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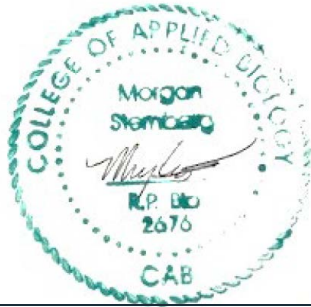
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TRAIL AREA SOIL MANAGEMENT PROGRAM 2025 ANNUAL REPORT AND 2026 WORK PLAN

Signature Page

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Executive Summary

In 2025, soil assessment and remediation services provided through the Trail Area Health & Environment Program (THEP) included the tasks outlined in the Trail Area Soil Management Program – 2024 Annual Report and 2025 Work Plan submitted to the Ministry of Environment and Parks (ENV) on March 31, 2025. The 2025 Work Plan is referred to herein as the 2025 Soil Management Program (SMP). It includes tasks related to risk-based, prioritized soil management at residential properties within the Environmental Management Area (EM Area) such as outreach, communications, soil assessment, and remediation (i.e., by means of soil replacement or risk management activities). The 2025 SMP first identified properties with children on which to complete soil assessment (SA) and ground cover evaluations (GCE), and then completed remediation at the highest risk properties identified through the implementation of a risk-based prioritization framework developed by AtkinsRéalis Canada Inc. (formerly SNC-Lavalin Inc.). The 2025 SMP also included the continuance of the Block Initiative (BI; formerly Pilot Block Initiative) to address neighbourhood-level risk through prioritization of City blocks for remediation using the existing risk-based prioritization framework; one block was remediated in 2025. In addition, the 2025 SMP included the completion of standardized paint screening at all properties that received SA and remediation in 2025. Key activities completed through the 2025 SMP included:

- At the beginning of 2025, 935 properties were identified with children under the age of 12 where:
 - 777 properties previously received soil assessment; and
 - 301 properties previously also received full soil replacement.
- GCEs were completed at 271 residential properties in 2025. GCEs are required to help identify priority properties for remediation and to confirm risk management measures remain in place, where applicable.
- Properties with children under 12 received the following services in 2025:
 - 82 received soil assessment and a GCE;
 - 77 previously assessed properties received an updated GCE; and
 - 74 received remediation through yard improvement, lawn care, or soil replacement.
- 108 child occupied properties had missing information such as child age, soil assessment, and/or ground cover data, and outreach efforts were unsuccessful in obtaining the missing information in 2025.
- Soil assessment or testing was completed at 193 residential properties (yard or yard and vegetable garden).
- 3 properties had only the vegetable garden tested.
- Remediation work was completed on 103 properties in 2025 including:
 - 54 properties received full-yard remediation;
 - 32 of these properties were Priority 1;
 - 30 properties received partial yard remediation;
 - 22 of these partial yard remediations, when combined with historical work, resulted in the property status of full yard remediations;
 - 3 properties had only the vegetable garden soil remediated;
 - Another 29 properties had vegetable gardens remediated with the full or partial yard;
 - 5 properties received only lawn care to improve and maintain good ground cover; and
 - 11 properties received other types of ground cover improvement.
- A total of 2,516 parcels within the EM Area have now had soil tested.

- A total of 641 properties have now had full soil replacement completed and 244 properties have been risk-managed through yard improvement strategies (e.g., lawn care and ground cover improvements, etc.).
- Exterior Standardized Paint Screening was conducted at all 229 properties that received soil assessment and/or remediation in 2025.

Although efforts are made to remediate all P1 properties identified by June 30 within the given year, 19 properties that were identified by June 30 received no soil management. Reasons included property owners declining or not responding to soil management offers and families moving away. The Community Program Office (CPO) staff remain in contact with all current P1 property owners with the goal that these properties will be ready for soil management in 2026.

THEP's Communications Plan was adopted in 2022 as part of the THEP Strategic Directions 5-Year Plan. It supports audience identification, key messaging, and identifies appropriate outreach material. Outreach includes a combination of in-person, written communication, and social media engagement approaches. The plan was updated in 2025 to reflect updated language that is consistent with the Strategic Directions Plan and provide examples of more current THEP products. The THEP website is regularly updated with features such as online options for completing consent forms and frequently asked questions and answers. In person- outreach in 2025 included hosting information tents at one community market, one community fair, attending the Teddy Bear Picnic, hosting a Trail realtors THEP information session, and participating in a Seniors Fair.

The main objectives of the 2026 Work Plan are to:

- Continue to promote the SMP through ongoing outreach and communication strategies within the EM Area;
- Offer soil testing to all residential properties with a focus on properties with children in key age groups (0 to <6 and 6 to <12 years old). Up to 300 properties can be tested but the number of tests completed will be based on response from residents;
- Obtain updated GCE information on properties with children in key age groups;
- Provide soil remediation through either ground cover improvements or soil replacement at all priority (P1 & P2) residential properties identified before the end of June 2026;
- If capacity allows following soil remediation provision at P1 and P2 properties, proceed with remediation of blocks in priority order based on the block prioritization approach;
- Offer vegetable garden soil replacement in qualifying gardens;
- Continue to work with municipalities to evaluate and implement remediation and recommended ground cover improvements in Parks;
- Continue to adapt our outreach to families and residents to inform the community about the SMP and other CPO programs;
- Provide soil management for new property developments through Teck's Property Development Program, as needed; and
- Conduct exterior paint screening on all properties identified for soil management activities including soil assessment and remediation.

Acknowledgements

The work of the Community Program Office team (CPO) and the Soil Management Program (SMP) has been carried out with the support of the Trail Area Health and Environment Committee (THEC). The collaboration of the THEC plays an important role in delivering the SMP. In particular, AtkinsRéalis would like to acknowledge Interior Health (IH) for their assistance in connecting the CPO staff with families and promoting the SMP through their work. As well, AtkinsRéalis would like to thank the citizens of Trail and area for their support and willingness to participate in the SMP and other Trail Area Health & Environment Program services. These collaborative efforts are key to the program's success.

Definitions and Acronyms

This list includes definitions and acronyms that are commonly used in the Trail Area Health & Environment Program (THEP) documents and within the Database. As such, they are used in the text of the report and in the associated tables.

Term	Acronym (if available)	Definition
BC Property Identification Number	BC PID	A nine-digit parcel identifier that uniquely identifies a parcel in the BC land title register.
Caregiver		A person who takes care of children two or more days per week in the absence of their parents (e.g., grandparent, extended family, family friend, foster parent).
Child-Occupied Property		Any property where children less than 12 years old live or regularly visit 2 or more days per week for at least 3 hours per day.
Community Properties	CP	Properties within the EM Area that are not child-occupied (e.g., there are no children less than 12 years old that reside on or visit the property 2 or more days/week).
<i>Contaminated Sites Regulation</i>	CSR	The regulation under the Environmental Management Act that governs contaminated sites and activities such as soil assessment and remediation.
Duplicate PID	DUP	Identifies properties where more than one THEP PID is present in the data set. This occurs when more than one FID is associated with a THEP PID (e.g., multi-family dwellings and daycare facilities). Within the tables associated with this report, these Dup PIDs need to be excluded to obtain an accurate summary of results.
THEP Database	Database	Purpose-built database system designed to store and provide access to information related to PIDs and FIDs that are part of the Community Program Office component of the THEP.
Daycare		A residential or commercial space that provides child-minding services to children who are younger than 12 years old.
Environmental Management Area	EM AREA	A term used in the CSR to identify an extensive geographic area comprised of many individual parcels that are contaminated from a known source or sources.
Exposure Term	ET	A fraction of the week that the property is used by children (e.g., 5 days/week = .71). The ET for full time primary residence is 1.
Family Identification Number	FID	A family identifier generated in the Database that uniquely identifies a parent, grandparent or caregiver who qualifies for Healthy Homes services and prioritization as per the SMP prioritization framework.
Frequent Visitor		A property that a child visits two or more days per week (e.g., seasonally or occasionally).
Full Yard Remediation		The status designation of a property that has had all accessible, qualifying surface soil replaced according to specifications outlined in the 2019 work plan.

Term	Acronym (if available)	Definition
Ground Cover Evaluation	GCE	A visual assessment tool that collects ground cover information used to prioritize yards for remediation.
Ground Cover Improvement		Landscaping or lawn care activities that cover bare soils in the yard with grass or other materials.
Max Lead	Max Pb	A discrete sample with the highest Pb soil concentration in a soil assessment collection set from a given PID.
Not Prioritized	NP	A priority status assigned to a property indicating that it does not meet any of the priority status levels (e.g., there are no children present, soil Pb concentrations do not exceed prioritization thresholds, or no yard is present).
Park		Outdoor public spaces such as playgrounds, sport fields, walking trails, that are frequented by children of all ages.
Block Initiative (previously Pilot Block Initiative)	BI (previously PBI)	Soil management initiative aimed at providing soil remediation or risk management activities to City of Trail blocks based on a prioritization framework and as operational capacity allows following remediation offers to P1 and P2 properties. This initiative was incorporated as part of the SMP in 2025, no longer requiring Pilot status.
Post-Remediation Pb	PR	Pb concentration from a composite sample of the replaced backfill following the completion of remediation activities.
Primary Play Area		An area in a yard or park that is frequented by children under the age of 12 as indicated by, but not limited to, the presence of outdoor play equipment (e.g., sandboxes, swing set), toys, or other children's possessions, observations of play patterns (e.g., worn areas of the lawn), or information provided by parents, residents, care givers, or property owners.
Prioritization Strategy		A risk-based approach for prioritizing child-occupied properties for soil assessment and remediation which is based on age of the child, quality of ground cover and soil Pb concentration.
Prioritization Screening Concentration (ppm)	PSC	The soil Pb screening concentration used to compare to the property. It is based on age of the children on the property. For example, 400 ppm for properties with young children; 2,800 ppm for properties with older children (6-<12 years old) where cover is poor.
Priority Status Group		Priority assignment given to a property-based on the prioritization strategy (i.e., P1, P2, P3 or NP).
Primary Residence		The main residence of the occupant (e.g., parent, grandparent, frequent visitor, etc.) within the EM Area, typically a house or an apartment.
Property Association	ASSOCIATION	A description of how property relates to children or FIDs in the community (e.g., primary residence, daycare, park, etc.).
Property Identification Number	PID	A property identifier number assigned in the Database that uniquely identifies a parcel within the EM Area.

Term	Acronym (if available)	Definition
Property Type	TYPE	Identifies the type of parcel (residential, park, commercial).
Remediation	REM	A mechanism to manage contaminated soil on the property either through soil replacement or ground cover improvements.
Remediation Complete	RC	Indicates a property where full-yard remediation has been completed.
Remediation Status		Classification of a property-based on the latest remediation work completed on the property.
Remediation Extent		The extent of the remediation services completed on the property in a given year (part-remediation, full remediation, yard improvement).
Secondary Residence		A child-occupied property that is associated to a child but is not their primary residence and the child visits more than two times per week.
Soil Assessment	SA	The process of collecting discrete and composite surface soil samples at a given PID. Results are used to calculate the 95% upper confidence limit of the mean (UCLM) and Max Pb. Areas included in an assessment include general yard, vegetable garden, ornamental gardens, play areas, and drip zone.
Soil concentration (ppm)	SC	The 95% UCLM soil Pb concentration for the property or an area of interest within a yard (e.g., a primary play area).
Soil Management Program	SMP	A program that addresses soil within the Trail EM Area.
Screening Quotient	SQ	The screening quotient is a way to further prioritize properties within a priority status (e.g., P2s) where $SQ = SC \times ET/PSC$.
95% Upper Confidence Limit of the Mean	95% UCLM	The upper limit of a confidence interval of the mean. In THEP, the 95% UCLM represents lab Pb and XRF Pb samples that were used to calculate a “protective estimate” of mean Pb concentration on an individual property. This would indicate that if a property was sampled 20 times, 19 times out of 20 the mean Pb will be below the calculated UCLM.
Trail Area Health & Environment Committee	THEC	Provides governance for the THEP and is a partnership between the local community, Teck, Interior Health, and the BC Ministry of Environment and Parks.
Trail Area Health & Environment Program	THEP	A comprehensive community-led program that has evolved on a continuous effort since 1988 to improve the Trail Area environment and promote and protect the health of the community related to smelter operations.
X-Ray Fluorescence	XRF	A specialized piece of equipment used to screen metals in soil and paint.
Yard improvement	YIMP	Yard improvement services used to improve ground cover on the property.

1. Introduction

On behalf of Teck Metals Ltd. (Teck), AtkinsRéalis Canada Inc. (AtkinsRéalis) has prepared the following Annual Report for the 2025 Soil Management Program (SMP) and 2026 Work Plan. The 2025 SMP was delivered by AtkinsRéalis under contract to Teck, through the Community Program Office (CPO) of the Trail Area Health & Environment Program (THEP). This report summarizes the work completed in 2025 including the details requested by the Ministry of Environment and Parks (ENV) in letters to Teck dated December 7, 2018¹, March 5, 2019², and January 15, 2020³.

This report also outlines the Trail Area Residential SMP 2026 Work Plan (the “2026 SMP”).

1.1 Instructions to Readers

The 2025 SMP includes a status update for properties worked on in 2025 or in previous years including those where:

- a. Children less than 12 years old are present or likely to be present;
- b. Soil assessment data was collected;
- c. Updated ground cover information was collected; and
- d. Soil remediation was completed.

This report outlines the scope, approach, and results of the 2025 SMP activities, as well as an outline of the work proposed for the upcoming year as part of the 2026 SMP. Additional details regarding program history and methodology are outlined in the 2019 Work Plan⁴. Table 1, referenced herein, compiles relevant soil summary data collected between 2007 and 2025 for properties participating in SMP activities. Using the filters in Table 1, the reader can obtain summaries of up-to-date data. For example, filtering by the SA (Soil Assessment) Date or Completion Date by the year of interest will provide a list of all properties that received soil assessment or remediation services in that year. By further filtering by neighbourhood, one can then obtain a list of all properties within a given neighbourhood that received SMP services. Tables 2 to 6 include summaries of the 2025 work including family and child-occupied property information, soil assessment and ground cover evaluations, remediation activities, risk-managed and high-risk site classifications and blocks within the residential neighbourhood block remediation program (Block Initiative; BI). Table 7 summarizes the priorities for 2026 remediation planning and Table 8 summarizes the prioritization for the 2026 BI.

There are many terms used in this report and in the attached tables that have been developed by THEP. Terms apply to the work carried out by THEP and, specifically, the CPO. A list of definitions and acronyms is provided on pages iv-vi. Note that SNC-Lavalin Inc. (SNC-Lavalin) changed its name to AtkinsRéalis Canada Inc. (AtkinsRéalis) in September 2023. Previous reports and documents will refer to SNC-Lavalin until the end of 2023.

¹ ENV 2018. *Remediation of Teck Metals Ltd. Trail Operations Facility Environmental Management Area in Trail, BC*. Letter issued December 7, 2017.

² ENV 2019. *Trail Area Residential Soil Assessment and Remediation – 2019 Work Plan*. Letter issued March 5, 2019.

³ ENV 2020. *Site 3250 Trail Area Soil Assessment and Remediation – Request for 2020 Workplan Submission*. Letter issued January 15, 2020.

⁴ SNC-Lavalin and Teck, 2019. *Trail Area Residential Property Soil Remediation – 2019 Workplan – Site ID: 3250 (Revision 1)*. April 1, 2019.

2. Background

Due to the presence of metallurgical operations in Trail for over a century, there is a long history of environmental and health monitoring related to metals. Since 2007, soil assessment and remediation programs have been delivered by the THEP CPO.

An *Environmental Management Area*⁵ (EM Area) is a geographic area that comprises many individual sites or parcels which are likely contaminated by one or more specific substances associated with a known source. In 2018, an EM Area associated with Teck Trail Operations was delineated based on concentrations limits determined for arsenic (As), cadmium (Cd), lead (Pb), and zinc (Zn) in surficial soils attributable to historical aerial emissions (SNC-Lavalin, 2018)⁶. The EM Area boundary is shown on Figure 2-1. Program efforts to date have been focussed within THEP Areas 1, 2, and 3, which are shown on the figure below. Areas 1, 2, and 3 are THEP operational areas established based on proximity to the Teck Trail Operations.

Starting in 2019, an annual SMP was developed to outline tasks to manage risks from soil within the EM Area including outreach, communications, soil assessment, and remediation (i.e., by means of soil replacement or risk management activities). Remediation of residential properties has been based on a prioritization framework that was developed by AtkinsRéalis and presented in the 2019 Work Plan⁷. While soil assessment and remediation methods continued as they have since 2007 and 2008, respectively, the pace of work increased significantly starting in 2019. The goal of the ongoing SMP is to identify and offer soil testing to properties with children under 12 years of age, prioritize properties according to the established framework, and remediate priority properties through soil replacement and risk management measures within 1-2 years following identification.

As properties are sampled and remediated each year, the work plan herein is updated to address the next priority properties, including those identified but not addressed in the previous year. The work plan is also updated to address the ongoing monitoring of ground cover quality at properties where risk mitigation measures are in place.

⁵ An EM Area was previously referred to as wide area contamination as defined in ENV's *Environmental Protection Division Procedure 8 – Definition of Acronyms for Contaminated Sites*, November 1, 2017.

⁶ SNC-Lavalin Inc., 2018. *Determination of Concentration Limits for Teck Trail WARP Boundary*, July 23, 2018.

⁷ SNC-Lavalin and Teck, 2019. *Trail Area Residential Property Soil Remediation – 2019 Workplan – Site ID: 3250 (Revision 1)*. April 1, 2019.

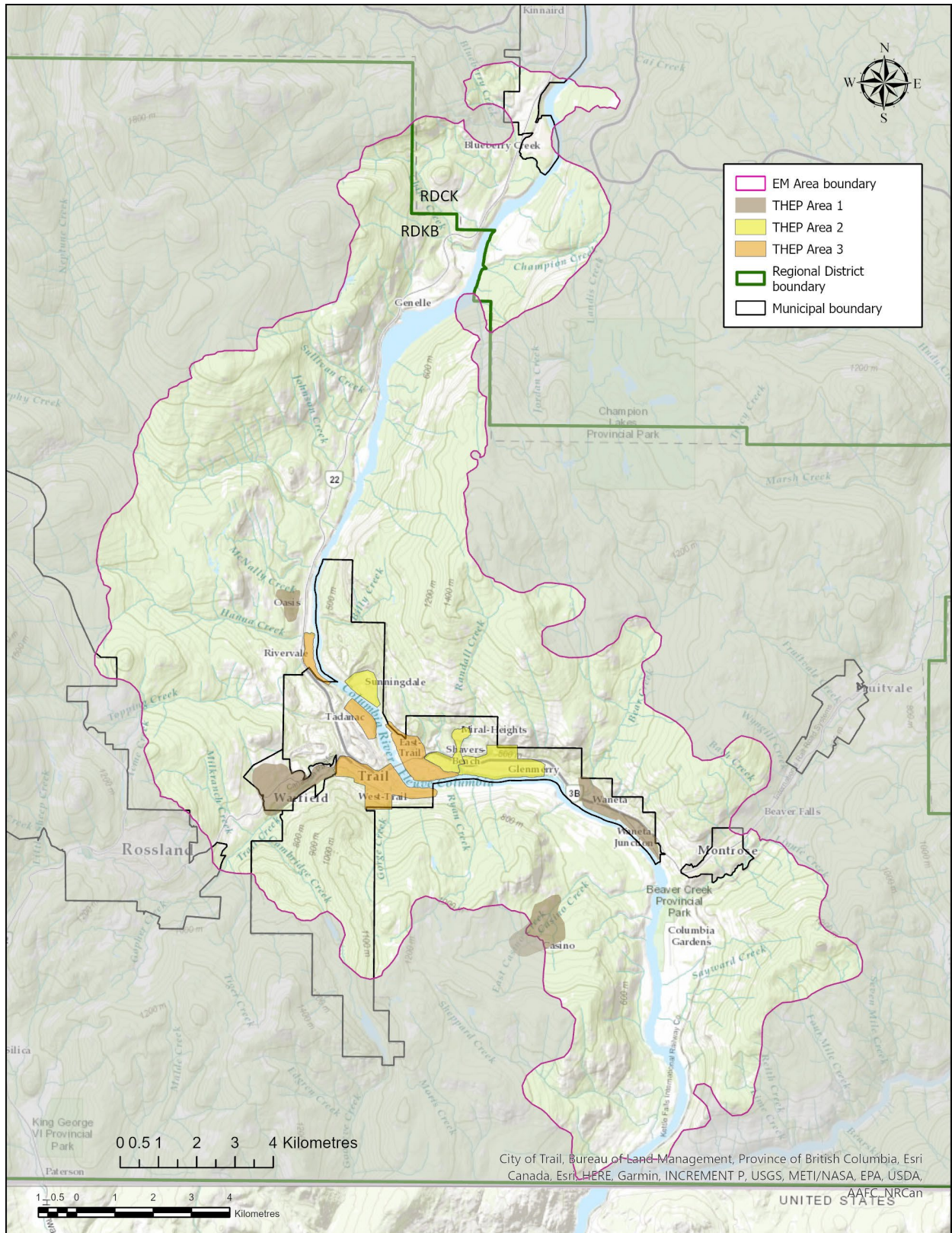


Figure 2-1: Environmental Management Area Boundary and THEP Areas

2.1 Regulatory Context

The primary regulation that governs soil remediation at residential properties in the EM Area is the *Contaminated Sites Regulation*⁸ (CSR), which was enacted under the *Environmental Management Act*⁹ (EMA) on April 1, 1997 and has since been amended several times to account for updates to scientific and policy information.

