

MINUTES

Meeting: Tuesday, July 10, 2012, 7:00 p.m.
City of Trail Committee Room, Spokane St. Entrance

Committee Members in Attendance:

Alternate Chair: Councillor Gord DeRosa
Jeannine Stefani, Interior Health
Brad McCandlish, BC Ministry of Environment
Mark Tinholt, Teck Trail Operations

Marylynn Rakuson, Community Rep.
John Crozier, Councillor, Village of Warfield
Jacquie Johnson, Interior Health

Other in Attendance:

Ruth Beck, THEP Program Manager
Bruce Enns, SNC-Lavalin Environment
Cindy Hall, SNC-Lavalin Environment

Megan Klammer, Interior Health
Chris Olesen, Interior Health
Richard Deane, Teck Trail Operations

MEETING MINUTES: Dated May 1st 2012. Accepted as presented.

REPORTS & RECOMMENDATIONS

Air Quality: Mark Tinholt, Teck Metals Ltd., Trail Operations - report attached

Mark presented an update on lead and arsenic in community air, as measured at Butler Park and Birchbank stations. For total suspended particulate (TSP), it was noted that the quarterly average for lead measured at Butler Park rose above 0.5 µg/m³ in the 2nd Quarter. Teck follows the NAPS (National Air Pollution Surveillance) sampling protocol which samples every 6th day. Upon investigating, the cause of the average rise was primarily due to a single spike (10x the average) on a particular NAPS sampling day on which it was unusually windy. As a result the average for the second quarter has been skewed by this single spike. Emissions measured at the stack indicate a decrease in TSP.

Question: Is street sweeping done only in spring and summer? Answer: The sand used during the winter dilutes lead in street dust. During summer more people leave their windows and doors open increasing exposure to lead dust in the home. Teck has a new sweeper that is used onsite that operates in winter conditions.

In regards to Arsenic, it was reported that the 2nd Quarter results have increased to 0.017 µg/m³ but as noted above this result was also skewed by a single sample that was higher than the others. Normally, 1st and 2nd Quarter are windy times of the year, so the yearly average may be lower than the average for the first two Quarters.

Question: Is there any construction onsite that may have caused this increase? Answer: Dust suppression is part of construction work plans. In terms of current construction, some is planned but most excavation won't start for a few weeks.

Question: Where is the release of Arsenic? Answer: The fugitive dust project will help determine the source.

Suggestion: The graphs used for future reporting should focus on more recent points and only show the last few years to improve resolution.

Suggestion: It might be helpful to use a box plot so as to identify outliers.

Action: Mark Tinholt will look into these suggestions and make changes to the graphs.

(Note subsequent to meeting: the THEC charts include the bi-daily data as well as NAPS.)

Program Planning & Operations: THEP Program Manager, Ruth Beck - report attached

5 Year Plan Working Group Report

The June 18th Workshop was very successful. It gave rise to several areas of general agreement. The Program Team has followed up, looking into potential program changes to propose. When ready, the Working Group will come forward with specific recommendations to the Committee. Any approved program changes will be included in the 5 Yr Plan. Teck is planning on hiring a consultant to conduct the literature review and assist with developing the plan. At the next THEC meeting, the Working Group will bring forward draft communications about blood lead levels. Our Family Health professionals need to communicate with parents about how to interpret blood lead levels in light of the new guidance. This is needed for the Fall Blood Lead Clinics.

Question: Is the focus changing from secondary prevention to primary prevention? Answer: THE Program, for the most part, is expected to remain the same. More emphasis will be placed on primary prevention. For example, we are exploring the idea that primary prevention could include a home assessment of every home that has an expectant mother/family. The intent is to reduce or eliminate lead exposure pathways so as to keep blood lead levels low and prevent them from rising.

Program Manager's Report

Family Action Network – Jeannine Stefani

FAN is currently conducting a survey to get feedback from the parents who reside in Greater Trail. This will continue until November 2012. The FAN Working Group continues to develop a “blueprint” strategic plan that can be used when approaching potential funders.

Question: Marylynn Rakuson knows of some families who may be unaware the survey and could offer valuable feedback. Could she have some copies of the survey?

Action: Jeannine Stefani will get Marylynn a package with all the necessary survey material.

Executive Committee Report-verbal by Ruth Beck

Discussion regarding content for the fall newsletter. Ideas for content included: the “new way of thinking about lead” based on the new guidance, POCT testing results, launch of the website, radon testing reminder, health tips, and pictures. Proposed Timeline: September 11th: draft for THEC meeting; September 12th – 14th: finalize content; September 17 - 21st: design and printing; September 24th: issue newsletter .

Question: What were the POCT testing results? Answer: It was recommended that Lead Care II device was not accurate enough for the purpose of the BLL Testing Program. While it is a good device for testing BLL above $\geq 10 \mu\text{g}/\text{dL}$ there is too much variability when looking at lower values. IH will continue to monitor and watch for improvements and advances in the technology.

Ruth provided an update on the THEC Terms of Reference that are currently out of date. The Executive Committee has decided to incorporate changes to THEC goal statements as per the recommendations from the June 18 meeting. When the TOR are drafted, they will come to THEC. Then they are presented to the City of Trail for final approval.

Family Health: Jeannine Stefani , Interior Health – report attached

In addition to the attached report, Mark Tinholt and Jeannine Stefani gave a powerpoint

presentation (also attached) first presented at the Lead Collaborative Consortium Conference in Hamilton, June 7-8th 2012.

Question: Do lower lead levels in the air really make a difference? Answer: Yes, reduction of source emissions is linked to reduced blood lead levels. This is important even at the low blood levels we're currently seeing in Trail. Lead can cause health effects at low levels. These effects are subtle and are measurable in populations of children but not in individual children. In 2001, during a shutdown and in 2005, during a strike, there were dips in BLLs that coincided with these events.

Suggestion: It would be great to use "before and after" pictures of the Teck Trail Operation.

Action: Mark will look for a before and after picture that could be used for wider distribution and Ruth will see that it is added to the website.

The new nutrition brochure was circulated for discussion and the suggestions and proposed changes were noted by Jeannine and Ruth.

