

MINUTES

Meeting: Tuesday, November 6, 2012, 7:00 p.m.
City of Trail Committee Room, Spokane St. Entrance



Committee Members:

Dieter Bogs, Chair, City of Trail
Gord DeRosa, Alternate Chair, City of Trail
Jeannine Stefani, Interior Health Authority
Brad McCandlish, BC Ministry of Environment

Mark Tinholt, Teck Trail Operations
Ron Joseph, Community Representative
John Crozier, Councillor, Village of Warfield
Jacquie Johnson, Interior Health Authority

Invitees:

Greg Belland, Teck Trail Operations
Richard Deane, Teck Trail Operations
Sonia Tavares, Success by 6
Ruth Beck, Program Manager
Ruth Hull, Intrinsik
Art Harrison, Trail Times

Bruce Enns, SNC Lavalin Environment
Cindy Hall, SNC Lavalin Environment
Andrea McCormick, SNC Lavalin Environment
Bill Jankola, Teck Trail Operations
Peter Golden, Teck Trail Operations
Denise Robson, Inside Job Consulting

MEETING MINUTES: Dated September 4, 2012

AMENDMENT: Home and Garden – discussion regarding waste materials left on the ground during roof replacement being a potential hazard for children; needs to be included in the minutes. There being no further amendments, minutes accepted.

ACTION: (GD/RB) to compare notes and amend the minutes accordingly.

REPORTS & RECOMMENDATIONS

Family Health

IHA Report, including 2012 blood lead clinic results – Jeannine Stefani, PowerPoint attached

Note: Red slides pertain to children 6 – 36 months and blue slides pertain to children 6 – 60 months of age

QUESTION: (MT) Are there some children (families) who are being missed when the invitations to participate in the clinics are sent out?

ANSWER: (JS) Our information is fairly comprehensive because we are able to access the information for children less than 18 months of age through the Public Health Nurse system.

QUESTION: (DB) Are there invited children who consistently do not attend the clinics? If so is this something we can address?

ANSWER: (JS) An invitation is always sent to children when they are 6 months old. If the family asks not to be contacted again we respect their decision. Some families require repeated contact and may decide to opt out for the current year but indicate that they would like to participate the following year.

QUESTION: (DB) If a child's blood lead level test results are low does this prompt some families to feel they don't need to continue having their child's blood lead level tested?

ANSWER (JS) Yes, sometimes this is the case however there are a variety of reasons for families to opt out of the clinics. Often families decide not to continue with the clinics when their children reach 3 years of age. Some families feel their children are too young, or they come once and decide not to return, and sometimes the clinics conflict with their schedule.

(RB) The 73% participation rate is very close to our target rate of 75%.

QUESTION: (MT) Referring to the blood lead histogram slide (slide 7), could you please clarify the number of children with high levels?

ANSWER: (JS) There were 4 children with readings higher than 13 $\mu\text{g}/\text{dL}$. The high results of these few children raised the average blood lead level for the area because of the relatively small sample size we are testing. This does not represent a significant year-over-year statistical change.

QUESTION: Slide 8 (RD) Is it possible to reference the data by area?

ANSWER: (JS) Yes it can be done but as the sample size is so small it is unlikely to present a true picture. While we can access that data we are unable to share it publicly due to our confidentiality requirements.

COMMENT: (DB) noted the difference between the levels in area 2 and 3 is very close to 2005 levels when there was a shut down. NOTE: 2015 goal is to see an average blood lead level of 4 $\mu\text{g}/\text{dL}$.

QUESTION: (GD) Do children who spend time out of the area in the summer see a drop in blood lead levels?

ANSWER: (JJ/JJS) Children who vacationed outside of the area for 2 – 3 weeks do not see any impact on their blood lead levels. The sample size for those that vacationed outside the area for 4 weeks or more was too small to draw conclusions from. (RB) noted that it is possible to stay in Trail for the summer and have a low blood level.

COMMENT: Slide 11 (DB) It is encouraging to note that the bump in the graph is moving to the left over time.

Slides 14 – 16 presented by Mark Tinholt

QUESTION: Slide 14 (GD) Do we know if production levels at the comparison sites are equivalent to Teck Trail Operations?

ANSWER: (MT) This data does not go into that level of detail. There are other factors to consider in addition to production levels, including the geographical area in which sampling is conducted and the number of children tested.

COMMENT: (RB) In response to the US CDC guidance, we are pro-actively taking the program to all families. In addition to the case management follow up currently in place, we will be implementing Healthy Home visits. The Home and Garden team will conduct a home visit with all expectant families and families with children under 36 months. The Public Health Nurses will visit all families with children under 12 months. The content of these visits will be much like a case management visit but with a slightly different emphasis.

Air Quality

Teck Report – Mark Tinholt, report attached

COMMENT: Slide 4 (BE) The linear (Tadanac) slope is going up, but it is a minimal increase.

MOTION: Gord DeRosa: Moved: that we do away with reporting on Street Dust; Seconded: Mark Tinholt; carried.

QUESTION: re. Arsenic PM10, what is the BC standard?

ANSWER: (MT) The BC objective is from 1978 and is outdated. We use the Alberta standard as it is the most stringent in Canada.

QUESTION (GD) Do we test the route of the concentrate trucks use?

ANSWER (PG) Currently no.

ACTION: MT will check to see what has been done historically in this area.

Fugitive emissions projects update – Bill Jankola, PowerPoint attached

There are currently four projects at various stages of development. The Smelter recycle enclosure project will be gated this month; the \$2M Track 14 (North Tadanac) project is approved and will

proceed in 2013; a feasibility study for the Roaster feed area is underway and the pre-feasibility study for covering the ETP is in process.

QUESTION: (DB) Will this approach meet the 2018 emission targets? ANSWER: (BJ) Yes, but the enclosures/covers are only the first step in the process.

QUESTION: (DB) What about the area near the water treatment plant?

ANSWER (BJ) The materials in question will be placed inside the new Track 14 building.

QUESTION: (DB) What happens to the water from the truck wheel wash?

ANSWER: (BJ) The water goes into a tank where solids are removed via a conveyor; once the water is contaminated it is treated through ETP.

QUESTION: (DB) Is the new Smelter recycle building a tent structure?

ANSWER: (BJ) No, it is a pre-engineered steel structure.

QUESTION: (DB) Is the ETP treatment greater than production? ANSWER: (BJ) It is slightly lower.

QUESTION: (DB) Are you looking for ways to change this balance? (BJ) Yes, however that is a medium to long term goal, this is stage one of the process.

QUESTION: (GD) For years the wash water from the roads has been flushed into the ditches. When you conduct internal road sampling do you test the ditches?

ANSWER: (GB/PG) These are not really ditches; the wash water is flushed into the storm water collection system, including Aldridge Rd. and the catch basins are vacated- out before a big rain.

QUESTION: (DB) How are the dust (Street Sweeper) trucks working out?

ANSWER: (BJ/RD) The larger truck required retrofitting as dust was getting into the cab causing a hazard for the driver, otherwise they are working well.

QUESTION: (DB) Does the roaster pre-heat stack still cause a problem and if so has this been evaluated?

ANSWER: (PG) There are still fugitive emissions through the start up process. While the procedures put in place are working well in the acid plant there is still work to be done in the roasters.

COMMENT: (DB) I'm pleased that the XACT 620 ambient air monitoring system is making it easier to track events and enables quick response times. We look forward to improvements especially in the higher problem area of Butler Park.

Program Planning & Operations

5 Year Plan Working Group Report – Mark Tinholt, recommendations attached

The focus over the last year has been program development. We are moving to an adaptive management model demonstrated in the final recommendations from the 5 Year Plan Working Group. Some of the recommendations have already been implemented and the new programs will ramp up in the spring.

Intrinsik has been retained to complete the literature review of the scientific documentation that supports what we do; what interventions make a difference and what works, what does not and why. Ruth Hull will organize our data and current documentation to create a document that explains our processes and program and what we do to protect people. This will form part of a broader knowledge base that we and other sites will use moving forward.

COMMENT: (DB) Wanted everyone to note the paragraph on page 5 explaining the intention of the new CDC reference level.

COMMENT: (ST) The development of the 5 Year Plan seems to coincide with the 15 by 15 initiative. (A comprehensive policy framework for early human capital investment in BC committed to lowering the provincial rate of early vulnerability to 15% by 2015/16). (MT) This is coincidental.

Executive Committee Report – Mark Tinholt, see attached THEC Terms of Reference

The \$90,000.00 budget for THEP Management and Administrative Support services in 2013 has been submitted for approval.

Updated and amended Terms of Reference for THEC will be included in the 5 Year Plan once they have been approved at this meeting. THEC reviewed the draft ToR.

QUESTION: (GD) Area A included was included in the last invitation should they be included in “Membership”?

ANSWER: (RB) Absolutely

QUESTION: (GB) Are you still comfortable with a quorum of 6 with the increase in membership to 14?

ANSWER: (DB/RB) Yes as it is difficult to consistently rely on a large turnout like we have this evening.

ACTION: (RB) Terms of Reference to include the following amendments: Mandate – to include the first sentence only; Membership – the Mayor and and/or designate from City Council... and RDKB Electoral Area A and Area B and 4 – 6 members appointed from the public...; Reporting – last page, final bullet....carried out in their role managing the implementation...

MOTION: Ron Joseph: Moved: that the amended Terms of Reference be accepted; Seconded: Dieter Bogs; carried

Re. the 2012 blood lead report, the key message moving forward is that the blood lead levels have reached a plateau. In part this is due to the small sample size, but in order to see a reduction in the current blood lead levels we need to expand our primary prevention program including the fugitive dust projects and providing young families with the necessary education and tools to prevent their children’s exposure to lead and other smelter metals.

ACTION: (RB) To convene a meeting to include representation from Warfield, Area A, and Area B, the Public Health Nurse, and Dieter Bogs to discuss proposed new program activities.

Program Manager’s Report – Ruth Beck, report and Health Forum PowerPoint attached

While lead is our primary focus we will be in a position to raise family awareness of the many other factors that affect their children’s development through our new programs. Every family with children under 36 months will receive an in home visit, this is a huge step. To find and reach every family we need a champion; in Revelstoke it is the School District.

ACTION: (RB) Consider including First Steps and Beyond and some books to promote child literacy in our handout package to families. Work with JJ/JJS/SNC.

There will be a focus on developing our communications strategy during the coming year. The presentation to the Health Forum at the regional hospital was successful and more are planned.

QUESTION: (GD) Do we now have a lead expert in the health care community?

ANSWER: (RB/ST) Not yet, but we do have advocacy. Dr. Trudi Toews, Chief of Staff is instrumental in helping make the connections that will move this forward. Physicians need to be educated and now that we are in the door, things are moving in the right direction.

ACTION: (RB) Paediatric and maternity physicians will receive a presentation at the end of November.

ACTION: (RB) Develop a communications plan that gets our message out to our target group in a cost effective manner.

FAN Update – Sonia Tavares

The Family Action Network working group has been getting input from families on their most important needs. It has been a long but informative process. We want Trail to be one of the best places to raise a family. We need a central repository for services to make them more accessible. There will be a meeting on November 29th to continue developing an action plan.

Home & Garden

Community Program Office Report – SNC Lavalin – Bruce Enns, report attached

QUESTION: (RJ) Has there been any feedback from conversations with contractors through the RDKB?

ANSWER: (BE) We are working on setting this up. We need further program development before approaching the RDKB for feedback and a way to access contractors.

ACTION: (BE) To work on program development and a strategy for approaching the RDKB and the contractors.

Groundwater

Mark Tinholt - A presentation on the groundwater projects will be provided at the next meeting.