The CSR outlines requirements for site identification, assessment, and clean-up (“remediation”) under the administration of the ENV Land Remediation Section.

Under the CSR, a site is contaminated if substances in the environment (soil, water, sediment, vapour) exceed the standards prescribed in the CSR; however a site is not contaminated if concentrations are less than local background concentrations. The CSR provides numerical and risk-based standards to determine when remediation is needed and satisfactorily completed. The legislation and regulation provide a framework for two remediation strategies. Contamination may be:

- Removed or reduced so that it no longer remains at a site above applicable numerical standards contained in the regulation (or ENV approved background concentrations); or
- Managed on site to satisfy risk-based standards.

Because of the large geographic area affected, THEP employs a risk-based approach for the purposes of identifying, prioritizing, and remediating residential properties in the EM Area.

A risk-based standard for Pb has been developed as part of the Wide Area Remediation Plan (WARP)¹⁰ which underwent public consultation in January 2025. Following review and incorporation of consultation feedback, the WARP was submitted to ENV in June 2025 for review along with an application for an approval in principle.

⁸ *Contaminated Sites Regulation* (CSR), B.C. Reg. 375/96, includes amendments up to B.C. Reg. 171/2025, October 27, 2025.

⁹ *Environmental Management Act* (EMA), B.C. Reg. 171/2025 / effective October 27, 2025.

¹⁰ The Wide Area Remediation Plan and supporting documents can be accessed at www.teck.com/TrailAreaWARP.

3. Risk-Based Remedial Strategy

3.1 Prioritization of Residential Properties for Remediation

In 2019, AtkinsRéalis (then SNC-Lavalin) developed an approach to identify the highest risk residential properties for remediation¹¹. The objective of the prioritization strategy was to provide a scientifically defensible approach to identify and prioritize those properties for which remediation is most important and, therefore, should occur soonest. The approach was based on the United States Department of Housing and Urban Development (US HUD) methods and focuses on three key attributes of a given property:

- Presence of children in target age groups: <6 years old (i.e., “young children”) and 6 to <12 years old (“older children”);
- Quality of ground cover (primarily grass but also gravel or mulch cover); and
- Soil Lead (Pb) concentration.

Having a clear and defensible risk-based prioritization strategy ensures a consistent approach for all residential properties in the EM Area so that the highest risk properties are addressed first. Risk-based prioritization has been applied since 2019 and has proven to be useful in identifying and remediating the priority properties where children are living or cared for and could be exposed to soil on the property.

3.1.1 Primary Prioritization to Identify Highest Risk Properties

Based on the above criteria, properties are assigned a priority using the Prioritization Screening Concentrations (PSC)¹², below:

- P1 refers to properties with poor ground cover and soil concentrations above 400 ppm Pb where younger children (<6 years) reside and over 2,800 ppm Pb where older children (6 years to <12 years) reside.
- P2 refers to properties where ground cover is good and soil concentrations are above 1,200 ppm Pb where younger children reside and over 8,400 ppm Pb where older children reside.
- P3 refers to properties of lower priority based on ground cover and soil Pb concentration. These are classified into:
 - P3A – children <6 years, good ground cover, Pb <1,200 ppm;
 - P3B – children 6 to <12 years, good ground cover, Pb <8,400 ppm;
 - P3C – children <6 years, any cover quality, Pb <400 ppm; and
 - P3D – children 6 to <12 years, any cover quality, Pb <2,800 ppm.

¹¹ SNC-Lavalin and Teck, 2019. *Trail Area Residential Property Soil Remediation – 2019 Workplan – Site ID: 3250 (Revision 1)*. April 1, 2019.

¹² Refer to the Prioritization Approach described in Appendix V of the 2019 Workplan (SNC-Lavalin, 2019).

It is important to stress that the above PSCs are not considered to represent risk-based remediation target concentrations and instead are intended to be used as part of the prioritization strategy. Prioritization of individual properties within the priority groups listed above can be further refined using secondary prioritization, described in the next section.

3.1.2 Secondary Prioritization

Secondary prioritization is used to further rank properties within their priority groups listed above (P1, P2, P3A, etc.). It is used to identify the priority properties within a group through the use of a screening quotient (SQ) that assesses exposure term (ET) and Pb concentration relative to the age of children. The properties with the highest SQ within a priority group should be prioritized for remediation. This is useful when not all properties within a priority group can be remediated within the year. The secondary prioritization uses the following equation to calculate the SQ:

Exposure Term (ET) x Pb Conc (UCLM) / Prioritization Screening Conc (PSC) = Screening Quotient (SQ).

Where ET is the Exposure Term for children in number of days per week spent at the property, Pb Conc UCLM is the 95% Upper Confidence Limit of the Mean Pb concentration for the property and the PSC is the Pb screening concentration based on child age and quality of ground cover as described in Section 3.1.1. It is important to note that the secondary prioritization only works within a priority status group as it assumes ground cover is equal across all properties (e.g., 'good cover' in the case of P2).

3.1.3 Prioritization of Sites for Soil Assessment

Any property owner in the EM Area can request soil assessment. Although the number of property owners consenting to or requesting soil assessment has not yet exceeded the capacity to complete the assessments, a prioritization framework for soil assessment was developed in the event that soil assessment requests exceed program capacity. The approach used in Trail focuses on the three attributes outlined above, as follows:

- 1: Identify and assess all residential properties occupied by children in the target age groups (0 to <6 and 6 to <12 years old). This is a critical and ongoing data gap as babies are born, families move within the area and new families move to the area;
2. Determine if the child-occupied property is situated in a neighbourhood where the average of the 95% UCLM Pb concentration for properties in that neighbourhood exceeds the most stringent PSC applicable to the age group of the children at the property (i.e., 400 pm for young-child-occupied properties and 2,800 ppm for older-child-occupied properties); and
3. Complete a GCE at properties screened through Steps 1 and 2 (i.e., child-occupied, and neighbourhood Pb concentration exceeds relevant PSC), prioritizing properties with impaired ground cover.

The methodology for assessment was provided in SNC-Lavalin, 2019.¹³

¹³ 2019 workplan to submitted to Teck Metals Ltd.

4. Summary of 2025 SMP Activities

The methodology for activities carried out in 2025, including soil assessment, GCE, soil replacement, and ground cover improvement are described in the 2019 Work Plan and the 2019 June Work Plan Progress Update¹⁴. A status update for all properties that have received soil assessment and remediation in 2025 and in previous years is provided in Table 1. A further breakdown for work completed in 2025 and work planned for 2026 is provided in subsequent tables, as detailed below.

4.1 Determining Child Occupancy and 2025 Priorities

At the start of 2025, a total of 935 individual properties within the EM Area were anticipated to have children under the age of 12 residing or spending time on them. These properties are shown in Table 2 by selecting 'FALSE' from the 'Dup' column and excluding the '12 or greater' and 'unknown' designations from the 'CurrentAgeCat' column. These 935 properties include primary and secondary residences and other associated properties where children frequently visit (e.g., daycares, grandparents, co-parenting, etc.). AtkinsRéalis develops this list each year based on information recorded through THEP's ongoing work within the community since 2007 and through collaboration with Interior Health (IH). AtkinsRéalis also identifies families through outreach and communications as described in Section 7.

Upon review of the data, AtkinsRéalis confirmed that 777 of these properties had previously been tested through soil assessment programs (found in Table 2 by excluding '2025' and 'blanks' from the 'SA Date' column) and of these properties, 301 had been fully remediated by the beginning of 2025 and no longer required remedial action (found in Table 2 by selecting 'FALSE' from the 'Dup' column, excluding '12 or greater' and 'unknown' from the 'CurrentAgeCat' column, selecting for 'FULL REM COMPLETED' from the 'Status' column, and excluding '2025' from the 'Completion Date' column). Thus, a group of 476 properties (777 properties minus those remediated prior to 2025) became the initial focus of the 2025 SMP. These properties would potentially be identified as priority properties for soil management (e.g., P1, P2, etc.).

As in previous years, the 2025 SMP was completed as follows:

- Attempted to confirm the presence and ages of children on properties through ongoing outreach and communication, where information was missing;
- Reviewed previous soil testing results and offered soil testing where no previous sampling had been completed;
- Offered a new or updated GCE to all P3A, and P3B properties, as these properties could be prioritized for remediation (soil replacement or ground cover improvements) if ground cover had deteriorated;
- Assigned a priority to the properties as updated or new information was gathered; and
- Offered soil management to the priority properties identified by June 30, 2025. This included P1 and P2 properties, as well as properties prioritized as part of the PBI.

In 2023, AtkinsRéalis initiated a review of all properties that received partial yard remediation prior to the adoption of the current Risk-Based Prioritization Strategy in 2019. Of those reviewed, properties with children <6 years old were prioritized for additional soil testing, if soil testing had not previously taken place across the entire property or if there were gaps in part-remediation activity records (e.g., excavation depth samples, barrier fabric installation confirmation, etc.). Identified properties were re-tested and the

¹⁴ AtkinsRéalis 2019. *Trail Area Residential Soil Assessment and Remediation - 2019 June Progress Update*, June 28, 2019.

average of the 95% UCLM Pb concentration was re-calculated for the property. This review continued into 2025. Fifteen properties were re-assessed in 2025. Of those, one property received full remediation, two properties received part-yard remediation, and one property's associated boulevard received remediation in 2025 based on the Risk-Based Prioritization Strategy, described in Section 3. Other properties were not prioritized for remediation or did not respond to SMP offers.

4.2 Residential Soil Assessment

Soil assessment was carried out from March – October 2025. In total, 193 residential properties were assessed in 2025, as presented in Table 3 (select 'FALSE' designation from the 'Dup' column, select 'Blanks' from the 'Shared SA' column, select '2025' from the SA Date column), in the following categories:

- The yard or yard and gardens tested in 2025 were comprised of:
 - 82 child-occupied residential properties (with previous filters in place, select 'less than 6' and '6 to less than 12' from the 'CurrentAgeCat' column); and
 - 111 community properties with no children under 12 years old present (select '12 or greater' and 'blanks' from the 'CurrentAgeCat' column).
- 3 properties had only the vegetable garden tested as the rest of the property had already been previously assessed.

In 2025, soil assessment was most frequently completed in the neighbourhood of Shavers Bench (50 properties tested; Table 4-1). Of note 46 of these properties were on one large parcel with small individual yards. Glenmerry received the second highest number of SAs (32 properties tested), and then Warfield (18 properties tested each). Twenty-six of the properties were in communities surrounding Trail, such as Rivervale, Montrose, Columbia Gardens and Waneta, which has increased the dataset in these areas where fewer soil assessments were completed historically. A summary of results collected in each neighbourhood is provided in Table 4-1 below and can also be found by filtering Table 3 in the 'Neighbourhood' column (select 'False' from 'Dup' column and select 'Blanks' from the 'Shared SA' column).

Table 4-1: Soil Assessment Progress by Neighbourhood

Area	Neighbourhood	Assessed 2025 ¹	Assessed Total ¹	Total Residential Properties	Percent Assessed
1	Annable	6	55	115	47%
	Casino	1	8	53	15%
	Oasis	0	12	65	18%
	Waneta	3	40	242	17%
	Warfield	18	192	610	31%
	Columbia Gardens	2	6	20	30%
	Montrose	12	40	462	9%
2	Glenmerry	32	378	678	58%
	Miral Heights	8	38	105	36%
	Shavers Bench	50 ²	208 ²	279 ²	75%
	Sunningdale	15	183	330	55%

Table 4-1 (Cont'd): Soil Assessment Progress by Neighbourhood

Area	Neighbourhood	Assessed 2025 ¹	Assessed Total ¹	Total Residential Properties	Percent Assessed
3	East Trail	13	684	784	87%
	Rivervale	9	59	117	50%
	Tadanac	0	66	86	77%
	West Trail	22	525	958	55%

¹ Outside of these core Program areas, two additional properties were also assessed in 2025 and an additional three were assessed from 2007-2024.

² Includes 46 THEP PIDs that were created from a larger parcel in 2025.

Soil assessment results, including the 95% UCLM and the maximum Pb concentration, are provided in Table 3 and are also included in Table 1 along with all previous soil assessment results. By the end of 2025, a total of 2516 parcels in the EM Area have been tested as presented in Table 1.

A compilation of drawings is provided to visually present the distribution of properties sampled and Pb concentrations across neighbourhoods in the Trail Area. Map Book 1 presents information from Table 1 (all assessed properties) with the most up-to-date 95% UCLM soil Pb concentrations calculated for each yard using 10 or more discrete surface soil samples collected during soil assessment. Hatched properties indicate that the yard has been remediated and, in those cases, the soil Pb concentration of the backfill is shown on the drawings to indicate surface soil concentrations currently present on the property.

4.3 Standardized Paint Screening

As introduced in the 2023 Work Plan, AtkinsRéalis developed a standardized paint screening (SPS) protocol to evaluate exterior lead-based paint (LBP) on residential properties. United States Environmental Protection Agency (US EPA) Title 40, Part 745¹⁵ defines LBP as paint containing Pb concentrations greater than 5,000 ppm or 1 mg/cm².

In 2024, to utilize the most stringent regulations available, THEP changed its paint reporting reference from the US EPA LBP standard to Canada's Surface Coating Materials regulation for Pb in paint¹⁶. The regulation states that paint sold in Canada containing greater than 0.009% (90 ppm) Pb must be labelled to indicate it is not safe to use in areas accessible to children or pregnant women. THEP identifies any detectable Pb found during paint screening activities as 'lead in paint'. Since the X-ray Fluorescence (XRF) instrument detection limit for Pb is approximately 90 ppm when in paint mode, THEP reports all detectable Pb as 'lead in paint'.

The two main objectives of paint screening are:

1. To understand the prevalence of Pb in paint and potential Pb exposure, as identified by Pb content and paint condition, within the Trail EM Area with the intention to help protect young children from the impacts of Pb exposure due the presence of lead in paint; and
2. To understand potential risks of soil recontamination from Pb in paint.

¹⁵ EPA. Title 40 – Protection of Environment. Chapter I – Environmental Protection Agency. Subchapter R - Toxic Substance Control Act. Part 745 – Lead-Based Paint Poisoning Prevention in Certain Residential Structures. 1996. <https://www.ecfr.gov/current/title-40/chapter-I/subchapter-R/part-745>.

¹⁶ Surface Coating Materials Regulation, SOR/2016-193, Canada Consumer Product Safety Act. 2022-12-19.

The scope of work in 2025 included paint screening on exterior painted surfaces on residential buildings and associated structures (e.g., fences, sheds, etc.) in conjunction with soil assessment, remediation activities. In 2025, exterior SPS was conducted at all properties that received soil assessment, GCEs where SPS data had not yet been collected, and remediation. In total, 229 properties received exterior SPS in 2025.

A summary report of data collected between April 2023 and May 2025 will be completed in 2026.

4.4 Ground Cover Evaluation

Properties that received soil assessment in 2025 received a ground cover evaluation (GCE) at the same time, even if the property was not child-occupied. This was done to streamline field efforts and fulfill the objectives of the risk-based prioritization strategy. Since any property can become child-occupied at some point in the future, the GCE at the time of soil assessment provides baseline information about the property and information about ground cover within the community. Included in Table 3, 271 GCEs were completed on residential properties in 2025, with 159 of those being completed on properties with children < 12 years of age. These numbers can be obtained by filtering for 'FALSE' from the 'Dup' column, selecting 'Blanks' from the 'Shared SA' column, then filtering for '2025' within the 'GCEDate' Column. Child-occupied properties are further identified by filtering the 'Age Category' column for 'less than 6' and '6 to less than 12'. Of the properties that received only GCEs at child-occupied properties in 2025, all were at properties where soil assessment results were already available and performed in order to gather current ground cover data and update prioritization.

The key features of the GCE are as follows:

- Complete a thorough visual inspection of all areas of the property;
- Identify primary play areas within the property, if present;
- Collect geo-located photographs and note ground cover information for each area of the property and relate to soil sample locations;
- Upload photos and GCE data into the Database;
- Review GCE information relative to soil concentration and use; and
- Assign a cover rating (POOR, AVERAGE, GOOD).

Table 3 presents an overview of the result of the GCEs completed in 2025.

4.5 Remediation Priority Assignments

Once child occupancy, soil assessment and GCE information is collected, the property is assigned a remediation priority based on the risk-based prioritization strategy outlined in Section 3.1. Some properties in Table 2 are categorized as not prioritized (NP). That is because there were no children under 12 living on the property, the child had moved, or no surface soil is accessible on the property. Some properties in Table 2 are categorized as To Be Determined (TBD). That is because a child currently lives on the property, but the property has not yet received a soil assessment or the property is missing updated information. If a property was not assigned a priority status by June 30, 2025 it was because the family moved out prior to prioritization or moved in after June 30, 2025. The priority assigned by June 30, 2025 for properties with children (i.e., includes a Family Identification number) is presented in Table 2 (select 'FALSE' from 'Dup' column, filter the priority in the column 'RemPMidYear') and summarized into the following categories:

- P1: 54 previously known and/or identified in 2025 and before July 30, 2025;

- P2: 12;
- P3A or P3B: 38;
- P3C or P3D: 335;
- NP: 131;
- TBD: 161; and
- Remediation Complete (RC): 367.

As outlined in Section 3.1, property prioritization for remediation requires data regarding the age of children and how much time they spend on the property, the quality of the ground cover, and the soil Pb concentration. Of the remaining 108 properties on our list that had not been assigned a priority by the end of 2025 there were missing pieces of information (e.g., contact, child age, soil assessment, GCE, etc.) that AtkinsRéalis will continue to try to resolve. The number of properties without an assigned priority by the end of 2025 can be found by selecting 'FALSE' from 'Dup' column then filtering column 'CurrentRemP' for TBD, and removing '12 or greater' from the 'CurrentAgeCat' column.

4.6 Soil Management of Non-Child Occupied Properties

Non-child occupied properties that have received soil management are tracked in the Database as community properties (CP). They may be occupied only by adults, have older children (12 years or older), or have children that visit the property infrequently (e.g., for less than two days a week or equivalent). CPs are not actively prioritized for remediation as the goal of THEP is to reduce young children's risk of exposure to Pb, as they are the most vulnerable to the effects of Pb.

However, remediation is completed at a few CPs every year, typically associated with the BI, or when significant homeowner-initiated work requires soil management, such as large renovations or landscaping projects that will disturb soil and where soil disposal is required. The SMP works with homeowner-initiated projects to remove and appropriately dispose of, and occasionally replace, soil on the property. In 2025, 13 full or partial soil remediations on properties that had previously been remediated were completed as part of the BI. Another 14 CPs received some form of soil management support due to vegetable garden replacement, full soil replacement, or they qualified for a soil delivery or pick-up. Table 4 can be used to determine the number of CPs that were provided with soil management support in 2025 by selecting 'False' under the 'Dup' column and selecting 'CP' under the 'Yard Remediation Type' column. Select '3' from the 'Block ID' column to further determine how many CPs received soil management because they were within a prioritized block. To determine the other CPs that received soil management, select 'False' from the 'Dup' column, select 'CP' under 'Yard Remediation Type' column, and de-select '3' from Block ID.

The SMP also provides soil replacement to boulevards due to qualifying soil Pb concentrations and proximity to remediation being completed on adjacent prioritized properties. A total of four boulevards were remediated in 2026, three of which were on the prioritized block. Some other reasons for remediating adjacent CPs included all or some of the following:

- access was required to reach a prioritized yard;
- the adjacent CP having poor ground cover and/or high-risk soil under the BC CSR that could be a source of dust on the adjacent child-occupied property; and/or
- remediation efficiencies.

Therefore, managing soil at CP yards both streamlines remediation efforts and can be risk protective to the adjacent prioritized property.

Vegetable gardens on CPs may be tested and prioritized for soil replacement separately from the rest of the yard.

4.7 Remediation

Properties were identified and prioritized for soil remediation throughout the 2025 field season based on the remediation priorities noted above. Soil remediation was carried out between April 15, 2025 and November 7, 2025. Properties were remediated by soil replacement or risk management strategies (i.e., ground cover improvements).

In total, either full or partial soil replacement was completed on 84 properties in 2025. In addition, four City of Trail boulevards were remediated independent of the adjacent property. To obtain this number, in Table 4 select 'False' from the 'Dup' column, and 'REM Full' and 'REM Part' options from the 'Remediation Extent' column. Of those 84 properties, 76 properties were determined to have a property status of full remediation (i.e., FULL REM COMPLETED status) by the end of 2025. This may be a function of a full remediation being completed in 2025 or completion of a partial remediation in 2025 that, combined with historical work, resulted in a full remediation status. To obtain the overall property status of the remediated properties in 2025, select 'FALSE' from the 'Dup' column, then select 'FULL REM COMPLETED' from the 'Status' column.

