

Trail Area Health & Environment Committee



Minutes

Meeting: Thursday, September 19, 2019, 7:00 p.m.
City of Trail – Committee Room #2, Spokane St. Entrance

Committee Members in attendance:

Lisa Pasin, Chair, City of Trail
Clare North, Teck Trail Operations
Dr. Karin Goodison, Interior Health

Jim Hill, Village of Warfield
Julia Stockhausen, Community Member
Erin Fazzino, Interior Health (designate)

Others in attendance:

Thompson Hickey, Teck Trail Operations
Peggy Evans, BC Ministry of Environment
Dr. Nelson Ames, former MHO, Community Member

Wendy Goodrich, Community Member
Christina Yamada, Interior Health

Program Team in attendance:

Michelle Laurie, THEC Facilitation Lead/Notes
Andrea McCormick, SNC-Lavalin Inc.

Cindy Hall, SNC-Lavalin Inc.
Meghan Morris, Interior Health

MEETING MINUTES

- Minutes approved from THEC meeting, June 4, 2019.

PRESENTATIONS, REPORTS, DISCUSSIONS & RECOMMENDATIONS

Presentations

Interior Health MHO Update

Presenter: Dr. Karin Goodison, MHO

Dr. Goodison presented an Interior Health MHO update including a proposed 'case management' blood lead threshold change, new information on blood lead reporting to the Provincial Health Officer by BC CDC and a move to nominal testing which impacts the Trail Blood Lead clinic (attached slides).

Additional points of discussion included:

- MHO offered to come and speak to local physicians, as needed, about the changes.
- Moving forward, Enhanced Healthy Family Healthy Homes Support is replacing the term 'case management' to avoid unnecessarily labeling children.

Early Childhood Development and THEC / THEP

Panel: Julia Stockhausen, Kootenay Family Place (THEC), Meghan Morris (Family Health), Cindy Hall (Home & Garden), Dr. Nelson Ames (former MHO / THEC invitee)

The purpose of the panel was to share how and why Early Childhood Development (ECD) is integrated into the program. Each panelist spoke for a few minutes followed by questions and discussion. Areas covered included (slides and handouts attached):

- What is ECD?
- History of THEC / THEP and ECD
- An overview of the Healthy Family Healthy Homes (HFHH) program

A thread in all presentations was that THEP is a 'ladder' in the community facilitating relationships and providing services. THEP supports ECD and ECD supports THEP to achieve its goals.

Program Reports & Updates:

Air Quality – Clare North, Teck Trail Operations

- The Air Quality Report is attached.
- Next AQTWG meeting is scheduled for Oct 30th (Lisa Pasin, Chair)

Family Health – Meghan Morris, Interior Health

- The Family Health Report is attached. Key points included:
 - Blood Lead Clinics ongoing and lots of outreach (posters and phoning) to encourage participation.
 - HFHH visits will resume once Blood Lead Clinics are completed.

Home & Garden – Andrea McCormick, SNC-Lavalin

- The Home and Garden Report is attached. Key points included:
 - Soil program on path to achieving goal of 75 top priority remediations in 2019.
 - Andrea requested help spreading the word on soil testing in order to gain more consents. Additional advertising will take place on the THEP website & newsletter and in the Trail Times in addition to attending school PAC BBQs and sharing by principles via newsletters/social media.
- Staffing updates: Andrea is replacing Bruce Enns as the office manager, Bruce will lead database and mapping work. Currently the team is hiring for a HFHH part time position focused on home visiting.
- Clare North, Teck Trail Operations, provided an interim update on the Soil Management Plan (slide attached).

Community Check-In - All community members

- Clare North from Teck responded to a question raised by a community member at the April 2019 THEC meeting on if alley dust needs more attention. An alley dust sampling pilot project has been initiated and she will provide an update at the November THEC meeting.

Program Planning & Operations – Michelle Laurie, THEC Lead Facilitator

- The Fall newsletter was shared.
- A community perception survey is online via thep.ca with the purpose to understand better how the public feels about the increased level of soil work in the community. The survey is being promoted in the Trail Times and THEC meeting participants were encouraged to spread the word. A homeowner feedback form is also being developed to learn from the 2019 season and solicit suggestions for 2020.
- Dates for 2020 meetings will be proposed in November.

Executive Report - Lisa Pasin, THEC Chair, Mayor, City of Trail

- Lisa thanked the following people who are changing positions within their organizations and no longer participating in the THEC/THEP work:
 - A.J. Downie, THEC member, Ministry of Environment and Climate Change Strategy
 - Catherine Adair, Teck Community Relations Leader
- Lisa shared the Provincial Health Officer has called together a review committee on Trail Health and the Environment with the goal to inform remediation targets for a Wide Area Remediation Plan. The first stage will be a literature review followed by identifying gaps and determining a work plan. She will provide updates at future THEC meetings.

NEXT THEC MEETING: November 26, 2019.

Interior Health MHO update

THEC

Sept 19, 2019



Interior Health
Every person matters

Blood lead Thresholds

- Current:
 - $\geq 7\mu\text{g/dL}$ for $< 1\text{yr}$ old
 - $\geq 10\mu\text{g/dL}$ for $> 1\text{yr}$ old
 - an increase of $3\mu\text{g/dL}$ or more between 2 consecutive fall Blood Lead clinic visits.

Health Canada: There is no safe Blood Lead Level in children.

US CDC: Uses a reference value of $5\mu\text{g/dL}$ to identify children with blood lead levels that are higher than most other children.

Recommended Thresholds

- Move towards new threshold for “case management”
 - $\geq 5\mu\text{g/dL}$ and/or
 - an increase of $3\mu\text{g/dL}$ or more between 2 consecutive fall Blood Lead clinic visits.
 - Supported by THEP

Reportability of blood lead

- Lab results for lead (and mercury) now reportable under PHA
- Impact to BL clinic
 - Nominal testing
 - Letter to Trail area physicians

Message to physicians

- Information letter sent last week
 - CC on results
 - May get request to support investigation
 - PHN role
 - THEP resource awareness
 - Enhanced services
 - Support



September 11, 2019

To All Trail Area Community Physicians:

Re: Blood Lead Testing - New Regulation, Related Services for Trail Area Families

There are new regulations impacting blood lead testing across BC and related services available to residents of the Trail area. Key information:

- Lab results for lead and mercury in blood and urine are now reportable under [Reporting Information Affecting Public Health Regulation](#) (the Regulation) to the Provincial Health Officer (and onward to regional Medical Health Officer).
- Community physicians in the Trail area may receive copy of blood lead results from Blood Lead Testing Clinic for Children. The Trail Area Health and Environment Program (THEP), in collaboration with Interior Health, will continue to investigate elevated results.
- Community Physicians may be requested to support investigations.

