Mori, Alicia HLTH:EX

From: Wu, Michael [VC] <Michael.Wu@vch.ca>
Sent: March 3, 2015 4:19 PM
To: Fishwick, David HLTH:EX; XT:HLTH MURRAY.SEXTON@CVIHR.BC.CA; [NHA] Tamblyn, Dave; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; [FHA] Tin Tun, U; XT:HLTH Radomske, Wayne
Cc: [NHA] Belanger, Darrell; Gee, Michele HLTH:EX
Subject: RE: Order to assess aggressive/corrosive water?

In VCH, we funded a mini- sampling program of lead and copper in schools. This was in response to media interests a couple years ago. We targeted a few schools with old plumbing and was even planning to issue some public warning. I'll provide more background when I've found it.

Michael Wu, P.Eng.
Public Health Engineer
Vancouver Coastal Health
Phone: 604-675-3860

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, March 03, 2015 4:09 PM
To: XT:HLTH MURRAY.SEXTON@CVIHR.BC.CA; [NHA] Tamblyn, Dave; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; [FHA] Tin Tun, U; [IHA] Radomske, Wayne; Wu, Michael [VC]
Cc: [NHA] Belanger, Darrell; Gee, Michele HLTH:EX
Subject: RE: Order to assess aggressive/corrosive water?

At the FPT cttee this past fall there were similar discussions about responsibility of water suppliers to take corrosion control measures where they know their customers have lead/brass/copper fixtures. – of course no specific resolution to the question. The new proposed HC pH guidelines may be of interest in this subject.

http://www.hc-sc.gc.ca/ewh-semt/consult/_2015/ph/draft-ebauche-eng.php

Dave.

From: Sexton, Murray [mailto:Murray.Sexton@viha.ca]
Sent: Tuesday, March 3, 2015 3:16 PM
To: 'Tamblyn, Dave'; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; XT:HLTH TINTUN@Fraserhealth.ca; XT:HLTH Radomske, Wayne; Wu, Michael [VC]
Cc: Belanger, Darrell; Gee, Michele HLTH:EX; Fishwick, David HLTH:EX
Subject: RE: Order to assess aggressive/corrosive water?

And which District plumbing inspector and building department allowed copper piping to be installed? And brass fixtures? And brass water meters? Etc.,?

From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Tuesday, March 03, 2015 2:19 PM
To: Sexton, Murray; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; Tin Tun; [IHA] Radomske, Wayne; Wu, Michael [VC]
Cc: Belanger, Darrell; 'Gee, Michele HLTH:EX'; 'Fishwick, David HLTH:EX'
Subject: Order to assess aggressive/corrosive water?

Hi - looking for opinions here. The District of Kitimat has a longstanding issue with aggressive water, made marginally worse by gas chlorination (pH 7.2 drops to 6.9 post-chlorination, alkalinity ≈ 10 mg/L). Lead and copper testing in schools (1992, repeated in 2012) shows lead up to .4 mg/L (40xMAC) and copper up to 10 mg/L (10xMAC) for first flush. Interestingly, flushing for up to 10 minutes was usually but not always able to bring them down, even though lead and copper in the mains is negligible.

So we know the schools are bad, but what about residences? A "Tier 2" study would entail about $5300 in lab costs. Fair enough, so who should pay? The District says it's the Health Authority's concern, not theirs (since the watermain levels of lead and copper are low), so the Health Authority should pay. We say, no, it's for the health of your residents, so you should pay. And further, it's information requested by the MHO (DWO), so you have an obligation to provide it under the DWPAct. Eg **11**(1)(b); **19**(1)(a).

> **Water monitoring requirements**
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> **11** (1) In the case of a prescribed water supply system, the water supplier must
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To which the District replies, ok, but the water supply system does not include any building system (prescribed as excluded from the definition of a water supply system in DWPReg **3**(c)), so you cannot ask us to sample from residents' taps.

And here we sit stuck at an impasse. Basically, the District doesn't want to spend any money on an upgraded water treatment facility. Anyone have experience/insight into how we can move this forward? How do other HAs handle testing for lead and copper and manage aggressive/corrosive water?

If necessary, Northern Health might be able to come up with $5k for the sampling, but I hope we can find a more elegant resolution. We also have aggressive water in several more water systems along the coast mountains, that have never been tested for lead and copper (Michael? am I correct that there was any targetted testing?) so we are cautious about establishing precedents we don't want to follow in the future.

All comments/questions/suggestions welcome. Would the Ministry be interested in funding a case study?

Thanks,
DRT.

Dave Tamblyn
Public Health Engineer
Northern Health Authority
Tel: 250-565-2150
Fax: 250-565-2144
dave.tamblyn@northernhealth.ca
www.northernhealth.ca
www.healthspace.ca/nha
the northern way of caring

Mori, Alicia HLTH:EX

From: Wu, Michael [VC] <Michael.Wu@vch.ca>
Sent: March 4, 2015 11:29 AM
To: [NHA] Tamblyn, Dave; XT:HLTH Radomske, Wayne; XT:HLTH MURRAY.SEXTON@CVIHR.BC.CA; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; [FHA] Tin Tun, U
Cc: [NHA] Belanger, Darrell; Gee, Michele HLTH:EX; Fishwick, David HLTH:EX
Subject: RE: Order to assess aggressive/corrosive water?
Attachments: Lead and Copper October2013 final .docx

I know the situation is very different here. THE VCH document that was sent out to school districts is attached for your reference.

Michael Wu, P.Eng.
Public Health Engineer
Vancouver Coastal Health
Phone: 604-675-3860

From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Tuesday, March 03, 2015 9:23 PM
To: [IHA] Radomske, Wayne; 'Sexton, Murray'; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; [FHA] Tin Tun, U; Wu, Michael [VC]
Cc: [NHA] Belanger, Darrell; 'Gee, Michele HLTH:EX'; 'Fishwick, David HLTH:EX'
Subject: RE: Order to assess aggressive/corrosive water?

Thanks all. Good comments.
It probably doesn't matter, but Kitimat has a unique history - it didn't "develop" over time like most places in the south; it was constructed all at once in the mid 1950s to house the workers at the new Alcan smelter, which is tied to the Nechako River being dammed and thousands of km2 of drainage area that once flowed down the Fraser now plunging 800 m downhill at Kemano to generate 900 MW of electrical power. Kitimat went from population

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From: Radomske, Wayne <Wayne.Radomske@interiorhealth.ca>
Sent: March 3, 2015 16:57
To: Tamblyn, Dave; 'Sexton, Murray'; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; Tin Tun; Wu, Michael [VC]
Cc: Belanger, Darrell; 'Gee, Michele HLTH:EX'; 'Fishwick, David HLTH:EX'
Subject: RE: Order to assess aggressive/corrosive water?

s.13

From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Tuesday, March 03, 2015 2:19 PM
To: 'Sexton, Murray'; Neville, Curtis; Crowe, Marianne; Tin Tun; Radomske, Wayne; Wu, Michael [VC]
Cc: Belanger, Darrell [NHA]; 'Gee, Michele HLTH:EX'; 'Fishwick, David HLTH:EX'
Subject: Order to assess aggressive/corrosive water?

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So we know the schools are bad, but what about residences? A "Tier 2" study would entail about $5300 in lab costs. Fair enough, so who should pay? The District says it's the Health Authority's concern, not theirs (since the watermain levels of lead and copper are low), so the Health Authority should pay. We say, no, it's for the health of your residents, so you should pay. And further, it's information requested by the MHO (DWO), so you have an obligation to provide it under the DWPAct. Eg 11(1)(b); 19(1)(a).

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To which the District replies, ok, but the water supply system does not include any building system (prescribed as excluded from the definition of a water supply system in DWPReg 3(c)), so you cannot ask us to sample from residents' taps.
And here we sit stuck at an impasse. Basically, the District doesn't want to spend any money on an upgraded water treatment facility. Anyone have experience/insight into how we can move this forward? How do other HAs handle testing for lead and copper and manage aggressive/corrosive water?
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All comments/questions/suggestions welcome. Would the Ministry be interested in funding a case study?

Thanks,

DRT.

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dave.tamblyn@northernhealth.ca
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the northern way of caring

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: March 4, 2015 11:55 AM
To: 'Wu, Michael [VC]'; XT:HLTH Radomske, Wayne; XT:HLTH MURRAY.SEXTON@CVIHR.BC.CA; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; [FHA] Tin Tun, U
Cc: Belanger, Darrell; Gee, Michele HLTH:EX; Fishwick, David HLTH:EX
Subject: RE: Order to assess aggressive/corrosive water?
Attachments: image001.emz; image005.emz

Thanks Michael. For everyone's edification, here is the summary graph showing the effectiveness of a 5-minute flush at Drinking Fountains (DF) and Dead Ends (DE) in schools in 2012. Of note, the uncertain effectiveness of flushing (sites circled in red – 40% of sites for lead and 60% of sites for copper failed our criteria). Flushing for 5 minutes does not guarantee safe levels, in this case. Similar to VCH, we sent a letter to all the schools outlining our concerns and got almost no parental interest/response.
DRT.

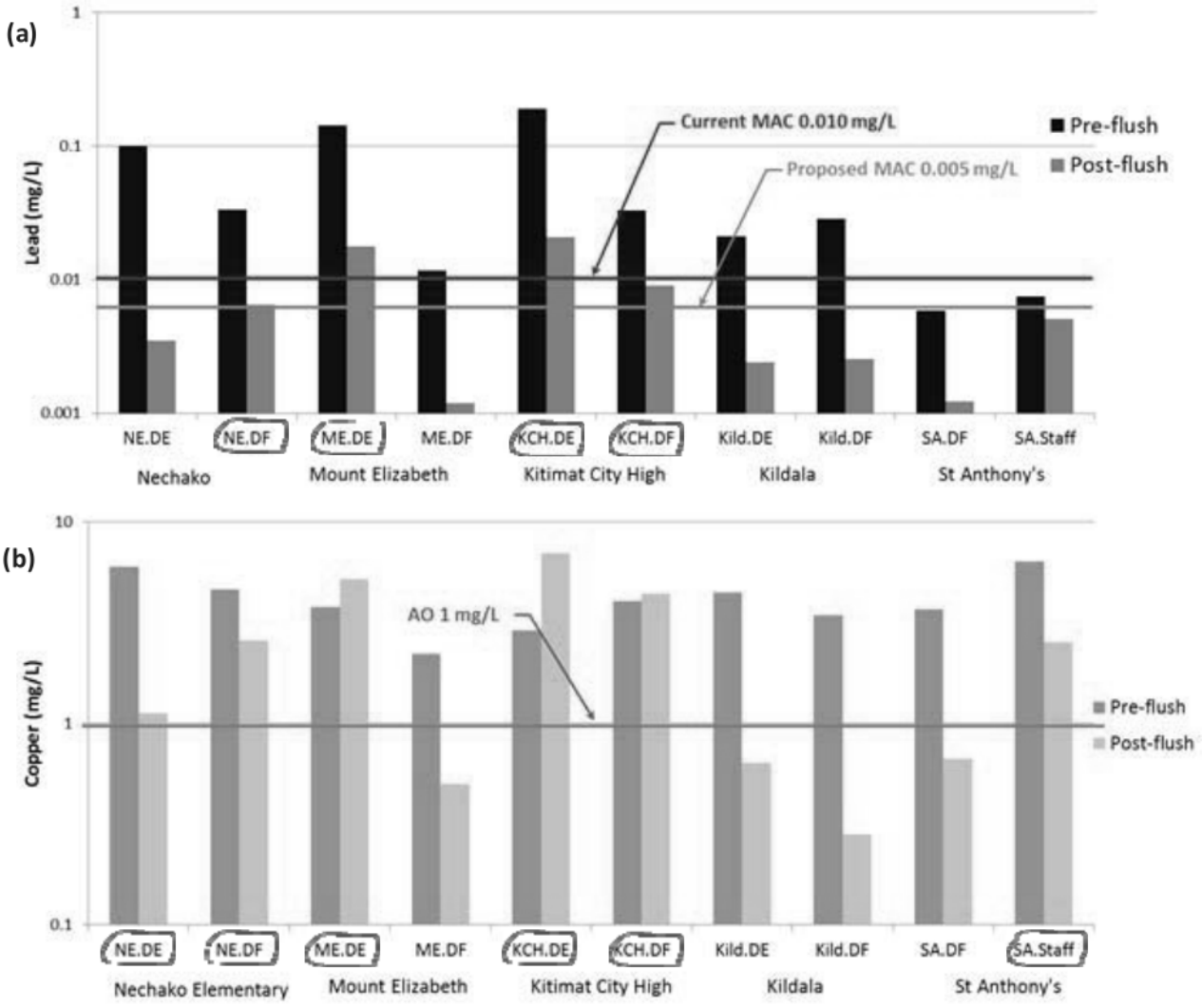


Figure 4. (a) Lead and (b) Copper sampling at all schools.

From: Wu, Michael [VC] [mailto:Michael.Wu@vch.ca]
Sent: Wednesday, March 04, 2015 11:29
To: Tamblyn, Dave; [IHA] Radomske, Wayne; 'Sexton, Murray'; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; [FHA] Tin Tun, U
Cc: Belanger, Darrell; 'Gee, Michele HLTH:EX'; 'Fishwick, David HLTH:EX'
Subject: RE: Order to assess aggressive/corrosive water?

I know the situation is very different here. THE VCH document that was sent out to school districts is attached for your reference.

Michael Wu, P.Eng.
Public Health Engineer
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Phone: 604-675-3860

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To: [IHA] Radomske, Wayne; 'Sexton, Murray'; [IHA] Neville, Curtis; [IHA] Crowe, Marianne; [FHA] Tin Tun, U; Wu, Michael [VC]
Cc: [NHA] Belanger, Darrell; 'Gee, Michele HLTH:EX'; 'Fishwick, David HLTH:EX'
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Cc: Belanger, Darrell; 'Gee, Michele HLTH:EX'; 'Fishwick, David HLTH:EX'
Subject: RE: Order to assess aggressive/corrosive water?

s.13

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Sent: Tuesday, March 03, 2015 2:19 PM
To: 'Sexton, Murray'; Neville, Curtis; Crowe, Marianne; Tin Tun; Radomske, Wayne; Wu, Michael [VC]
Cc: Belanger, Darrell [NHA]; 'Gee, Michele HLTH:EX'; 'Fishwick, David HLTH:EX'
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DRT.

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Fax: 250-565-2144
dave.tamblyn@northernhealth.ca
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Mori, Alicia HLTH:EX

From: Zemanek, Michael HLTH:EX
Sent: March 10, 2015 12:47 PM
To: Fishwick, David HLTH:EX
Subject: RE: Comments on the pH Document

Hi Dave,

I would tend to agree with you, however, to cover the bases, we should confirm with DWO's that they would feel the same way and not demand extraordinary responses to pH.

Regards,

Mike Zemanek, M.Sc. P.Eng.
Director
Healthy Community Environments
B.C. Ministry of Health
PO BOX 9646 Stn Prov Govt
Victoria BC V8W 9P1

ph.: 250-952-2372
e-mail: Michael.Zemanek@gov.bc.ca

From: Fishwick, David HLTH:EX
Sent: Thursday, March 5, 2015 4:04 PM
To: Zemanek, Michael HLTH:EX
Subject: FW: Comments on the pH Document

Hi Mike:

Just an FYI I think. I've heard a couple of concerns about the new range proposed in the pH document, which is higher than previous versions, as a lot of BC water is of pH lower than the proposed range. That said it is not a MAC, and is an objective targeted at corrosion control etc., so I don't see it as a show stopper.

Dave.

From: Magee, Lynne HLTH:EX
Sent: Thursday, February 19, 2015 9:32 AM
To: Fishwick, David HLTH:EX
Subject: Comments on the pH Document

Hi Dave

I have no concerns with the document.

I don't know about operational costs, but could see a lot of systems continuing to operate with lower pH in the distribution system, in the absence of metals such as lead above the MAC's. This does highlight the need for taking

chemical samples in the distribution system on a regular basis – seems to me at Island Health we tend to take raw samples. We might need to look at our procedures.

Lynne

Lynne Magee, BSc, CPHI(C)
Provincial Drinking Water Officer
Office of the Provincial Health Officer – Ministry of Health
Ph: 250.952.1572 Fx: 250-952-1362 | 4-2, 1515 Blanshard St. Victoria BC V8W 3C8
Warning: *This email is intended only for the use of the individual or organization to whom it is addressed. It may contain information that is privileged or confidential. Any distribution, disclosure, copying, or other use by anyone else is strictly prohibited. If you have received this in error, please telephone or e-mail the sender immediately and delete the message.*

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: March 12, 2015 12:08 PM
To: Fishwick, David HLTH:EX
Subject: lead guideline change

Importance: High

Hi Dave,
I need to know if there is or has been any discussion at the Health Canada FPT Committee around lead and **reducing the lead MAC level to 5 µg/L** (currently 10 µg/L) **with an objective of ALARA**. I've been telling people there is, so if I'm wrong, I need to get the correction out ASAP before I cause any more damage. I thought I heard you saying this in one of the DWLC calls that Bruce Gaunt was on, but I may be confused. Please let me know!
Thanks,
DRT.

Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

Mori, Alicia HLTH:EX

From: Anne Vezina <anne.vezina@hc-sc.gc.ca>
Sent: April 23, 2015 8:23 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: WQHB@hc-sc.gc.ca; kristina.taracha@hc-sc.gc.ca; Rocio Aranda-Rodriguez; Anca-Maria Tugulea; doug.spry@ec.gc.ca; Gary.OToole@gov.ns.ca; philippa.cureton@ec.gc.ca
Subject: pH of drinking water
Attachments: pH 2015-0422 for CDW final approval).pdf; pH 2015-0422 compared to consultations.pdf; pH_Public Comments_Table 2015-0422.pdf

CDW folks and secretariat,

You will find attached the document on the pH of drinking water for your review (clean and compared since consultations) and the table of comments and responses from consultation as well:

Please let me know if you cannot attend the meeting in person - I will send you the call-in information.

Thank you!
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 5, 2015 9:18 AM
To: XT:HLTH Parsonage, Roger; 'Angela.Wheeler@northernhealth.ca'
Subject: FPT - CDW Report May 2015.pptx
Attachments: FPT - CDW Report May 2015.pptx

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 10, 2015 3:28 PM
To: 'Wheeler, Angela'
Subject: RE: Fw: information request

Hi Angela:
Were any of your folks ever able to help Health Canada with this?

Dave

From: Wheeler, Angela [mailto:Angela.Wheeler@northernhealth.ca]
Sent: Thursday, May 7, 2015 11:52 AM
To: Fishwick, David HLTH:EX
Subject: RE: Fw: information request

Thanks!

Did they have a timeline in mind for this information? The Terrace inspector is away until the 19th. And I do not have the access level to our database that Bruce had. One more thing to work on!

Angela

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, May 07, 2015 11:40 AM
To: Wheeler, Angela
Subject: Re: Fw: information request

Great.
I've already told them there will be no info on private wells.
D.

From: Wheeler, Angela [mailto:Angela.Wheeler@northernhealth.ca]
Sent: Thursday, May 07, 2015 02:36 PM
To: Fishwick, David HLTH:EX
Subject: RE: Fw: information request
HI Dave,

We may have some of the requested information, likely as it pertains to permitted systems. Individual wells are mentioned in the note. If there are also looking for information private systems, we would not be able to do that. I will forward the request to the inspector for Kitimat/Terrace. She should be able to relay the information she has available. I don't anticipate that there is much information on THM's.

Angela

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, May 06, 2015 7:47 AM
To: Wheeler, Angela
Cc: 'anca-maria.tugulea@hc-sc.gc.ca'; 'anne.vezina@hc-sc.gc.ca'
Subject: Re: Fw: information request

Hi Angela:

Just following up on this as I was chatting with Health Canada folks today. Do you have access to this kind of info?

Dave.

From: Fishwick, David HLTH:EX
Sent: Wednesday, April 29, 2015 02:05 PM
To: 'Wheeler, Angela' <Angela.Wheeler@northernhealth.ca>
Cc: 'Anca-Maria Tugulea' <anca-maria.tugulea@hc-sc.gc.ca>; 'Anne Vezina' <anne.vezina@hc-sc.gc.ca>
Subject: RE: Fw: information request
Hi Angela:

Health Canada is starting a new CHMS (Canadian Health Measurement Study) site for VOCs (THMs and BTEX) in tap water, and is planning to look at water in Terrace and Kitimat.
Are you able to provide Anca from Health Canada with the information requested below, or direct her to where it can be found?

Dave

From: Anca-Maria Tugulea [mailto:anca-maria.tugulea@hc-sc.gc.ca]
Sent: Tuesday, April 28, 2015 7:28 PM
To: Anne Vezina
Cc: Fishwick, David HLTH:EX
Subject: Re: Fw: information request

Thank you, Anne.

Anca
613-948-7631

From: Anne Vezina/HC-SC/GC/CA
To: David.Fishwick@gov.bc.ca
Cc: Anca-Maria Tugulea/HC-SC/GC/CA@HWC
Date: 2015-04-28 04:49 PM
Subject: Fw: information request

Hi David,

Anca-Maria would need some information about Terrace and Kitimat in BC (see her email below).