The summary of remediation activities in 2025 reflects the extent of work completed at each property. The extent of work completed is determined by the amount of accessible soil that is removed from a property during this reporting period. If large portions of a yard were not replaced, typically resulting from a homeowner's request to leave sections of the property unaddressed, the extent of the work completed in 2025 is reported as partial soil replacement. Multiple partial soil replacements on a property can result in achieving a status of FULL REM COMPLETED if all accessible contaminated material has been removed from the property. Of the 30 properties that had a partial soil replacement extent in 2025, 22 were designated with a status of FULL REM COMPLETED by the end of 2025.

Full soil replacement was completed on 54 properties in 2025, consisting of 32 P1s, 7 P2s, and 15 CPs. To view the P1, P2, and CP properties that received full soil replacement by June 30, 2025, in Table 4, select 'FALSE' from the 'Dup' column, filter for 'REM FULL VG' and 'REM FULL NOVG' in the 'Remediation Extent' column, then filter by 'Yard Remediation Type' column.

In addition to the 84 properties that received either full or partial soil replacement, remediation was also completed at 19 properties using risk management strategies as follows:

- 11 properties received a soil or mulch delivery to cover bare areas within the yard and/or soil pick-up
- 5 properties were serviced with only lawn care to improve and maintain grass cover; and
- 3 properties received soil replacement for vegetable gardens only.

Table 4-2 provides a summary of the results of the remediation activities that were completed in 2025 on all types of properties.

Table 4-2: Summary of 2025 Remediation Activities on Properties Listed by Priority Group

Priority Status	Number of Properties	Lawn Care	Improvement & DIY Deliveries	Partial Soil Replacement	Full Soil Replacement	Veg Gardens
P1	57	3	-	22	32	-
P2	12	-	1	4	7	-
P3	6	2	3	1	-	-

Table 4-2 (Cont'd): Summary of 2025 Remediation Activities on Properties Listed by Priority Group

Priority Status	Number of Properties	Lawn Care	Improvement & DIY Deliveries	Partial Soil Replacement	Full Soil Replacement	Veg Gardens
RC	1	-	1	-	-	-
CP	27	-	6	3	15	3
TOTAL	103	5	11	30	54	3

¹ 82 RC properties from 2024 and until July 31, 2025 also received lawn care in 2025, but not included herein because post-remediation lawn care is no longer considered a risk management measure.

Note that vegetable garden soil is replaced during full-yard soil replacement, but are also prioritized separately on properties (i.e., remediated even if the rest of the yard is not prioritized or accessible). Along with the three properties where only the vegetable garden had soil replacement, 29 other properties received vegetable garden soil replacement as part of yard soil replacement. A summary of vegetable garden remediation can be found in Table 4 and the type of remediation can be determined by filtering "Remediation Extent" for 'REM FULL VG' and 'REM PART VG'.

Although efforts are made to remediate all P1 properties identified by June 30 within the given year, 19 properties that were identified by June 30 received no soil management. Seven property owners declined soil management, three properties notified CPO that they had moved to a new location, eight did not respond to CPO requests and one homeowner completed extensive earth work projects on their property and required re sampling of their yard. The CPO staff remain in contact with all current P1 property owners with the goal that these properties will be ready for soil management in 2026.

4.7.1 2025 Post-Remediation Soil Results

A summary of 2025 soil results from the excavation base and the average soil replacement depth for all properties that received full soil remediation is provided in Table 4. The properties that received full and partial soil remediation in 2025 and in previous years are also presented in Table 1 and can be found by filtering the table by year within the 'Completion Date' column and then 'Remediation Extent'.

Map Book 2 presents the properties that have received full soil replacement and displays the associated 95% UCLM soil Pb concentration from the excavation base, below the geotextile demarcation fabric. The backfill materials and landscape features are placed above the demarcation fabric following excavation. Soil results collected from the newly placed backfill at all properties that received full remediation in 2025 are presented in Table 4 by filtering for 'Status' and 'Post Rem Pb'.

The records of soil replacement for individual yards remediated as part of the SMP are also available in Notification of Independent Remediation (NOIR), Notice of Completion of Independent Remediation (NCIR) forms and, where applicable, associated Site Risk Re-classification reports submitted to ENV. Remediation summary reports are provided to property owners after remediation is carried out.

4.7.2 ENV Reporting: Notifications and Site Risk Classification

The ENV is notified at multiple points throughout the SMP independent remediation process. A NOIR is submitted to ENV at remediation commencement and includes a Site Risk Classification Report (SRCR) and Exposure Pathway Questionnaire (EPQ)¹⁷ completed based on pre-remediation metal concentrations found in surface soil samples. A NCIR is submitted when remediation is complete, along with an updated SRCR. If a site was initially classified as a 'High Risk Site' and that site risk classification changed following remediation, a reclassification letter is submitted and includes an additional SRCR based on post-remediation surface soil and excavation base samples.

Table 5 provides a status summary of properties that remain classified as 'risk-managed high risk' and 'high risk' after the completion of remediation. These properties generally have soil above upper cap concentrations at the excavation base (commonly 0.3m Below Ground Surface), beneath ground cover improvements (e.g., mulch installed over flower gardens) or in areas of the property that are not accessible for soil replacement. These areas are also not commonly accessible for young children.

4.8 Daycares and Parks

A summary status for Daycare facilities is provided in Table 1 (filter "Property Type" for "Daycare"). Soil at all registered Daycare facilities in Trail was sampled prior to 2019 and full or partial remediation was completed on all consenting P1 Daycares in previous years. Additional sampling was conducted at one P1 Daycare in 2025 and results indicated that additional soil management may be required. The Daycare provided did not respond to CPO efforts at follow-up. The CPO will continue with communications attempts in 2026 in order to address risk on this property. Outside of this instance, there were no known Daycares requiring soil management.

Seven City of Trail Parks received soil assessments in 2025 with the objective of sampling flower garden beds that were transformed into vegetable gardens for the season (Table 1, select 'Park' from 'Property Type' column, then select '2025' from the 'SA Date' column). Parks that were tested in previous years were generally found to have good quality ground cover with well maintained grass in most areas and alternative cover applications (e.g., gravel or mulch) in primary play areas. In general, all parks in the EM Area typically have good cover and will continue to be monitored annually through the GCE process and remediated as needed.

4.9 Block Initiative

The Block Initiative (BI) is now a standard part of the SMP, rather than a pilot. The BI approach was identified as an opportunity to reduce the potential influence of neighbourhood soils on children's Pb exposure. Von Lindern et al. (2003) analyzed data from the Bunker Hill site in Idaho and found that the soil in a child's own yard and immediate neighbourhood may contribute 30% to their Pb exposure and that community-wide soil may contribute another 30%¹⁸. Neighbourhood block remediation efforts will

¹⁷ Protocol 12; Protocol for Contaminated Sites – *Site Risk Classification, Reclassification and Reporting*, BC Ministry of Environment & Climate Change Strategy, Version 6, March 20, 2023. <https://www2.gov.bc.ca/assets/gov/env>

¹⁸ Von Lindern; et al., 2003. Assessing remedial effectiveness through the blood lead: soil/dust lead relationship at the Bunker Hill Superfund Site in the Silver Valley of Idaho. *The Science of the Total Environment* 303 (2003) p. 139-170.

further reduce average neighbourhood soil Pb levels and reduce children’s potential exposure to Pb from neighbourhood soils, while also addressing high-risk sites as defined in the BC CSR Protocol 12¹⁹.

The BI defined a block as a group of properties on two adjacent streets that are joined by a common laneway or a common property boundary. This definition of a block was selected based on reasons of safety and efficiency related to performing remediation. The 2025 approach for prioritizing neighbourhood blocks was detailed in Section 5.2.3 of the 2025 SMP Work Plan and was developed using child age and soil Pb concentration thresholds from the 2019 Prioritization Strategy. Additionally, a secondary prioritization approach was developed in 2024 to differentiate blocks that were ranked the same following the primary prioritization, which considered the number of young children on immediately adjacent blocks.

After offering remediation to P1 and P2 properties identified prior to June 30, 2025, THEP utilized remaining capacity to manage soil at properties through the BI. As described in the 2025 Work Plan, due to an administrative error, the block ranked 13th was offered soil management in 2025 (i.e., Table 6, Block ID 3). Based on high participation rates and to reinforce community trust in THEP, accepted offers for Block ID 3 were honoured. This block was the only BI work completed in 2025 (Figure 4-1). The order of individual yard remediations was determined based on logistical considerations (e.g., access, minimizing recontamination of previously remediated yards, etc.). Block remediation took place between July 24, 2025 and November 7, 2025.

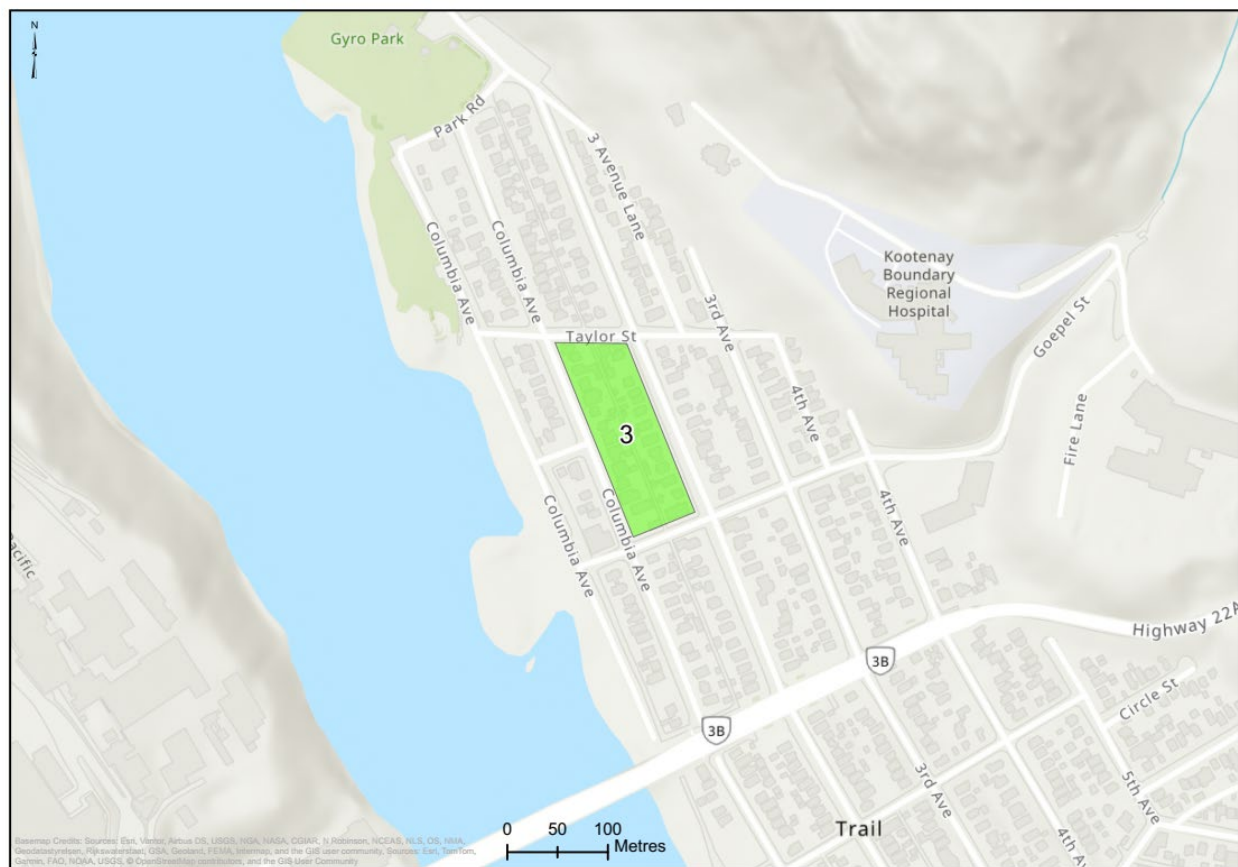


Figure 4-1: Block (BlockID) Remediation Completed in 2025 Through the Block Initiative

¹⁹ Protocol 12; Protocol for Contaminated Sites – *Site Risk Classification, Reclassification and Reporting*, BC Ministry of Environment & Climate Change Strategy, Version 6, March 20, 2023. <https://www2.gov.bc.ca/assets/gov/env>

Remediation offers were extended to the 20 properties within the prioritized block that had not previously been remediated. Seventeen property owners provided approval for remediation, although three provided approval to only remediate the property's associated City boulevard. Four properties received partial remediations and 10 properties received full remediation (Table 4-3). Three partial remediations on this block in 2025 resulted in the status of full remediation of the property due to the combination of work completed in 2025 and previous partial remediations. Of note, the remediation of three boulevards within the block took place where the adjacent homeowner's property had previously been addressed or the property owner had declined remediation of their yard.

Properties remediated as part of the BI can be identified by filtering Table 4 'FALSE' in the 'Dup' column, then for '3' within the 'BlockID' column, then by filtering the Status column. A block-level summary of pre-remediation average soil Pb UCLM and post-remediation average soil Pb by Block ID can be found in Table 4-3.

Table 4-3: Summary of 2025 Pilot Block Initiative Pre and Post-Remediation Soil Pb Levels

Block ID	Number of Properties	Total Number Full Remediations ¹	PRE REM Avg Pb UCLM (ppm)	POST REM Avg Surface Pb (ppm)	POST REM Avg Excavation Base Pb UCLM (ppm) ²	Avg Exc Depth (m)
3	28	14	1732	47	640	0.45

¹ Some properties within the blocks had been remediated prior to 2025 (Status = Full REM Complete).

² Excavation base soil Pb samples are taken from beneath the demarcation fabric.

4.10 Frequent Visitor Properties

A frequent visitor property is one in which a child does not reside but visits two or more days per week. Once identified, frequent visitor properties are prioritized for remediation according to the risk-based remedial strategy outlined in Section 3. A review of all frequent visitor properties took place in November 2024 to inform prioritization for the 2025 SMP.

Of the 44 frequent visitor properties that were prioritized or required a soil assessment and/or a GCE, 18 properties received soil management in 2025. Three received either lawn care or mulch/soil delivery to improve ground cover. Twelve received full yard remediation and three received part-yard remediation. No action was completed at the other 26 properties because they were determined to have an ET of less than 2 days/week or equivalent, did not respond to the THEP offer, or a child was no longer associated with the property.

5. 2026 SMP Workplan

The 2026 Work Plan is anticipated to be similar in approach and scope to that of 2025 and will build on the work completed and data collected through implementation of the 2025 Work Plan. If 2026 SMP capacity remains after offering remediation to all P1 and P2 properties identified prior to June 30, neighbourhood-level remediation may be initiated at prioritized blocks through the BI.

The main objectives of the 2026 Work Plan are to:

- Promote the SMP and the services available to residents within the EM Area through ongoing outreach and communication strategies;
- Complete soil testing at all identified properties with children less than 12 years of age where consent has been signed, and fulfill other sampling requests to a total of up to 300 properties for the year;
- Obtain updated GCE information on all properties that have not received full soil replacement with children in key age groups;
- Provide soil remediation at all P1 & P2 residential properties identified prior to June 30, 2026 including properties where children with underlying developmental risks may increase potential exposure to soil (refer to Section 5.2.2 below);
- Provide vegetable garden soil replacement as needed in qualifying gardens;
- If capacity remains after addressing all P1 and P2 properties identified prior to June 30, provide soil remediation at the neighbourhood-level through the BI to further reduce community soil Pb;
- Conduct exterior paint screening on all properties identified for soil management activities including soil assessment and remediation; and
- Support soil management on new property developments through Teck's Property Development Program.

5.1 Soil Assessment and GCEs

As in previous years, AtkinsRéalis is aiming to complete soil assessment on every property that requests testing in 2026. It is expected that our capacity for sampling is approximately 300 properties. If requests exceed capacity, priority will be given to properties with children under 12 years of age in key neighbourhoods as noted in Section 3.1. In 2026, as in previous years, outreach to raise awareness will continue to include a focus on locations frequented by families such as schools, daycares, public spaces (e.g., arena, local mall, library), and more general advertising such as the semi-annual THEP newsletter, the local newspaper, and on social media through the program partners (e.g., Family Action Network and City of Trail).

If residents do not request soil assessment through outreach activities, direct offers may be provided to properties of interest such as multi-family rental properties where our program has identified that families regularly inhabit. If any blocks are remediated in 2026, efforts may include directly offering soil assessment to remaining properties on blocks that are prioritized through the BI. Soil assessment may also be directly offered to individual properties immediately adjacent to properties where young children reside. The CPO will also continue to approach properties adjacent to existing proposed remediation properties to potentially create efficiencies and ease access constraints. Soil assessments at previously assessed Parks and residential properties will be updated as required (e.g., to fill in data gaps or follow-up after soil disturbance work).

GCEs will be offered to all properties with children less than 12 years of age where full-yard soil replacement has not previously been completed. The CPO will follow-up initially over the phone and then complete an in-person GCE in the following instances:

- Where ground cover is reported by the resident to be poor or average;
- Where the resident has identified a change in landscaping or has noted deteriorating ground cover (e.g., where cover was previously good and is now reported as average, or vice versa); and
- Where an in-person GCE has not been completed in the past year, even if the resident reports ground cover is good.

An in-person GCE will not be completed if the ground cover is reported to be good during the phone conversation and an in-person evaluation was completed during the last field season. In these cases, the GCE will be recorded as 'good' in the Database and an in-person evaluation will be recommended for the following year. In order to increase THEP's understanding of the prevalence of Pb in paint in the Trail area, exterior paint screening will also be offered at the time of GCE if the exterior paint on the property has not previously been screened.

GCEs will be completed at all properties during soil assessment and annual GCEs will continue at all City Parks.

5.2 Prioritization of Properties for Remediation

5.2.1 P1 & P2 Residential Properties

As in previous years, the priority for soil remediation is P1 and P2 properties that are a primary or secondary residence for children. Frequent visitor properties, where children spend two or more days per week, can also qualify as P1 and P2 properties within THEP's risk-based prioritization framework. There are currently 30 properties (29 P1 and 1 P2) that are a priority for remediation services in 2026 Table 7, remediation priorities can be filtered by selecting 'FALSE' in the 'Dup' column and toggling status in the 'RemP At 2026-03-01' column. Of the prioritized P1 and P2 properties, 25 have been offered soil remediation in 2026, including some that have previously declined soil remediation. The remaining 5 P1 and P2 properties are currently being assessed for access constraints or require additional information about soil, ground cover and child occupancy. It is expected that partial remediation, including partial soil replacement or yard improvements, will be completed at P1 and P2 properties that have significant access constraints. Examples of access constraints include limited or no access for equipment via steep roadways and/or over retaining walls, stairs that are unsafe for workers to access the yard, or access only available through adjacent properties.

The 30 P1 and P2 properties scheduled for remediation (soil replacement or ground cover improvement) are summarized in Map Book 3. It is anticipated that there is capacity in the SMP to address all accessible P1 and P2 properties identified in 2026, and secondary prioritization will not be required within these groups. The secondary prioritization of P1 and P2 properties will be applied in the event there are more properties in the queue than can be accommodated in the 2026 remediation season.

5.2.2 Other Child-Occupied Residential Properties

It is not anticipated that child-occupied properties in the lower priority (P3) groups will be offered remediation in 2026 due to a risk-based focus on the P1 and P2 properties described above, and other remediation priorities described in the sections below. It is important to remember that P3 properties have been assessed to have good ground cover and lower soil Pb levels and therefore, pose low risk to children living at the property.

The process to support children that exhibit soil pica behaviour was described in the Trail Area Soil Management Program 2022 Annual Report and 2023 Work Plan. Properties occupied by these children will be identified for prioritization in 2026 as recommended by IH, but for confidentiality reasons will not be further identified in SMP reporting. Any currently known properties in this group have been included in Table 7.

5.2.3 Prioritization of Neighbourhood Blocks

The CPO has assessed that in addition to the remediation of P1 and P2 residential properties, there may be some capacity remaining in the SMP to continue with the BI in 2026; this will include the remediation of blocks where there are high average soil Pb concentrations (the majority of properties would be classified as high-risk under CSR Protocol 12) and there are children present. No changes are proposed to the prioritization framework developed for blocks, as described below.

1. The determination of a candidate block if at least 75% of the properties within the block had received soil assessments.
 - A 75% threshold was selected to ensure existing soil Pb data was representative of the block.
2. The calculation of the average soil Pb 95% UCLM concentrations for each block and selection of blocks with 95% UCLM > 1,200 ppm (i.e., CSR Protocol 11²⁰ Upper Cap Concentration).
3. The determination of the total number of children residing within each block (NChild). $N_{\text{Child}} = N_{\text{Young}} + N_{\text{Old}}$; where:
 - (N_{Young}) = # of children < 6 years of age where average soil UCLM > 1200 ppm Pb; and
 - (N_{Old}) = # of children 6 to 12 years of age where soil 95% UCLM is > 2,800 ppm (based on bare soil threshold for older children in the 2019 prioritization framework).
4. The ranking of candidate blocks by the total number of individual children (NChild) identified in Step 3.
 - This ensured that blocks offered soil replacement first were those with the most children potentially exposed to soil Pb above age-based concentration thresholds.