NEXT MEETING

Tuesday, February 5, 2013

Fall 2012 Blood Lead Results



Participation Rates
Results
Environmental Conditions

Age Groups Targeted

- 1991-2000: age 6-60 months
- 2001-2005: age 6-36 months
- 2006-2008: age 6-60 months
- 2009-2012: age 6-36 months

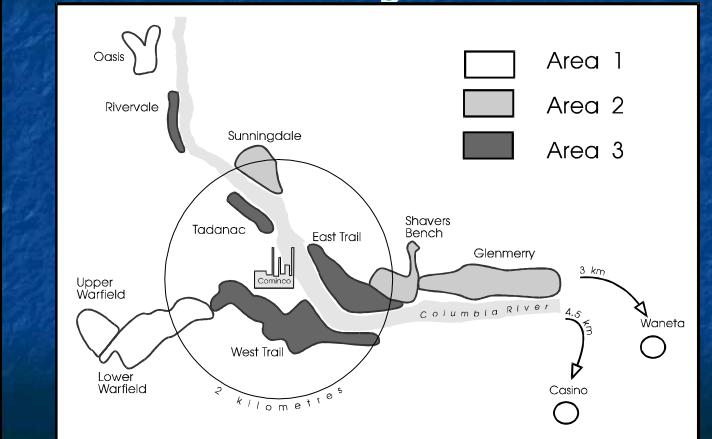


Who Was Tested in 2012?

- Target group:
 - Children aged 6-36 months, living in City of Trail or Rivervale (Area 2/3)
- Also:
 - New to area, up to age 5 yrs (60 mos)
 - Previous case management for follow-up

Hx

"Areas" & Neighbourhoods



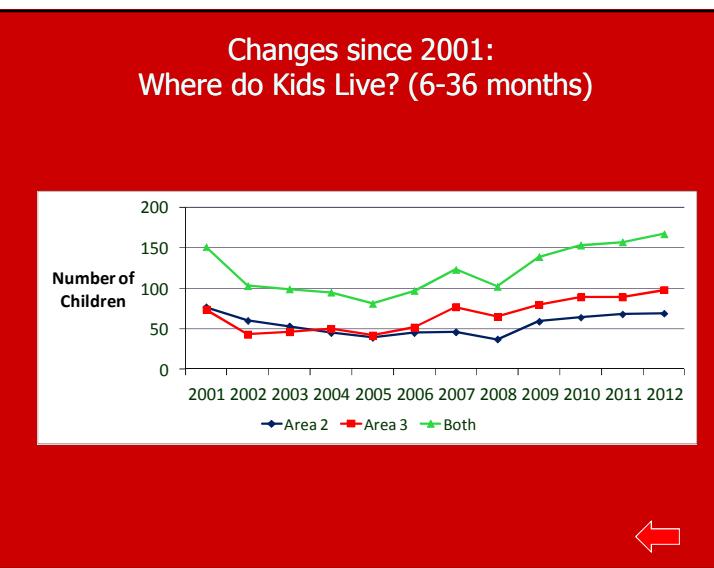


Fall 2012

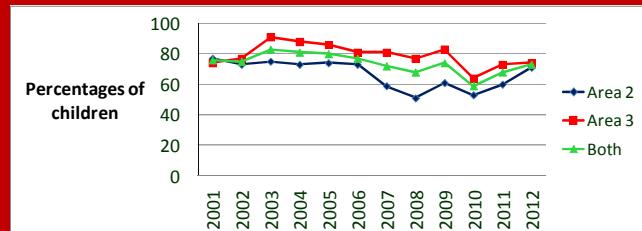
Participation for 2012 (Children under 3 years)			
Breakdown by Neighborhoods	# Children Contacted	# Children Participating	% Children Participating
AREA 3 (Children < 3 years)			
East Trail	36	24	67%
West Trail	53	41	77%
Tadanac	3	3	100%
Rivervale	6	5	83%
AREA 3 TOTAL	98	73	74%
AREA 2 (Children < 3 years)			
Glenmerry	43	32	74%
Shavers Bench	14	9	64%
Sunningdale	12	8	67%
AREA 2 TOTAL	69	49	71%
AREA 2 & 3	167	122	73%
(< 3 years)			
	75% (24)		
	69% (34)		
	100% (3)		
	80% (4)		
	73% (65)		
(< 3 years)			
	60% (24)		
	50% (5)		
	67% (12)		
	60% (41)		
	68% (106)		



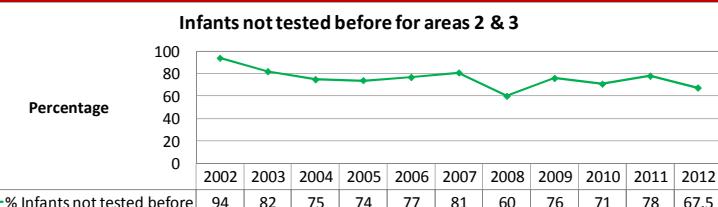
<ul style="list-style-type: none"> • Needle phobia • "I have a clean house" • "My children don't put things in their mouths anymore" 		4 total Area 2: 0 Area 3: 4
<ul style="list-style-type: none"> • "Our yard soil lead levels were ok" 		30 total Area 2: 17 Area 3: 13
<ul style="list-style-type: none"> • "Children are too young to be tested with needles" 		not interested
<ul style="list-style-type: none"> • "If the test was just a drop of blood in an instant machine I would come" 		11 total Area 2: 3 Area 3: 8
<ul style="list-style-type: none"> • "We moved to a new house in Glenmerry" 		Unable to attend
<ul style="list-style-type: none"> • "only 7 months old" 		



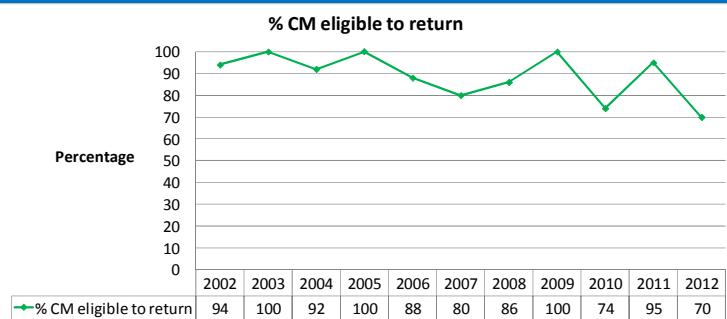
Percentages for participation by area and general trend



Participation rate of infants (<12m) eligible for first BLL test



Participation: Percentage of CM children who returned for testing



Case Management Families



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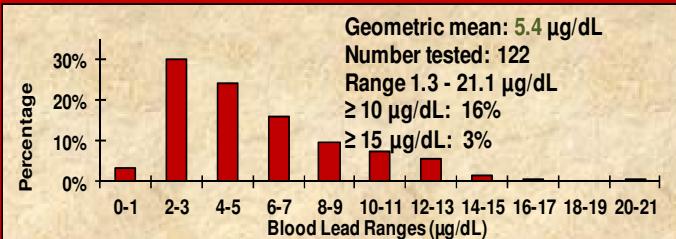
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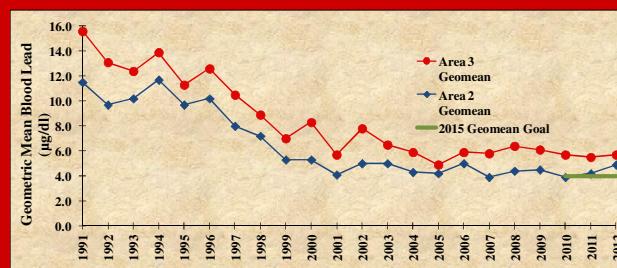
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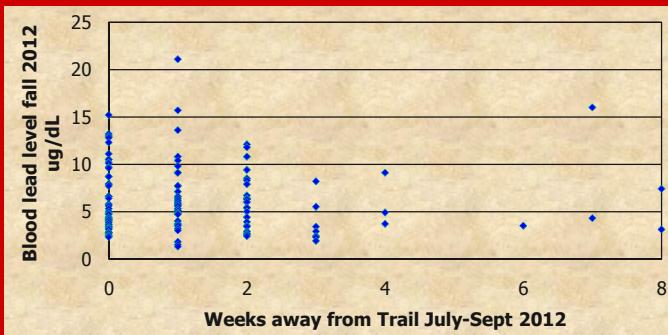
2012 Blood Lead Histogram: Area 2/3 (Age 6 mos. - 36 mos.)



Blood Lead Geo Mean by Area (age 6 – 36 months throughout)

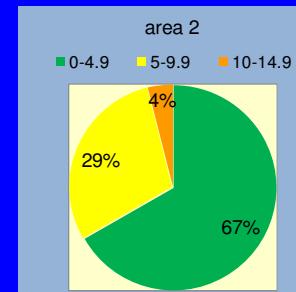


Weeks from Trail vs Blood Lead Results

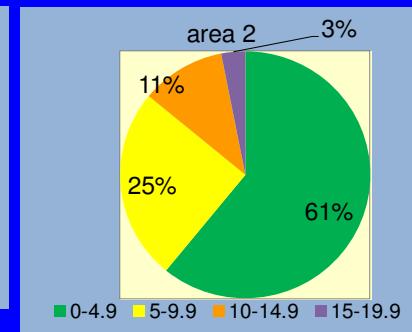


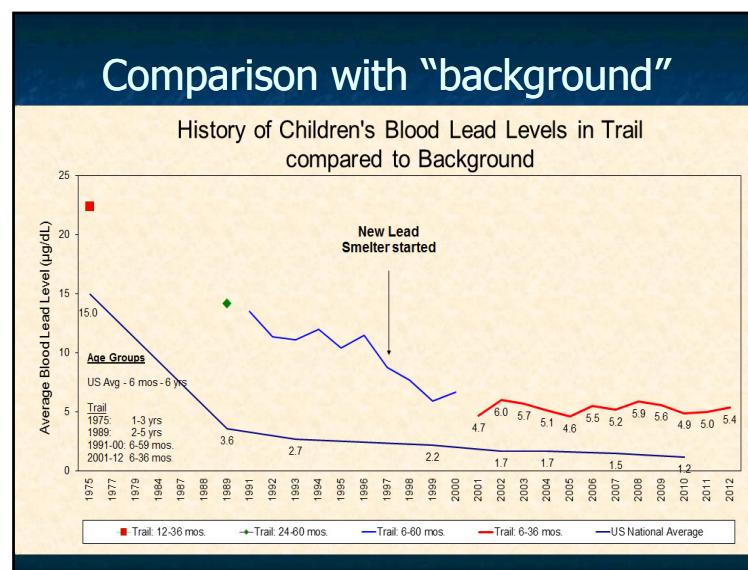
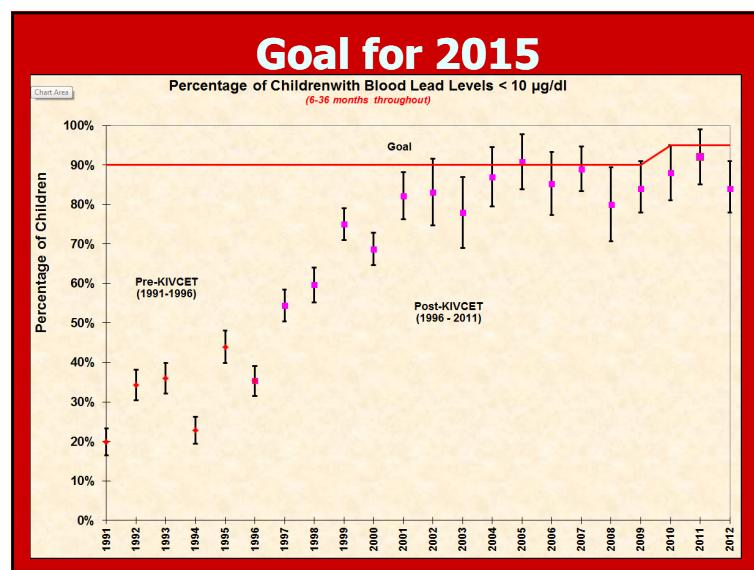
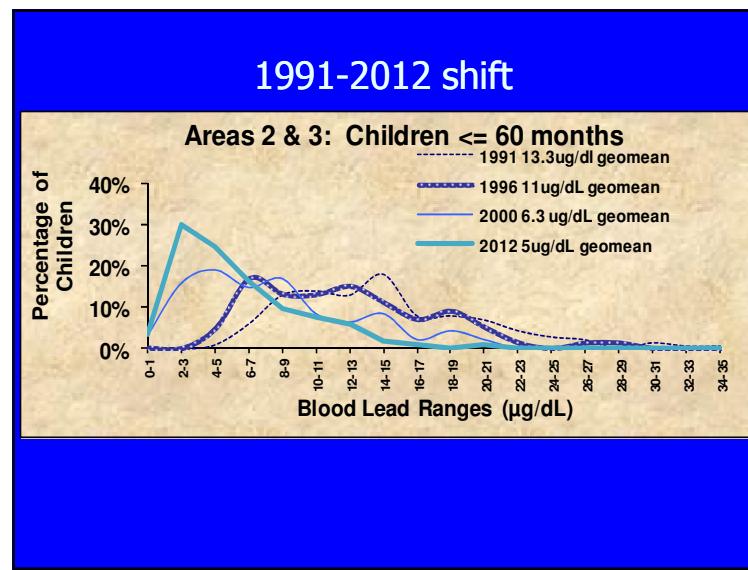
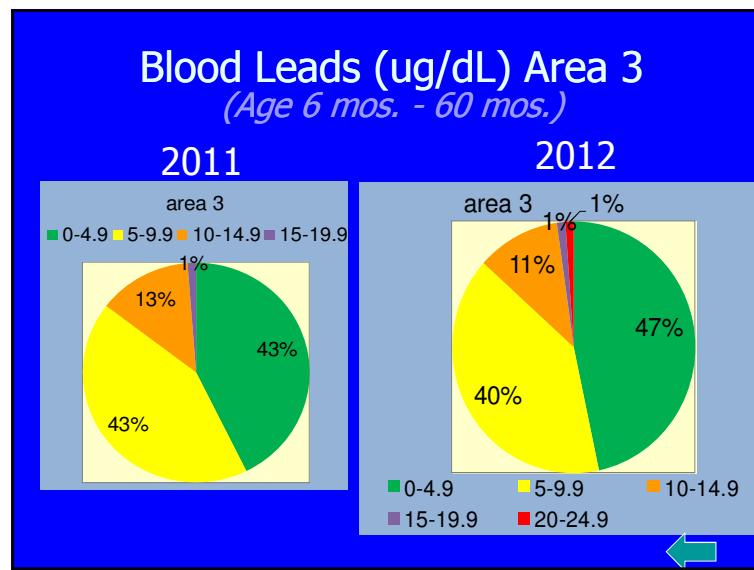
Blood Leads (ug/dL) Area 2 (Age 6 mos. - 60 mos.)