Would you be able to assist her with this request please? I cc'd her so you can respond directly.

Thank you!
Anne

_____
Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau

Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

----- Forwarded by Anne Vezina/HC-SC/GC/CA on 2015-04-28 04:46 PM -----

From: Anca-Maria Tugulea/HC-SC/GC/CA
To: Anne Vezina/HC-SC/GC/CA@HWC
Date: 2015-04-28 03:32 PM
Subject: information request

Hello Anne,

This is one of my usual requests for information before starting a new CHMS (Canadina Health Measurement Study) site for VOCs (THMs and BTEX) in tap water.

This request is for information about Terrace, BC and Kitimat, BC.

I would like to know what to expect at these sites (they form one CHMS site).

- how many different water treatment systems are there?
- how hard is the water likely to be?
- are there a lot of individual wells and how likely is it that these will use chlorination?
- What are highest concentrations for individual THMs to be expected during May-June?

This information will help me decide how many dilutions (and at what level of dilution) to set up for the analysis of tap water samples.
It will save us a lot of unnecessary work and money and allow us to avoid the risk of loosing samples.

If more information about the study, why we ask for the information and how it will be used is required, I am willing to provide it at any time.

Thank you for all your help,

Dr. Anca-Maria Tugulea
Exposure and Biomonitoring Division
Environmental Health Science and Research Bureau
Environmental and Radiation Health Sciences Directorate
Tel:(613) 948-7631
Fax: (613) 946-3573

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: June 10, 2015 3:51 PM
To: Fishwick, David HLTH:EX; [IHA] Norlin, J Ivor; [NHA] Wheeler, Angela; [FHA] Zubel, Marc; 'Anderson, Gary D'
Cc: Zemanek, Michael HLTH:EX; 'Sylvia Struck'
Subject: RE: Health Canada Data request - copper in drinking water
Attachments: Lead and Copper October2013 final .docx

Hi David – I would love to help work on developing a database that we could use to pull this sort of information together for you – but currently we do not have such a thing. I do have some ideas as to how to go about it and briefly discussed this with Mike at the end of our day last Friday…
Here is a document we put together regarding lead and copper in building systems (not source water)… I hope it is of some help.

Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, June 10, 2015 3:33 PM
To: [IHA] Norlin, J Ivor; [NHA] Wheeler, Angela; [FHA] Zubel, Marc; Clarkson, Len [STS]; 'Anderson, Gary D'
Subject: FW: Health Canada Data request - copper in drinking water

Hi Folks:
As I briefly mentioned at last weeks meeting, copper is one of the parameters that Health Canada is looking at updating. If you are able to respond and provide information on any or all of the questions below it would be much appreciated. They are targeting July 17th .

From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: Tuesday, June 9, 2015 11:14 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Leigh Anne Lepine; Humera Ibrahim; Sarah Jane Payne; Sandrine Chebekoue
Subject: Data request - copper in drinking water

CDW members,

Our evaluation team for copper is looking for up to date data on **copper** levels in drinking water. We are requesting monitoring data from the provinces and territories as we would like to compile all monitoring data available **from the last 5 to 10 years**. The team also has some questions regarding exposure, treatment and analytical methods.

Exposure Data/Treatment

Please provide the concentration of copper measured in drinking water, noting:
1. date, sample location (raw water-ground or surface, water treatment plant, distribution system, or tap)
2. frequency of monitoring
3. if the sample is flushed (yes/no)

Any additional details on water quality (pH, alkalinity) would also be very helpful.

Analytical Methods

1. What methods are being used to measure copper?
2. What is the associated detection limit or type (ie. Minimum Level (MDL), Reporting Level (MRL))?
3. If available, please specify the copper fraction measured (total or dissolved).

Could you please provide us with the monitoring data by **July 17th**?

Thank you all in advance,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 11, 2015 8:48 AM
To: 'Zubel, Marc'
Subject: RE: Health Canada Data request - copper in drinking water

OK Thanks.

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Thursday, June 11, 2015 8:02 AM
To: Fishwick, David HLTH:EX
Cc: Haworth, Barb; Choquette, Blair; Lutz, Jeniene; Freer, Kevin; Struck, LLoyd; Sivia, Binny
Subject: RE: Health Canada Data request - copper in drinking water

Hi David: Information on Copper levels is available on hard copy lab reports for hundreds of our water systems, dating back 10 years. Unfortunately, the data is on hard copies and we do not have this information compiled in any easily extractable electronic formats; and we do not have the resources to go through the hundreds of reports to extract the kind of information that is being requested.

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, June 10, 2015 3:33 PM
To: [IHA] Norlin, J Ivor; [NHA] Wheeler, Angela; Zubel, Marc; [VCH-PHC] Clarkson, Len [STS]; 'Anderson, Gary D'
Subject: FW: Health Canada Data request - copper in drinking water

Hi Folks:

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From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: Tuesday, June 9, 2015 11:14 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Leigh Anne Lepine; Humera Ibrahim; Sarah Jane Payne; Sandrine Chebekoue
Subject: Data request - copper in drinking water

CDW members,

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Any additional details on water quality (pH, alkalinity) would also be very helpful.

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Could you please provide us with the monitoring data by **July 17th**?

Thank you all in advance,
Anne

_____
Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Norlin, J Ivor <JIvor.Norlin@interiorhealth.ca>
Sent: June 12, 2015 2:41 PM
To: Fishwick, David HLTH:EX
Subject: RE: Health Canada Data request - copper in drinking water
Attachments: copper sample results fiscal 2010-11.pdf; copper sample results fiscal 2011-12.pdf; copper sample results fiscal 2012-13.pdf; copper sample results fiscal 2013-14.pdf; copper sample results fiscal 2014-15.pdf

Hey Dave,

Attached are the records I pulled from our databased on copper for the past five fiscal years. The export function from our HedgeHog is finicky, so if they want it in Excel or some other format they will need to come back and ask.

As for the context questions:
1. date, sample location (raw water-ground or surface, water treatment plant, distribution system, or tap)
Unless otherwise indicated in the record should assume tap sample.
2. frequency of monitoring
Will have been a grab or follow-up sample. We don't keep records of routine chemical sampling; that is something the water supply is expected to do.
3. if the sample is flushed (yes/no)
Assume yes.

Unless indicated on the sample record (which I don't believe it is) we would need to follow up with the specific labs use to confirm methods. This is something I will do if asked, but will wait to asked explicitly (a little busy up here☺).

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, June 10, 2015 3:33 PM
To: Norlin, J Ivor; Wheeler, Angela [NHA]; [FHA] Zubel, Marc; 'Clarkson, Len [STS]'; 'Anderson, Gary D'
Subject: FW: Health Canada Data request - copper in drinking water

Hi Folks:
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Sent: Tuesday, June 9, 2015 11:14 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Leigh Anne Lepine; Humera Ibrahim; Sarah Jane Payne; Sandrine Chebekoue
Subject: Data request - copper in drinking water

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Could you please provide us with the monitoring data by **July 17th**?

Thank you all in advance,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
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Direction de la sécurité des milieux
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Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: October 28, 2015 10:24 AM
To: 'Choquette, Blair'
Subject: RE: Regulating Corrosion Control Systems in Residential Building

Hi Blair:

My take on this is that these are generally out of the jurisdiction of the DWPA as they are within the building, therefore being a building system. I am of the view that our "public health" jurisdiction generally stops at the curb stop, where the plumbing code begins and we get onto people's private properties. We don't inspect people's under the counter kitchen sink filter systems either.

That said, I'm sure there are exceptions where health could be involved, such as schools, where it becomes a public health issue, and the Public Health Act could be applied. Corrosion leading to leaching of lead and copper (among other things) could be a health issue, as well as products potentially added to control this. I'm not sure what evidence the plumbing inspector used to determine that there was a potential health hazard.

A bigger question is whether the water supplier has a duty to deliver water that is not corrosive, thereby negating the need for such units altogether. The latest pH guidance from Health Canada speaks to this, which will be released soon. In the meantime we have the following: http://hc-sc.gc.ca/ewh-semt/pubs/water-eau/ph/index-eng.php

Hope this helps, but feel free to give me call if you want to discuss more.

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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From: Choquette, Blair [mailto:Blair.Choquette@fraserhealth.ca]
Sent: Wednesday, October 28, 2015 9:37 AM
To: Fishwick, David HLTH:EX
Subject: Regulating Corrosion Control Systems in Residential Building

Hey Dave

Do you have any thoughts on the regulating of corrosion control systems in residential buildings ? Our position in Fraser has been that these types of installations fall under the jurisdiction of the plumbing code (see attached letter). However, a recent Building Code Appeal Board decision (attached) stated that these types of installation may "endanger health". Unfortunately, I have no context for this decision other than what is written. I received a copy of this

decision from a local plumbing inspector. I checked out the Boards website and the decision has yet to be posted. Also, I received a call from a large strata (50 + units) that is looking at installing one of these systems. The strata is aware of the Board's decision and is looking for some guidance. Do we need to re-think our position based on the appeal board's decision?

http://www2.gov.bc.ca/gov/content/industry/construction-industry/building-codes-standards/building-code-appeal-board

Thank you

Blair

Blair Choquette
Environmental Health Services
Fraser Health
207-2776 Bourqin Cres West,
Abbotsford, BC V2S 6A4

Tel: (604) 870-7921 Fax: (604) 870-7901
Toll Free 1 866-749-7900
e-mail: blair.choquette@fraserhealth.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 2, 2015 4:05 PM
To: 'Khan, Haseen'; 'Deshpande, Satish (MOECC)'; 'Pat.Brooks@gov.yk.ca'; 'Sam.Ferris@wsask.ca'; 'MLeBlanc-Havard@GOV.NU.CA'; 'Kim.Philip@gov.mb.ca'; 'donald.reid@gov.ab.ca'; 'Peter_Workman@gov.nt.ca'; 'POLEGAAR@gov.ns.ca'; 'ghsomers@gov.pe.ca'; 'Kevin.Gould@gnb.ca'
Cc: 'Anne Vezina'
Subject: RE: Drinking water surveillance/monitoring programs

Hi folks – we don't have a centralized surveillance/monitoring program.

From: Khan, Haseen [mailto:hkhan@gov.nl.ca]
Sent: Monday, November 2, 2015 4:55 AM
To: 'Deshpande, Satish (MOECC)'; Pat.Brooks@gov.yk.ca; Sam.Ferris@wsask.ca; MLeBlanc-Havard@GOV.NU.CA; Kim.Philip@gov.mb.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; POLEGAAR@gov.ns.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca
Cc: Anne Vezina
Subject: RE: Drinking water surveillance/monitoring programs

Satish;

The Province of Newfoundland and Labrador is responsible for drinking water quality monitoring for all public water supplies in the province. This monitoring program consists of 529 water distribution systems. The program includes:

- Source inorganic sampling – once every three years
- Tap inorganic sampling – a minimum of two times per year
- THM/HAA – 4 times per year for all chlorinated surface water supplies

The Policy for Drinking Water Quality Monitoring and Reporting in Public Water Supplies lists the specific parameters sampled under this program and is available online at:
http://www.env.gov.nl.ca/env/waterres/regulations/policies/water_quality.html

In addition, special parameter monitoring is conducted for emerging or contaminants of concern on an as-needed basis. Parameters to date include:

- Asbestos
- Bromate
- Carbon tetrachloride & benzene
- NDMA
- Radiological parameters
- Vinyl chloride

Reports for the special parameter monitoring is available online at:
http://www.env.gov.nl.ca/env/waterres/quality/drinkingwater/spm.html

Haseen Khan, P.Eng.
Director
Water Resources Management Division
Department of Environment and Conservation
4th Floor, Confederation Building West Block
PO Box 8700

St. John's NL Canada A1B 4J6
T (709) 729-2563
F (709) 729-0320
E hkhan@gov.nl.ca
www.gov.nl.ca/env

From: Deshpande, Satish (MOECC) [mailto:Satish.Deshpande@ontario.ca]
Sent: Tuesday, October 27, 2015 1:45 PM
To: Pat.Brooks@gov.yk.ca; Sam.Ferris@wsask.ca; MLeBlanc-Havard@GOV.NU.CA; Kim.Philip@gov.mb.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; POLEGAAR@gov.ns.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; Khan, Haseen; Kevin.Gould@gnb.ca
Cc: Anne Vezina
Subject: Drinking water surveillance/monitoring programs

Hello Colleagues,

Ontario is looking at its well-known Drinking Water Surveillance Program to assess the type of information it gathers and would like to know what data other provinces/territories gather on either a routine or event-based basis.

Can you tell me if you have any monitoring programs (non-regulatory) that assess contaminants that may impact drinking water on either a routine or a one-of basis please?

I can collate the info and send to each of you after.

Thanks and let me know if you have any questions.

Satish

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Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: November 13, 2015 11:34 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Leigh Anne Lepine; Joyce Mortimer; Anne Vezina; Wendy Enright
Subject: CDW: Request for impact paragraph for lead document
Attachments: Lead 2015-1113 (draft for public consultation).pdf

CDW members,

The Guideline Technical Document for lead was approved at the May 2015 meeting. The current draft is attached below for your information.

(See attached file: Lead 2015-1113 (draft for public consultation).pdf)

Please send us your impact paragraph to add into the consultation document (or a nil response) by December 4, 2015.

Thank you!

Joyce Mortimer (on behalf of Anne Vézina)
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Kristina Taracha <kristina.taracha@hc-sc.gc.ca>
Sent: November 19, 2015 6:29 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Anne Vezina; Joyce Mortimer; Veronique Morisset
Subject: Consultation on the Best Practice regarding THMs Levels

Dear Provincial FTP Committee Representatives,

As briefly discussed in our recent FPT committee meeting this month, we have been looking into the issue of THMs exceedances in the First Nations communities. To take the next steps toward addressing this issue, it would be very helpful for us to know what approaches you take when you encounter with THMs exceedances in your provinces/territories for longer time. While some of you has already provided your feedback, I would greatly appreciate if you could provide us more detailed information regarding the questions below:

1- Does your approach regarding THMs exceedances in water systems include issuing drinking water advisories? If yes, what kind of drinking water advisories do you issue in such cases?

2- With any of these advisories, is bottled water provided to the consumers?

3- Do you have systems suffering long-term (over 5 years) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given a higher funding priority to address any upgrades, thus to address the THM issues?

4- Do you have systems with consistently high (3x-5x the MAC) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given higher priority for funding in terms of upgrades to address the THM issues?

5- Is there any time frame after which you exercise your enforcement?

6- To what level do the sampling and analysis of THMs follow the guideline procedures provided in the GCDWQ? Do you suspect that the exceedances might be related to longer sample storage (than suggested in the guideline) before analysis?

7- Does your action plan include any other steps not discussed above?

Thank you in advance for your support and help,

Kristina

G. Kristina Taracha , P.Eng
Manager, Drinking Water & Public Health Engineering Units
Gestionnaire, les sections de l'eau potable & du génie sanitaire
First Nations & Inuit Health Branch | Direction générale
de la santé des Premières nations et des Inuits, EPHD/DSEP
Health Canada / Santé Canada
200 Eglantine Driveway, Tunney's Pasture
Ottawa, Ontario K1A 0K9
Tel.: **NEW TEL. 613-323-6447**
e-mail: kristina.taracha@hc-sc.gc.ca

Mori, Alicia HLTH:EX

From: Polegato, Angelina R <Angelina.Polegato@novascotia.ca>
Sent: November 20, 2015 8:55 AM
To: 'Kristina Taracha'; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Anne Vezina; Joyce Mortimer; Veronique Morisset
Subject: RE: Consultation on the Best Practice regarding THMs Levels

Hello,

Please see responses below.

Take Care,

Angelina

From: Kristina Taracha [mailto:kristina.taracha@hc-sc.gc.ca]
Sent: Thursday, November 19, 2015 10:29 AM
To: Polegato, Angelina R ; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
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1- Does your approach regarding THMs exceedances in water systems include issuing drinking water advisories? If yes, what kind of drinking water advisories do you issue in such cases?

In Nova Scotia we have not issued a drinking water advisory for THMs. This is determined in consultation with our Medical Officer of Health (MOH). We require the Owner to retain a certified professional to prepare an action plan (outlining corrective measures and a schedule of implementation of the corrective measures) to be submitted within 30 days of receiving notice of the exceedance.

2- With any of these advisories, is bottled water provided to the consumers?

No advisories have been issued due to an exceedance of THMs. There is a reluctance as exposure is not limited to ingestion.

3- Do you have systems suffering long-term (over 5 years) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given a higher funding priority to address any upgrades, thus to address the THM issues?

We have one municipal facility in particular that has had issues with THMs for several years. They have tried several measures to correct the issues without success. In this case, we were able to work with the Department of Municipal Affairs to recommend funding for this facility to meet our municipal treatment standard.

4- Do you have systems with consistently high (3x-5x the MAC) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given higher priority for funding in terms of upgrades to address the THM issues?

We have not had systems that exceeded the THM MAC 3-5x.

5- Is there any time frame after which you exercise your enforcement?

The Inspector issues a directive to the Owner to submit a corrective action plan and schedule of implementation within 30 days of receiving notice of the exceedance. The Inspector holds the Owner accoutnable to the dates included in the implementation schedule. If the Owner fails to adhere to the schedule, the Inspector would take enforcement action in accordance with Nova Scotia Environment's Compliance Model.

6- To what level do the sampling and analysis of THMs follow the guideline procedures provided in the GCDWQ? Do you suspect that the exceedances might be related to longer sample storage (than suggested in the guideline) before analysis?

The Owner and accredited laboratory are required to follow the methods included in the Guideline Technical Document. In Nova Scotia we have a large number of supplies that rely on the use of surface water that is characterized by high organic loading.

7- Does your action plan include any other steps not discussed above?

Risk communication messages would be developed in accordance with the local Medical Office of Health (MOH) and communicated to the residents if determined necessary by the MOH.

Thank you in advance for your support and help,

Kristina

G. Kristina Taracha , P.Eng
Manager, Drinking Water & Public Health Engineering Units
Gestionnaire, les sections de l'eau potable & du génie sanitaire
First Nations & Inuit Health Branch | Direction générale
de la santé des Premières nations et des Inuits, EPHD/DSEP
Health Canada / Santé Canada
200 Eglantine Driveway, Tunney's Pasture
Ottawa, Ontario K1A 0K9
Tel.: **NEW TEL. 613-323-6447**
e-mail: kristina.taracha@hc-sc.gc.ca

Mori, Alicia HLTH:EX

From: Khan, Haseen <hkhan@gov.nl.ca>
Sent: November 20, 2015 5:26 AM
To: 'Kristina Taracha'; POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Anne Vezina; Joyce Mortimer; Veronique Morisset
Subject: RE: Consultation on the Best Practice regarding THMs Levels

Please see NL response. Thanks.

1- Does your approach regarding THMs exceedances in water systems include issuing drinking water advisories? If yes, what kind of drinking water advisories do you issue in such cases?

No.

2- With any of these advisories, is bottled water provided to the consumers?

N/A.

3- Do you have systems suffering long-term (over 5 years) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given a higher funding priority to address any upgrades, thus to address the THM issues?

Yes. They are given higher rankings with respect to capital works projects to correct the issue.

4- Do you have systems with consistently high (3x-5x the MAC) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given higher priority for funding in terms of upgrades to address the THM issues?

Yes. They are given higher rankings with respect to capital works projects to correct the issue. ENVC may work with the town to identify probable causes and possible corrective measures to encourage the town to take corrective action.

5- Is there any time frame after which you exercise your enforcement?

No.

6- To what level do the sampling and analysis of THMs follow the guideline procedures provided in the GCDWQ? Do you suspect that the exceedances might be related to longer sample storage (than suggested in the guideline) before analysis?

Sampling follows the NL Drinking Water Quality Monitoring Manual. These are based on the GCDWQ and Standard Methods. We go by a maximum holding time of 14 days for THMs and HAAs. Samples make it to a certified lab before this timeframe. This has never been brought up as an issue. Sample bottles contain a preservative.

7- Does your action plan include any other steps not discussed above?

NL has an approach for communities dealing with DBPs. Details can be found at:
http://www.env.gov.nl.ca/env/waterres/reports/cwws/index.html

Thank you in advance for your support and help

Haseen Khan, P.Eng.
Director
Water Resources Management Division
Department of Environment and Conservation
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F (709) 729-0320
E hkhan@gov.nl.ca
www.gov.nl.ca/env

From: Kristina Taracha [mailto:kristina.taracha@hc-sc.gc.ca]
Sent: Thursday, November 19, 2015 10:59 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; Khan, Haseen; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Anne Vezina; Joyce Mortimer; Veronique Morisset
Subject: Consultation on the Best Practice regarding THMs Levels

Dear Provincial FTP Committee Representatives,

As briefly discussed in our recent FPT committee meeting this month, we have been looking into the issue of THMs exceedances in the First Nations communities. To take the next steps toward addressing this issue, it would be very helpful for us to know what approaches you take when you encounter with THMs exceedances in your provinces/territories for longer time. While some of you has already provided your feedback, I would greatly appreciate if you could provide us more detailed information regarding the questions below:

1- Does your approach regarding THMs exceedances in water systems include issuing drinking water advisories? If yes, what kind of drinking water advisories do you issue in such cases?