Secondary prioritization is required if multiple blocks have the same ranking following Step 4. The number of young children (i.e., N_{Young}) on immediately adjacent blocks is used for secondary prioritization with the objective to reduce potential Pb exposure for neighbourhood children. The secondary prioritization methodology is:

1. The determination of the total number of young children ($N_{\text{Young Adjacent}}$) residing on all adjacent blocks (within a 1-block radius) to each block.
2. Ranking of blocks tied after Step 4 by $N_{\text{Young Adjacent}}$ to prioritize those with the highest number of young children within a 1-block radius.
3. If block rankings tied after Step 2 of the secondary prioritization, the blocks were then ordered by the average Pb UCLM from highest to lowest.

²⁰ Protocol 11; Protocol for Contaminated Sites – *Upper Cap Concentrations for Substances Listed in the Contaminated Sites Regulation*, BC Ministry of Environment & Climate Change Strategy, Version 6, November 22, 2024.

In 2026, additional blocks from West Trail were considered in the prioritization framework where average surface soil Pb was greater than 1200 ppm (CSR Protocol 11 Upper Cap Concentration (UCC)) and the percent of properties with a SA was $\geq 75\%$.

A block has previously been defined only as a group of properties on two adjacent streets that are joined by a common laneway or a common property boundary (see 2023-2025 Work Plans). Due to inconsistent block delineations in West Trail (i.e., sometimes lacking laneways, long stretches lacking cross-street access, numerous dead-end streets, etc.), blocks there were identified as groupings of adjacent properties based on ease of operational access.

Block prioritizations for the 2026 BI are shown in Table 8. Note that all blocks shaded and beneath the heavily line indicate those that had less than 75% of properties assessed and/or had a 95% UCLM soil Pb below UCCs.

Should there be capacity to remediate multiple blocks after all P1 and P2 properties identified by June 30, 2026 are addressed, the order of remediation of the blocks and individual properties within a block will be determined based on logistical considerations (e.g., access, minimizing recontamination of previously remediated yards, etc.). Homeowner consent and additional soil assessment may be required prior to final selection of blocks in 2026.

5.2.4 Other Properties Scheduled for Remediation

Whilst the remediation of P1 and P2 properties and City blocks prioritized through the BI are the main focus for 2026 remediation activities, other residential properties may also be included in the 2026 SMP based on property specific situations that THEP periodically encounters. Examples anticipated in 2026 include:

- Properties adjacent to P1 properties where soil Pb exceeds 1200 ppm (and would therefore be classified as high-risk under CSR Protocol 12), ground cover is poor and/or access would support remediation of the P1 property.
- Properties where homeowners are initiating projects in their yard with significant ground disturbance and/or soil requiring disposal.
- Properties that were not prioritized for yard remediation but do qualify for vegetable garden remediation. The CPO has generated a list of properties with vegetable garden soil Pb > 400 ppm that have not received remediation, as identified in the 2025 Work Plan. During the spring 2026, the CPO will continue to contact these property owners to determine whether the vegetable garden is in use and offer vegetable garden remediation, as capacity allows.

In addition to work on residential properties, soil management to support new development, redevelopment or construction projects within the EM Area may be required. Projects of this nature are addressed through the THEP Property Development Program (PDP). These properties are reported separately and have not been included in the SMP Annual report.

5.2.5 Parks

Soil management is not currently planned at any parks in the EM Area for 2026.

In 2026, the CPO will reach out to local municipalities to identify any planned work or improvements in Parks (e.g., replacement of play structures) and to offer updated GCEs to monitor ground cover. As ground cover is typically excellent in Parks, soil remediation is not currently a high priority; however, soil replacement may be considered in coming years for primary play areas and/or in conjunction with park improvement projects.

5.2.6 Summary of 2026 Remediation Priorities

If homeowner consent is obtained and detailed property-based planning does not identify additional constraints, remediation work in 2026 is anticipated to include:

- Full soil replacement at 30 P1 and P2 properties;
- Yard improvements (lawn care and ground cover improvements) and/or partial soil replacement at difficult access P1 yards where full soil replacement is not possible;
- Soil remediation at any new P1 and P2 properties identified prior to June 30, 2026;
- Soil remediation at any CP properties adjacent to and allowing access to P1s and P2s;
- Soil management at CP properties that qualify for SMP supports; and
- If capacity remains, full soil replacement within one or more neighbourhood blocks as part of BI.

The CPO is working with property owners to gain access consent to the above-mentioned properties. Once consent is obtained, remediation plans will be developed. Currently, 71 properties have been offered remediation, including properties with only qualifying vegetable gardens. Weather permitting, remediation activities are scheduled to commence in early April for vegetable gardens and in mid-April 2026 for full yard remediations.

5.3 Contingency Plan

Over the course of the year, families move or have reasons to decline soil remediation work. In these cases, the reasons for cancellation are noted in the Database and the property is flagged for follow-up if applicable (e.g., with new owner/tenant, etc.). Assuming time allows and consent is confirmed, another property will be scheduled for remediation in order of priority as our capacity allows. In previous years, we typically see approximately 10 families move into or within the community. A contingency to accommodate these families is included in the 2026 SMP.

5.4 Data Gaps

5.4.1 Critical Data Gaps

There were three critical data gaps identified in previous SMP Work Plans; updates on these gaps are provided below:

1. Identification of Child-Occupied Properties:

Child occupancy changes frequently as families move into, out of, or within the EM Area. This information is kept updated to the extent reasonably possible through partnerships and outreach. The partnership between CPO and IH is essential to collecting the most up-to-date information on families. Additional staff hours were approved by IH in 2023. This provided capacity to support additional in-person outreach opportunities for the second half of 2023 and increased outreach will continue into 2026. These ongoing efforts continue to address this critical data gap.

2. Garden Produce Pathway:

The garden produce pathway was reported in the 2020 SMP. The key findings showed significant decreases in Pb in both fruit and leafy vegetables from previous studies. These decreases appear to be related to air quality improvements from Teck's fugitive dust reduction program. Although soil replacement may help reduce some but not all Pb from produce, soil testing and, where warranted, soil replacement, continues to be offered to vegetable gardeners.

3. Lead in Paint Prevalence and Recontamination Potential:

Understanding the prevalence of Pb in paint and the potential associated risk of soil recontamination was identified in the 2023 SMP. To address this data gap, exterior SPS methods were developed in 2023. SPS has been conducted at all properties that received soil assessment and remediation since April 2023. If exterior SPS data was not collected during a soil assessment that took place before 2023, it will be offered at the time of conducting the GCE. A draft SPS report is currently in review. Conclusive findings will be presented in the 2026 Annual Report.

5.4.2 Non-Critical Data Gaps

Non-critical data gaps identified in the previous SMP Work Plans included:

1. Limited Vertical Delineation:

Vertical delineation in the EM Area has been previously investigated and because the mechanism of contamination is aerial deposition of metals, soil concentrations are typically highest in the near surface soil (e.g., the top 30 cm to 60 cm below grade). While assessment to confirm the vertical extent of metals contamination has not been conducted at each individual property, strong evidence of vertical delineation is found in areas where extensive soil assessment and remediation have been completed. The data demonstrates that the highest soil metals concentrations are consistently found in the upper 0.6 m of soil, and concentrations decrease with depth, trending toward the EM Area concentration limits within the upper 1 m of soil.

Vertical delineation of metals is a non-critical data gap and not a primary objective at individual yards because human health exposure pathway is removed through surface soil removal and replacement or good ground cover. Metal contamination at depth is evaluated by XRF screening and soil sample collection at the base of remedial excavations. It is often difficult to excavate beyond 30 cm on individual properties due to property constraints (e.g., utilities, adjacent structures, large rocks, etc.) and, as such, vertical delineation is not always achieved on an individual property basis. On properties where high-risk conditions are encountered, efforts are made to remove high-risk conditions from the property in accordance with CSR Protocol 12.

2. Limited Dataset for Some Neighbourhoods:

For neighbourhoods within the EM Area but outside the City of Trail, fewer soil data were collected historically. Soil data collected across the EM Area and beyond indicates that these neighbourhoods are unlikely to be prioritized for and/or require full soil replacement; however, soil assessment and GCE is still needed to make a final decision on remediation. The number of properties sampled in outer-lying neighbourhoods can be found by filtering Table 1 by neighbourhood. AtkinsRéalis will continue to offer soil assessment and GCE to all properties within the EM Area, with a priority on properties with children under the age of 12.

3. Limited Groundwater Assessment:

The potential influence of soil impacts from historical aerial emissions on groundwater in the EM Area has been evaluated through various studies over the past 20 years. The studies have determined it to be an inoperable pathway due to no spatial trend of metals in groundwater consistent with soil impacts from historical aerial emissions, and limited exceedances for the four parameters of interest in soil (i.e., As, Cd, Pb, Zn). Groundwater continues to be monitored by Teck in areas of potential environmental concern related to Teck Trail Operations.

4. Long-Term Sustainability of Remedial Actions:

Given the significant improvement in Teck's aerial emissions of Pb through technology upgrades and fugitive dust reduction measures, the potential recontamination of residential soil remediations due to aerial emissions is predicted to be low. To more definitively assess this risk, the Long-Term Soil Study (LTSS) was launched in 2023 to monitor changes in soil metal concentrations for up to 30-years (to at least 2053). Test plots installed within the EM Area in 2023 were designed to represent remediated residential yards while avoiding confounding factors (e.g., Pb-based paint). Soil samples are collected and analyzed annually and compared to baseline conditions.

6. Challenges and Constraints

The SMP has the goal to complete remediation on all P1 properties identified before the end of June of each year; however, working on residential properties presents significant challenges and constraints to executing the SMP as we try to meet the needs of individual property owners and tenants and manage the physical constraints on individual yards. The main challenges facing the program are summarized as:

1. **Property owners declining** assessment and remediation services. Each year a portion of the P1 property owners decline remediation services for a variety of reasons. These include not wanting the disruption in their yard, wanting to coordinate remediation efforts with their own future property improvements, and not understanding the program (e.g., owners assuming they have to pay for soil replacement). The CPO continues to reach out to property owners that previously declined services to re-offer, provide further information and education, and complete work when the owners are ready.
2. **Families moving** into, away from, or within the EM Area throughout the year. This is an ongoing challenge as the program is not always aware of families moving and work can be delayed, stopped, or shifted to address families moving. It is critical that the SMP remain agile to respond to ownership or occupancy changes throughout the remediation season.
3. **Physical property constraints:** Significant challenges exist with respect to access to some properties to carry out both soil assessment and remediation. Common access constraints include unsafe stairs, steep slopes, unstable retaining walls, overhead utilities, and other concerns. These constraints could cause significant risk to property, workers, residents, and municipal infrastructure. The approach to assessment and remediation needs to be considered carefully. Solutions for access may range in complexity from simple measures such as closing off streets to allow exclusive temporary access to more invasive measures such as building temporary roads or extending alleyways. There is also potential for application of alternate equipment such as conveyor systems, hydrovac trucks, and soil slingers or alternate remediation strategies such as soil capping. This constraint has been explored throughout the last 5 years. Solutions have been identified for many of these constraints and the options have increased in recent years with remediation contractors supplying additional customized equipment for difficult access sites. The outlook for accessing and offering soil management at more of these properties in 2026 continues to improve.
4. **Backfill materials:** A challenge that has been identified as the SMP progresses is locally sourcing quality backfill materials, specifically topsoil. Topsoil import from other regions incurs many costs, including monetary (trucking fees), environmental (greenhouse gas emissions), and safety (increased road traffic). The program continues to look for sustainable sources of local, quality backfill materials.

7. Communication Plan

THEP uses a continuum of communication strategies to engage and inform residents about the programs available. Typically, it starts with broader community outreach such as newsletters, radio ads, events, posters, and print materials provided in key locations. Once a family or property owner has connected with the CPO, direct communication continues as they move through the program. The majority of communication with families is carried out through the Healthy Homes program (a component of the CPO) and this information is shared between IH and the CPO to ensure delivery of optimal services for families.

In 2022, the THEP Communications Plan was published as part of the THEP Strategic Directions 5 Year Plan. The plan was most recently revised in August 2024 to reflect changes in standards used for identifying Pb in paint and identifying Pb and SO₂ as the primary THEP focuses for exposure reduction (Appendix A). This Communications Plan describes the primary components (e.g., Air, Soil, etc.) of THEP and how Program partners can continue to engage Trail and area residents. Target audiences are identified along with related key engagement material. With regard to soil, specifically, communications objectives include:

- Improving communications on the potential risk from metals in soil, who may be at risk, exposure prevention methods, and the supports available to the community; and
- Ensuring soil is contextualized as one exposure pathway, and that people understand soil management may not be the only action to reduce children's Pb exposure and lower blood Pb levels.

7.1 2025 Communication Strategies

Highlights of the 2025 outreach and communication strategies are presented in Appendix B and included:

- A spring and fall THEP newsletter that was delivered to all addresses in Areas 1, 2, and 3 and mailed directly to families participating in our programs;
- Two newspaper articles: 1) the May 2025 Trail Times highlighting THEP Community of Practice member visit to share about smelter efforts to reduce Pb in Hoboken, Belgium and learn from THEP and 2) the December 2025 Trail Times article highlighting participation in the children's blood Pb testing clinic and blood Pb levels consistent with results in recent years;
- Attending one IncrEDIBLE Trail Farmers Market where residents could get information about programs and sign up for soil testing;
- Hosting a realtor engagement event to inform realtors about THEP, answer questions they typically receive from prospective homebuyers, and describe what THEP supports are available to residents;
- Attending one Community Connect Fair where residents accessed THEP pamphlets and were provided with educational messaging;
- Attending Three and Thriving Parenting Café, a Family Action Network event, where THEP educational messaging was shared with caregivers of young children;
- Attending the Teddy Bear Picnic, along with IH. At the Teddy Bear Picnic, we set up a sandbox and a handwash station to help share educational messaging;
- Participating in the Trail Senior's Fair (Amazing & Aging Wellness Fair) and provided air quality and soil testing information to attendees; and
- Attending the Trail Family and Individual Resource Centre Society's Building Beautiful Babies meetings to provide families and expectant parents with information about the Healthy Homes and Healthy Families programs through THEP and to promote Lead Safe Renovation resources.

7.2 2025 SMP Recipient Survey

As in previous years, the recipients of 2025 remediation work (soil replacement and yard improvement) were surveyed by the THEC Lead Facilitator. A change in 2025 was that surveys were sent within a month of soil management completion, rather than at the end of the year. A summary of the survey results is included in Appendix C.

The soil replacement and yard improvement survey were sent to 77 property owners and there were 59 responses (i.e., 77% response rate). This response rate was a considerable increase from 2024 likely due to the surveys being requested within one month of remediation completion. A total of 93% of respondents indicated they were satisfied or very satisfied with the remediation work that was completed on their property. Three percent said they were dissatisfied with work performed on their properties. There was an increase in satisfaction in 2025 and a considerable decrease in dissatisfaction. The CPO followed up with all homeowners who were dissatisfied and provided contact information. Plans to address survey feedback in 2026 include increased CPO training of soil management contractors. The CPO will host early season SMP onboarding meetings with all soil management contractors to reiterate SMP requirements including homeowner communication, frequent engagement with the property owners during remediation, and additional quality control requirements with the remediation contractor prior to demobilizing from each property.

7.3 Summary of Communications with Property Owners

A summary of communication steps specific to the SMP is described below:

1. Identifying child occupancy – these are indicated in Table 2 by the assignment of an FID through the Healthy Homes program. Information obtained from each resident is documented in a “First Contact Questionnaire” and noted in the Database. For properties without children present, the first direct contact occurs when the owner/resident contacts CPO (i.e., AtkinsRéalis does not actively contact in these cases).
2. GCE and Soil Assessment – once identified, these residents are offered a GCE and/or soil assessment. These communications are recorded in the Database and via signed consent forms where applicable. Entry of a date in the soil assessment or GCE columns of Table 3 indicates that service was accepted and received by the resident. If a property has an FID assigned but no date recorded under soil assessment or GCE, this indicates CPO needs to re-offer that service. CPO offers services three times before the property owner is recorded as “silent” if they do not respond. Following GCE and soil assessment, the property is prioritized, and a letter is sent to the property owner outlining next steps.
3. Remediation – for properties prioritized for remediation, the communication steps are to first offer remediation. If remediation is accepted, a consent form is signed, and a remediation plan is developed in consultation with the property owner. The property is then scheduled for remediation work and once the work is accomplished, a completion form is signed, and a summary report is prepared and submitted to the property owner.

A summary of the remediation workflow has been developed and is included in the attached Homeowner Guide to Remediation in Appendix D. These workflows and communication milestones are recorded in the Database by CPO staff.

7.4 2026 Communications Activities

In 2026, we expect to carry out similar communications as in 2025 such as the THEP semi-annual newsletter, radio ads, posters, and in-person outreach events.

Outreach at local daycares is ongoing. Other outreach will take place through posters, parent advisory committee notices, school-based social medial channels, and school newsletters and websites. It is expected that the CPO team will host a booth at the spring IncrEDIBLE Trail farmer's market in 2026. This will be an opportunity to inform residents about soil testing programs for yards and gardens. In addition, at the CPO will attend the Interior Health Kindergarten Fairs. The Fairs provide a chance for families with children entering kindergarten in fall 2026 to learn about THEP's Pb exposure reduction efforts, THEP supports they may be eligible for, and ways to reduce Pb exposure at home.

Communication and outreach with local community groups, local Pb-based industries (e.g., battery recycling), hobby groups that utilize Pb-based tools, soil remediation contractors, and regional district and municipal groups continue to improve messaging and collaboration in the community with regard to soil management. The CPO will continue to communicate with realtors to provide additional education around soil management at properties in the Trail Area.

Following public consultation on the draft WARP in January 2025, the WARP was submitted to ENV in June 2025 for approval in principle.

8. Data Management and QA/QC

AtkinsRéalis follows strict Quality Assurance/Quality Control (QA/QC) protocols for all sampling and analysis and will ensure that all data is handled accordingly. As a minimum, the QA/QC program will include the following:

- Senior supervision of field staff;
- Use of in-house trained personnel;
- Implementation of AtkinsRéalis preferred operating procedures (POPs);
- Written field instructions; and
- Documentation of all field activities:
 - Samples will be collected in a manner appropriate for the prevention of cross-contamination and other field sampling errors. Samples will be collected using an appropriate contaminant-free utensil and placed in contaminant-free containers specifically designed for such use and appropriate to the subsequent analyses.
- Chain-of-custody documentation for sample submission:
 - Use of an appropriate coding system for submitting samples to the analytical laboratory to ensure that information concerning location or expected concentration is unavailable to the analyst(s). A chain-of-custody form will be established to trace the movement and handling of samples from the field to their final destination.
- Use of a Canadian Association of Laboratory Accreditation (CALA) accredited laboratory;
- Adherence to laboratory sampling and analysis protocols (e.g., hold times, sample containers, preservatives, detection limits, approved methodology);
- Procedures to confirmation accurate transcription of laboratory data into tables;
- Review of laboratory QC performance (standards, spike recoveries, etc.) to confirm results are within acceptable limits;
- Analysis of samples in batches of no more than ten (10) samples for organic substances. Batch-by-batch review will be completed of the analytical data produced in concert with all internal QA data for that batch. Failure to achieve appropriate QA will require additional analysis to rectify the problem on a batch-by-batch basis;
- At least one analytical (lab) duplicate for each batch of analyses;
- Results of the laboratory's internal checks will be included in the analytical report;
- Decontamination of sampling equipment (trowels, mixing bowls) between samples and sampling locations;
- Submission of field QC samples at a rate of 10% of total samples; and
- Implementation of corrective action plans (CAP) when acceptable limits are exceeded.

8.1 XRF

The use of the XRF as a field screening tool is essential to the remediation workflow. Using the XRF to screen metals concentrations at the base of the excavation allows property backfill in a timely fashion and reduces risks associated with leaving open excavations on residential properties.

During soil replacement, the base of the excavation is measured for depth and the base of the excavation is screened on an approximate 5 m grid or at visually unique locations. Following XRF base screening, a minimum of 10 discrete samples are collected from across the property and screened with the XRF in the CPO lab.

The proper servicing and operation of the XRF is an important part of the QA/QC of the equipment. Only certified staff can operate the XRF and are issued an operating licence under Natural Resources Canada's Non-Destructive Testing Certification Body. Certificates are valid for three years. Field training staff is also an important part of the XRF QA/QC. Samples must not be saturated with water and must be representative and homogeneous soil samples for accurate results.