For blood lead results over the current recommended threshold level, the ordering clinician will be contacted for the initial assessment. Either WorkSafeBC or Interior Health will follow up with investigation as appropriate. For results ordered through the Blood Lead Testing Clinic for Children, Interior Health will collaborate with THEP on these investigations.

THEP offers lead exposure prevention services to support families in the Trail area. Interior Health provides the Family Health program where a Public Health Nurse offers primary prevention home visits, support and education, and the Blood Lead Testing Clinic for Children with follow-up as necessary. Results are sent to the Medical Health Officer as the ordering clinician and copied to the family physician upon consent. SNC Lavalin, on contract to Teck, provides the Home & Garden program including in-home visits, home renovation support and soil testing and remediation. Enhanced support and services are offered to families with children above threshold blood lead levels.

Early Childhood Development & THEC / THEP

Julia Stockhausen, Kootenay Family Place (THEC)

Dr. Nelson Ames (former MHO / THEC invitee)

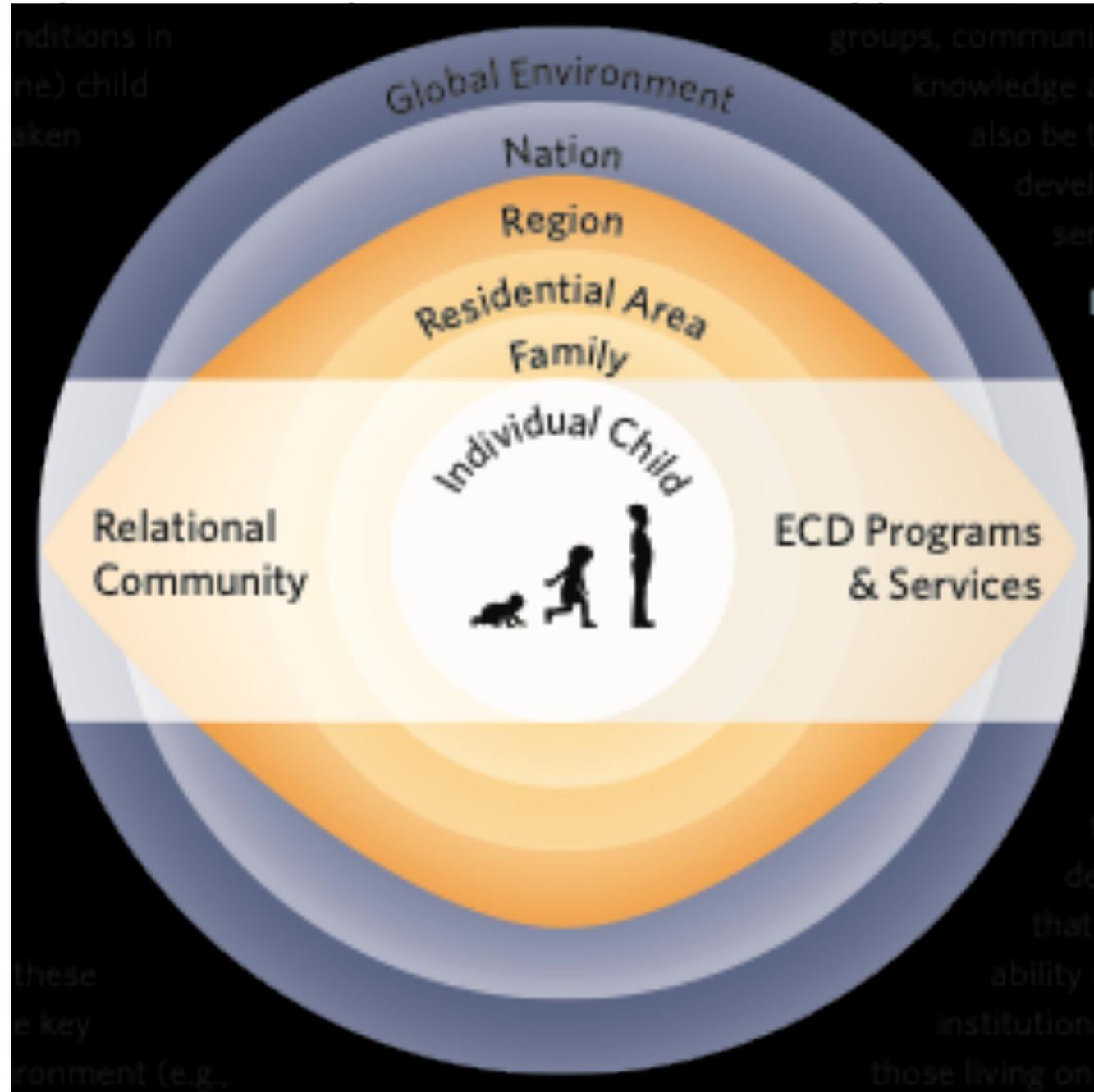
Meghan Morris (Family Health)

Cindy Hall (Home & Garden)

THEC Meeting, City of Trail, Sept 19, 2019



How can we make our community the best place to raise a child?



The Snakes & Ladders of Life

90 You've lived a healthy life	89	88	87 After a lifetime you have been laid off work	86	85	84 Your family doctor moved away	83	82	81
71	72	73	74 You've retired to a wonderful community	75	76 Income & Social Status	77 Health services	78	79 After 20 years, your husband just left you	80
70	69 Your mom, aunt and sister are breast cancer survivors	68	67	66 You broke your leg and can't drive	65 Personal Health & Coping skills	64	63	62 Gender	61
51 Genetics	52	53 Social Environment	54	55	56	57	58	59	60
50	49 You've been elected president of the local service club	48	47	46	45	44	43	42	41
31	32 Education & Literacy	33	34	35	36	37	38	39 You've moved to a bad neighbourhood	40
30 Graduated from high school	29	28	27	26 Employment	25 You've landed your first job at a good employer	24 Physical environment	23	22	21 You didn't make the team
11	12	13	14 Other children tease you because you look different	15	16	17	18 Social support	19	20
10 Different culture	9	8	7	6 You have learned to play with others	5 Healthy child development	4	3	2	1 Life



OPPORTUNITIES



COMMENTS



Fun Finder

Have a look at the drawing and see if you can find the answers to these questions!

