

# Trail Area Health & Environment Committee



## SUMMARY

**Meeting:** April 20, 2023, 7:00 p.m.

**Location:** *Online by Zoom*

### **Committee Members in attendance:**

Colleen Jones, Chair, City of Trail  
Thea Hanson, Alternate Chair, City of Trail  
Ashley Melenchuk, Community (Parent)  
Dr. Karin Goodison, Interior Health MHO  
Steve Hilts, Community Member (History)

Jasen Nelson, BC Ministry of Environment  
Clare North, Teck Trail Operations  
Dan Bouillon, Teck Trail Operations  
Fran Noone (alternate), Village of Warfield  
Jane Power, Interior Health

### **Others in attendance:**

Vicki Beard, Dep. for Energy and Mining, South Australia  
Michelle Piro, Government of South Australia  
Mikell Afford, Health, Government of South Australia  
Sonia Thornton, Health, Government of South Australia  
Jayne Garry, Teck Trail Operations  
Thompson Hickey, Teck Trail Operations  
Morgan Sternberg, Community Program Office (CPO)

Nelson Ames  
Dave Bell, Teck Trail Operations  
Keith Klimchuk, Teck Trail Operations  
Meghan Morris, Interior Health  
Christina Yamada, Interior Health  
Cindy Hall, Community Program Office  
Alexa Matthes, (CPO)

*The Trail Area Health & Environment Committee (THEC) meets five times per year online or in-person. Members, designates and community members are welcome.*

## WELCOME and INTRODUCTIONS

- Mayor Colleen Jones, THEC Chair, welcomed everyone online and hosted a round table of introductions.

## MEETING MINUTES

- The meeting summary from the THEC meeting, February 22<sup>nd</sup>, 2023 was approved. One change was shared via email to correct the phone number of Teck's 24/7 Environmental Feedback Line.

## PRESENTATIONS, REPORTS, DISCUSSIONS & RECOMMENDATIONS

### **Knowledge Sharing & Learning with lead smelting and mining communities in Australia**

Steve Hilts chaired the presentation and panel discussion. He shared that communities that live in close proximity to active lead smelting and mining facilities share unique challenges when working toward the goal of thriving families, environment and economy. For more than thirty years sharing has taken place between Australian communities and Trail (of which he was part of, and initiated, during his tenure with the Trail Lead Task Force studies). A session sharing experiences from Broken Hill and Port Pirie was ranked as a priority by THEC members who participated in a December 2022 survey soliciting topics for THEC meetings.

### **Port Pirie presenters:**

- Razia Zariff, Senior Scientific Officer, Port Pirie Lead Investigation Group, South Australian Department for Health and Wellbeing
- Peter Dolan, Executive Director, Targeted Lead Abatement Partnership (TLAP)
- Sophie Martin - Manager Compliance and Regulatory Practice, Environment Protection Authority South Australia (SA EPA)

- Joining for the panel discussion that followed was Dr. Carolyn Lewis, Principal Scientific Officer, Port Pirie Lead Investigation Group, South Australian Department for Health and Wellbeing

#### **Broken Hill presenter:**

- Dr. Frances Boreland, Technical Officer, Broken Hill Environmental Lead Program, New South Wales Environment Protection Authority

Presenters shared the unique differences of each site as well as some common challenges. The questions and discussion focused on a range of topics such as providing daycare funding for children to reduce time spent in residences with lead exposure, program funding models, public information campaigns including grandparents, neighbourhood scale yard remediations, blood lead clinic attendance as well as making professional connections between Trail and Australian counterparts. See attached for presentations. A recording will be edited and shared on thep.ca.

#### **Soil Management Update ‘What’s New in 2023’**

##### **Presenter Dave Bell, Teck Trail Operations**

The soil management update included information on the addition of paint screening for lead as part of residential soil assessment as well as a pilot block initiative offering soil management to four blocks in East Trail.

- See attached presentation.

#### **Program Reports & Updates**

*Air Quality, Family Health and Community Program Office reports are provided in the agenda package for your review prior to the meeting. Please bring your questions and comments for discussion.*

#### **Q&A and Comments on Reports All**

- Air Quality, Health and Community Program Office reports are attached. No questions were asked.

#### **Community & Round Table Check-In - All**

- During the round table, Dr Goodison shared she is working with local physicians along with Meghan Morris, THEP’s public health nurse, to integrate screening for lead as part of maternal health check-ups. Port Pirie shared that they provide clinical guidelines to physicians. Broken Hill also provides guidelines and an orientation to new physicians.

#### **Program Planning Update - Michelle Laurie, THEC Lead Facilitator (10 min)**

- Highlights shared included hosting a lunch and learn on THEP for local government elected officials, supporting communications for soil management, progress on updating THEP’s brochure on how it supports the community, new signage in the community to promote air quality monitoring and handwashing along with a survey in progress seeking feedback on THEP’s Healthy Families Healthy Homes from 2020-2022. Newsletters will be in mailboxes early May and people can subscribe online at thep.ca.

#### **Partner Meeting Report – Colleen Jones, Chair**

- There was no partner meeting. Still, Mayor Jones shared that she received an update from the Assistant Deputy Ministers from Ministries of Environment and Health on the Trail Health Review Committee. Mainly the THRC is being transitioned to a Technical Working Group with the purpose to support the Provincial Health Officer if needed.
- The Assistant Deputy Ministers and other Ministry staff plan to visit Trail to better understand the local context, landscape and work taking place June 21-23, 2023.

**2023 THEC MEETING DATES**

- June 15
- September tbc
- November tbc

THEC meetings are held from 7:00-9:00pm.

# Trail Area Health & Environment Committee



## AGENDA

April 20, 2023, 7:00 p.m.

Location: *Online by Zoom*

<https://us02web.zoom.us/j/81736891693?pwd=OFFzTWWhNWk1YaEFCSHRUWU4rekRSQT09>

### Committee Members:

Colleen Jones, Chair, City of Trail	Linda Worley, RDKB Area B
Thea Hanson, Alternate Chair, City of Trail	Carolyn Amantea, Village of Warfield
Dr. Karin Goodison, Interior Health MHO	Ali Grieve, RDKB Area A
Jane Power, Interior Health	Cassandra Caunce, BC Ministry of Environment
Trevor Allegretto, USW Local 480 Rep	Jasen Nelson, BC Ministry of Environment
Ron Joseph, Community Member (Resident)	Erika Krest, Community Member (Chamber)
Dan Bouillon, Teck Trail Operations	Steve Hilts, Community Member (History)
Clare North, Teck Trail Operations	Julia Stockhausen, Community Member (FAN)
Annick de Goede, Community Member (Parent)	Ashley Melenchuk, Community (Parent)

*The Trail Area Health & Environment Committee (THEC) meets five times per year online or in-person. Members, designates and community members are welcome.*

### WELCOME and INTRODUCTIONS

- Opening remarks from Colleen Jones, THEC Chair

### MEETING MINUTES

- Approve minutes from THEC meeting, February 22, 2023 (as attached)

### PRESENTATIONS, REPORTS, DISCUSSIONS & RECOMMENDATIONS

#### **Presentation and Panel: Knowledge Sharing & Learning with lead smelting and mining communities in Australia (45 mins)**

Communities that live in close proximity to active lead smelting and mining facilities share unique challenges when working toward the goal of thriving families, environment and economy. For more than thirty years sharing has taken place between Australian communities and Trail.

**Moderator:** Steve Hilts, THEC Community Member

#### **Presenters**

- **Port Pirie:**
  - Razia Zariff, Senior Scientific Officer, Port Pirie Lead Investigation Group, South Australian Department for Health and Wellbeing
  - Peter Dolan, Executive Director, Targeted Lead Abatement Partnership (TLAP)
  - Sophie Martin - Manager Compliance and Regulatory Practice , Environment Protection Authority South Australia (SA EPA)
- **Broken Hill:**
  - Dr. Frances Boreland, Technical Officer, Broken Hill Environmental Lead Program, New South Wales Environment Protection Authority

#### **Panel Discussion additional guests:**

Dr. Carolyn Lewis, Principal Scientific Officer, Port Pirie Lead Investigation Group, South Australian Department for Health and Wellbeing

### **Soil Management Program Update: *What's New in 2023* (10 mins)**

**Presenter Dave Bell, Teck Trail Operations**

- Resource: [Pilot Block Program FAQs online](#)

### **Program Reports & Updates**

*Air Quality, Family Health and Community Program Office reports are provided in the agenda package for your review prior to the meeting. Please bring your questions and comments for discussion.*

### **Q&A and Comments on Reports All (10 mins)**

- Q&A on all reports (Air Quality, Health, Community Program Office)

### **Community & Round Table Check-In - All (15 mins)**

- Round table contributions & questions

### **Program Planning Update - Michelle Laurie, THEC Lead Facilitator (10 min)**

- Program team support: planning, team meetings, tools for knowledge sharing.
- Monitoring updates:
  - HFHH survey launched for 2 weeks in April.
  - Undertaking rapid review of program participation based on THEP areas.
- Communications update:
  - Communication plan update
  - Online team knowledge base
  - Newsletter (subscribe for online version at [thep.ca](http://thep.ca)).
  - Several public communications are coming to fruition including signage in the community and updating brochures.

### **Partner Meeting Report – Colleen Jones, Chair**

#### **2023 THEC MEETING DATES**

- June 15
- September tbc
- November tbc

THEC meetings are held from 7:00-9:00pm.

# **Presentations**

- 1) Knowledge Sharing & Learning with lead smelting and mining communities in Australia**
- 2) Soil Management Program Update: *What's New in 2023***



**Nyrstar, Port Pirie, SA,  
Australia**



**Teck, Trail, British Columbia,  
Canada**

# TLAP AGREEMENT

- 10-year agreement, between Nyrstar Port Pirie and the State Government, commenced 2014.
- New Governance arrangements were put in place in mid-2021 following an independent review.
- TLAP Board:
  - Dale Webb and Todd Milne (Nyrstar)
  - Dr Paul Heithersay (CE DEM)
  - Sandy Pitcher (A/CE DHS)
  - Prof Nicola Spurrier (CPHO SA Health)
  - Leon Stephens (Mayor of PPRC)
- Full time Executive Director (me)
- Will be extended to 2034; negotiations underway.







Targeted Lead Abatement Program

For the future  
we all want.

1. House & Land Remediation
2. Community Health
3. Strategic Projects
4. Clean Community
5. Community Engagement



# ACHIEVEMENTS

- Social Impact Assessment leading to increased participation
- Increased caseworker resources & subsidised childcare
- Comprehensive road sweeping & footpath cleaning program
- Homes & Houses - lead remediation program
- Collaboration with PP Regional Council on greening programs
- TLAP Community Reference Group
- "Here's What Matters" engagement campaign

# **NEXT STEPS**

- Extension of TLAP agreement until 2034 (currently being negotiated)
- Enhanced cooperation between a wide range of State Government agencies with an interest in Port Pirie
- Precinct wide remediation of high risk areas rather than a focus on individual homes.

# Port Pirie Lead Investigation Group

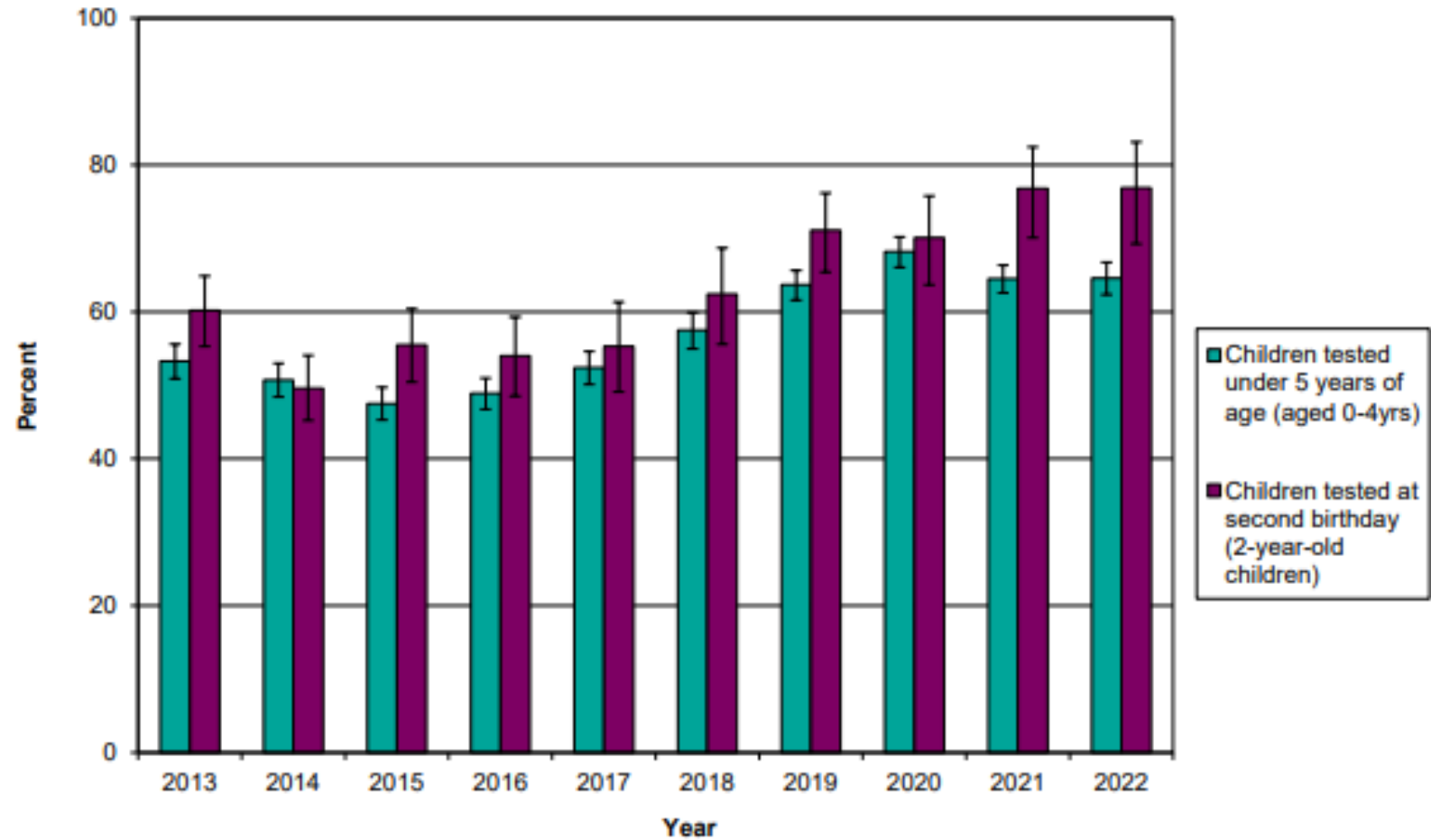
- Latest blood lead results
- EHC support
- Research