Surface and excavation base samples collected under the SMP are screened with an XRF and at least 20% of samples are then verified with laboratory analysis. The XRF result for Pb is then compared to a laboratory result and a regression equation is developed for the XRF. The regression equation is then applied to the XRF samples collected on the property. Methods for the XRF use and calculating UCLMs were provided in the 2019 Work Plan. The latest regression equation is provided in Appendix E.

8.2 Information Management

In coordination with Teck, AtkinsRéalis has developed the information management system for the CPO as outlined in the 2019 Work Plan. Each year, updates and refinements are made to the Database such as new property owner information and identifying better ways to track property information.

Note that all electronic laboratory documents, report letters, photos, videos, chains of custody, certificates of analysis, and maps are stored on the AtkinsRéalis server computer in Trail and are linked to the associated property in the Database for quick reference and availability. Paper field documents, such as the various consent forms, property condition checklists, soil logs, remediation plans, etc. are scanned, filed on the server, and linked to the appropriate property in the Database.

The Database and all information within it are owned by Teck. Data are summarized and presented to the THEC, or to Teck upon request. The CPO provides information and data to property owners about their specific property on request (e.g., in the case of a new property purchase, soil information can be provided to the new owner). Data is also shared with IH and ENV as needed or requested.

9. Professional Statement

As required under Part 16, Section 63 of the *Contaminated Sites Regulation* (CSR), B.C. Reg. 375/96, includes amendments up to B.C. Reg. 171/2025, October 27, 2025, AtkinsRéalis Canada Inc. (AtkinsRéalis) acknowledges that the person(s) signing this report has(have) demonstrable experience and is(are) familiar in completing the work, as described, for the type of contamination at this property. The documentation provided has been prepared in accordance with the applicable regulations in the *Environmental Management Act* (EMA), B.C. Reg. 171/2025 / effective October 27, 2025.

TABLES

(Provided in Separate Excel File)

- 1: Soil Management Program Property Status 2007 to 2025
- 2: 2025 Family and Property Status Update
- 3: 2025 Summary of Soil Assessment and Ground Cover Evaluation Status
- 4: 2025 Summary of Soil Remediation Activities
- 5: Soil Management Program Risk-Managed High Risk and High-Risk Sites
- 6: 2025 Pilot Block Initiative Prioritization
- 7: 2026 Prioritization and Remediation Planning of P1 & P2 Properties
- 8: 2026 Pilot Block Initiative Prioritization

DRAWINGS

(Provided in Separate File)

- 1: Map Book 1 – THEP Surface Soil Status
- 2: Map Book 2 – THEP Excavation Base Soil Status
- 3: Map Book 3 – THEP Remediation Priority Status

APPENDIX A

Trail Area Health & Environment Program Communications Plan

Trail Area Health & Environment Program (THEP) Communications Plan

Updated May13, 2025

Prepared by: Michelle Laurie (THEC Lead Facilitator) & Sally MacDonald (Communications Associate)



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1.0 INTRODUCTION

The Trail Area Health & Environment Program (THEP) supports the community of Trail and surrounding areas to live, work and play in an area influenced by smelter air emissions for more than 125 years.

THEP (the 'Program') is a partnership between the City of Trail, Teck Trail Operations, Interior Health, and the B.C. Ministry of Environment and Parks (referred to as BC Ministry of Environment or ENV depending on the context). The Program aims to be an accessible entry point for the community to understand and navigate ways to reduce exposure to lead (Pb) and sulphur dioxide (SO₂). Community connections help ensure support reaches those who need it. A culture of sharing and learning helps to ensure programming and resources have maximum impact.

THEP focuses on air, soil, health, built environments (homes and other structures), community connection, and understanding the relationships between these focus areas. The Program addresses the inherent overlap of different ways people are exposed to lead and maximizes opportunities for improving health and the environment through an integrated approach.

Background on how the Program was established and its partners can be found at thep.ca. Completed in 2022, the **Strategic Plan** is a guide the partners can use to work together toward their shared ambitions. It sets out the broad areas of work, ambitions, and milestones to achieve.

1.1 About This Plan

Aligned with the 2022 Strategic Plan, this Communications Plan sets out the main facets of the Program and explains how Program partners will continue to reach residents of Trail and the surrounding area.

Each section includes a summary, communications goals, objectives, and key messages. The summary introduces the topic, the communications goal describes what Program partners hope to achieve by communicating about the topic, and the communication objectives describe how partners will achieve that goal. Key messages are plain language talking points that partners and their staff can use to talk about the topic at an introductory level.

The plan also contains a summary of the Program's target audiences and how they are reached. Finally, an activities chart demonstrates the practical tasks that will allow partners to reach the target audiences, and the timing each year for carrying out these tasks.

The plan is intended for use by THEP team members and partners. It is not a public facing document.

Accompanying the Communications Plan are two supplementary documents:

1. Located at thep.ca, the internal THEP **Knowledge Base** includes the key messages from this plan, as well as other information for more detail about each topic. It also contains an FAQ to help THEP's team respond consistently to a wide variety of questions. A THEP style guide is also included, along with downloadable THEP and THEC logos, and templates for letters, reports and presentations.
2. An **Activity Tracker** allows THEP team members, who work in partnership yet span different organizations, to keep note of when each carries out the practical communications and outreach work of the Program. The tracker helps to demonstrate how target audiences have been reached in support of the goals and topic areas of the Strategic Plan.

This collection of documents will help to clarify communication objectives, activities, and public messages. It will allow THEP to communicate how it's working towards its goals and provide markers for success.



Figure 1 The communications plan includes a Knowledge Base, Key Messages and Activity Tracker.

1.2 Overall Communications Goal

Help people in Trail and surrounding areas better understand:

- potential human health risks related to historical and ongoing smelter air emissions,
- additional sources of lead in the community, and
- communicate actions to reduce human exposure.

1.3 Overall Communications Objectives

- Share current Program information with all expectant parents, families, and caregivers in Trail and area.
- Be a go-to source for information on science and research related to community lead/sulphur dioxide exposure, health impacts, and early child development programs, locally and beyond.
- Ensure all committee members and partners know about the work the Program is doing in the community.

1.4 General Key Messages

Core Message: THEP supports the community of Trail and nearby areas to live, work and play in an area influenced by smelter air emissions.

Since the 1890's Trail has been home to one of the world's largest lead and zinc smelting and refining facilities. The smelter continues to be a major employer and economic driver for people living in Trail and the surrounding areas.

Over the past 30 years, operational environmental improvements have greatly reduced smelter emissions. As a result of historical emissions, lead remains in dust and soil in the Trail area.

Lead is a naturally occurring element found in small amounts in the earth's crust, and was commonly used in products such as paint and gasoline. Lead exists in all communities however there may be more lead in Trail than a town without a lead smelter.

For more than 30 years, a group of partners—the City of Trail, Teck, B.C. Ministry of Environment, and Interior Health—in collaboration with the community, has worked together to continually improve the health and wellbeing of people living near the smelter. The program these partners deliver is called the Trail Area Health & Environment Program (THEP).

Each partner, guided by the strategic plan, works on their area of expertise, and they collaborate to support the community.

The Trail Area Health & Environment Committee (Chaired by the City of Trail and including community members) meets regularly to support the program.

There has been good progress. Since the 1990s, there has been a 99% reduction in emissions of lead from the smelter stacks. Children's blood lead levels have dropped from an average of 13.5 micrograms per decilitre (µg/dL) in 1989, to 2.5 µg/dL or less since 2018.

There are several important actions that THEP carries out in the community.

- Expectant families and all families with children aged three and under are offered in-home visits (Healthy Families Healthy Homes visits). Visits are focused on education and prevention of lead exposure for young children. Families also receive supplies to help reduce in-home dust and are offered indoor paint testing for lead.
- Homeowners can receive soil testing and, where needed, soil management for their yard, exterior paint testing for lead, and free supplies for lead-safe home renovations.

- THEP team members actively participate in community events, sharing information about reducing exposure to lead as well as communicating on sulphur dioxide.
- Twice a year, THEP offers a voluntary children's blood lead testing clinic, following up with ways to reduce exposure if a child has an elevated blood lead level (defined as >5 ug/dL).

All THEP community programs are free, and residents can sign up easily online.

Each year, THEP supports hundreds of people in the community with outreach, activities and supplies.

2.0 AIR

Core Message: Air quality has improved dramatically in Trail. THEP partners continue their work to reduce emissions and control dust in the community.

2.1 Summary

Significant operational improvements have been made to reduce emissions from Teck's facility in Trail. Still, lead and sulphur dioxide levels in air have the potential to impact community health.

2.2 Communications Goal

- Increase community awareness around aerial emissions, monitoring, the potential health effects, and actions community members can take to mitigate.

2.3 Objectives

- Communicate programs to identify and support actions residents can take to improve air quality and reduce lead in dust in the community.
- Communicate improvements in lead (and sulphur dioxide) in ambient air.
- Provide resources to allow community members to act when sulphur dioxide emissions are elevated.

2.4 Air Key Messages

Over the past 30 years, there have been significant reductions to levels of lead in air.

- There has been a 99.5% reduction in emissions of lead from the smelter stacks since 1997.
- Teck's Fugitive Dust Reduction Program (a program focussed on reducing emissions from fugitive or non-stack sources) has delivered an 80% reduction in Pb in airborne dust in the community since 2012.
- Pb in airborne dust has been lower than the U.S. EPA standard of 0.15 micrograms per cubic metre µg/m³ since 2018. Canada doesn't have an applicable standard.

Air quality in the Trail area is consistently monitored, and Teck works closely with ENV to adjust operations and take corrective actions.

Sulphur dioxide is a colourless, reactive gas created by industrial operations, such as the metal processing that occurs at Teck's Trail smelter.

In 2020, the Canadian government introduced a short-term benchmark for sulphur dioxide in air. Concentrations in Trail fluctuate but peak levels can be higher than the benchmark for a short period of time.

There are only a few hours each year when sulphur dioxide emissions in Trail are higher than the amount recommended for outdoor physical exertion.

- More than 99 percent of sulphur is captured by the smelter before it comes out of the stacks.
- Because the smelter is in the heart of Trail, and in a deep valley, sometimes weather conditions prevent sulphur dioxide from dispersing before it reaches the community.

When sulphur dioxide levels are elevated, consider staying indoors. You can see real-time data [online](#).

- It's a good idea to also reduce other sources of sulphur dioxide emissions in your environment, such as tobacco smoke and unvented gas stoves.
- If you have trouble breathing, have chest pain or discomfort, or a severe cough, seek medical attention.

Teck is continuing to invest in technology which will reduce sulphur dioxide emissions, and further improvements in community air are expected as these changes are implemented.

More detailed messaging and frequently asked questions about the Air focus area can be found online [here](#).

3.0 SOIL

Core Message: Because of historical emissions from the smelter, soil in the Trail area may contain elevated levels of lead. This is one way a child can be exposed to lead. THEP works with the community to reduce exposure to lead in soil and dust.

3.1 Summary

Emissions from over 125 years of metallurgical operations in Trail have resulted in elevated levels of lead in soil in the surrounding area. These levels are above natural background levels and regulatory standards.

Annual soil management plans are developed by Teck, submitted to the Ministry of Environment, and shared with the Committee. Soil management aims to address potential health risks associated with metal-contaminated soil. The plan includes soil testing and, in qualifying yards, improvements to ground cover or replacement of soil on a prioritized basis.

3.2 Communications Goal

Support the community to have an increased awareness and understanding around metal-contaminated soil, potential risks, soil management activities, and priorities.

3.3 Communications Objectives

- Improve communications on the potential risk from lead in soil, who may be at risk, exposure prevention methods, and the supports available to the community – residential, public spaces, and property developments.
- Ensure soil is contextualized as one exposure pathway, and that people understand soil management may not be the only (or the most impactful) action to reduce lead exposure and lower blood lead levels.

3.4 Soil Key Messages

Because of historical emissions from the smelter, there may be lead in soil in the Trail area.

For most people, there is little risk from exposure to lead in soil, especially when soil is covered by grass or mulch.

For children, bare soil can increase exposure to lead, and contribute to elevated lead levels in blood.

To reduce the risk of exposure to lead in soils, THEP carries out soil management activities on prioritized properties in Trail and nearby areas.

THEP soil management began in 2007 and thousands of yards have since been tested and hundreds have received soil management.

Parks, playgrounds, child-care facilities, and schools in Trail have also been assessed. Ground cover is very good in our schools, parks, and playgrounds, but if you notice poor ground cover in these places, please contact us.

THEP works with property developers to assess and, if required, manage soil during construction. This includes the safe excavation, handling and disposal of soil.

- If construction involves any soil excavation or movement of soil, please fill out a property development application found [here](#).

Soil testing is helpful if you are planning yard work, planting a vegetable garden, or have young children who play in your yard.

Soil testing is the first step and it's free for all residents in THEP's Program Area. [See the map](#) and [sign up online](#).

For qualifying properties, soil management is one way to reduce exposure to lead in your home and yard environment. There are a few ways THEP manages soil in yards:

- improving lawns to fill in bare spots
- covering soil with mulch, rocks, or landscape fabric
- replacing contaminated soil with clean fill

Each of these options reduces exposure to lead in soil.

We manage soil according to a prioritization framework accepted by the B.C. Government. We focus on properties with bare soil and the highest levels of lead, and where children live.

THEP prioritizes properties where children live because children ingest more soil than adults, absorb lead more easily, and are more vulnerable to health impacts from lead exposure while their brains are developing.

Vegetable gardens are also prioritized for soil testing and soil management, regardless of the presence of children.

Plan ahead if you're removing soil from your yard. All soil in [Trail and surrounding areas](#) requires testing, analysis, and approval before it can be taken to the landfill.

Teck funds soil management in Trail, under the direction of the B.C. Ministry of Environment and Parks. It's regulated by the Contaminated Sites Regulation of the Environmental Management Act.

The B.C. Government is working with Teck to develop a Wide Area Remediation Plan, under the Contaminated Sites Regulation of the Environmental Management Act. This long-term plan will build on THEP's current work to address soil contamination in Trail and nearby areas.

We're here to help. Call the Program office at 250.368.3256 or visit thep.ca to get started.

More detailed messaging and frequently asked questions about the Soil focus area can be found online [here](#).

2024 Health Tip Poster related to Soil and Outdoor Dust and Social Media post promoting soil testing:



4.0 BUILT ENVIRONMENTS

Core message: Homes built before 1990 may contain lead in paint. Lead in paint is a hazard when it's chipping, peeling or disturbed during renovations. Keeping dust down in the home and yard reduces the chances of children accidentally ingesting lead.

4.1 Summary

Lead in indoor dust is a significant pathway for children's lead exposure and continues to be an important focus of the Program's in-home visits to families with children under three years old.

4.2 Communications Goal

Provide education about various potential sources of lead and supports that help to reduce potential lead exposure in the built environment.

4.3 Communications Objectives

- Further family, caregiver and community understanding of the relative influence of smelter and non-smelter sources of lead in the built environment and ways to reduce potential exposure for young children.
- Educate renovators on how to identify lead risks during renovation projects and protect themselves, their families, workers, and others in the household.

4.4 Built Environments Key Messages

To reduce dust in your home:

- Use a damp mop on bare floors and a damp cloth on windowsills, furniture, baseboards, and other surfaces kids touch.
- Wash toys often (especially those that young children may put in their mouths).
- Use a high-quality vacuum with a filter on carpets (including area rugs) and bare floors.
- Avoid sweeping with a broom because it stirs up dust without removing it.
- Wipe kitchen counters and eating surfaces often.

There are some other steps you can take to limit the amount of dust you ingest.

- Always wash hands before eating and after being outdoors.
- Eat regular, nutritious meals that are high in calcium, vitamin C and iron.
- When renovating, be careful to contain dust to the work area and clean up thoroughly.

Expectant families and families with children under three years old can sign up [online](#) for a free ~~Healthy Families~~ Healthy Homes visit to increase understanding of how to reduce lead exposure in your home. Supplies are provided to families to help reduce in-home dust.

Homes built before 1990 may have lead in paint.

Renovations stir up dust and older homes can expose people to lead.

- THEP now offers free paint testing as part of its Healthy Families Healthy Homes visits for expectant families and families with children under three years old.
- THEP soil testing and soil management now includes exterior paint testing.
- All homeowners can access tips on how to limit your exposure to lead in paint. Contact us for an information package or visit thep.ca for resources.
- Sometimes it's safest to leave lead in paint undisturbed, as long as it's not chipping, creating dust, or within reach of young children.
- Children and pregnant women are more at risk from lead exposure, and it's important to keep them clear of renovation dust.

In the Program area, if your home was built before 1990, THEP offers advice and support to residents carrying out renovations.

- THEP provides safety supplies and equipment for free.
- Visit thep.ca for a lead-safe renovation checklist and instructional videos.

More detailed messaging and frequently asked questions about the Built Environments focus area can be found online [here](#).

2024 and 2025 updated Health Tip Posters related to Built Environments include:



5.0 [HEALTH](#)

Core message: Because of historical emissions from the smelter, there may be lead in soil and dust in the Trail area. Exposure to lead can affect healthy development in children. THEP works with families to limit children's exposure to lead.

5.1 Summary

THEP includes a collaborative Healthy Families Healthy Homes Program to raise community awareness about ways to reduce lead exposure, particularly in young children.

The Healthy Families Healthy Homes Program promotes health through in-home and daycare visits for expectant families and those with children under three years old in Trail, Casino, Oasis, Rivervale,

Waneta, and Warfield. During these early years, children are more at risk of oral exposure to lead in their home as they are beginning to crawl, explore their world, and put objects and hands in their mouths.

5.2 Communications Goal

Communicate publicly (and one-to-one) on healthy child development education and support to positively influence children's future outcomes.

5.3 Communications Objectives

- Ensure messaging on reducing exposure to lead, as well opportunities for improving child development/health outcomes, reaches families, baby groups, daycares, and family service providers.
- Support participation in Interior Health's blood lead testing clinics to maintain high participation rates.
- Communicate with families that have children with elevated blood lead levels.
- Communicate how to manage potential effects from elevated levels of sulphur dioxide.

5.4 Health Key Messages

For most people, the risk from lead in soil and dust is low. For children, particularly those under three years old, the risk is higher because of the fast rate of development and the way they interact with their environment.

- Babies and toddlers are more likely to transfer dust to their mouths when teething and playing.
- Young children are more likely to play in soil and get it in their mouths.
- Young children absorb lead at a higher rate.
- Pregnant women can pass lead to their baby through their blood stream, and transfer it to newborns through breast milk.

Expectant families and those with children under three years old are eligible for two in-home visits. Request an in-home visit from Community Program Office staff as soon as possible and one from the Public Health Nurse when your baby is about six-months old. Sign up for your Healthy Families Healthy Homes visit online (thep.ca).

- These experts will look more closely at nutrition, diet, and the home and yard environment.
- They will connect families with community resources and groups that support early childhood development.
- They can provide useful supplies to reduce dust in the home environment, such as a vacuum, dust buster kits, hand soap, and lead-safe renovation resources and supplies.

Preventing ingestion is the most effective way to limit lead exposure.

- Wash hands after playing outside and before eating.
- Take off shoes at the door and use door mats.
- Vacuum, mop and dust often, focusing on entryways, window ledges and countertops.
- Cover bare soil in your yard with lawn, mulch, or landscape fabric.

- Hose off outdoor furniture and toys often.
- Wash fruits and vegetables, especially if they're locally grown.
- Renovate safely by sealing off the work area and cleaning well when the job's done.
- Ensure you don't bring lead dust home from work on clothing, shoes and lunch kits.

THEP provides free voluntary blood testing for children under three years old to check levels of lead in the blood. Annual blood lead testing is recommended by the Medical Health Officer. If levels are elevated, we follow up with support. Contact Interior Health for details.

Increasing the iron in your diet is another way to limit how much lead your body absorbs. This is particularly important for pregnant women and children.

Make sure your diet includes healthy foods that are high in iron, vitamin C and calcium.

More detailed messaging and frequently asked questions about the Health focus area can be found online [here](#).

2024 Health Communications shared with families (and social media) with updated or condensed messaging include:



HEALTH TIPS

Prevent ingestion of lead with clean hands.

- ✓ Always wash hands after playing outside and before eating.
- ✓ Use a damp cloth to wipe indoor surfaces and toys kids touch.
- ✓ Hose off outdoor furniture and toys often.