1. Where's the ball?
2. How many pets are there?
3. What colour is kitty?
4. How many kids can go for a swing?
5. How many shoes at the back door?
6. What is the dog's name?
7. Count the sidewalk squares you can see.
8. How many orange things can you find?



www.thep.ca

- Supporting a healthy start
- Listening
- Trust
- Relationships
- Freebies



The Snakes & Ladders of Life

What are the Social Determinants of Health?

The economic and social conditions that directly or indirectly influence the health of individuals, communities and jurisdictions. They are about quantity and quality of resources that a society makes available to its members (childhood, income, food, shelter, employment, working conditions, and health and social services).



How does this apply to me?

We are all born with the board game “snakes and ladders.” The goal is to achieve optimum well-being by making one’s way, via the ladders.

Some boards have lots of snakes (challenges) and many ladders (opportunities); others have a lot of ladders and few snakes. For example, a child born into a high-income family and who lives in a safe neighbourhood with plenty of parks, recreation facilities and good schools has a board with more ladders than snakes. On the other hand, a child whose family is dealing with the stress of poverty, poor education, and isolation, and who lives in a neighbourhood with high crime, has a board with lots of snakes and few ladders. He or she faces more health challenges and has fewer opportunities for health. (Dr. Michael Hayes, SFU)

How To Play

Each player chooses a playing piece. Roll the die to determine number of squares the playing piece should be moved. If a player lands on a square containing the bottom of a ladder, the player moves up to the square at the top of the ladder. If a player lands on a square containing the tail-end of a snake, the player must move down the snake to the square containing the head of the snake.

Players start at the beginning of the Game (square 1 – Life). The first player to reach square 90 wins.

90 You've lived a healthy life	89	88	87 After a lifetime you have been laid off work	86	85	84 Your family doctor moved away	83	82	81
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Created by East Kootenay Health Services Community Development (Interior Health) - based on the concept of Dr. Michael Hayes (Simon Fraser University)

The Determinants of Health

Defined by the Public Health Agency of Canada

a) Income and Social Status

It is not the amount of wealth but its relative distribution which is the key factor. Likewise, social status affects health by determining the degree of control people have over life circumstances and, hence, their capacity to take action.

b) Social Support Networks

Support from families, friends and communities is important in helping people deal with difficult situations and maintaining a sense of mastery over life circumstances.

c) Education & Literacy

Education, that is meaningful and relevant, equips people with knowledge and skills for daily living, enables them to participate in their community, and increases opportunities for employment.

d) Employment & Working Conditions

Meaningful employment, economic stability and a healthy work environment are linked to good health.

e) Physical Environment

Air and water quality, the type of housing and the safety of our communities majorly impact health.

f) Biology and Genetic Endowment

Recent research in the biological sciences has shed new light on “physiological make-up” as an important health determinant.

g) Personal Health Practices & Coping Skills

Personal health practices are key in preventing diseases and promoting self-care. Effective coping skills enable people to be self-reliant, solve problems and make choices that enhance health.

h) Healthy Child Development

Positive prenatal and early childhood experiences have a significant effect on subsequent health.

i) Health Services

There is a relationship between the availability of preventive and primary care services and improved health (e.g., well baby and immunization clinics, education programs about healthy choices).

j) Social Environments

Our values and norms may influence our health and well-being (e.g. social stability, recognition, safety, good working relationships, and cohesive communities provide a supportive society that reduces or avoids many potential risks to good health.)

k) Gender

Personal health may be affected by the society-determined roles, attitudes, and values society ascribes to the two sexes.

l) Culture: Some cultures or groups may face additional health risks due to a lack of access to culturally appropriate health care and services.

What makes a difference for early child development?

Total Environment Assessment Model for Early Child Development
(TEAM-ECD)



For years, research has demonstrated that children growing up in countries worldwide follow similar developmental patterns. No matter where they are growing up, most children walk, talk, construct things, learn to feed themselves, and build trust and independence. At the same time there are wide variations in what is considered “typical development,” which is driven by a number of genetic, cognitive, physical, family, cultural, nutritional, educational, and other factors.

EARLY EXPERIENCES & EARLY ENVIRONMENTS

There are many things that influence children’s development from genes to early environments.¹ Although we do not fully understand the mechanisms by which children are influenced by early life experiences, we do know that these experiences, and therefore the qualities of early environments, can shape the ways that our genetic building blocks (DNA) are expressed. This in turn influences individual differences in development and behaviour. Early experiences actually influence chemical reactions in our growing bodies and these reactions can change the way our genes function.²⁻⁵ And through this process, the environments in which children grow and develop have a lifelong effect on physical and mental health, on socio-economic well-being, and on an individual’s ability to contribute to society. We call this process biological embedding.

SOCIAL DETERMINANTS OF HEALTH

In our society, we tend to understand health in terms of biology, focusing mainly on physical well-being. The biological determinants of health include healthy functioning hormonal and immune systems, inherited or genetic predispositions, and exposure to harmful microorganisms that affect organ function. But biological determinants are only part of the determinants of overall health. Social determinants of health are of equal significance for one’s health but are less well understood. Social determinants, including access to proper nutrition, adequate housing, access to programs and services, adequate income, and other socioeconomic circumstances, can influence early environments and health in substantial ways.⁶

Biological and social determinants work together to influence health and development, however, there is an important distinction between them: we have considerable control over changing the social determinants of health. Improving the *social* conditions that determine health means paying attention to not only the individual child and family but also to the broader society. Actions to influence the social determinants of health can potentially impact millions of people: altering the social conditions to create more family-friendly systems of supports and services means that we can affect populations of children, subsequently improving the health of populations more generally.

NURTURANT ENVIRONMENTS

Nurturant environments promote healthy child development. Good nutrition for physical growth, secure shelter, and protection from harm are basic aspects of nurturant environments.⁷ Young children also need to spend their time in loving, socially responsive, language-rich environments, supported by caring adults. They need opportunities to explore their world, play, solve problems, and learn to speak and listen to others. Generally, we expect parents and caregivers to create these nurturant environments but they cannot do it alone. Their ability to do so is affected by the socio-economic conditions in which they live: their income level, working hours, knowledge, past experience etc. It is clear that families require supportive programming and policy in their community, regionally, provincially, and federally to create conditions that support the kinds of environments to which we aspire for all children.