2011



2012

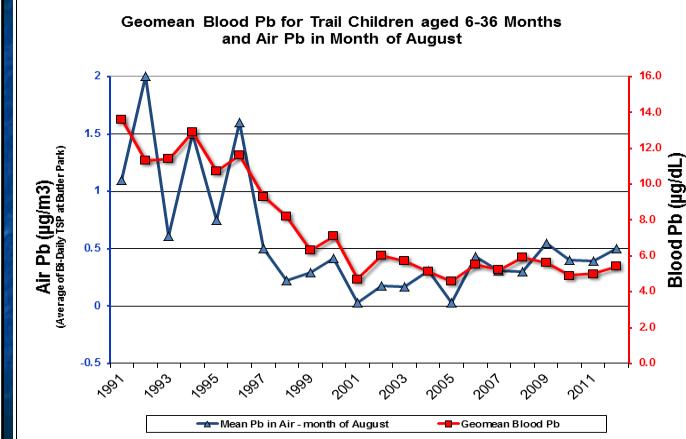




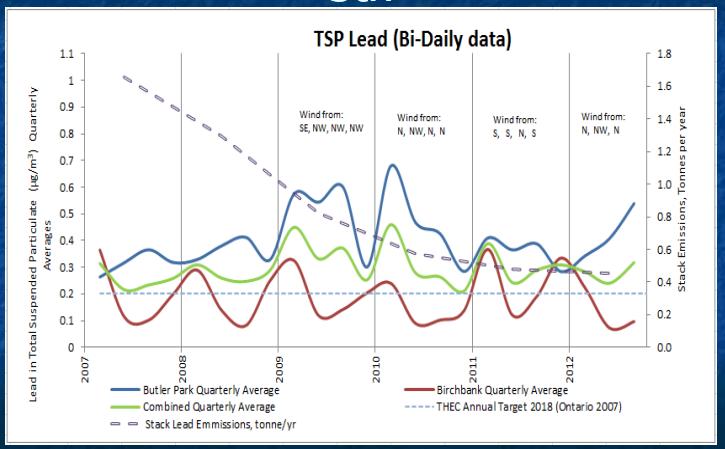
Comparison with Other Sites

City/Region	Country	Nature of site	Age of kids tested	Year	Geomean Blood Lead Level ($\mu\text{g/dL}$)
La Oroya	Peru	Pb smelter closed 2009	< 6 yrs	2011	~10
Port Pirie	Australia	Primary Pb smelter	24 months	2012	6.2
Torreón	Mexico	Primary Pb smelter	<16 yrs	2011	5.7 avg
Hoboken (Moretusburg)	Belgium	Secondary Pb smelter	2.5-6 yrs	2012	8.9
Rouyn-Noranda	Canada	Primary Cu smelter	6 mos to 5 yrs	1999	5.2
Mount Isa	Australia	Primary Pb smelter/mir	1-4 yrs	2010	4.3
Trail	Canada	Primary Pb smelter	6 mos to 3 yrs	2012	5.4
Hamilton	Canada	Urban/city centre	under 6 yrs	2008	3.0
Nation-wide	U.S.A.	Urban/rural (NHANES)	1 to 5 yrs	2010	1.2

Air Pb/Blood Pb Relationship



Air Lead Levels - Butler Park Stn



Concluding messages

- There is no known threshold below which there is no effect from lead exposure. The lower the better.
- Lead education and support programs have been in place in our community for over 20 years
- There has been huge improvement in children's blood lead levels over the past 20 years, and Trail is at the forefront of smelter communities in terms of low lead emissions and blood lead levels.

Concluding messages

- We continue to work towards the THEC goal of continual improvement, with our current target being 95% of children with BLL of <10 ug/dL by 2015. Over the last ten years this has ranged between 78% and 91% and in 2012 we have 84%
- Over the last ten years, the geometric means has ranged from 4.6 - 5.7 with a result of 5.4 ug/dL in 2012. The current 2015 target for continual improvement is a geomean of 4ug/dL.
- There is some expected variation from year to year due to the small number tested, variations in weather etc. Overall the trend has reach a plateau over the last several years.

Concluding messages

- Late summer 2012 conditions were again warm and dry and the levels of lead in ambient air were slightly greater than 2011
- Children with elevated blood lead ($\geq 10 \text{ ug/dL}$ OR $< 12 \text{ months age and } \geq 7 \text{ ug/dL}$ OR increase $> 3 \text{ ug/dL}$) will continue to receive home visits and assistance with reducing exposure.

Concluding messages

- Increased participation rates since 2010 could be due to the raised awareness of the THEP from the extensive consultation process done with the community in 2010 and increased awareness of the Community Program Office.

Concluding messages

- Studies of large numbers of children have found that those with higher blood lead levels tend, on average, to score slightly lower on developmental tests than children with lower blood lead levels.
- Adverse effects associated with blood lead levels as seen in Trail children today would be subtle, and an individual child's blood lead level is only one of many predictors of his/her development
- New programs will be introduced in the Spring of 2013 to continue the progress towards our 2015 goal

Concluding messages

- These new programs, announced in September 2012, were developed partly in response to new guidance from the US Centres for Disease Control and Prevention (US CDC) on the prevention of children's lead exposure.
- The US CDC guidance affirms the Trail Area Health & Environment Program's focus on preventing lead exposure through actions including lower smelter/fugitive emissions and health education and home & yard assessments for all families.

Questions and Comments

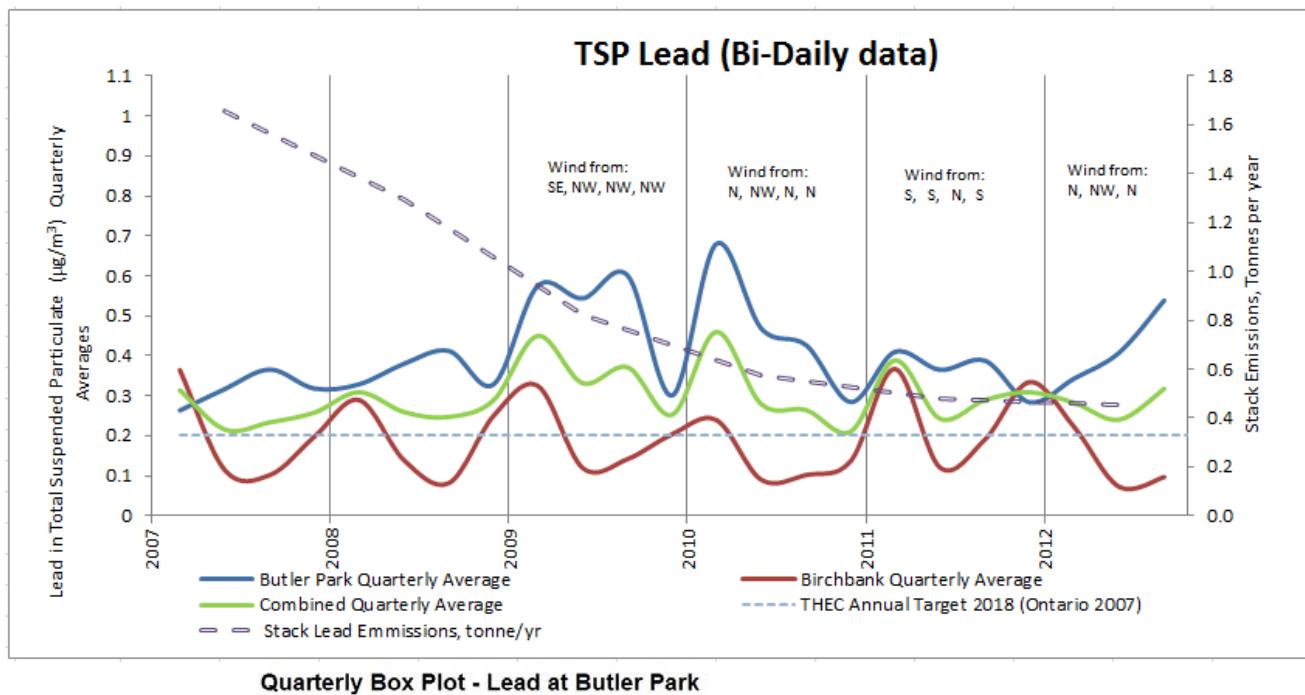


Trail Health & Environment Committee – Teck Report Nov 6, 2012

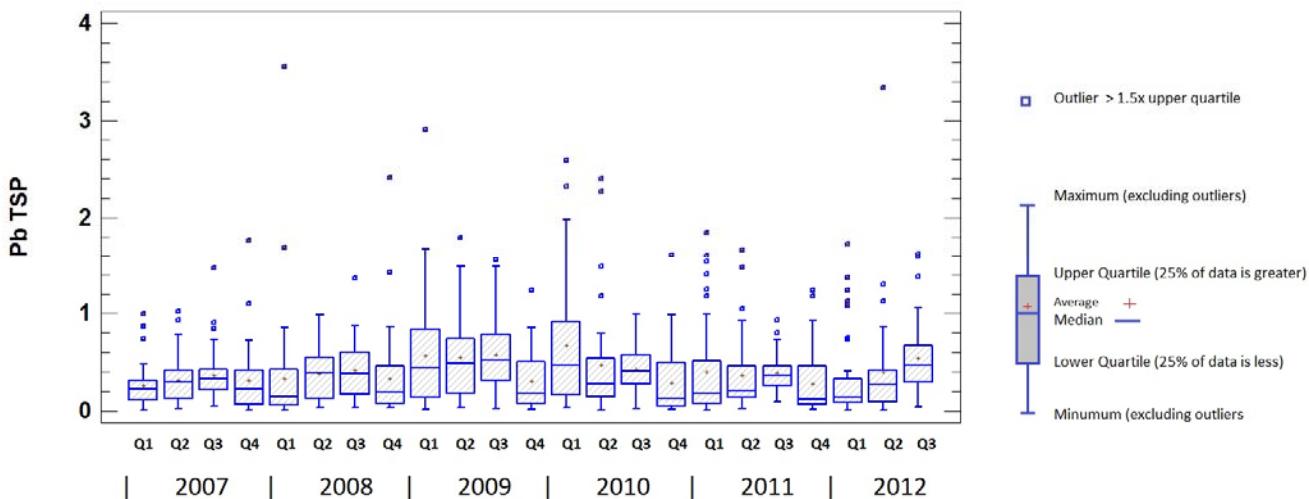
Air Quality Program

Lead – Total Suspended Particulate:

