



Blood lead levels in Trail Fall 2024

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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 2024
- Comparison of mean blood Pb levels in 2024 to previous years



Who was tested in 2024?

- 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)



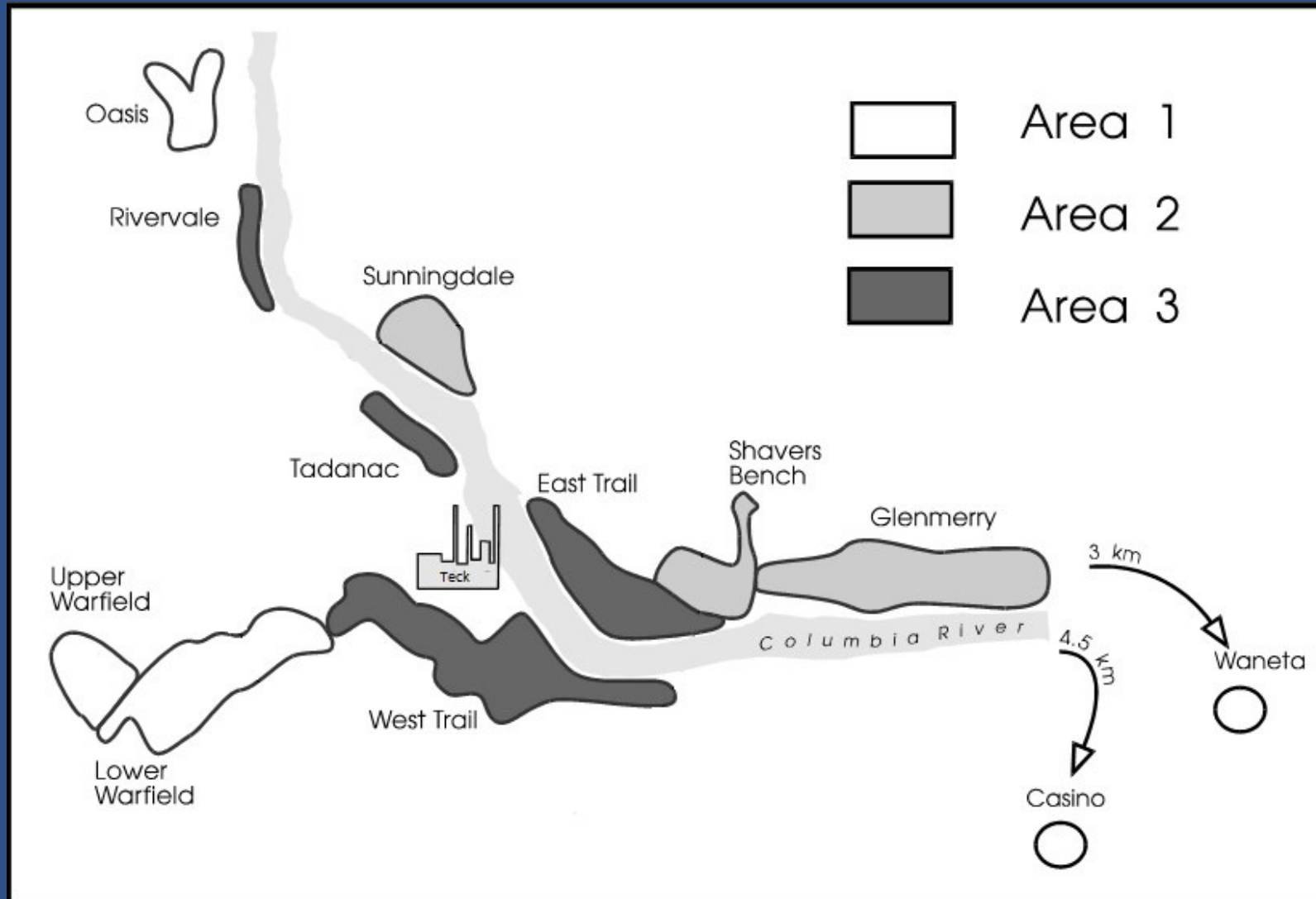
Additional Testing

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



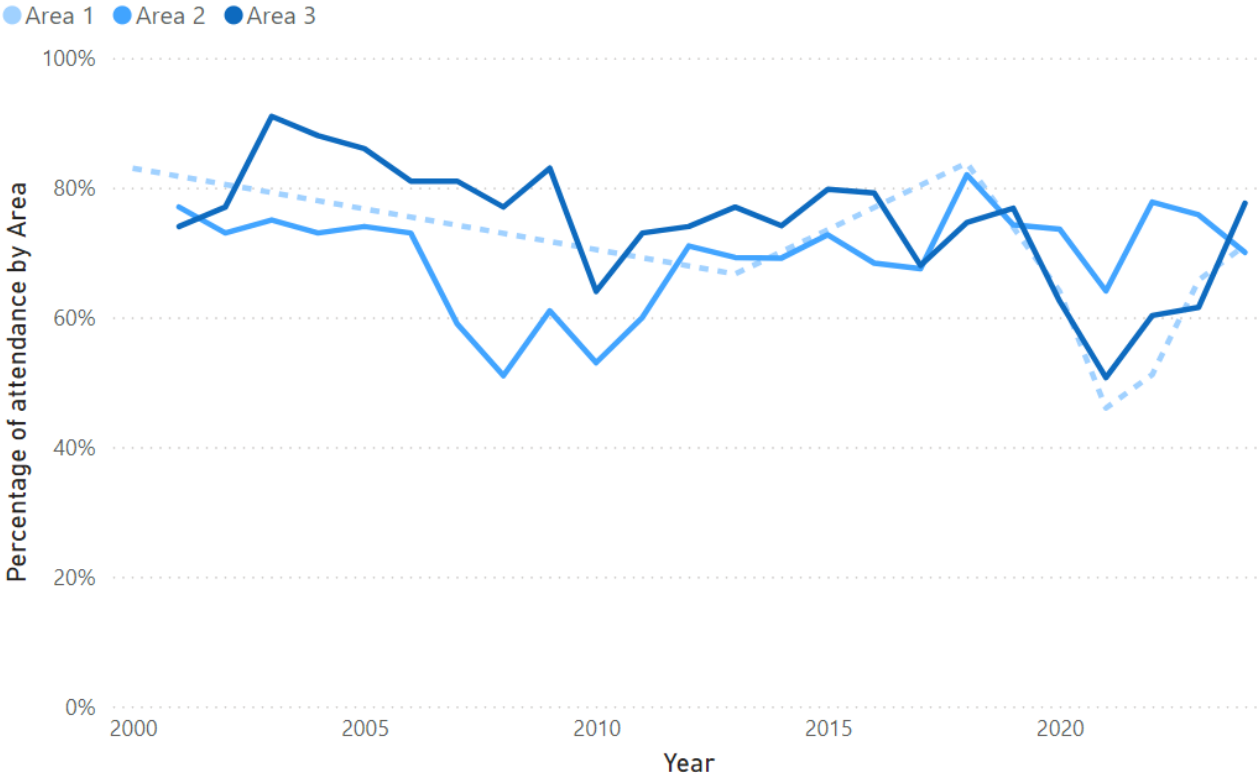
"Areas" and Neighbourhoods



Participation By Target Areas (6-36 months old)