Question: Is there any information about lead in older populations? Answer: The greatest health risks are to young children. Past studies have focused on children. In terms of exposure by adults, there are programs in place at Teck to address lead exposure by employees on the industrial site.

Question: What about studies that examine pregnant women? Answer: There was a study done many years ago with expectant women from Trail. The result was that there was no significant difference in BLLs of women in Trail compared with the control group. At the June 18 workshop, it was recommended that there was no need to redo this testing as the result is not likely to change.

Home & Garden: Bruce Enns, SNC-Lavalin Environment – report attached

Bruce Enns gave an update on activity at the Community Program Office, noting that great progress is being made and productivity has increased. Result letters for yard and garden soil assessments now take 1 ½ months to produce compared with 3-4 months in the past. The number of yards remediated this year has decreased compared to past years. Bruce noted that the nature of lead in the area can result in strange patterns and is very erratic.

Suggestion: Request that future presentations use bar charts including information for previous years and thus showing cumulative work over time. It would be helpful to include a line indicating the "trigger" value.

Action: Bruce will make these changes to future reports.

Question: What is the wait time for a soil assessment? Answer: It varies depending on whether the request is from a case management or yard support family, or based on the property's location.

Question: Have the areas where snow is dumped by the City of Trail been sampled? Answer: In 2010 the city parks were sampled. While the results indicated that the lead levels were acceptable two anomalies were detected and remediation of those areas has occurred.

Action: Gord Derosa will determine the areas where snow is dumped and forward those locations to BE.

Action: Ruth Beck to include a reminder to residents about radon detectors for the Fall Newsletter.

Note: There has been a decrease in the number of radon detector requests. Also, fall and winter are the most ideal times for testing.

Parks & Wildlands: Mark Tinholt, Teck Metals Ltd., Trail Operations – verbal report

Mark gave an update on work that has been conducted in two of the City's parks as part of Teck's Community Greening Project. Part of this work includes a new rose garden in Jubilee Park which coincides with the upcoming arrival of the Communities in Bloom International Judges. Rivervale Park was previously excluded during the 2010 sampling but was recently sampled. The results have indicated that lead levels are within an acceptable range.

Mark also gave an update on the Lower Columbia Ecosystem Management Plan which aims to address ecological concerns. Work has begun and was initiated by a meeting of the Steering Committee. Dave Derosa, Teck Trail Operations, will be asked to present at a future THEC meeting.

Question: Where is the contaminated soil taken after it has been removed from a property?

Answer: Depending on the lead levels present, the soil will either go to the Teck landfill or be processed at the smelter.

Question: Is this the landfill on the Warfield hill and, if so, are there any concerns about wind?

Answer: Yes, it is the landfill on the Warfield hill. Sampling reveals that lead levels there are low compared to the plant.

NEXT MEETING: Tuesday, September 11, 2012 (Note: Date changed to Sept. 4)

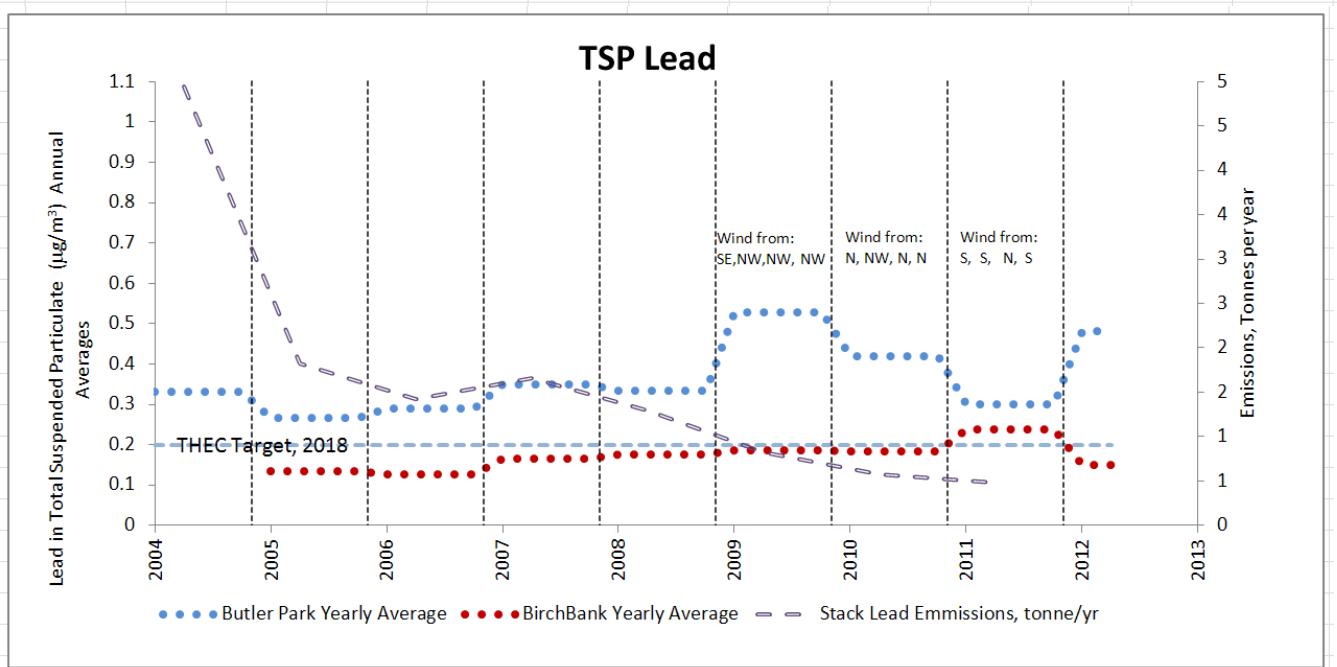
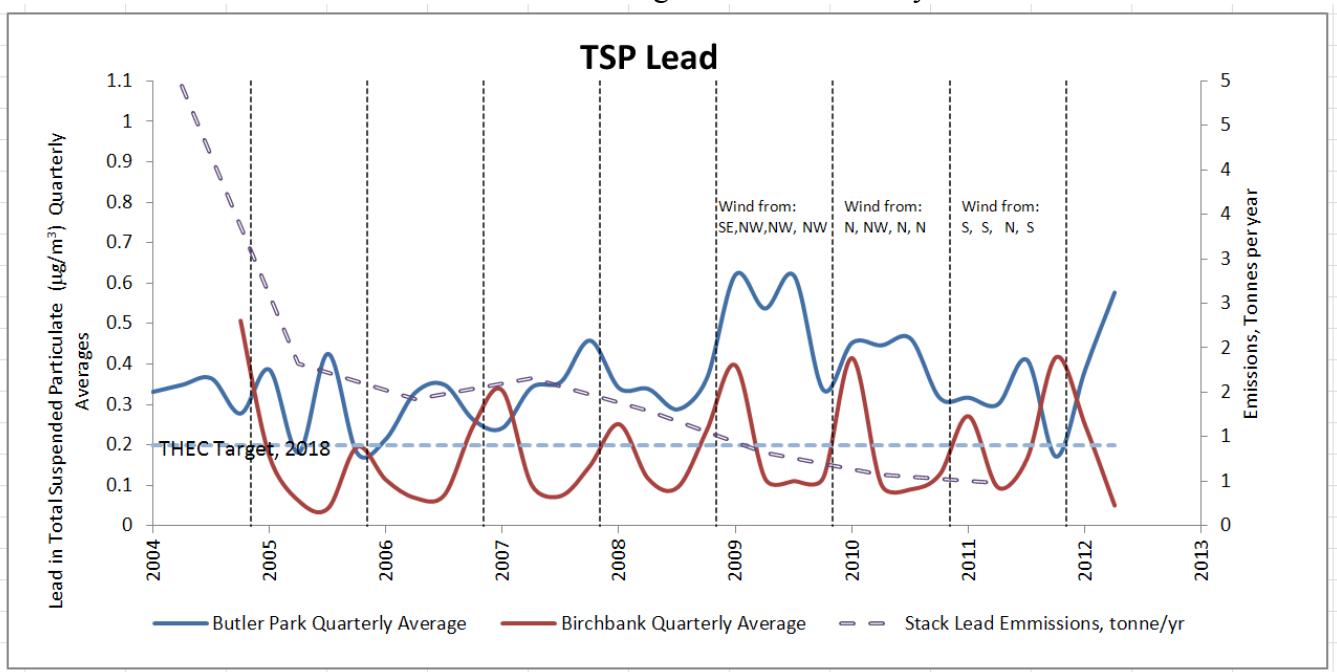
Trail Health & Environment Committee – Teck Report