- Graphs have been improved to also show stack emissions and predominant wind direction (quarterly, as measured at Maintenance Services Building) for last 3 years, using Bi-Daily rather than NAPS day (6 day) data. A Box-Plot graph for Butler Park has also been added so show more data transparency.
- Stack emissions have continue to drop (2012 annual data will be updated at year end)- the discrepancy in trends between stack emissions and measured TSP in air is believed to be sourced from fugitive dust.
- Most recent Quarterly averages for Lead in ambient (community) air at Butler Park have increased, however this corresponds with lowest levels at Birchbank - a reflection of the influence of predominant wind. The combined average is generally consistent with previous years, with some seasonal variation.
- The box plots show the range of measurements and that outliers can influence the average calculation.
- Trail smelter's releases of lead to air are still amongst lowest in industry.

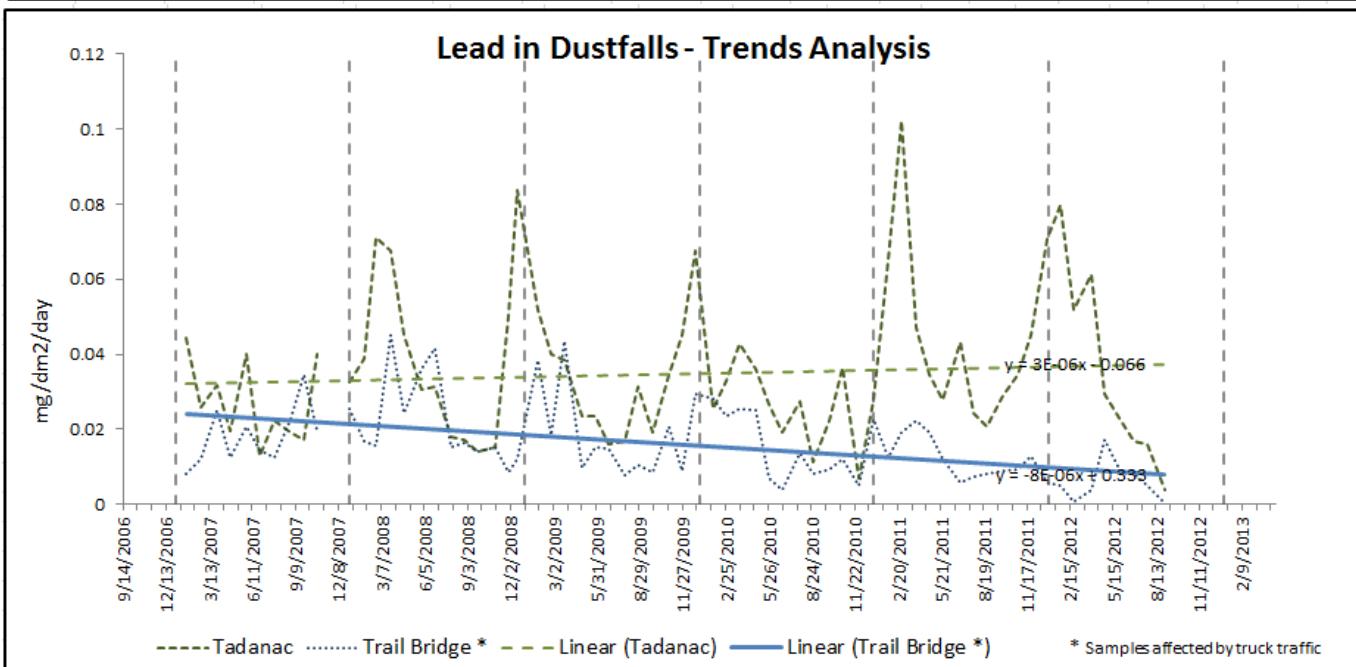
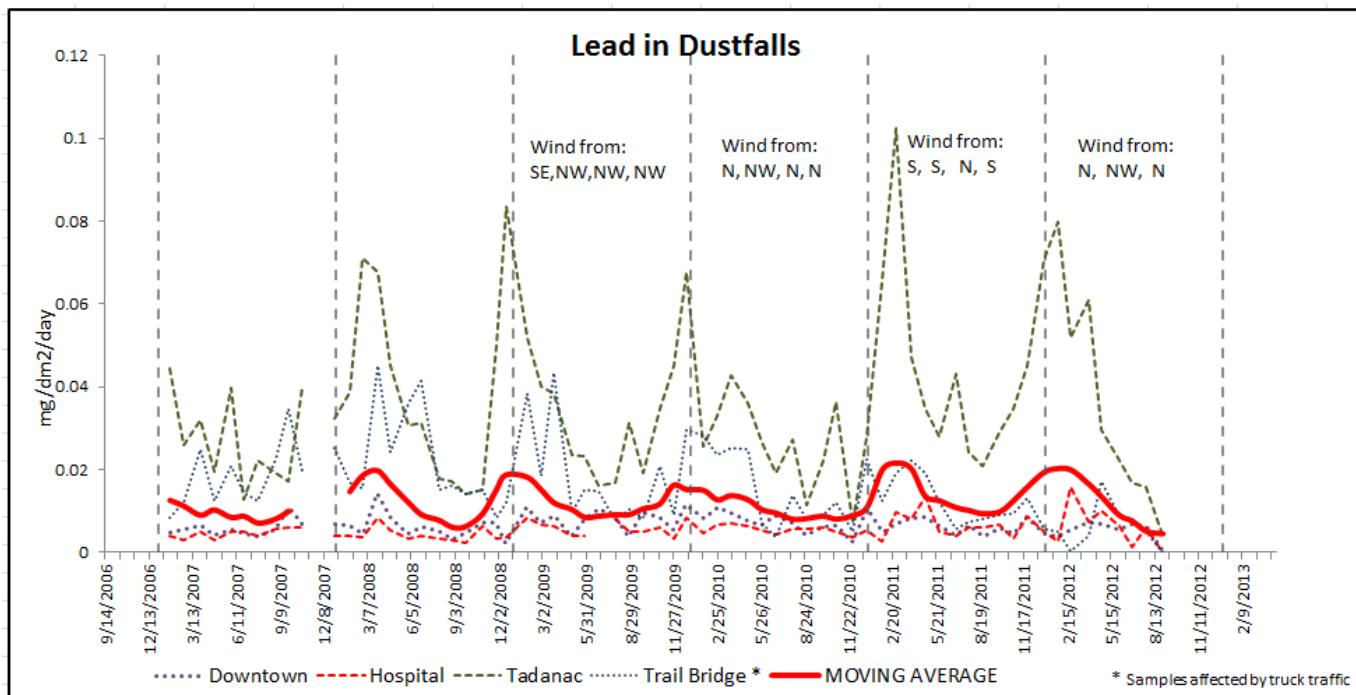


Quarterly Box Plot - Lead at Butler Park



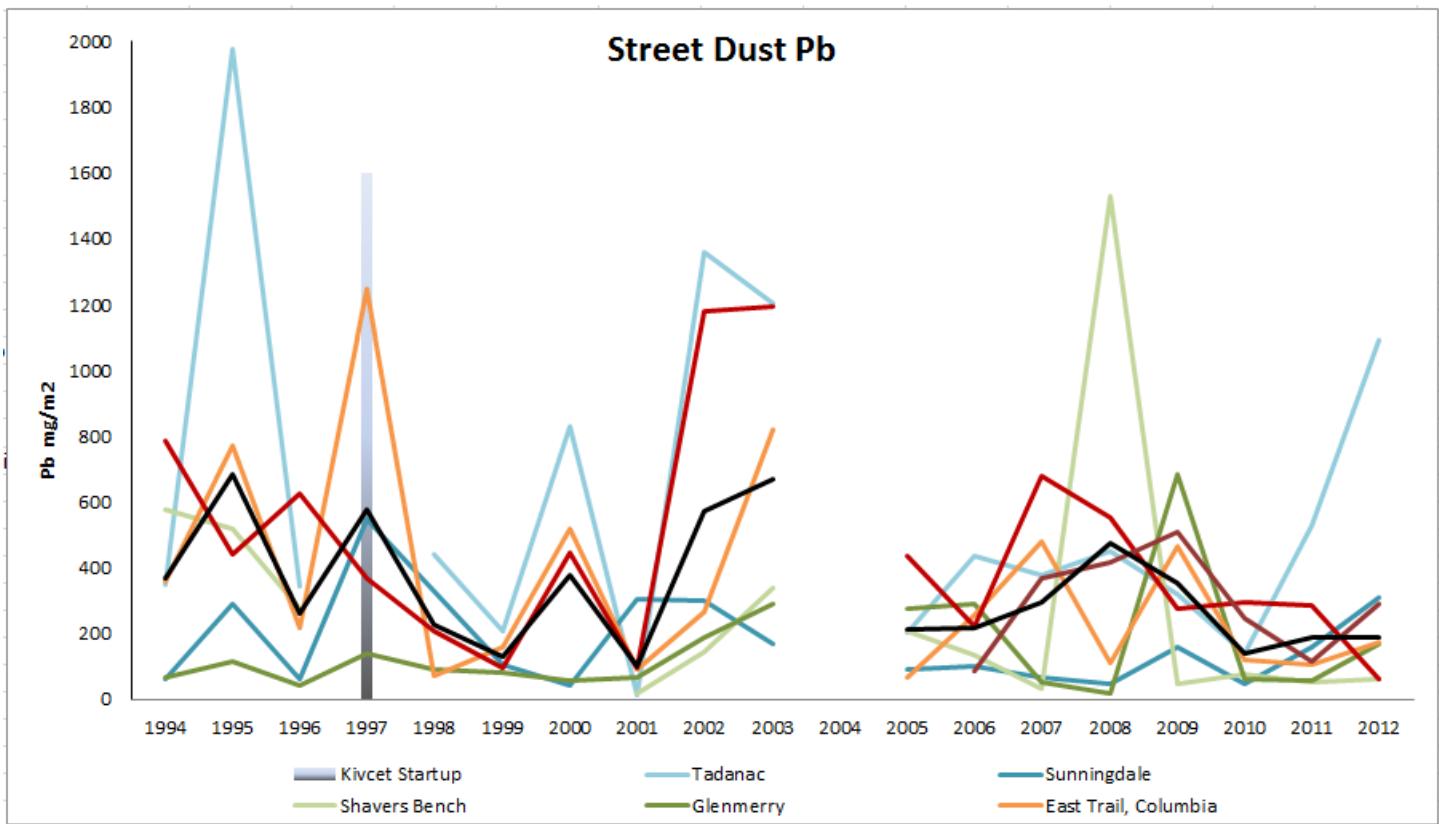
Lead in Dustfalls (monthly):

- Chart has been improved so trends are easier to see, including quarterly predominant wind as measured at Maintenance Services for last three years.
- No regulatory basis for comparison- used by Teck to monitor trends over a wider area (more stations).
- In general, average data appears to follow a seasonal cycle that has not changed significantly during the reporting period. The seasonal cycle peaks during the winter months, with some variation that appear to be due to wind and weather conditions.
- At the request of the THEC, a second graph with trend analysis for Tadanac and Trail Bridge is provide. The average trend for Tadanac is relatively flat, whereas there is a decreasing trend for the Trail Bridge sample station – improved trucking practice may be reason for improvement at the Trail Bridge.