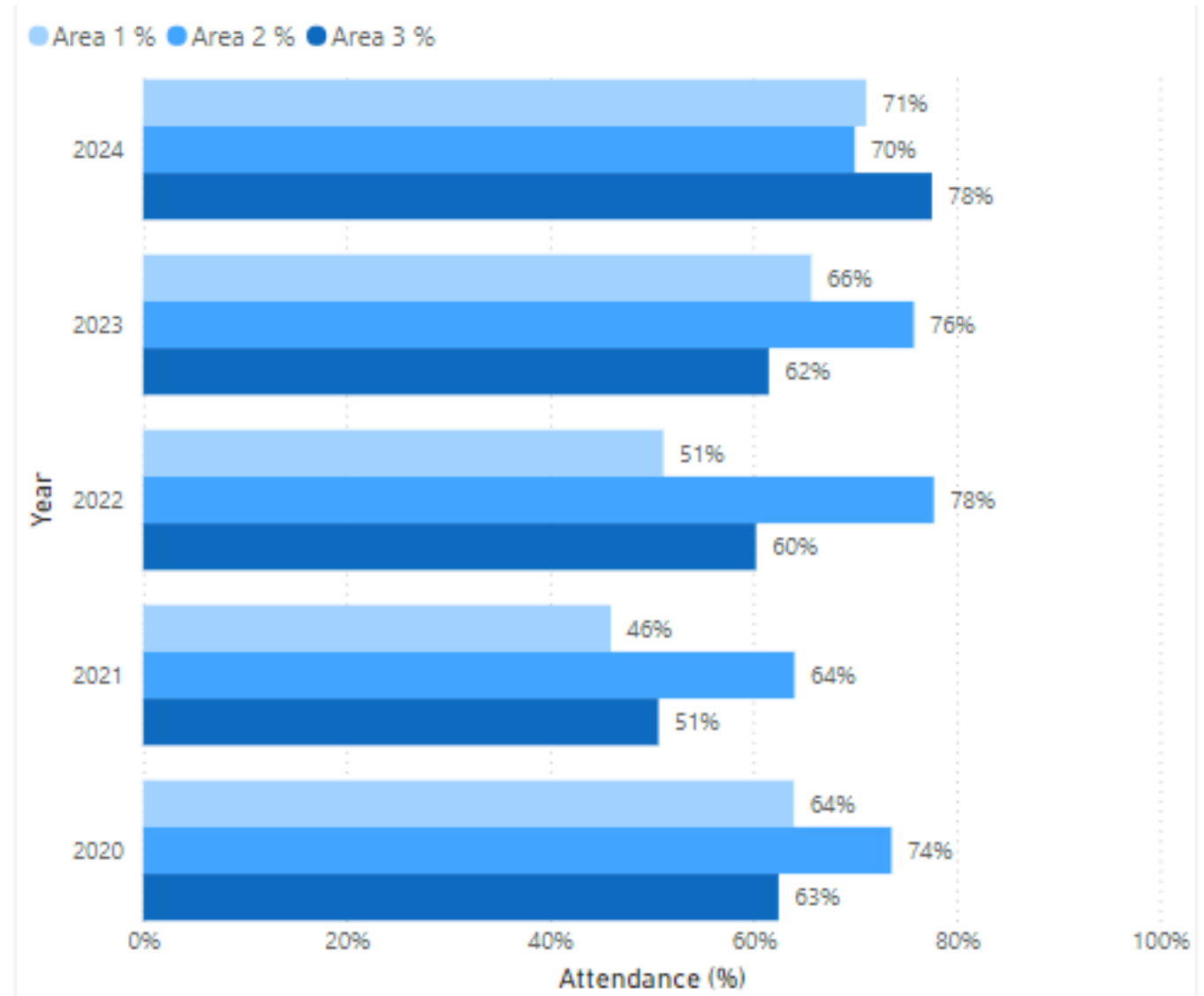
- No. of samples collected: 116
- No. of children attended: 119
- No. of children in target age and areas invited: 163

Figure 1. Proportion of children who attended the blood lead clinics over the past year by areas



Participation By Target Areas contd.

Figure 2. Proportion of children who attended the blood lead clinics by areas 2020-2024