TRAIL AREA
Health & Environment Program
Teck Interior Health
For Family Health info: 250.364.6223 | thep.ca



HEALTH TIPS

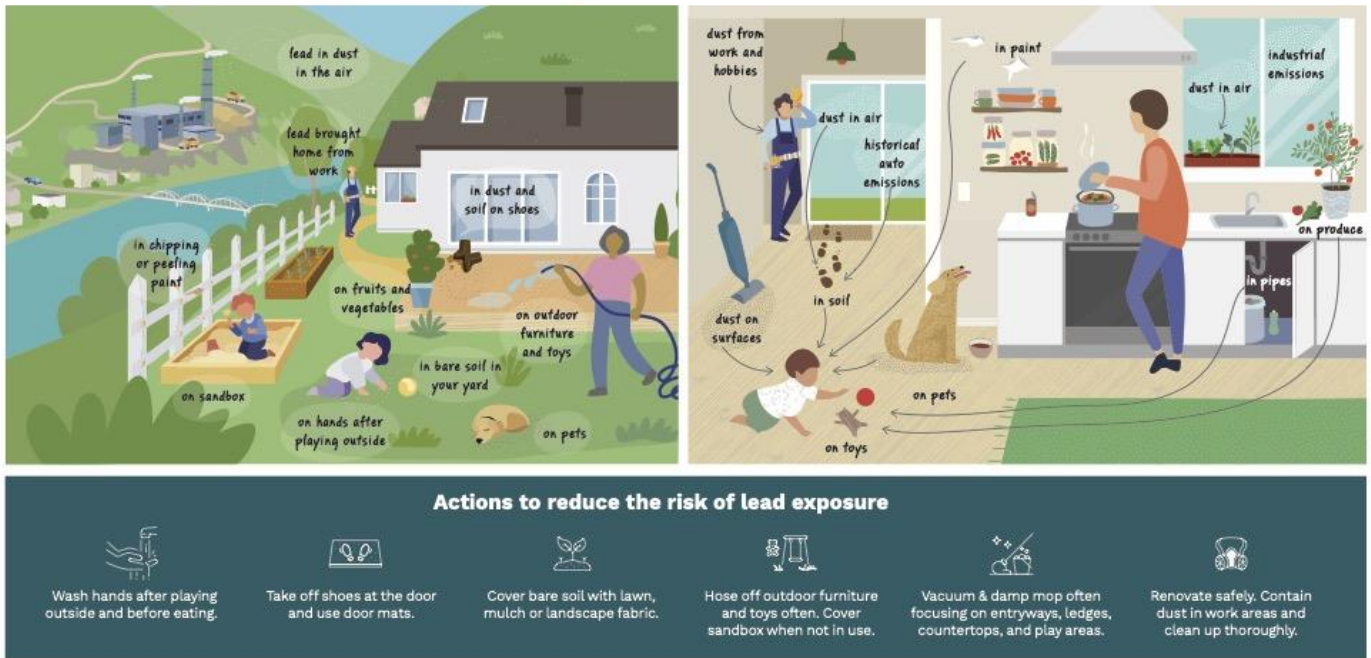
Healthy eating reduces uptake of lead.

- ✓ Eat regular, nutritious meals high in iron, calcium and vitamin C.
- ✓ Feed young children at the table.
- ✓ Peel root vegetables & wash leafy greens well before eating.

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Teck Interior Health
For Family Health info: 250.364.6223 | thep.ca



Lead can come from many sources.



thep.ca

6.0 COMMUNITY CONNECTEDNESS AND LEADERSHIP

Core message: Working alongside the Trail community is important for THEP.

- Our partnerships in the community help us reach families we can support.
- Keeping up a positive reputation in the community means residents will refer THEP to other community members.

6.1 Summary

Community partnerships and visibility are important to ensuring:

- messaging gets to those who need it,
- sustaining high participation rates in programs, and
- maintaining a positive reputation in the community.

6.2 Communications Goal

THEP is known, visible and accessible in the community of Trail and surrounding areas.

6.3 Communications Objectives

- Ensure THEP is communicating, engaging and participating in events related to THEP's goals.
- Ensure THEP is sharing its learning with the wider community of practitioners facing similar challenges.

6.4 Community Connectedness and Leadership Key Messages

It's important that community members have a seat on the Trail Area Health & Environment Committee because it provides accountability, builds trust and goodwill, and helps keep the program focused on what is needed in the community.

If you're interested in representing the community on THEC, please get in touch. There are five meetings a year and anyone can attend.

Around the world, there are other communities like ours, with an operating smelter or mine nearby. Together we exchange knowledge, share ideas, and discuss questions in an effort to learn and continually improve THEP.

For more than 30 years, we've exchanged ideas with Port Pirie, Australia, and other similar communities. We've learned from each other's experiences.

At a global level, THEP will continue to share what we know with other communities.

More detailed messaging and frequently asked questions about the Community Connectedness and Leadership focus area can be found online [here](#).

7.0 INTEGRATION, UNDERSTANDING AND CREATING VALUE TOGETHER

Core message: THEP has made great progress over the past 30 years, and it wouldn't have happened without government, industry, and the community working together towards the same goal.

7.1 Summary

The complex challenges THEP addresses cannot be solved by one organization or government alone. Understanding dominant exposure pathways for lead ensures resources and programming are designed for maximum impact.

7.2 Communications Goal

Communications between partners, with new staff and with Committee members contributes to a better understanding of the complex system the Program operates in.

7.3 Communications Objectives

- Improve communication and documentation with partners, new staff and committee members.
- Utilize communications to help build understanding of a complex topic.
- Ensure communications are locally contextualized.

7.4 Integration, understanding and creating value together Key Messages

THEP works on a set of complex challenges, and no single organization could solve the challenges alone – each of THEP’s partners brings unique expertise to the work.

Collaboration between the groups has helped improve air quality and blood lead levels.

We continue working together to understand and share information about the multiple ways children can be exposed to lead, from smelter emissions as well as non-smelter sources in the community and peoples’ homes.

More on THEP’s unique governance and collaboration can be found [here](#).

8.0 TARGET AUDIENCES

The Program prioritizes several groups in the community who can most benefit from reducing their exposure to lead and sulphur dioxide (SO₂). Activities are focused on reaching and providing support for these target audiences.

There are also key audiences within the Program’s partner organizations who can help spread information about resources and supports available to community members.

8.1 Community Audiences

Families expecting babies or with young children, and family caregivers (e.g., grandparents)

- Research shows that children absorb lead more easily than teens and adults, making this a key target audience for the Program.
- This audience is reached in person through in-home visits for expecting families and those with young children and at outreach events.
- The audience is also reached through materials distributed by public health programs and other health-care providers.

Child-care providers

- Research shows that children absorb lead more easily than teens and adults. Child-care facilities are a focus of health and the built environment focus areas.

- Program representatives visit known child-care facilities, and outreach to child-care providers through distribution of newsletters and brochures in the community, media (paid such as radio ads and earned such as news releases), and community event attendance by program representatives.

Health-care workers

- This audience has greater access to key community members such as families with young children and those with respiratory illness. Health-care workers can share information about Program resources and supports to these community members.
- Newsletters and brochures will be shared with health-care workers. The Medical Health Officer, in collaboration with the Program team, will outreach to family physicians, midwives and nurses with presentations and one-to-one meetings.

Community navigators and connectors

- Those who work and volunteer for social support, community and education groups can help us reach children and families, and vulnerable populations, to share information about Program resources and supports. Groups include CBAL, FAIR, Family Action Network, Success by 6.
- We will participate in board meetings of aforementioned groups, as well as community events planned by these groups when possible. As well, we will ask groups to share information on their own social media accounts.
- The Program will reach out directly to the School District, principals and PACs related to soil testing.

DIY renovators

- Dust stirred up by renovations can expose people to lead and other hazards. The Program offers free lead-safe renovation safety supplies and equipment for renovations in homes built before 1990.
- A brochure at key locations includes information about lead-safe renovation and directs people to the Program's website for more information. Information is shared with Trail's building services department (RDKB) to pass to renovators. Advertising and social media is also used to share information.

Contractors

- Contractors' work can require soil management, and contractors can benefit from information about lead-safe renovations.
- Information about lead-safe renovations and the soil management program is displayed prominently on the THEP website. The Program connects with the regional district building inspectors to share information that can be passed to contractors.

Local businesses

- Workers at businesses with potential exposure to lead could carry dust into homes with young children and pregnant women.
- The Program outreaches to workplaces that may have lead exposure, communicates to contractors via the Chamber of Commerce, and provides brochures on reducing lead

exposure in the home to workplaces for distribution. The THEP website is promoted as a source of information.

Elderly residents

- Elderly people are shown to be more susceptible to short-term effects from sulphur dioxide exposure.
- This audience is reached through targeted information sharing with seniors' groups and residences (and their leadership), distribution of newsletters and brochures in the community, and community event attendance by program representatives.

New residents

- People who are moving into Trail and the surrounding area may have lower awareness of the risks of exposure to lead (Pb) and sulphur dioxide (SO₂).
- Materials such as brochures and newsletters are displayed at key locations such as the City, realtor offices, and the Regional District office. A link to the Program's website is posted on local and regional government and Chamber websites.

Realtors and property managers

- Realtors are connected to people moving to Trail who may not be aware of the Program and can direct families with young children to the website for information about supports and resources. Property managers can share information with tenants with young children.
- The Program presents to realtors annually as well as connects one-on-one to keep them informed on supports and resources.

Other community residents

- There are steps that Trail residents can take to reduce the risk of lead exposure in their homes and yards—for their own benefit and for neighbours and potential visiting children.
- Materials such as brochures and newsletters are displayed at key locations. Newsletters are mailed to every household and business twice yearly. A news release is shared with local media once a year, and radio advertising shares Program information. Program staff attend community events to explain resources and supports. Signage in the community (e.g., on air-monitoring and hand-washing) promotes the website for information. Community consultation also happens every few years via events and surveys.

8.2 Partner and Committee Audiences

Partner organizations and their staff

- Partner organizations work collaboratively to ensure coordination of activities and share knowledge. The partners can ensure that activities are meeting the needs of the community and identify and manage risks.
- There are five meetings of the Committee each year with Program reports. Between meetings, partner organizations communicate through email, focused meetings and working groups. Members of partner organizations are invited to subscribe to materials such as newsletters.

Local and regional government staff (e.g., public works)

- Municipal and Regional District staff such as building inspectors and public works employees can share information about the Program with community members and take steps to reduce lead exposure in public and private spaces.
- Program staff hold one-to-one conversations on relevant topics with local government staff.

Elected officials

- Community leaders such as mayors, councillors, and regional district directors require updates on the Program to stay informed of any changes that could impact their constituents and have information to share with constituents who may benefit from it.
- Program consultants present to elected officials regularly to provide updates and offer opportunities to review public materials.

Trail Area Health & Environment Committee (THEC)

- THEC is formally established as a select committee of the City of Trail. Membership is largely mentioned above.
- Committee members are champions of the Program and THEC facilitates information sharing and communication with the public.

9.0 ACTIVITIES

The table below lists activities undertaken by Program partners to achieve the communications objectives in alignment with the Strategic Plan. It is not an exhaustive list and activities change as opportunities arise, however it provides a basis for outreach methods.

Activity	Target Audience	Carried out by	Timing
In-home and child-care facility visits	Expectant families and those with young children	HFHH	Ongoing
Pregnancy Outreach Program attendance	Expectant families and those with young children	HFHH	Monthly
Community events	All	CPO/IH	As requested
Presentations	Elderly residents; childcare providers; elected officials; realtors; healthcare providers	CPO/IH/City	As requested
Printed materials (newsletters and brochures)	All	CPO	As needed
Website	All	City	Ongoing
Social media	All	City	Ongoing
Advertising (i.e., radio, print)	All	City/CPO	May-Sept
Earned media (i.e., news release, article in Trail Times)	All	City	Aug and Nov
Signage (i.e., parks, air monitoring stations, storefront)	All	CPO/Teck	As needed

One-to-one outreach	All		
Bimonthly meetings (i.e. THEC meetings) with Committee/partners	Committee members; partner organizations	City	Feb, April, June, Sept and Nov

LANGUAGE / USAGE PROTOCOLS (*we can add to this section annually*)

- Spell out lead and sulphur dioxide. If a document meant for public and plain language uses lead (with lead (Pb)) to start as the word lead could mean different things in different contexts.
- Attempt in writing to use THEP / THEC as a name rather than saying The THEP and The THEC, as possible and where it makes sense.
- Lead in paint is the term we use for any paint that has detectable lead. We are not focused on lead-based paint specifically as there is currently no known safe level of lead exposure.

APPENDIX B

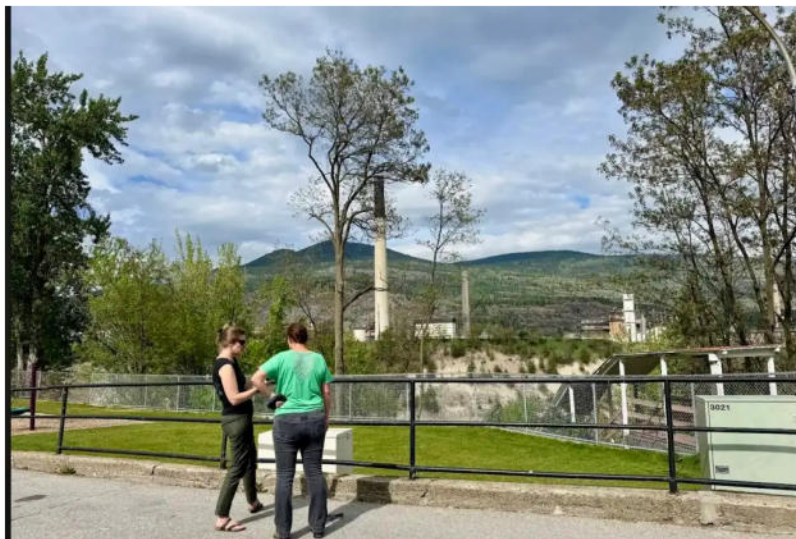
Communications Materials

READ MORE

Trail shares global spotlight in effort to reduce lead exposure

Published 6:50 pm Tuesday, May 13, 2025

By Sheri Regnier



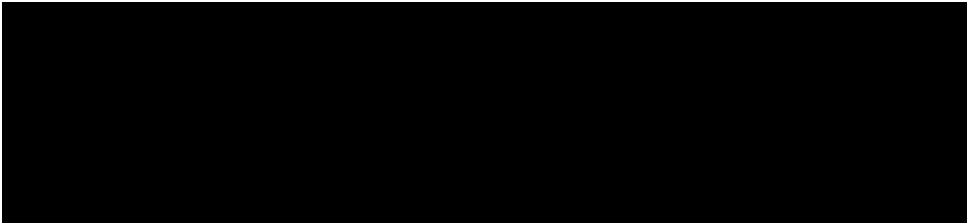
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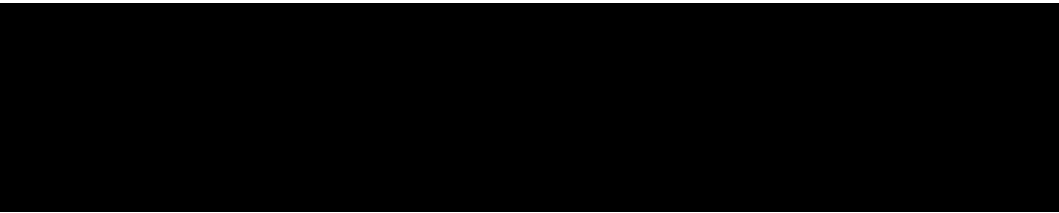
The THEP team, including Clare North, (left), took Liene Dhooghe of Umicore in Hoboken, Belgium, on a city tour last week. Stops included West Trail, with the smelter visible in the background.



As Silver City Days festivities lit up downtown Trail last week, another important gathering was unfolding behind the scenes, one with global implications. From May 7 to May 9, Trail hosted Liene Dhooghe, manager of the environmental department at Umicore’s Hoboken site in Belgium. Her visit marked the latest chapter in an ongoing international collaboration aimed at reducing lead exposure in industrial communities around the world.



Trail is part of a Community of Practice (CoP) that includes Port Pirie, South Australia, and Hoboken, Belgium — three communities with active smelters and shared public health challenges. Each brings a different approach shaped by local regulations and systems, but all are working toward the same goal: reduce airborne lead and lower children’s blood lead levels. Port Pirie, a city of about 14,000 located roughly 220 kilometres north of Adelaide, is home to one of the world’s largest lead smelters, operated by Nyrstar. Hoboken, a district of Antwerp with around 35,000 residents, hosts Umicore’s metals recycling and refining facility. The collaboration launched in June 2023 with a visit from Port Pirie representatives to Trail. Hoboken joined in 2024, and since then, the three cities have connected virtually to exchange data, challenges, and strategies. During her visit to Trail, Dhooghe met with staff from the Trail Area Health and Environment Program (THEP), toured Teck Trail Operations, and participated in discussions with the Trail Area Health and Environment Committee.



“It is so wonderful to see active cooperation between all different parties here in Trail and the commitment of everyone to work together,” Dhooghe said, highlighting the strength of local partnerships and the effectiveness of THEP’s delivery model. She described the program as impressive and said she looked forward to bringing lessons from Trail back to her colleagues in Belgium. Dhooghe pointed to several strengths in Trail’s approach, including its partnership model, a delivery team made up of Interior Health and AtkinsRéalis, a city-appointed facilitator, and major operational improvements at the smelter to reduce lead in dust. For over 125 years, Trail has lived with the legacy and realities of smelter emissions. THEP was established in the early 1990s in response to community concerns about lead exposure and other environmental health issues. It has evolved into a long-standing partnership between Teck, the City of Trail, Interior Health, and the Province of British Columbia. Today, THEP supports the community in managing industrial impacts through services such as soil testing to help keep yards safe, home visits for families with children under three, lead-safe renovation supplies and advice, and updates on air quality through Teck’s Community and Environment Feedback Line. Mayor Colleen Jones said Trail’s role in the global effort reflects decades of commitment. “It’s wonderful to see the hard work being done in Trail recognized internationally,” she said. “THEP has long been a leader in our collaborative approach to reducing lead exposure, and we remain committed to innovation and sharing what we’ve learned.” While most eyes were on parades and fireworks, Trail was also serving as host to an important international exchange, one that may help improve public health far beyond the city’s borders.

NEWS RELEASE issued by THEC

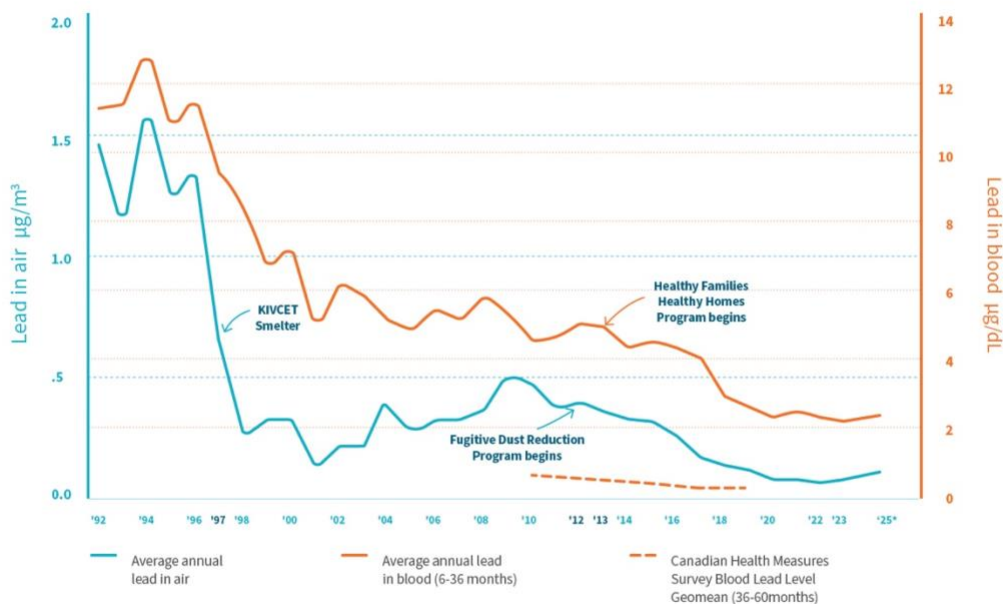
2025 Children's Blood Lead Levels Remain Similar to Recent Years. *Participation Rates Rising*

December 5, 2025

Trail, BC - The 2025 blood lead testing clinic results for children aged six months to 36 months in Trail and Rivervale show an average blood lead level of **2.3 micrograms per decilitre**, similar to recent years. Year to year variability in blood lead levels is influenced by lead levels in community air, weather conditions, the group of children tested and where they live.

The long-term downward trend continues to highlight the community's progress in managing lead exposure in an area with an operating lead smelter. Thanks to ongoing testing, prevention, and collaboration, children's blood lead levels in Trail have declined dramatically over time. THEP partners are committed to working together to further reduce children's blood lead levels and decrease the gap in levels between children in Trail and other Canadian children of similar age.

Annual average for lead in community air and children's blood (1992-2025*, Trail, B.C.)



*NOTE: Lead in air values for 2025 are currently showing year-to-date, not the complete year.

Dr. Karin Goodison, Medical Health Officer, Interior Health says, “It is encouraging to see that blood lead levels for children in the Trail area remain similar to last year and that community participation is increasing. The collaborative and family-centered approach is key to continuing to drive the blood lead levels lower.”

Monitoring blood lead levels is more than numbers. Every blood lead test helps THEP understand how to better support local families. Tests also help demonstrate where progress has been made, and where attention is still needed. The Trail Area Health & Environment Committee (THEC) extends its gratitude to all the families who participated in the clinics and contribute to the program’s success.

Blood lead testing within the Health Program connects closely to all areas of THEP’s work. A holistic approach underpins everything.

