

Trail Area Health & Environment Committee

MINUTES



Meeting: Tuesday, April 19, 2016 7:00 p.m.
City of Trail Committee Room, Spokane St. Entrance

Committee Members:

Mike Martin, Chair, City of Trail
Gord DeRosa, Community Member
Brad McCandlish, BC Ministry of Environment
Mark Tinholt, Teck Trail Operations
Ron Joseph, Community Rep.

Diane Langman, Councillor, Village of Warfield
Steve Como, USWA Local 480
Jeannine Stefani, Interior Health
Tiffany Armstrong, Community Rep.

Invitees:

Thompson Hickey, Teck Trail Operations
Bill Jankola, Teck Trail Operations
Matt Parrilla, Teck Trail Operations
Frances Maika, Vox Communications
Dr. Kamran Golmohammadi, MHO

Ruth Beck, Circle B Services
Amy Bohigan, Watershed Productions
Liz Anderson, SNC-Lavalin Inc.
Andrea McCormick, SNC-Lavalin Inc.
Bruce Enns, SNC-Lavalin Inc.

MEETING MINUTES: Dated February 2, 2016

Minutes from February 2, 2016 accepted.

PRESENTATIONS, REPORTS, DISCUSSIONS & RECOMMENDATIONS

Presentations, Reports & Issues Arising:

Lead Safe Renovation Videos and Program Proposal – Andrea McCormick, Home & Garden Team with Amy Bohigan, filmmaker

Andrea introduced the eight Lead Safe Renovation videos. Ruth commended the team for the work went into creating the videos over the last year and a half. The process, from idea to finished product, has cemented our concept of what lead safe renovation really means. Andrea added that the videos star local Trail residents and will help to draw the community to the videos and create a lead safe renovation community.

The committee and guests watched video 1 and video 8. Video 1 is an introduction to why lead safe renovations are important; video 8 targets contractors.

Andrea announced that we will be launching the videos at the end of May and will send out a media release then. Amy Bohigan commented that she is very impressed by how rooted the THEP program is in the community; it was easy to find people to participate in the videos as the relationships were already established. Amy commented that our program is especially good because it is so accessible. She was impressed by the professional group of THEP staff that she got to work with, and likes the diversity of Trail residents featured in the videos. She added that the information on lead safe renovations filtered into her own renovations in Nelson.

Andrea described the proposed upgrades to the Home Renovation Support Program, to create a new Lead Safe Renovation program.

- Advertise and promote the videos throughout Trail
 - o E.g.: Ultrasound waiting room
 - o Promote the video launch and Home & Garden Day in late May

- Increase and strengthen advice and supports
 - o More ShopVacs available for loan
 - o HEPA dust shrouds for loan
 - o Hands-on support for DIYers including help setting up, advice and techniques
 - o Hiring a contractor checklist
 - o *Contractor Engagement Program*: THEP ‘approved’ Lead Safe Contractors (there are already four contractors interested). Contractors would have to comply with the following to be promoted through our office (via business cards, thep.ca website, and our newsletters):
 - Watch the Lead Safe Reno videos
 - Meet with H&G team member (Andrea) on a jobsite for evaluation/discussion of potential dust hazards and how to mitigate
 - Sign a commitment to work in the best interest of working lead safe
- Relationship building
 - o RDKB permitting process
 - o Local 480
 - o Teck internal bulletin

Mike commended the good work on this program and the videos.

Andrea added that videos will go live at the launch in late May and they will be publically available on the website.

Gord commented that we should double check that the videos are all WorkSafe BC compliant. In particular, the perspective of Lance on the roof in video 8 makes it appear that he is working at a height that would require safety equipment.

ACTION: Andrea to take the lead on getting this checked and corrected, if necessary. E.g. run video 8 by Nick Morris (of WorkSafe BC) for feedback.

Discussion took place about the number of renovations that occur in Trail in a year. There’s no way to know absolutely, but we can gauge the number based on building permits and orders through Home Renovation Supplies Program. We have also thought about working with Utility locates as an indicator. There could be 200 to 300 people renovating in a year; which makes the Lead Safe Renovation program a worthwhile endeavour.

Fugitive Dust Reduction Program & Dustfall Update – Bill Jankola, Teck Trail Ops

Bill Jankola presented the Fugitive Dust Reduction Program update. He highlighted the Smelter Recycle building construction. It should be complete by late July and fully operational by the end of 3rd quarter.

Bill clarified what a baghouse is by using the analogy of the HEPA vacuum cleaner. The baghouse collects dust in filters and the dust is then brought back into the building for re-processing.

Bill also highlighted other work being done to minimize dust, specifically, mist cannons and wind fences at the roaster pad. Ultimately the roaster pad will likely need to be enclosed too, but Teck can’t get a building constructed on the roaster pad in time to affect the 2018 air quality goal, so adding the mist cannons and wind fences are short-term solutions.

Gord requested clarification as to where the waste water goes when flushing the Teck roadways. Bill replied that some goes into the sewer (and it's monitored) and most goes to water treatment. Bill continued his presentation and highlighted the slide with monthly average ambient lead and projected lower lead levels.

Bill clarified that once the smelter recycle building is fully operational, we should see a 25% reduction in fugitive dust. We'll likely see that benefit after August this year.

Community and Family Working Group Report – Ruth Beck, Program Manager

Ruth summarised the last meeting of the Community and Family Working Group (CFWG); a large focus of the meeting involved reviewing ideas for encouraging sustainable governance and engagement with the community. Ruth has created a list of acronyms/glossary. Diane commented that she has noticed a good improvement in the presentations; they are “like night and day” from when she started on the committee.

Mark shared that there will be a Teck tour in mid-July. In fact, there are two tours planned for the near future: (1) a tour of the smelter recycle building in mid-July, and (2) a more general tour of Teck in the fall of 2016. The first tour will include THEC, the Tadanac Residents' Association, and Trail City Council. It will take 2-3 hours for the tour. Mark polled the group as to what time of day would work best: Diane suggested morning for a more comfortable tour (heat wise). Steve commented that the building is impressive and worth touring. Mark liked the idea of a morning tour; he will propose a few dates through Doodle. Mark also mentioned that he is open to requests if we have anything particular we'd like to learn about during the tour.

Ruth highlighted the shift in focus for the proposed radio ads for this summer. We are setting ourselves up as a resource for health and environment tips and advice. The CFWG recommends that we precede with the radio ads and see how they work this year. Ruth clarified that the target audience for EZ Rock is 75% female and between the ages of 35 and 55; a good demographic for our summer messaging. The messages are reducing dust exposure, family health, and hygiene, and radon awareness; we are reminding families to have 'healthy habits'.

Ruth continued and shared the proposed newsletter items for the upcoming spring edition. Jeannine suggested a thank-you to City Council for the pool passes. The newsletter will come out in time for the LSR launch, in later May.

Consultation Working Group Report – Frances Maika, Consultant, attending

Frances reviewed the Consultation Working Group meeting and explained that she will have a draft consultation plan for the working group in May. She noted that two demonstrations of online engagement software took place at the meeting: one for EngagementHQ and one for Thought Exchange. Time was limited during the meeting, so Frances will explore online engagement further and report back.

Frances also spoke about the questions we may wish to explore with the community during the public consultation; how the community feels about the program and where they'd like to see us go with it in the future. The more technical numbers/goals consultation could take place with focus groups.