July 9, 2012

Air Quality Program

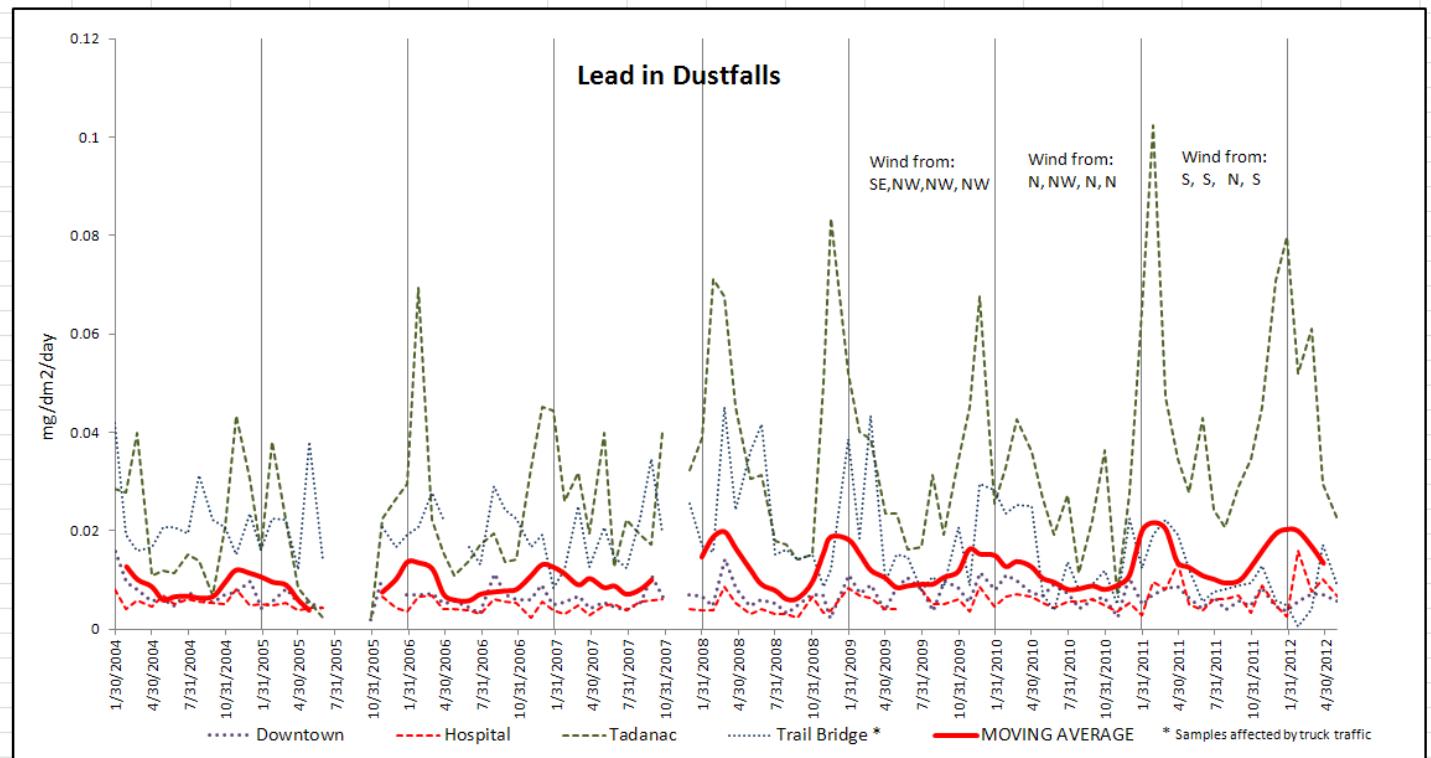
Lead – Total Suspended Particulate:

- Graphs have been improved to also show stack emissions and predominant wind direction (quarterly, as measured at Maintenance Services Building) for last 3 years. Stack emissions have continue to drop, but there has been variation in predominant wind direction. 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 have at Butler Park have increased to 2009 levels, however this corresponds with the lowest level at Birchbank since 2005 - a reflection of the influence of predominant wind. Overall average is increased since 2005, and is above the current 2018 THEC target.
- Trail smelter's releases of lead to air are still amongst lowest in industry.