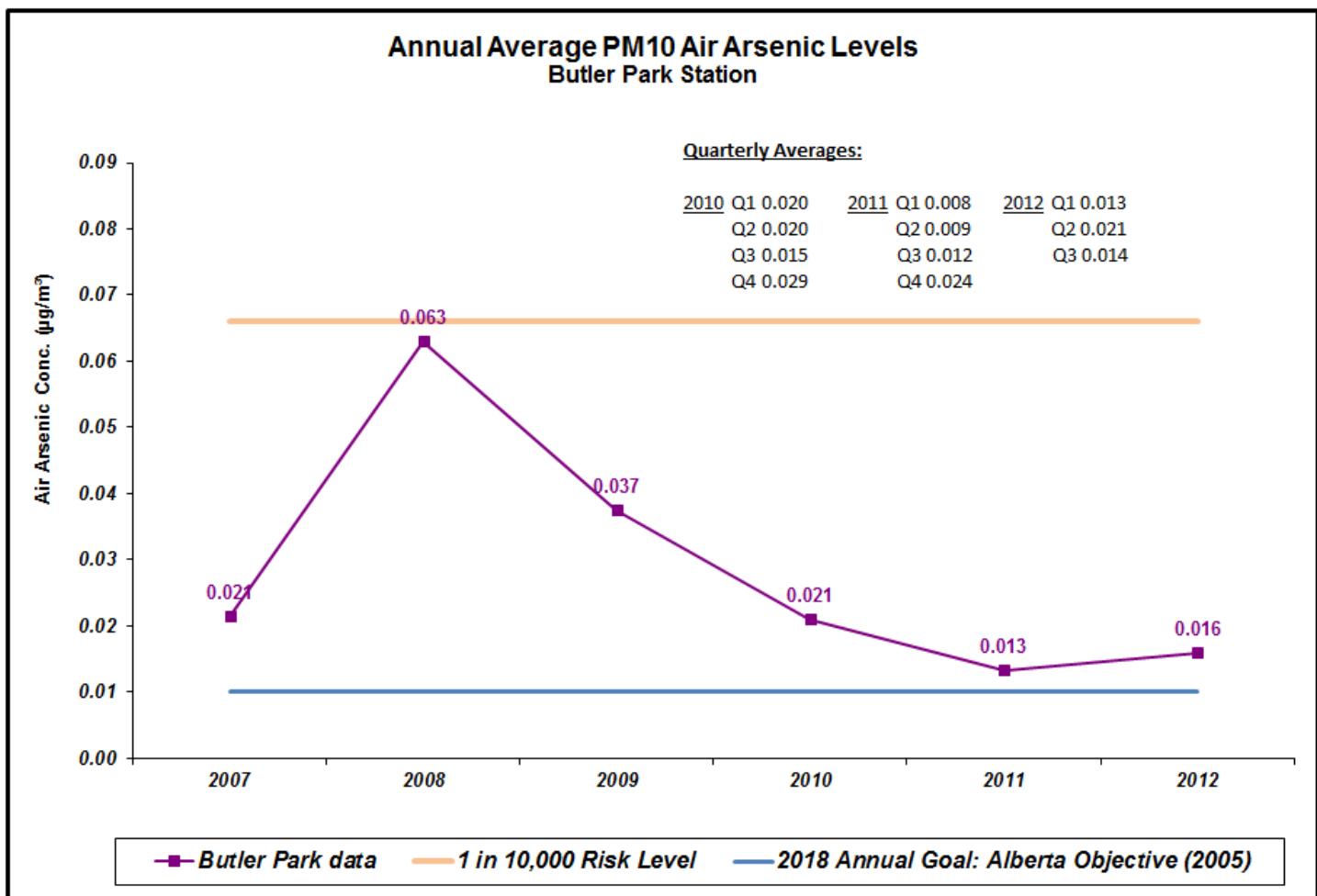
Lead in Street Dust

- Measured as a loading rather than concentration.
- No regulatory basis for comparison- used by Teck to monitor trends.
- In general, data is haphazard and clear trends are not apparent.
- History and Proposal: The street dust sampling was first set up in 1994, when it was as part of a special network of 35 sites across the city. Included were soil, street dust, exterior dustfall, indoor dustfall, carpet dust and more, all sampled on a quarterly basis. The primary purpose was to document the changes due to KIVCET and, it worked for that purpose because we were able to see the step change above the noise. After that, the THEC just asked that street dust continue to be checked at a few locations once per year to ensure that it didn't climb back up in a significant way. Now after 10 years of continued collection we are seeing that no trend can be deciphered, as the data is very "noisy" since the sampling methodology does not account for many variable such as weather or street sweeping. As such the sampling provides no value and we pose the question whether it is worthwhile to continue this sampling considering there are other sample methodologies being carried out that are more reliable for guiding operational improvement.



Arsenic– PM10:

- Arsenic in ambient (community) air had returned to pre-2004 levels in 2011. Improvements appear to be the results of actions taken at the Continuous Drossing Furnace and Refinery Scrubber Stack.
- 2012 average to date of 0.016 µg/m³ is similar to 2011 but only reflects Q1 – Q3 and may be subject to seasonal variation.
- Trail smelter's releases of arsenic to air are amongst lowest in industry.







Trail Health & Environment Committee
Fugitive Dust Project Update
November 6, 2012

Outline



1. Goals
2. Enclosures and covers
3. Road emission study
4. Operations use of XACT

2

Teck

Fugitive Dust Project:
Project Goals



- Reduce fugitive dust emissions
 - Improve materials storage for raw materials, intermediate process materials and recycles at Trail Operations
 - Develop sustainable materials transportation, handling and recycling practices
 - Reduce fugitive emissions from existing processes and infrastructure
- Develop 5-year Plan with milestones and targets to achieve THEC 2018 ambient metal targets
 - Improve risk and source identification
 - Focus on continuous improvement
 - Develop improved control measures to prevent excursions from resulting in elevated fugitive emissions

3

Teck

Fugitive Dust Project:
Feasibility Estimates



- Material storage
 - Track 14 (North Tadanac) enclosure proceeding in 2013
 - Smelter Recycle enclosure feasibility study
 - Engineering completed
 - Roaster Feed Area – feasibility study underway
 - ETP cover – pre-feasibility (conceptual) study underway



4

Teck

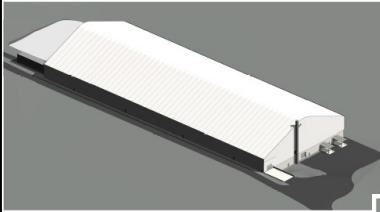
**Fugitive Dust Project:
Track 14 Enclosure**



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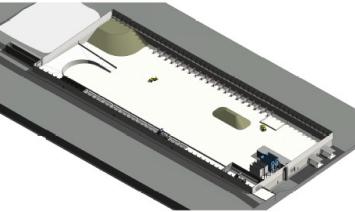
Teck

**Fugitive Dust Project:
Smelter Recycle Building**



Design concept:

- Building under negative pressure
- All internal air exhausted through baghouses
- Air-locks for all vehicle entrance/exits
- Wheel wash for exits



6

Teck

**Fugitive Dust Project:
Truck wheel wash**



Purchased a new truck wheel wash

- Designed to wash buildup in treads
- Evaluation began in October.
- Results have been encouraging
- If successful, will be used in the new storage buildings and the existing Smelter Feed Plant



7

Teck

**Fugitive Dust Project
Covering the ETP Pile**



- Two potential locations:
 - At its current location north of the Roaster Pad
 - To the north of another covered pile of ETP residue
- Location chosen will depend on how the current location will impact the construction of the Roaster Feed Pad Building

8

Teck

Fugitive Dust Project *Stockpile dusting*

Testing the use of sprays to reduce dusting

- Each spray must first be evaluated for its impact on the Effluent Treatment Plant and the river
- Tested the first spray late September – very effective




Before



1 week after

Applying spray to existing stockpile

9

Teck

Dust Reduction Program *Internal road sampling*




Completed sampling during the summer. As a result of this work:

- Road cleaning priorities are being changed
- Working to eliminate the cause of the contamination

10

Teck

Fugitive Dust Project: *Plant Fugitive Emissions*

- By the end of this year, several minor ventilation projects will be completed at our operation. A number of these projects were completed in October.
- Engineering has commenced on additional ventilation projects to be installed during the 2014 total KIVCET shutdown.

11

Teck

Ambient Air Monitoring *XACT 620*

- In 2008, a review of site emissions noted the need for real-time dust monitoring:
 - XACT 620 real-time dust monitoring system installed initially at Birchbank in 2008, moved to Butler Park in 2010.
 - Values are hourly averages, with a one hour delay
 - August, 2012 a fan-out system was developed for operations to respond to high metals events detected by the monitor



12

Teck

Ambient Air Monitoring
XACT 620 – Measuring success



- **Reduced Duration of High Metals Events**
 - Short-term goal (immediate)
 - Operations will be able to identify and control emissions
 - Potential activity or equipment emission
- **Reduced Frequency of High Metals Events**
 - Long-term goal (within 1-2 years)
 - Operations can focus attention on “bad actor” activities and equipment
 - Operations can share best practices for similar issues

13

Teck

City of Trail
Select Committee of Council
Terms of Reference

NAME OF COMMITTEE:

Trail Health and Environment

MANDATE:

To reduce exposure to lead and other smelter metals in the community on a continual improvement basis.

FUNCTIONS:

Within their mandate, the Committee is to:

- Monitor, coordinate and advise Council on the implementation of the Trail Area Health & Environment Program ;
- Facilitate public communication and oversight with respect to delivery of services and progress towards the Committee's mandate;
- Provide for public financial accountability, especially in terms of public input on priority setting;
- Participate directly in the development of the final remedial plan for the area.

MEMBERSHIP:

Membership on the Committee shall consist of the following:

- The Mayor, or designate from City Council, who shall act as Chair;
- 1 member of City Council;
- 1 member appointed by the following organizations, or their designate:
 - Village of Warfield
 - RDKB Electoral Area 'A'
 - RDKB Electoral Area 'B'
 - Teck Metals Ltd.
 - Ministry of Environment
 - United Steelworkers, Local 480
- 2 members from the Interior Health Authority
- 4-6 members appointed from the public at large who are broadly reflective of the community.

Membership on the Committee shall reflect the desired experience, knowledge and expertise necessary to fulfill the Committee's mandate.

Members shall serve on the Committee without remuneration.

Once the remedial plan has been approved, the role of the Committee will be re-evaluated.

MEETINGS:

Meetings of the Committee shall be held at least quarterly and shall be open to all members of the public and media. A meeting of the Committee may also be called at the discretion of the Chair.

A quorum is 6 members.

On all matters requiring a decision, the Committee shall attempt to reach said decision by a process of concensus. If the Committee is unable to achieve a concensus, the decision shall be decided by majority vote.

Agenda packages will be sent to the members before the meeting and will exclude confidential information.

If any member considers an agenda item confidential, they will advise the Chair and that item may be discussed in camera at the discretion of the Chair.

BUDGET & EXPENDITURES:

Teck Metals Ltd. will provide funding, facilities and/or equipment if needed by the Committee to conduct meetings (eg: presentation equipment, photocopying, minute taking).

REPORTING:

The minutes of each meeting of the Committee must be legibly recorded and highlight key discussion points and record any decisions or recommendations the Committee may decide on.

The minutes shall be submitted to the Corporate Administrator's office for circulation to Council as soon as possible after the meeting. As the minutes will be available to the public, they will include reporting on items of general discussion and exclude any and all confidential material.

The Mayor shall report on the activities of the Committee at the next Regular Council Meeting after any Committee meeting.