Government  
of South Australia

SA Health

# 2022 Blood lead data for Port Pirie



## EHC support

- > Environmental sampling training and interpreting results
- > Extensive in home sampling using XRF



- > Literature review for complex questions

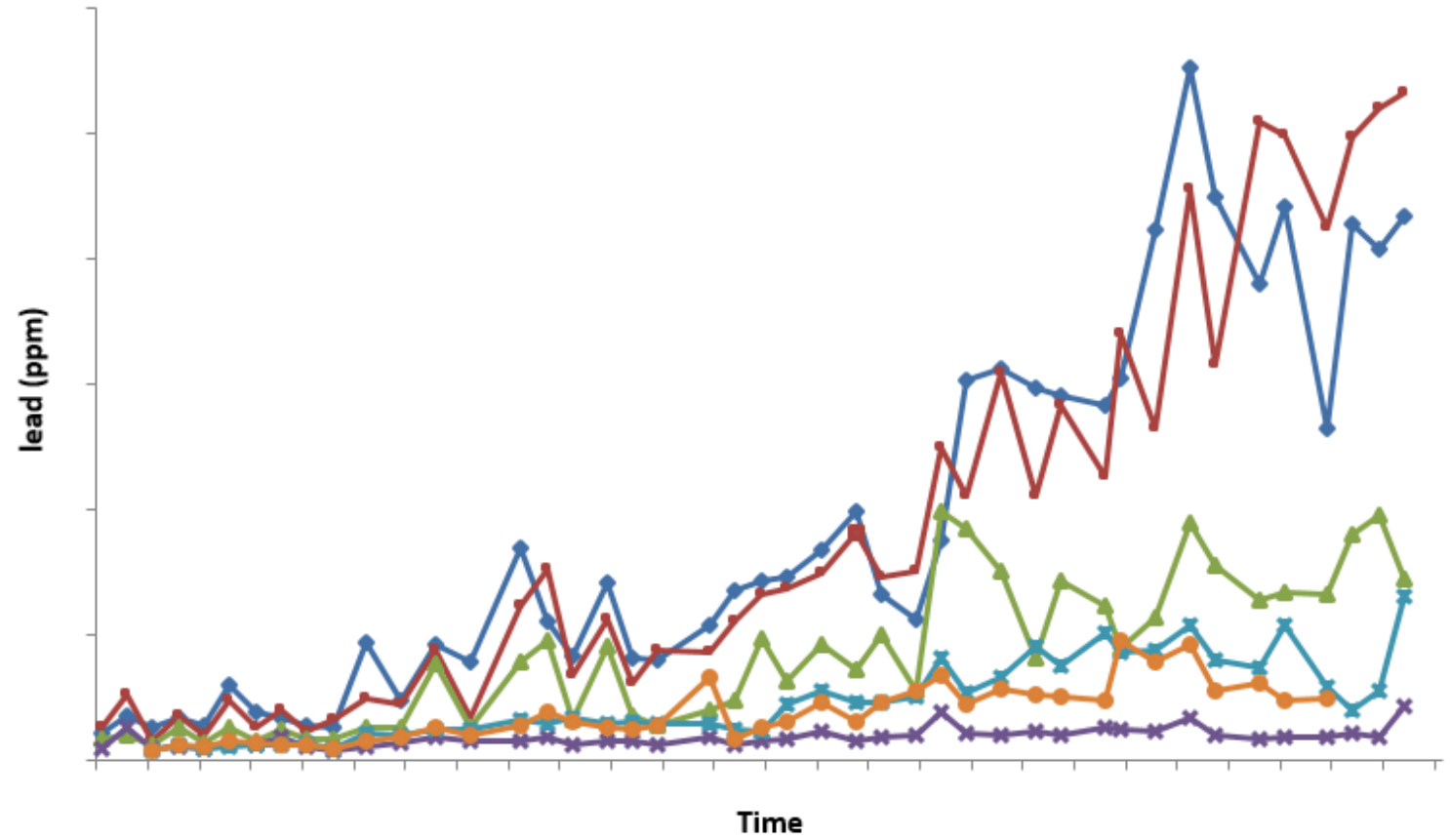


# Lead research

- Recontamination study – indoor and outdoor
- Directional dust deposition gauges
- Dust characterisation

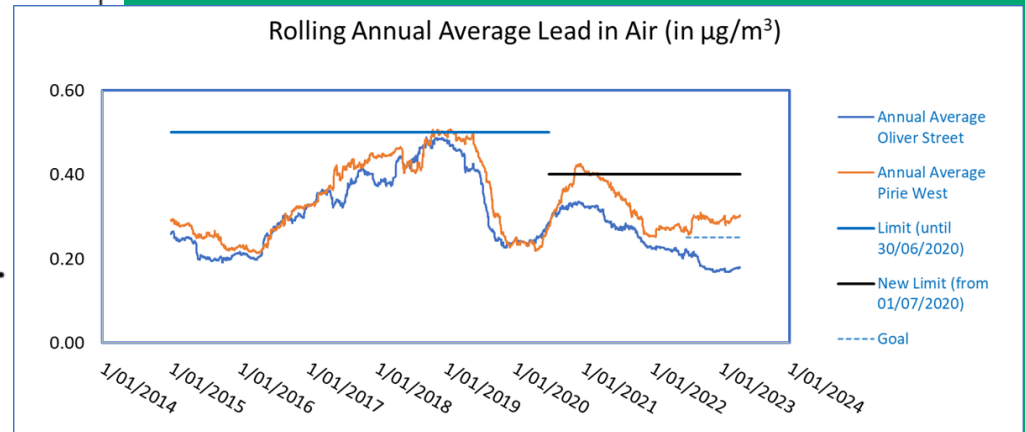
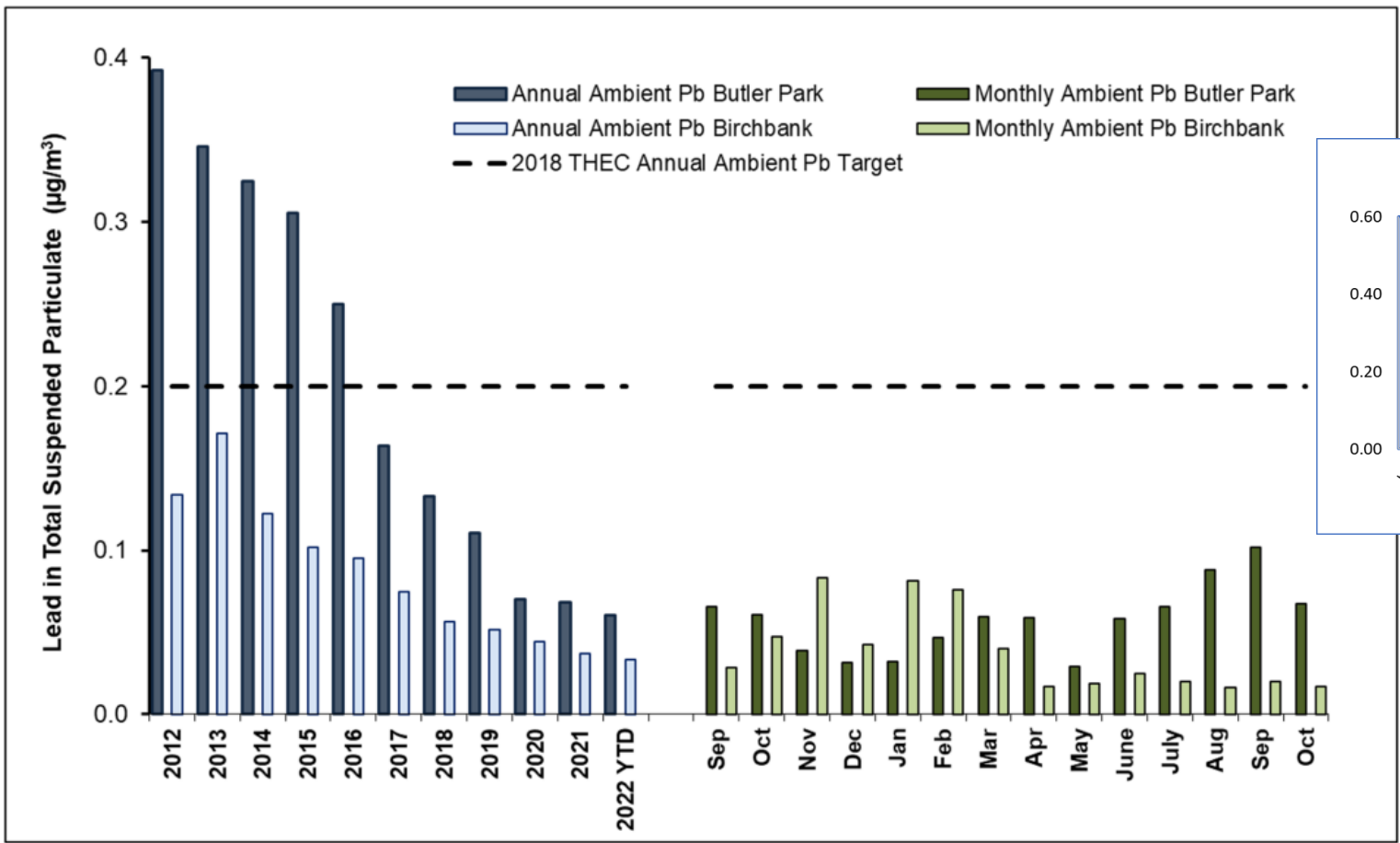


# Soil recontamination





# Performance – comparison, LIA annual



- Lessons learnt
- Focus for the future – plant stability AND fugitive emissions
- More investment needed

Figure 2: Annual and monthly average lead at Butler Park and Birchbank stations (as total suspended particulate measured bi-daily)