Ruth clarified that the Consultation Working Group is tasked with the job of setting up the consultation; the THEC won't likely need to be directly involved (barring something large and unforeseen). Members are welcome to join the working group if they want to be directly involved.

Mike provided an update on the ongoing discussions with the Ministry of Environment regarding a WARP, noting that he will request a special meeting of the THEC to discuss this in more detail sometime in the near future. Ron pointed out that the archives will have a lot of information about that discussion. Ruth clarified that the PITG is the group Ron is referring to. That task group discussed the issues in detail in 2009/10 and all the meeting minutes are available. Frances will put together a pros and cons document utilizing this information and more recent discussion points; it will be shared with the THEC when ready.

Community Check-in

No issues or comments raised.

Program Reports & Issues Arising:

Air Quality - Teck Trail Operations

Mark presented the report. He highlighted recent results from the dust fall monitoring jars. Though the jars are not as accurate as the total suspended particulate monitoring, they do give a good picture for dust fall trends over the long term. It is notable that the last 5 years for Tadanac are progressing lower and lower; a good indication that the fugitive dust reduction program is reducing fugitive dust emissions. Mark expects to see dramatic improvement after the recycle building and roaster pad solutions are completed. Ruth wondered why the dust fall appears lower in summer. Mark replied that, though we can't know why for sure, it is believed that the dust fall jars are not reliable during high wind events of which there are more in summer (dust might not be able to fall straight down and vortices may occur above the jars). This is why we don't use dust fall numbers for goal setting.

Mark continued the Teck report and shared that the lowest number to date for arsenic appears in the most recent quarter.

Air Quality Technical Working Group (AQTWG) update;

Mark shared that the AQTWG has not met recently; the MOE is coming to Trail talk about sulphur dioxide guidelines in June and AQTWG will meet then. The focus for the working group is the prioritization of air quality issues. Mark added that everyone is welcome, but that the meetings are highly technical. Mark and Ron will bring any recommendations to the Committee.

Ron suggested the Committee consider including SO₂ readings with the Teck report in an effort to get the THEC familiar with the issue of sulphur dioxide. Thompson asked if the THEC should broaden their mandate. Ron clarified that the AQTWG examines all issues concerned with air quality and brings recommendations back to the Committee. Ruth reiterated the question: should Mark include data on SO₂ in his Teck report going forward? Thompson suggested that first Mark should clarify the issues around SO₂ thoroughly so that the Committee understands it; it's a bigger learning curve as the issues are different from

lead. Mike commented that Teck already captures 99% of the SO₂ emissions and he is disappointed that Teck is still targeted by the MoE in their push to lower emissions. Mark offered to prepare a special Sulphur Dioxide 101 presentation for the Committee. Brad added that we'll have a better picture of all the issues after the next meeting with MoE. The new guideline will likely come out in the fall, but there's a significant timeline of years before we are at the crunch. The messaging to go along with regulation announcements should be released in Fall 2016. Ruth pointed out that we will need to revisit the THEC Terms of Reference in about a year's time (after approval of a WARP); this could be a topic to be explored at that time.

Family Health - Interior Health

Jeannine presented her Interior Health report. She gave a review of the Winter clinic and added that there are no concerns arising. Jeannine shared that the first Trail Outdoor Market is June 10 and there will be a new family-friendly space. This space will be jointly hosted by the THEP, FAN, Success by 6, CBAL, the City of Trail, and the Chamber of Commerce.

Jeannine added two items to the report:

1. IH and Teck have an agreement in place to work together to create a new blood lead database. Currently Jeannine utilises multiple databases to track all that she does; the new database will be more efficient. Mark commented that this progress is very exciting.
2. Dr. Golmohammadi (MHO) is working with the BC Center for Disease Control (BC CDC) and Drs. Kosatsky and Afshari; Dr. Golmohammadi is exploring additional complements to our existing program and is gathering data in an effort to find opportunities to improve the geometric mean for children's blood lead levels. Dr. Golmohammadi and representatives from the BC CDC will meet with us in the near future to discuss further.

Home & Garden/Program Office – SNC-Lavalin Inc

Bruce presented the Home & Garden report. The Program Office will soon host the grand opening of our new Easy Peezy comfort station. This is a family friendly washroom and quiet space for parents, caregivers and their children to use when downtown. We are still waiting on a revised hosting agreement from FAN and will set the grand opening date after it is signed.

Bruce is working on refining the dust study design; we will be seeking participants starting in May with our Spring newsletter. Gord asked to clarify if we know whether gardens are becoming recontaminated. Mark replied that we have finished the long term study and there is recontamination at a slow rate, such that replacing soil is still worthwhile. Mark added that the fugitive dust reduction program is going to further decrease lead emissions by up to 25%, such that the recontamination rate will be even slower. He noted that cadmium is our main metal of concern triggering garden remediation as the threshold is a lot lower.

Mark shared that the Ministry is currently performing a complete review of the CSR and will come out with new numbers in May. He suspects that the lead standard will be lower. If this is the case, the THEC will need to discuss how the new regulations will influence our soil remediation trigger numbers. We don't know yet what the new number will be; we will have to review this when the numbers are released, probably at the June meeting.

Discussion turned to remediation standards in the US. Mark commented that our program targets areas where children are present as they are the most vulnerable group, whereas the US uses a different risk management approach and remediates selective areas to a much lower level. We will review again with regards to a long term approach in the future.

Gord commented that he often passes community concerns on to Teck and he is impressed by the prompt response, usually within the day.

Program Manager – Circle B Services Consulting

Ruth proposed the dates for the next meetings: June 28, Sept 20, and Nov 22 (when Blood Lead results from the 2016 Fall clinic will be presented). The dates were accepted.

ACTION: Liz to send out the Outlook meeting requests ASAP.

Good news items:

Teck Trail and THEC are noted as finalists in the Mining Association of Canada (MAC) Toward Sustainable Mining Award. Ruth presented the MAC media release issued out of Ottawa yesterday. Mike added that Sheri Regnier of the Trail Times was in touch with him, looking for update on the meeting tonight. He will speak to her again and let her know this good news. Mike highlighted the key messages. Thompson commented that MAC is the senior body in mining; it represents the entire mining body nationally and it is no small thing to be recognized at the national level.

Ron commented that summer has arrived early and it's already dusty out. Trail's dust suppression normally starts in May, but Ron would like to see it sooner. Mike shared that it'll be near the end of May before the city is ready as there is an order of preparation that must be taken and it takes time.

NEXT MEETING

Tuesday, June 28, 2016

April 11

Lead Safe Renovation - Program Description - Brief

Home renovations are a potential source of lead exposure that people may not recognize. The THEP has had a Home Renovation Support Program since 2008. It offers free lead safety supplies, equipment loan and advice to tenants and home owners renovating homes in Trail and pre-1976 homes in Greater Trail.

At this time we are proposing to enhance the program as we would like to:

- reach contractors with a program that will engage them and make them want to be lead safe
- improve monitoring of our free safety supplies to make sure they are used and that the renovators actually use lead safe practices
- promote new videos as a way to engage and convey best renovation practices
- see the potential to build a strong trust relationship with the renovation community the way we've done with families

1) Promotion, Outreach and Engagement

Existing strategies - Home Renovation Support Program brochure, Home & Garden Days event, THEP Spring Newsletter, Radio ads in May/June, fridge magnets

Proposed new strategies – Videos available on our website and at the Program Office and potentially other locations, media event to launch the videos, build relationships with the community via USW Local 480, the RDKB and building supply stores, revising the brochure, and create a video “trailer” for outreach. Build a sense of local pride by branding the videos as “Made in Trail”.