MULTIPLE ENVIRONMENTS: THEIR CHARACTERISTICS AND IMPORTANCE

Research has helped us to better understand how everything from the smallest cell to the more complex growing child is influenced by the environments in which they spend their time. The Human Early Learning Partnership has developed the Total Environment Assessment Model of ECD (TEAM-ECD) as a way of understanding these environments and their qualities that play a significant role in influencing early development.⁸ Environments—from the most intimate to the broadest—can and do influence the growing and developing child and therefore influence life-long health and well-being. Social, economic, cultural, and gender factors affect the nurturant qualities at play within each environment and have a impact on the development of the child. An assumption that lies at the heart of this model is that more equal societies have better long term health and well-being.



Social, economic, cultural, and gender factors affect the nurturant qualities at play within each environment and have a impact on the development of the child. An assumption that lies at the heart of the TEAM-ECD model is that more equal societies have better long term health and well-being.

WHY IS IT IMPORTANT TO CONSIDER THE TEAM-ECD MODEL?

The TEAM-ECD model illustrates the connections between environments and key influences that relate to children's early development. The environments are nested and interconnected so aspects of each can affect the others in a number of ways and at various levels. The more positive and supportive the environments, the richer they are in supporting children to develop, grow, and learn. The results of such rich and nurturing environments can be measured by monitoring children's development over time at a population level.

A Program and Policy Perspective

The significance of the TEAM-ECD model is that it provides a mechanism for considering early child development practice, policy, and programming together rather than in isolation. The model also highlights the importance of interconnected and collaborative efforts across levels, addressing each of

the environments that affect child development, thus helping children and families thrive.

Recent recommendations contained in the New Deal for Families,⁹ and which draw on the TEAM-ECD research, speak to broad-based federal and provincial policies that are intended to influence the ability of families and caregivers to nurture and support their children. The recommendations speak to the importance of parents having TIME with their children, having the RESOURCES to care appropriately, and having the SUPPORTS AND SERVICES they need to both parent and engage in the workforce. And in doing so, improving the quality of environments in which children spend their time.

The proposed system is built on the principle of proportionate universality with a universal platform of programs, services, and policies, but delivered locally at a scale and intensity that is proportionate to the level of need (for more on proportionate universality see HELP's brief, found online at earlylearning.ubc.ca/documents/70).

THE IMPORTANCE OF MONITORING OUR PROGRESS

Understanding systematic differences in the prospects for healthy child development at every level of the TEAM-ECD model is critical to planning changes to investment and policy that can improve the health of populations. One way to understand these differences is through monitoring early child development.

At HELP, we have monitored and reported, at a population level, on the health, well-being, and competence of British Columbian children using the Early Development Instrument (EDI) as an outcome measure. New work has also led to a Middle Years Development Instrument (MDI) that will help us to better understand the health and well-being of children in their middle years (ages 6 to 12), again at a population level. Our goal, through these projects and others, is to improve the health and well-being of our youngest citizens. By understanding the barriers, whether systemic or specific, that children

Biological Embedding

The early years are considered to be one of the most important developmental phases throughout the lifespan. These years are marked by extremely rapid development of the brain and other key biological systems. At the same time, current research is unequivocal about the fact that children's early environments have a vital impact on the way their brains develop.¹³⁻¹⁵ Developing fetuses create new brain cells at a rate of tens of millions each week that represent lifelong potential.^{16,17} To develop optimally, these brain cells need to connect with each other. The more stimulating and nurturing the early environment, the more positive connections are formed in the brain and the better the child thrives in all aspects of his or her life, in terms of physical development, emotional and social development, and the ability to express him or herself and acquire knowledge.¹⁸ All of these aspects of growth and development matter for later life health and success.

TOTAL ENVIRONMENT ASSESSMENT MODEL FOR EARLY CHILD DEVELOPMENT (TEAM-ECD)

Individual Child

At the centre of the TEAM-ECD model lies the child with his/her unique biology. Children live within a series of interconnected and interactive environments from the immediate family, to the community, and further to the province (region), country, and global environment. The conditions in each of these environments and the degree to which they support (or undermine) child development determine how well children are supported. Therefore actions taken at any of the environmental levels will affect children not only in present day, but also throughout their lives.

Family

Family has the largest share of human contact with children. In addition, family mediates a child's contact with their broader environments. Family environments are where children aged 0-6 spend most of their time and they are the primary source of influence in shaping children's early development.^{10,11} A wide range of familial social and economic factors directly influence children's early development. A family's social resources include parenting skills and education, demands on their time from work, cultural practices and approaches, intra-familial relations, and the health status of the family members. Economic resources include wealth, occupational status, and dwelling conditions, all of which can have a profound effect on a child's early development.

Residential Area

Children and families live in residential communities and the extent to which these communities offer families multiple forms of support matters for children. The key aspects of the residential environment for children include the economic environment (e.g., economic well-being), the physical environment (e.g., safety, access to parks and playgrounds), the service environment (e.g., the existence of and access to high quality community support programs), and the social environment (e.g., quality of social relationships).

Relational Community

The relational environment includes the family's social ties to others with a common identity. The relational community provides, among other things, a source of social networks for families (e.g., faith-based groups, community groups), information and emotional forms of support, and shared knowledge about child-rearing practices. Yet, these same relational communities can also be the source of social exclusion leading to social inequities for early child development (e.g., sources of racism, barriers to access for programming and services).