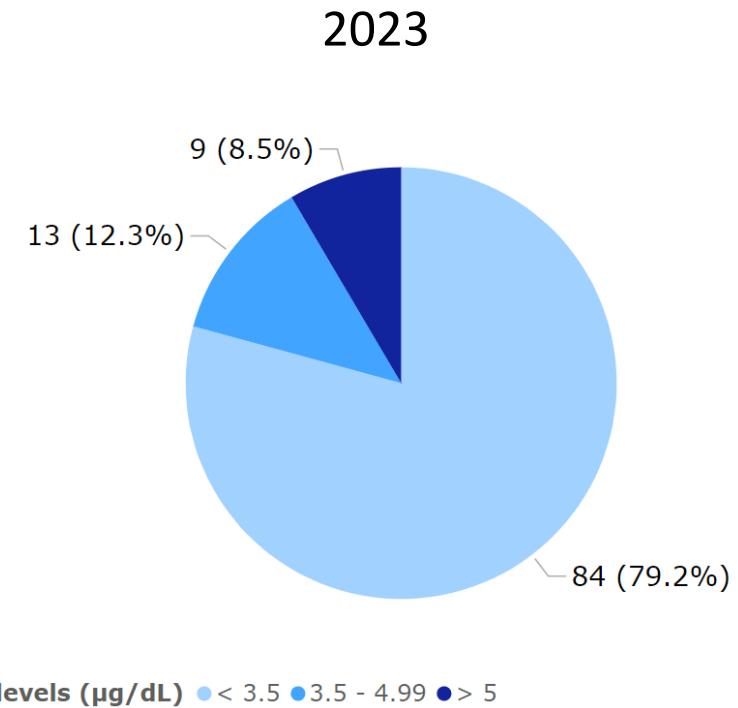
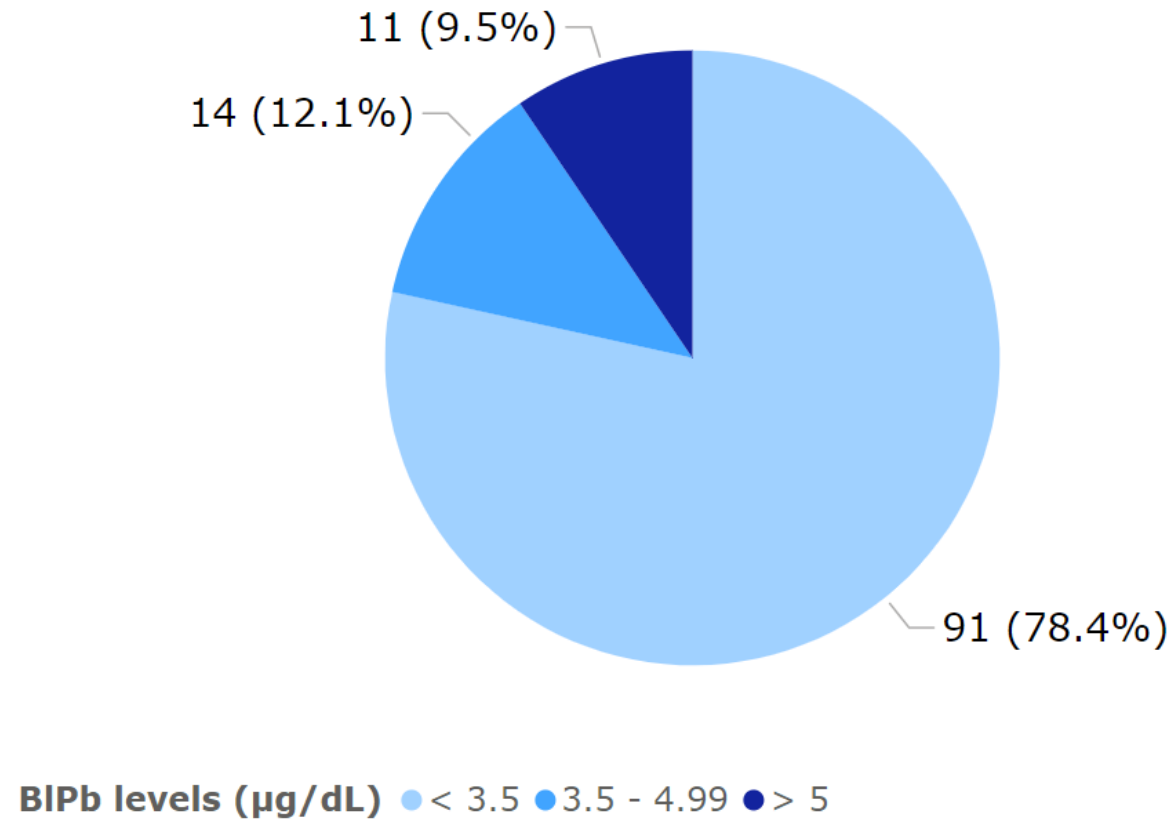


Blood Pb Level Threshold

- There is no known specific blood Pb level below which there are no identified health effects
- 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. This indicates that most children's BLL are less than $3.5 \mu\text{g}/\text{dL}$.