2) Education and Advice

Education and advice will continue to be offered to all renovators. Including, the new videos and in-person advice at the Community Program Office.

Proposed new strategies - On-site visits, with advice and hands-on demonstration of lead safe practices. Educational information for homeowners looking to hire a lead safe contractor – (a) a checklist on What to Expect from a Lead Safe Contractor, (b) a list of Lead Safe Contractors.

3) Incentives and Support

(a) Do-It-Yourself Home Renovators:

Existing safety supplies offered as Home Renovation Support and new supports including: a Free HEPA filter and shop vacuum bags for a renovator's existing shop vacuum and free loan of HEPA tools such as dust shrouds for sanders, grinders and paint scraping tools. The new incentive is to help discussions and improve knowledge around the use of vacuums, vacuum bags and HEPA filters.

April 11

(b) Contractors:

The new Lead Safe Contractor program aims to engage contractors via market demand, that is, by influencing hiring preferences of home owners and tenants.

A contractor will qualify as a 'Lead Safe Contractor' by:

- Watching the Lead Safe Renovation Videos.
- Having an on-site lead safety discussion and evaluation by Community Program Office staff,
- Reviewing with their client the checklist: What to Expect from a Lead Safe Contractor,
- Signing-off the intention to utilize lead safe renovation practices, and;
- Renewing annually.

Lead Safe Contractors will receive the following benefits:

- Inclusion on a list of Lead Safe Contractors promoted on our website, in our Spring Newsletter, in the Community Program Office, and provided to residents upon request.
- Business cards may be left at the Community Program Office
- To promote conversion to lead safe renovation tools & equipment, contractors will be offered a one-time:
 - HEPA filter and vacuum bags to improve filtration on their regular shop vac
 - Loan of shop vacuum HEPA attachments and tools (i.e. dust shrouds, paint scraping tool) to test their usefulness on a project.

4) Evaluation, Tracking and Continual Improvement:

Currently, the Community Program Office tracks Home Renovation Support requests through the THEP Database based on completion of a Renovation Project Scope form. We propose to strengthen the process by getting more detail from renovators on their projects and the use of our supports. This will be done by expanding the project scope form and conducting a simple follow-up survey with 3 quick questions.

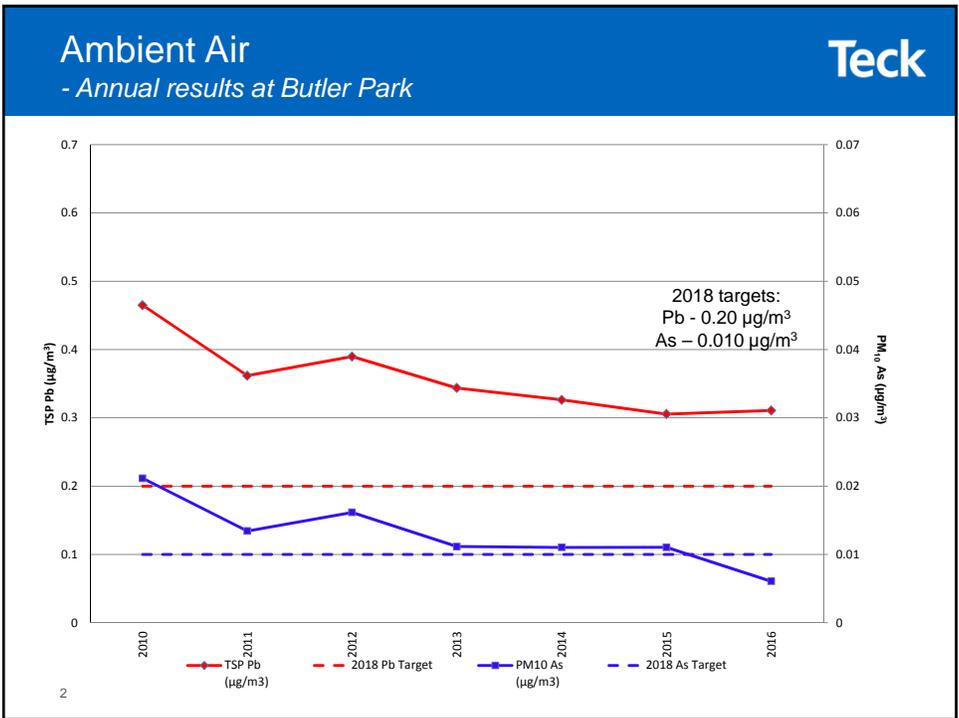
Budget

This program is delivered through the Community Program Office and includes lead safety supplies provided to Vallen via direct contract with Teck. There will be some additional costs for the new supports (HEPA vacuum retrofits) as well as time needed to provide on site advice and evaluation of contractor knowledge. The overall cost for the enhanced program is approximately \$22,000, all of which will come from a reallocation within existing budgets.

Teck

THEC Update: Fugitive Emissions

April 2016
Bill Jankola, Superintendent Operations Environmental Projects

Smelter Recycle Building (SRB)

Teck

- Construction progressing well – completion expected in July 2016.
- Commissioning and startup planning is underway.
- All “new” materials will be moved directly inside the building.
- Plan to consume existing stockpiles rather than transfer the stockpiles inside.