The following parties shall submit a report to the Committee as noted:

- City of Trail staff will report to the Committee on street washing and dust suppression on alleys. City staff will also report to the Committee on community greening initiatives undertaken by the City.
- Teck Metals Ltd. representative will report to the Committee on the results of environmental monitoring and remedial activities including emissions reduction and monitoring, dust control, the Home Renovation Support Program, soil testing and remediation, primary prevention and case management services, property development remediation programs, greening, and environmental management planning.. The Teck representative may delegate reporting on the Home & Garden Program to their designated contractor, SNC Lavalin Environment.

- The Interior Health Authority staff responsible for the blood lead testing, primary prevention home assessments and education, family case management and education programs will report to the Committee on those programs. A Medical Health Officer will provide advice, including written guidance, to the Committee on an as needed/requested basis.
- The Trail Area & Environment Program Manager will report to the Committee on activities carried out in their role managing the implementation of services/actions in accordance with approved annual workplans.

THEP Program Manager's Report

November 6, 2012

1. Program development

- The Program Team has been working hard to prepare for the new programs we plan to introduce in early 2013. On October 9, the Home & Garden Team met to discuss plans for the new in-home "healthy home" visits. We met again today and will meet in early December to finalize the content of the new programs. We plan to hold an in-house training session for all program staff in February, prior to initiating the Healthy Homes visits in March. We're starting slow in order to have time to assess effectiveness and develop a consistent approach that works well.

2. Website

- The website was launched on September 21 and announced in our Fall newsletter which reached local residents on September 24. We received some positive comments from a toxicologist with the US Environmental Protection Agency. Richard Deane has arranged for an external reviewer to look at the website. In terms of generating hits, it doesn't appear that we've reached many local families. We had a prize draw for people who went to the website and sent us their feedback. Despite promoting this with the newsletter, a rack card, and at presentations to families, we only received 8 or 9 responses. We plan to review all THEP communications over the next few months (see below) to improve effectiveness.

3. Communications

- An Issues Paper was developed after the September 4 meeting to support THEC spokespeople in media interviews.
- A media release was sent out September 13, announcing the new programs for families and the blood lead clinics, and making mention of the US CDC guidance.
- The Trail Times printed two short articles in September. The first, on September 14, introduced our new programs for families. The second, on September 27, announced the blood lead clinics and provided some context from last year's results.
- In its September 26 blog, Keystone Appraisals featured a article on THEP entitled "Are you Lead Aware?". It included information on the blood lead clinics and the new programs.
- We are planning to review all THEP communications including media ads, media releases, the newsletters, website, promotional materials and displays. The goal is to improve effectiveness and have a coordinated, planned approach. For example, we produce and distribute about 4,100 newsletters and they don't appear to be read by many families with young children.

4. Early Childhood Development

- On October 4, I made a presentation (attached) on behalf of the network of early learning service providers at a Neonatal/Paediatric Education event at KBRH. This was in follow-up to a recommendation made at Family Action Days in May, 2011 to strengthen relations with local physicians. The goal of the presentation was to encourage primary care physicians (and nurses) to let families know about the free services available to support their children's development, and to refer to public health nursing when they have concerns about a child or think the family needs

extra support to get connected to services. While there were few physicians in attendance, good connections were made with the Paediatric and Maternity Departments as well as Emergency Room staff.

- Follow-up from that presentation has included:
 - an e-mail introducing Interior Health's new Medical Director for Peri-natal and Child Health to Dr. Clyde Hertzman's office at UBC, with the aim of seeing if the Early Development Instrument could be used in IH planning & evaluation;
 - an e-mail, suggested by Dr. Trudi Toews, requesting time on the agenda of the KBRH paediatric physicians' monthly meeting, to help reach more physicians

5. 5 Year Plan

- Work continues towards the 5 Year Plan. The recommendations have been finalized based on discussions at the last THEC meeting. Ruth Hull of INTRINSIK has been contracted to help pull the plan together. A proposal to conduct the literature review has been approved.

6. New Administrative Support

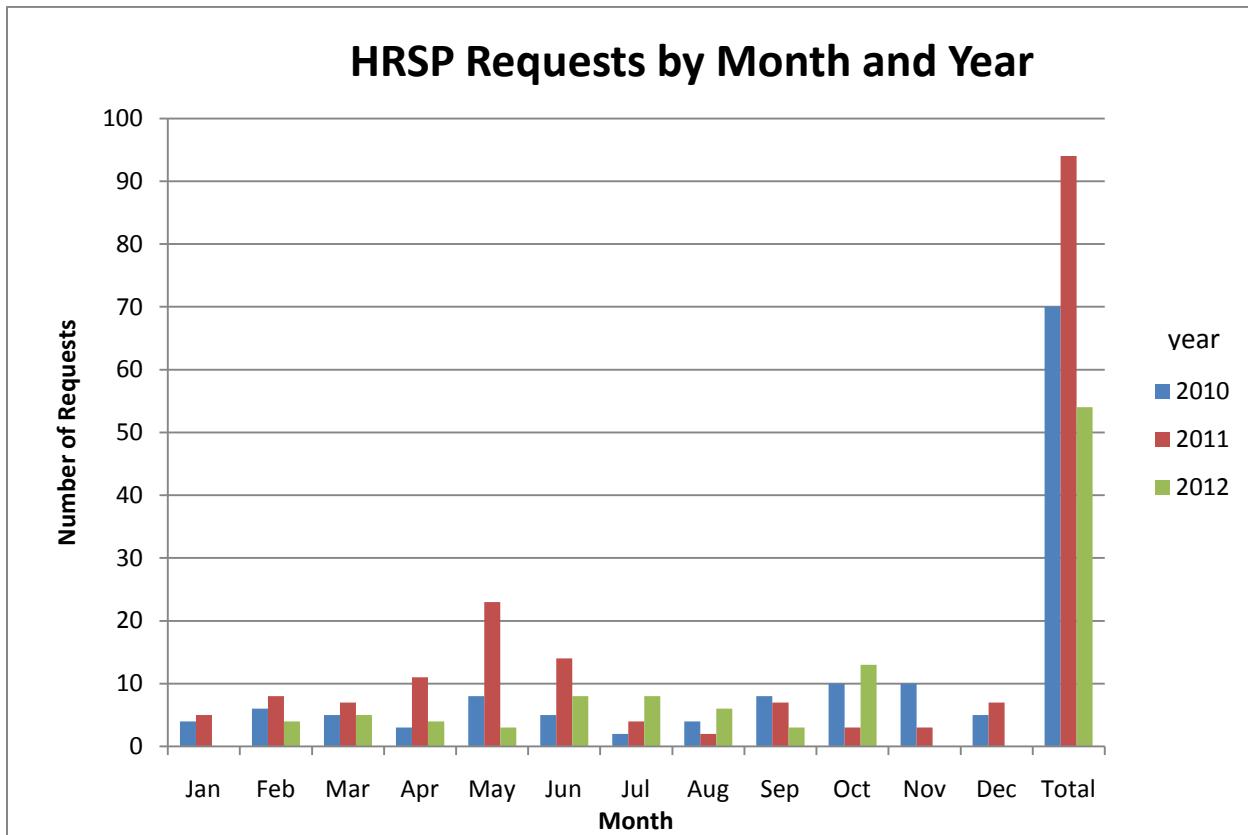
- Denise Robson has joined our team as my administrative Assistant. Denise replaced Chris Pistner at the Skills Centre and has time in her work schedule to provide us with part time support. Denise brings expertise in administrative work as well as a strong network of community contacts.

THEP Home and Garden Update – November 6, 2012

Summaries of Home and Garden Program Activities

1. We are still in the early stages of developing a new database to track the information important to the THEP. We've had one internal meeting where an initial design was discussed and will work on this more intensively in the coming couple of months now that the field season is ramping down.
2. We are currently doing soil assessment for Case Management and Primary Prevention families to be ready for next spring.
3. Staffing - Andrea McCormick back and wrapping up remediation work for the year.
4. Cindy and Andrea tested paint at two Case Management homes last week as trial for the Primary Prevention Program.
5. An increased number of assessments have been done this year, but a decreased number of full yard remediations has been required under the current guidelines (see included graphs and tables below). A similar number of garden remediations were completed this year.
6. Our Long Term Study has grown somewhat this year to include more gardens in east and west Trail. We should have all of the numbers back from the lab by the end of November.
7. The Grass Clipping Study analyses are starting to come in and we should have all of them by the end of November.
8. Home Renovation supports are up in October likely due to all the events we attended (Blood Lead Clinics, Pediatrics Conference, etc.)

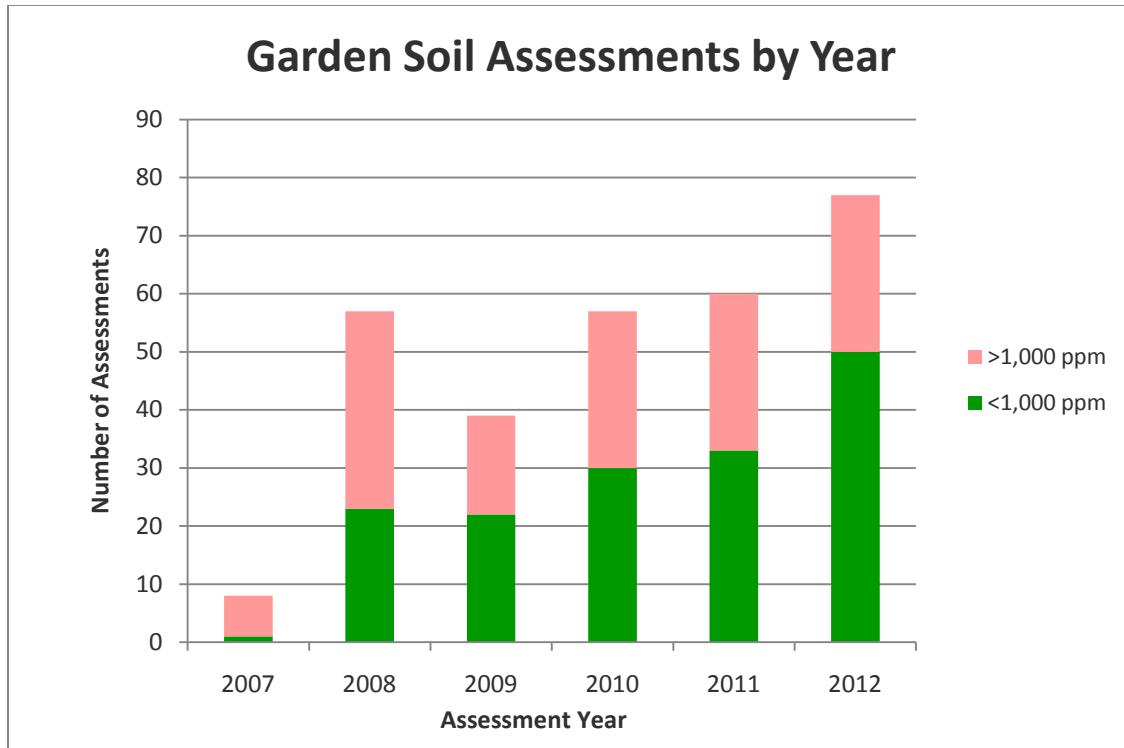
Home Renovation Support Program



Month	2010	2011	2012
Jan	4	5	0
Feb	6	8	4
Mar	5	7	5
Apr	3	11	4
May	8	23	3
Jun	5	14	8
Jul	2	4	8
Aug	4	2	6
Sep	8	7	3
Oct	10	3	13
Nov	10	3	
Dec	5	7	
Total	70	94	54