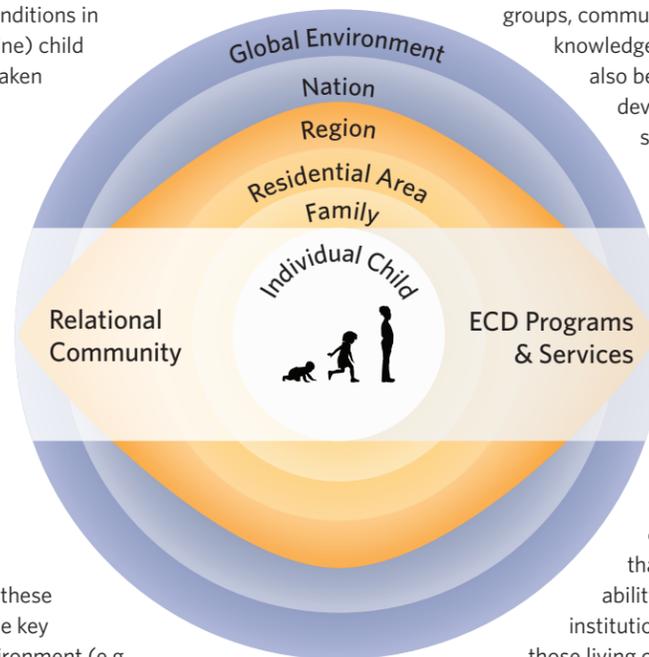
ECD Programs and Services

The availability of ECD programs and services to support children's development during the early years is a crucial component of an overall strategy for success in childhood. Programs and services must also manage to overcome physical and cultural barriers that can affect access by some groups of people. While early child development programs and services are essential, they will not be as effective if under-resourced and unregulated, and if they are of low quality.

Region, Nation & Global Environments

At these levels, regional, national and global policy and investment define the more intimate environments which offer an indirect effect on early child development. These environments are responsible for qualities such as: access that parents have to work that pays a living wage sufficient to raise a family; ability of parents to be at home with their infants until they are ready to enter institutional care settings; the degree to which social policies are in place to support those living on low incomes to raise their children optimally.

The environments within this model are interconnected and interdependent: they are not hierarchical. While the home environment is critical, parents and caregivers may not be in a position to provide optimal care for children because of pressures imposed on them by these broader policy environments.



Source: TEAM-ECD figure adapted from Total Environment Assessment Model for Early Child Development: Evidence report for the World Health Organization's Commission on the Social Determinants of Health.^{8,12}



and families face and by ensuring that children have access to nurturant environments, we can reduce child vulnerability. Achieving this goal requires coordination and action at many different levels in every sector – it requires a “whole of society”

approach. How well populations of children develop and are ready to learn, work, and give back to their community is an indicator of the future health and well-being of a society.

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Trail Area Health & Environment Committee and Early Childhood Development

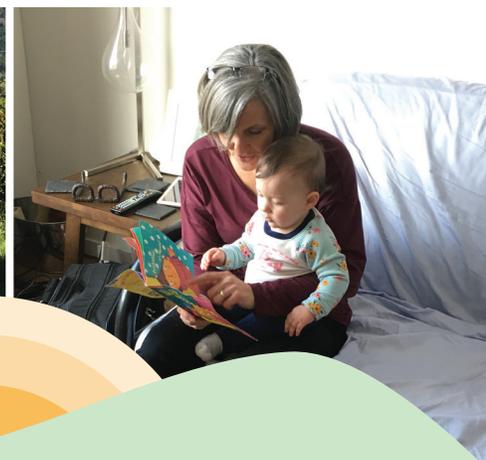
A child's early years are critical because this is when the brain develops most rapidly. Early childhood development strongly influences well-being throughout life.

Children are at the heart of the Trail Area Health & Environment Committee's work. Over the years, THEC's mandate of preventing children's exposure to lead has broadened to include a commitment to young children's healthy development.

In 2013, THEC launched the Healthy Families Healthy Homes Program (HFHH). It's a health promotion program that targets all expectant families and families with children aged 0-3 years in Trail and Rivervale. Each family receives two visits, one from an Interior Health Public Health RN (the Healthy Families visit) and one from a trained Home & Garden professional (Healthy Homes). Visits focus on prevention of lead exposure and healthy child development. Tools, information and support are brought into the home:

- Education, advice, a visual review of the home and yard, engagement of parents in conversations about their children's health, and referrals to other health or social services.
- Support for family actions to prevent lead exposure, such as vacuum cleaners, covered sandboxes and "Dust Buster" kits.
- Advice on topics such as keeping dust down, nutrition, handwashing, programs and services for young children, home renovation and removal of lead-based paint and home health hazards.
- Answering parents' questions and concerns.

**Research has found
that the potential
effect of enriched early
child development
opportunities can be as
much as 15 IQ points.**



Leadership and community collaboration

How has the Trail Area Health & Environment Committee (THEC) strengthened early childhood development in the community?

- Providing public education for community leaders and residents
- Building a broad base of community support
- Stimulating community action
- Developing an educated and engaged core group of community citizens
- Making a long-term commitment

Collaboration is key!

- Founding member of the Family Action Network (FAN)
- Collaborations that connect families and services and build relationships that increase participation in programs such as Lead Safe Renovation

Reducing exposure to lead and early childhood development go hand in hand.

The Trail Area Health & Environment Program relies on community support and participation. Key to this participation is THEC's engagement in early child development. It raises the program's profile in the community and strengthens relationships with local families and the organizations that support families. This, in turn, leads to support for environmental health initiatives of the program.

Bottom line: It's all about the kids.

**The THEC and
it's programs
keep early child
development
top-of-mind in
the public eye.**



FAMILY ACTION NETWORK (FAN)

FAN is the champion of community action on Early Childhood Development in the Lower Columbia region (Trail, Warfield, Montrose, Fruitvale and Rossland). FAN encourages community organizations to invest in families and young children. It provides support for organizations that help families and for initiatives that go beyond the scope of a single organization. It helps link families to each other and to community resources.

www.familyactionnetwork.ca



“... minimizing lead exposure in combination with improving other important early childhood factors such as parent-child interactions may be the best way to improve developmental outcomes.”

THE CONCLUSION OF RESEARCH PUBLISHED IN 2014 FOLLOWING 30-YEARS OF INTERVENTIONS IN THE SMELTER COMMUNITY OF PORT PIRIE, AUSTRALIA.



Air Quality Report

September 19, 2019

1. Lead in Air:

Second quarter average for lead in air at Butler Park was $0.105 \mu\text{g}/\text{m}^3$, which is lower than second quarter in 2018 ($0.130 \mu\text{g}/\text{m}^3$). The year-to-date average is $0.130 \mu\text{g}/\text{m}^3$, which remains below the THEC 2018 Annual Objective of $0.2 \mu\text{g}/\text{m}^3$.