# The 2023 licence will (likely) include




**PROGRESSIVE LEAD-IN-AIR (LiA) LIMIT and TARGET REDUCTIONS OVER FIVE YEARS**



**ADAPTIVE MANAGEMENT APPROACH**




**SULPHUR DIOXIDE (SO<sub>2</sub>) EMISSIONS LIMITS**



**WASTE WATER DISCHARGE IMPROVEMENTS**




**ELIMINATION OF OPEN STOCKPILES OF LEAD BEARING MATERIAL**



**STREAMLINING MONITORING AND REPORTING**



**LiA GOAL TO BE ACHIEVED IN THIS LICENCE PERIOD**



Environment Protection Authority

# Managing children's blood lead levels in Broken Hill, NSW

Dr Frances Boreland

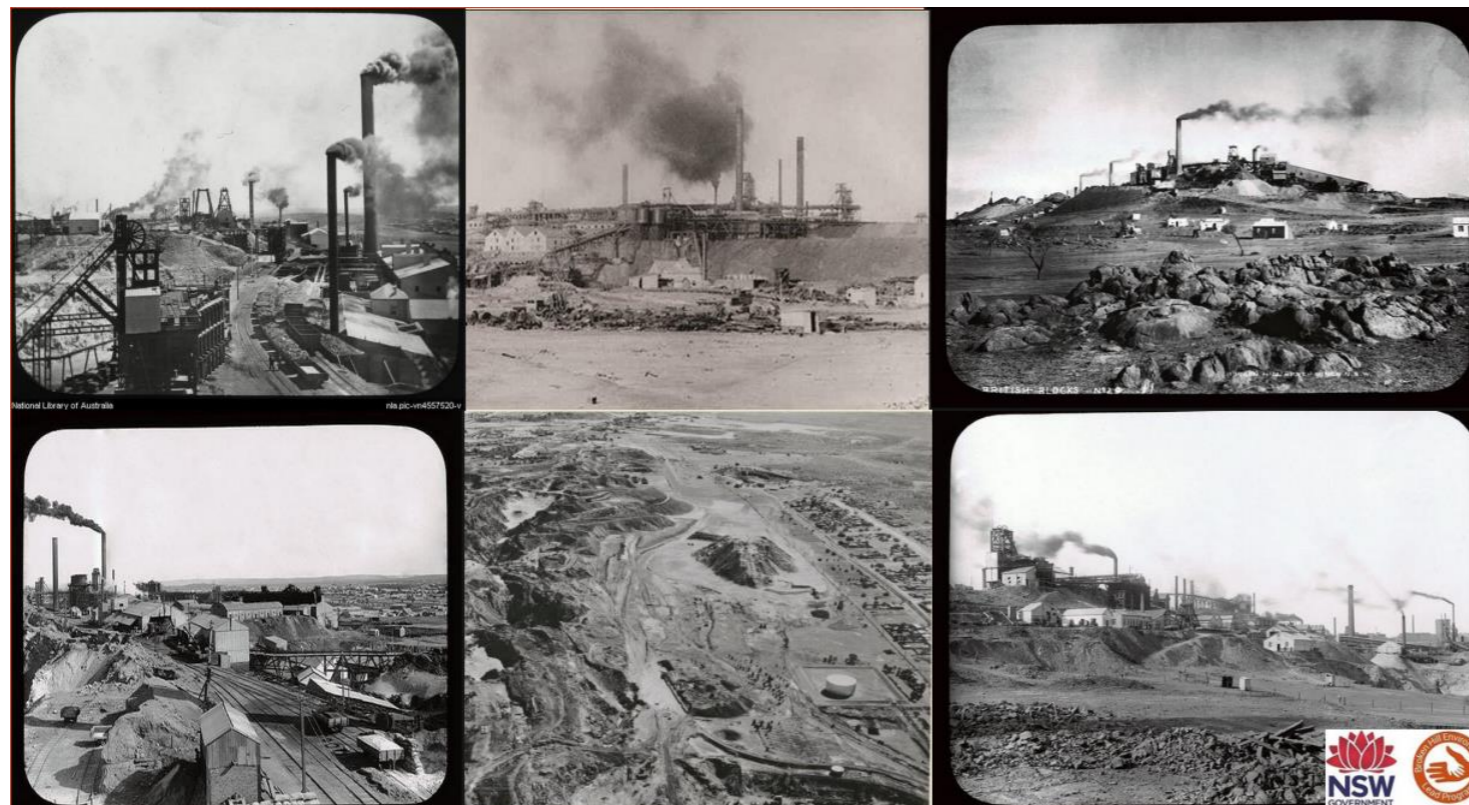
April 2023



# Topics

- Background
- Sources of lead exposure
- Blood lead levels in Broken Hill
- Lead management in Broken Hill
- What we've learnt from other lead management programs
- Current challenges

- Mining since 1883
- Silver initially, then lead
- Smelting until 1898
- Multiple changes of company ownership
- Currently 3 mines (2 companies)



# Headlines



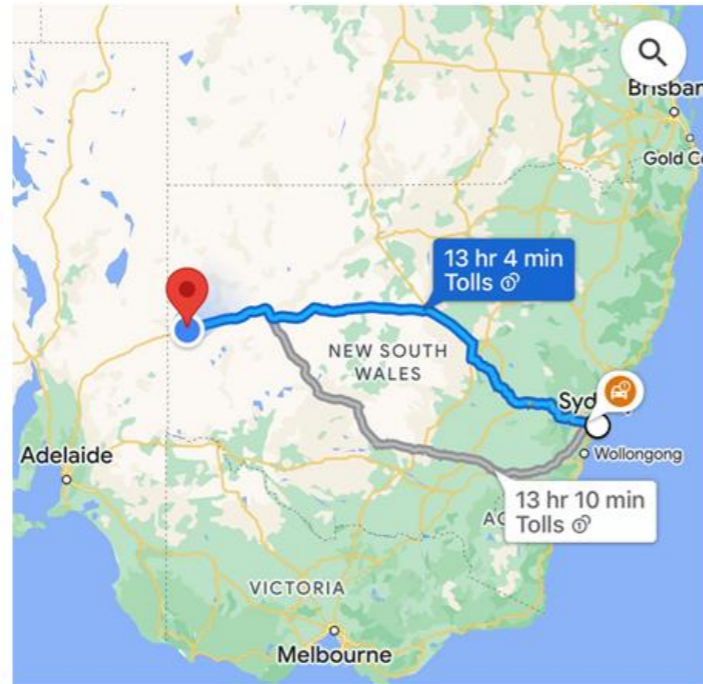
B 54756/2

- The town grew up around the Line of Lode (ore body) and physically surrounds it



- Homes and child care centres within 100m of the Line of Lode

# Broken Hill



- Remote – 2 day drive from state capital
- Current population 17,661
- Major industries 2021
  - Health care/social assistance (21.8%)
  - Mining (11.0%)
  - Retail (10.8%)
- Semi arid –
  - Av rain 259.7 mm
  - Range 58 – 714 mm
  - Av max 15.7 – 33.7 °C
  - Av min 4.8 – 19.3 °C
  - Range -4.6 – 46.3 °C





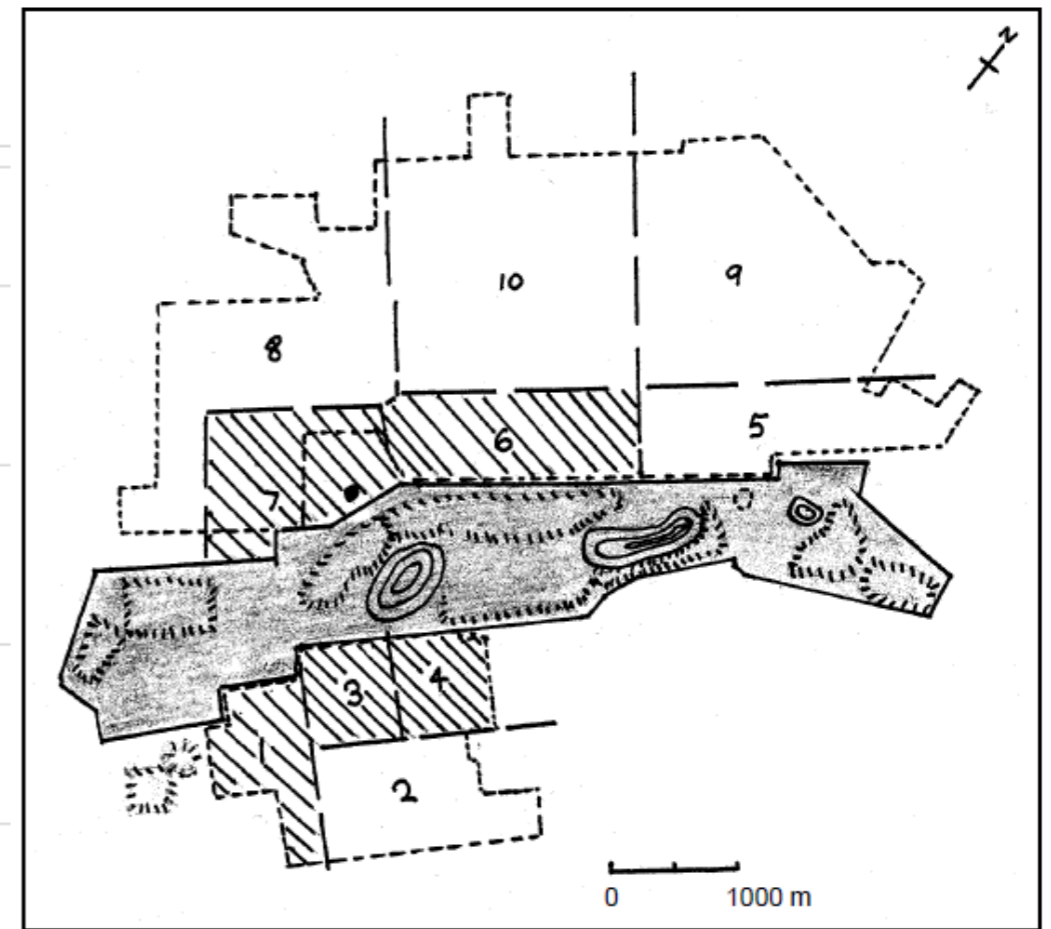
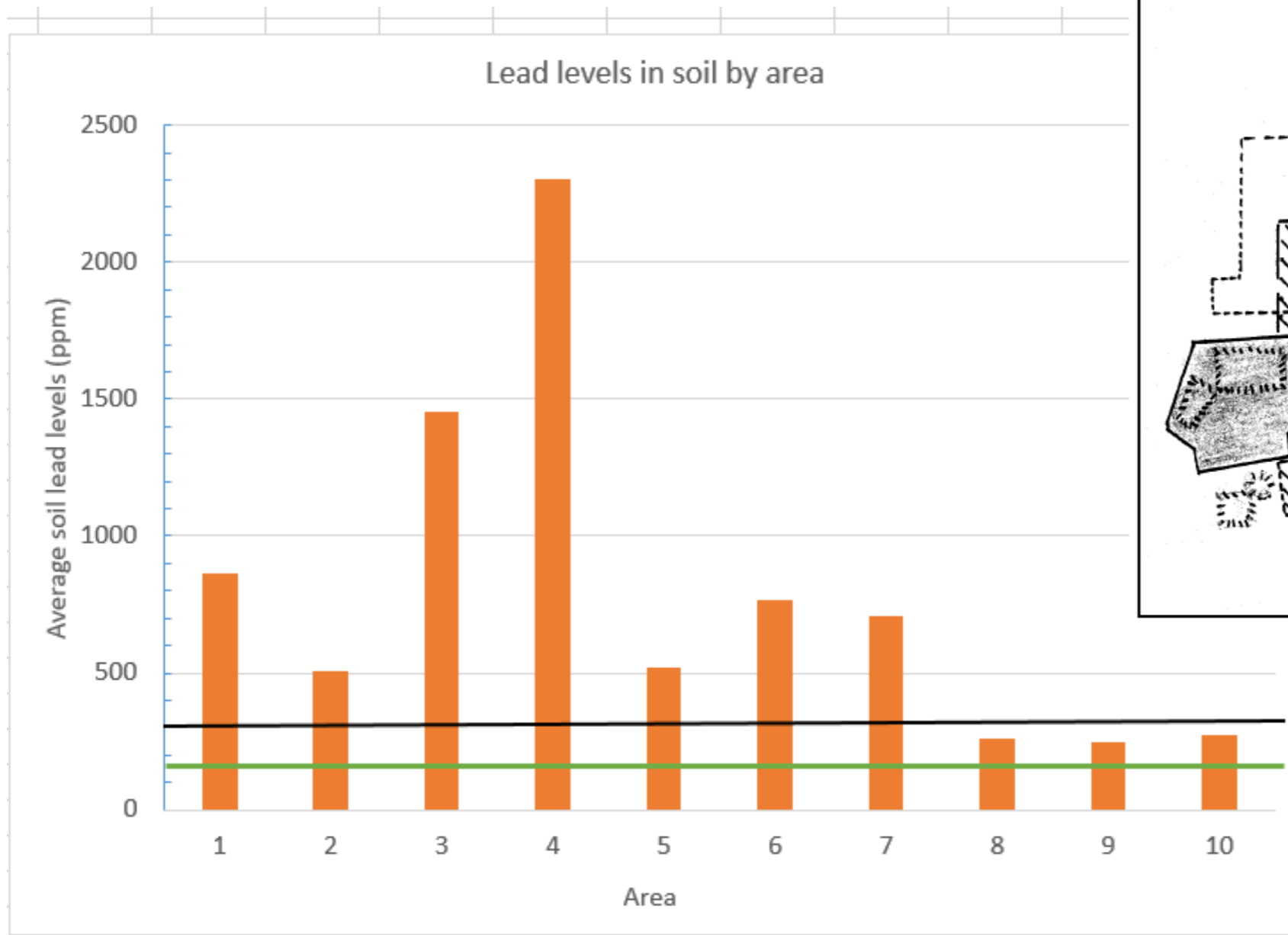
- Climate of extremes – dust storms to intense rains



- High blood lead levels identified as a significant public health issue for young children in Broken Hill in 1991
- Majority of homes have soil lead levels above 300 mg/kg (HIL residential soils)
- Majority of Broken Hill homes built before 1970 and likely to have issues with lead-based paint