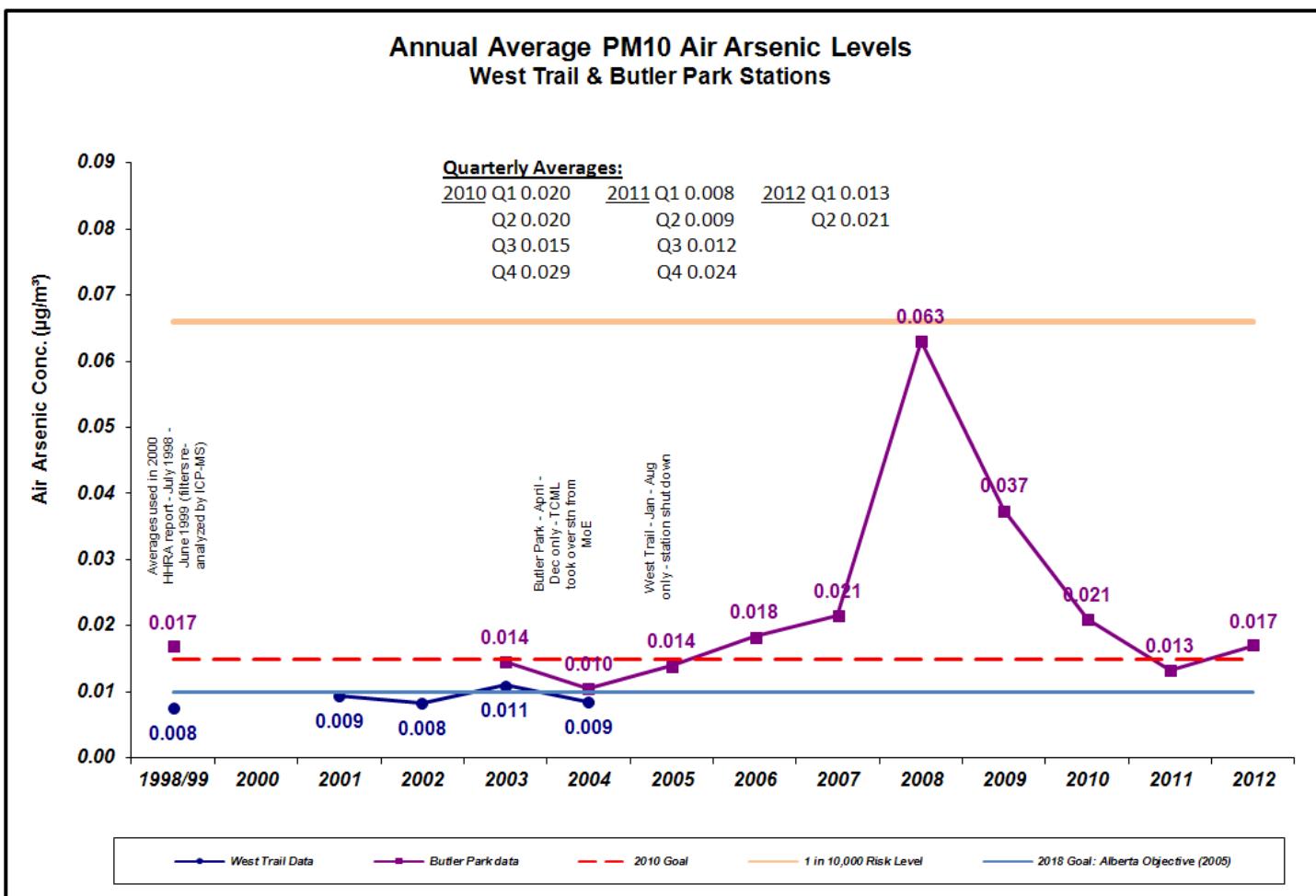
Lead in Dustfalls (monthly):

- 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 weather conditions.
- The January 2011 winter peak in Tadanac came back down to a more typical range in December 2012 – Tecks data interpretation is that the peak in Tadanac January 2011 is the result of unusual winds during that season.



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 $0.017 \mu\text{g}/\text{m}^3$ has increased again slightly but only reflects Q1 and Q2 and may be subject to seasonal variation.
- Trail smelter's releases of arsenic to air are amongst lowest in industry.



THEP Program Manager's Report

July 10, 2012

1. 5 Year Plan Support

Since May 1, the focus has been on organizing the June 18 workshop to discuss the new CDC guidance and its implications for THE Program. Notes from that workshop have been distributed to all attendees and members of the 5 Year Plan Working Group. The results of the workshop are available for internal discussion only at this point as we did not come to formal agreement about interpretation of the guidance or recommended next steps. Specific recommendations will be brought forward to the THEC when ready. Mark will provide an update on the next steps for developing the 5 Year Plan.

2. Website revamp project

We are anticipating that the new website will “go live” just after Labour Day. Our web consultant, Mike Hepher, is working on a “beta” version that will be ready by the end of July. In the first three weeks of August, our Website Revamp Working Group will have an opportunity to review and comment on the beta version of the site. Mike Hepher will make final changes by the end of August.

3. FAN Update – from Fiona Mooney

- We hosted the team from Revelstoke's Neighbourhood of Learning / Early Childhood Development Committee who gave us a dynamic presentation (and lots of useful information) on mobilizing a community to invest in early childhood. They shared their very positive results of working together to sustain a seamless system of supports to families. We had a great turn-out and lots of questions and comments. We continue to research what is working well in other communities across Canada when it comes to innovative approaches and models for family-friendly communities.
- It continues to be a priority for us to use every opportunity we can to gather input, so we asked for opinions from the attendees of the Revelstoke presentation, and we have developed a survey for parents for use at family-oriented events (e.g. the Teddy Bear picnic) and for focus groups. We want to know how FAN can bring as much value as possible to creating and nurturing a family-friendly community and region. Jeannine has copies of the survey used at the Teddy Bear picnic. It will also be distributed throughout Greater Trail at parent-child groups, daycares, libraries, rec centres and the health unit between now and the beginning of October.
- We are spending significant time having individual conversations with key stakeholders in all 5 Lower Columbia communities. It is important to us that we understand and work with the unique needs, opportunities and cultures of each community, while holding space for a regional approach.
- We continue to work on creating a recognizable public identity – check out our new logo on the surveys that Jeannine is bringing to the meeting!