2- With any of these advisories, is bottled water provided to the consumers?

3- Do you have systems suffering long-term (over 5 years) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given a higher funding priority to address any upgrades, thus to address the THM issues?

4- Do you have systems with consistently high (3x-5x the MAC) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given higher priority for funding in terms of upgrades to address the THM issues?

5- Is there any time frame after which you exercise your enforcement?

6- To what level do the sampling and analysis of THMs follow the guideline procedures provided in the GCDWQ? Do you suspect that the exceedances might be related to longer sample storage (than suggested in the guideline) before analysis?

7- Does your action plan include any other steps not discussed above?

Thank you in advance for your support and help,

Kristina

G. Kristina Taracha , P.Eng
Manager, Drinking Water & Public Health Engineering Units
Gestionnaire, les sections de l'eau potable & du génie sanitaire
First Nations & Inuit Health Branch | Direction générale
de la santé des Premières nations et des Inuits, EPHD/DSEP
Health Canada / Santé Canada
200 Eglantine Driveway, Tunney's Pasture
Ottawa, Ontario K1A 0K9
Tel.: **NEW TEL. 613-323-6447**
e-mail: kristina.taracha@hc-sc.gc.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 24, 2015 4:40 PM
To: 'Kristina Taracha'; 'POLEGAAR@gov.ns.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'Peter_Workman@gov.nt.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'pat.brooks@gov.yk.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ene.gov.on.ca'; 'MLeBlanc-Havard@GOV.NU.CA'
Cc: 'Anne Vezina'; 'Joyce Mortimer'; 'Veronique Morisset'
Subject: RE: Consultation on the Best Practice regarding THMs Levels

See answers below

From: Kristina Taracha [mailto:kristina.taracha@hc-sc.gc.ca]
Sent: Thursday, November 19, 2015 6:29 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Anne Vezina; Joyce Mortimer; Veronique Morisset
Subject: Consultation on the Best Practice regarding THMs Levels

Dear Provincial FTP Committee Representatives,

As briefly discussed in our recent FPT committee meeting this month, we have been looking into the issue of THMs exceedances in the First Nations communities. To take the next steps toward addressing this issue, it would be very helpful for us to know what approaches you take when you encounter with THMs exceedances in your provinces/territories for longer time. While some of you has already provided your feedback, I would greatly appreciate if you could provide us more detailed information regarding the questions below:

1- Does your approach regarding THMs exceedances in water systems include issuing drinking water advisories? If yes, what kind of drinking water advisories do you issue in such cases?

Would likely result in the issuance of a water quality advisory, with specific instructions for consumer on actions to take, based on the situation.

2- With any of these advisories, is bottled water provided to the consumers?

Since the concern about THMs is related to multiple routes of exposure (via drinking water including ingestion, and both inhalation and skin absorption from showering and bathing), it is unlikely that providing bottle water would address the relevant health risks, as a major concern would be showering.

3- Do you have systems suffering long-term (over 5 years) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given a higher funding priority to address any upgrades, thus to address the THM issues?

Systems should be evaluating all potential risks and developing plans to prioritize and address them. The Ministry of Health does not fund water supply systems, however municipal systems that are eligible for funding for the Ministry of Community Sport and Cultural Development may given higher priority if there has been an order to abate a health hazard issued to the system.

4- Do you have systems with consistently high (3x-5x the MAC) THMs exceedances? If yes, are these systems considered differently in terms of the provided action plan to address the THM issue? Are these systems given higher priority for funding in terms of upgrades to address the THM issues?

See previous answer.

5- Is there any time frame after which you exercise your enforcement?

Local health officers would endeavor to negotiate a reasonable and achievable time frame with operators of there was determined to be a health hazard.

6- To what level do the sampling and analysis of THMs follow the guideline procedures provided in the GCDWQ? Do you suspect that the exceedances might be related to longer sample storage (than suggested in the guideline) before analysis?

Hard to answer this question.

7- Does your action plan include any other steps not discussed above?

Thank you in advance for your support and help,

Kristina

G. Kristina Taracha , P.Eng
Manager, Drinking Water & Public Health Engineering Units
Gestionnaire, les sections de l'eau potable & du génie sanitaire
First Nations & Inuit Health Branch | Direction générale
de la santé des Premières nations et des Inuits, EPHD/DSEP

Health Canada / Santé Canada
200 Eglantine Driveway, Tunney's Pasture
Ottawa, Ontario K1A 0K9
Tel.: **NEW TEL. 613-323-6447**
e-mail: kristina.taracha@hc-sc.gc.ca

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 25, 2015 1:51 PM
To: 'Joyce Mortimer'
Subject: RE: Request for impact paragraph for lead document

HI Joyce:
I'm wondering if we can have an extension on this date, as I will be meeting with our regional folks on December 3rd to discuss this and other issues.
Dave.

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Friday, November 13, 2015 11:34 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Leigh Anne Lepine; Joyce Mortimer; Anne Vezina; Wendy Enright
Subject: CDW: Request for impact paragraph for lead document

CDW members,

The Guideline Technical Document for lead was approved at the May 2015 meeting. The current draft is attached below for your information.

(See attached file: Lead 2015-1113 (draft for public consultation).pdf)

Please send us your impact paragraph to add into the consultation document (or a nil response) by December 4, 2015.

Thank you!

Joyce Mortimer (on behalf of Anne Vézina)
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 25, 2015 2:23 PM
To: 'Joyce Mortimer'
Subject: RE: Request for impact paragraph for lead document

Sounds good. One more question –

I've been looking for examples of other impact statements that have been made in the past but can't seem to find any – do you have some examples of some form the past you could share with me?

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Wednesday, November 25, 2015 2:06 PM
To: Fishwick, David HLTH:EX
Cc: Veronique Morisset
Subject: RE: Request for impact paragraph for lead document

Hi, David. For the impact statement on lead, it would be no problem to extend the deadline. Would December 15 be feasible for you?

For the impact statement on microcystin, are you still OK with the December 4 deadline? It is on a much more urgent timeline for us. If problematic for you to meet that deadline, I think we might get you to send whatever you can at that date. Let me know, though.

Thanks for this.

Regards,
Joyce

Joyce Mortimer
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
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email: Joyce.mortimer@hc-sc.gc.ca
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Fax: (613)-952-2574

"Fishwick, David HLTH:EX" ---2015-11-25 04:50:45 PM---HI Joyce: I'm wondering if we can have an extension on this date, as I will be meeting with our regi

From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
To: "'Joyce Mortimer'" <Joyce.Mortimer@hc-sc.gc.ca>
Date: 2015-11-25 04:50 PM
Subject: RE: Request for impact paragraph for lead document

HI Joyce:
I'm wondering if we can have an extension on this date, as I will be meeting with our regional folks on December 3rd to discuss this and other issues.
Dave.

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Friday, November 13, 2015 11:34 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Leigh Anne Lepine; Joyce Mortimer; Anne Vezina; Wendy Enright
Subject: CDW: Request for impact paragraph for lead document

CDW members,

The Guideline Technical Document for lead was approved at the May 2015 meeting. The current draft is attached below for your information.

(See attached file: Lead 2015-1113 (draft for public consultation).pdf)

Please send us your impact paragraph to add into the consultation document (or a nil response) by December 4, 2015.

Thank you!

Joyce Mortimer (on behalf of Anne Vézina)
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 9, 2015 3:56 PM
To: 'Norlin, J Ivor'
Subject: FTP_CDW_November_2015
Attachments: FTP_CDW_November_2015.docx

That's weird, the link is just within SharePoint. Here is the document.

SharePoint is such a great concept, too bad it isn't as great on the delivery!

Mori, Alicia HLTH:EX

From: Pat.Brooks@gov.yk.ca
Sent: December 3, 2015 12:40 PM
To: kristina.taracha@hc-sc.gc.ca
Cc: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA; Joyce.Mortimer@hc-sc.gc.ca
Subject: Consultation on the Best Practice regarding THMs Levels

Hi Kristina,

I don't really have very much feedback that would be meaningful within the context of your questions. We have not to date seen any exceedances for THMs in the Yukon, so we do not have a formalized policy in terms of how we would deal with this issue. At the moment our focus is more on improving compliance for sampling.

Owners of large public drinking water systems serviced by surface water and/or ground water under the influence of surface water (GUDI) are required to submit water samples for THM analysis every 3 months.

Water samples must be submitted to a laboratory accredited for the required testing. Owners are directed to contact the laboratory of their choice for information about proper sample bottles and collection method prior to collecting water samples. The owner is required to provide the full lab report to our department.

Hope this is helpful.

Regards.
Pat

Patricia Brooks
Drinking Water Program Coordinator/Health Officer
Environmental Health Services
2 Hospital Road
Whitehorse, YT
Y1A 3H8
Phone 867-667-8351 Fax 867-667-8322

Confidentiality Notice: This e-mail communication is directed solely to the intended addressee(s). If you have received this e-mail in error, please notify the author immediately by return e-mail and permanently delete this transmission from your system without making any copy.

From: Kristina Taracha [mailto:kristina.taracha@hc-sc.gc.ca]
Sent: November-19-15 6:29 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Pat.Brooks; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Anne Vezina; Joyce Mortimer; Veronique Morisset
Subject: Consultation on the Best Practice regarding THMs Levels

Dear Provincial FTP Committee Representatives,

As briefly discussed in our recent FPT committee meeting this month, we have been looking into the issue of THMs exceedances in the First Nations communities. To take the next steps toward addressing this issue, it would be very helpful for us to know what approaches you take when you encounter with THMs exceedances in your provinces/territories for longer time. While some of you has already provided your feedback, I would greatly appreciate if you could provide us more detailed information regarding the questions below:

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5- Is there any time frame after which you exercise your enforcement?

6- To what level do the sampling and analysis of THMs follow the guideline procedures provided in the GCDWQ? Do you suspect that the exceedances might be related to longer sample storage (than suggested in the guideline) before analysis?

7- Does your action plan include any other steps not discussed above?

Thank you in advance for your support and help,

Kristina

G. Kristina Taracha , P.Eng
Manager, Drinking Water & Public Health Engineering Units
Gestionnaire, les sections de l'eau potable & du génie sanitaire
First Nations & Inuit Health Branch | Direction générale
de la santé des Premières nations et des Inuits, EPHD/DSEP
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200 Eglantine Driveway, Tunney's Pasture
Ottawa, Ontario K1A 0K9
Tel.: **NEW TEL. 613-323-6447**
e-mail: kristina.taracha@hc-sc.gc.ca

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: December 4, 2015 9:23 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Veronique Morisset
Subject: CDW: Reminder - Request for impact paragraph for lead document
Attachments: Lead 2015-1113 (draft for public consultation).pdf

CDW folks:

A gentle reminder that we are also hoping to get your impact paragraphs by end of day today for inclusion in the Guideline Technical Document for lead in drinking water. However, if that is not possible, we have a bit more flex on this timeline, but would absolutely need these impact paragraphs by no later than December 15.

A nil response is appreciated as well.

Thank you again!

Regards,
Joyce

Joyce Mortimer
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
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email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2015-12-04 11:42 AM -----

From: Joyce Mortimer/HC-SC/GC/CA
To: POLEGAAR@gov.ns.ca, Caroline.Robert@mddelcc.gouv.qc.ca, David.Fishwick@gov.bc.ca, donald.reid@gov.ab.ca, Peter_Workman@gov.nt.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, pat.brooks@gov.yk.ca, sam.ferris@wsask.ca, Satish.Deshpande@ene.gov.on.ca, MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, France Lemieux/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Leigh Anne Lepine/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Anne Vezina/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2015-11-13 02:33 PM
Subject: CDW: Request for impact paragraph for lead document

CDW members,

The Guideline Technical Document for lead was approved at the May 2015 meeting. The current draft is attached below

for your information.

(See attached file: Lead 2015-1113 (draft for public consultation).pdf)

Please send us your impact paragraph to add into the consultation document (or a nil response) by December 4, 2015.

Thank you!

Joyce Mortimer (on behalf of Anne Vézina)
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
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Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Philip, Kim (CWS) <Kim.Philip@gov.mb.ca>
Sent: December 4, 2015 3:20 PM
To: Deshpande, Satish (MOECC); Joyce Mortimer; POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; pat.brooks@gov.yk.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Veronique Morisset
Subject: RE: Reminder - Request for impact paragraph for lead document

Manitoba also needs more time… Thanks.
Kim Philip

From: Deshpande, Satish (MOECC) [mailto:Satish.Deshpande@ontario.ca]
Sent: December-04-15 12:06 PM
To: Joyce Mortimer; POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Philip, Kim (CWS); pat.brooks@gov.yk.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Veronique Morisset
Subject: RE: Reminder - Request for impact paragraph for lead document

Hello Joyce
Ontario will need time. The impact is significant. We need to address a lower value in several regulations and this presents a challenge.
Thanks
Satish

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: December 4, 2015 12:23 PM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; Deshpande, Satish (MOECC); MLeBlanc-Havard@GOV.NU.CA
Cc: Veronique Morisset
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A nil response is appreciated as well.

Thank you again!

Regards,
Joyce

Joyce Mortimer
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
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Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2015-12-04 11:42 AM -----

From: Joyce Mortimer/HC-SC/GC/CA
To: POLEGAAR@gov.ns.ca, Caroline.Robert@mddelcc.gouv.qc.ca, David.Fishwick@gov.bc.ca, donald.reid@gov.ab.ca, Peter_Workman@gov.nt.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, pat.brooks@gov.yk.ca, sam.ferris@wsask.ca, Satish.Deshpande@ene.gov.on.ca, MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, France Lemieux/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Leigh Anne Lepine/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Anne Vezina/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2015-11-13 02:33 PM
Subject: CDW: Request for impact paragraph for lead document

CDW members,

The Guideline Technical Document for lead was approved at the May 2015 meeting. The current draft is attached below for your information.

(See attached file: Lead 2015-1113 (draft for public consultation).pdf)

Please send us your impact paragraph to add into the consultation document (or a nil response) by December 4, 2015.

Thank you!

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Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
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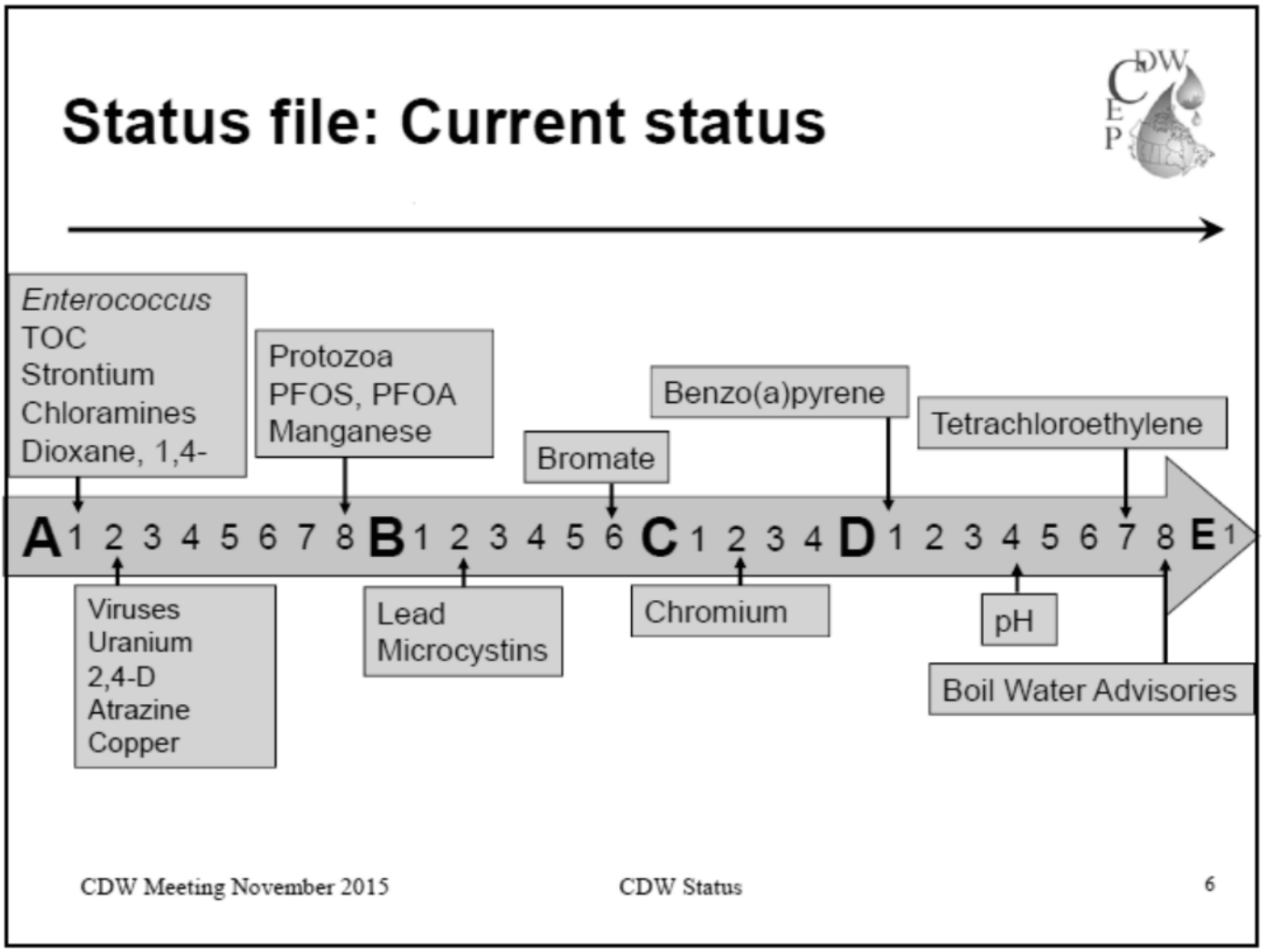
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 8, 2015 2:59 PM
To: 'Sylvia Struck'
Subject: RE: FPT DW guideline changes

No Problem – Here it is:

Update – FTP Committee on Drinking Water
November 2015



A – (Activation) Project scoping research
B – (Beginning) Drafting
C – (Consultation)
D – (Develop final) CHE approval, final draft and translation
E – (End) Publishing

Highlights

BWN – Complete - anticipated posting Nov 27
Protozoa

- Guideline statement unchanged, supporting info updated.
- Further discussion on riverbank filtration in context of GUDI
- E.coli not good indicator of protozoa

- Includes extensive guidance on QMRA - Discussion on breaking this into a separate document
- Further drafting expected prior to moving to consultation stage in near future

Virus
- Has undergone peer review
- Extensive further drafting expected

PFOS/PFOA
- Persistent in Environment
- May be a fish tissue issue
- Moving to consultation stage shortly

Chromium
- Consultation closed
- No change in MAC
- Expected to go to CHE for Approval in next couple months

B(a)P
- Consultation closed
- Expected to go to CHE for Approval in next couple months

Uranium
- Chemical Toxicity – not radiological
- Very early in process

Strontium
- Chemical Toxicity – not radiological
- Very early n process

Copper
- Early in review process
- Anticipate a MAC being developed – no idea what that will be yet

TOC
- Very early in process
- Very difficult to set MAC – may look for percent removal guidance

Microcystins
- Consultation document will come out soon
- Health Canada Needs impact statement

Lead
- (Refresher): Current guideline (1992) is 0.010 mg/L (after flushing), MAC of 0.005 mg/L (5 µg/L) based on analytical feasibility
- Health Canada Needs impact statement

Manganese
- Current AO 0.05mg/L– looking at moving to 0.02mg/L. Looking at a MAC of 0.1mg/L.
- Addition of a MAC is a significant departure form previous messaging regarding Manganese, and may impact many systems.
- Concern is neurotoxicity in infants and reproductive effects. (note this is from short term, not lifetime exposure)
- Also concerns about manganese accumulation in system that may get stirred up.
- Health Canada Needs impact statement

Withdrawal of unused pesticides and other chemicals
- Pesticides no longer licenced by PMRA
- Chemicals that guidance is so out of date their value is limited and are not priorities for re-evaluation. Better to look elsewhere
- HC will do public consultation on these prior to withdrawal - see list below

National Conference – October 16-18, 2016 in Ottawa, $525, $100 students

Antimicrobial resistance
- Looking at whether treatment may be selecting for resistant strains. No evidence yet.