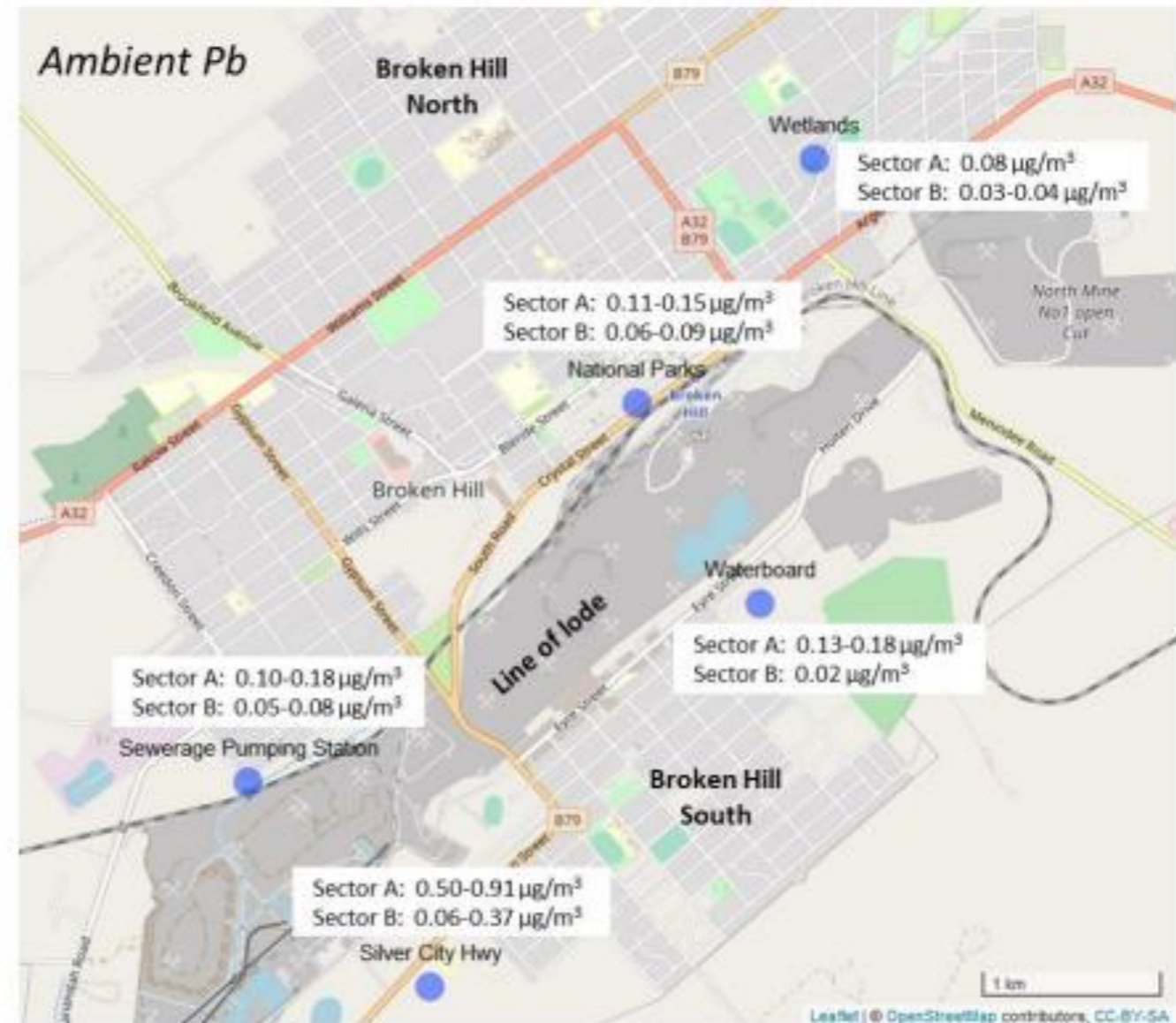


- Soil lead levels



## Ambient lead levels

- Lead levels 2 – 3 X higher when wind from Line of Lode
- Higher closer to Line of Lode



- Oldest homes closest to Line of Lode

Red = pre 1914

Orange = 1915 – 1939

Yellow – 1940 – 1970

Green = 1971+



## Other risk factors:

- Social disadvantage
- Apathy from locals “I grew up with it and I’m fine”
- High turnover of key professionals – eg GPs, medical staff, teachers, dentists, emergency services etc
- **Overlapping risk factors** people with a higher level of social disadvantage tend to live closer to the Line of Lode on land that is highly contaminated, in houses in poorer condition, and with high levels of lead paint. These people have few resources and face the biggest challenges

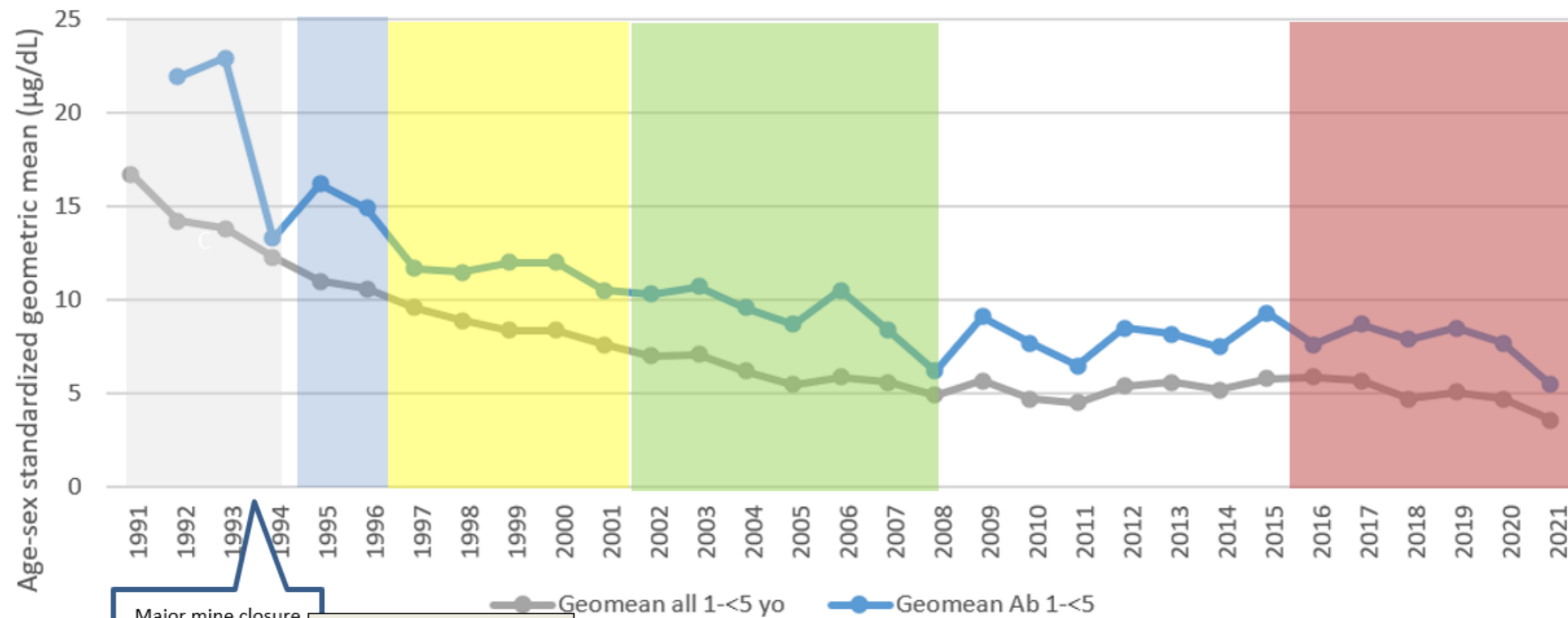
# Lead management

---

## Lead management in Broken Hill:

- Comprehensive free voluntary screening program since 1991
    - 12 - < 60 month old children: since 1991 – estimated participation rate > 80%
    - 6 < 12 months: 2000 – 2012 and 2018 to present
    - Cord blood of babies born at BH hospital: 1996 to present
  - Education and awareness
  - Remediation of homes and public spaces
  - Research and evaluation
- Minimise emissions (dust and sediment) from Line of Lode and adjacent rail corridor

Age-sex standardized geometric mean blood lead level for All 1 - < 5yo children, and 1 - < 5yo Aboriginal children



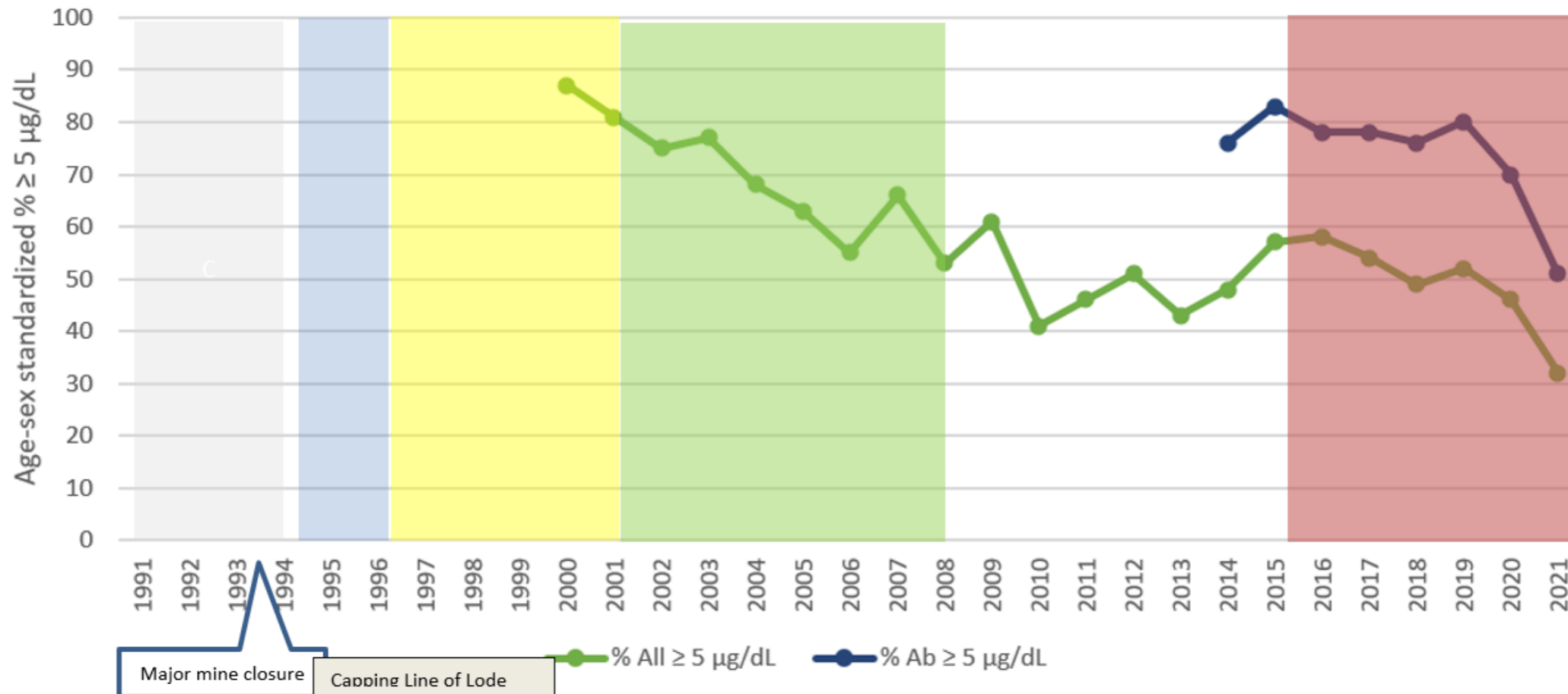
Major mine closure (1993-1994)  
Capping Line of Lode (1994-2001)

- Grey box – initial discovery and investigation of sources of exposure
  - Blue box – Short Term Strategy (1<sup>st</sup> BHELP) – blood lead testing, trial home remediation, public land rem
  - Yellow – Long Term Strategy (1<sup>st</sup> BHELP extension) as above
  - Green – integration strategy- mostly blood lead testing, small amount remediation
  - White – blood lead testing and minimal promotion, very limited/no remediation
  - Reddish – BHELP # 2
- Likely driver reduction in blood lead 1991 – 2000 is significant reduction of mining output and capping of Line of Lode.

Maybe starting to see reduction in blood lead since 2018.



### Age-sex standardized percent of All 1 - < 5yo children, and 1 - < 5yo Aboriginal children, with blood lead levels $\geq 5 \mu\text{g}/\text{dL}$



- Grey box – initial discovery and investigation of sources of exposure
  - Blue box – Short Term Strategy (1<sup>st</sup> BHELP) – blood lead testing, trial home remediation, public land rem
  - Yellow – Long Term Strategy (1<sup>st</sup> BHELP extension) as above
  - Green – integration strategy- mostly blood lead testing, small amount remediation
  - White – blood lead testing and minimal promotion, very limited/no remediation
  - Reddish – BHELP # 2
- Maybe starting to see reduction in percentage  $\geq 5 \mu\text{g}/\text{dL}$  since 2018.