October 2015



April 2016

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Roaster Pad

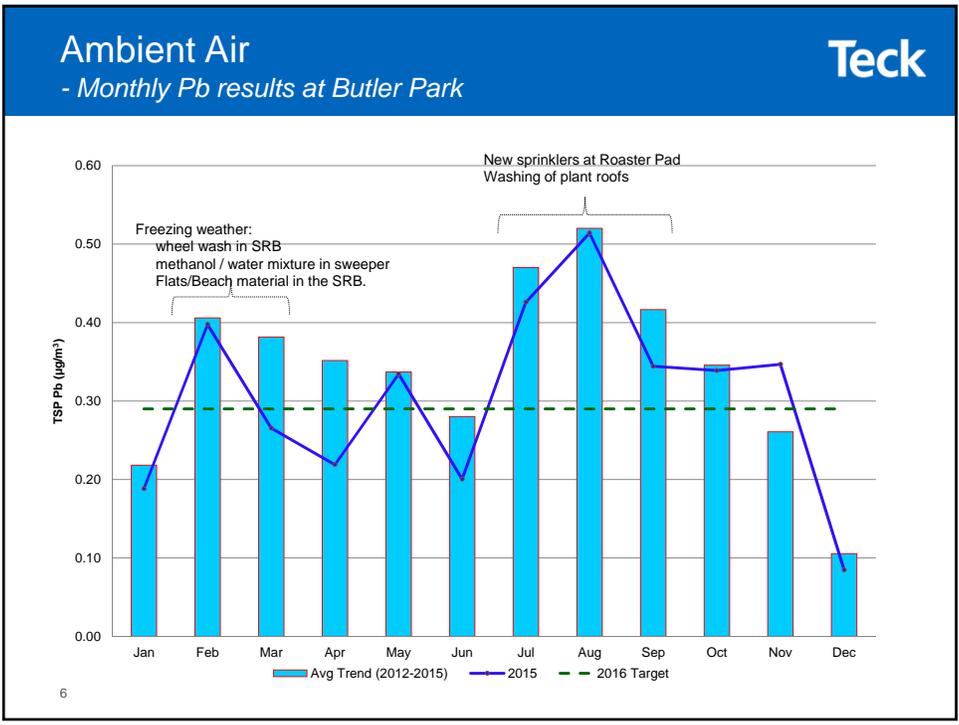
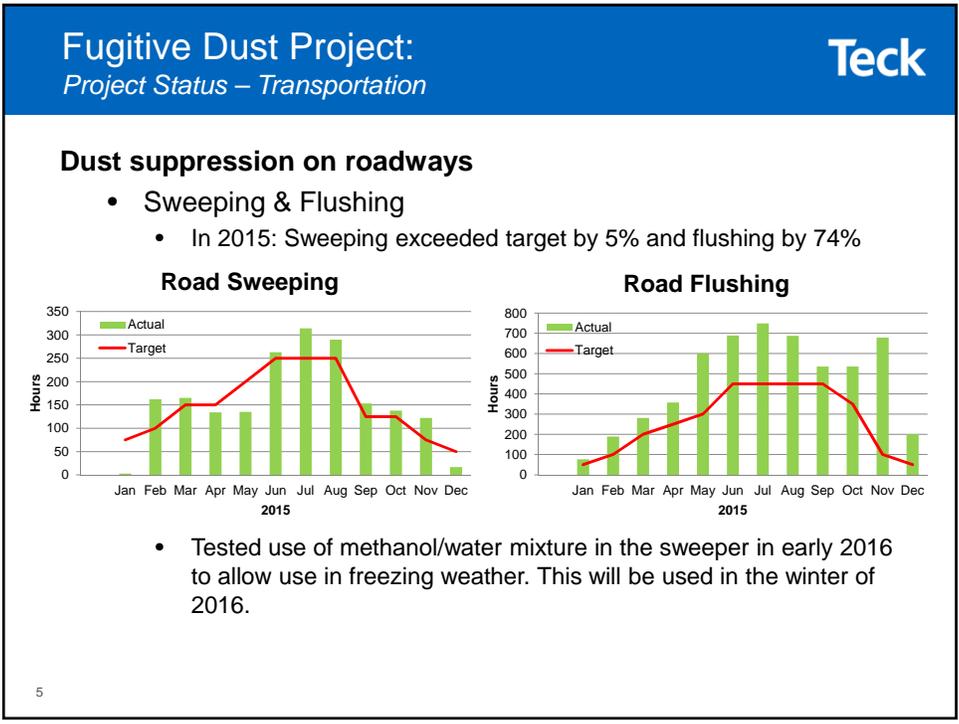
Teck

- New sprinklers have been installed around the perimeter of the pad and are now operational (2016).
- Project to install wind fence & dust controlling misters has been gated and approved to proceed to a feasibility level study. Plan is to have this project gated and approved for installation in 2017.
- Project to replace the current method of mixing concentrates in the open with a feed system is approved to proceed to pre-feasibility (study now underway). Goal is to have this project gated and approved at the feasibility level before year-end 2016.



Picture from dustboss.com: environmental remediation dust control

4



Community and Family Working Group Report

The Community and Family Working Group met on Monday, April 11. It was a full meeting with balance between tracking actions suggested by the THEC members and requesting THEC member feedback on program communications.

1. Tracking Progress on Actions Requested

- a) We have an updated list of acronyms and glossary of terms as well as a commitment to use acronyms as little as possible –we'll email you the new list
- b) We are doing our best to make presentations understandable – always feel free to let us know when we miss the mark
- c) We will make sure that at a program staff member meets in person with new Committee members before their first meeting – typically, this would be Cindy
- d) Mark and Catherine are arranging a Teck tour for mid July some time and we are invited to attend
- e) The group is Chaired by the Committee Chair or designate; Ruth will draft a Terms of Reference for the next meeting
- f) The group will give input into public consultation plans at its next meeting in June
- g) The next meeting date is June 20 or 27. Ruth will send out a Doodle poll.

2. Feedback on Program Communications

- a) Lead Safe Renovation Project: The group provided some great feedback on different communication avenues, where to show the videos, and suggestions for the new brochure. Also, we're working with Local 480 to promote the videos.
- b) Radio Ads: The group received a presentation from Nicole Beetstra, General Manager of EZ Rock, regarding the purpose and value of radio and playing a sample of three ads based on our proposed new focus and content. The group recommends approval of the radio ad campaign for this year and also recommends a two week run of ads prior to the regular campaign to tell people about us, and two weeks in September to promote the consultation. *Discussion/Motion?*
Things to mention in the ad about us are: over 25 years, big improvements and successes, partnership between the community, Teck, Interior Health and the Ministry of Environment, recognition for success, it starts with the kids,.... *Input?*
- c) Newsletter: The group gave feedback on proposed newsletter topics – see attached. *Input? (fyi, it looks pretty full so if we add something, we may need to remove something)*

Trail Area Health & Environment Program

List of Acronyms and Definitions

Acronym or Term	Definition
Programs	
THEP	Trail Area Health & Environment Program
CPO	Community Program Office - a storefront at 1319 Bay Avenue in Trail that serves as a public resource for the THEP.
HRSP	Home Renovation Support Program - free safety supplies, advice and assistance for people doing residential excavation, construction, demolition or renovation
LSR	Lead Safe Renovation – new, upgraded program for home renovation support – encompasses the Home Renovation Support Program and has new features
LCEMP	Lower Columbia Ecosystem Management Program - activities to remediate and restore land-based ecosystems impacted by the Trail smelter
PDP	Property Development Program - activities that address metals in surface soil during the redevelopment or new development of residential, commercial or industrial lands
Organizations and Groups	
THEC	Trail Area Health & Environment Committee - a partnership between the local community, Teck, Interior Health and the BC Ministry of Environment; provides governance for the THEP
IH	Interior Health
CIHS	Community Integrated Health Services – the service department of Interior Health that participates on the THEC and delivers the Family Health Program
MoE	BC Ministry of Environment
LRS or MoE, LRS	Land Remediation Section of the Ministry of Environment; responsible for the Contaminated Sites Regulation
FAN	Family Action Network – a coalition dedicated to making the Lower Columbia region family friendly
Success by 6	A coalition of early childhood service providers
US CDC	United States Centers for Disease Control and Prevention - part of the US Department of Health and Human Services. Sets guidance on children’s blood lead reference levels, among other things.
Health and Environment Technical Terms	
µg/dL	Microgram per deciliter - a measurement of concentration; used to measure lead in blood
BLL	Blood Lead Level - the concentration of lead in blood
ECD	Early Childhood Development; sometimes also referenced as “the early years”
TSP	Total Suspended Particulate – airborne dust. Lead in Trail air is measured as parts per million total suspended particulate
PM ₁₀	Particulate Matter - solid particles in the air that are smaller than 10 µm (micrometre) in diameter. Arsenic is measured this way because the main exposure pathway is inhalation – it’s the smaller particles that matter.
SO ₂	Sulphur Dioxide - a gas emitted as a result of smelter operations
Enclosure	Referred to in relation to the Fugitive Dust Reduction Program; Three

	dimensional structure that completely seals off the Trail Operations process from the community air
Fugitive Dust	Dust that escapes from smelter buildings, off roadways or outdoor process areas.
mg/kg	Milligrams per kilogram, equivalent to parts per million
ppm	Parts per million, equivalent to mg/kg (milligrams per kilogram)
UCC	Upper Cap Concentration – referred to in relation to soil metal concentrations; it is the concentration of a substance in soil, water, sediment or vapour above which could pose a high risk to the environment or human health
ERA	Ecological Risk Assessment - a process that evaluates the likelihood that adverse effects may occur or are occurring to non-human organisms, as a result of exposure to chemicals and other stressors. Our ERA was completed in xxx and the LCEMP has been developed as the program to address those risks.
HHRA	Human Health Risk Assessment - a process that evaluates the likelihood that adverse effects may occur in people, as a result of exposure to chemicals. We have had 4 phases of risk assessment that assessed the risks from metals other than lead. Dates were:
Regulatory Terms	
CSR	Contaminated Sites Regulation - the law under the Environmental Management Act that addresses the assessment and remediation of areas containing elevated concentrations of chemicals.
WARP	Wide Area Remediation Plan