FNIB report
- Slowly movement from east to west in regulatory development and figuring out logistics

Old guidelines Nov-2015
Proposed path forward
Withdrawal Rationale
Bromoxynil Low # of detects, levels well below MAC + Int values
Carbaryl Low # of detects, levels well below MAC + Int values
Chlorpyrifos Low # of detects, levels well below MAC + Int values
Diazinon
Low # of detects, levels below MAC + Int values. Most uses being phased out by PMRA by December 31st 2016, except soil drench and ear tags; low potential for water exposure
Diuron
Uses on dugouts and ponds to be phased out (date TBD); low potential for water exposure
Metolachlor Phased out by PMRA in 2006
Paraquat
Domestic product uses phased out by PMRA in 2005; low potential for water exposure
Phorate Phased out or to be phased out by PMRA 2015-08
Picloram Low # of detects, levels well below the MAC + Int values
Simazine Low # of detects, levels well below the MAC + Int values
Trifluralin Low # of detects, levels well below the MAC + Int values
Dichlorobenzene, 1,2- Low # of detects, levels well below the MAC + Int values
Dichlorophenol, 2,4- Low # of detects, levels well below the MAC + Int values
Monochlorobenzene Low # of detects, levels well below the MAC + Int values
Tetrachlorophenol,
2,3,4,6- Low # of detects, levels well below the MAC + Int values
Pentachlorophenol Low # of detects, levels well below the MAC
Temperature To be replaced by Water Talk
Azinphos-methyl Phased out by PMRA 2006-12
Carbofuran Phased out by PMRA 2010-12
Diclofop-methyl Phased out by PMRA 2011-08
Terbufos Phased out by PMRA 2012-08
Update Rationale
Antimony Lots of detects, levels close to MAC + Int values
Silver Lots of detects, no current HBV/MAC
Problem formulation Rationale
Cyanide Lots of detects, levels close to MAC + Int values
Dicamba Average # of detects, levels well below the MAC + Int values
Dichlorobenzene, 1,4- Lots of detects, levels close to MAC + Int values
Dimethoate Low # of detects, levels close to MAC + higher than Int values
Diquat Low # of detects, levels close to MAC + Int values
Glyphosate Average # of detects, levels close to MAC + Int values
Malathion Low # of detects, levels well below MAC + Int values
Mercury Lots of detects, levels close to MAC + Int values
Metribuzin Average numbers of detects, levels below MAC + Int values
Dichloroethylene, 1,1- Low # of detects, levels close to the MAC + Int values
Nitrilotriacetic acid (NTA)
Average # of detects, levels close to MAC + Int values

Sodium To determine if guideline is still required
Trichlorophenol, 2,4,6- Lots of detects, levels close to MAC + Int values
Calcium Part of Operational
Chloride Part of Operational
Hardness Part of Operational
Magnesium Part of Operational
Sulphate Part of Operational
Sulphide Part of Operational
Total dissolved solids (TDSPart of Operational
Odour Part of taste and odour
Taste Part of taste and odour
Colour Part of TOC

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Tuesday, December 8, 2015 2:47 PM
To: Fishwick, David HLTH:EX
Subject: RE: FPT DW guideline changes

Hi Dave,
I thought you might have posted it on the sharepoint site but I am still having difficulty accessing the site. Hopefully I will have access soon. If it isn't too much trouble, would it be possible to send me the info as a cut and paste or attachment?
Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: December 8, 2015 1:58 PM
To: Sylvia Struck
Subject: RE: FPT DW guideline changes

Hi Sylvia:
The details are on SharePoint at the following:
https://hlth005.gov.bc.ca/HPB/DWLC/_layouts/listform.aspx?PageType=4&ListId={4D5330D3-A0F7-4287-B0A7-87B342723CDB}&ID=263
If this doesn't answer your questions, please let me know.
Dave

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Tuesday, December 8, 2015 8:48 AM
To: Fishwick, David HLTH:EX
Subject: FPT DW guideline changes

Hi Dave,
I took notes during your update on the proposed guideline changes and wanted to confirm that I have the following correct:
Copper – MAC ? (what stage is this in?)
Lead – MAC will be reduced to 0.005 mg/L with an ALARA statement
Manganese - MAC is expected to be 0.1 mg/L based on neurotoxicity in infants and short-term (6 Month exposure). 0.02 mg/L for AO ?
Do you have dates when these will be implemented or what stage are these changes in? I am currently going through our DW quality data and this information is necessary to look at potential impacts.
Thank you,
Sylvia
Sylvia Struck, Ph.D.
Manager, Drinking Water Safety Program
First Nations Health Authority
#404 - 1138 Melville Street
Vancouver, BC V6E 4S3

Tel. (604) 693-6960
Sylvia.Struck@FNHA.ca



First Nations Health Authority
Health through wellness

Mori, Alicia HLTH:EX

From: Norlin, J Ivor <JIvor.Norlin@interiorhealth.ca>
Sent: December 9, 2015 3:54 PM
To: Fishwick, David HLTH:EX
Subject: RE: Announcements - Reminder - Impact statemenets fo...

Hi Dave,

I'm not aware of any systems in our region with outstanding Lead concerns. Presumably this is more of an issue for building systems, especially in areas with aggressive water. As the water in our region tends more to the hard side and we don't have a proactive building system monitoring program (i.e. we haven't been looking for Pb and Cu in buildings) I'll say the impacts of the proposed Lead rules for us is low.

I can't seem to open the file you've hyperlinked below to see what the proposed Manganese changes are. Can you send me the file in an attachment?

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

~ We are committed to being a trusted leader in creating the healthiest and the safest environments in which we live, work, learn and play ~

Note: The information contained in this email and any attachments is confidential and may be legally privileged. If you are not the intended recipient please do not disclose, distribute, copy, print or rely on this email's content. If you are not the intended recipient, please notify the sender immediately and then delete the email and any attachments from your system.

From: Drinking Water Leadership Council [mailto:DoNotReply@SP2010.gov.bc.ca]
Sent: Tuesday, December 08, 2015 2:25 PM
To: Norlin, J Ivor
Subject: Announcements - Reminder - Impact statemenets fo...

Drinking Water Leadership Council
Reminder - Impact statemenets fo... has been added

Modify my alert settings | View Reminder - Impact statemenets fo... | View Announcements | Mobile View

Title:	Reminder - Impact statemenets for both Lead and Mangnanese
Body:	Hi Everyone:

As mentioned at DWLC, I will be preparing impact statements to Health Canada on both Lead and Manganese prior to their upcoming public consultation. In order to do this, I will need some feedback from you folks ASAP for Lead, followed by Manganese in the near future.

I think it is important each health authority put some effort into this as I see potential long term impacts. THis will eb a high level response, so fine details are not critical, but it think it is important to paint an accurate picture.

The minimum questions I think we need to answer are:

- Will these new MACs impact water systems in your region? (i.e. will they exceed the new MAC)
- If so, how many, and by how much? (estimate range)
- How would this change impact the way you guys and water systems do business? (i.e. public messaging, financing and planning for treatment, HA and water system workload, dollar costs if available, etc)
- Any other important info or reports that come to mind.

Here is a summary of upcoming HC guidelines and their status.

https://hlth005.gov.bc.ca/HPB/DWLC/_layouts/listform.aspx?PageType=4&ListId={4D5330D3-A0F7-4287-B0A7-87B342723CDB}&ID=263

As far as timelines - I'm looking at preparing the Lead response early next week, and will get back to you in the near Ifuture for a deadline on manganese.

Thanks,

Dave

Expires:

Last Modified 12/8/2015 2:20 PM by Fishwick, David HLTH:EX

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: December 15, 2015 12:44 PM
To: Fishwick, David HLTH:EX; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; Satish.Deshpande@ene.gov.on.ca
Cc: Veronique Morisset
Subject: CDW: checking in re: Request for impact paragraph for lead document
Attachments: Lead 2015-1113 (draft for public consultation).pdf

Hello, CDW folks:

We have not received an impact paragraph from you for the lead guideline document. I'm just checking in to see if you were intending to send one.

If yes, please do let me know when you could provide it. A nil response would also be greatly appreciated.

Many thanks for this!

Regards,
Joyce

Joyce Mortimer
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
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Cc: Veronique Morisset/HC-SC/GC/CA@HWC
Date: 2015-12-04 12:23 PM
Subject: CDW: Reminder - Request for impact paragraph for lead document

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CDW folks:

A gentle reminder that we are also hoping to get your impact paragraphs by end of day today for inclusion in the Guideline Technical Document for lead in drinking water. However, if that is not possible, we have a bit more flex on this timeline, but would absolutely need these impact paragraphs by no later than December 15.

A nil response is appreciated as well.

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Subject: RE: checking in re: Request for impact paragraph for lead document

Yes – It's coming....still only mid-afternoon here!

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Cc: John Cooper/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, France Lemieux/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Leigh Anne Lepine/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Anne Vezina/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
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email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 15, 2015 10:19 AM
To: 'Magee, Lynne'
Subject: RE: Lead - hatlh Cadna impact statment

Thanks Lynne. This is helpful.

From: Magee, Lynne [mailto:Lynne.Magee@viha.ca]
Sent: Tuesday, December 15, 2015 9:38 AM
To: Fishwick, David HLTH:EX
Subject: RE: Lead - hatlh Cadna impact statment

HI David

I guess it will depend on what type of plumbing materials are common in a community, what is the alkalinity of the source water, does the community have corrosion control, would a well-advertised first flush program be an effective control message?

- Will these new MACs impact water systems in your region? (i.e. will they exceed the new MAC) It is likely there will be some impact – I would imagine that the lead would tend to come more from building works than the raw water.
- If so, how many, and by how much? (estimate range) If we are looking at plumbing/building issues, then it is likely all of them. We have about 850 systems.
- How would this change impact the way you guys and water systems do business? (i.e. public messaging, financing and planning for treatment, HA and water system workload, dollar costs if available, etc) We would have to develop a plan to deal with systems, perhaps by size or concerns, and get the water systems to address the issues.
- Any other important info or reports that come to mind.

Hope that helps, and thanks for the reminder.

Lynne

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Monday, December 14, 2015 4:29 PM
To: 'Clarkson, Len [STS]'; Magee, Lynne; 'Zubel, Marc'
Subject: Lead - hatlh Cadna impact statment

Last chance for any comments regarding the potential impact of Health Canada's proposal to cut the Lead MAC in Half and introducing an ALRA statement.
Any and all comments welcome, my deadline for submitting something to them is the end of day tomorrow.
Dave.

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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- Will these new MACs impact water systems in your region? (i.e. will they exceed the new MAC)
- If so, how many, and by how much? (estimate range)
- How would this change impact the way you guys and water systems do business? (i.e. public messaging, financing and planning for treatment, HA and water system workload, dollar costs if available, etc)
- Any other important info or reports that come to mind.

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 15, 2015 3:37 PM
To: 'Clarkson, Len [STS]'
Subject: RE: Lead - hatlh Cadna impact statment

Thanks Len – this is consistent with everyone else's comments.

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Tuesday, December 15, 2015 2:07 PM
To: Fishwick, David HLTH:EX; 'Magee, Lynne'; [FHA] Zubel, Marc
Subject: RE: Lead - hatlh Cadna impact statment

Hi David – sorry for the delay.
Most of our exposure to lead in DW comes in from building plumbing systems. Earlier we had revisited lead and copper levels in schools and day care settings, and found levels exceeding the current MAC due to the relatively corrosive water and contact time with lead solder as well as brass fittings. Accordingly we are requiring those facilities to flush their taps prior to consumption. The proposed reduction in the MAC with an ALARA statement may trigger us to revise and re-release our guidance document as attached.

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Monday, December 14, 2015 4:29 PM
To: Clarkson, Len [STS]; 'Magee, Lynne'; [FHA] Zubel, Marc
Subject: Lead - hatlh Cadna impact statment

Last chance for any comments regarding the potential impact of Health Canada's proposal to cut the Lead MAC in Half and introducing an ALRA statement.
Any and all comments welcome, my deadline for submitting something to them is the end of day tomorrow.
Dave.

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 15, 2015 3:55 PM
To: 'Zubel, Marc'
Subject: RE: Lead - heatlh Canada impact statment

Thanks Marc – sounds like everyone is on the same page.

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Tuesday, December 15, 2015 3:51 PM
To: Fishwick, David HLTH:EX
Subject: RE: Lead - heatlh Canada impact statment

Hi Dave: I echo Len's comments about building plumbing and our notices to flush before use.
Not sure what the impact of lowering the Lead MAC to half of current level with ALARA will be.

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Tuesday, December 15, 2015 2:07 PM
To: 'Fishwick, David HLTH:EX'; Magee, Lynne; Zubel, Marc
Subject: RE: Lead - hatlh Cadna impact statment

Hi David – sorry for the delay.
Most of our exposure to lead in DW comes in from building plumbing systems. Earlier we had revisited lead and copper levels in schools and day care settings, and found levels exceeding the current MAC due to the relatively corrosive water and contact time with lead solder as well as brass fittings. Accordingly we are requiring those facilities to flush their taps prior to consumption. The proposed reduction in the MAC with an ALARA statement may trigger us to revise and re-release our guidance document as attached.

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca

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From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Monday, December 14, 2015 4:29 PM
To: Clarkson, Len [STS]; 'Magee, Lynne'; [FHA] Zubel, Marc
Subject: Lead - hatlh Cadna impact statment

Last chance for any comments regarding the potential impact of Health Canada's proposal to cut the Lead MAC in Half and introducing an ALRA statement.
Any and all comments welcome, my deadline for submitting something to them is the end of day tomorrow.
Dave.

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 16, 2015 9:04 AM
To: 'Joyce Mortimer'
Subject: RE: checking in re: Request for impact paragraph for lead document

LOL! – I did not read it as harsh! Apparently my sarcastic email needed a smiley too!

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Wednesday, December 16, 2015 6:13 AM
To: Fishwick, David HLTH:EX
Subject: RE: checking in re: Request for impact paragraph for lead document

Hi, David. Thank you so much for this. Oops, I had not intended for the email to sound so harsh! I'll need to start adding smiling emoticons or something to tone them down. :)

Take care, have a great day, and thank you again.
Joyce

Joyce Mortimer
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

"Fishwick, David HLTH:EX" ---2015-12-15 07:09:07 PM---HI Joyce - Here is the BC Lead Impact statement: Given the developmental risks to children from lea

From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
To: "'Joyce Mortimer'" <Joyce.Mortimer@hc-sc.gc.ca>, "'Peter_Workman@gov.nt.ca'" <Peter_Workman@gov.nt.ca>, "'ghsomers@gov.pe.ca'" <ghsomers@gov.pe.ca>, "'Kevin.Gould@gnb.ca'" <Kevin.Gould@gnb.ca>, "'Kim.Philip@gov.mb.ca'" <Kim.Philip@gov.mb.ca>, "'MLeBlanc-Havard@GOV.NU.CA'" <MLeBlanc-Havard@GOV.NU.CA>, "'Satish.Deshpande@ene.gov.on.ca'" <Satish.Deshpande@ene.gov.on.ca>
Cc: "'Veronique Morisset'" <Veronique.Morisset@hc-sc.gc.ca>
Date: 2015-12-15 07:09 PM
Subject: RE: checking in re: Request for impact paragraph for lead document

---

HI Joyce - Here is the BC Lead Impact statement:

Given the developmental risks to children from lead, BC supports minimizing lead intake from drinking water as much as reasonably achievable, preferably below the existing and the proposed maximum in the Guidelines for Canadian Drinking Water Quality.

The proposed change in the guideline will cause the water delivered by a small number of water supply systems to exceed the new, more stringent MAC. However, leaching from fixtures within individual buildings is likely the most significant contributor to lead concentration in water, and therefore exceedance of the guideline at the tap. Drinking water in many water systems in BC is soft (low in hardness), and slightly acidic (low pH and alkalinity). When soft water stagnates in building piping, lead and other metals can leach out from the plumbing into the water. This is particularly true in older facilities and homes that may have lead and copper or brass plumbing, fixtures, fittings, or used solder containing lead.

It is therefore difficult for water suppliers to know lead concentrations delivered at individual taps, as this will vary from building to building, depending on plumbing. Sampling for buildings, particularly high risk institutions such as schools and daycares, will remain a cost pressure. Questions of whether this is responsibility of water suppliers or building owners will also still remain.

Water suppliers do not have direct control over water once it leaves their distribution system, however in areas where water is aggressive, effective mitigation measures can be taken at either the individual or the community level.

Individual building owners may reduce lead concentration in water by regular flushing of taps, retrofitting plumbing, installing corrosion control, or installing other point of use treatment. At a community level, water suppliers may adopt corrosion control measures to reduce the corrosiveness of water before it enters the distribution system. None of these measures are without significant expense, and the most cost effective of these options would likely depend on the size of the water supply system.

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Tuesday, December 15, 2015 12:44 PM
To: Fishwick, David HLTH:EX; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; Satish.Deshpande@ene.gov.on.ca
Cc: Veronique Morisset
Subject: CDW: checking in re: Request for impact paragraph for lead document

Hello, CDW folks:

We have not received an impact paragraph from you for the lead guideline document. I'm just checking in to see if you were intending to send one.

If yes, please do let me know when you could provide it. A nil response would also be greatly appreciated.

Many thanks for this!

Regards,
Joyce

Joyce Mortimer
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
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Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962

Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2015-12-15 03:22 PM -----

From: Joyce Mortimer/HC-SC/GC/CA
To: POLEGAAR@gov.ns.ca, Caroline.Robert@mddelcc.gouv.qc.ca, David.Fishwick@gov.bc.ca, donald.reid@gov.ab.ca, Peter_Workman@gov.nt.ca, ghsomers@gov.pe.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, pat.brooks@gov.yk.ca, Satish.Deshpande@ene.gov.on.ca, MLeBlanc-Havard@GOV.NU.CA
Cc: Veronique Morisset/HC-SC/GC/CA@HWC
Date: 2015-12-04 12:23 PM
Subject: CDW: Reminder - Request for impact paragraph for lead document

---

CDW folks:

A gentle reminder that we are also hoping to get your impact paragraphs by end of day today for inclusion in the Guideline Technical Document for lead in drinking water. However, if that is not possible, we have a bit more flex on this timeline, but would absolutely need these impact paragraphs by no later than December 15.

A nil response is appreciated as well.

Thank you again!

Regards,
Joyce

Joyce Mortimer
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2015-12-04 11:42 AM -----

From: Joyce Mortimer/HC-SC/GC/CA
To: POLEGAAR@gov.ns.ca, Caroline.Robert@mddelcc.gouv.qc.ca, David.Fishwick@gov.bc.ca, donald.reid@gov.ab.ca, Peter_Workman@gov.nt.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, pat.brooks@gov.yk.ca, sam.ferris@wsask.ca, Satish.Deshpande@ene.gov.on.ca, MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, France Lemieux/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Leigh Anne Lepine/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Anne Vezina/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2015-11-13 02:33 PM
Subject: CDW: Request for impact paragraph for lead document

CDW members,

The Guideline Technical Document for lead was approved at the May 2015 meeting. The current draft is attached below for your information.

(See attached file: Lead 2015-1113 (draft for public consultation).pdf)

Please send us your impact paragraph to add into the consultation document (or a nil response) by December 4, 2015.

Thank you!

Joyce Mortimer (on behalf of Anne Vézina)
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 23, 2015 2:32 PM
To: 'Zubel, Marc'
Subject: RE: Secondary Disinfection Draft Guideline

Hi Marc:
Sorry to take so long to respond. This has made its way back to the top of the pile. We have reviewed comments from the consultation at the beginning of the year and are reworking it in response, and should have something to move forward with this spring. I should have a better idea of where we are at with it by the next DWLC in February.

Dave

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Thursday, December 3, 2015 3:54 PM
To: Fishwick, David HLTH:EX
Subject: FW: Secondary Disinfection Draft Guideline

Hi David: can you provide an update as to where this draft is at?

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Struck, LLoyd
Sent: Thursday, December 03, 2015 3:31 PM
To: Zubel, Marc
Subject: FW: Secondary Disinfection Draft Guideline

Hi Marc,

Do you know anything more about the attached document that my operator at White Rock is asking about?

Lloyd

From: John Foster [mailto:JFoster@whiterockcity.ca]
Sent: Thursday, December 03, 2015 2:48 PM
To: Struck, LLoyd
Subject: Secondary Disinfection Draft Guideline

Hi Lloyd,

I remember a co-worker sending me this when I had worked in the Drinking Water Team at the Government of Alberta before coming out to BC. I believe the attached guideline has passed through 3 reviews and I was wondering if will become finalized in the near future?

Have you heard any update on this yet?

Thanks,

"Drinking Water, what's more important?"

JOHN FOSTER,
Lead Operator - Treatment,
Water Services, City of White Rock
15322 Buena Vista Avenue, White Rock, BC V4B 1Y6
Tel: 604.541.2114 | Em: jfoster@whiterockcity.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: March 9, 2016 1:49 PM
To: 'Joyce Mortimer'
Cc: 'Veronique Morisset'
Subject: RE: your question about pH and corrosion control

Thanks Joyce!

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Wednesday, March 9, 2016 12:52 PM
To: Fishwick, David HLTH:EX
Cc: Veronique Morisset
Subject: Re: your question about pH and corrosion control

Hi, David. I chatted with Véronique about your question as to whether an additional document was planned to specifically address corrosion control and pH.

The answer is no, as the current corrosion control document (Guidance on Controlling Corrosion in Drinking Water Distribution Systems) deals with both lead and pH.

That being said, if you have any specific questions related to pH and corrosion control that are not addressed in the document, please don't hesitate to call.

You can find the corrosion control document at http://healthycanadians.gc.ca/publications/healthy-living-vie-saine/water-corrosion-eau/index-eng.php

I hope this is helpful.