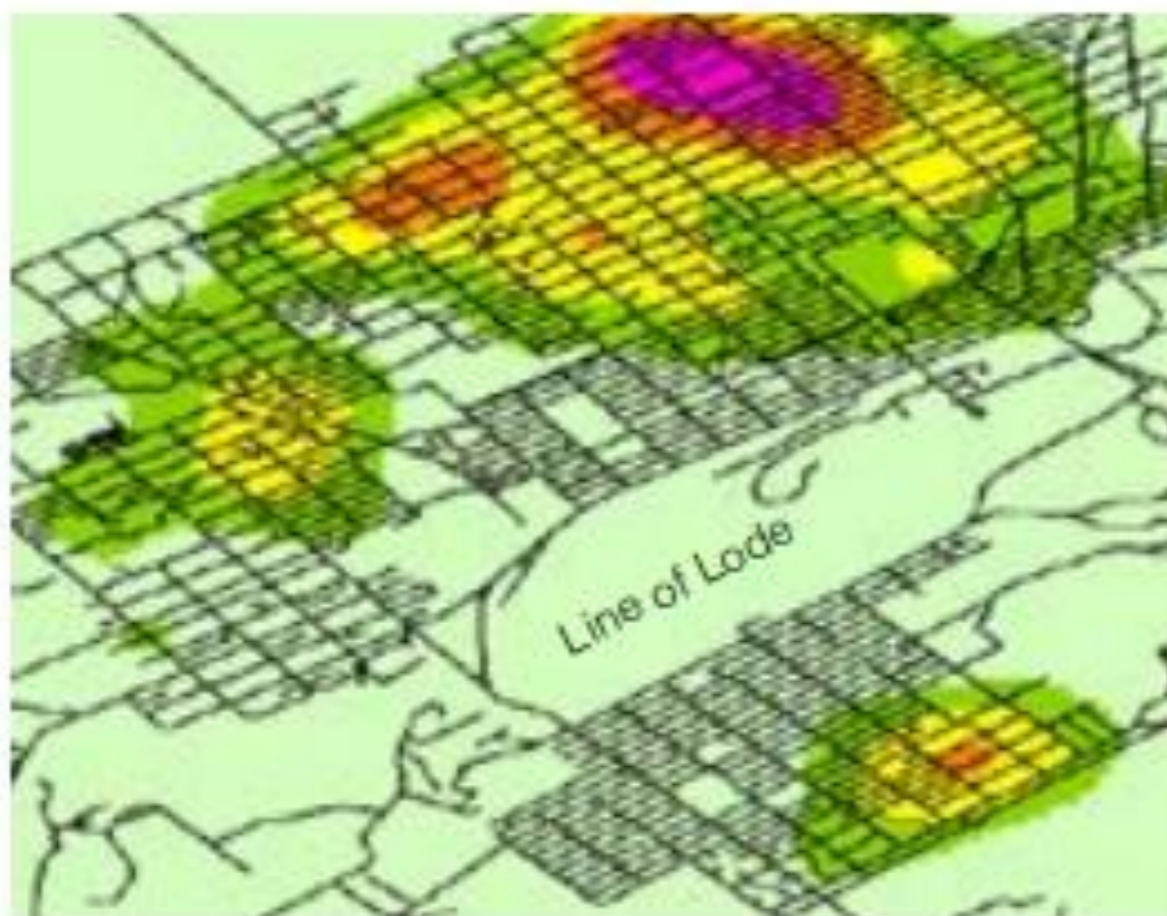
# Longitudinal blood lead study



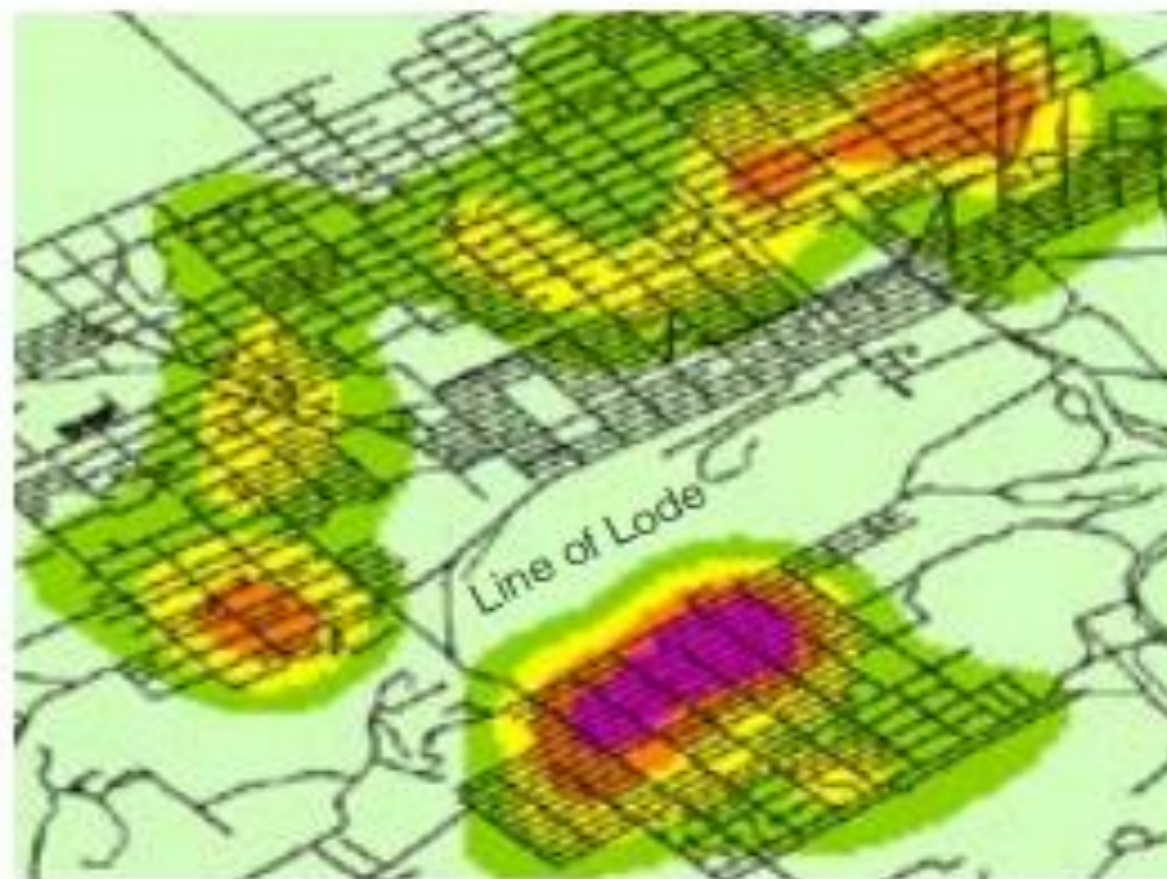
- About 1/3 children stay below 5  $\mu\text{g}/\text{dL}$

About 1/3 children have at least 1 test of 10  $\mu\text{g}/\text{dL}$  or more

**Children with low blood lead trajectory<sup>a</sup>**



**Children with very high blood lead levels<sup>b</sup>**





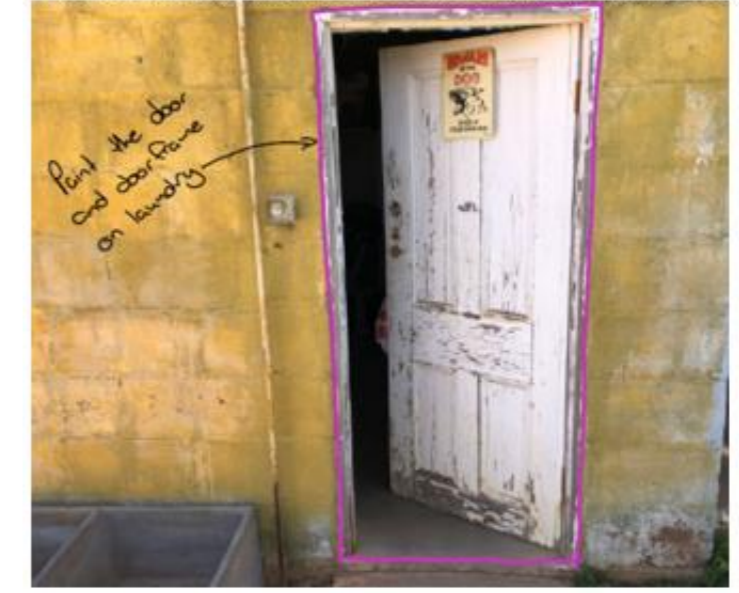
**Example 1:** Owner-occupied. 2 yo, PbB > 15 ug/dL, home well sealed against dust entry, but soils to 3,605 mg/kg.



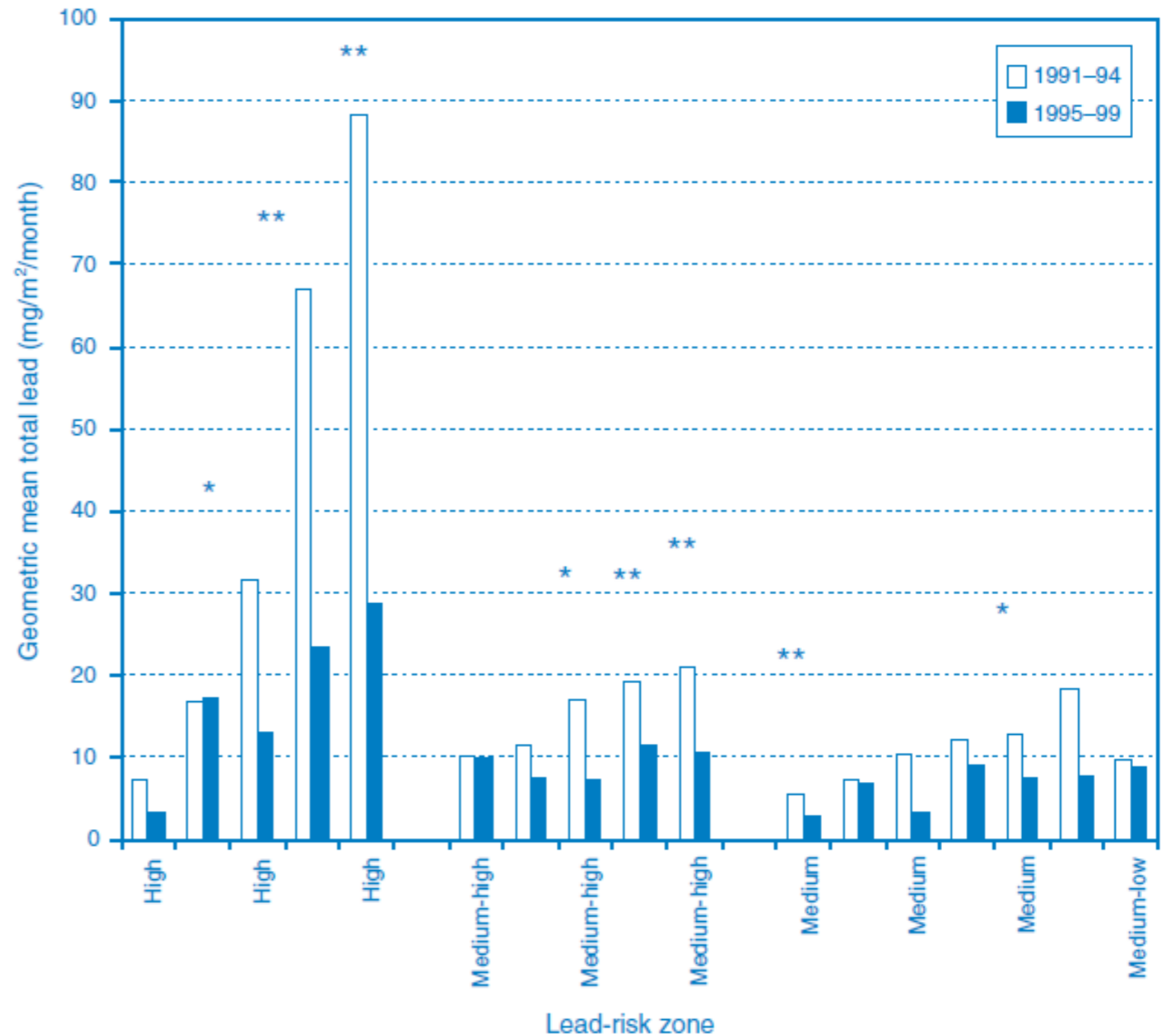
**Example 2:** Rental. 1 yo, PbB > 10 ug/dL. Blood lead levels rose rapidly after moving into property. Home well sealed internally and internal paint and floors in good condition, but high lead in some soil and very high lead paint (<5%) in very poor condition | on back wall flaking onto child play area.



**Example 3:** Owner occupied. 18 months, PbB 10-14 ug/dL, | soils to 670 mg/kg; paint to 5%. Poorly sealed in back lobby.



- Mine closures in the early 1990s and capping the Line of Lode in the mid 1990s significantly reduced lead levels in dust.
- This probably caused most of the reduction in blood lead levels seen during the 1990s.



## What we've learnt from other programs:

- Iterative approaches to understanding sources of exposure and a continuous improvement approach to reducing lead exposure are common
- Very important to have genuine buy-in from all stakeholders (industry, community, government) – developing it takes time
- Adequate resources (leadership and funding) are essential
- Possible to have all children within guidelines and still have lead industry
- Strong emission controls and broad community clean-up more effective than individual approaches

## Current challenges:

- Funding – historically has only been supported in 3 – 5 year tranches, when a longer timeframe was required, and is currently unfunded
  - Strenuous activity on part of NSW EPA to secure ongoing funding for BHELP and an integrated solution that deals with all the exposure pathways
- Recent evidence that emissions from Line of Lode, although much reduced, are still impacting children's blood lead levels – but mines are meeting their current licence conditions
- Potential reduction of blood lead threshold to 3.5 µg/dL
- Competing visions/requirements among government departments for final form of remediation of Line of Lode (Heritage, public safety etc)
- Widespread contamination of residential soils and most our homes built before 1970 – clean up very costly
- Potential significant increase in population due to several upcoming large mining projects within driving distance of Broken Hill
- Need co-ordinated whole of govt approach to minimising emissions and cleaning up contamination – is looking more likely than in recent years

# Soil Management Program 2023 Update





# Soil Management Program

Soil management is one way to reduce lead (Pb) exposure in the home and yard environment

**Aims to:**

**Identify properties with children under 12 years old and assess soil and ground cover**

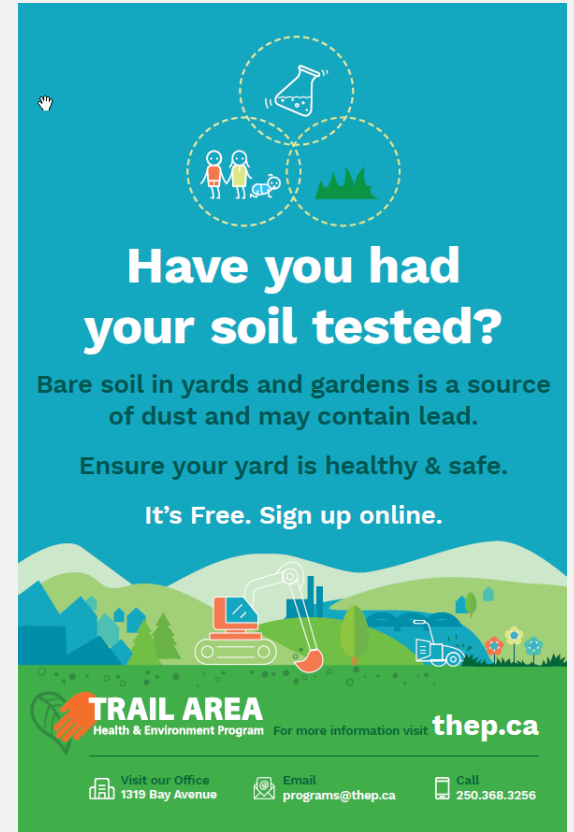
**Prioritize those properties for soil management based on:**

- Soil lead (Pb) levels
- Age of children
- Quality of ground cover

**Annual Soil Management Plan submitted to ENV**

**New Additions in 2023:**

- Standardized Paint Screening (SPS)
- Pilot Block Remediation Program



The flyer features a blue background with a white mouse cursor icon in the top left. At the top, three overlapping dashed circles contain icons: a beaker with a flame, a family with a dog, and a landscape with trees. Below this, the text reads: "Have you had your soil tested?" in large white font. Underneath, it says: "Bare soil in yards and gardens is a source of dust and may contain lead. Ensure your yard is healthy & safe. It's Free. Sign up online." The bottom section shows a colorful illustration of a yard with a house, trees, a red excavator, a blue car, and a blue truck. At the bottom, the logo for TRAIL AREA Health & Environment Program is displayed, along with the website thep.ca. Contact information is provided at the very bottom: "Visit our Office 1319 Bay Avenue", "Email programs@thep.ca", and "Call 250.368.3256".