Range of Blood Pb Levels

Figure 3. Proportion of children stratified by blood lead levels for 2024



Blood Pb levels

Figure 4. Proportion of children stratified by blood lead levels for three areas in 2024

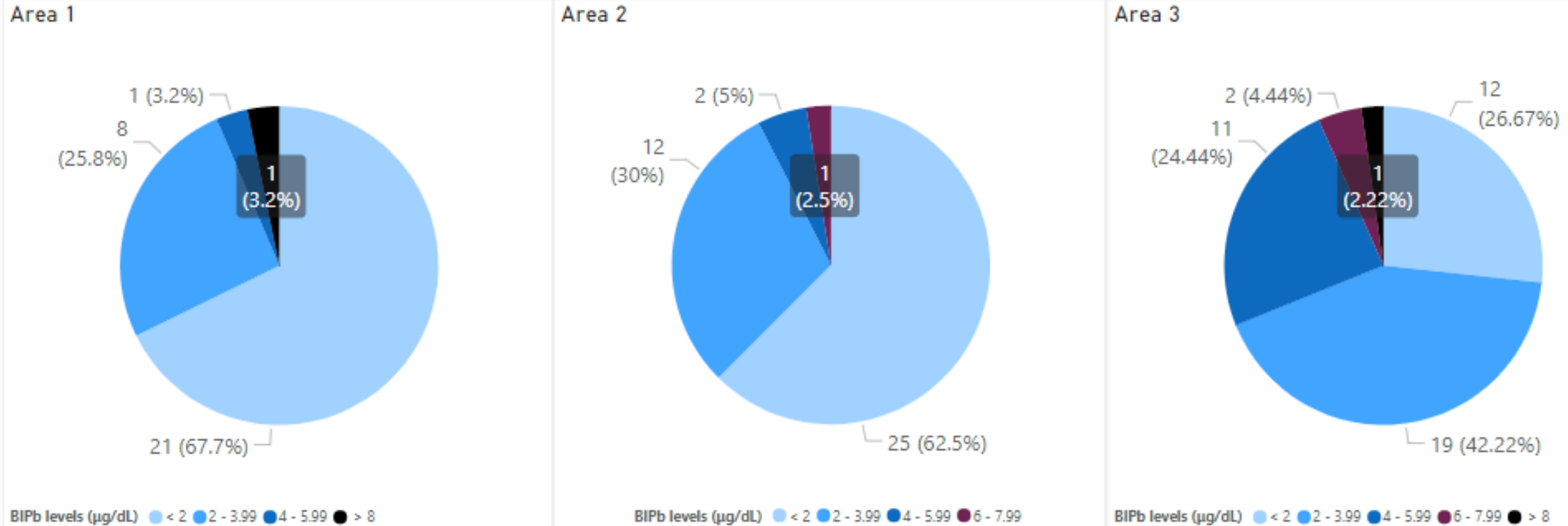
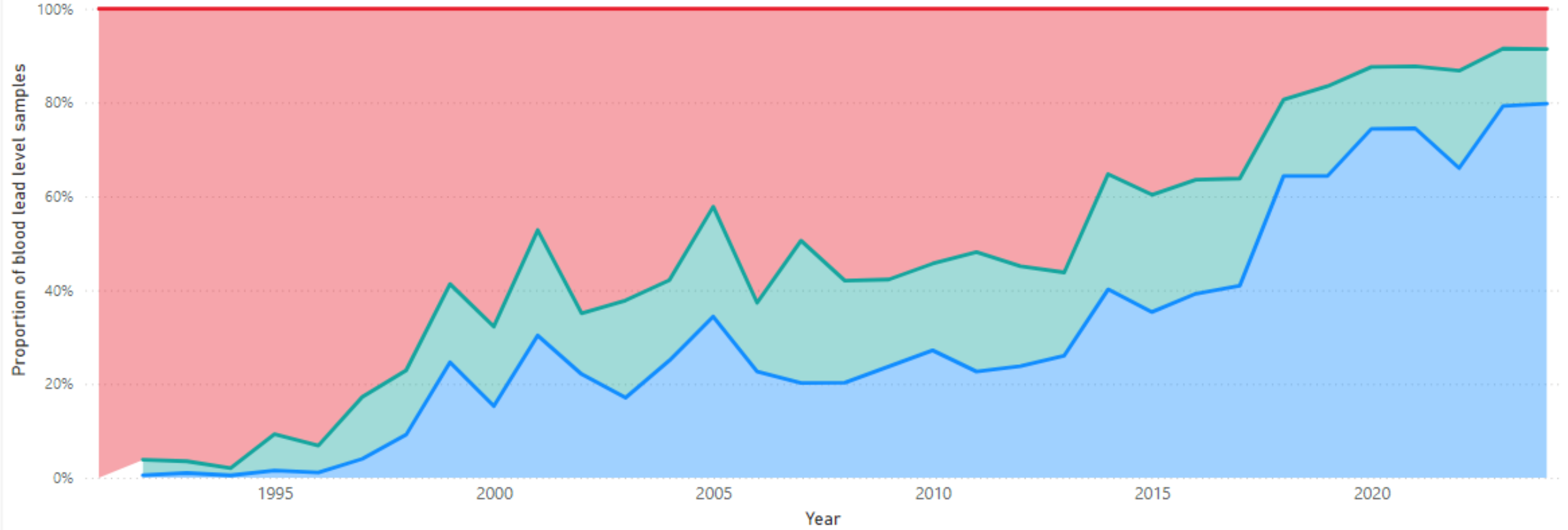