Regards,
Joyce

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: March 14, 2016 11:46 AM
To: [NHA] Wheeler, Angela; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Subject: flushing for lead
Attachments: Guidance to schools on flushing for lead.docx

Hi folks,
In speaking with Ivor – I thought I would share this draft I am putting together to remind SD's here to flush.
NB this is just a draft and has not been finalized – so if you wish to provide any comments please feel free to do so.

Len

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: March 17, 2016 3:51 PM
To: 'Clarkson, Len [STS]'
Subject: RE: Health Link BC Document on Lead in Drinking Water directs the public to local health unit for water testing in home

That's pretty much where I landed – it's in the works.

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Thursday, March 17, 2016 11:53 AM
To: Fishwick, David HLTH:EX
Subject: RE: Health Link BC Document on Lead in Drinking Water directs the public to local health unit for water testing in home

Yes – I think that's fair enough. Perhaps also consult their water supplier's annual report for water quality data first – then check with HA's subsequently if they have questions?

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, March 16, 2016 9:38 AM
To: Clarkson, Len [STS]
Subject: RE: Health Link BC Document on Lead in Drinking Water directs the public to local health unit for water testing in home

What advice would you like to see here? Something along the lines of "contact you heath authority for advice on whether your home may be at risk"?

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Tuesday, March 15, 2016 3:40 PM
To: Fishwick, David HLTH:EX; Zemanek, Michael HLTH:EX
Subject: RE: Health Link BC Document on Lead in Drinking Water directs the public to local health unit for water testing in home

Thanks ☺

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, March 15, 2016 2:37 PM
To: Clarkson, Len [STS]; Zemanek, Michael HLTH:EX
Subject: RE: Health Link BC Document on Lead in Drinking Water directs the public to local health unit for water testing in home

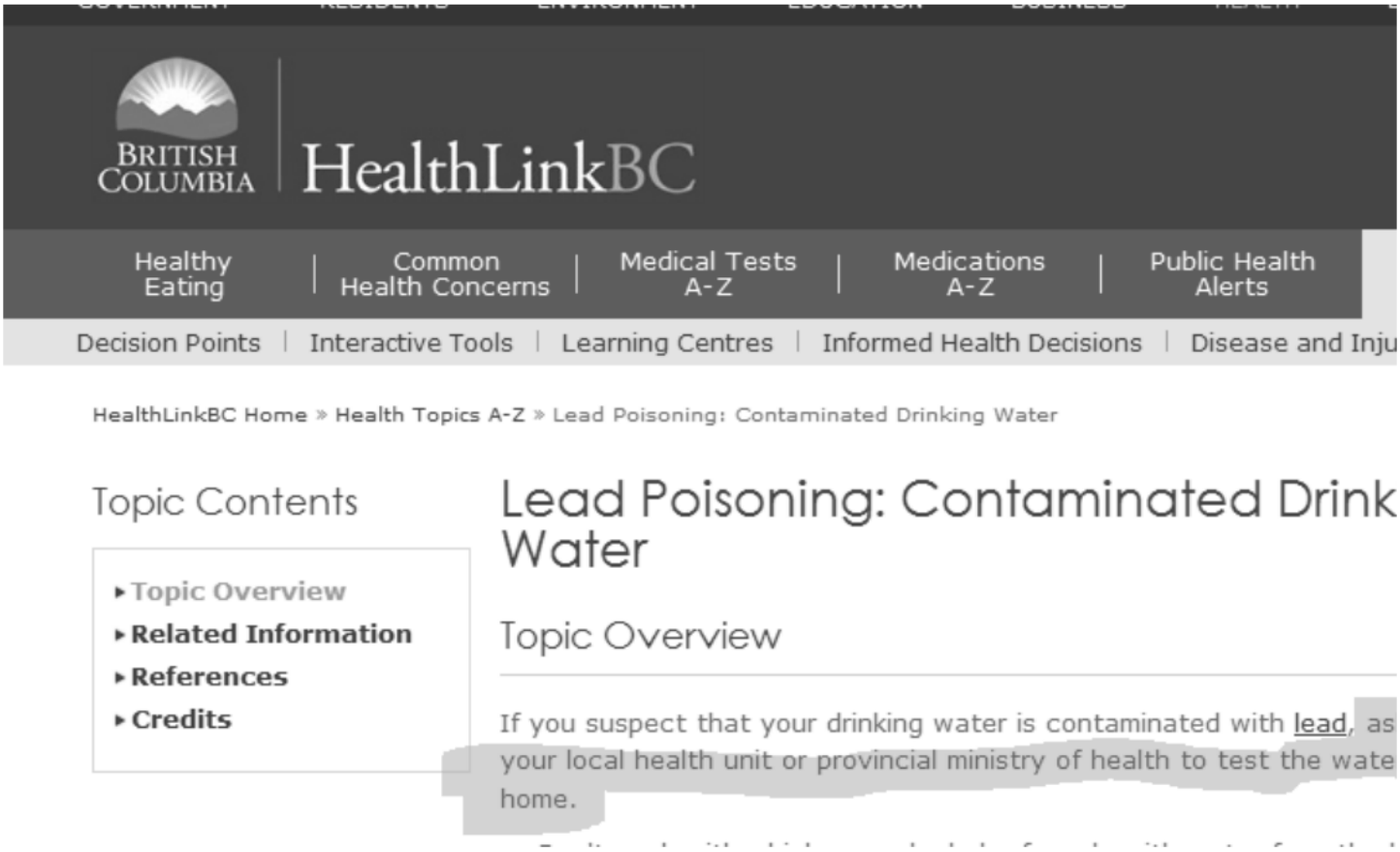
Oh, that's not good. I'll ask them to get on that.

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Tuesday, March 15, 2016 11:50 AM
To: Fishwick, David HLTH:EX; Zemanek, Michael HLTH:EX
Subject: FW: Health Link BC Document on Lead in Drinking Water directs the public to local health unit for water testing in home

Hi David or Mike – is it possible to have this updated please?
Len

From: Watson, Cindy [SC]
Sent: Tuesday, March 15, 2016 11:32 AM
To: Clarkson, Len [STS]; Martiquet, Paul [SC]; Molder, Darren [SC]; Ritson, Mark [VC]; Chong, Steve [Health Protection] [NS]
Subject: Health Link BC Document on Lead in Drinking Water directs the public to local health unit for water testing in home

See below.
Someone in Pemberton brought this to my attention; based on this information she called us to ask us to test her home.



Cindy
Cynthia Watson
Snr.Environmental Health Officer
Drinking Water Officer
Sea to Sky Corridor
604-815-6846
www.vch.ca

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: March 22, 2016 9:24 AM
To: [NHA] Wheeler, Angela; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Cc: XT:HLTH Martiquet, Paul; XT:HLTH Taki, Richard; Chong, Steve [Health Protection] [NS]; Ritson, Mark [VC]; XT:Wilson, Gavin HLTH:IN; XT:Akins, Tiffany GCPE:IN
Subject: FW: Corrosion Issues
Attachments: DWLC_lead policy discussion.docx

Thank you Joanne – this captures it very nicely.

In VCH our EHO's inspect schools every 3 years and the intent is to have them verify flushing is occurring unless the school has data to demonstrate the water is within guidelines without flushing (basically everyone needs to flush we think). Interestingly our survey testing was last conducted in 2011 / 2012, when MV had corrosion control works in place. So we may see varying degrees of effectiveness with centralized treatment (and some lead exposure can still occur although at a lower level). Still I believe this is the best approach since I worry about who maintains the decentralized building treatment systems and their performance (use of appropriate reagent, etc).

My own thoughts are that we have sufficient authority in schools and Child Care facilities, so for me the biggest dilemma is what to do about private residences. I am mindful that we are developing a guideline on public communications following some experiences in IHA about the role of HA's and that we should not be interceding with communities in terms of public messaging on WQ issues..

Good luck with your meeting today!

Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Tuesday, March 22, 2016 8:57 AM
To: Clarkson, Len [STS]; [NHA] Wheeler, Angela; Fishwick, David HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Subject: RE: Corrosion Issues

Hi Len,

Excellent questions and ones we did touch on at our last DWLC when you were away and will certainly be discussing moving forward. These questions will also be on the agenda at EHPAC this morning.

I have attached for your info the info I provided for the discussion today "EHPAC Policy Discussion – Lead in Drinking Water."

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Monday, March 21, 2016 4:17 PM
To: [NHA] Wheeler, Angela; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Subject: FW: Corrosion Issues

Good afternoon folks,

I am now looking for a little background on water corrosively.
For your reference I have attached my 2010 inspection report to the Village of Pemberton. Also attached is a good article on the matter from San Francisco.

So now I need to get a reference check from you as to how far we go with things:

1. While I have identified and recommended the benefits for centralized treatment – I have not made the issue a requirement or condition of OP. Are any of you doing anything more in terms of mandating treatment?
2. Are any of you promoting or advocating the need to flush taps to minimize exposure to lead and copper in the case of low pH water? This could be either public messaging or advice to the purveyor…

As I go through this I tend to think we would all benefit from a provincial communication strategy on this. I think this issue is quite likely widespread – including water that complies with the current AO levels for pH – if the alkalinity and hardness are low…

Please and thanks for your thoughts.

Regards all,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Cristina Fonseca [mailto:cfonseca@urbansystems.ca]
Sent: Monday, March 21, 2016 10:58 AM
To: Clarkson, Len [STS]
Subject: RE: Corrosion Issues

This is the Paper they issued associated with lead and copper

---

From: Cristina Fonseca
Sent: March 21, 2016 10:46 AM
To: 'Clarkson, Len [STS]' <Len.Clarkson@vch.ca>
Subject: Corrosion Issues

Hi Len,
Just quickly checked my box of treasures…maybe this helps. This is not the study that I was talking about, though; I do not seem to be able to find that one.

> **Corrosion Indices.** The Langelier Saturation Index (LSI) was historically used as an indicator of the corrosivity of water. It is an ineffective indicator because it is based on inhibition solely by carbonate species (carbonate, bicarbonate, and hydroxide ions) and calcium, and from the perspective of DIC (which is a measure of all dissolved carbonate-containing species), this is incorrect. Other compounds can complex with metals, including phosphate and silicate among other anions, and therefore the LSI may not correlate well with the corrosivity of the water.

If you are not the intended recipient or agent, do not rely on, distribute, or copy any part of this e-mail. If you received this e-mail in error, please delete the message, and if possible let me know it has been received in error. Many thanks.

Mori, Alicia HLTH:EX

From: Martiquet, Paul [SC] <Paul.Martiquet@vch.ca>
Sent: March 22, 2016 9:46 AM
To: Clarkson, Len [STS]; [NHA] Wheeler, Angela; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Cc: XT:HLTH Taki, Richard; Chong, Steve [Health Protection] [NS]; Ritson, Mark [VC]; XT:Wilson, Gavin HLTH:IN; XT:Akins, Tiffany GCPE:IN
Subject: RE: Corrosion Issues

Thanks Len, could you let us know when we receive the post flush testing results from Pemberton.

From: Clarkson, Len [STS]
Sent: Tuesday, March 22, 2016 9:24 AM
To: [NHA] Wheeler, Angela; David Fishwick; Joanne Edwards; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Cc: Martiquet, Paul [SC]; Taki, Richard [VC]; Chong, Steve [Health Protection] [NS]; Ritson, Mark [VC]; Wilson, Gavin [CORP]; Akins, Tiffany [CORP]
Subject: FW: Corrosion Issues

Thank you Joanne – this captures it very nicely.

In VCH our EHO's inspect schools every 3 years and the intent is to have them verify flushing is occurring unless the school has data to demonstrate the water is within guidelines without flushing (basically everyone needs to flush we think). Interestingly our survey testing was last conducted in 2011 / 2012, when MV had corrosion control works in place. So we may see varying degrees of effectiveness with centralized treatment (and some lead exposure can still occur although at a lower level). Still I believe this is the best approach since I worry about who maintains the decentralized building treatment systems and their performance (use of appropriate reagent, etc).

My own thoughts are that we have sufficient authority in schools and Child Care facilities, so for me the biggest dilemma is what to do about private residences. I am mindful that we are developing a guideline on public communications following some experiences in IHA about the role of HA's and that we should not be interceding with communities in terms of public messaging on WQ issues..

Good luck with your meeting today!

Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca

Save a tree, please do not print this email unless you really need to!

From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Tuesday, March 22, 2016 8:57 AM

To: Clarkson, Len [STS]; [NHA] Wheeler, Angela; Fishwick, David HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Subject: RE: Corrosion Issues

Hi Len,

Excellent questions and ones we did touch on at our last DWLC when you were away and will certainly be discussing moving forward. These questions will also be on the agenda at EHPAC this morning.

I have attached for your info the info I provided for the discussion today "EHPAC Policy Discussion – Lead in Drinking Water."

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
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1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Monday, March 21, 2016 4:17 PM
To: [NHA] Wheeler, Angela; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Subject: FW: Corrosion Issues

Good afternoon folks,

I am now looking for a little background on water corrosively.
For your reference I have attached my 2010 inspection report to the Village of Pemberton. Also attached is a good article on the matter from San Francisco.

So now I need to get a reference check from you as to how far we go with things:

1. While I have identified and recommended the benefits for centralized treatment – I have not made the issue a requirement or condition of OP. Are any of you doing anything more in terms of mandating treatment?
2. Are any of you promoting or advocating the need to flush taps to minimize exposure to lead and copper in the case of low pH water? This could be either public messaging or advice to the purveyor…

As I go through this I tend to think we would all benefit from a provincial communication strategy on this. I think this issue is quite likely widespread – including water that complies with the current AO levels for pH – if the alkalinity and hardness are low…

Please and thanks for your thoughts.

Regards all,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Cristina Fonseca [mailto:cfonseca@urbansystems.ca]
Sent: Monday, March 21, 2016 10:58 AM
To: Clarkson, Len [STS]
Subject: RE: Corrosion Issues

This is the Paper they issued associated with lead and copper

---

From: Cristina Fonseca
Sent: March 21, 2016 10:46 AM
To: 'Clarkson, Len [STS]' <Len.Clarkson@vch.ca>
Subject: Corrosion Issues

Hi Len,
Just quickly checked my box of treasures…maybe this helps. This is not the study that I was talking about, though; I do not seem to be able to find that one.

Corrosion Indices. The Langelier Saturation Index (LSI) was historically used as an indicator of the corrosivity of water. It is an ineffective indicator because it is based on inhibition solely by carbonate species (carbonate, bicarbonate, and hydroxide ions) and calcium, and from the perspective of DIC (which is a measure of all dissolved carbonate-containing species), this is incorrect. Other compounds can complex with metals, including phosphate and silicate among other anions, and therefore the LSI may not correlate well with the corrosivity of the water.

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Mori, Alicia HLTH:EX

From: Hasselback, Paul <Paul.Hasselback@viha.ca>
Sent: April 5, 2016 5:51 AM
To: Fishwick, David HLTH:EX; Breiddal, Rosanna HLTH:EX; Edwards, Joanne HLTH:EX; Magee, Lynne
Subject: FW: Announcements - DWLC April agenda and March minu...

My regrets for this week. I (and expect other MHOs) are at HOC.

A few points

Lead – while we have control over licensed child care, the "licensed" part of it is not necessarily emphasized. All children deserve to be subject to same policy direction.
My sense is this is a passing concern, only to return in another decade or so. There are specific communities where we have aged infrastructure and leaching likely occurring that can be addressed at treatment point, this may be more relevant to include in drinkig water guide as expectation for addressing pH and aged infrastructure. Also feeds into distribution system management that still needs much more attention.

Small water systems centre of excellence. Of course support for TRU proposal, although unclear how this fits into provincial small water system plan (what plan?), or national needs.

Disinfection document: This is a relatively good document and thanks to all involved. There is a balance between writing a textbook, and writing guidance, and while this draft is more textbook than guidance, perhaps appropriate for the current circumstances. It may be better in the future to cull the background material and focus on more guidance.
I am concerned where we are "brave" enough to state that new systems should have secondary disinfection, but are ambiguous on wording about how to apply to existing systems – few of the larger ones of which have all practices in place that would negate any need for secondary disinfection. We actually emphasize this point by further providing detailed guidance on what is required to not have secondary disinfection. This is only balanced by the single line is section 5.2.2 that opens with from a public health perspective secondary disinfection is warranted in most circumstances.
Hence I would at least recommend that any reference to conditions that might allow for not including secondary disinfection at best be an appendix. Further that any discussion on exemption needs clarity on how such a decision is made. Ie, should require formal application demonstrating that all conditions are met, that review team be established by HA, that clarity in the decision perhaps should rest with the MHO and not be delegatable.
Further I would actually encourage the document to consider setting some goals akin to other provinces that have implemented compliance expectations that implementation be no longer than 3 years hence and should be encouraged as soon as possi ble (within one year) for any system already capable of temporary secondary disinfection.

Sorry that I am not available for this discussion, and I do hope that serious consideration be given to what should be provincial guidance on the subject.

I am available by email this week if there are questions on my comments.

Paul

Paul

From: Drinking Water Leadership Council [mailto:DoNotReply@SP2010.gov.bc.ca]
Sent: Monday, April 04, 2016 3:55 PM
To: Hasselback, Paul
Subject: Announcements - DWLC April agenda and March minu...

Drinking Water Leadership Council
DWLC April agenda and March minu... has been added

Modify my alert settings | View DWLC April agenda and March minu... | View Announcements | Mobile View

Title:	DWLC April agenda and March minutes
Body:	Hi Everyone, The agenda for the April 7 meeting is available here: https://hlth005.gov.bc.ca/HPB/DWLC/Agenda%20February%204/Home.aspx Minutes from the March 3, 2016 DWLC meeting can be accessed here: https://hlth005.gov.bc.ca/HPB/DWLC/Minutes%202016/March%202016.aspx . If you are having difficulty accessing either document, please email me at rosanna.breiddal@gov.bc.ca and I will send you a copy directly. Thanks, Rosanna.
Expires:	

Last Modified 4/4/2016 3:50 PM by Breiddal, Rosanna HLTH:EX

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: April 6, 2016 9:19 AM
To: 'Crowe, Marianne'; 'Doug.Quibell@northernhealth.ca'
Subject: DWLC Agenda - Tomorrow.

Hi Folks:
Here is an updated agenda for tomorrow's teleconference.
Dave

DWLC Agenda

Thursday April 7, 2016, 9:00am

s.15;s.17 , Codes.15;s.17

Agenda Items

- Introductions
- Action items from previous meeting
- Webinars - Excusive to HAs or? Esther
- PHO Indicators - Joanne
- Lead - Joanne/Dave
- Vancouver Coastal Database Pilot Project BN - Len
- Distribution Systems - final review - Dave/Emily
- MOTI checklist - Dave
- Round table

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Sylvia Struck <Sylvia.Struck@fnha.ca>
Sent: April 6, 2016 10:25 AM
To: Zubel, Marc; Clarkson, Len [STS]; Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX; Magee, Lynne; Norlin, J Ivor; Wheeler, Angela
Subject: Lead and Copper testing
Attachments: FNHA-Fact-Sheet-Lead-and-Copper-In-Drinking-Water(1).pdf

Hi All,

Thank you for allowing a brief discussion during the past meeting to discuss lead and copper sampling. I am aware of the Ontario guidelines but it specifies a sample volume of 1 litre which seems a bit excessive (compared to the EPA 250 mL and our regular metals sample volume of 120 mL) and has a first flush of 5 minutes which also seems excessive (compared to the 30 seconds recommended by EPA).

This probably warrants a larger discussion but I would like for you all to weigh in on how it has been handled in your health authority. As mentioned on the call, we are planning on conducting sampling in all our day care and school facilities as a baseline. Also Joanne and Dave if you could weigh in on how the province might approach this would be great.

We are hoping to initiate sampling within the month to be responsive to concerns so I will need to establish a protocol shortly. I will be aiming to develop a protocol that is both defensible and practical! I have attached a flyer that we sent out to the communities and which is also downloadable from our website.

Thank you in advance for your opinions and experience.

Sylvia

Sylvia Struck, Ph.D.
Manager, Drinking Water Safety Program
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Tel. (604) 693-6960
Sylvia.Struck@FNHA.ca



Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: April 6, 2016 11:20 AM
To: 'Sylvia Struck'; Clarkson, Len [STS]; [FHA] Zubel, Marc; Edwards, Joanne HLTH:EX; 'Magee, Lynne'; [IHA] Norlin, J Ivor; [NHA] Wheeler, Angela
Subject: RE: Lead and Copper testing

Hi Sylvia – We'll chat about this at DWLC tomorrow.

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Wednesday, April 6, 2016 10:56 AM
To: Clarkson, Len [STS]; [FHA] Zubel, Marc; Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX; 'Magee, Lynne'; [IHA] Norlin, J Ivor; [NHA] Wheeler, Angela
Subject: RE: Lead and Copper testing

Hi Len,

Thank you for your quick response. No need to release data – just looking at various protocols that may have been used in the health authorities to address this issue.