Trail Health and Environment Committee

Interior Health Report

July 10, 2012

1. Fall Blood Lead Clinic prep has started
 - Currently utilizing 3 databases to find eligible children to invite to clinic
 - At present have 239 kids to invite to clinic
 - 191 kids 6-36 months (from all areas)
 - Clinic dates are September 21st, 24th, 27th, 28th, Oct. 2nd and 3rd
2. Sandboxes
 - Have given out 19
 - Message left at Career Development Services inquiring about partnering to make sandboxes for families. Trail Middle School (TMS) staff interested in same type of partnering with their students to make sandboxes. To follow-up with TMS in September.
3. Community Education
 - Beaver Valley Adventure Picnic in June
 - Teddy Bear Picnic in June
4. Continuing Education
 - Attended Lead Collaborative Consortium (LCC) Workshop in Hamilton, Ontario at McMaster University June 7th and 8th. Funded by Interior Health for Jeannine to attend. Attended with Mark Tinholt and Steve Hilts. Steve and I gave a presentation too.
 - Review draft letter to IH from THEC thanking them for their approval for my Education leaves for both the US CDC's National Healthy Homes / Lead Poisoning Prevention Training in March and the LCC and covering the costs of the LCC.
5. Nutrition Brochure
 - Completed, to show final copy to committee and to order this week.

Trail Health & Environment Committee

Home & Garden Program Update July 10, 2012 – 7:00 – 9:00 p.m.

1. Property Development Program
 - a. Currently under Teck review
2. Soil Programs
 - a. Garden and Yard Assessment to July 6 – see Figures 1-2
 - i. 45 vegetable garden assessments
 - ii. 91 yard assessments
 - iii. 2012 sampling has been on the following priority basis:
Case Management
Yard Support and vegetable gardens
Annual “Block” program – this year focusing on 1400 blocks of Columbia, 2nd, 3rd and 4th Avenues in East Trail but other areas were also sampled by request to improve our understanding of overall lead distribution in the community and to assist with setting priorities for assessment and remediation going forward
 - b. Yard Remediation to date in 2012
 - i. 1.5 CM yards remediated
 - ii. 3 other full yards remediated
 - iii. 1 yard support remediation
 - iv. 300 m³ soil replaced
 - c. Garden Remediation to date in 2012
 - i. 12 gardens remediated
 - ii. 58 m³ soil replaced
3. Home Renovation Support and Radon kits – see Figure 3
 - a. Fewer requests so far this year than last
 - b. Current total for 2012 is 24.
 - c. Radon detector requests also way down (no numbers ~6?)
4. Yard Support
 - a. Currently doing site evaluations for those that qualify
5. Case Management –
 - a. 27 current case management properties (including some grandparent's properties)
 - b. 6 with 95% UCLM Pb > 1000 ppm
 - c. 7 with 95% UCLM Pb < 1000 ppm, but at least one sample > 1000

- d. 9 either fully remediated or with 95% UCLM and Max Pb < 1000
- e. 5 with more complex follow-up required
- f. Workshop on June 28th with Jeannine, Jacquie, Mark and Bruce to discuss follow-up with all situations requiring attention

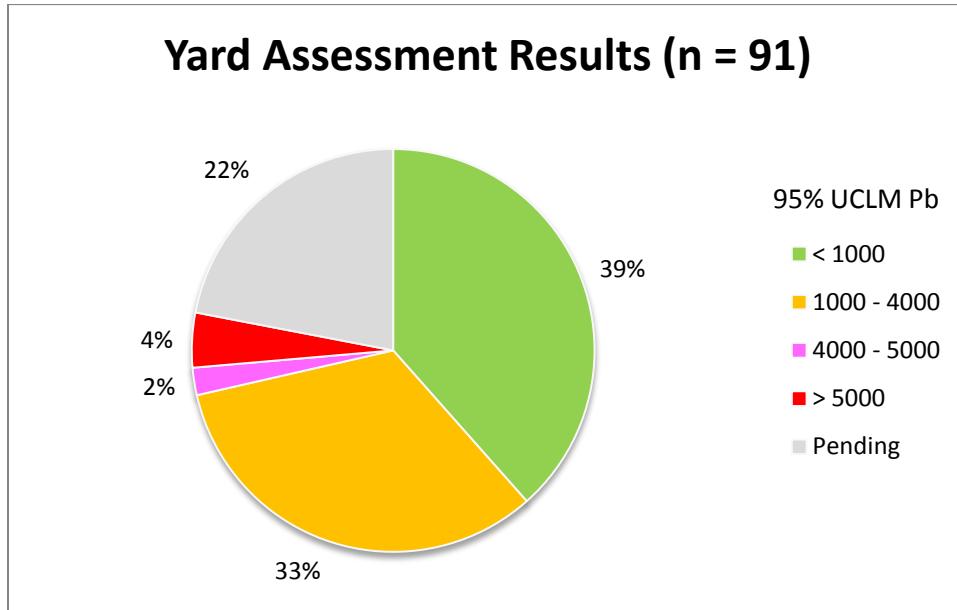
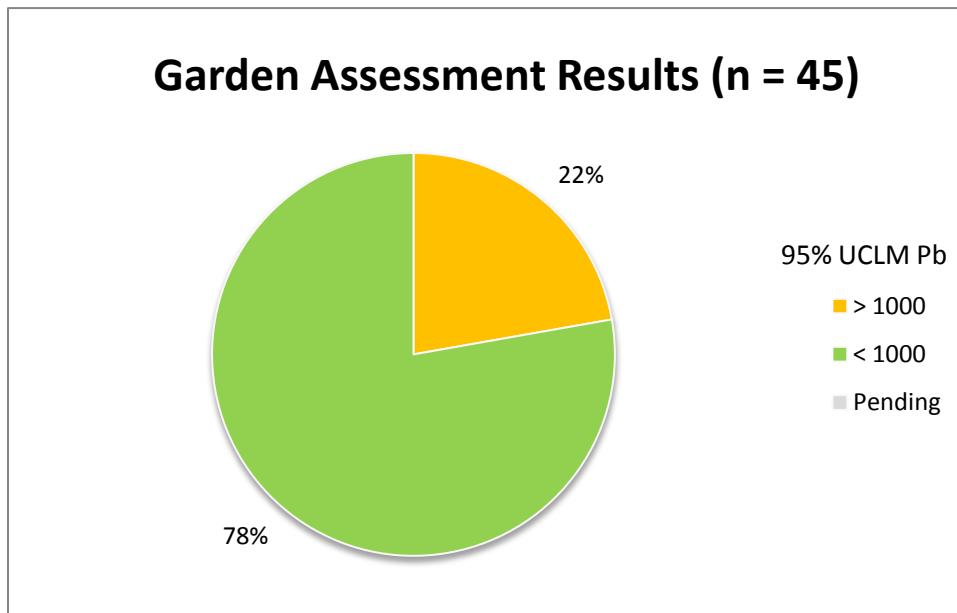
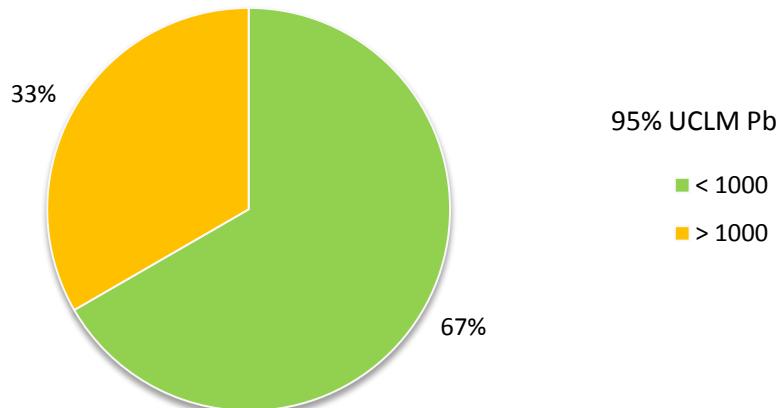