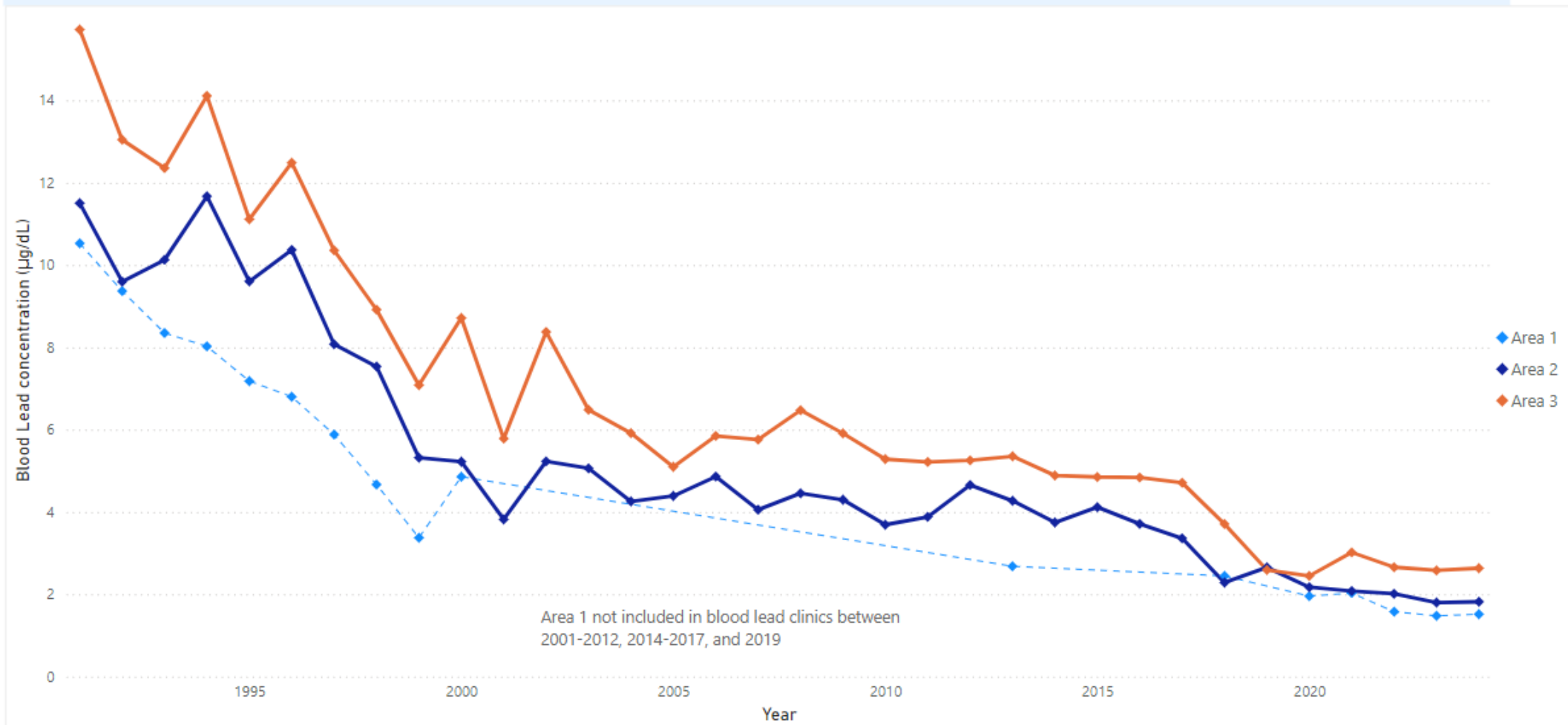
Figure 5. Proportion of blood lead samples collected over the years for all areas by blood lead level concentration