**Have you had your soil tested?**

Bare soil in yards and gardens is a source of dust and may contain lead.

Ensure your yard is healthy & safe.

It's Free. Sign up online.

**TRAIL AREA**  
Health & Environment Program For more information visit [thep.ca](http://thep.ca)

Visit our Office 1319 Bay Avenue | Email [programs@thep.ca](mailto:programs@thep.ca) | Call 250.368.3256

# Standardized Paint Screening

Many homes in the Trail area were built when the use of lead (Pb) based paint was common

Exterior paint will be screened for lead (Pb) during:

- Soil Assessment
- Soil Management

The purpose of paint screening:

- Inform residents of potential lead (Pb) exposure risks other than soil
- Understand the prevalence of lead (Pb) based paint (and risks to children) in the Trail area



# Pilot Block Program

All priority properties have been offered soil management

- There is **additional capacity in the SMP**.

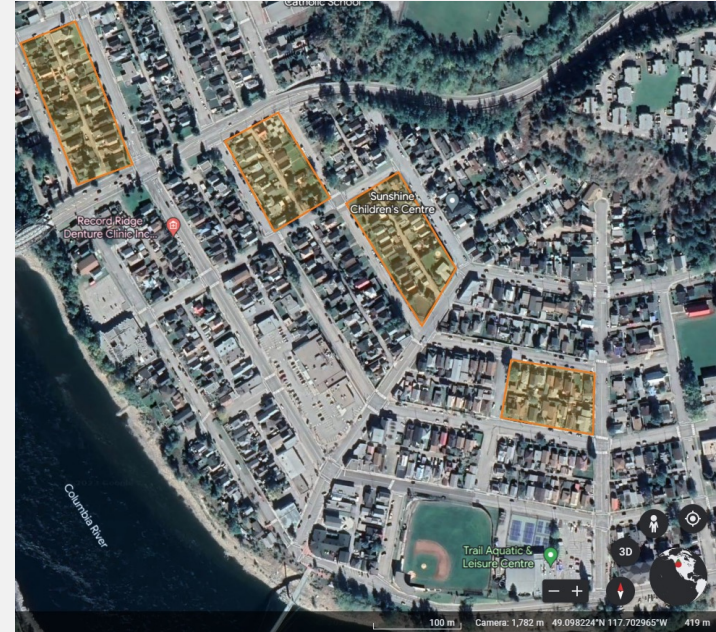
Research shows that neighbourhood-wide soil management can reduce community exposure to Pb.

Initiated a trial program in 2023

- Offered soil management to 4 blocks in East Trail.

**Blocks were prioritized using the existing criteria:**

- Number of children <12 years old living on the block
- Lead (Pb) levels in soil – Block average



# Questions?



# **Program Reports**

# **Air Quality Report**



## Air Quality Report

April 20, 2023

### 1. Lead in Air:

Averages for lead in air remain at historical lows; first quarter 2023 for lead in air at Butler Park and Birchbank stations was  $0.06 \mu\text{g}/\text{m}^3$  and  $0.07 \mu\text{g}/\text{m}^3$ , respectively.

As seen in the monthly averages in Figure 2, month to month variability in ambient levels remains relatively low, but the influence of weather including dominant wind direction and precipitation, can be seen in the data.

Figure 3 presents the 3-month rolling average for lead in air measured at the Butler Park station compared to the US EPA standard of  $0.15 \mu\text{g}/\text{m}^3$  (Federal and BC Provincial governments do not have ambient air quality objectives or standards for lead; however, it is reasonable to rely on standards from other jurisdictions when this is the case). Lead in air levels measured at Butler Park and Birchbank meet the US EPA standard of  $0.15 \mu\text{g}/\text{m}^3$  on a 3-month average.

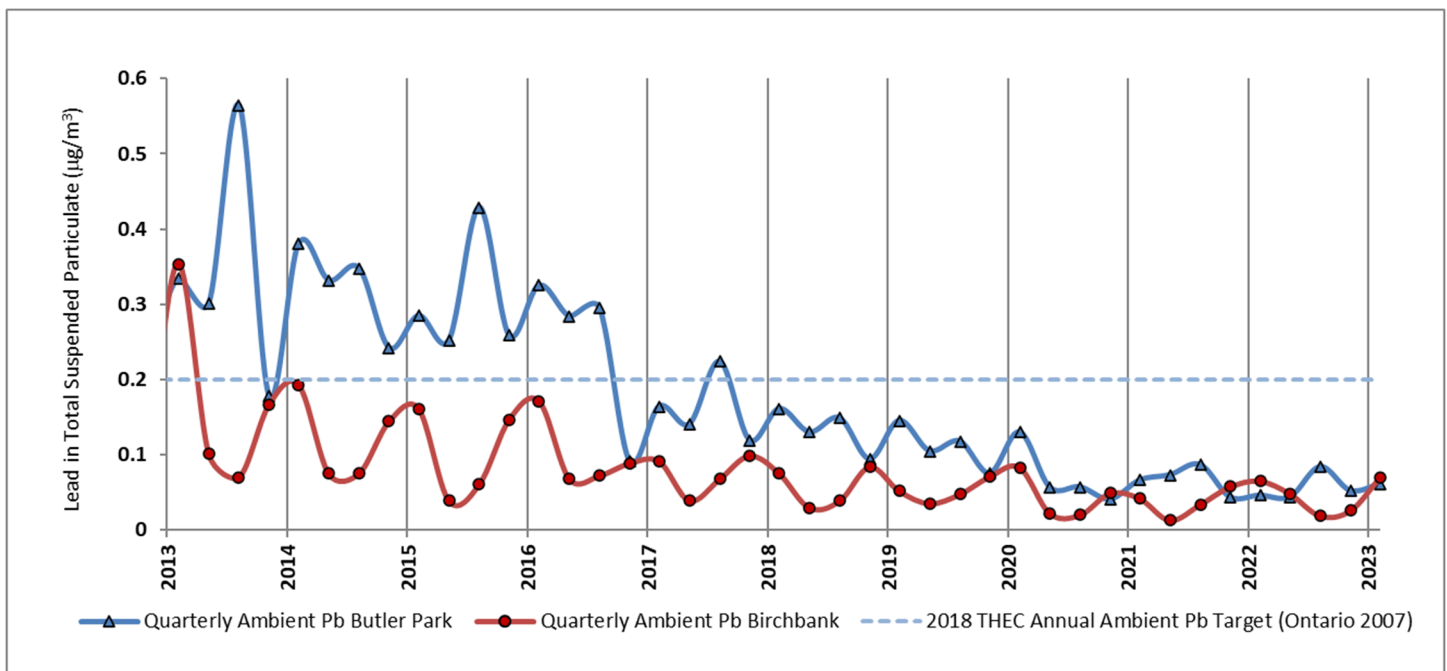


Figure 1: Quarterly monthly average lead at Butler Park and Birchbank stations (as total suspended particulate measured bi-daily)

The chart in Figure 1 shows quarterly averages for Lead in air for Butler Park (dark blue) and Birchbank (red), in comparison to the 2018 THEC Annual Ambient Lead in Air Objective (dashed line).

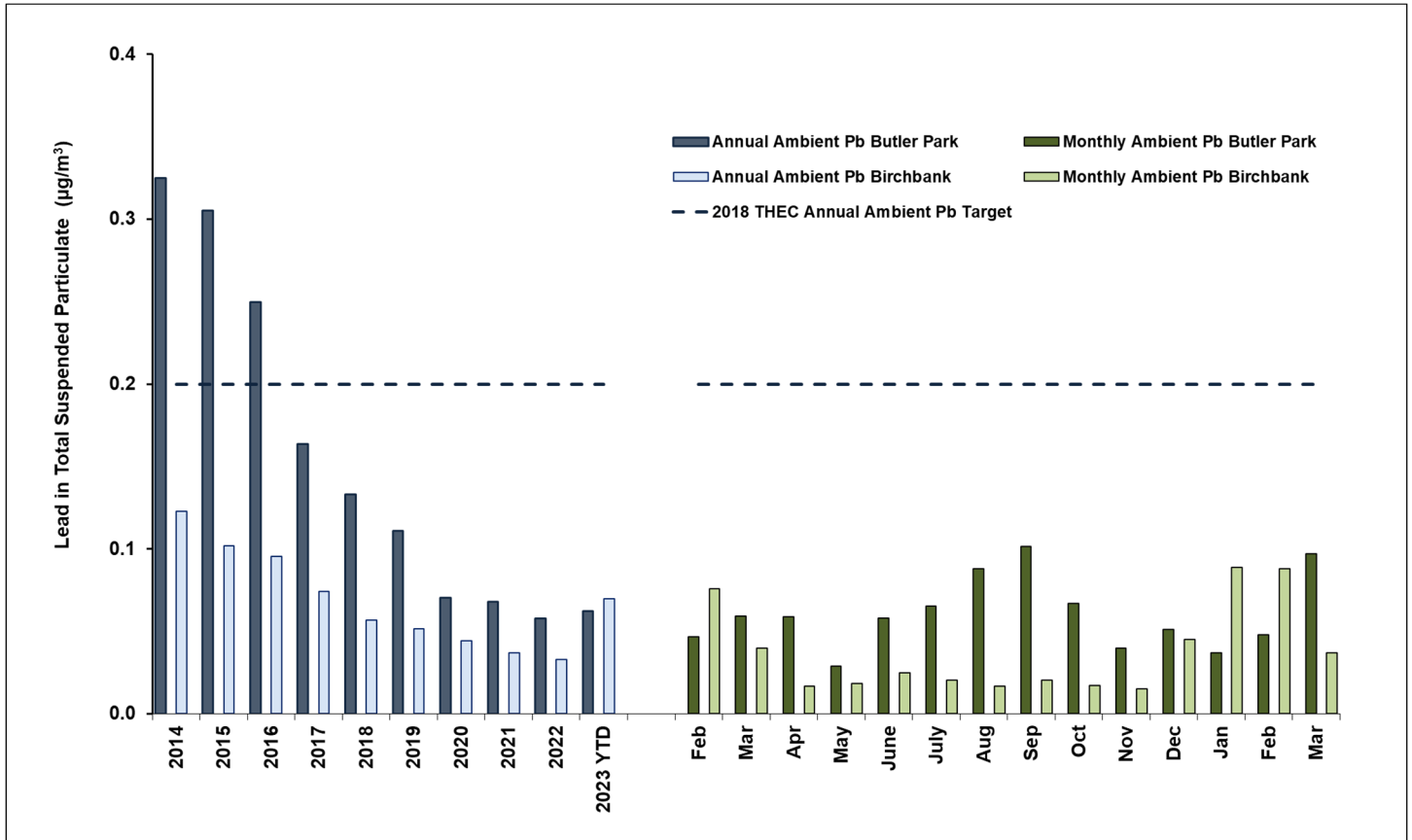


Figure 2: Annual and monthly average lead at Butler Park and Birchbank stations (as total suspended particulate measured bi-daily)

The chart in Figure 2 shows annual and monthly averages for Lead in air for Butler Park. Annual averages are shown on the left for Butler Park (dark blue) and Birchbank (light blue). Monthly averages for the past year are shown on the right for Butler Park (dark green) and Birchbank (light green). The 2018 THEC Annual Ambient Lead in Air Target is shown as a dashed line. Monthly averages for Lead in ambient air are expected to have some variability due to season, weather, predominant wind direction and operational variance.



