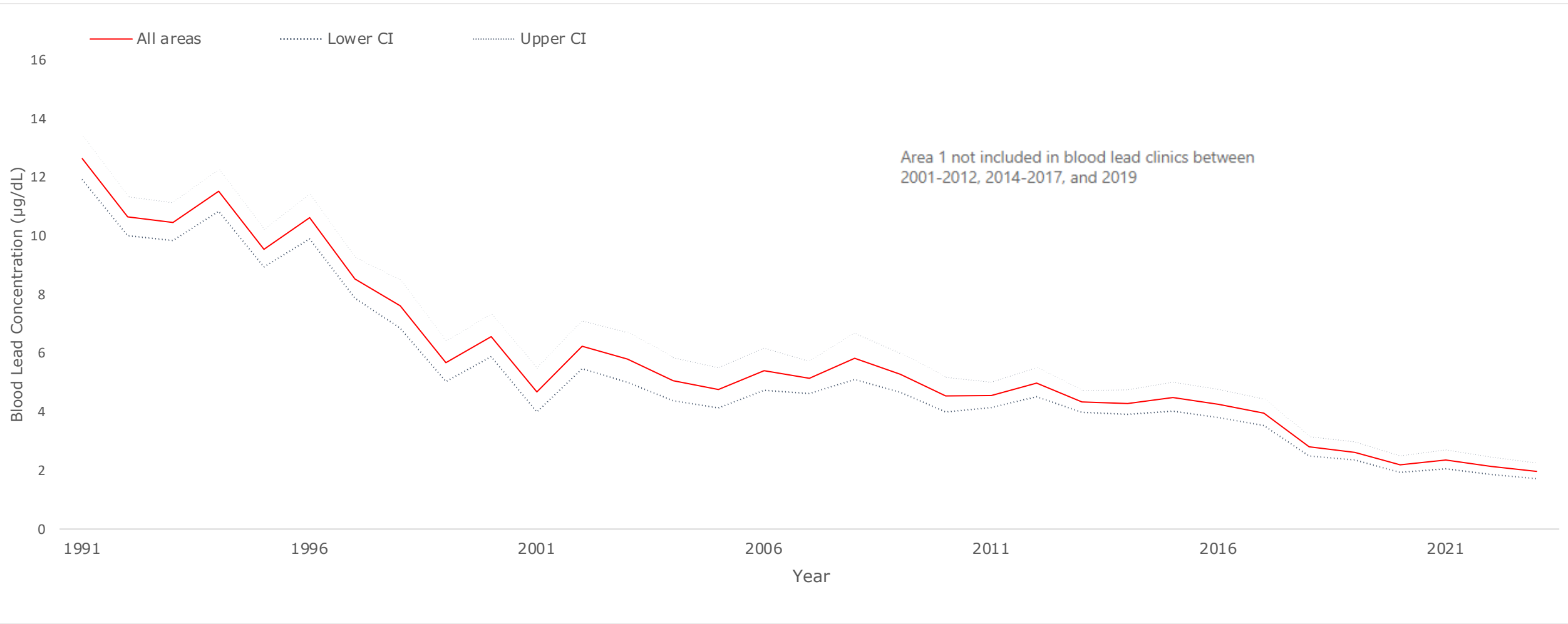


Figure 8. Blood lead concentration over the years by all areas combined along with confidence interval (CI)



Concluding messages

Area 2&3 Geomean 2022= 2.3 **2023= 2.1**

Overall Geomean 2022=2.1 **2023= 2.0**

The mean blood lead levels continue to demonstrate evidence of some exposure to lead in the environment

We continue to see a decrease in blood lead levels with a narrowing of the gap between Trail children and other Canadian and American children of similar age.



Thank you