Blood lead levels (ug/dL) ● < 3.5 ● 3.5 - 4.99 ● > 5



Trend of Blood Pb Geomean by Area

Figure 8. Geomean of blood lead concentration over the years by three areas



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

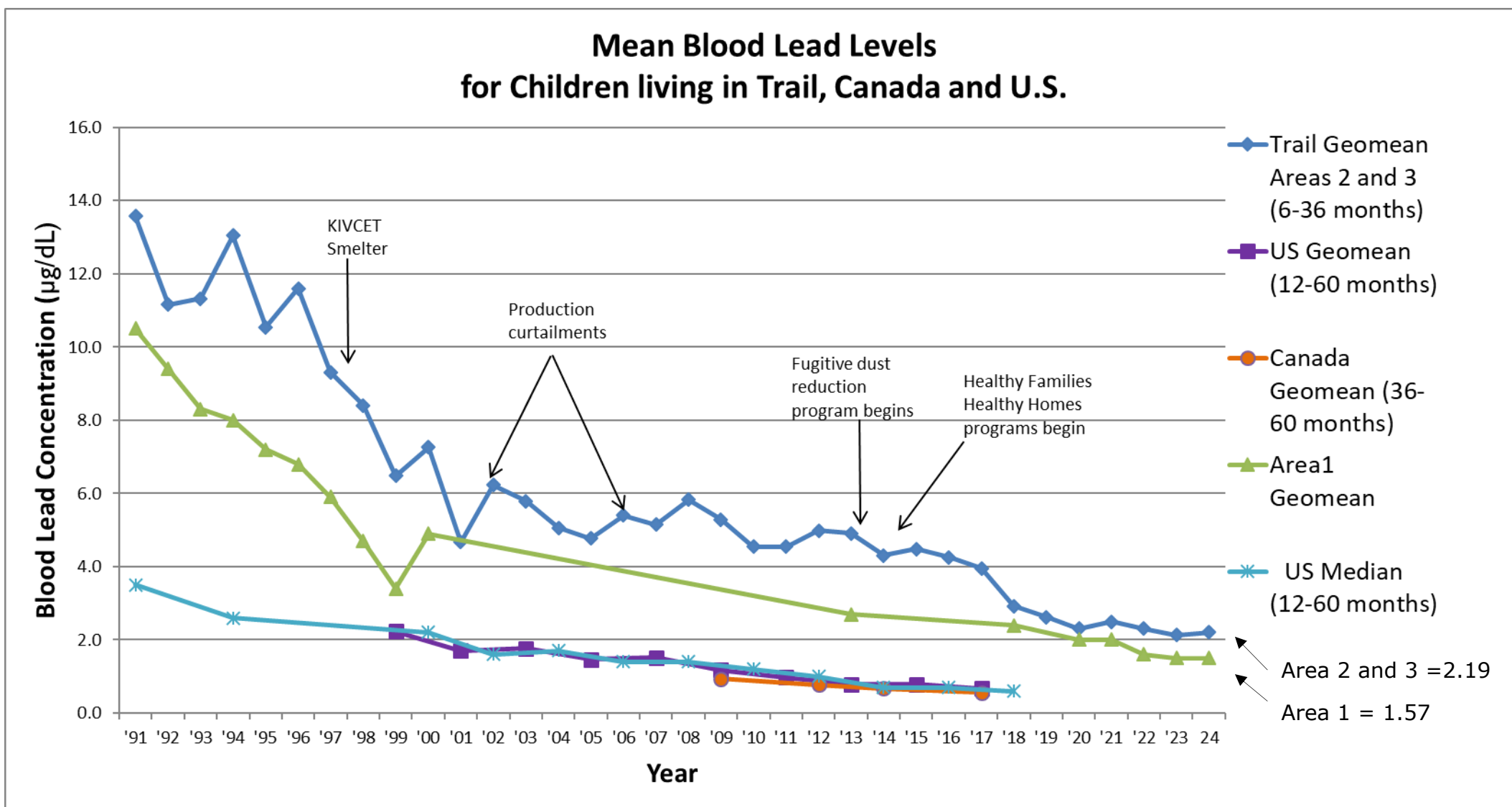
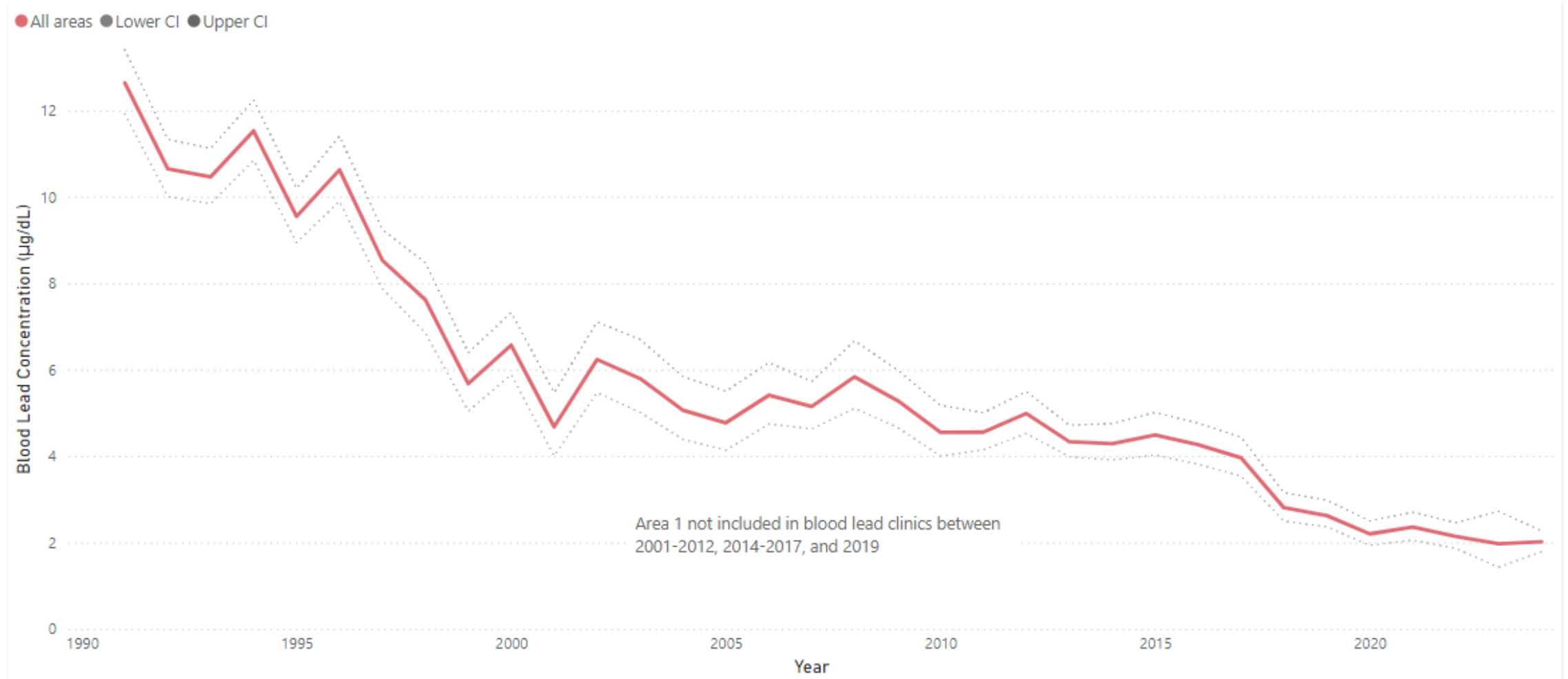


Figure 9. Blood lead concentration over the years by all areas combined along with confidence interval (CI)



Concluding messages

Area 2&3 Geomean 2023= 2.13 **2024= 2.19**

Overall Geomean 2023= 1.97 **2024=2.00**

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

We see similar blood lead geomeans to last year.

Overall, this demonstrate a narrowing of the gap between Trail children and other Canadian and American children of similar age.



Thank you