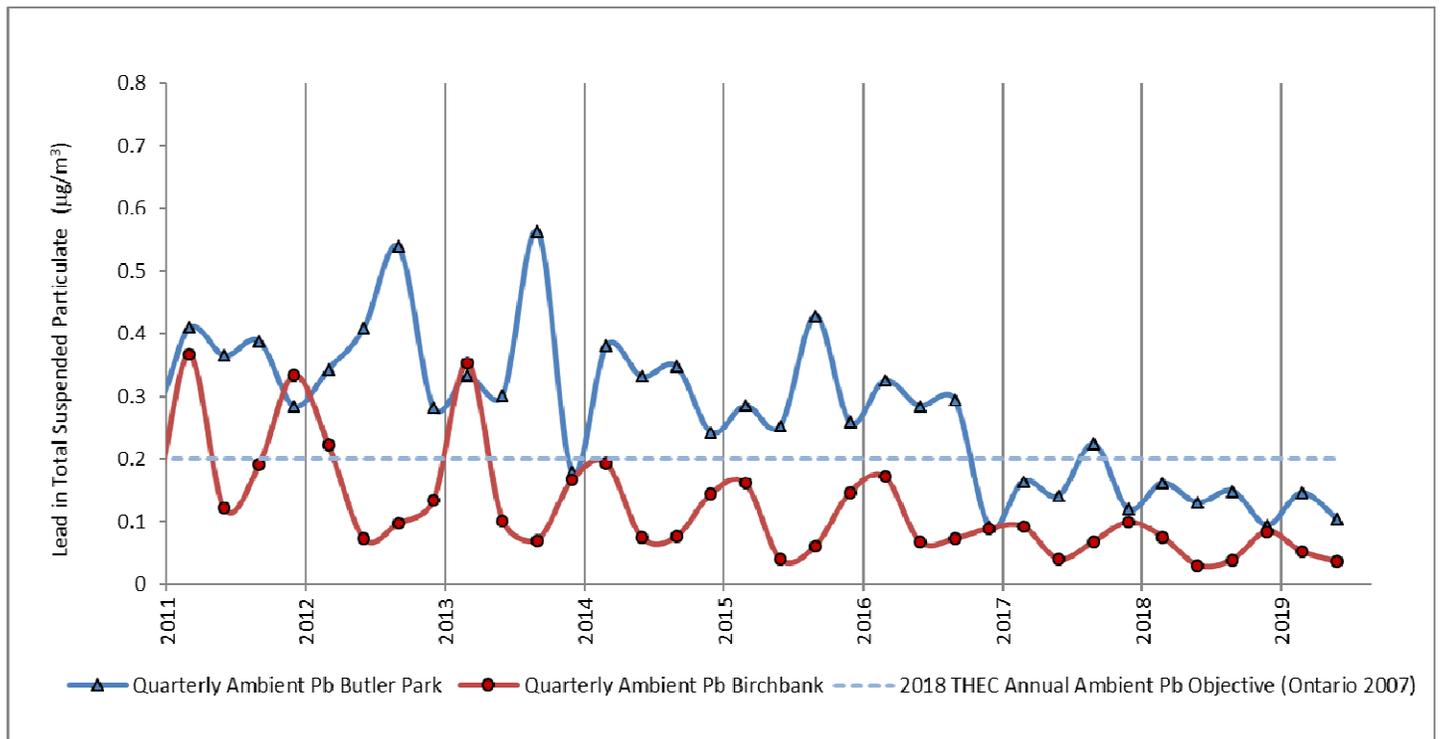


Figure 1: Quarterly monthly average lead at Butler Park and Birchbank stations (as total suspended particulate measured bi-daily)

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

2. Arsenic in Air:

Second quarter average for arsenic in air at Butler Park was $0.005 \mu\text{g}/\text{m}^3$, which is significantly lower than the second quarter in 2018 ($0.01 \mu\text{g}/\text{m}^3$). The year-to-date average is $0.006 \mu\text{g}/\text{m}^3$ which remains below the THEC 2018 Annual Objective of $0.010 \mu\text{g}/\text{m}^3$.

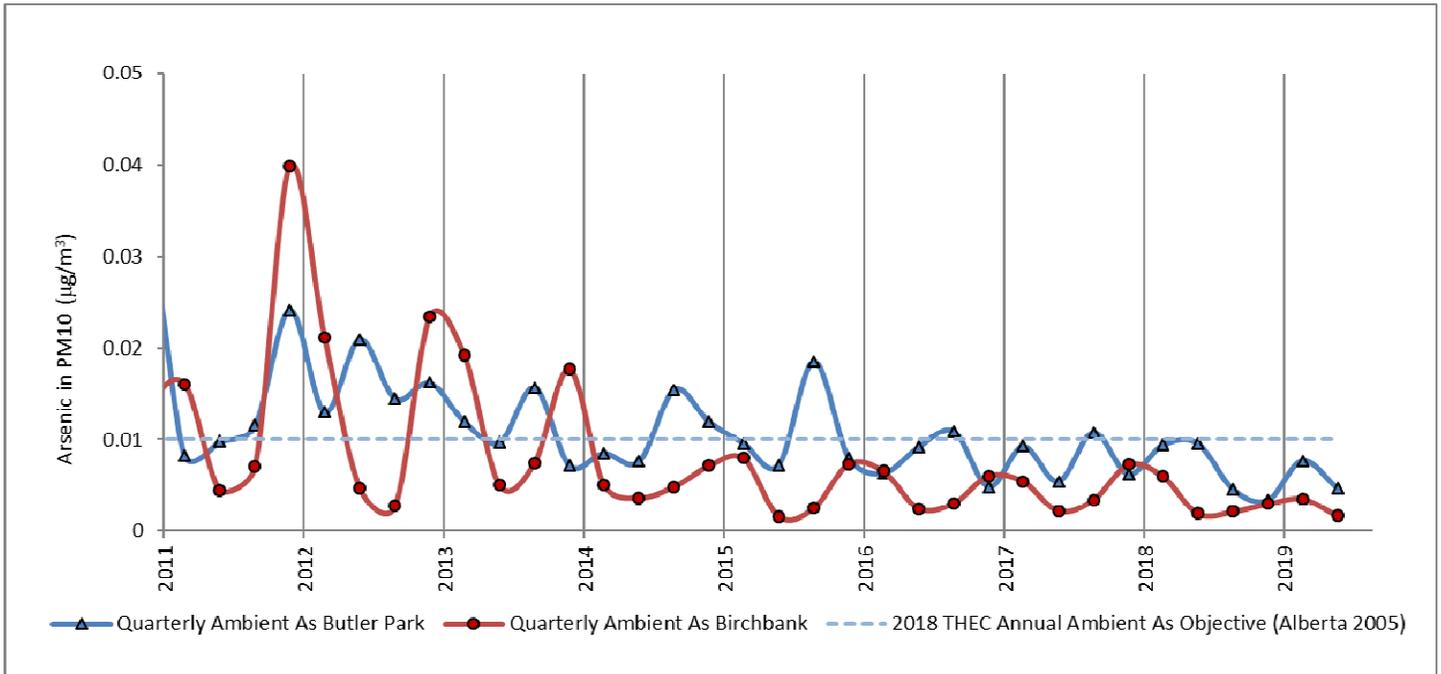


Figure 3: Quarterly average arsenic at Butler Park and Birchbank stations (as inhalable PM₁₀ fraction measured weekly)