Figure 1. 95% UCLM of Lead Concentrations in soil samples from Garden and Yard Assessments to July 6, 2011.

CM Yard Assessment Results (n = 15)



YS Yard Assessment Results (n = 36)

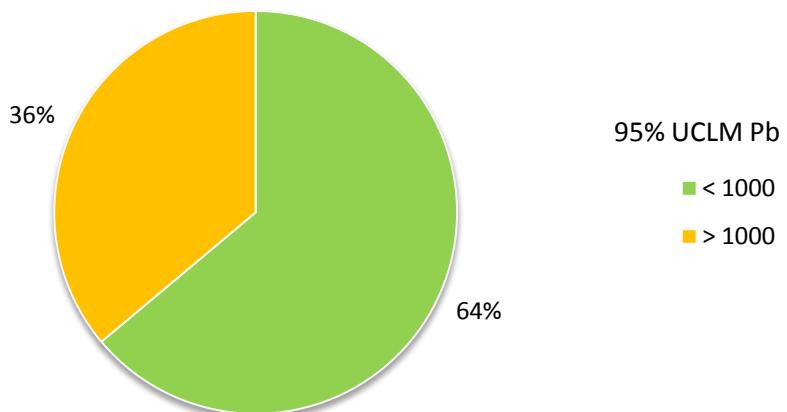


Figure 2. 95% UCLM of Lead Concentrations in soil samples from Case Management and Yard Support Assessments to July 6, 2011 (data is a subset of data in Figure 1 for Yards).