Sylvia

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Wednesday, April 6, 2016 10:51 AM
To: Sylvia Struck <Sylvia.Struck@fnha.ca>; [FHA] Zubel, Marc <Marc.Zubel@fraserhealth.ca>; 'Edwards, Joanne' <Joanne.Edwards@gov.bc.ca>; ''Fishwick, David' (David.Fishwick@gov.bc.ca)' <David.Fishwick@gov.bc.ca>; 'Magee, Lynne' <Lynne.Magee@viha.ca>; [IHA] Norlin, J Ivor <JIvor.Norlin@interiorhealth.ca>; [NHA] Wheeler, Angela <Angela.Wheeler@northernhealth.ca>
Subject: RE: Lead and Copper testing

Hi Sylvia,

Here is the procedure the District of Squamish used:

Hi Len,

Thank you for your time on the phone this morning. As discussed, please see the attached data from the 23Mar16 Langelier Saturation Index (LSI) and Lead Grab Sampling Event.

Sampling Information:

Lead Sampling was conducted as per Schedule 15.1 of the Ontario Safe Drinking Water Act, 2002 ONTARIO REGULATION 170/03 https://www.ontario.ca/laws/regulation/030170#BK35

Procedure summarized as follows:

1. Run water for 5 mins
2. Shut water off
3. Within 30-35mins take "First Draw" Sample (must capture water that first comes out of the tap)

4. Take "Second Draw" Sample immediately after 1st without adjusting water flow
5. Take a third sample immediately after and test for pH and temp to two decimal places in the field, add these results to the chain of custody for the lab

I don't feel I can share their data directly but essentially they have an LSI of aprox -1.7 or so. In following the guidance above all values from municipal buildings came back with Pb < 10ppb.

I am not sure how Ontario arrived at this protocol, but I suppose it is intended to give a depiction of what a 'typical' daily exposure level would look like which is what the MAC is based on – although you would be the better judge of that than I. Please let me know which way you decide to go.
I can ask DOS for permission to release their data to you if you wish??

Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
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From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Wednesday, April 06, 2016 10:25 AM
To: [FHA] Zubel, Marc; Clarkson, Len [STS]; 'Edwards, Joanne'; 'Fishwick, David' (David.Fishwick@gov.bc.ca); Magee, Lynne; [IHA] Norlin, J Ivor; [NHA] Wheeler, Angela
Subject: Lead and Copper testing

Hi All,

Thank you for allowing a brief discussion during the past meeting to discuss lead and copper sampling. I am aware of the Ontario guidelines but it specifies a sample volume of 1 litre which seems a bit excessive (compared to the EPA 250 mL and our regular metals sample volume of 120 mL) and has a first flush of 5 minutes which also seems excessive (compared to the 30 seconds recommended by EPA).

This probably warrants a larger discussion but I would like for you all to weigh in on how it has been handled in your health authority. As mentioned on the call, we are planning on conducting sampling in all our day care and school facilities as a baseline. Also Joanne and Dave if you could weigh in on how the province might approach this would be great.

We are hoping to initiate sampling within the month to be responsive to concerns so I will need to establish a protocol shortly. I will be aiming to develop a protocol that is both defensible and practical! I have attached a flyer that we sent out to the communities and which is also downloadable from our website.

Thank you in advance for your opinions and experience.

Sylvia

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First Nations Health Authority
Health through wellness

Mori, Alicia HLTH:EX

From: Sylvia Struck <Sylvia.Struck@fnha.ca>
Sent: April 12, 2016 4:04 PM
To: Fishwick, David HLTH:EX
Subject: RE: changes in lead sampling protocol

Hi Dave,

Thank you for sending. I will have a more thorough read. I did notice the recommended sampling time period for schools being june-october which is when they are generally not in full use (other than possibly the later part of the timeframe). Capturing 'typical exposure' is definitely a change. But you are correct in that it will take a while to finalize the protocol. If it is to be conducted annually, the new protocols will be used when they are available for the next round.

I will complete what you and Joanne have sent around concerning RHA activities around lead sampling/programs.

Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, April 12, 2016 1:01 PM
To: Sylvia Struck
Subject: RE: changes in lead sampling protocol

Hi Sylvia – they will be posting a revised draft technical guidance document for lead shortly. It will then be quite some time before they receive comments, incorporate them into the document, get approval, translate to French and then finally publish them – many months down the road.

The document discusses analytical methods and health effects, and does speak briefly to monitoring protocols. The question is whether this will be something that is useful in the BC context of the BC lead in schools issue. I've pasted that section below fyi. Please let me know if this adresses what you are interested in, or if you are looking for something different.

As you may recall from DWLC last week, we are developing a BC document to speak to lead in schools and child care facilities, and the first step is to figure out the scope of what we are going to cover, so any feedback would be helpful.

Dave

3.1 Monitoring

Utilities should characterize their water to assess if it is corrosive to the materials found throughout the distribution system and in household plumbing. Sampling protocols will differ, depending on the desired objective (i.e., identifying sources of lead, controlling corrosion, assessing compliance, estimating exposure to lead). As monitoring of lead at the tap can be done using different sampling protocols, it is important that the selected protocol be appropriate to

meet the desired objective. Monitoring for typical exposure to total lead should be conducted at the consumer's tap, with priority given to homes with lead service lines, as these are likely to have the highest lead concentrations. Schools and daycare facilities should also be prioritized for monitoring to ensure that the most sensitive population (i.e., young children) is captured. However, a different sampling protocol should be considered for schools, daycare facilities and larger buildings or dwellings. It is difficult to assess exposure in these buildings because of their unique and complex plumbing configurations and the large number of pipes and plumbing components. Sampling should be conducted at least once per year, with the number of sites to be monitored determined based on the size of the drinking water system and the type of building, as discussed below.

3.1.1 Monitoring for residential dwellings

It is recommended that total lead be monitored, at least once per year, at the consumer's tap between the months of June and October. The first priority for monitoring should be homes with partial or full lead service lines, followed by homes with lead solder and lead-bearing brass fittings. The following sampling protocol is recommended for residential sites, as it is intended to capture typical exposures, including potential exposure to particulate lead. Sampling should be done after a 30-minute stagnation period following a flushing period of 5 minutes, at the cold water tap in the kitchen or other appropriate location where water is collected for drinking or food preparation. Two 1 L samples should be collected in wide-mouth sample bottles at a medium to high flow rate (greater than 5 L/minute) without removing the aerator. The samples need to be acidified using a 2% nitric acid solution and held for a minimum of 16 hours after preservation with nitric acid before analysis. Each sample should be thoroughly mixed prior to analysis using an appropriate method (see Section 6.0). The lead concentration is determined by averaging the results from the two samples.

3.1.2 Monitoring for schools, multi-dwelling residences and large buildings

It is recommended that total lead be monitored, at least once per year, at each of the drinking water fountains or cold water taps where water is used for drinking or food preparation in schools, multi-dwelling (i.e., more than six residences) buildings or large buildings. Multi-dwelling and large buildings should be sampled between the months of June and October. Schools should be sampled during the same period, but when the buildings are fully occupied and functional, to capture typical exposure levels – recommended to be in either June or October. When sampling multi-dwelling buildings, priority should be given to sites suspected or known to have full or partial lead service lines. The following sampling protocol is recommended for these sites to capture typical exposures, including potential exposure to particulate lead. Random daytime (RDT) sampling should be conducted by collecting a sample at drinking water fountains or at cold water taps where water is used for drinking or food preparation, without a stagnation period and without prior flushing. Two 125 mL samples should be collected, preferably in wide-mouth sample bottles, at a medium to high flow rate without removing the aerator. The samples need to be held for a minimum of 16 hours after they are acidified using a 2% nitric acid solution and prior to analysis. Each sample should be thoroughly mixed prior to being analyzed using an appropriate method (see Section 6.0). The lead concentration is determined by averaging the results from the two samples.

The sampling plan for schools and child care centres/facilities must consider that many occupants in these buildings are the most susceptible to the adverse health effects from lead exposure. Consequently, sampling plans for these facilities should prioritize every drinking water fountain and cold water outlet used for drinking or food preparation over infrequently used outlets. In other building types, sampling plans should also target drinking water fountains and cold water outlets used for drinking or food preparation, but with the number of sites sampled based on the size and population of the building.

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Tuesday, April 12, 2016 12:39 PM
To: Fishwick, David HLTH:EX
Subject: changes in lead sampling protocol

Hi Dave,

I just spoke with Kristina Taracha at HC and she mentioned that the lead sampling protocol will put out for public comment shortly. Do you know what is being discussed in the FPT group and what changes will be implemented? We hope to get the sampling going this spring before school lets out.

Sylvia

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First Nations Health Authority
Health through wellness

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: April 25, 2016 1:32 PM
To: 'Clarkson, Len [STS]'; 'Keith Kohut'; 'Mark Burger'; 'Jodi Garwood'; 'Cristina Fonseca'
Subject: RE: Position statement(s) - Lead control

Hi Len:

As usual I'm happy to add my two cents worth as an "ex-officio" contributor. However I'll be in Ottawa May 6th, but may be able to join in if it is after 4:30 eastern time – I guess that is 1:30 here? The
beginning of the next week looks fairly open. If I can't attend, either Manish or Joanne can probably attend.

Dave.

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Monday, April 25, 2016 1:22 PM
To: 'Keith Kohut'; 'Mark Burger'; 'Jodi Garwood'; 'Cristina Fonseca'; Fishwick, David HLTH:EX
Subject: RE: Position statement(s) - Lead control

Yes I am hoping Cristina and David can join us – which may be about the right size already.
David – I think it will be important to have someone from MOH – even if it's just to make sure we are aligned with what the ministry may have in mind…

Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Keith Kohut [mailto:kohutk@ae.ca]
Sent: Monday, April 25, 2016 12:54 PM
To: Clarkson, Len [STS]; 'Mark Burger'; 'Jodi Garwood'; 'Cristina Fonseca'
Subject: RE: Position statement(s) - Lead control

Thanks Len,
s.22 No one else has really stepped forward, although Cristina had asked exactly what help was needed. I will reach out to her and see if she is interested.
Keith

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Monday, April 25, 2016 12:39 PM
To: 'Mark Burger'; 'Jodi Garwood'; 'Cristina Fonseca'
Cc: Keith Kohut
Subject: RE: Position statement(s) - Lead control

Thanks Mark,

For some strange reason Wednesdays and Fridays are good for me this week and the next 2 after that.

Can we perhaps aim for May 6th?

s.22 Do we need anyone else to join in this effort? I am fine with keeping it to a small group.

Len

Len Clarkson
Water Specialist and Drinking Water Officer
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From: Mark Burger [mailto:MBurger@kwl.ca]
Sent: Monday, April 25, 2016 12:25 PM
To: Jodi Garwood; Clarkson, Len [STS]
Cc: Keith Kohut
Subject: RE: Position statement(s) - Lead control

Hi Jodi:

A conference call anytime next week would be great. The week of May 9 is probably OK but will likely be in the field towards the end of that week which may make it a bit more difficult (although not impossible) for me to call in.

Mark

Mark Burger, M.A.Sc., P.Eng.
Water Treatment Engineer

D 604-293-3115 **C** 778-322-1535
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consulting engineers

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KWL File #

From: Jodi Garwood [mailto:jgarwood@bcwwa.org]
Sent: April-25-16 12:18 PM
To: Mark Burger; Len Clarkson
Cc: Keith Kohut
Subject: RE: Position statement(s) - Lead control

Hi Len and Mark,

The board meeting has been **moved from mid-late June to May 30/31** so there will not be enough time to pull together a draft paper. However, Tanja would like to present the board with an update on the status of the position statement / issues analysis paper as well as the timeline for completion. Should I schedule a call for the three of us to meet late next week or early the week of May 9 to start pulling this together?

Keith, has anyone else stepped forward to assist?

Jodi Garwood
Technical Communications Specialist

BC Water & Waste Association
Suite 620 – 1090 W. Pender St., Vancouver, BC V6E 2N7
D: 604-630-5350 F: 604-433-9859 TF: 877-433-4389
jgarwood@bcwwa.org www.bcwwa.org



From: Mark Burger [mailto:MBurger@kwl.ca]
Sent: Friday, April 15, 2016 6:00 PM
To: Keith Kohut; Len Clarkson; Jodi Garwood
Subject: RE: Position statement(s) - Lead control

Hi Keith, Len, and Jodi:

I can help with some of the writing. Let me know if you want me to help out.

Mark

From: Keith Kohut [mailto:kohutk@ae.ca]
Sent: April-15-16 4:51 PM
To: 'BCWWA Drinking Water Committee'
Subject: FW: Position statement(s) - Lead control
Importance: High

Hi all,

It sounds like there is some interest in the Drinking Water Committee preparing a position paper on lead (corrosion) control for drinking water systems. Tanja has asked to have a position paper ready for June to share with the board. Len has graciously agreed to act as the lead coordinator for this work, but we need some people to help with the heavy lifting, especially the writing department. If you are interested could you please let Len, Jodi and I know? A quick response would be greatly appreciated.

Jodi, we will need your help with minutes (if necessary) and setting up sub-committee meetings for this task. Would you be able to help?

As reference, the AWWA has created a Lead Resource Community that may have much of the information we need to draft the BCWWA paper.

Keith Kohut, M.A.Sc., P.Eng.
Associated Engineering (B.C.) Ltd.
Suite 300 - 4940 Canada Way, Burnaby, BC V5G 4M5
Tel: 604.293.1411 | Fax: 604.291.6163.



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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: April 27, 2016 10:19 AM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Wu, Michael [VC]; Clarkson, Len [STS]; Molder, Darren [SC]; Ip, Jessica [VC]; XT:Lysyshyn, Mark Dr. HLTH:IN; Ritson, Mark [VC]; Radnidge, Michele [RH]; Massoud, Nader [NS]; Dolling, Roya [NS]; Chong, Steve [Health Protection] [NS]
Cc: XT:Akins, Tiffany GCPE:IN; Glover, Dan [SC]
Subject: FW: 1989 lead survey results for Howe Sound
Attachments: img-207114727-0001.pdf; Lead school survey 1989 Howe Sound.pdf

Importance: Low

Some historical data from 1989 – just fyi thanks to Dan's excellent record keeping.

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Glover, Dan [SC]
Sent: Tuesday, April 26, 2016 4:18 PM
To: Clarkson, Len [STS]
Subject: 1989 lead survey results for Howe Sound

Dan Glover
DWO/EHO
Vancouver Coastal Health - Powell River
604-485-3335 604-485-3305 (fax)
"This E-mail message, including any attachments, contains confidential information and is intended solely for the use of the individual or entity to whom it is addressed. Any distribution, copying, disclosure, or other use is strictly prohibited. If you have received this E-mail in error, please notify the sender immediately and permanently delete this message. Thank you"

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: April 27, 2016 3:23 PM
To: Fishwick, David HLTH:EX
Subject: RE: 1989 lead survey results for Howe Sound

Agreed. Even Squamish has a pH of roughly 7.4 but still mildly corrosive as our hardness and alkalinity are around 23 ppm each.
So we are looking at a widespread issue I am sure.

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, April 27, 2016 3:19 PM
To: Clarkson, Len [STS]
Subject: RE: 1989 lead survey results for Howe Sound

Interesting stuff. Those show a remarkable reduction after just 30 seconds flushing – that would lead me to conclude that in these cases the lead would be coming from the fountains themselves, or perhaps the solder rather than piping. Also interesting to note that the PH was above 7 in the examples shown.

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Wednesday, April 27, 2016 10:19 AM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Wu, Michael [VC]; Clarkson, Len [STS]; Molder, Darren [SC]; Ip, Jessica [VC]; XT:Lysyshyn, Mark Dr. HLTH:IN; Ritson, Mark [VC]; Radnidge, Michele [RH]; Massoud, Nader [NS]; Dolling, Roya [NS]; Chong, Steve [Health Protection] [NS]
Cc: Akins, Tiffany [CORP]; Glover, Dan [SC]
Subject: FW: 1989 lead survey results for Howe Sound
Importance: Low

Some historical data from 1989 – just fyi thanks to Dan's excellent record keeping.

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Glover, Dan [SC]
Sent: Tuesday, April 26, 2016 4:18 PM
To: Clarkson, Len [STS]
Subject: 1989 lead survey results for Howe Sound

Dan Glover
DWO/EHO
Vancouver Coastal Health - Powell River
604-485-3335 604-485-3305 (fax)
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Mori, Alicia HLTH:EX

From: Norlin, J Ivor <JIvor.Norlin@interiorhealth.ca>
Sent: April 29, 2016 1:45 PM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Cc: Zemanek, Michael HLTH:EX; Janke, Brenda G HLTH:EX; Hesketh, Courtney; Lively, Sharlene [IHA]
Subject: RE: Question for lead policy discussion

Hi again,

Below are our final responses to the questions. Please let me know if you need anything clarified.

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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From: Norlin, J Ivor
Sent: Thursday, April 21, 2016 11:22 AM
To: 'Edwards, Joanne HLTH:EX'; Fishwick, David HLTH:EX
Cc: Zemanek, Michael HLTH:EX; Janke, Brenda G HLTH:EX
Subject: RE: Question for lead policy discussion

Hi Joanne and Dave,

Courtney Hesketh is our lead on the School Act and Sharlene Lively is Manager of Licensing. I will forward their team's responses to the questions pertaining to these facilities when they are ready. Below is our response to the questions pertaining to community water supply systems and testing protocols. Let me know if you need any clarification on these.

Schools:

Questions for discussion on schools:

- Does your RHA inspect schools and if so, at what frequency?
  We do not inspect schools in relation to drinking water unless they are on a 'stand-alone' drinking water system.
- Is lead in drinking water addressed or tested for as part these inspections?
  For schools with 'stand-alone' drinking water systems they would be required to provide comprehensive water sampling including lead levels.

- What messaging does your RHA give schools regarding the risks of lead in drinking water? How and at what frequency?
  We have not provided messaging to schools. We have investigated complaints and provided consultation to school districts as required.
- How are schools with flushing programs or POU treatment for lead monitored?
  The monitoring has remained with the school/ maintenance department of the school district.
- Have you been using the School Act as the authority to engage schools? See below.
  We have not engaged schools with messaging regarding lead in drinking water

- School Act – School Medical Health Officers
  - In your health authority, is the School MHO under s.89(1) of the School Act the regional MHO? Or is one MHO appointed as the School MHO for the whole RHA?
    Dr. Sue Pollock is appointed as the School MHO for Interior Health

Childcare facilities:

- Do Licensing Officers at your RHA look into lead in drinking water as part of their approval / inspections of licensed childcare facilities? Yes, if the applicant is not on a community water system. If so, are they using the CCALA or other legislation? CCALA

- Do Licensing Officers ever require childcare facilities to have their water supply tested for lead even if they are connected to an approved water system that may have acceptable levels of lead in the distribution system mains (but perhaps has corrosive water that can increase leaching in older buildings)? If not, should this be added as a licensing requirement? No testing is done at this time. If a community is deemed to be at risk for lead due to aggressive water, we could assist them in determining whether their facility is at risk.

- Does your Licensing Officers provide messaging regarding lead in drinking water to childcare facilities? Is so, what is the message, who provides it, how, when and at what frequency? No.

- How do / could EHOs support LOs with such drinking water concerns originated from within the facility or building it is in (i.e., define roles)? EHO consults if under 8 in daycare or under 6 in residential care. Over those capacities, the EHO would take the lead role.

Building systems and the general public:

- Some RHAs report that water suppliers provide information about the need for flushing in annual reports. Do you feel this messaging is enough to be effective? No, not in cases where there has been an identified risk of significant Lead exposures. The general public and School districts are often not aware that annual reports are produced by water suppliers.

- What do you think would be the most effective way to educate the general public and building system owners about the risks of lead in drinking water after the water enters their building or home?
  Through partnerships and collaboration with schools, water suppliers (e.g. utility bill inserts), realtors/CMHC (e.g. advice on older homes), and industry (e.g. home water treatment equipment

companies). Also through Health Authority public websites with links to HealthLink BC and Health Canada documents/guidelines.

- Who do you think should be responsible for providing these messages? Public Health or the water supplier or both? That would depend on the level of risk. Where there has not been a substantiated hazard public messaging would (at best) be misdirected resources and (at worse) undermine public confidence in community water supplies. Homeowners, building owners, water suppliers, regional public health departments and provincial government all hold some level of responsibility for determining what risk there may be. Regional Health Authorities could provide messaging, but the messaging itself should be at a provincial level and consistent across all RHA's.

Community level interventions - Corrosion control at the treatment plant level

- DWLC reps indicated that they have not taken an aggressive stance on corrosion control (e.g., it is not something they have ordered a community with aggressive water to do), but that they have worked with operators to educate them and encourage it. How has your RHA approached the issue of corrosion control of the community level where corrosive water exists? Corrosive/aggressive water is an uncommon occurrence in our region and has not been a high priority for our program to date (i.e. primary treatment for pathogens, distribution system security, operator training, source protection and other issues have been larger concerns). New systems and water sources are scrutinized for corrosion issues at the source approval stage. Existing water systems that have been "living with" their water quality for decades have not been viewed as a warranting intervention. We have not approached the issue of corrosion control unless it has been brought forward through complaints or discussion with the water system operator or school districts.