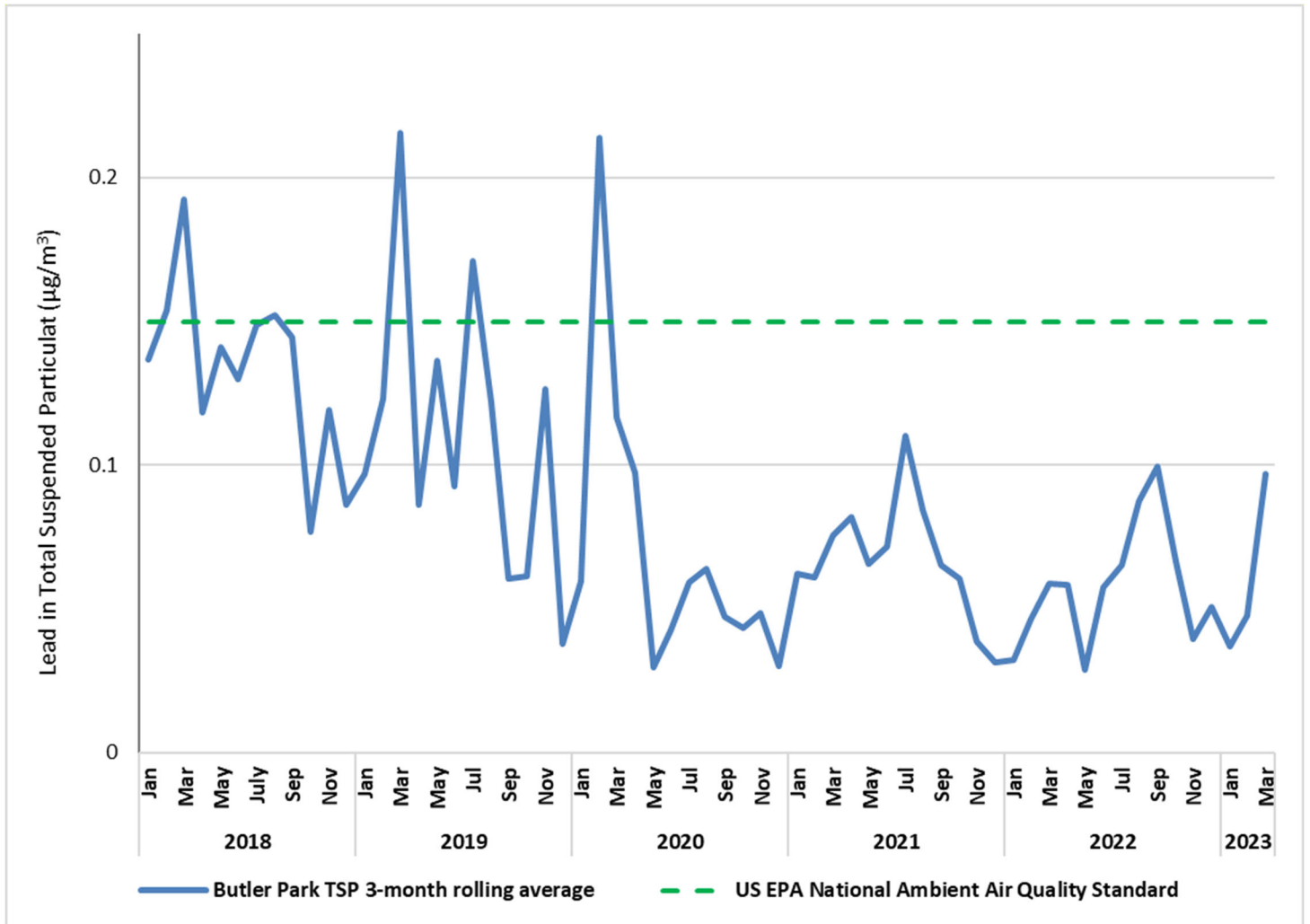


Figure 3: 3-month rolling average lead in air at Butler Park station (as total suspended particulate measured bi-daily)

The chart in Figure 3 shows the 3-month rolling average for lead in air for Butler Park (blue line), in comparison to the US EPA standard (green dashed line).

## 2. Arsenic in Air:

Averages for arsenic in air continue to be at historical lows. First quarter 2023 for arsenic in air at Butler Park and Birchbank was 0.002 and 0.003  $\mu\text{g}/\text{m}^3$ , respectively.

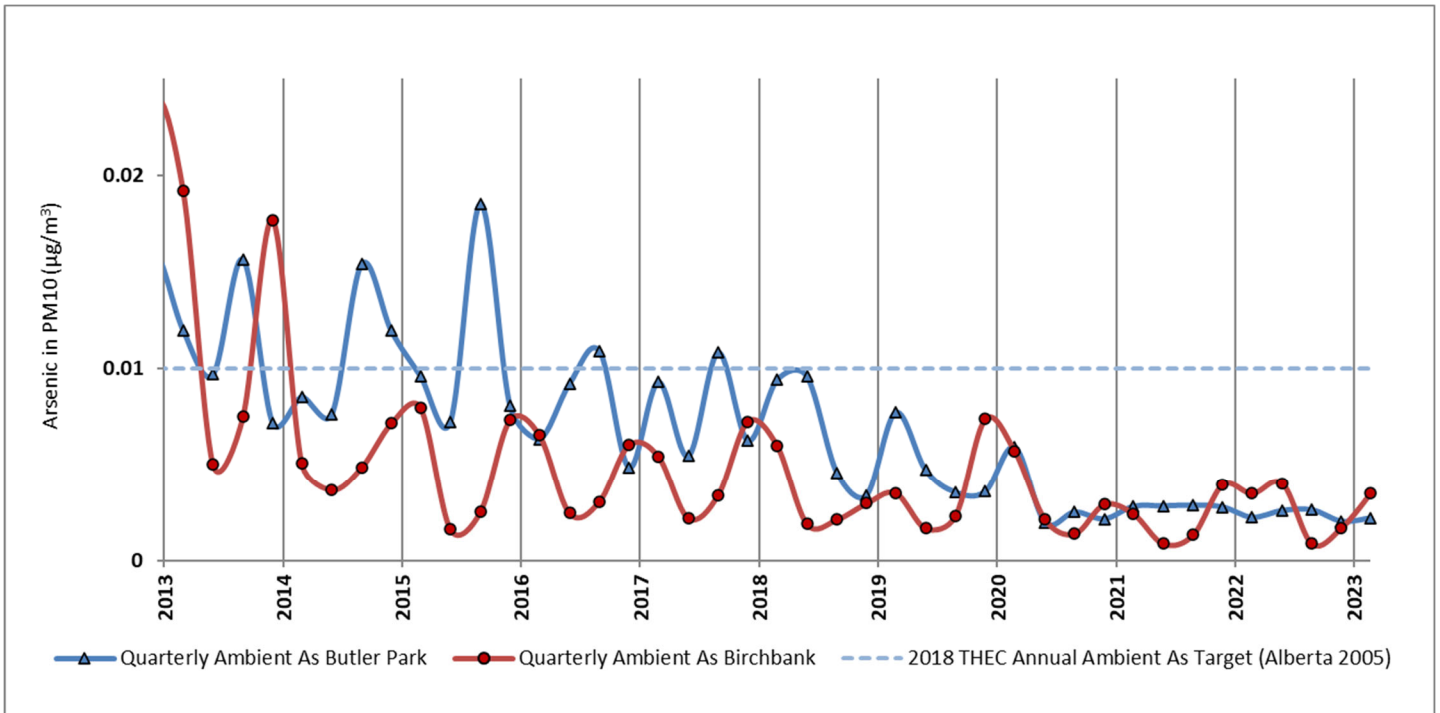


Figure 4: Quarterly average arsenic at Butler Park and Birchbank stations (as inhalable PM<sub>10</sub> fraction measured weekly)

The chart in Figure 4 shows the annual average for Arsenic in air (measured as inhalable PM<sub>10</sub> fraction) at Butler Park (blue) and Birchbank (red) in comparison to the 2018 THEC Air Quality Objective (blue line).

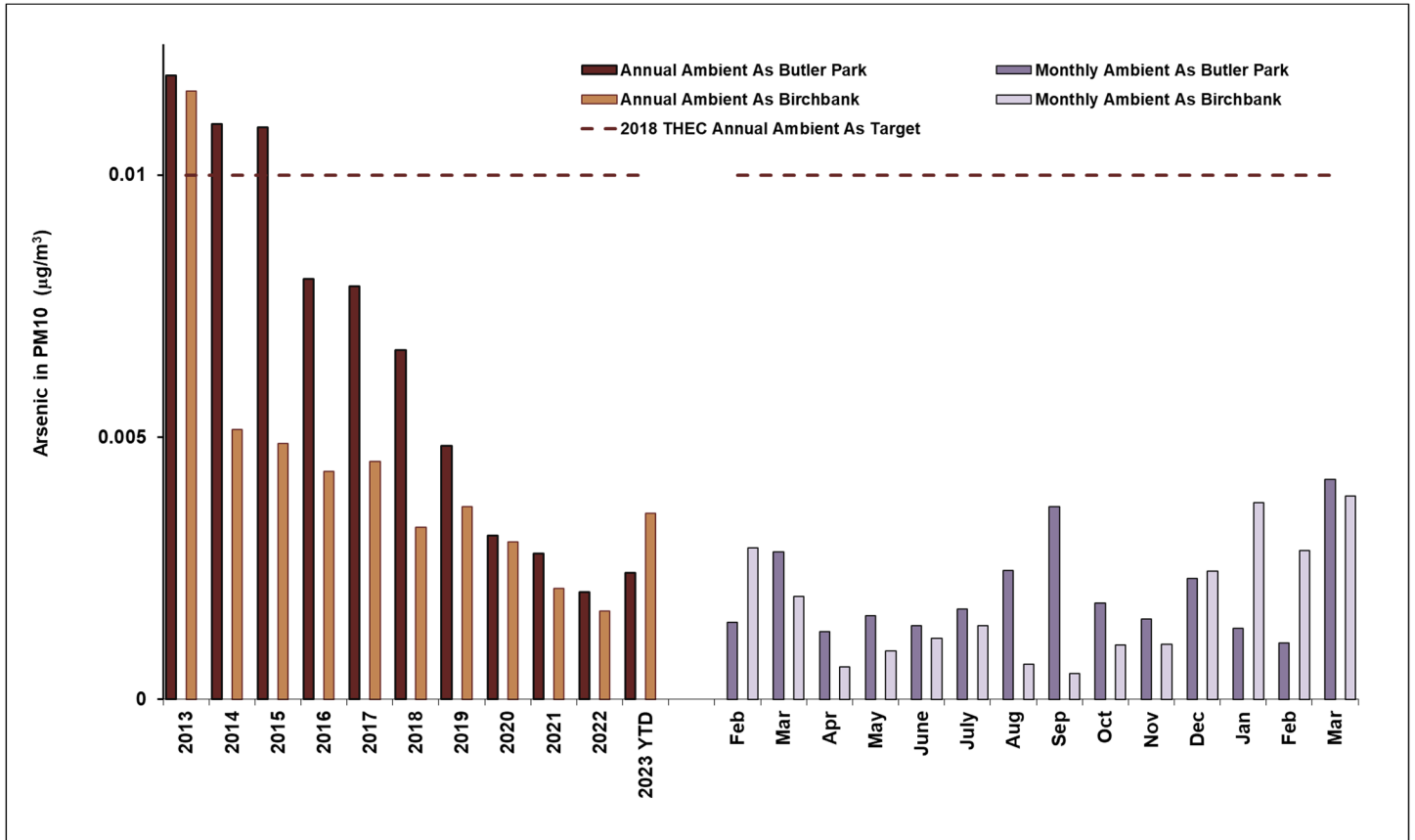


Figure 5: Annual and monthly average arsenic at Butler Park and Birchbank stations (as inhalable PM10 fraction measured weekly)

The chart in Figure 5 shows annual and monthly averages for Arsenic in air at Butler Park and Birchbank. Annual averages are shown on the left for Butler Park (dark brown) and Birchbank (light brown). Monthly averages for the past year are shown on the right for Butler Park (dark purple) and Birchbank (light purple). The 2018 THEC Air Quality Arsenic in Air Target is shown as a dashed line. Monthly averages for Arsenic in ambient air are expected to have some variability due to season, weather, predominant wind direction, operational variance and sampling frequency.

### 3. Sulphur Dioxide (SO<sub>2</sub>):

SO<sub>2</sub> is emitted by Teck Trail Operations as a by-product of processing mine concentrates, which contain sulphur, into metal and chemical products. Teck Trail Operations currently captures more than 99% of the sulphur and converts it to by-products, such as fertilizer and sulphuric acid. About 1% leaves the operation through emissions to air. With environmental improvements, SO<sub>2</sub> emissions continue to decline. However, the dispersion of air emissions from the smelter is constrained due to the location of the smelter, weather and the surrounding topography.

SO<sub>2</sub> is monitored by Teck at four locations throughout Trail and the surrounding areas – Birchbank, Butler Park, Columbia Gardens and Warfield. These stations operate continuously, with near real-time data publicly available at <https://www.env.gov.bc.ca/epd/bcairquality/readings/find-stations-map-SO2.html> SO<sub>2</sub> levels fluctuate throughout the day, month and year.

THEP’s SO<sub>2</sub> Fact Sheet provides guidance for actions to take when SO<sub>2</sub> levels are elevated. The chart below provides SO<sub>2</sub> hourly data from Butler Park and Birchbank stations for the last 10 years categorized by the health guidance levels. As Teck Trail Operations continues to implement emissions reductions measures, the percentage of hours within the yellow (35-185 ppb) and red (>185 ppb) categories is decreasing. In 2022, there were no hours in the red (>185 ppb) category at Butler Park or Birchbank stations.

