



Blood lead levels in Trail Fall 2022

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Land Acknowledgement

We recognize and acknowledge that we are collectively gathered on the traditional, ancestral, and unceded territories of the seven 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.



Objective

- Overview of blood lead (Pb) levels tested in fall 2022
- Comparison of mean blood Pb levels in 2022 to previous years



Who was tested in 2022?

- 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)



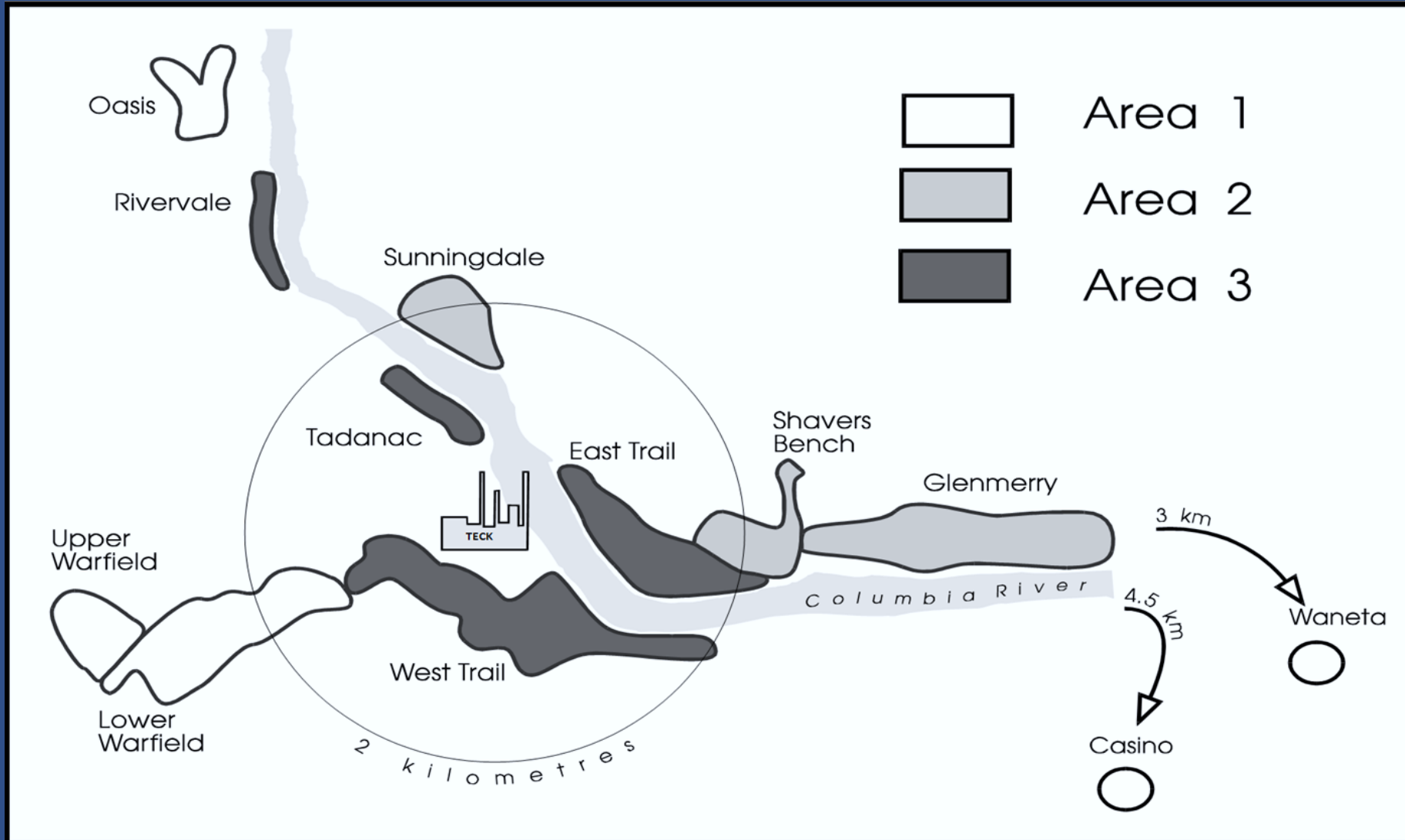
Additional Testing

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



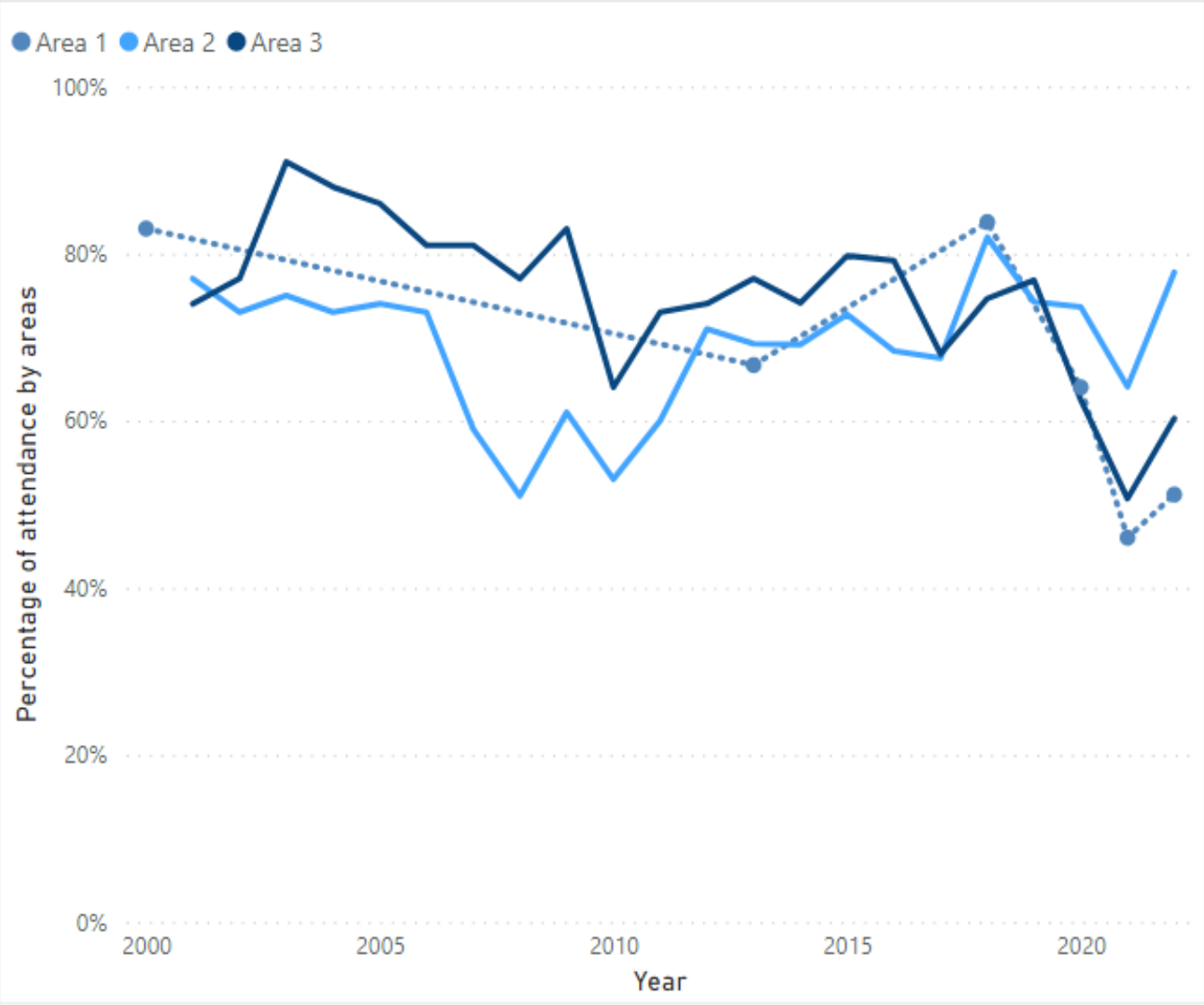
Blood Pb levels in Trail



Participation By Target Areas (6-36 months old)

- No. of samples collected in 2022: 106
- No of children participated in 2022: 108