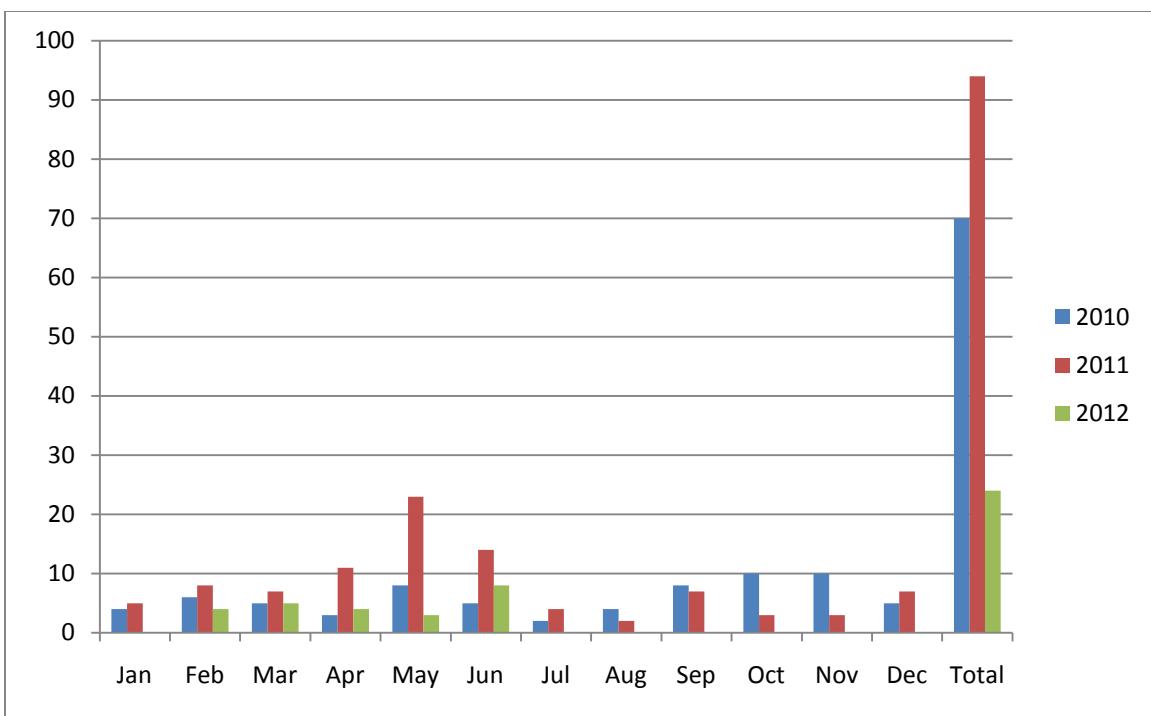
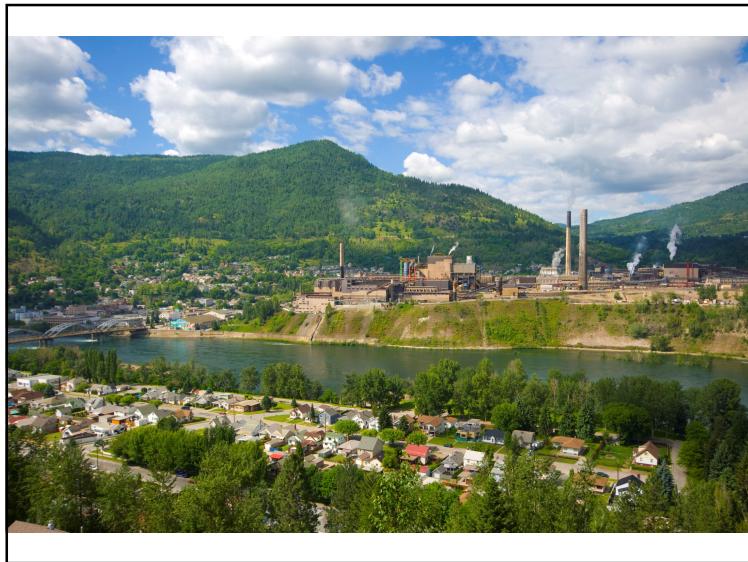
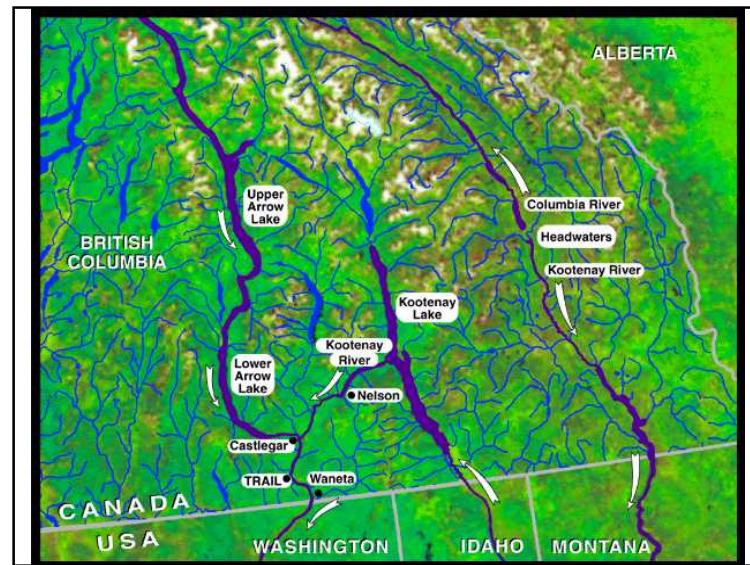


Figure 3. Home Renovation Support Requests from 2010 through June 2012.



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Getting together on the issue

- University of BC performed 1989 study
- “Lead Study Liaison Committee” set up
 - Cominco (now Teck)
 - Province (Health & Environment)
 - City of Trail
 - Cominco employees’ union
 - parents

Trail Area Health & Environment Program | 2010

Enabling factors

- Stakeholders, particularly the company, were PROACTIVE
 - Cominco made inquiries that led to study *before* issue received media or public attention
 - Gov't, industry *asked* general community to share their authority
 - Company, City and Province issued press releases in support of program



Trail Area Health & Environment Program | 2010

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Enabling factors

- Community members were offered seats at table and encouraged to PARTICIPATE fully.
 - Community members on Technical and Education Committees
 - Gov't and industry encouraged inclusion of community in discussions
- TRUST and CREDIBILITY were established early



Trail Area Health & Environment Program | 2010

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Exposure Pathways Study - 1992

- Blood lead, environmental data and questionnaires for 241 children – analysis using structural equations modeling
 - indoor house dust - dominant source of lead for children, esp. those under 18 months
 - smoking in the home, presence of pets, and engaging in mouthing behavior - *higher* BPb
 - eating homegrown produce and living on properties with less bare soil - *lower* BPb



Trail Area Health & Environment Program | 2010

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Indoor Dust Control Trials – 1993-94

- Intensive vacuuming every 6 weeks for a year did not have impact children's lead exposure
- Intensive vacuuming and wet-mopping every 2 weeks appeared to reduce lead exposure



Trail Area Health & Environment Program | 2010

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What worked? New lead smelter – 1997

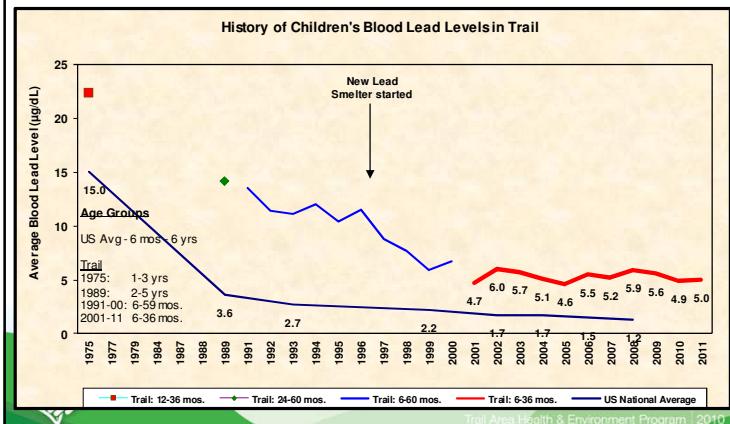
- Old furnace technology replaced with Russian KIVCET flash-smelting technology
- lead levels in air dropped by about 70% within two years after KIVCET started up
- lead in dust (dustfall, street dust) dropped by about 40-50%
- children's blood lead levels also dropped by about 40-50%