- We need a clear, consistent message on water chemistry and corrosion. Corrosion control is much more than pH levels. What has been the messaging around corrosion from your RHA? We refer to the GCDWQ (including *Guidance on Controlling Corrosion in Drinking Water Distribution Systems*) the , AWWA, EPA or other references as it is not explicitly covered in the DWPA and there are currently no specific provincial objectives.

- When would community level corrosion control be necessary? When a public health hazard has been identified, treatment of the municipal drinking water must be considered as a means of addressing that threat. Is lead in drinking water caused by aggressive water stagnating in plumbing fixtures better addressed at the building level (e.g., through flushing and POU) or at the community level through corrosion control measures? That is something that would have to be assessed (and a solution agreed to) at the stakeholder level. Have risk assessments been done to determine which strategy would be most effective for the situation in specific communities? No. The few cases we've dealt with to date have been focused on schools. These buildings were all old and accepted to be the most appropriate point of intervention.

- How effective in your opinion are flushing programs or POU devices as a method of reducing exposure to lead from leaching from older plumbing? They can be effective but require on-going resources to maintain and monitor to ensure they remain so. Ideally the plumbing should be replaced but the costs for doing that are generally what drive the flushing program and PoU solutions. If a municipality or a school district is looking at the costs of renovating several schools, the costs can enter the realm where treatment on the municipal water system becomes comparable. The specific school districts that have utilized these options as a means to reduce Lead in their drinking water should be engaged in trying to answer this question.

- What would be the best approach moving forward to encourage communities to implement corrosion control? A water system could have a pH within the acceptable range but leaching of lead in buildings can still be an issue.
  As it is now, when an issue comes to our attention we have only external information resources to use such as the GCDWQ, AWWA, EPA, etc. These documents tend to be large, detailed, technical and not very user friendly or applicable to our BC experience. Consider the volume of information involved in the review of the US Lead and Copper Rule and you get an idea of enormous drain on resources that could occur.

  It is not clear what the best approach would be. One option could be to implement a simplified monitoring program for schools with RHAs screening water quality corrosion parameters to flag water systems that might have a problem. If this initial screening identifies any issues a simplified Provincial guidance document could be employed to lead communities (with support of their RHA) through assessing vulnerability and determining options. This could include where to get information on blood lead levels in their community, percentage of old home (pre-plumbing code changes), and user surveys for anecdotal observations for fixture staining (the tell-tale blue ring around the sink drain or other signs of corrosion and leaching).

Sampling for lead:

- What are the sampling protocols for lead testing in drinking water followed in your RHA? We have no specific sampling protocol developed. We've been applying what we believe the reasonable and achievable reference method for the particular case, including Sec. A.2.5 of the Health Canada *Guidance on Controlling Corrosion in Drinking Water Distribution Systems*.
- Please highlight any questions or concerns you may have over Health Canada's sampling protocols for lead and corrosion. It is a very detailed and technical document that might be difficult for communities to understand and RHAs to use as an engagement tool. School Districts will want more specific guidance on sampling protocols.

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
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From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Tuesday, April 12, 2016 12:10 PM
To: Fishwick, David HLTH:EX; Norlin, J Ivor; Magee, Lynne; Wheeler, Angela [NHA]; Quibell, Doug [NHA]; Zubel, Marc; XT:HLTH Hasselback, Paul; Parsonage, Roger; XT:HLTH TINTUN@Fraserhealth.ca; Clarkson, Len [STS]; Sylvia Struck
Cc: Zemanek, Michael HLTH:EX; Janke, Brenda G HLTH:EX
Subject: Question for lead policy discussion

At DWLC last week an action item was to provide responses to the questions posed in the document I had prepared for EHPAC regarding lead in drinking water. I have taken that document and compiled the questions in sections as they were interspersed with a lot of general information as well (See revised questions for lead policy discussion attached). We hope this format will make answering the questions more straight forward. Can you kindly provide a response from your programs to the questions asked to help inform the direction of this policy work by April 27. You can send your responses to Dave and/or myself. Thanks!

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: May 2, 2016 3:06 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: FW: Revised DOS documents
Attachments: Water Fact Sheet.pdf

Joanne and David – I think this is pretty good actually…
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Clarkson, Len [STS]
Sent: Monday, May 02, 2016 3:03 PM
To: Chong, Steve [Health Protection] [NS]; Martiquet, Paul [SC]; Taki, Richard [VC]; Akins, Tiffany [CORP]
Cc: Watson, Cindy [SC]
Subject: FW: Revised DOS documents

Revised DOS release fyi..
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Christina Moore [mailto:CMoore@squamish.ca]
Sent: Monday, May 02, 2016 2:57 PM
To: Clarkson, Len [STS]
Cc: Bob Smith; Dan Ricciuti
Subject: Revised DOS documents

Hello Len, for your information, below is the news release that we have revised and plan to send out by end of day today. Attached is the fact sheet that it will link to.

Thanks,
Christina

May 2, 2016

FOR IMMEDIATE RELEASE

Drinking Water Week reminds British Columbians of the value of our drinking water

Vancouver Coastal Health 'flush until cold' guideline explained

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Media Contact:
District of Squamish
Christina Moore, Communications Manager
604-815-5025, cmoore@squamish.ca

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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: May 3, 2016 2:40 PM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Cc: XT:Lysyshyn, Mark Dr. HLTH:IN; XT:HLTH Lu, James; Chong, Steve [Health Protection] [NS]
Subject: FW: Question for lead policy discussion
Attachments: Questions for lead policy discussion (2).docx; VCH Advice re Lead in Drinking Water - Public Final_APR272016.pdf; VCH Advice re Lead in Drinking Water - School Final_APR272016.pdf; VCH Advice re Lead in Drinking Water - Day Care Final _APR272016.pdf; DRAFT_VCH School flushing Program Development Guide_v2.docx; DRAFT_VCH SD Flushing Sampling and Testing Information_v2.docx

Importance: High

Hi Joanne,
Sorry to be late with this. Let me know if you have any questions please.

Regards,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Clarkson, Len [STS]
Sent: Monday, May 02, 2016 4:01 PM
To: Lysyshyn, Mark [NS]; Markey, Paul [VC]
Cc: Chong, Steve [Health Protection] [NS]; Lu, James [RH]
Subject: FW: Question for lead policy discussion
Importance: High

Mark and Paul – this information has been requested by EHPAC – do you agree with my replies (in blue)?
James or Steve – please let me know if you wish to see anything added (or subtracted).

Thanks – I would like to send this in the next day or two….

Regards all
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Thursday, April 28, 2016 3:23 PM
To: Fishwick, David HLTH:EX; [IHA] Norlin, J Ivor; 'Magee, Lynne'; [NHA] Wheeler, Angela; [FHA] Zubel, Marc; Clarkson, Len [STS]; 'Sylvia Struck'
Subject: RE: Question for lead policy discussion
Importance: High

Hello all,

This is a friendly reminder that we were looking to get feedback on the lead policy questions (see attached) sent in this initial email by **April 27th** from each health authority. If you have not yet responded, could you please send your responses to Dave and I by early next week.

Thank you kindly,

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

From: Edwards, Joanne HLTH:EX
Sent: Tuesday, April 12, 2016 12:10 PM
To: Fishwick, David HLTH:EX; Norlin, J Ivor; Magee, Lynne; Wheeler, Angela; 'Quibell, Doug'; Zubel, Marc; XT:HLTH Hasselback, Paul; XT:HLTH Parsonage, Roger; XT:HLTH TINTUN@Fraserhealth.ca; Clarkson, Len [STS]; Sylvia Struck
Cc: Zemanek, Michael HLTH:EX; Janke, Brenda G HLTH:EX
Subject: Question for lead policy discussion

At DWLC last week an action item was to provide responses to the questions posed in the document I had prepared for EHPAC regarding lead in drinking water. I have taken that document and compiled the questions in sections as they were interspersed with a lot of general information as well (See revised questions for lead policy discussion attached). We hope this format will make answering the questions more straight forward. Can you kindly provide a response from your programs to the questions asked to help inform the direction of this policy work by April 27. You can send your responses to Dave and/or myself. Thanks!

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
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Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: May 11, 2016 9:46 AM
To: XT:Fumerton, Raina HLTH:IN; Emerson, Brian P HLTH:EX; Torng, Allan; XT:Allison, Sandra HLTH:IN; Edwards, Joanne HLTH:EX; Kendall, Perry HLTH:EX; Zemanek, Michael HLTH:EX
Cc: Fishwick, David HLTH:EX
Subject: Re: Conversation re Condition of Permit for Corrosive Water

Re 1. Looks good. Ensure wording makes clear that the *communication* is annual, not the *mitigation*.
Re 2. Looks good. Maybe clarify that we are limiting lead exposure to drinking water only? Or were you thinking of sampling other media (paint/dirt/air/serum)?

Re 3. I don't think we should *specify* "conditioning" in the third suggested COP. Conditioning (water treatment) is one way of addressing a corrosion problem, but not the only way. I would prefer something like,

3. The operator must *devleop* a *remedial action* plan *acceptable to NH* to ~~condition their corrosive water~~ *mitigate the corrosion* (with timelines attached)

The key points are:

1. Water supplier responsibility for plan development
2. HA oversight and approval of the plan, prior to implementation, and
3. Outcome-based (reduce actual corrosion, which will require residential monitoring to prove it's happening) vs process-based (condition water, which would only require monitoring of water chemistry).

Not to beat a dead horse, but corrosion is a function of 3 factors: water chemistry, plumbing materials, and contact time, so addressing the problem could involve any or all of these. We also shouldn't overlook the sometimes critical role of microbial communities (biofilm) in producing localised acidic condtions within a distribution system - usually described as MIC (microbially-induced corrosion). Increased flushing or swabbing or disinfectant residual could be part of a remedial action plan in such situations, or replacing old cast iron or ductile iron mains.

Dave Tamblyn
Public Health Engineer
Northern Health Authority
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dave.tamblyn@northernhealth.ca
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the northern way of caring

From: Fumerton, Raina
Sent: May 10, 2016 20:04
To: Tamblyn, Dave; brian.emerson@gov.bc.ca; Torng, Allan; Allison, Sandra; joanne.edwards@gov.bc.ca; perry.kendall@gov.bc.ca; michael.zemanek@gov.bc.ca
Cc: Fishwick, David HLTH:EX
Subject: Re: Conversation re Condition of Permit for Corrosive Water

Hi everyone thanks for the call the other week - just to summarize and ensure I am clear as to the discussion, as I would like to include reference to our conversation in my email to the RDs and CMHOs, which Perry had suggested I do prior implementation in order to elicit their feedback.

As I understood from our conversation, there was unanimous support at the provincial level that including a condition of permit as being a useful and appropriate mechanism to address water operators who refuse to address corrosive source water. This would be the preferred enforcement tool (versus using the Public Health Act). I cannot recall if legal council was sought at the provincial level on this issue, so would appreciate if someone could refresh my memory.

Conditions of permit relevant to this issue that were discussed, and that were deemed appropriate included:

1. The operator must inform the community around the potential risk for lead exposure in their drinking water (through an appropriate communication mechanism) and outline mitigation strategies homeowners can take on an annual basis
2. The operator must implement an annual residential testing strategy in order to understand lead exposure burden in their community.
3. The operator must implement a plan to condition their corrosive water (with timelines attached)

Please correct me if I have not captured the discussion accurately.

Thanks,
Raina

Raina Fumerton, MD, MPH, FRCPC
Medical Health Officer Northwest HSDA
Northern Health Authority
(250) 631-4261

From: Fumerton, Raina
Sent: Monday, March 21, 2016 2:10 PM
To: Fumerton, Raina; Tamblyn, Dave; brian.emerson@gov.bc.ca; Torng, Allan; Allison, Sandra; joanne.edwards@gov.bc.ca; perry.kendall@gov.bc.ca; michael.zemanek@gov.bc.ca
Cc: Fishwick, David HLTH:EX
Subject: Conversation re Condition of Permit for Corrosive Water
When: Thursday, April 28, 2016 3:30 PM-4:15 PM.
Where: 1-877-385-4099 Participant 7226459# Moderator (Raina) 8964664#
To discuss our legislative options in NH should municipalities not adhere to our recommendation to treat corrosive water.

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: May 18, 2016 11:29 AM
To: 'Zubel, Marc'
Cc: Zemanek, Michael HLTH:EX
Subject: RE: RR NU: Legislative Authority re: Corrosive Source Water

Hi Marc:
Yes- No doubt this will be on the DWLC agenda. This will also be on the agenda for EHPAC on May 31st as we hope to have an outline for discussion there, and I anticipate some further direction will come from this on a consistent provincial approach.
I would tread cautiously on any reaction to lead without doing thorough groundwork first- I think we collectively need to be on the same page, even if this slow things down a bit initially. Important questions need to be answered as to what the best mitigation measures are for a community before concluding that ordering corrosion control is the best way to go (Will it even be effective? What are the unintended consequences of changing water chemistry?). I would also be concerned that the same political pushback would happen as did with filtration in the interior if it is not approached carefully, which may end up setting back progress in solving the problem.

Dave

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Wednesday, May 18, 2016 9:16 AM
To: Fishwick, David HLTH:EX
Subject: FW: RR NU: Legislative Authority re: Corrosive Source Water

Hi Dave: Please review e-mail thread below.
can we add this to our next DWLC agenda for discussion, with the intent of determining if Northern health's approach is reasonable.

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Zubel, Marc
Sent: Wednesday, May 18, 2016 8:38 AM
To: Tyson, Oonagh
Cc: Larder, Andrew
Subject: RE: RR NU: Legislative Authority re: Corrosive Source Water

Hi Oonagh: I appreciated Andrew's perspective on this, given his experiences with Interior Health.
Am not sure which approach would work best, as both have merits and seem reasonable.

The DWLC is looking at this whole issue of lead testing; corrosion control, etc.
The following excerpt from the minutes of the April 7, 2016 meeting provides a summary:
Lead – Joanne/Dave
- *Brought HA lead information to EHPAC*

- *Health Protection will lead development of provincial policy on lead in drinking water, especially in schools, licensed day care facilities and other public buildings.*
- *Homeowners need info too*
- *Does not fall strictly under DWPA – MoH will be discussing with legal council*
- *Roles, responsibilities and communication need to be established*
-

Given that the DWLC is already looking at this, including the PHO's office (Joanne Edwards), I would suggest that the DWLC discuss Northern Health's proposed approach at their next council telecom.
If you are in agreement, I will send Northern Health's proposed approach to the DWLC for discussion.

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Larder, Andrew
Sent: Tuesday, May 17, 2016 11:47 AM
To: Zubel, Marc
Subject: FW: RR NU: Legislative Authority re: Corrosive Source Water

Oonagh has probably contacted you about this. Here are my thoughts.
Andrew

Dr Andrew Larder
Medical Health Officer, Fraser East

From: Larder, Andrew
Sent: Tuesday, May 17, 2016 11:46 AM
To: Lee, Victoria; Tyson, Oonagh
Cc: Shum, Tim; Larder, Andrew
Subject: RE: RR NU: Legislative Authority re: Corrosive Source Water

This is the first that I have heard of this specific proposal, although I have had some discussions about corrosion control in general with the Drinking Water Team. This is a similar approach to that initiated by Bill Moorehead in the Interior to get large water systems using surface water to comply with the 43210 treatment standards. It generally worked, but requiring filtration got very complicated. There was huge push back because the suppliers accused IH of arbitrarily implementing more stringent standards than the act required. Implementation was very slow.

I anticipate that this approach will run into the same issues.

An alternate approach, which would have its own challenges, would be to declare the level of corrosiveness in these systems a drinking water health hazard under the Act (see the end of the email). This would allow an order to be issued and enforced in the usual manner. While there undoubtedly would have to be reconsideration and review of the order, the timelines would probably be much faster than the COP route – which would reduce the PH risk in a more timely way. This would also provide an open declaration of the concern related to the corrosiveness of the water, which is implicit but not openly stated in attaching terms and conditions.

Dr Andrew Larder
Medical Health Officer, Fraser East

drinking water health hazard" means

(a) a condition or thing in relation to drinking water that does or is likely to

(i) endanger the public health, or

(ii) prevent or hinder the prevention or suppression of disease,

---

From: Lee, Victoria
Sent: Monday, May 16, 2016 8:57 PM
To: Larder, Andrew; Tyson, Oonagh
Cc: Shum, Tim
Subject: RR NU: Legislative Authority re: Corrosive Source Water

Hi Andrew and Oonagh,

I presume that you've been consulted on this? Please let me know what your thoughts are.

Thank you,
Victoria

Victoria Lee MD MPH MBA CCFP FRCPC
VP Population Health and
Chief Medical Health Officer
Fraser Health Authority
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13450 - 102nd Avenue
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V3T 0H1
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email: Victoria.lee@fraserhealth.ca

Cecelia Holling, Executive Assistant
#400 - 13450 102 Avenue, Surrey, BC V3T 0H1
Direct: 604-587-7896
Fax: 604-930-5414
Email: cecelia.holling@fraserhealth.ca

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: May-16-16 2:25 PM
To: 'Evan Adams'; 'Linda Pillsworth'; Stanwick, Richard (Dr); Corneil, Dr. Trevor; Lee, Victoria; Allison, Sandra; Daly, Patty [VC]; Torng, Allan; Parsonage, Roger; Taki, Richard [VC]; Thomas, Ann; Tyson, Oonagh
Cc: Kendall, Perry; Henry, Bonnie HLTH:EX
Subject: Legislative Authority re: Corrosive Source Water

Hi Everyone,

As suggested by Perry, I am consulting this group (Regional Directors of Health Protection and CMHOs) on the issue of a progressive enforcement approach to corrosive water systems using Conditions of Permit (COP). Initial conversations at the provincial level suggest that this could be a useful and appropriate approach.

A bit of background, the water sources for both communities of Prince Rupert and Kitimat are very corrosive. Prince Rupert in particular is refusing to accept any responsibility for lead exposure to their community members, given the source water and the municipal distribution system do not contain lead. Their firm position is that their legal responsibility "ends at the property line" and do have any obligation to address the corrosiveness of their source water. We have recently received copies of 24 residential homes in Prince Rupert (first flush) test results and 50% of those results are above the MAC for lead, and 75% are above the aesthetic guidelines for copper. While I recognize this is a small sample size, the results are certainly not surprising. Prince Rupert has some of the oldest housing stock in BC. Also relevant to this issue is that Rupert has high poverty rates (my understanding is that about half the population are renters) - most community members do not have the financial means to simply replace their older plumbing infrastructure, as the city suggests they should.

There is work provincially that the Ministry of Health - Health Protection Branch is leading around many issues concerning lead and drinking water.

Specific to the issue of corrosive water I would like to seek this group's feedback on the proposed approach:

To develop a staged approach, progressive enforcement implementation plan with Conditions on Permit (COPs) applied to each stage for water systems determined to have (or potentially have) corrosive water.

NHA is working on developing a lead in drinking water mitigation strategy for communities with corrosive water. This strategy will include an assessment of risk, a management plan that includes a set of stand COPs that are implemented in a staged approach as needed. These COPs may include conditions around sampling and an assessment of risk from corrosion, communications, as well as investigating, identifying and implementing corrosion control options where necessary.

I would very much appreciate your feedback on this approach.

Best,
Raina

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting Northern Interior Medical Health Officer
Northern Health Authority
250-631-4261

Mori, Alicia HLTH:EX

From: Norlin, J Ivor <JIvor.Norlin@interiorhealth.ca>
Sent: June 2, 2016 2:03 PM
To: 'Sylvia Struck'
Cc: Linda Pillsworth; Magee, Lynne; Clarkson, Len [STS]; XT:Lysyshyn, Mark Dr. HLTH:IN; Zubel, Marc; XT:HLTH Parsonage, Roger; XT:HLTH Hasselback, Paul; Wheeler, Angela [NHA]; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: RE: lead and copper testing in daycare and school facilities

Thank you Sylvia.

Will you be able to share the results of the sampling with us? I ask as some IH population health programs provide services for First Nations communities. I'd also like to have results for those facilities that are receiving bulk-water from a non-First Nations drinking water system.

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Tuesday, May 31, 2016 11:27 AM
To: Magee, Lynne; Clarkson, Len [STS]; XT:Lysyshyn, Mark Dr. HLTH:IN; Norlin, J Ivor; Zubel, Marc; Parsonage, Roger; XT:HLTH Hasselback, Paul; Wheeler, Angela [NHA]; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Cc: Linda Pillsworth
Subject: lead and copper testing in daycare and school facilities

Hi All,

To update you, we have started lead and copper sampling in all identified daycare and school facilities in FN communities. Please find the attached protocol that we are using. You will note that it is a bit of a hybrid referencing EPA and HC protocols as well as incorporating some practical measures since some of the facilities are remote and difficult to access. This data will be used as a baseline so that we have information on all facilities and can assess if there is any corrective action that needs to be taken. We will be working with the communities and INAC if any exceedances of guideline levels are found.

In 2015, we conducted the quinquennial comprehensive chemical and radiological sampling of all FN community water systems and no lead exceedances were noted.