The chart in Figure 3 shows the annual average for Arsenic in air (measured as inhalable PM₁₀ fraction) at Butler Park (blue) and Birchbank (red) in comparison to the 2018 THEC Air Quality Objective (blue line).

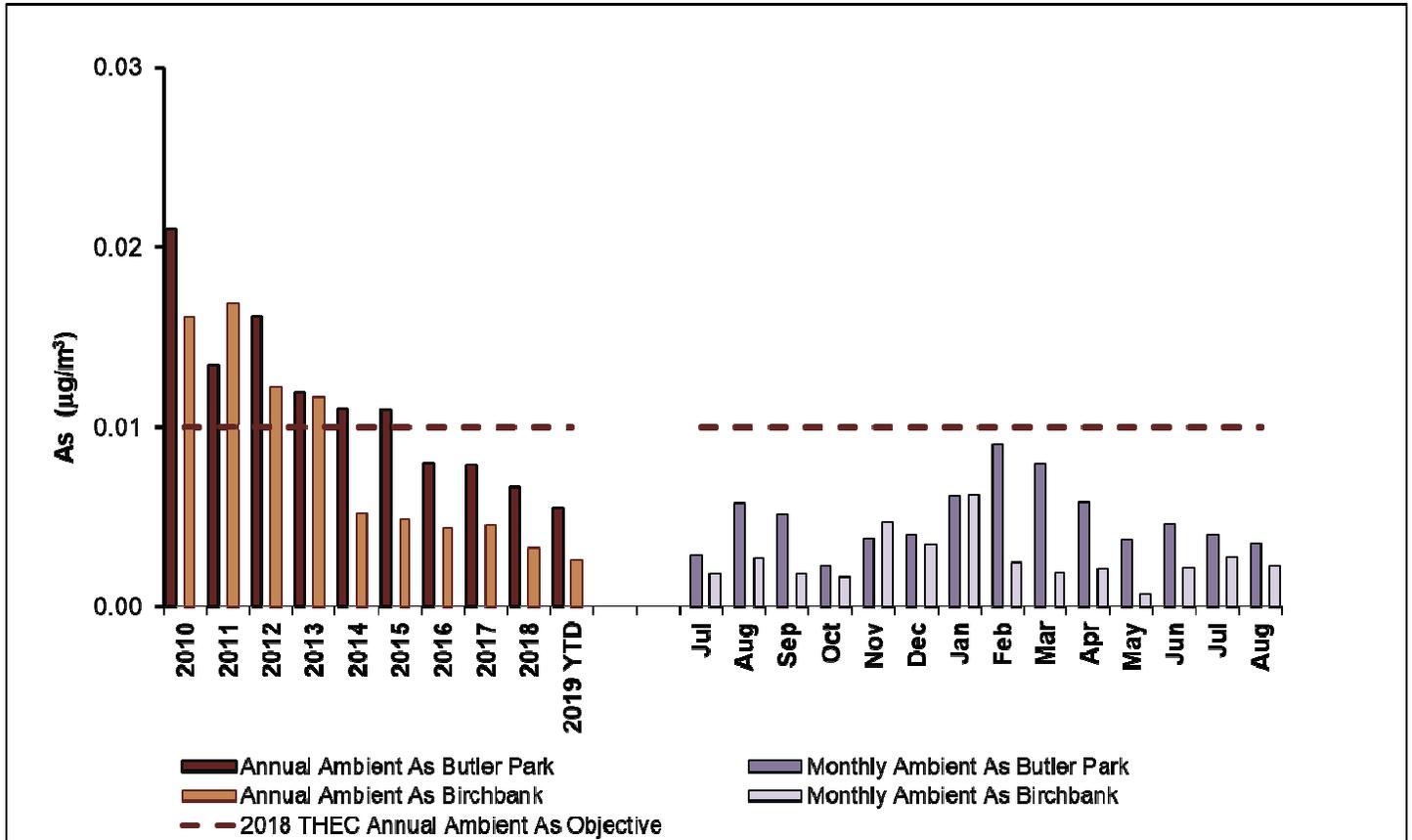


Figure 4: Annual and monthly average arsenic at Butler Park and Birchbank stations (as inhalable PM_{10} fraction measured weekly)

The chart in Figure 4 shows annual and monthly averages for Arsenic in air at Butler Park and Birchbank. Annual averages are shown on the left for Butler Park (dark brown) and Birchbank (light brown). Monthly averages for the past year are shown on the right for Butler Park (dark purple) and Birchbank (light purple). The 2018 THEC Air Quality Objective is shown as a dashed line. Monthly averages for Arsenic in ambient air are expected to have some variability due to season, weather, predominant wind direction, operational variance and sampling frequency.