Trail Area Health & Environment Program | 2010

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Children's Blood Lead Levels



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Air Quality

FUGITIVE DUST REDUCTION PROJECT

- Current project to reduce fugitive dust from smelter site:
 - Open mixing and storage of concentrate and process materials
 - Transportation of materials around site; and
 - From operating buildings
- Multi-year effort, to look at all fugitive dust sources, and then take measures to reduce those emissions.
- Two new street sweepers acquired to improve collection and recycle of on-site road dust.
- Feasibility study for two large storage buildings to enclose mixing activities and provide for indoor short term storage of process materials

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Home & Garden



Soil

- Vegetable garden soil testing on request in Trail & Rivervale
- Remediation, depending on test results and in order of priority
- Priority is families with children under 5 and pregnant women

Home & Garden Program Home Renovation Support Program



Family Health

Educational Events



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Family Health

Blood lead testing and follow-up

- annual testing for children aged 6-36 months
- follow-up testing and support services, for families where children have high blood leads
- testing at parents' request for kids over 36 mos. or outside Trail & Rivervale
(new to area/neighbourhood, renovating home etc.)



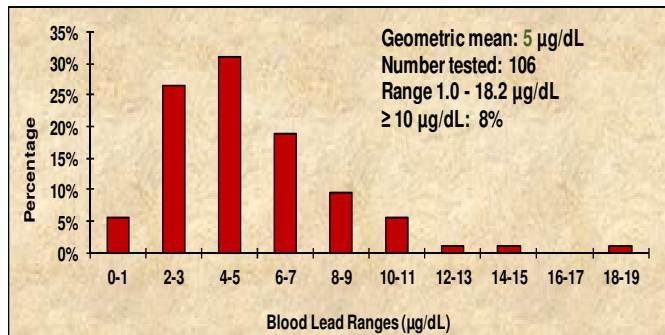
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Family Health

2011 Blood Lead Histogram: Area 2/3

(Age 6 mos. - 36 mos.)



Family Health

Family Action Network



Building strong foundations

The Family Action Network is an active coalition of regional service providers, business, government and community stakeholders who have big plans for the Lower Columbia area.

Our mission is to work even closer together to make available seamless, integrated supports, services and programs for families. Strong families are vital for strong, economically viable communities.



Family Action Network

To learn more about us and how you can play a role in helping to benefit your community, please contact Sonia Tavares, West Kootenay Early Years Coordinator, at childrenfirst@thekoop.ca or 250-352-6786.

Family Health

Premier's Award





LEAD AWARENESS AND YOUR CHILD

The only way to know if your child has elevated blood lead levels is by getting a blood test.

It is recommended that children 6 months to 3 years of age have their blood lead levels tested annually.

Call the Trail Lead Health Services Coordinator at 250-364-6223 for more information.



For more information

CALL:

The Trail Lead Health Services Coordinator, Kiro Wellness centre, 1500 Columbia Avenue, Trail BC
250-364-6223

Trail Health & Environment Community Program Office, 1319 Bay Avenue, Trail BC
250-368-3256

VISIT:

Trail Health and Environment Program website: www.thep.ca

Interior Health website:
www.interiorhealth.ca

Healthlink BC

Go to: www.healthlinkbc.ca
or dial 811 to talk to a nurse 24 hours a day, 7 days a week.

A Pharmacist is available between 5 pm and 9 am daily.

A Dietician is available between 9 am and 5 pm Monday to Friday.

LEAD AND A HEALTHY DIET

*WHAT YOU CAN DO
TO PROMOTE YOUR
CHILD'S HEALTH*



WORKING TOGETHER
Creating a healthy environment



LEAD'S EFFECTS ON THE BODY

Lead is a metal our bodies cannot use. People in smelter communities are likely to be exposed to more of it in the environment than people in other areas. Some extra steps ensure that we, and our families, keep good health front and centre.

In particular, elevated blood lead levels may contribute to learning, hearing, and behavioural problems in children; or may impact your child's brain, kidneys and other organs. Lead in the body hinders good minerals such as iron and calcium from working effectively. Some of these effects may be permanent.

Elevated lead levels can occur without any obvious symptoms.

"A healthy diet is important for all children, particularly when lead is a consideration."

EAT HEALTHY FOODS REGULARLY

Children with empty stomachs absorb more lead than children with full stomachs.

Provide your child with four to six small meals during the day. The following nutrients can help protect your child from developing elevated blood lead levels:

Iron-Rich Foods

Normal levels of iron work to protect the body from the harmful effects of lead. Good sources of dietary iron include:

- Lean red meats, fish, chicken, and eggs;
- Iron-fortified cereals, whole grains;
- Raisins, prunes, pumpkin seeds, leafy green vegetables.

Calcium-Rich Foods

Calcium reduces lead absorption and also helps make teeth and bones strong. Good sources of dietary calcium include:

- Milk, yogurt, cheese;
- Green leafy vegetables (spinach, kale, collard greens);
- Almonds;
- Canned salmon;
- Whole grain pancakes or waffles.

Vitamin C-Rich Foods

Vitamin C and iron-rich foods work together to reduce lead absorption. Good sources of vitamin C include:

- Strawberries, blueberries, oranges, grapefruit;
- Orange juice, grapefruit juice, tomato juice;
- Green peppers, broccoli, cabbage, cauliflower.

TAKE SIMPLE STEPS TO PROMOTE YOUR FAMILY'S HEALTH IN RELATION TO LEAD EXPOSURE

- Always wash your hands before preparing and eating food.
- Make sure your children eat regular, healthy foods high in iron, calcium and vitamin C.
- Wash all fruits and vegetables especially locally grown produce that may have lead-contaminated soil or dust on it. Dunk and swish leafy vegetables such as lettuce and spinach in a sink of clean, cold water. Peel root vegetables such as carrots and potatoes.
- Use cold water and heat it up for drinking, cooking or preparing baby formula, rather than using hot water from the tap.
- Do not use imported pottery to store or serve food.
- Serve meals and snacks at the table rather than "picnic style" on the floor.
- Have your children tested annually for lead, even if they seem healthy.