Less Commonly Used Acronyms and Terms (from the THEP Document)

AiP	Approval in Principle - a legal instrument in British Columbia issued when a remediation plan has been reviewed and approved
AREMP	Aquatic Receiving Environment Monitoring Program - activities to evaluate the ecological condition in the Canadian portion of the Columbia River as part of a permit requirement for Trail Operations effluent discharge
CRIEMP	Columbia River Integrated Environmental Monitoring Program - activities completed by stakeholders from government and industry to assess the status of ecological health of the Canadian portion of the Columbia River
PSI	Preliminary Site Investigation - Evaluation of existing information for a site to determine the areas of potential environmental concern that may require further investigation
US EPA	United States Environmental Protection Agency - branch of the US government responsible for the protection of human health and the environment
US HUD	US Department of Housing and Urban Development - a US federal agency that works to create strong, sustainable, inclusive communities and quality affordable homes for the people of the United States

THEP Spring Newsletter 2016

Proposed Topics

INFORMATION & ANNOUNCEMENT: New Lead Safe Renovation Program

EVENT ANNOUNCEMENT: Home & Garden Days Event

INFORMATION: Outreach to Expectant Families

FEATURE: Meet our THEC Community Reps: Profile on Brandi Thirsk

INFORMATION & ANNOUNCEMENT: Eazy Peezy Washroom at the Program Office

EVENT ANNOUNCEMENT: Summer Events Schedule including new family friendly space at the Trail market

INFORMATION & REQUEST: Dust Study recruiting participants & free family pool passes for first 50 who sign up

INFORMATION & REQUEST: Sandboxes are available upon request.

FEATURE: Photos of our families

POSSIBLY: Mention of being a finalist in the Mining Association of Canada's Towards Sustainable Mining Awards



April 19, 2016

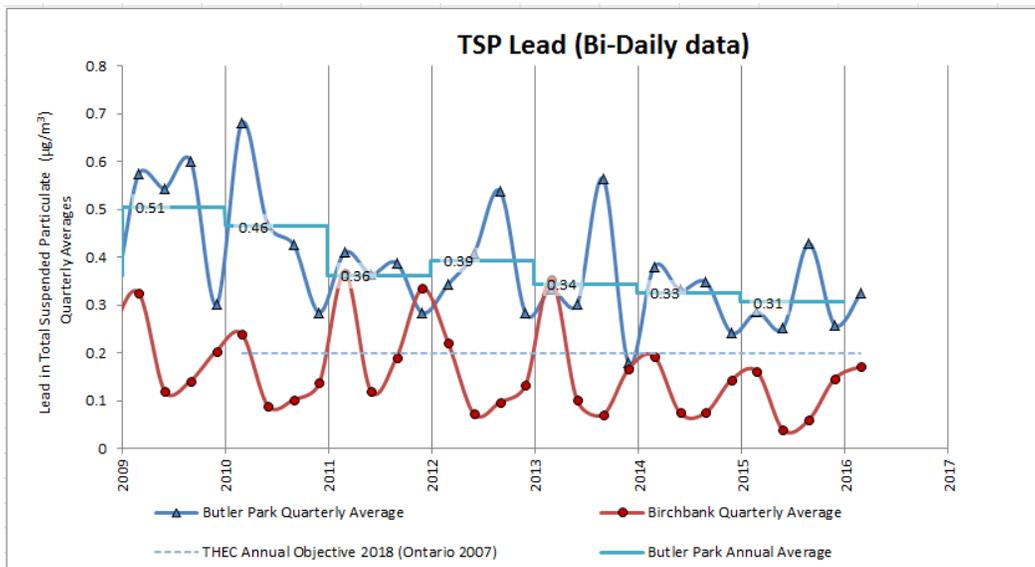
RECENT HIGHLIGHTS

1. Lead in Air:

- The overall average for lead in air for 2015 was the lowest since the 2005 shutdown year.
- The average for the first quarter of 2016 is within the expected seasonal variation.

Details:

The chart shows quarterly averages for Lead in air (measured in Total Suspended Particulate) for Butler Park (dark blue), Birchbank (red), as well as the annual average for Butler Park (light blue), in comparison to the 2018 THEC Air Quality Objective (dashed line). Quarterly averages for Lead in ambient air are expected to have some variability due to season, weather, predominant wind direction and operational variance. For Butler Park the overall annual average for 2015 (0.31 $\mu\text{g}/\text{m}^3$) was the lowest since the 2005 shutdown year. The average for the first quarter of 2016 is within the expected seasonal variation.

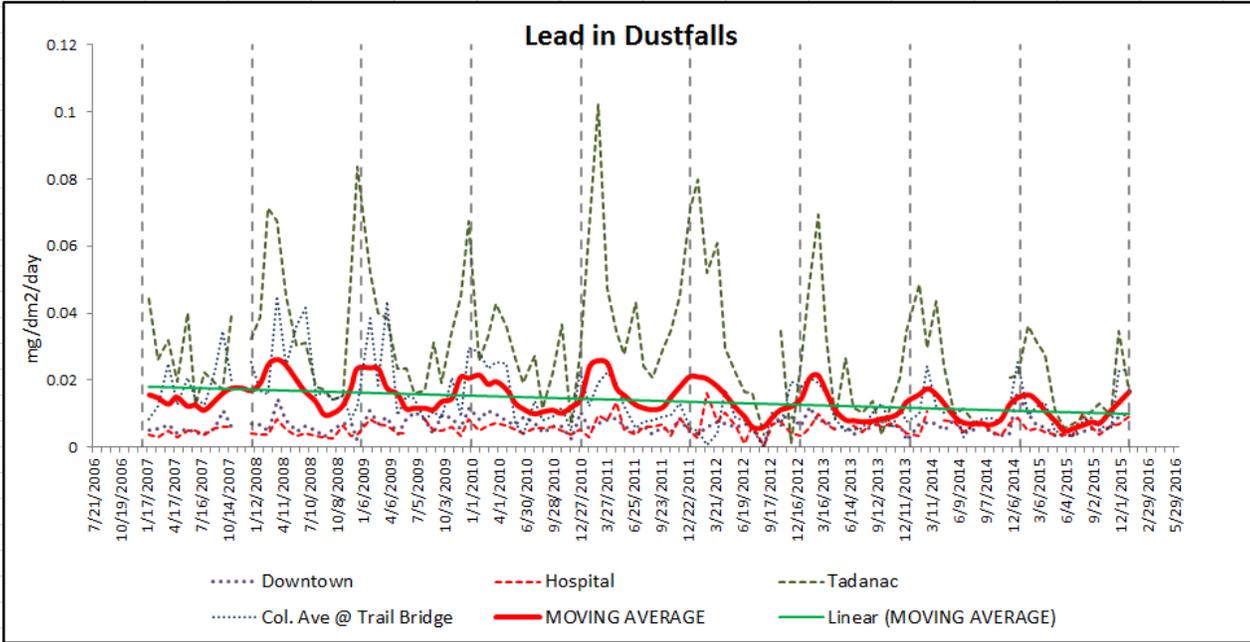


2. Lead in Dustfall

- Lead in dustfall continues to follow expected seasonal variation trend of higher loadings in Q1 and lower loadings in Q3.
- The highest dustfall loadings are in Tadanac, however have been improving since 2008, and the new Recycle Building expected to further reduce levels in Tadanac.