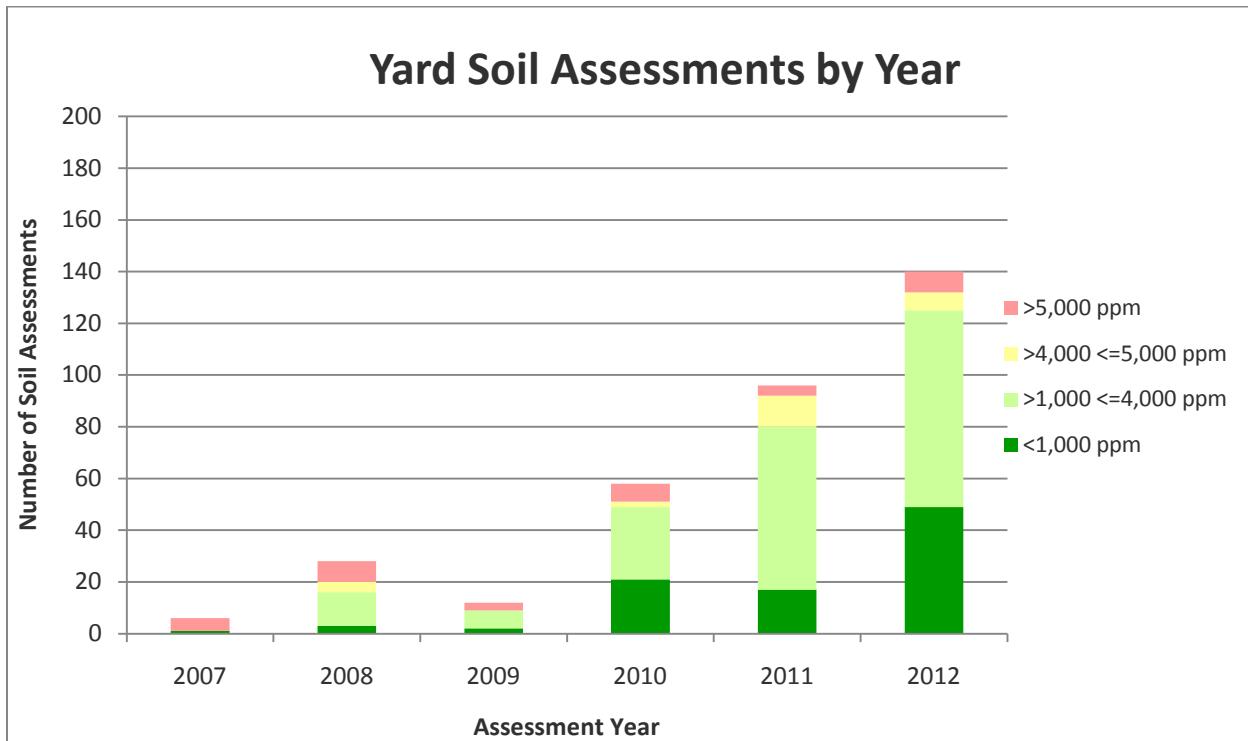
Soil Assessments by Year

Gardens to October 31, 2012



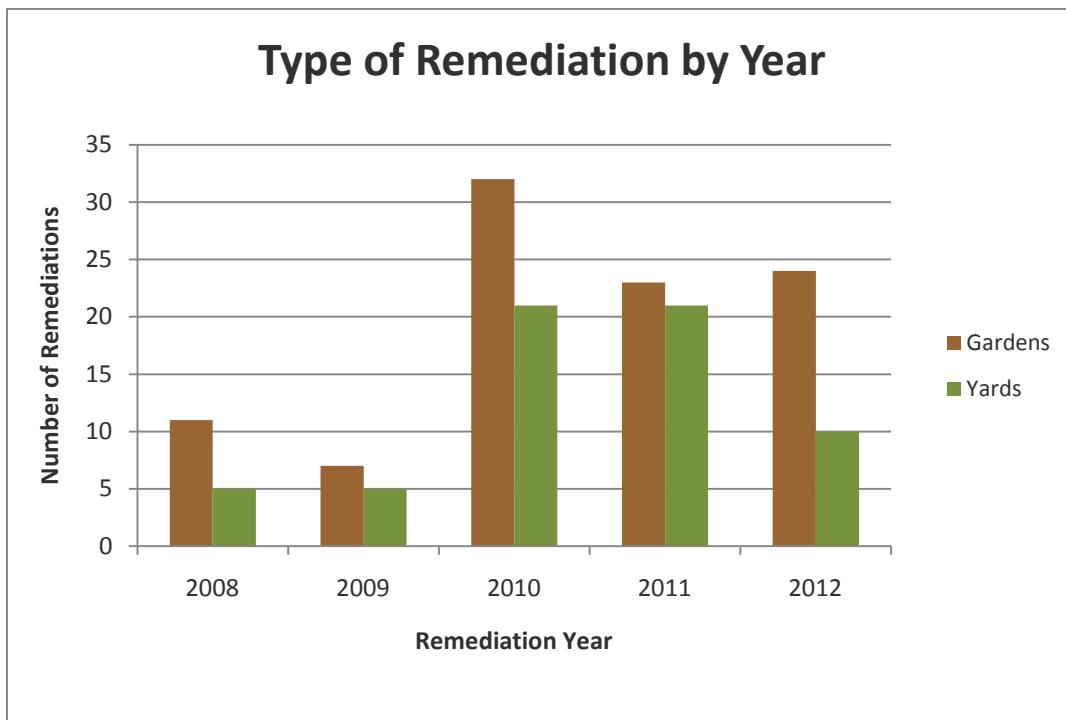
Row Labels	<1,000 ppm	>1,000 ppm	Total
2007	1	7	8
2008	23	34	57
2009	22	17	39
2010	30	27	57
2011	33	27	60
2012	50	27	77
Total	159	139	298

Yards to October 31, 2012



Year	<1,000 ppm	>1,000 <=4,000 ppm	>4,000 <=5,000 ppm	>5,000 ppm	Total
2007	1			5	6
2008	3	13	4	8	28
2009	2	7		3	12
2010	21	28	2	7	58
2011	17	63	12	4	96
2012	49	76	7	8	140
Total	93	187	25	35	340

Remediation to November 9, 2012



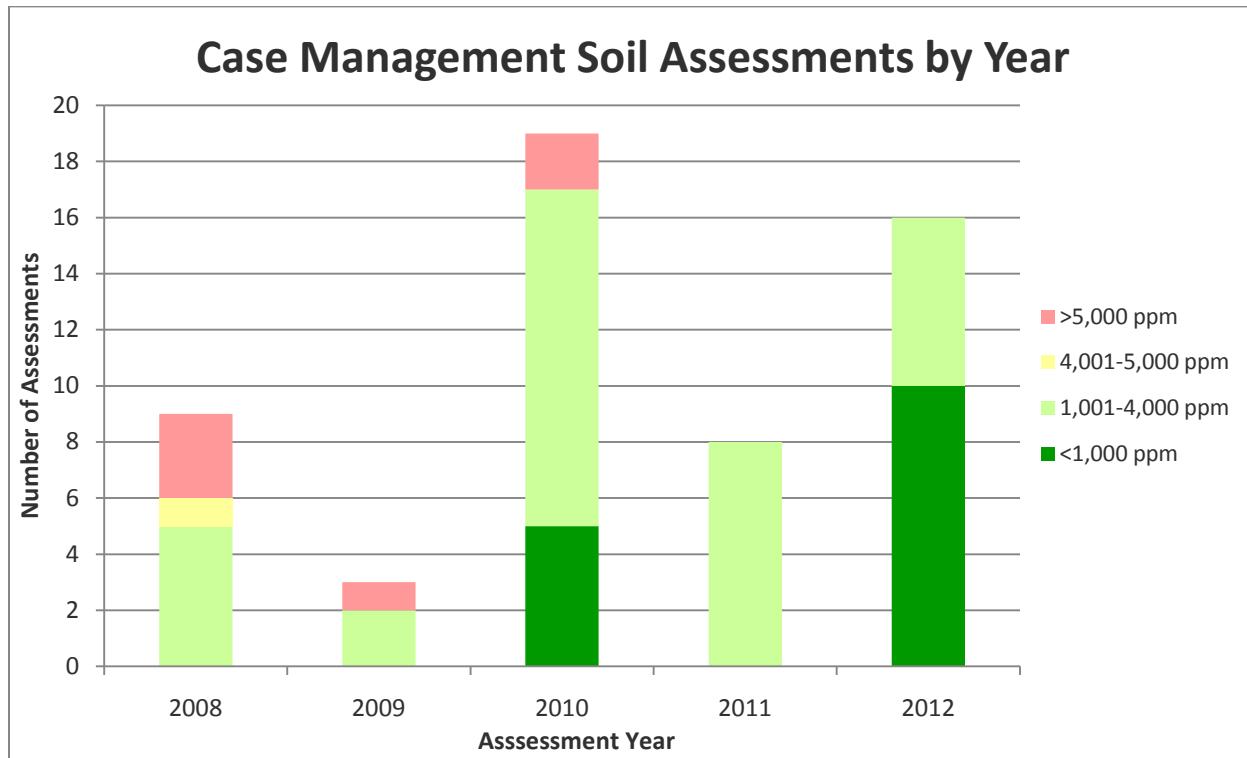
* We have also done 7 yard support properties

Year	Gardens	Yards	Total
2008	11	5	16
2009	7	5	12
2010	32	21	53
2011	23	21	44
2012	24	10	34
Total	97	62	159

Case Management Assessment and Remediation to October 31, 2012

Soil Assessments*

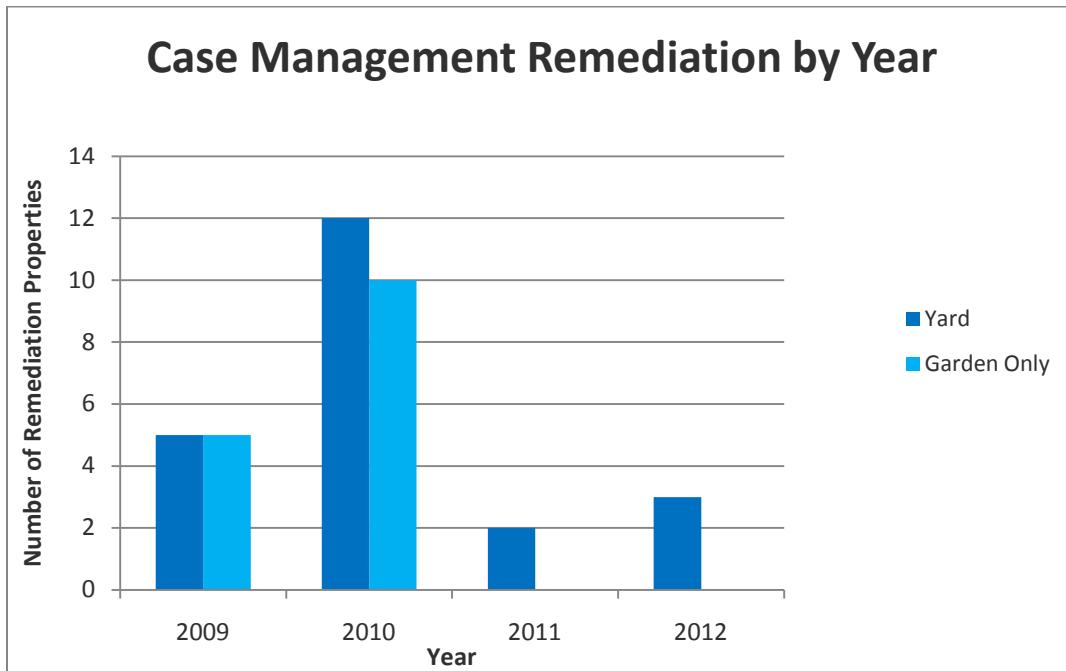
2012 assessments include some grandparents yards



*2012 assessments include 2 of grandparent's yards

Year	<1,000 ppm	1,001-4,000 ppm	4,001-5,000 ppm	>5,000 ppm	Total
2008	0	5	1	3	9
2009	0	2	0	1	3
2010	5	12	0	2	19
2011	0	8	0	0	8
2012	10	6	0	0	16
Total	15	33	1	6	55

Soil Remediation*



*includes both partial and full remediation

Year	Yard	Garden Only	Total
2009	5	5	10
2010	12	10	22
2011	2	0	2
2012	3	0	3
Total	22	15	37

It Takes a Child to Raise a Community



Presentation by Ruth Beck, Manager, THEP



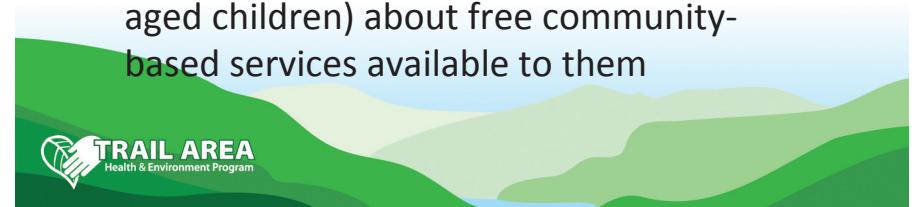
Presenting on behalf of

the network of community-based early
learning program providers in
Greater Trail.