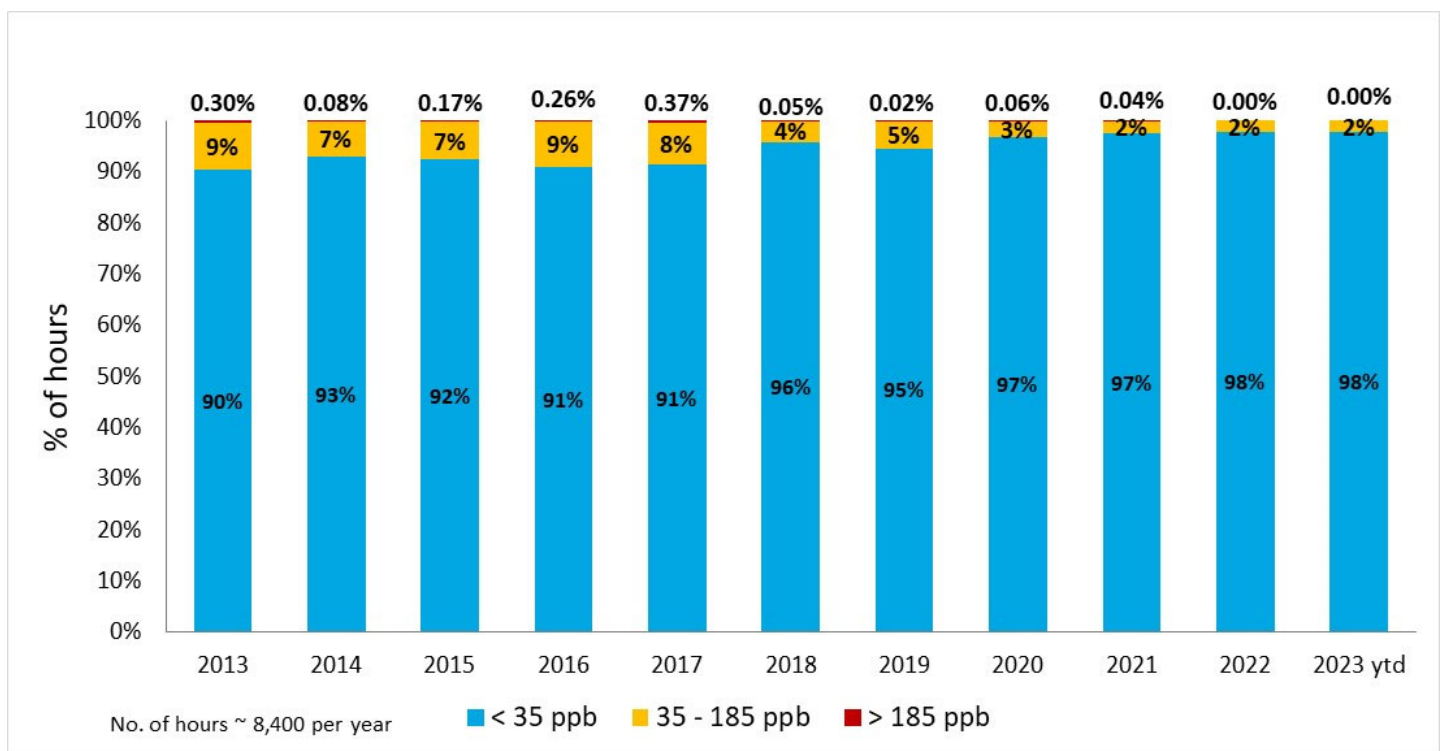


Figure 6: Distribution of Hourly SO<sub>2</sub> Levels at Butler Park

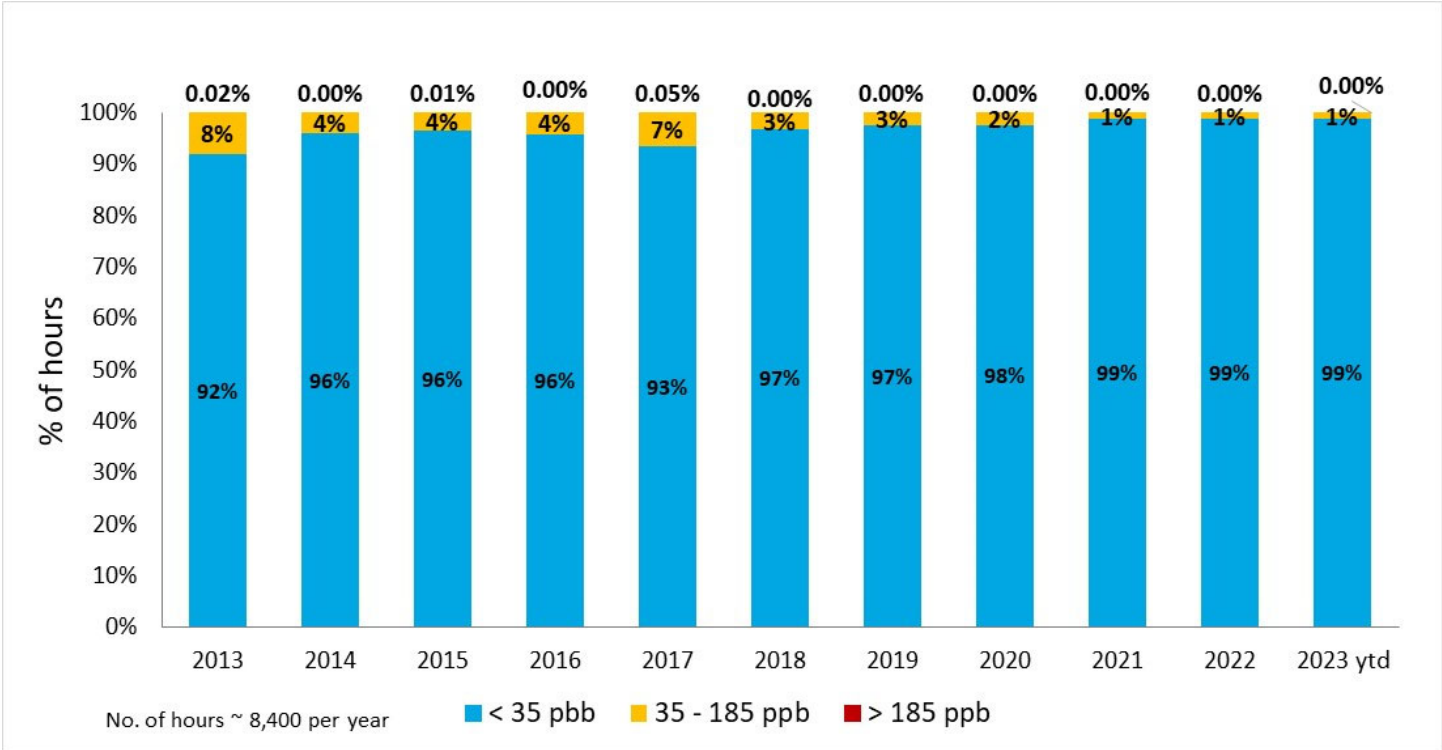


Figure 7: Distribution of Hourly SO<sub>2</sub> Levels at Birchbank

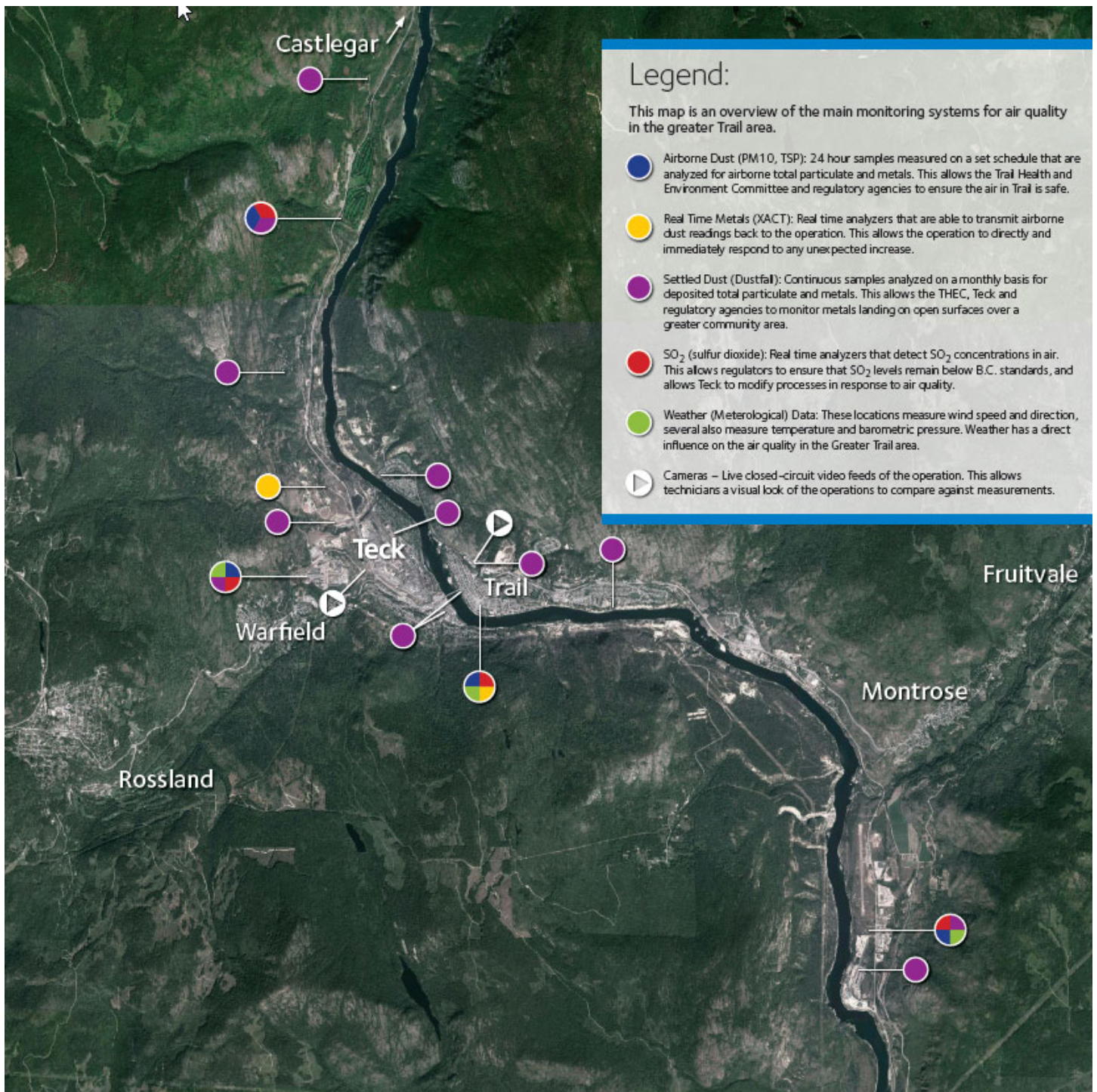


Figure 8: Teck Community Air Monitoring Stations

# Health Report



## FAMILY HEALTH REPORT

April 20, 2023

### RECENT HIGHLIGHTS

1. Healthy Family Visits
2. Community Outreach
3. Blood Lead Clinic Updates

---

### ADDITIONAL DETAILS

1. Healthy Family Visits
  - 28 Healthy Family visits completed so far 2023
  - Two visits declined, both had received previous visits with older children. One family did engage with CPO for refresh of Healthy Home supports.
2. Community Outreach
  - Meghan attending Building Beautiful Babies monthly
  - Meghan attended Ready, Set, Learn Event for families with children entering Kindergarten in September
  - Meghan co-presented with Clare North (TECK) orientation for Trail and Warfield City councils.
  - Meghan co-presented with Dr. Karin Goodison (MHO) to local Primary Care Providers (Family Doctors and Nurse Practitioners) providing overview of THEP and opportunities for collaboration.
  - Cecilee working with Wendy to provide outreach to daycares and preschools
  - Cecilee attend the Early Years Table, planning is underway for June Teddy Bear Picnic
3. Blood Lead Clinic Updates
  - Winter Clinic completed in February
  - Fall clinic to be scheduled over three weeks in September



# **Community Program Office Report**



## COMMUNITY PROGRAM OFFICE REPORT

April 20, 2023

### 1 Soils Program:

- › April 13 & 14: Soils team training/prep day.
- › Planning Soil Management work for 2023.
  - Kickoff began April 17<sup>th</sup>
- › Pilot Block Program preparations.
  - Offer letters sent out to 4 blocks as determined by prioritization framework.
- › Yard Assessments & Ground Cover Evaluations are underway, with an aim to identify any new, qualifying properties before July.

### 2 Healthy Homes:

- › Healthy Homes:
  - 24 home visits completed in 2023.
  - Busy with follow up requests from families re-connecting after the winter.
- › Enhanced Support:
  - All new families identified following the Winter BL clinic have received follow up.
  - 1 additional Residential Lead Inspection completed.

### 3 Lead Safe Renovation:

- › 12 residents have accessed free supplies so far this year.

### 4 Outreach and Engagement:

- › Attending local early years programs:
  - Co-facilitated a session of Three & Thriving with the Family Action Network.
  - Visit at the Tiny Tots Cooking with CBAL.
  - Visit at the Drop-in Playdate through the Trail and District Library.
- › Present at the Winter blood lead clinics in February.
- › Our team attended the Trail IncREDIBLE Easter Market on April 8.
- › Daycare outreach is ongoing. 4/5 centers offered have accepted a visit, 2 visits have taken place, with the remaining 2 planned for the last week of April.
- › Our staff continue to attend the Navigator meetings, Early Years committee meetings, and are involved on the Family Action Network board.

# **Community & Round Table Check-in**

# **Program Planning Update**

# **Partner Meeting Report**