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



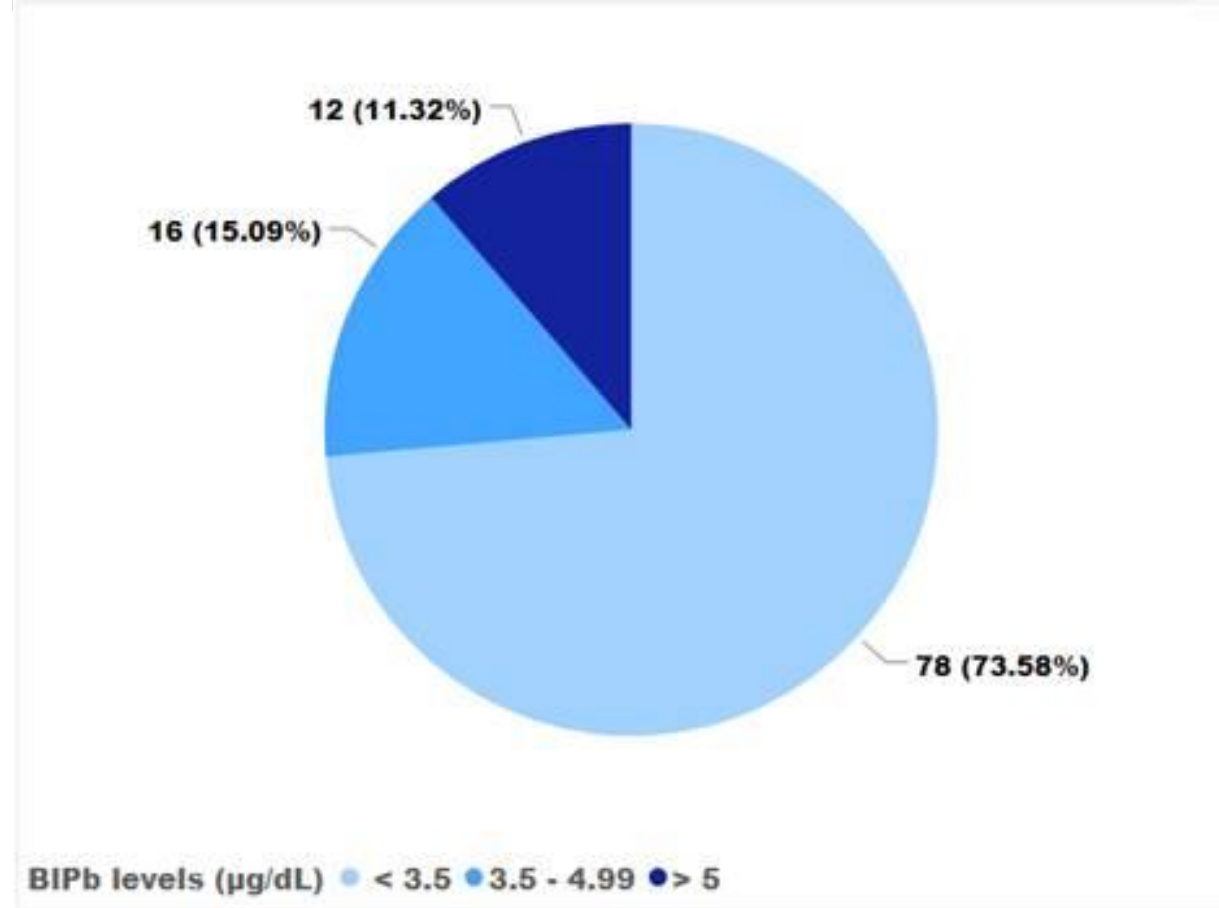


Blood Pb Level Threshold

- 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, when higher Pb burden 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.