Details:

The chart shows monthly dustfall measurements (measured in as a loading, $\text{mg}/\text{dm}^2/\text{day}$) for Downtown, Hospital, Tadanac and Columbia Ave stations as well as a three month rolling average (bold red line) and a linear trend line (green). Dustfall measurements are more likely to be affected by high wind and precipitation, and are considered less reliable than TSP measurements, however are useful for comparing general neighbourhood and long term trends since there are more stations.

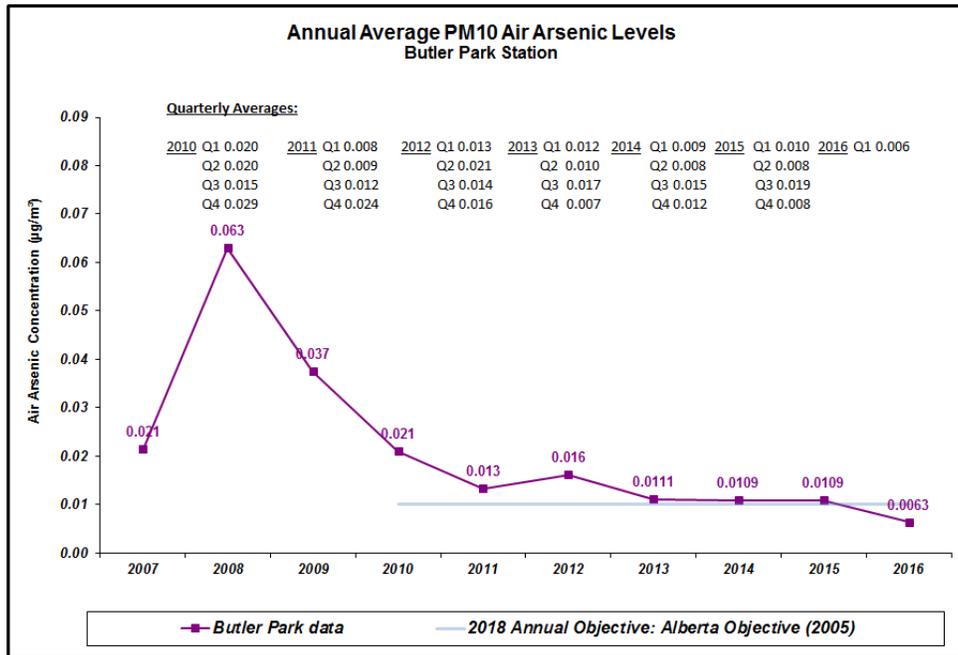


3. Arsenic in Air:

- The annual average for arsenic in air continues to be almost equal to the 2018 objective, and improving.

Details:

The chart shows the annual average for Arsenic in air (measured as inhalable PM₁₀ fraction) for Butler Park (purple) in comparison to the 2018 THEC Air Quality Objective (blue line). Improvements between 2008 and 2011 appear to be the result of maintenance of the Continuous Drossing Furnace and Refinery Scrubber Stack. The 2015 annual average was 0.0109 µg/m³, and for the first quarter of 2016, 0.006 µg/m³.



4. The Air Quality Technical Working Group will be meeting in May 2016, along with Ministry of Environment representatives to discuss proposed new guidelines for sulphur dioxide. THEC members are invited.

ISSUES FOR DISCUSSION

None brought forward.

FAMILY HEALTH REPORT



April 14, 2016

RECENT HIGHLIGHTS

1. February 15th and 16th, 2016 blood lead clinics
 2. Healthy Family Visits
 3. Community Outreach
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ADDITIONAL DETAILS

1. February 15th and 16th, 2016 blood lead clinics
 - 54 children invited
 - 43 children attended
 - 8 unable to attend, 2 no show, 1 not interested
 - 4 out of the 21 Case Management children tested from the Fall 2015 clinic are repeat Case Management. 1 child was unable to attend. All Case Management blood lead results were lower.
 - 2 new Case Management children were identified
 - Contact has been made with all the new Case Management families and all but one repeat Case Management families.
2. Healthy Family Visits
 - 28 done so far 2016
 - 15 since last THEC meeting February 2, 2016
 - 5 more visits scheduled
3. Community Outreach
 - Attended local pregnancy outreach program on February 23rd, April 5th and continue about once a month.
 - Presented at Prenatal Classes on April 14th. Future Prenatal classes to June 9th.
 - Teddy Bear Picnic at Gyro June 15th.
 - Supporting Cindy to provide a family friendly area at the Trail Summer Market over the summer. First Market June 10th. Collaborative initiative with City of Trail, FAN, Success by 6 and CBAL.



April 19, 2016

RECENT HIGHLIGHTS

1. Family Friendly Spaces – Trail Market Family Friendly Area – The THEP has partnered with Family Action Network (FAN) and Greater Trail Success by 6, to host a Family Friendly Area during this year's Trail Market on the Esplanade. The objective is to provide a space at the Trail Market where families can gather, rest, and stay cool while enjoying the market. THEP, FAN and Success by 6 have committed to attending all 10 markets and will provide activities and have an early childhood resource and information booth. Easy Peezy Washroom - We are also pleased to announce the Easy Peezy Washroom for families is now ready at the Community Program Office. Look for a grand opening soon!
2. Soil Programs - Remediation and soil assessment programs are now underway. Soil sampling is complete at all Healthy Homes properties. Vegetable garden replacement and Yard Improvement started last week. Once again we anticipate a very busy remediation season.
3. Dust Study - We are refining the design for the dust study and will be advertising for participants in the Spring Newsletter. If you or people you know in Trail or Rivervale are interested, please contact Liz with your name, address and phone number.

NEWS RELEASE

Finalists selected for 2016 TSM Awards for Community Engagement and Environmental Excellence

Winners to be announced at the CIM Convention in May

OTTAWA, April 18, 2016 – The finalists for the 2016 Towards Sustainable Mining (TSM) Awards for Community Engagement Excellence and Environmental Excellence have been selected and the award winners will be announced on May 2 at the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Awards Gala at the 2016 Convention in Vancouver.

A total of 23 nominations were submitted by mining companies that participate in the TSM initiative, a performance-based program whereby mining operations evaluate, manage and publicly report on critical environmental and social responsibilities. The selection committee, comprised of members from the Mining Association of Canada's (MAC) national Community of Interest (COI) Advisory Panel, selected the finalists based on criteria such as innovation, involvement of and engagement with communities, and project outcomes. TSM performance was also considered as an indicator of the company's ongoing commitment to corporate responsibility.