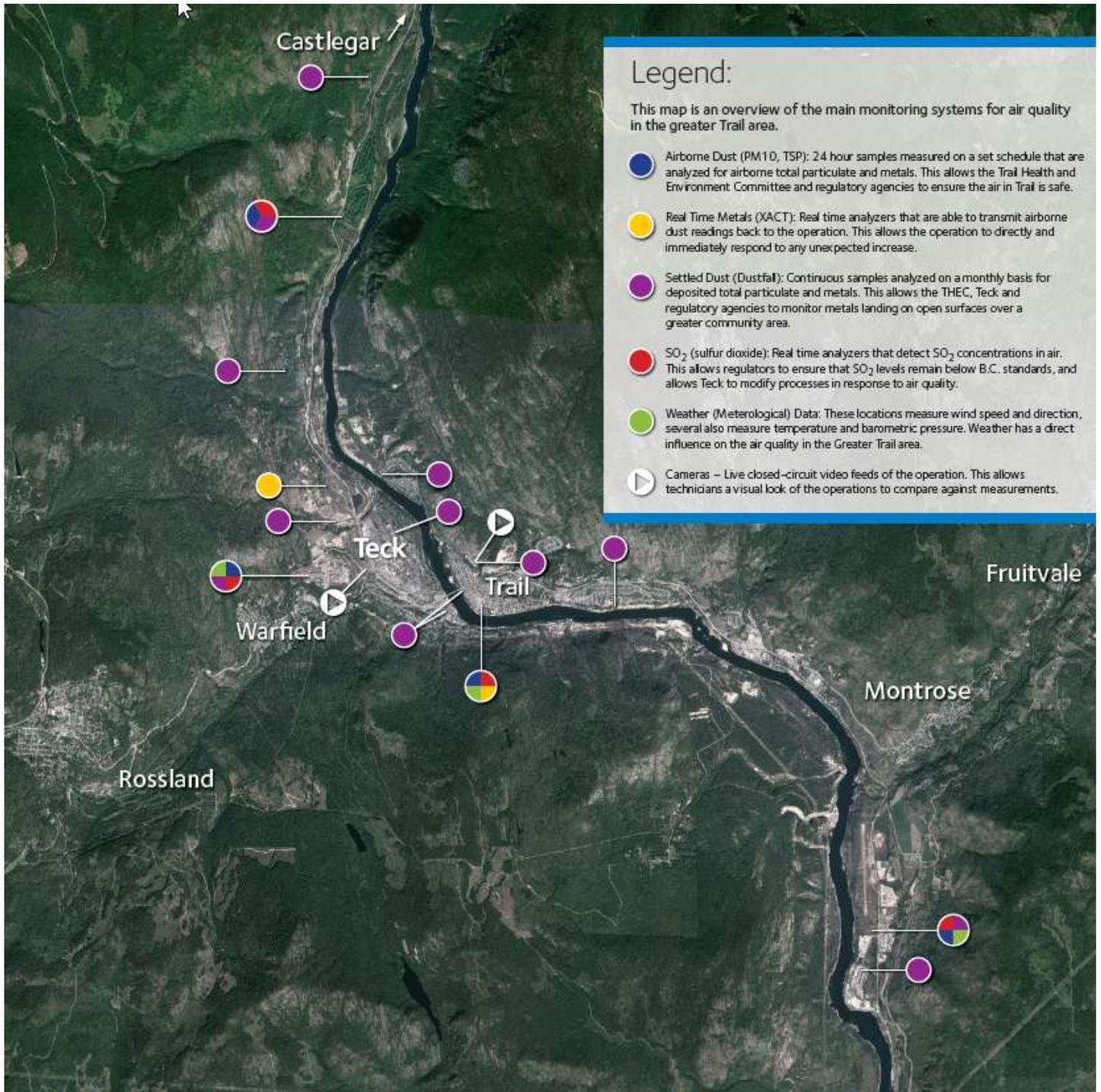


Figure 5: Teck Community Air Monitoring Stations

September 19, 2019

RECENT HIGHLIGHTS

1. Fall 2019 Blood Lead Clinics are in progress
2. Healthy Family Visits
3. Community Outreach

ADDITIONAL DETAILS

1. Fall 2019 Blood Lead Clinic Dates
 - September 9th, 9am-4pm
 - September 11th, 2019 9am-4pm
 - September 16th, 2019 9am-4pm
 - September 17th, 11am-6pm
 - September 23rd, 9am-4pm
 - September 25th, 11am-4pm

Total of 221 children invited (as of September 3rd)

Total from target area 2/3 age 6-36 months: 153 children

And additionally:

- i. 30 New Children to the target areas that are over 36 months
 - ii. 36 parent requests for testing in Trail/Rivervale for children over 36 months
 - iii. 16 children new to the Target areas 2/3
 - iv. 16 children from Area 1 other Lower Columbia Communities at parent request.
2. Healthy Families Visits
 - 46 Health Family Visits done in 2019
 - 6 visits were declined
 - 16 visits have been done since the last THEC Meeting on June 5th
 - Less capacity for visits in September with Blood Lead Clinics, will resume after clinics complete.
 - 22 visits remain to book-some may carry over into 2020.
 3. Community Outreach
 - Attended Building Beautiful Babies Pregnancy Outreach Program September 8th and will continue to do so monthly.
 - Posters for Blood Lead clinics posted throughout community to places families gather including grocery stores, daycares, preschools, schools, hospital and other high traffic locations.

Sept 19, 2019

HIGHLIGHTS

1. Soils Program: We are on our way to achieving the goal of 75 top priority remediations in 2019. As well, lawn care has been initiated at 74 properties and yard improvement completed at 10. We are working toward our targeted number of soil assessments (300) however are challenged due to a lack of consent for sampling. There is still time so please spread the word regarding soil testing. We will have four advertisements in the Trail Times this month. Everyone is welcome.
2. Feedback on 2019 Soil Remediation: We would like to know how the community is feeling about the increased activity in the community with respect to remediation. There is a survey that is open to everyone and a more targeted feedback form is being developed for those homeowners and tenants receiving remediation work. The community survey is on the website so please take the time to fill out the survey and spread the word.
3. Healthy Homes: Cindy has continued to support the 2019 Soil Management Plan throughout the summer (specifically ground cover, lawn care and yard improvement). However, scheduling for Healthy Home visits has resumed. Of note; there is an open job posting for a part time position to support Healthy Homes.
4. Outreach & Engagement: As noted above, advertisements in the Trail Times are hoping to provide broader outreach as well as more targeted outreach to families with school aged kids.

Recent activities have been:

- a. Webster School – Year End PAC BBQ
- b. Fall Blood Lead Clinic – ongoing in September

2019 Soil Management Plan

Progress Update

Stepped process to identify soil management priorities:

1. Properties with kids <12: over 500 properties reviewed
2. Ground cover evaluation: 261 completed, 8 scheduled
3. Soil assessment: 143 completed, 66 in the queue

Soil management priorities:

- 60 full yard remediations completed, 32 planned
- Ground cover improvements in progress at 82 properties
- 23 vegetable gardens remediated