Range of Blood Pb Levels

Figure 3. Proportion of children stratified by blood lead levels for 2022



Blood Pb levels

Figure 4. Proportion of children stratified by blood lead levels for three areas in 2022

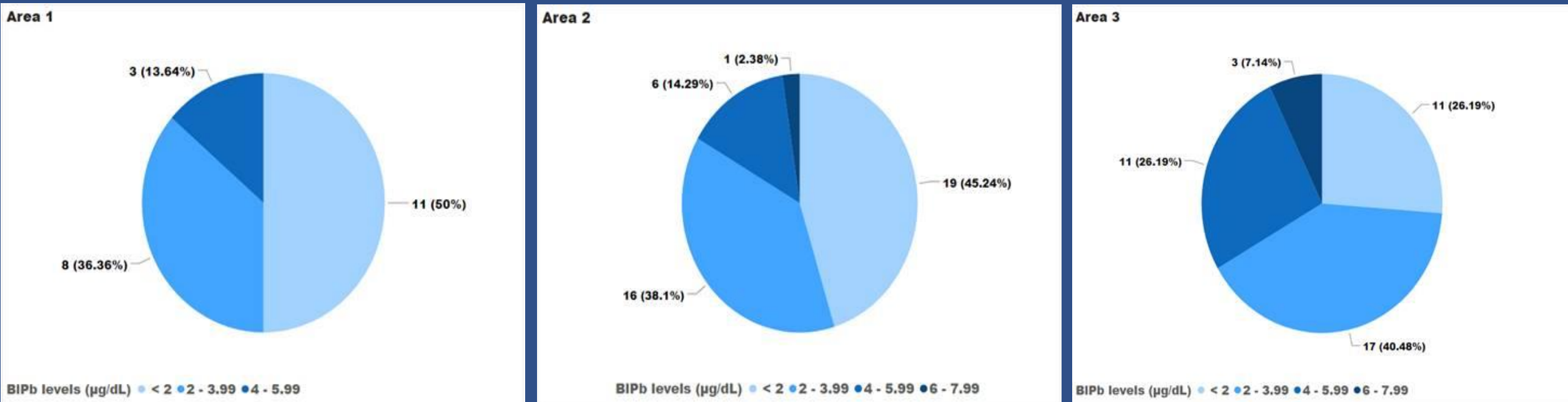
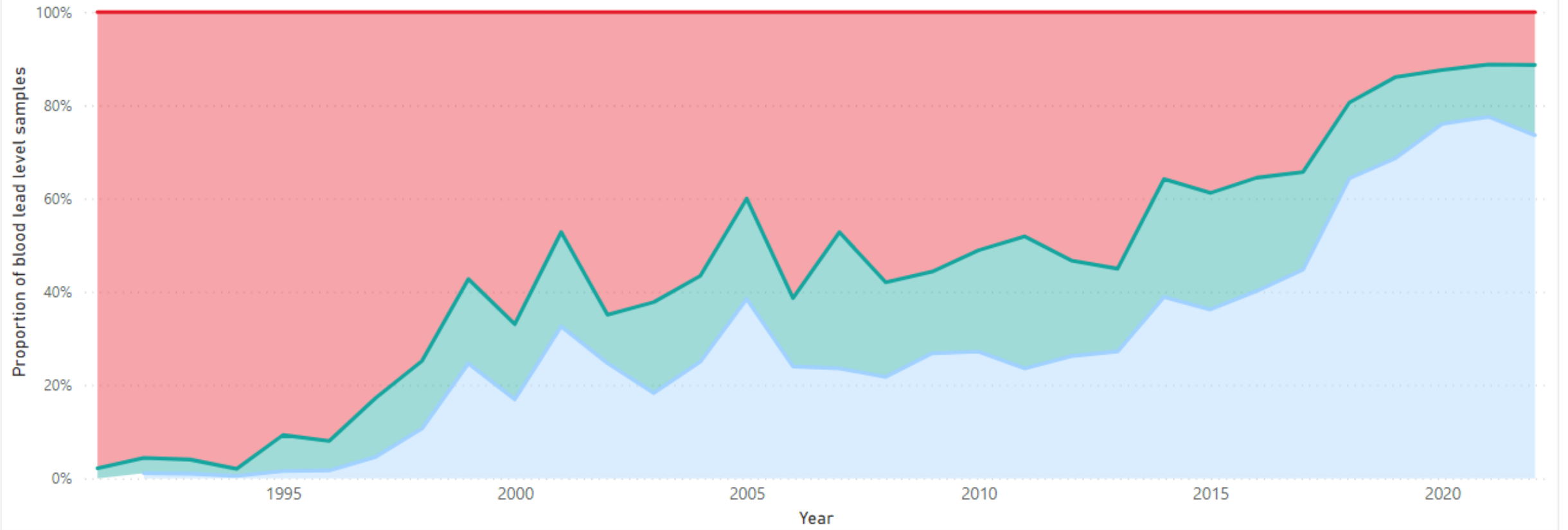
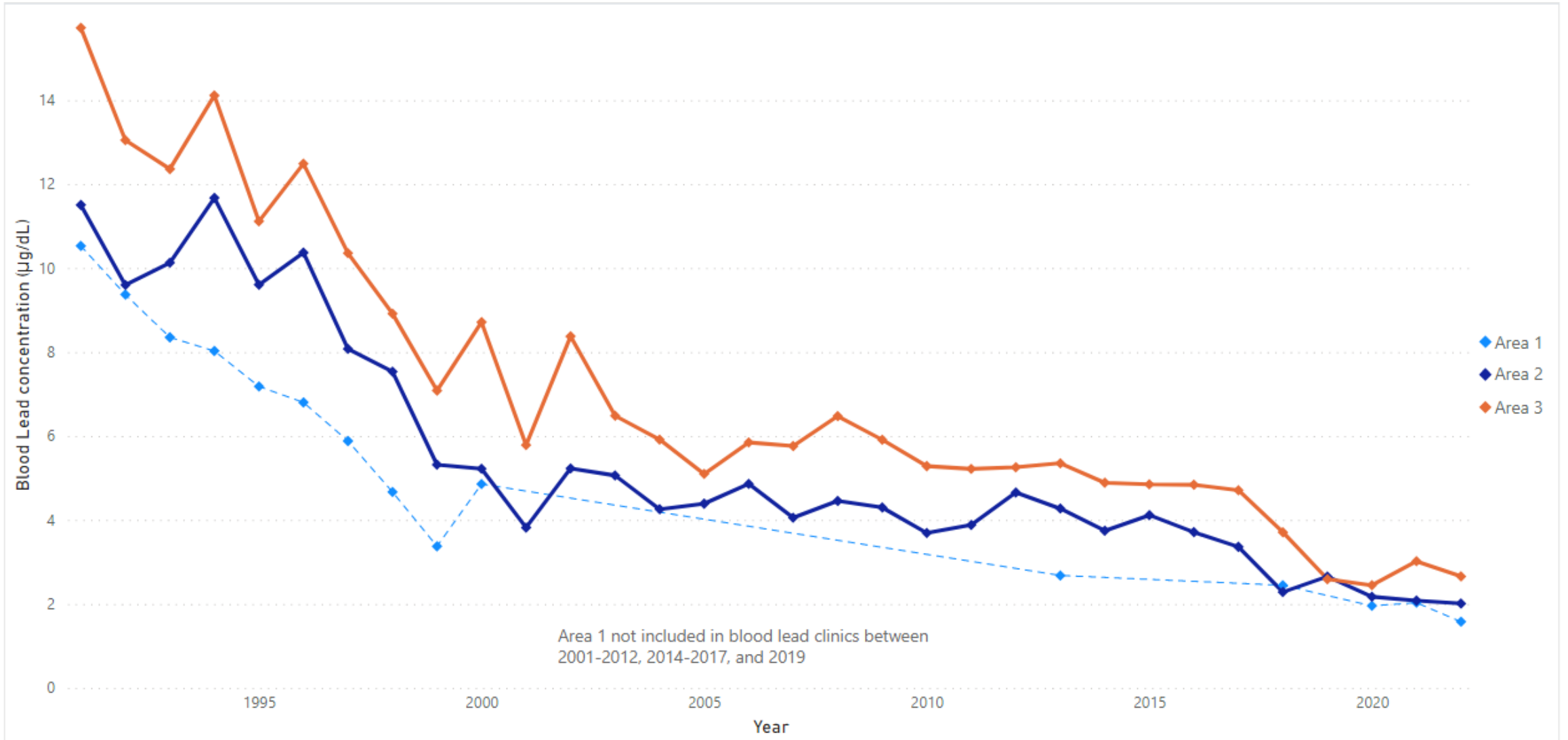