"We're proud to announce this year's finalists whose projects demonstrate our members' leadership in sustainable mining practices through their innovative approaches to environmental protection and community engagement. This year's nominations are impressive and show how our member companies are making meaningful change at the local level, in Canada and abroad," said Pierre Gratton, President and CEO, MAC.

"From energy diversification and biodiversity to social investment and improved waste management, the finalists in this year's TSM Excellence Awards competition once again demonstrate how the mining sector can contribute to sustainable development around the globe," said Philip Oxhorn, Member of MAC's COI Panel and Professor of Political Science and Founding Director of the Institute for the Study of International Development, McGill University.

TSM Community Engagement Excellence Award – 2016 Finalists

Dominion Diamond Corporation: Partnering with Aboriginal communities to protect caribou in the NWT

The North is experiencing a decline in the Bathurst Caribou Herd population, which is concerning for all northerners, but particularly for Aboriginal peoples. While the cause is unknown, some residents have wondered whether resource development has played a

role. Dominion Diamond Corporation, which took over the Ekati Diamond Mine in the Northwest Territories in 2013, heard these concerns and immediately took action. Working alongside local and Aboriginal communities, Dominion developed Caribou Mitigation Measures to help identify factors behind the herd's decline and to take proactive steps to limit potential impacts from mining activity and the company's proposed Jay Project expansion. Community engagement was paramount to the measures' design, and Aboriginal groups and other stakeholders continue to be integral to their implementation. Aboriginal groups are taking a lead role in monitoring the herd's activities and sharing critical information with the company and Aboriginal and territorial governments to support the management and protection of the herd. Traditional knowledge has been sought out for all measures, which have translated to changes on the ground. For example, Aboriginal groups advised on the design and placement of the future Jay pipe access road to make it more caribou-friendly and so that it crosses at the narrowest point of the Esker—known as a "caribou highway"—to minimize impacts. Traditional knowledge has also contributed to Dominion's reclamation efforts, with Aboriginal groups advising on the locations of wildlife access ramps in the waste rock areas being reclaimed.

Despite the fact that Dominion's research has shown that the Jay Project is expected to contribute little to the cumulative effects on caribou, the company is committed to eliminating any small residual impacts from the Ekati mine on the herd. The company is also lending its support to the territorial government, investing more than \$1 million on Zone of Influence research. The funds will go towards geo-fenced collars, which will generate the data necessary to help the government determine the causes of the herd's decline in the region and develop strategies and plans to improve the health of the caribou population.

Glencore: Helping local non-profits secure long-term sustainability

Glencore's Kidd Operations, including the Kidd Concentrator and the Kidd Mine, is Timmins' largest private-sector employer. Kidd Operations is a major corporate funder in Timmins, and has donated nearly \$4 million towards community initiatives since 2007. With an anticipated closure date of 2022, it has re-invented its corporate giving approach to mitigate impacts of its eventual exit and to ensure that it is contributing to long-term capacity building and sustainability in the community.

Based on stakeholder feedback and identified local priorities, Kidd developed an innovative social investment program called "Community Partnerships", transforming how the site invests in the community. The new model has Kidd taking a proactive approach to social investment by brokering strategic projects to community partners, moving away from traditional corporate philanthropy. This has enabled Kidd to engage meaningfully with stakeholders to design collaborative, multi-partner projects that contribute to the long-term sustainability of the community at large. An example of this was the offering of Timmins' first sustainability conference for the local non-profit sector in 2013. What is also innovative about that model is that it measures social return on investment for the major projects supported allowing Kidd to evaluate the reach of its social investments based on financial and social impact data. For example, Kidd was able to determine its \$320,000 investment in a recent expansion project at a local

retirement home showed a return of \$1.58 for each dollar that Kidd invested into the project.

The success of the Community Partnerships program and its ability to measure social return on investment attracted the attention of Canada's largest public-sector grantmaker, the Ontario Trillium Foundation (OTF). In 2015, Kidd and the OTF launched the \$1 Million Kidd Operations–Ontario Trillium Foundation Legacy Fund. This partnership will see Kidd Operations and the OTF each investing \$500,000 into the Fund, which will begin making grants when Kidd ceases operations. This collaboration, a first for the government agency, paves the way for future private-public sector partnerships.

Iron Ore Company of Canada: Collaborating on community priorities in Labrador West

Over the last few years, communities in Labrador West have experienced the ups and downs associated with the cyclical nature of the mining industry. To help manage community impacts in both boom times and periods of low commodity prices, the Iron Ore Company of Canada (IOC) created the Community Advisory Panel (CAP) in 2006. The consultative forum includes mining company representatives and community stakeholders, and helps IOC respond to the needs of residents of Labrador City and neighbouring communities.

In 2012, IOC took one step further by creating the Regional Task Force (RTF) to complement the CAP's efforts. Where the CAP addresses issues at the local level, the RTF is comprised of industry representatives and senior government officials who address and escalate issues at the provincial or federal levels. Both the CAP and RTF meet four times each year, and their priorities are re-validated annually to ensure they are addressing the most critical community needs at any given period. These groups have generated positive results for the region, including advocating for affordable housing, addressing issues with homelessness, working to ensure the region has appropriate health, emergency and child care services, supporting the development of community infrastructure, and partnering with colleges to improve education and training opportunities.

Although the CAP and RTF were established during times of rapid expansion and growth in the community, IOC believes that multi-stakeholder consultation is equally important in periods of a downturn. That's why IOC remains committed to these forums and has even expanded its stakeholder engagement over the past year. In 2015, IOC introduced Project RESET, working with suppliers and stakeholders to cut \$70 million in business costs to help the company adjust to significant declines in iron ore prices and to enable it to remain a major employer in the region. IOC also increased its engagement with Aboriginal communities, reaching formal agreements with the Innu Nation and the NunatuKavut Community Council to facilitate such benefits as employment, skills training and business development opportunities now and well into the future.

Teck Resources Limited: Community-led partnership to improve family health in Trail, BC

The Trail Area Health and Environment Committee (THEC) is a community-led partnership between Teck Trail Operations, the City of Trail, the BC Ministry of Environment, the Interior Health Authority and local residents. The THEC's core work is to prevent and reduce exposure to lead and other smelter metals in the community, with a particular focus on child health. As young children are most vulnerable to the risks of lead exposure, the THEC works to educate all families of young children to prevent exposure risk in their home and surrounding environment.

The THEC offers a suite of programs that are focused on risk prevention, education and outreach. This includes in-home visits for families with young children, blood lead testing, garden and yard soil testing, and additional support for families where children have levels above the typical range. Furthermore, a Community Program Office is operated in downtown Trail to allow residents to drop in and learn more about family health, home and garden remediation, air quality and other preventative measures. Since 1989, the THEC has achieved many significant outcomes—air quality and blood lead levels have improved considerably, and smelter stack emissions of lead and other metals have been reduced by 99 percent. The THEC's success is attributed to the community playing a leading role in establishing priorities, objectives and targets related to emissions, the environment and health. The structure of the THEC puts the community in the driver's seat—the Chair is the Mayor of Trail, and 11 out of 16 seats are held by community representatives.

The THEC has garnered a reputation as being a leader in collaboration between community, government and industry. Companies and governments across Canada and internationally have asked the THEC to share its experiences at conferences and meetings. It has also been recognized as best practice within the public sector. In 2011, the BC Government awarded the Interior Health Authority and Ministry of Environment with a Premier's Innovation and Excellence Award for Partnership.