- **Air Quality Improvements** reduce emissions at the source.
- **Soil Management** ensures yards and gardens are safe.
- **Healthy Families Healthy Homes Support** helps families understand and reduce exposure in their home environment.
- **Community Education and Connections** keep everyone informed and engaged.

Air Quality

THEP’s Air Quality Program, delivered by Teck Trail Operations, remains focused on reducing site emissions to reduce lead in dust in the community. Air Quality improvements over three decades have been a key driver for reducing blood lead levels among children and further improvement opportunities continue to be identified and implemented through Teck’s Fugitive Dust Reduction Program. The 2025 year-to-date average is 0.11 micrograms per cubic metre at Butler Park which is higher than recent years influenced by a return to more consistent production following significant investments in the KIVCET furnace in recent years. Levels of lead in community air continue to meet the US Environmental Protection Agency standard (used in the absence of Canadian air quality objectives or standards).

Matt Parrilla, General Manager at Teck Trail Operations says, “Teck Trail Operations is committed to working with all THEP partners to achieve the Medical Health Officer’s recommendation to reduce children’s lead exposure. We have a proven track record of identifying and implementing controls that reduce lead in our community. In 2025, capital investments to reduce fugitive dust along with renewed employee awareness have positioned us to regain momentum on decreasing trends in lead in community air.”

Leading the Way

The Trail community’s leadership and longstanding commitment to a healthy and thriving community has led to internationally recognized results. The community-industry-government partnership is a model for collaborative action. Other countries with operating lead smelters are learning from Trail as an example. Together, we know from evidence that a healthy community depends on collaboration and a holistic approach.

“I want to express my sincere appreciation to all the families who participated in this year’s blood lead testing clinics. Your participation strengthens this long-standing program and ensures we remain focused on safeguarding the health of our children. The City of Trail is proud to be a partner of THEP for over three decades, working together to ensure the health and wellbeing of our community”, says Mayor Colleen Jones, City of Trail, and Chair of the Trail Area Health & Environment Committee.

About the Trail Area Health & Environment Program (THEP)

THEP supports the community of Trail and nearby areas to live, work and play in an area influenced by smelter air emissions. Since the 1890s Trail has been home to one of the world’s largest lead and zinc smelting and refining facilities. For more than 30 years, a group of partners—the City of Trail, Teck Trail, B.C. Ministry of Environment and Parks, and Interior Health—in collaboration with the community, has worked together to continually improve the health and wellbeing of people living near the smelter. THEP focuses on air, soil, health, built environments (homes and other structures), community connection, and understanding the interrelationships between these focus areas. THEP addresses the inherent overlap of different ways people are exposed to lead and maximizes opportunities for improving health and the environment through an integrated approach. Each year, THEP supports hundreds of people in the community with outreach, activities and supplies.

The Trail Area Health & Environment Committee (THEC) is a select committee of Trail City Council and includes local government, the community, industry, provincial and local partners. It was established in 2001 by the Trail Lead Task Force which had conducted research on the issues for 10 years prior. Its mandate is to be a transparent platform for multistakeholder dialogue, collective decision-making and community engagement specific to THEP. A full description is available [online](#).

Over the past three decades children’s blood lead levels in Trail have declined and air quality has improved. For more information please visit thep.ca.

For more information, contact:

Interior Health Media Relations
1-844-469-7077 or media@interiorhealth.ca

Jayne Garry, Community Relations Leader, Teck Trail Operations
(250) 364-4878 or jayne.garry@teck.com

Colleen Jones, Mayor of the City of Trail & THEC Chair
cjones@trail.ca

FAQ to follow.

BL Media Release FAQ Attachment

Why should I get my children's blood lead tested every year?

Blood lead levels vary year to year depending on where the child is spending their time (home, daycare, and outdoor play), their behaviour (crawling, hand to mouth activity) and their nutritional status (wide range of healthy foods, adequate iron stores). Blood lead testing ensures that children with elevated blood lead levels are identified and provided follow-up care. As a community, blood lead testing also helps monitor our overall progress in reducing lead exposure in the community. As lead can come from many sources, even if your home received soil management, you should continue to test your children's blood each year.

What should I do if I want to get my child's blood lead level tested?

Every year, THEP offers free voluntary testing of blood lead levels for children from the age of 6 to 36 months living in Trail, Casino, Oasis, Rivervale, Waneta and Warfield. Children up to 5 years old from other Lower Columbia communities are welcome to attend. Clinics are typically held in September with a follow-up clinic in February.

Please contact the Interior Health Public Health nurse for details. Call 250-364-6223 or text 250-231-5945.

Why is the blood lead clinic in September?

Lead levels are expected to be highest at the end of summer as windows and doors are open to the outdoors more, kids are playing outdoors more, and the ground in the community is snow-free and dry.

Are we going in the right direction?

Yes! We have seen a downward trend over the years. It's been under 3 micrograms per decilitre since 2018 with this year the average blood lead level being 2.3 micrograms per decilitre. To compare, in the 1990s, the average blood Pb level in Trail children was over 14 µg/dL.

Are we ever going to reach a safe blood lead level in Trail?

There is currently no known safe blood lead level. Canadian and U.S. health surveys indicate that the majority of the population has some exposure to lead. For the past five years, the average blood lead level for children 6-36 months in Trail has fallen below 2.5 micrograms per decilitre and 90% of children tested are below the B.C. C.D.C.'s Exposure Investigation Level (of 5 µg/dL).

What is lead (Pb) in airborne dust and how does it affect the community?

Dust particles present in smelter emissions contain lead (Pb). Dust particles in the air that contain Pb is referred to as 'lead in airborne dust'. This lead in airborne dust may travel from the smelter site and settle in the community as part of the dust and soil. In Trail, lead in airborne dust originating at the smelter site can come from fugitive dust emissions (e.g. stockpiles, open handling of materials, buildings and vehicle traffic) and stack emissions. Bare soils, deteriorating older paint, and other industries in the community can also add to Pb in airborne dust.

Is lead (Pb) in air going in the right direction?

Yes! Over the past 30 years, there have been significant reductions to levels of lead in air. Lead in airborne dust 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. The variability in the data reflects the influence of emissions and weather including dominant wind direction and precipitation. Read [THEP's Lead \(Pb\) Fact Sheet](#) to learn more.

Air Quality Program: **Lead (Pb)**

The Air Quality Program works to improve air quality in the community through emissions reductions, air quality monitoring, and community dust control. The Air Quality Program activities work together to get the best results – lower exposure, lower health risks, and a healthier environment.

Young children are mainly exposed to lead through hand-to-mouth activity (ingestion) rather than breathing. In Trail, much of the lead in dust comes from ongoing smelter emissions.

Air quality has improved dramatically in Trail

Over the past 30 years, there have been significant reductions to levels of lead in air. The work continues.

- Since 1997, there has been a 99.5% reduction in emissions of Pb from the smelter stacks.
- Since 2012, major reductions to lead in the environment are being made through the comprehensive Fugitive Dust Reduction Program
- Since 2020, air measurements for Pb in Trail are lower than the U.S. EPA standard of 0.15 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$). Canada doesn't have an applicable standard. See Figure 1 below. Visit reports to view [Air Quality Reports](#) over time.

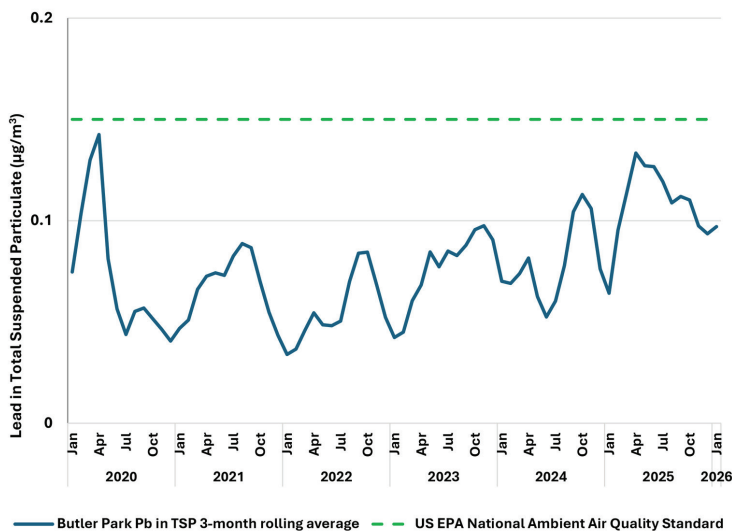


Figure 1: 3-month rolling average lead in total suspended particulate at Butler Park station (measured bi-daily)

To note, other metals were evaluated through Human Health Risk Assessment and current levels are not of concern in community air.

What is Lead (Pb) and why is it in Trail?

Lead is a naturally occurring element found in small amounts in the earth's crust. In addition to lead (Pb) contributions from historical use of products such as lead-based paint and leaded gasoline, Trail is home to one of the world's largest Pb and zinc smelting and refining facilities, in operation for over one hundred years. The goal is always to recover as much metal as possible from concentrates but due to the limits of technology, lead has been emitted into the air and these particles can settle on surfaces. Both stack and fugitive emissions (dust that escapes from buildings, stockpiles, roadways and other activities on site) have caused lead to settle on surfaces in the Trail area as part of the dust and soil.

What is Pb in airborne dust, how does it affect the community, and how is it being managed?

In Trail, dust originating at the smelter site from stockpiles, open handling of materials, buildings and vehicle traffic can become airborne. This airborne dust containing Pb, along with stack emissions, may travel from the smelter site and settle in the community. Bare soils and deteriorating paint can also add to Pb in airborne dust.

Since 2012, Teck's Fugitive Dust Reduction Program has resulted in a 65% reduction in Pb in fugitive emissions, dramatically reducing Pb in airborne dust in the community. This program continues to look for opportunities for improvement.

Fugitive dust reduction efforts to date include:

- construction of the Smelter Recycle Building, close to the size of two Canadian football fields to enclose mixing and storage of process feed materials;
- installation of a ten-metre high wind fence reducing dusting where feed materials are mixed;
- installation of wheel washes and truck washes onsite help reduce tracking of materials onto roads;
- onsite street cleaning, via street sweepers and water trucks, provide a year-round program of roadway sweeping and flushing; and,
- identification and reduction of fugitive dust sources from work activities in our operating plants.

Reducing health risks to children associated with Lead (Pb)

Dust particles present in smelter emissions contain Pb. These particles settle on surfaces as part of the dust and soil in the Trail area, and there may be more Pb in soil and dust in the Trail area than a town without a Pb smelter. Exposure to Pb in dust and soil, for example by a child getting it on their hands and then putting their hands in their mouth, can affect healthy development. For most people, the risk from Pb in soil and dust is low. For children, particularly those under three years old, the risk is higher because of the fast rate of development and the way they interact with their environment.

Accidental ingestion of Pb is the main route of Pb exposure for children, and the route that most commonly leads to elevated blood Pb levels.

How does lead (Pb) enter the body?

Ingestion is the most common route of exposure to lead for children as children often put hands and objects in their mouth. Ingestion is the route that most commonly leads to elevated blood lead levels. **The most important action you can take is to manage dust.**



Lead particles from old paint, dirt, industrial emissions, or renovations can be **inhaled** or **absorbed** through the skin; however, ingestion is the main contributor to Pb exposure.

THEP works with families to limit children's exposure to Pb.

Monitoring metals is key to action in the near and long-term?

Monitoring air quality is important to understand if we are on track for reducing Pb in airborne dust. Air quality in the Trail area is consistently monitored, and Teck works closely with ENV to adjust operations and take corrective actions when needed. Regular monitoring helps identify emissions sources, track the effectiveness of emissions and dust control efforts, and track progress on improving air quality. Visit <https://thep.ca/programs/air-quality/lead-pb/> to view the map of monitoring station locations.

This information is collected and analyzed by Teck's environment staff and reported to the Ministry of Environment and Parks as well as the Trail Area Health & Environment Committee (THEC).

Dust control in the community

In addition to addressing stack and fugitive dust emissions from the smelter, the Air Quality Program includes ongoing dust control in the community. In the summer months, the Trail area can be very dry. Additional street sweeping and dust suppression reduces dust, which may have Pb content, in the community during the dry months. While most towns only clean streets in the spring and fall, the City of Trail performs at least two additional street sweepings of the whole community in summer as well as weekly sweeping and flushing of the downtown core. Dust suppressant is applied to unpaved alleys in Trail each June. One additional summer sweeping is performed in Rivervale. The roads are flushed with water at the time of sweeping so that dust is not stirred up in the process.

About the Trail Area Health & Environment Program

The Trail Area Health & Environment Program (THEP) supports the community of Trail and surrounding areas to live, work and play in an area influenced by smelter air emissions for over 125 years. Learn more at thep.ca.

Residents who have questions or concerns about air quality are encouraged to call **Teck's Community and Environment Feedback line at 250-364-4817** or send your request electronically at teck.com/contact, noting that it is for Teck Trail Operations.

If you have a health concern specific to lead exposure, please contact **THEP Family Health Services** at the Kiro Wellness Centre **250-364-5945** or text your public health nurse **250-231-5945**.

Trail Area Health & Environment Program Community Program Office

1319 Bay Avenue, Trail, BC V1R 4A7 250.368.3256 programs@thep.ca



thep.ca



DID YOU KNOW...

Parks and playgrounds in Trail and the surrounding areas are regularly assessed and maintained to ensure good ground cover. Soil in parks is tested for lead and managed where needed.

The sand at Gyro Park beach has very low lead levels—well within the safe levels established for urban parks. Enjoy the beach!

AS A GENERAL HEALTHY HABIT, ALWAYS WASH CHILDREN'S HANDS (AND YOUR OWN) AFTER OUTDOOR PLAY AND BEFORE EATING.



If you notice areas where ground cover is lacking at parks or playgrounds, please contact the City of Trail 250 364-0858 or THEP's Community Program Office 250-368-3256.

Children's Lead Testing Clinics

September 3, 10, 15, 23
9:15AM-3:30PM

September 9, 16
11:15AM-5:30PM

TO BOOK AN APPOINTMENT
OR FOR MORE INFORMATION:

Call or text 250-231-5945
Kiro Wellness Centre
1500 Columbia Avenue



Entry to win a
Ferraro Foods
gift card for
every child!



ENGAGE YOUR KIDS WITH FUN WAYS TO REDUCE DUST!

OUTSIDE

Kid's carwash + music = fun!

Get them to wash the dirt off all their bikes and trikes.

Hose + bucket + bar of soap = outdoor handwashing station.

Kids can wash up often while playing outside.

INSIDE

Bath time with your kids' favorite toys. It's fun and keeps their toys clean and dust free.

Dusting with kids. They love to help!

- ✿ Share a damp microfiber cloth and let them dust alongside you.
- ✿ Give the kids a turn using the vacuum, turn the suction on low and they can vacuum their own room.

REDUCE CLUTTER!

Family competition: see who can pick up the most toys in two minutes. *Can you beat mom or dad?*

Red Light, Green Light game:

On Green, kids can pick up as many toys as possible. When you call out Red Light, they need to freeze!



WHO CAN ATTEND?

Children 6-36 months who spend the majority of their day in Trail, Casino, Oasis, Rivervale, Waneta or Warfield.

Children 6-60 months who recently moved to the area, have never been tested, or live in a recently renovated home in the Lower Columbia.

YOU ARE INVITED!

Committee meetings are open to the public and we would love see you there.

Please join us
September 16 and Dec 4th 7-9pm
(details at thep.ca).

GOOD NEWS STORY FROM THE MILLIKEN AND MCAULEY FAMILY!

Before receiving soil replacement in 2025, this family had their exterior paint tested. Results showed lead in paint. After careful review, the family was able to remove the peeling paint, a significant source of lead, before soil replacement. The family can rest easy knowing two known sources of lead (paint and soil) have been removed.

TAKE ACTION! #1

Review your paint results letter. Contact the Community Program Office with any questions to safely manage identified lead in paint.

#2

Check out THEP's Lead Safe Renovation videos online for safe paint removal tips and to sign up for renovation supplies.



DID YOU KNOW?

When you sign up for soil testing, exterior paint testing is offered at the same time.

Deteriorating paint can be an exposure source for lead, especially on homes older than 1990.

MEET, SARA RIDGE, A THEC COMMUNITY MEMBER

"I grew up in the West Kootenays, where my family settled in Bonnington in 1909. After some time living in Warfield and moving around, I now call upper Warfield home.

My interest in Trail's environment began in 2014 during a flight when a fellow passenger called Trail "a wasteland." I was proud to share how green it is today, and that conversation sparked my curiosity about our region's environmental progress.

JOINING THEC HAS DEEPEENED MY UNDERSTANDING OF THE IMPROVEMENTS MADE AND HOW WE CAN CONTINUE SUPPORTING COMMUNITY HEALTH.

Through THEC, I've learned practical ways to help protect my family in our older home and share valuable information with families and childcare centres in my work as a Supported Child Development Consultant. I appreciate THEC's role in keeping the community informed and look forward to continuing to learn and contribute."



THEP team visit to Casino Gun and Archery Range.

DOES YOUR FAMILY SHOOT FIREARMS?

Most ammunition contains lead and shooting releases lead particles into the air. Lead in dust can settle on hands, skin, clothing and nearby surfaces. Follow hygiene practices after shooting to avoid ingesting lead and carrying it home where your children can be exposed:

wash hands with soap and water after shooting

change clothes and shoes before entering your vehicle

wash your clothes separately from your family

keep shoes outside

keep children away from lead shot

Knowledge Sharing, Exchange & Learning

Staff and partners have been busy reaching out to educate, learn and share with people from near and far over the last several months. A few highlights include:

In April, THEP hosted a learning event with local realtors in Trail. Realtors are the first point of contact for many people new to the area. Building realtors' knowledge helps inform new residents of the programs THEP is providing.

In May, a representative from a smelter in Belgium visited Trail to learn how we are improving air quality in the community and lowering children's blood lead levels. She met with the local program team to exchange ideas and also presented to the Trail Area Health & Environment Committee at the May public meeting.

In June, THEP partners presented on a panel to communication professionals about our unique partnership and how we communicate across our different organizations to deliver a robust community program (Local Government Management Association meeting June 10, 2025)

In June, THEP's Healthy Families Healthy Homes staff were at the **Teddy Bear Picnic in Gyro Park**. This is a beloved community event and THEP loves participating. We share on handwashing, soil testing and our many free programs for young families.

As new people join **THEP partner** organizations (Ministry of Environment and Parks, Interior Health, Teck and City of Trail), its important they know our history. **Together we walked the community to show and tell our story, build a shared understanding and align on the path forward!** Here are a few snapshots of our walk in the community!





For more than 30 years, community has been at the heart of our partnership with government, industry, and the City of Trail to reduce exposure to lead in our area.

Bring your voice to the THEC table!

Join the next Committee meeting May 7th, 7-9pm at Trail City Hall.

Dear THEP Team,

Sunshine Children's Centre is incredibly grateful for your generous donation of the high-quality "Henry"

vacuum and mopping system—now affectionately named "Sally" by the children!

We also deeply appreciate the time you took to educate the staff about lead testing and best practices for maintaining a lead-safe centre. Your proactive approach to community health is truly commendable and exemplifies the caring spirit of Trail.

Your generosity and dedication make a lasting impact on our community.

*With sincere gratitude,
Sunshine Children's Centre*

*** A MESSAGE FROM
SUNSHINE CHILDREN'S CENTRE**



Avoid dry sweeping with a broom because it stirs up dust.



Vacuum & damp mop often focusing on entryways, ledges, countertops, and play areas.

Clean often to reduce lead dust.



Take shoes off at the door and use door mats.



Keep work boots, clothing, and lunch kits away from kids.



Above: Sunshine Children's Centre staff and children with the vacuum and mopping system provided by THEP.

LET'S BUST SOME MYTHS!

CURIOUS ABOUT YOUR HOME AND YARD?

Sign up for all programs online at thep.ca or call the office 250.368.3256.

MYTH: MY YARD SOIL HAS BEEN REPLACED, SO I DON'T NEED TO GET MY CHILD'S BLOOD LEAD TESTED ANYMORE. *BUSTED*

Soil is one of many sources of lead (Pb) in the environment. Children can be exposed to lead from other sources such as indoor dust, deteriorating paint, imported toys and ceramics, and dust brought home from work or hobbies.

Blood lead testing ensures that children with elevated blood lead levels are identified and provided follow-up care. As a community, blood lead testing also helps monitor our overall progress in reducing lead exposure in the Trail area.

MYTH: MY BABY IS BREATHING IN LEAD. *BUSTED*

Ingestion is the main contributor to lead (Pb) exposure and the most important pathway to manage through hand washing, cleaning, and reducing exposure to lead in dust and soil.

Accidental ingestion of lead is the main route of lead exposure for children, and the route that most commonly leads to elevated blood lead levels.

Always wash fruits and vegetables and peel root crops before eating.