Objectives for the Presentation

- To strengthen links between clinical health professionals and community-based early learning programs
- To give clinical professionals information they can offer families (prenatal to school aged children) about free community-based services available to them



Our Goals

- To reduce the rate of early childhood development vulnerability in Greater Trail
- To make sure every family has access to the services and supports it needs
- To “find” all families expecting children or with pre-school aged children



Measuring Children's Development

- Dr. Clyde Hertzman and the Human Early Learning Program (HELP) at UBC have measured early development vulnerability 4 times over 10 years in all BC school districts using the Early Development Instrument



Development Domains Measured

- Physical health and well-being
- Language and cognitive skills
- Emotional maturity
- Social competence
- Communication skills



The Picture in Greater Trail

- Greater Trail communities have reported different levels of vulnerability in the 4 waves of testing.
- Some communities show very low rates
- Others have rates higher than the BC average



A Success Story

- Through the 4 waves of testing, we've learned that some communities have reduced vulnerability rates in a consistent downward trend, and maintain low levels.
- Revelstoke is one such success story



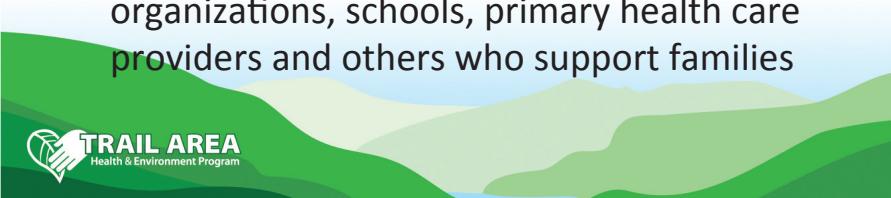
Learning from Revelstoke

- A key feature of Revelstoke's success is that their network of community organizations and health & social service agencies has "found" every family
- *Every family* has been reached through their community outreach efforts



The Situation in Greater Trail

- We know that we *don't know* all our families. Some fall through the cracks
- Dr. Hertzman suggests that vulnerability is reduced in communities where there are strong links between community organizations, schools, primary health care providers and others who support families



We Want to Make it Easy

- We want to make it easy for clinical health professionals to help connect families to community-based services
- We know that ALL families can be reached – they did it in Revelstoke
- We'd like to know about challenges that may stop families from accessing services



What we can do - #1

- We will give all physicians and maternity/pediatrics & ER departments our brochures showing the free services for families with young children
- We'd ask you to please give these to ALL families (from prenatal to school age)
- Please keep the flyers handy in your office and let us know when you need more



What we can do - #2

- We will offer you this “One Stop Shop” phone number whenever you’d like to refer a family or if you have questions or concerns about a child’s development
- Please call the Health Unit and ask for a Public Health Nurse
- The number is (250) 364-6219



What we can do - Future Education

- Thank you for indicating your interest in further education on early childhood development
- We will help arrange future education sessions on local community programs and on scientific research about the early years



Contacts for more Information

- For Dr. Clyde Hertzman and HELP at UBC, visit <http://earlylearning.ubc.ca>
- For information on early learning programs in the West Kootenays, visit <http://www.wkearlyyears.ca>
- For the Trail Area Health & Environment Program, visit <http://www.thep.ca>



Together we can make a
difference



TRAIL AREA
Health & Environment Program

Thank you!



We appreciate the opportunity to participate
in Neonatal/Pediatric Education Days,
October 4 & 5, 2012!

The following report is incomplete.

We are aware and have requested the complete document.

Monitoring of Outdoor Air Pollution in Trail, British Columbia

Scott Weichenthal, Ryan Kulka, Barry Jessiman

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Air Health Science Division
Ottawa, ON

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Methods

Ambient air monitoring was carried out over four weeks in the region of Trail, British Columbia in November, 2011. Four, one-week samples were collected for each pollutant at eleven sites. Sampling locations consisted of four residential backyards, three municipal buildings, and four Teck Cominco ambient air monitoring stations. Site selection was based on the use of existing air monitoring facilities operated by Teck Cominco with additional monitors added to fill in the spatial coverage. Two sites were selected for duplicate sampling and one blank sample was collected for each pollutant each week.

Particulate matter was measured using a Harvard Cascade Impactor operating at 5 litres per minute (lpm). The cascade impactor collected PM_{10-2.5} and PM_{2.5-1.0} on a polyurethane foam (PUF) impaction substrate whereas PM_{1.0} was collected using a Teflon filter. Polycyclic aromatic hydrocarbons (PAH) were sampled using a URG personal pesticide sampler. Gaseous phase PAH's were collected on a two inch plug of PUF. Particulate bound PAH's were collected on a glass fiber filter using a PM_{2.5} impactor operating at 2 lpm. Nitrogen dioxide and sulphur dioxide were collected using Ogawa passive sampling badges. Volatile Organic compounds were collected using passive 3M Personal OVM badges. VOCs and PAHs are reported below as BTEX (benzene, toluene, ethylbenzene, and xylenes) and benzo[a]pyrene, respectively. Descriptive data for the sampling period are summarized in Tables 1. Sampling sites and PM2.5 concentrations are shown in Figure 1.

Tables

Table 1. Descriptive Statistics for Weekly Particulate Matter Concentrations

	PM₁($\mu\text{g}/\text{m}^3$)		PM_{2.5}($\mu\text{g}/\text{m}^3$)			PM₁₀($\mu\text{g}/\text{m}^3$)			
	Median	Mean (SD)	Range	Median	Mean (SD)	Range	Median	Mean (SD)	Range
<i>All Sites Combined (n=41)</i>	7.74	9.09 (4.84)	2.41-22.03	10.06	11.24 (5.36)	3.44-25.44	12.48	13.89 (5.75)	5.07-27.95
Bilesky (n=3)	4.72	5.82 (2.70)	3.85-8.89	6.41	7.69 (2.69)	5.87-10.78	8.74	9.99 (2.43)	8.43-12.79
Birchbank (n=4)	7.26	7.63 (4.55)	2.46-13.54	9.35	9.82 (4.48)	4.89-15.70	12.95	12.96 (5.32)	7.14-18.79
Butler Park (n=5)	6.08	8.65 (5.73)	4.87-18.76	8.45	10.93 (6.49)	6.49-22.28	12.32	14.11 (7.08)	8.83-26.51
Columbia Gardens (n=2)	12.95	12.95 (5.67)	8.94-16.96	14.94	14.94 (6.48)	10.36-19.52	17.29	17.29 (6.80)	12.48-22.10
East Trail (n=3)	7.95	6.62 (2.42)	3.83-8.08	9.25	7.90 (2.84)	4.63-9.80	11.58	9.96 (3.83)	5.59-12.71
Glenmerry (n=4)	9.40	11.18 (4.31)	8.41-17.50	12.13	13.85 (4.43)	10.74-20.39	14.24	16.48 (5.45)	12.89-24.52
Lookout Street Reservoir (n=3)	6.68	5.83 (2.44)	3.08-7.74	9.55	8.10 (3.18)	4.46-10.29	10.94	10.11 (2.57)	7.22-12.16
Rivervale (n=4)	11.34	11.38 (5.88)	5.99-16.85	13.56	13.85 (7.14)	7.03-21.24	15.88	16.43 (7.75)	9.12-24.84
Sunningdale (n=3)	13.27	12.57 (9.83)	2.41-22.03	15.78	14.89 (11.03)	3.44-25.44	19.27	17.43 (11.55)	5.07-27.95
Tadanac (n=5)	10.22	9.52 (4.09)	4.49-15.10	12.01	11.34 (4.38)	5.89-17.57	13.51	13.40 (3.71)	9.97-19.27
Warfield (n=3)	7.02	6.03 (1.81)	3.95-7.13	8.85	8.05 (1.90)	5.89-9.42	11.40	11.26 (3.15)	8.04-14.33
Rosland Ave Park (n=2)	12.16	12.16 (1.43)	11.15-13.17	14.82	14.82 (1.26)	13.93-15.72	18.95	18.95 (0.12)	18.87-19.04

n, number of weekly samples; Provincial Ambient Air Quality objectives for 24-hour average concentrations of PM_{2.5} and PM₁₀ are 25 $\mu\text{g}/\text{m}^3$ and 50 $\mu\text{g}/\text{m}^3$, respectively.

Table 3. Descriptive Statistics for Weekly VOC Concentrations

	Median	Benzene Mean (SD)	Range	Median	Toluene Mean (SD)	Range	Median	Xylenes Mean (SD)	Range
<i>All Sites Combined (n=56)</i>									
	0.42	0.44 (0.18)	0.066-0.89	0.55	0.61 (0.23)	0.27-1.13	0.59	0.72 (0.32)	0.33-1.93
Bilesky (n=4)	0.31	0.33 (0.14)	0.21-0.50	0.43	0.42 (0.058)	0.33-0.47	0.45	0.46 (0.056)	0.42-0.55
Birchbank (n=4)	0.34	0.42 (0.32)	0.11-0.87	0.38	0.43 (0.18)	0.27-0.67	0.39	0.40 (0.070)	0.33-0.49
Buttler Park (n=8)	0.49	0.53 (0.19)	0.23-0.76	0.82	0.78 (0.13)	0.61-0.96	1.05	0.97 (0.20)	0.62-1.13
Columbia Gardens (n=4)	0.41	0.40 (0.099)	0.30-0.49	0.51	0.50 (0.073)	0.40-0.57	0.55	0.53 (0.091)	0.40-0.61
East Trail (n=4)	0.45	0.48 (0.19)	0.29-0.75	0.74	0.77 (0.080)	0.72-0.89	0.93	0.92 (0.12)	0.77-1.05
Glenmerry (n=4)	0.56	0.50 (0.18)	0.24-0.65	1.01	0.98 (0.16)	0.76-1.13	1.09	1.01 (0.24)	0.67-1.19
Lookout Street Reservoir (n=4)	0.29	0.26 (0.13)	0.066-0.38	0.36	0.35 (0.052)	0.28-0.41	0.39	0.40 (0.075)	0.34-0.50
Rivervale (n=4)	0.51	0.51 (0.19)	0.29-0.75	0.51	0.59 (0.26)	0.38-0.97	0.56	0.56 (0.11)	0.43-0.70
Rosland Avenue Park (n=4)	0.56	0.58 (0.23)	0.33-0.89	0.94	0.91 (0.16)	0.69-1.09	1.08	1.22 (0.50)	0.79-1.93
Sunningdale (n=4)	0.35	0.37 (0.096)	0.29-0.48	0.56	0.64 (0.20)	0.50-0.93	0.76	0.89 (0.41)	0.57-1.49
Tadanac (n=8)	0.40	0.40 (0.11)	0.27-0.56	0.43	0.45 (0.061)	0.40-0.59	0.51	0.52 (0.035)	0.48-0.57
Warfield (n=4)	0.38	0.38 (0.15)	0.25-0.52	0.55	0.54 (0.090)	0.42-0.63	0.59	0.62 (0.12)	0.53-0.79

Figure 1. Sampling Sites and Mean PM_{2.5} Concentrations.