TSM Environmental Excellence Award – 2016 Finalists

Agnico Eagle Mines Limited: Contributing to environmental science in Pinos Altos, Mexico

Agnico Eagle's Pinos Altos mine is located in the Sierra Madre Occidental mountain range of Chihuahua about 300 kilometres northwest of the City of Chihuahua. The region surrounding the mine is characterized by a very steep topography with limited road access and a very sparse population. These factors were responsible, in part, for the fact that no thorough inventory of native flora had been performed and documented for the region. As the Pinos Altos staff worked to apply the TSM Biodiversity Conservation protocol, which required the identification of biodiversity in and around the mine site, staff saw an opportunity to expand the scope of its research and contribute more broadly.

In 2013, Agnico Eagle joined forces with the Autonomous University of Chihuahua to perform a thorough forensic inventory. The intention was to develop a book that

inventories native flora of the region, which could be used by the university and other educational institutions in natural resources courses, as well as mine staff in their conservation efforts and project planning. The resulting book, *Pinos Altos, scientific and visual study of flora*, was published in 2015 and contains detailed descriptions of 141 plant species divided in three categories: trees, shrubs and herbaceous species. The inventory also contains traditional use of the species and knowledge from the community. The book has already made a significant contribution to scientific knowledge about the diversity of plant species in the region. In fact, as a result of the research, species of economic interest such as blackberry, wild blueberry and stevia were discovered, which could help diversify the economic activities in the region beyond the dominant forestry industry. The book provides invaluable data for staff at the Pinos Altos mine, and is being used to inform decisions for conservation and restoration programs and regional flora management. The information has also enabled Agnico Eagle to act in advance of impacts by establishing and implementing conservation measures.

Dominion Diamond Corporation: Transforming waste management in Canada's North

When Dominion Diamond Corporation purchased the Ekati Diamond Mine in the Northwest Territories in 2013, the company saw an immediate opportunity to improve the mine's sustainability practices in the area of waste management. Dominion began by purchasing environmentally-friendly products for the mine. This involved changing to corn-oil based garbage bags, sugarcane take-out containers, wooden stir-sticks, and compostable disposable utensils to reduce the amount of chlorine-rich plastics in the waste incinerator.

The company then restricted incineration input to paper and organic waste. Items such as oily rags, glass, plastics, cans, and other recyclables are removed from the mine site by supply plane or winter road, depending on the season. To support staff in the transition to the new processes, Dominion conducted an awareness campaign for all staff on waste management and segregation. By introducing biodegradable products to Ekati and restricting incineration to paper and organic waste, Dominion has prevented nearly 59,000 kilograms of plastics and more than 145,000 kilograms of oily rags from being incinerated since the start of the waste management project, reducing harmful emissions into the environment. Recent testing on Ekati's two incinerators has confirmed that releases of dioxins and furans are now well below the Canada Wide Standard. Further improvements were made in 2015 when Dominion installed an in-vessel composter—the first mine in Canada's North to do so. Now, roughly half of organic waste, such as food waste and paper products, generated at Ekati is composted. After only three months of the composter's operation, the company has saved more than 25,000 litres of diesel and reduced greenhouse gas emissions by 80 tonnes CO₂e by moving away from incineration of organic waste.

Dominion's goal is to compost all organic waste at Ekati in the near future. The company is also conducting a study in 2016 to evaluate the use of the site-generated compost in reclamation work to add nutrients to the tailings and promote vegetation

growth. The composter project has generated positive feedback from local Aboriginal communities, government and community groups. It has also sparked interest among other northern mining operations that are looking for innovative ways to reduce emissions and protect the environment.

Glencore: Putting energy into wind power in northern Quebec

Sitting on a plateau 600 metres high on the Ungava Peninsula in northern Quebec, Glencore's Raglan Mine is well situated to take advantage of the power of wind. In 2014, the company did exactly that when it completed its construction of a 120-metre high wind turbine and storage facility, the largest in Quebec. Like most other northern mines, the off-grid Raglan Mine was heavily dependent on diesel to fuel its operations. With climate change considerations, commitments to limit environmental impacts and rising diesel costs, there was a strong business case for Glencore to explore renewable energy solutions. With the mine situated in the Canadian Arctic, which harbours some of the world's richest wind resource, Glencore set out to diversify its energy mix with wind as a means of improving sustainability, reducing emissions and cutting costs. The project was unprecedented in scale, and was specially designed for severe Arctic climate conditions. The project was a private-public partnership between Raglan Mine, TUGLIQ Energy and the federal and provincial governments. Communities were consulted throughout the project and feedback was acted upon by the company. For example, concerns raised by the Inuit about the potential of blade reflection affecting local fish patterns resulted in Glencore's decision to move the turbine to another location.

In its inaugural year, the 3-megawatt wind turbine and storage facility has already saved 2.1 million litres of diesel and reduced greenhouse gas emissions by 5.85 kilotons. Based on these results, Glencore estimates that it will save more than \$40 million in fuel-related costs over the projected 20-year life of the wind turbine. This successful pilot project could have transformative impacts across northern Canada, helping to pave the way for the more widespread adoption of greener energy alternatives. It is a fully-developed and tested wind power and storage system that could be duplicated into Aboriginal communities and other northern mining operations in the future.

IAMGOLD Corporation: Protecting vulnerable ecosystems and improving biodiversity in Burkina Faso

Growing plants, trees and other flora in the Sahel region of Burkina Faso is challenging given the climate and a shortage of water and the essential minerals needed for plant survival. The environment is also facing a loss of biodiversity due to erosion and desertification. IAMGOLD Corporation, which operates the Essakane Gold Mine in the region, has been working with communities to overcome these challenges through innovative biodiversity initiatives.

One such example is a partnership between the town of Gorum-Gorum and IAMGOLD that resulted in the creation of a communal forest. In 2013, 10,000 seedlings were planted in the 16-hectare forest area. A fence funded by the mine provides needed protection against wildlife that graze in the area, and farmers can obtain feed for their

animals during times when grass is lacking. Village nurseries were created and are run by residents, with the aid of employees from the mine. Community members have been trained in forestry techniques and are able to produce plants for various purposes, including for food, pharmaceutical and economic purposes. The following year, IAMGOLD and the town undertook another project – a school grove consisting of trees and other plants was established at a local school. The grove has not only taught students techniques in planting, but has also empowered them to take an active role in caring for the environment. Additionally, the produce harvested from the grove is used in the school’s canteen for meals for the students and teachers.

The projects’ success is owed to the community for being a driving force behind their design, locations, development and ongoing maintenance. Beyond the socio-economic benefits that the community has generated through these projects, there has also been transformative improvements to the local environment. For example, the communal forest has added needed plant cover for the once degraded area, which will help increase plant diversity and will contribute to carbon sequestration in the region.

The TSM Excellence Awards are intended to acknowledge innovative projects and initiatives that expand and promote sustainable development within the mining sector. For more information about TSM, please visit www.mining.ca/tsm.

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About MAC

The Mining Association of Canada is the national organization for the Canadian mining industry. Its members account for most of Canada’s production of base and precious metals, uranium, diamonds, metallurgical coal, mined oil sands and industrial minerals and are actively engaged in mineral exploration, mining, smelting, refining and semi-fabrication. Please visit www.mining.ca.

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