MYTH: LEAD PAINT WAS DEALT WITH IN THE 90'S AND ISN'T A CONCERN ANYMORE. *BUSTED*

Lead (Pb) based paint can't be purchased anymore however it still exists in many homes built before 1990. Lead in paint becomes a risk when the paint is in poor condition or disturbed during renovations. In addition to soil, THEP now tests exterior paint in the yard during Soil Assessments. Lead is often detected on older homes.

Lead in paint is a hazard when chipping, peeling or disturbed during renos.

Communities in Bloom
Collectivités en fleurs
CANADA

**COMMUNITIES IN BLOOM
2025 THEME:
EDIBLE GARDENS!**

Looking to volunteer in the Public Garden beds? Check out the "Trail Community in Bloom" Facebook page for the latest!

MEET NOLAN DEROSA: THEP'S RESIDENTIAL SOIL MANAGEMENT PROGRAM

Nolan DeRosa has returned to Trail, bringing fresh perspective and expertise to THEP's Soil Management Program. Despite never expecting to move back to his hometown, the opportunity to work with THEP and be closer to family proved irresistible.

Since relocating from Calgary last year, DeRosa and his wife have embraced Trail's outdoor lifestyle, enjoying the accessibility of activities like hiking, fishing, and biking – all within a 15-minute drive from their home. "Being back in the mountains has been amazing," he shares.

"Creating a plan with a homeowner, overseeing the execution of it, and seeing the end result is satisfying, especially knowing we're helping reduce lead exposure risk to young children."

NOLAN DEROSA

In his role, Nolan focuses on collaborating with homeowners and contractors to develop and implement effective soil management plans at prioritized properties. He particularly enjoys the personal aspect of his work.

Looking ahead, DeRosa is enthusiastic about tackling difficult access properties through innovative approaches and contractor collaboration, and effectively managing soil exposure risk at all prioritized properties.



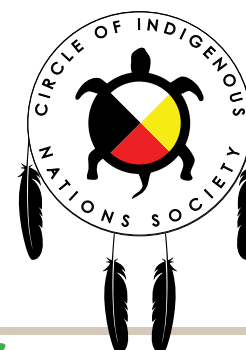
BEFORE



DURING



AFTER



Culture. Community. Healing

Supporting Aboriginal people in the West Kootenay and Boundary region since 2013.

Visit www.coinations.net or find us on Facebook.

Learn about our June 21 Aboriginal Day gathering and other services.



For more gardening tips in Trail, visit thep.ca

KIDS ACTIVITY!

Find 12 Healthy Home and Yard Improvements made to this yard! How many can you check off in your yard? Full activity and 'before' image are online.



- ✓ Soap at the sink for handwashing before snacks and meals
- ✓ Baby playing on a blanket when on the floor
- ✓ Covered sandbox after playing
- Activities to reduce babies and children exposure to dust:**
- ✓ Wet mopping the floors
- ✓ Windows and doors closed when windy to keep outdoor dust outside
- ✓ Leave shoes at the door
- ✓ Door mat at the front door
- Activities related to keeping indoor dust down:**
- ✓ Dog run zone in the yard
- ✓ Ground cover (grass) under the swings
- ✓ Ground cover around the bushes.
- Actions related to covering bare dirt:**

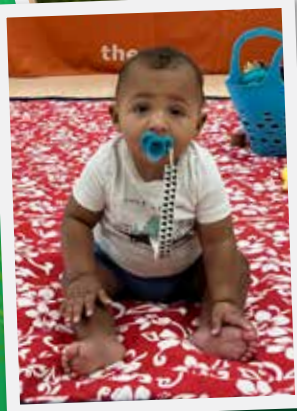
ANSWER KEY

**TEDDY BEAR
PICNIC
GYRO PARK**

Join us for a day filled with children's activities, early years resources, prizes, fun and more, with your local early years service providers! Bring your picnic blankets, chairs and snacks!

**WEDNESDAY JUNE 11 2025
10:00AM - 12:00PM
AT GYRO PARK IN TRAIL**

FAIR
For more information contact Sophie at: sttreleaff@trailfair.ca



For more information contact the Trail Area Health & Environment Program Community Program Office

1319 Bay Avenue, Trail, BC V1R 4A7

250.368.3256

programs@thep.ca

thep.ca

APPENDIX C

2025 SMP Survey Summary

HOMEOWNER FEEDBACK – RESULTS SUMMARY 2025

SOIL MANAGEMENT OF RESIDENTIAL YARDS IN TRAIL



Photo 1: Innovative method used for soil replacement on a tough access property with six steep terraces in Trail.

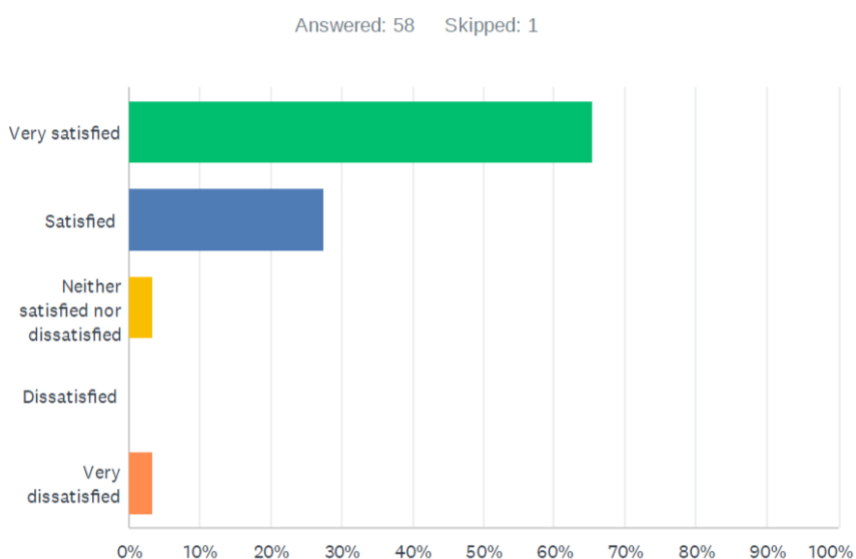
The Trail Area Health & Environment Program (THEP) completed a survey of residents who participated in the residential soil management program (SMP). The survey was conducted online through SurveyMonkey and distributed to homeowners within one month of soil-management work being completed on their property. Homeowners who didn't respond were sent an initial reminder followed by a final reminder at the end of the SMP season in November 2025. This is the first year THEP has requested homeowner feedback within a month of the work, as opposed to at the end of the season.

The survey was closed November 19th, 2025. The survey was emailed to 77 program participants and 59 people responded (77% response rate). Response rates in recent years were 47% (2024) and 64% (2023).

Among respondents who indicated where they lived, 39% were in East Trail¹, 22% in Glenmerry, 14% in Sunningdale, 10% in West Trail, 5% in Tadanac, 3% in Rivervale, 2% in Gulch, 2% in Warfield, 2% from Waneta, and 2% from other. 56% of respondents previously participated in the Healthy Families Healthy Homes program, up from 41% in 2024.²

The vast majority of respondents were satisfied with the soil management program. When asked to rate their overall experience, 93% of respondents said they were either very satisfied or satisfied (up from 88% in 2024) and 3% indicated they were dissatisfied or very dissatisfied (down from 12% in 2024). All homeowners who provided contact information, and were dissatisfied, will receive follow-up communications.

Figure 1: Respondents' answers to "When telling friends and family about your experience with soil management, how would you rate your overall experience?"



Satisfaction with THEP Community Program Office (CPO) Coordination and Communication

Respondents were generally very positive about the soil management program. 97% of respondents said they were satisfied with the work plan they developed for their yards, 88% said that the THEP Community Program Office (CPO) team responded to questions in a reasonable timeframe, 90% said that the CPO communicated well and in a timely manner, 81% said that their questions about the new yard and maintenance were addressed, 88% had enough time to prepare for the soil management work, 92%

¹ East Trail includes the neighbourhood of Shavers Bench in this survey.

² Discrepancies in values may exist in the summarized data due to rounding.



said they would likely recommend that friends and family contact the CPO to have their soil tested, 83% said they were provided with information about health and safety considerations prior to work, and 85% thought the finished yard product was the same or better than before.

Fifteen respondents left positive comments about the CPO, such as: “his handling of all matters pertaining to my property were exemplary. He provided detailed information, responded immediately to all inquiries, including those I made while the project was already in progress, and was quick to ensure that any changes requested were implemented where possible.” “Super and appreciative.” The team I worked with was very professional and easy to deal with. I have nothing but praise for them.” “Friendly knowledgeable staff.” “I found the communication excellent and the number of meetings was exactly what was needed.”

Four respondents commented on negative aspects: desired follow up for deficiencies, communication dropping off near the end, not receiving a walk through or information about sod maintenance. One of the respondents with negative comments had substantive complaints about the work, as well as the contractor doing the work. Specific claims were related to the quality of grass and soil and poor communications and misunderstandings between contractor and homeowner. Follow-up with these homeowners was completed to respond to their concerns.

Soil Management Contractors

Most respondents were generally satisfied with the soil management contractor who worked on their yard. 49% of respondents worked with Alpine Contracting, 29% worked with Simm Excavating, 8.5% worked with Cascade Ventures, and 13.5% didn't know which company worked on their yard. 95% said the contractors facilitated safe access to their home during the work, 92% of respondents said the contractors completed the work safely, 86% said the contractors worked efficiently, 86% said the contractors contained soil and dust as it moved in and out of the yard, 78% said the contractors provided valuable advice during planning and work, 88% of respondents said that they had enough time to prepare for the work, and 81% of respondents said the contractors communicated well and in a timely manner.

Seventeen respondents left positive comments about the contractor, such as: “The people on site were very courteous, polite and open to discussion”, “These contractors were excellent to work with. They were helpful and ensured we were happy every step of the way.” “They worked extremely efficiently and were always there to ensure good communication.”

Four respondents commented on some negative aspects related to the contractor: poor communication, not cleaning up after each visit, leftover dust and dirt, damaged plants, leaving exposed exacto blades after cutting sod, and damage to a fence.

Irrigation

58% of respondents had their sprinklers replaced. 68% of respondents who had their sprinklers replaced were informed about new requirements for sprinkler maintenance, while 24% were not (other respondents neither agreed nor disagreed), 71% of respondents thought the irrigation contractor responded in a reasonable timeframe, whereas 15% did not think the contractor responded in a reasonable timeframe (other respondents neither agreed nor disagreed), and 71% of respondents thought the irrigation contractor communicated well, compared to 18% of respondents who did not think the irrigation contractor communicated well (other respondents neither agreed nor disagreed).

Ten respondents left positive comments, such as: “Provided good communication, was fast and efficient based on a very tight timeline.” “Very professional, and respectful of time.” “So fast and efficient.” “He was very knowledgeable and an excellent worker.”

Ten respondents left negative comments, with specific concerns related to payment for extra services, communication of the plan as well as quality of the work. Follow-up with these homeowners was completed to respond to their concerns. Many of the irrigation concerns were from early in the season and were related to a sub-contractor that is no longer used for SMP work.

Changes in Survey Results Over Time

A similar survey was also administered by THEP from 2019 to 2024. As in previous years, 2025 survey respondents were generally positive about the program. Many ratings were higher in 2025 than 2024. Overall satisfaction went from 88% in 2024 to 93% in 2025. In 2025, 85% thought the finished yard product was the same or better than before (with 10% saying they disagree or strongly disagree), compared with 67% of respondents who thought the quality was better in 2024.

Overall satisfaction with the soil management experience remained high, with 93% saying they were satisfied or very satisfied in 2025, compared to 88% in 2024, 93% in 2023, and between 90 and 96% in 2020 through 2022. Satisfaction with the finished yard product improved from a dip in satisfaction in 2024. In 2025, 85% were satisfied or very satisfied that their yard was the same or better than before, compared to 67% in 2024, 90% in 2023, 96% in 2022 and 94% in 2021.

More Information

A summary of the feedback results with comments removed to protect anonymity and maintain privacy is available upon request. Please contact the THEP community program office: programs@thep.ca with questions.

APPENDIX D

Homeowner's Guide to Remediation

Many people make soil management successful.



HOMEOWNER

- Review the soil management process
- Participate in the work planning and make decisions
- Ask questions
- Communicate directly with Community Program Office

CONTRACTOR

- Complete the work according to the soil management plan
- Ensure the work is done safely
- Identify issues and concerns and bring them to Community Program Office

COMMUNITY PROGRAM OFFICE

- Answer questions from the homeowner and contractors
- Plan, coordinate and schedule the work
- Communicate with homeowners, contractors, Teck & Ministry of Environment
- Monitor contractors and sample the soil
- Keep records, document the work and provide reports

TECK

- Responsible party for Soil Management Program under the BC Contaminated Sites Regulation
- Provide technical support and funding for the Soil Management Program
- Hire the soil management contractor and Community Program Office

RESIDENT SAFETY DURING SOIL MANAGEMENT

Safety information will be provided to you before the work begins. Key safety tips are:

- Keep kids and pets out of the active work areas.
- Hose down outdoor surfaces and children’s toys before accessing them during soil management.
- Water your lawn to reduce dust.
- Store and secure personal belongings.
- Watch out for increased traffic.
- Keep clear of equipment and materials.

Homeowners Guide to Soil Management

ABOUT SOIL MANAGEMENT

Soil management is one way to reduce exposure to metals in your home and yard environment. Trail Area Health & Environment Program (THEP) began managing soil in 2007 and thousands of yards have since been tested and hundreds have received soil management.

There are a few ways THEP manages soil in yards:

- improving lawns to fill in bare spots
- covering soil with mulch, rocks, or landscape fabric
- replacing contaminated soil with clean fill

Each of these options reduces exposure to lead and other metals in soil. Participation is voluntary and there is no cost to the homeowner.

SOIL MANAGEMENT PLANS AND PROCESS

Soil management plans are unique to each property and depend on the layout and size of the yard, lead levels in soil and ground cover. The whole planning process can take over a year from initial planning to completion. The onsite work involving the contractor, soil replacement and landscaping, typically only takes a few weeks. Yards with difficult access take longer to plan and manage soil.

WHAT IS SOIL REPLACEMENT?

Soil replacement involves removing soil by excavating and disposing of soil that has been impacted by smelter metals. Following removal the property is re-landscaped with new soil.

Steps include:



SOIL WILL NOT BE REPLACED UNDER, OR ON, THESE AREAS:

- Buildings with foundations.
- Low decks.
- Paved areas, sidewalks, patios, or driveways.
- Walls, ponds, or pools.
- Dripline or root ball of large trees or shrubs.
- Steep slopes more than 3 metres in height or 30 degrees in slope.



For more information

Step-by-step guide to soil replacement



The Community Program Office (CPO) is the primary contact for the Homeowner, the Contractor, and in some cases, Renters.

1. PLANNING & SOIL MANAGEMENT AGREEMENT

The Community Program Office (CPO) contacts the Homeowner to **offer soil management and obtain consent.**

CPO and Homeowner **meet on-site** to plan soil management, review landscape options and identify potential delays.

Together, a **soil management plan is developed.** Additional visits are often needed to finalize details such as landscaping and sprinkler system functionality.

The **agreed upon plan is signed by** the Homeowner and CPO.

CPO shows the Contractor the yard, introduces them to the Homeowner, and develops a schedule. CPO notifies the Homeowner approximately **two weeks before** a proposed start to arrange a 'kick-off' meeting.

DO YOU OWN A RENTAL PROPERTY?

CPO communicates with the renter throughout the project to confirm they are aware of the process and provided information to prepare.

HOMEOWNER CONSTRUCTION OR RENOVATION PROJECTS:

Homeowners are responsible for the cost and coordination of additional landscaping or construction projects that are outside the scope of the Soil Management Plan. If a Homeowner project causes delays, CPO may have to postpone soil management. All Homeowner projects must be documented in an agreement with CPO.

2. PREPARE THE YARD

The **yard is prepared** by the Homeowner. Personal items are stored (e.g. play equipment, patio furniture, etc.). Yard waste and debris are removed.

CPO takes **photos and videos** of the property and pre-soil replacement landscape features.

The Contractor performs a utility locate. They may install **temporary fencing or barricades** such as caution tape, to ensure safe access to the residence during the work.

Soil is disposed at the Teck operated landfill or other designated location.

Dust is controlled by the Contractor and soil is sprayed with water if dry. CPO may ask you to turn on sprinklers in the evenings to help dampen soil.

CPO **tests soil at the base of the excavation** and provides direction to the Contractor as needed.

A **geotextile fabric is installed** at the base, to mark the final depth of the excavation.

4. REPLACE SOIL

Clean soil and backfill material are brought to the yard to fill in the areas that were excavated.

Fences and gates that were removed for access are reinstalled or replaced.

CPO and the Homeowner confirm the final grades and landscaping.

The Contractor **restores the landscaping** based on the agreed upon plan.

Sprinklers are replaced where a system existed previously.

The Contractor uses **sod, gravel or bark mulch**, to replace lawn areas. Sod delivery can be delayed during extended periods of hot, dry and wet weather.

Avoid walking on the lawn for about two weeks. Keep pets off!

6. CARE FOR NEW LANDSCAPING

Watering and general maintenance instructions are provided to the Homeowner.

The Homeowner is responsible for **basic landscape care** of restored lawn and plants, including:
Watering
Weeding regularly
Picking up pet waste
Mowing regularly

If **additional watering** is required outside of local restrictions, CPO advises the municipality.

Plants and sod are warranted for up to 1 year. **Warranty** is voided if negligence is a factor.

Contact CPO immediately if a problem is noticed.

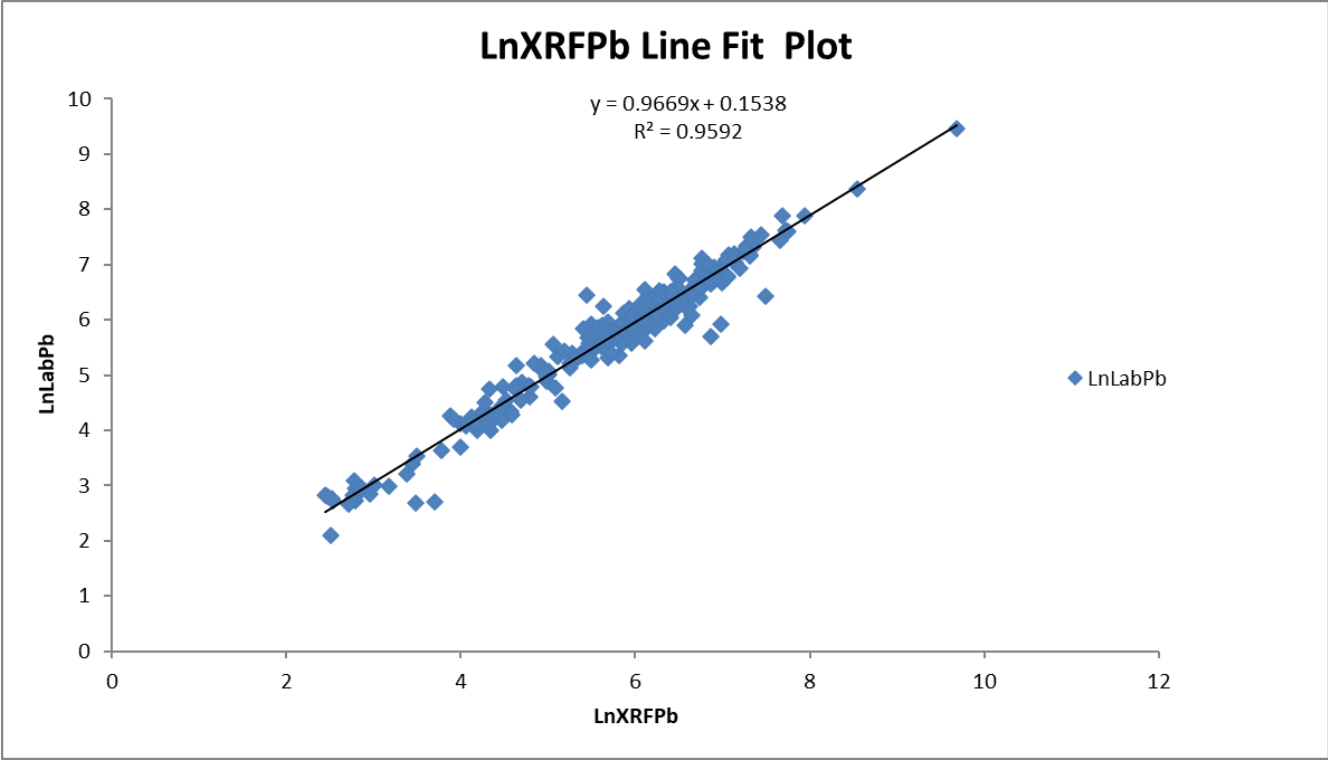
Upon completion, CPO reviews the yard with the Homeowner. The Homeowner signs a **completion agreement form** and CPO provides a soil management summary report.

CPO keeps a **record of the work** for your yard and notifies Teck and the Ministry of Environment that soil management has been completed.

7. COMPLETION & RECORD KEEPING

APPENDIX E

XRF Regression Equation



Appendix E: 2025 Regression Chart for THEP Soil-XRF vs. Laboratory Pb

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