Figure 5. Proportion blood Pb samples collected over the years for all areas by blood lead level concentrations

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



Trend of Blood Pb Geomean by Area



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

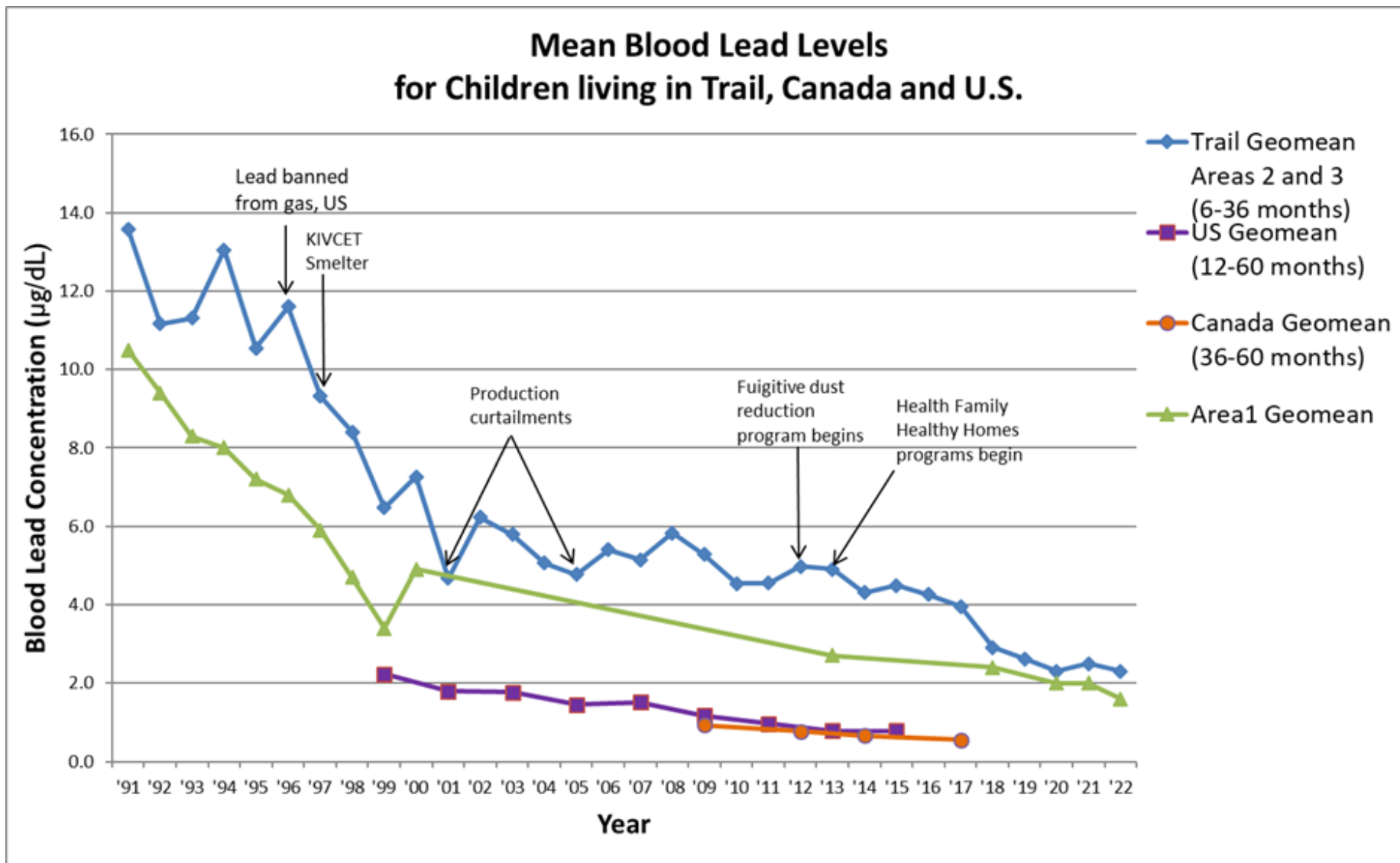
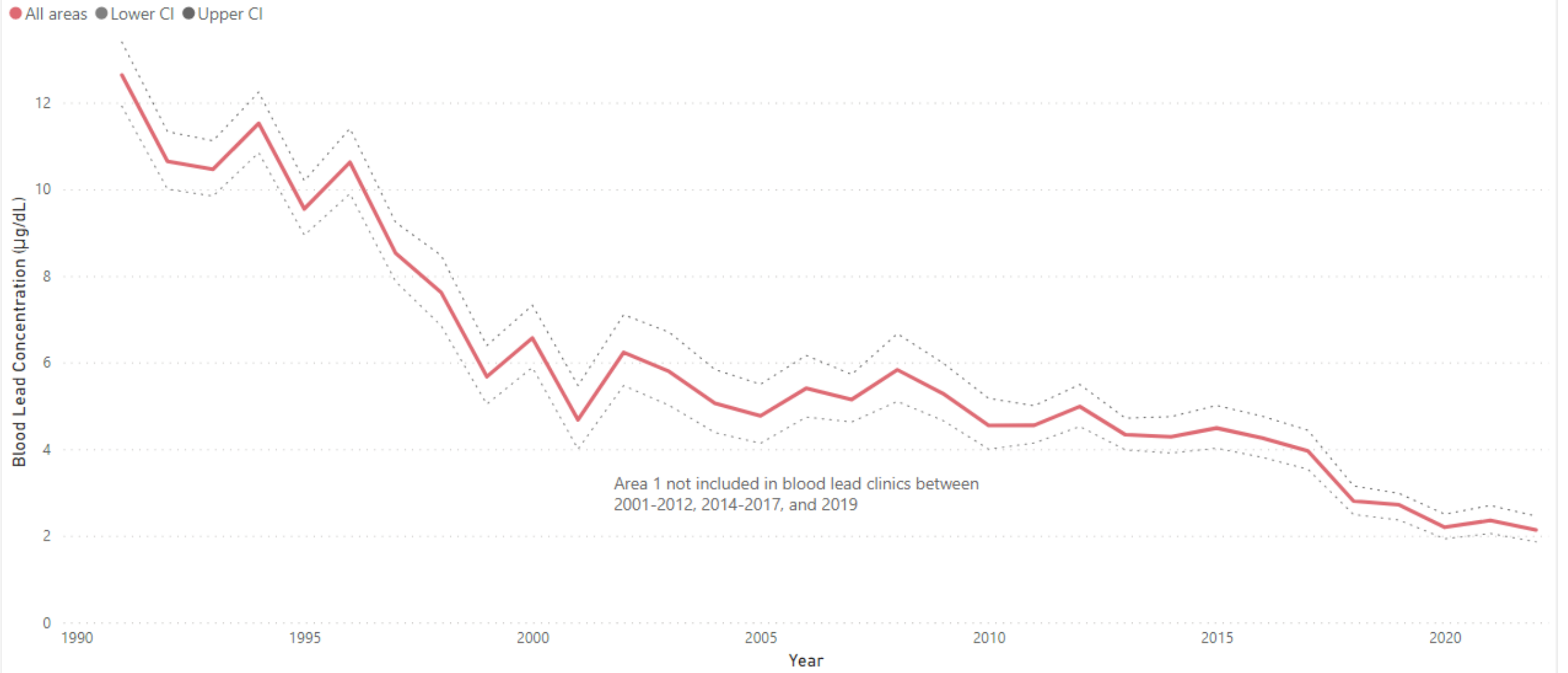


Figure 8. Blood lead concentration over the years by all areas combined along with confidence interval (CI)



Concluding messages

- In 2022, participation in BL clinics increased for all areas, with area 2 returning to almost 80%. While areas 3 and 1 have increased relative to 2021, they are notably lower than previous years.
- The blood lead geometric mean was 2.3 for areas 2 & 3. It was 2.1 for all areas. These are lower than 2021 means of 2.5 and 2.4 (2.35) respectively.
- The mean blood lead levels continue to demonstrate evidence of exposure to lead in the environment. 11% of children tested have blood lead values of 5 or greater, but no value was greater than 8.
- A slight to moderate decrease was seen in blood lead levels in all areas in 2022 vs 2021.



Thank you