Please feel free to contact me if you have any questions.

Sylvia

Sylvia Struck, Ph.D.
Manager, Drinking Water Safety Program
First Nations Health Authority
#404 - 1138 Melville Street
Vancouver, BC V6E 4S3
Tel. (604) 693-6960
Sylvia.Struck@FNHA.ca

First Nations Health Authority
Health through wellness

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: June 10, 2016 4:01 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Cc: [NHA] Wheeler, Angela; 'Lynne Magee'; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; 'Sylvia Struck'; Chong, Steve [Health Protection] [NS]
Subject: BC Lead Guideline draft - VCH comments
Attachments: BC Lead Guidelines - Outline Draft for EHPAC (2).docx

Hi David and Joanne – here are our comments on this draft as requested. I have not provided any comments on the appendices however. Perhaps we can revisit that area once the main issues are resolved…

Have a good weekend all,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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Mori, Alicia HLTH:EX

From: Norlin, J Ivor <JIvor.Norlin@interiorhealth.ca>
Sent: June 10, 2016 11:15 AM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX; Lively, Sharlene [IHA]; Hesketh, Courtney; Byron, Dan; Birtles, Robert; XT:HLTH Pollock, Sue; XT:Golmohammadi, Dr. Kamran HLTH:IN; XT:HLTH Parsonage, Roger
Subject: RE: Announcements - Draft lead policy
Attachments: BC Lead Guidelines - Outline Draft for EHPAC (2).docx

Hi Dave,

Below are the comments on the draft Lead guidelines for BC from our folks at IH. Please let me know if you need anything clarified.

Overall …

1) Experience suggests water supply systems in the IH region will be able to address corrosion concerns. The greater challenge will likely be in schools and other facilities taking responsibility for building system sampling and mitigation.
2) We fully support EHO's working with elementary schools and child care facilities to provide assistance in testing, interpreting results, and mitigating risks from Lead. We are not supportive of getting EHOs involved in Rental Tenancy Board issues/disputes.
3) The criteria and expectations for the water suppliers needs to be reconsidered. That a water supplier follow better practices for corrosion control is reasonable. That they take responsibility (e.g. sampling) for Lead in individual building systems is not.

Specific …

1) Scope – the scope should be narrowed from "schools" to "elementary Schools" for the first round. The greatest effects are under age 6 and should be the priority.
2) Role and responsibilities appear inconsistent throughout the document and raise questions of feasibility (e.g. water systems conduct survey of area / building that might have lead plumbing vs. schools/daycare should conduct surveys). The water supplier must deliver potable water to the property line. Once delivered it is the property owner who must ensure their water remains potable.
3) 3.a Roles and responsibilities- "Regular School Inspections"…. We are not comfortable with this sentence. Something like: "regular day care inspections and targeted elementary school inspections/ communications" may be more appropriate.
4) The table on pg. 5 mentions regular school inspections. We do not have frequencies, criteria, or resources for routine school inspections in IH. We would prefer a reminder go out (e.g. every September) to schools regarding their responsibilities. This would allow us to manage the service more efficiently (e.g. using phone calls; admin with a script).
5) 3.d. The DWO/LO has a lot of responsibilities listed here. How would a LO verify lead mitigation programs are adhered to and effective? Is there an expectation for an LO to take an audit sample?
6) 3.e. "Follow up on landlord tenant complaints made under Health Hazard Regulation (under the *Public Health Act*)." It is not clear how this piece of legislation applies if the city water is potable. We do not want to be seen as responsible for RTB complaints.
7) Regarding day cares, we would like to see some clearer criteria (e.g. evidence of aggressive water) for when LO are expected to initiate investigations. In the proposed approach all water is considered equal and the requirement to test for lead is across the board. We would prefer the DWO provide some screening to focus LO resources.

8) There will need to be a much more succinct tool/document geared to communicating expectations to water suppliers, schools, and care facilities. Facility operators will need to provide explicit and clear instruction (e.g. how/when to test and how to flush).
9) Legislation: There is no need to start listing legislation unless there is an intent of the province to resource HA's to prosecute schools and care facilities. This sort of information is more appropriate for a discussion document or white-paper than a guideline.
10) This might be a good opportunity to communicate with parents about the water they provide to their children. It's ironic that a schools would carry much responsibility for safe water when many homes in the province get water from water systems that are high risk or get their water from their own domestic systems that meet no safe standard.
11) It is not clear why we would ask the drinking water suppliers to implement these measures through guideline. There should be consideration given to making corrosion control a regulatory requirement (e.g. as it is for cross-connection control, emergency response plans, annual reports). The guideline then could be focused more simply on clarifying what the expectation is. If there is concern with political push-back to updating the regulation, we should question if this issue is of significant enough concern to warrant intervention. Regulation through policy is not administrative better practice.

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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From: Drinking Water Leadership Council [mailto:DoNotReply@SP2010.gov.bc.ca]
Sent: Wednesday, June 01, 2016 2:06 PM
To: Norlin, J Ivor
Subject: Announcements - Draft lead policy

Drinking Water Leadership Council
Draft lead policy has been added

Modify my alert settings | View Draft lead policy | View Announcements | Mobile View

Title:	Draft lead policy
Body:	Here is a draft of a lead policy outlining roles and responsibilities that was shared yesterday with EH Policy Advisory Committee. We will discus tomorrow and will be seeking your feedback on the draft in the very near future. BC Lead Guidelines - Outline Draft for EHPAC (2).docx

Expires:

Last Modified 6/1/2016 2:04 PM by Edwards, Joanne HLTH:EX

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: June 13, 2016 3:27 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: DWLC - Lead documents from VCH
Attachments: VCH Advice re Lead in Drinking Water - Public Final_APR272016.pdf; VCH Advice re Lead in Drinking Water - School Final_APR272016.pdf; VCH Advice re Lead in Drinking Water - Day Care Final _APR272016.pdf

Sorry to bug you – I cannot recall if I sent you this before or not, in any case here it is again. It is essentially targeted messages towards schools, child care or homes – broken down from our 2013 document that had all 3, but this time in a more comprehensive manner with specific direction to schools re sampling.
For possible discussion at DWLC – we are hoping the current guideline under review will address who will take the lead for communications. We are hoping it will be the province, with HA's and suppliers taking part in some measure also….

Regards both,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: June 13, 2016 3:34 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: RE: DWLC - Lead documents from VCH

School Lead and VCH Guidance Documents including Research and EPHAC
Discussion: • VCH documents for lead in drinking water for schools, daycares and general public have now been distributed to School Districts/water purveyors/daycare operators & posted on VCH website; some municipalities (ie. Squamish/Pemberton) are also in turn distributing information; further to PHO letter to SDs, it is felt that the Prov should take the lead on messaging – VCH MHOs further discussing historical & current communication as a group tomorrow • For daycares, JL clarified that for child care facilities on a large/known water system, they can proceed directly to flushing but facilities on small water systems are to implement the document as a whole; in addition, the complexity of care at a facility must also be considered (ie. family daycare vs a purpose built care facility) in the application of the document • Discussed communication & lead agencies…since a building system (governed by the Plumbing Code) by definition is exempt from a water system, a purveyor's responsibility ends at the curb thus the Prov should take the lead on communications (as opposed to the HAs); LC to take our docs forward to DWLC with respect to the Prov taking the lead on communication while J. Edwards will do the same at EHPAC • School District Flushing Plans: Recommendation vs. Requirement including review/approve SD Flushing Plans? o The VCH direction will be to request the SDs to design/implement Plans & if they do not, we are to document this in relation to the PHO letter to the SDs

- Although the SDs have the primary responsibility for designing/implementing the Plans as they own the buildings, DWOs are to review the Plans for irregularities & provide comments to assist the SDs (similar to the way we provide comments on air quality permit application reviews)
- Current VCH sampling – results are to be provided to the SDs once we receive them; since our sampling results are just a high level survey (further to our 2011 sampling) & are not being done at each school, VCH results are not to be used by the SDs to develop their Plans -> thus, the SDs will need to do their own sampling & use their results to develop their detailed Plans; If our sampling results differ from the SDs, we will need to work with the SDs in order for the SDs to reconcile the findings
- Note - West Van SD has already sampled their schools but their protocol was not in keeping with VCH documents

- Various other documents are posted in U-Drive for further reading

Here is the context from our last vch committee meeting fyi

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Monday, June 13, 2016 3:31 PM
To: Clarkson, Len [STS]
Subject: RE: DWLC - Lead documents from VCH

Great, Thanks Len!

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Monday, June 13, 2016 3:27 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: DWLC - Lead documents from VCH

Sorry to bug you – I cannot recall if I sent you this before or not, in any case here it is again. It is essentially targeted messages towards schools, child care or homes – broken down from our 2013 document that had all 3, but this time in a more comprehensive manner with specific direction to schools re sampling.
For possible discussion at DWLC – we are hoping the current guideline under review will address who will take the lead for communications. We are hoping it will be the province, with HA's and suppliers taking part in some measure also….

Regards both,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 14, 2016 4:22 PM
To: 'Magee, Lynne'
Subject: RE: Victoria Schools - Lead

Thanks, I'll contact Craig.

From: Magee, Lynne [mailto:Lynne.Magee@viha.ca]
Sent: Tuesday, June 14, 2016 4:10 PM
To: Fishwick, David HLTH:EX
Subject: RE: Victoria Schools - Lead

Hi Dave

I do not but by copy of this to Craig Nowakowski, EHO Supervisor in Victoria, am hoping he might have details for you.

Lynne

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, June 14, 2016 12:09 PM
To: Magee, Lynne
Subject: Victoria Schools - Lead

Hi Lynne:

Lead testing in Victoria schools has been in the news this morning, and discusses post flush samples being problematic . Do you have any details? Range of results? What their protocol has been for flushing? Etc?

Dave

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Nowakowski, Craig <Craig.Nowakowski@viha.ca>
Sent: June 15, 2016 1:24 PM
To: Fishwick, David HLTH:EX
Subject: RE: Lead in Victoria Schools

No I haven't

Dr. Fyfe was supposed to be talking with the Superintendent this morning.

Craig

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, June 15, 2016 11:53 AM
To: Nowakowski, Craig
Cc: Hasselback, Paul; Magee, Lynne
Subject: Lead in Victoria Schools

Hi Craig:

Further to our call this morning, any luck in finding any details beyond what was reported in the Times Colonist on lead in Victoria schools?

Dave

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Norlin, J Ivor <JIvor.Norlin@interiorhealth.ca>
Sent: July 15, 2016 11:57 AM
To: Fishwick, David HLTH:EX
Subject: RE: Question re: copper data from BC

We follow the CARO instructions for collection. This includes using a "metals bottle" pre-charged with HNO3 unless specially arrangements are made with the lab (e.g. for immediate transport and processing).

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, July 15, 2016 10:23 AM
To: Norlin, J Ivor
Subject: RE: Question re: copper data from BC

I think it is more like – "do samplers add any sort of preservative, or other chemical at the time of sampling", or "are they all following some specific protocol, or are labs using different sampling/analytical techniques". I'm assuming from your answer that we really don't have a way to know.

You also raise a good point in that, similar to lead, meaningful results can be confounded by where and when samples are taken.

Dave.

From: Norlin, J Ivor [mailto:JIvor.Norlin@interiorhealth.ca]
Sent: Monday, July 11, 2016 10:59 AM
To: Fishwick, David HLTH:EX
Subject: RE: Question re: copper data from BC

Hi Dave,

a)do you know if these results are for total or dissolved?
Total is the typical protocol. Assume they are all totals.

b) Any idea on how samples are prepared, or is that detail not forwarded by water suppliers?
For Cu samples I understand they turn on the tap, let it run till cool, and fill the bottle provided by the lab. Is that preparation?

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, July 07, 2016 3:42 PM
To: Norlin, J Ivor
Subject: FW: Question re: copper data from BC

Hi Ivor:

With respect to the Copper data you had provided a few months back, Health Canada had a couple questions:
a)do you know if these results are for total or dissolved?
b) Any idea on how samples are prepared, or is that detail not forwarded by water suppliers?

Thanks

From: Fishwick, David HLTH:EX
Sent: Friday, June 24, 2016 4:40 PM
To: 'Joyce Mortimer'
Cc: 'Sarah Jane Payne'
Subject: RE: Question re: copper data from BC

Hi Joyce and Sarah Jane:
I am away for the next week, and I will try to find the answer to this question upon my return.

Thanks
Dave

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Thursday, June 23, 2016 12:46 PM
To: Fishwick, David HLTH:EX

Cc: Sarah Jane Payne
Subject: Question re: copper data from BC

Hello, David. Hope you are well!

You had kindly sent us copper monitoring data back in July 2015 (July 18 email to Anne Vezina). Sarah Jane Payne, the lead on that file, has a follow up question regarding that data (please see email below).

Thanks in advance for any assistance you can provide on her question.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-06-23 03:43 PM -----

From: Sarah Jane Payne/HC-SC/GC/CA
To: Joyce Mortimer/HC-SC/GC/CA@HWC
Date: 2016-06-23 03:04 PM
Subject: Question on CDW copper data - BC -

Hi Joyce,

Could you pass along this question to David, in BC.

Thanks so much,

SJP

****

Dear David,

I just have a quick question about the British Columbia copper data that you sent us last summer. I have attached one of original data files for your reference.

Could you clarify whether or not these are total or dissolved copper samples. If possible, could you also provide some details on copper sample preparation. . I know that there are different definitions for total and dissolved, so I just want to make sure that I describe the data as accurately as possible.

Thanks so much for your help with this. It is greatly appreciated.

Sincerely,

Sarah Jane

(See attached file: copper sample results fiscal 2014-15.pdf)

Sarah Jane Payne, PhD., P.Eng.

Water Quality Engineer, Healthy Environments Consumer Safety Branch
Health Canada / Government of Canada
sarah.jane.payne@hc-sc.gc.ca / **NEW! Tel: 613-952-9962**

Ingénieure de la qualité d'eau, Direction générale de la santé environnementale et de la sécurité des consommateurs
Santé Canada / Gouvernement du Canada
sarah.jane.payne@hc-sc.gc.ca / **NOUVEAU! Tél: 613-952-9962**

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 15, 2016 1:28 PM
To: 'Nowakowski, Craig'
Subject: RE: School water SD61

Thanks Craig. Please keep me posted.

Dave

From: Nowakowski, Craig [mailto:Craig.Nowakowski@viha.ca]
Sent: Wednesday, June 15, 2016 1:25 PM
To: Fishwick, David HLTH:EX
Subject: FW: School water SD61

FYI…this just in

From: Fyfe, Murray W. (Dr)
Sent: Wednesday, June 15, 2016 11:14 AM
To: Nowakowski, Craig; Lum, Joanne
Subject: School water SD61

Craig and Joanne,
I just spoke to David Loveridge, Director of Facilities at SD 61 about the lead issue. They will be requesting funding from their Board for a more thorough, valid assessment of lead in their schools' water using an independent consultant. He will call you regarding advice on a laboratory and on a sampling protocol. He will also share results of the preliminary sampling once all of the results are in, likely next week.
Murray

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 15, 2016 8:54 AM
To: 'Magee, Lynne'
Subject: RE: Victoria Schools - Lead

Thanks!

From: Magee, Lynne [mailto:Lynne.Magee@viha.ca]
Sent: Wednesday, June 15, 2016 8:52 AM
To: Fishwick, David HLTH:EX
Subject: RE: Victoria Schools - Lead

Hi Dave

It is 250-519-3401.

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, June 14, 2016 4:22 PM
To: Magee, Lynne
Subject: RE: Victoria Schools - Lead

Do you have his number?

From: Magee, Lynne [mailto:Lynne.Magee@viha.ca]
Sent: Tuesday, June 14, 2016 4:10 PM
To: Fishwick, David HLTH:EX
Subject: RE: Victoria Schools - Lead

Hi Dave

I do not but by copy of this to Craig Nowakowski, EHO Supervisor in Victoria, am hoping he might have details for you.

Lynne

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, June 14, 2016 12:09 PM
To: Magee, Lynne
Subject: Victoria Schools - Lead

Hi Lynne:

Lead testing in Victoria schools has been in the news this morning, and discusses post flush samples being problematic . Do you have any details? Range of results? What their protocol has been for flushing? Etc?

Dave

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 20, 2016 5:05 PM
To: 'Veronique Morisset'; 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'Kristina Taracha'
Cc: 'France Lemieux'; 'John Cooper'; 'Joyce Mortimer'; 'Michele Giddings'; 'Richard Carrier'; 'Stephanie McFadyen'; 'Wendy Enright'
Subject: RE: Update on lead document

Hi Folks:

Thanks for keeping us up to date.

Forgive me if this has been asked before, but has there been any thought towards aligning sampling advice in the new lead document what is in the corrosion control document? I realize they are designed for a different purpose, however it would be useful if there were consistent so that results from sampling for health risks could be pooled to be useful data for corrosion control investigations. If this is not realistic, then perhaps we can refer to the corrosion document and explain why they different and when one would choose one over the other.

-For example, advice for sampling residences (A.2.2.2) in the corrosion control document is similar, but not quite the same as the proposed "30MS" but not quite the same – could the same protocol not be used for both?

Any thoughts?

Dave

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Wednesday, June 15, 2016 8:43 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Kristina Taracha
Cc: France Lemieux; John Cooper; Joyce Mortimer; Michele Giddings; Richard Carrier; Stephanie McFadyen; Veronique Morisset; Wendy Enright
Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

Please let us know if you have any concerns with this approach.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 22, 2016 3:42 PM
To: 'Marc Zubel'
Subject: IN_Drinking water in schools_21June2016_final
Attachments: IN_Drinking water in schools_21June2016_final.doc

Hi Marc:

Have you guys been giving schools any specific advice on how to go about flushing?

D.

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 24, 2016 4:38 PM
To: 'Joyce Mortimer'
Subject: RE: Update on lead document

Thanks Joyce:
s.22

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Thursday, June 23, 2016 1:22 PM
To: Fishwick, David HLTH:EX
Cc: Veronique Morisset; France Lemieux
Subject: RE: Update on lead document

Hi, David. I just wanted to check in with you briefly s.22 Since we'll need to involve her with respect to your question/comments below, we'll respond next week once we've had a chance to chat with her.

Hope that's OK!

Talk to you soon.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

"Fishwick, David HLTH:EX" ---2016-06-20 08:07:11 PM---Hi Folks: Thanks for keeping us up to date.

From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
To: "'Veronique Morisset'" <Veronique.Morisset@hc-sc.gc.ca>, "'Angelina.polegato@novascotia.ca'" <Angelina.polegato@novascotia.ca>, "'Caroline.Robert@mddelcc.gouv.qc.ca'" <Caroline.Robert@mddelcc.gouv.qc.ca>, "'donald.reid@gov.ab.ca'" <donald.reid@gov.ab.ca>, "'ghsomers@gov.pe.ca'" <ghsomers@gov.pe.ca>, "'hkhan@gov.nl.ca'" <hkhan@gov.nl.ca>, "'Kevin.Gould@gnb.ca'" <Kevin.Gould@gnb.ca>, "'Kim.Philip@gov.mb.ca'" <Kim.Philip@gov.mb.ca>, "'MLeBlanc-Havard@GOV.NU.CA'" <MLeBlanc-Havard@GOV.NU.CA>, "'pat.brooks@gov.yk.ca'" <pat.brooks@gov.yk.ca>, "'Peter_Workman@gov.nt.ca'" <Peter_Workman@gov.nt.ca>, "'sam.ferris@wsask.ca'" <sam.ferris@wsask.ca>, "'Satish.Deshpande@ontario.ca'" <Satish.Deshpande@ontario.ca>, "'Kristina Taracha'" <kristina.taracha@hc-sc.gc.ca>
Cc: "'France Lemieux'" <France.Lemieux@hc-sc.gc.ca>, "'John Cooper'" <john.cooper@hc-sc.gc.ca>, "'Joyce Mortimer'" <Joyce.Mortimer@hc-sc.gc.ca>, "'Michele Giddings'" <michele.giddings@hc-sc.gc.ca>, "'Richard Carrier'" <richard.carrier@hc-sc.gc.ca>, "'Stephanie McFadyen'" <Stephanie.McFadyen@hc-sc.gc.ca>, "'Wendy Enright'" <wendy.enright@hc-sc.gc.ca>
Date: 2016-06-20 08:07 PM
Subject: RE: Update on lead document

Hi Folks:

Thanks for keeping us up to date.

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-For example, advice for sampling residences (A.2.2.2) in the corrosion control document is similar, but not quite the same as the proposed "30MS" but not quite the same – could the same protocol not be used for both?

Any thoughts?

Dave

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Sent: Wednesday, June 15, 2016 8:43 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Kristina Taracha
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veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: George Somers <ghsomers@gov.pe.ca>
Sent: July 25, 2016 6:39 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; Joyce Mortimer; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; Peter_Workman@gov.nt.ca; Satish.Deshpande@ontario.ca; donald.reid@gov.ab.ca; hkhan@gov.nl.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca
Cc: France Lemieux; Veronique Morisset
Subject: Re: CDW: Question re Lead service line replacement programs

Kim - no such program in PEI, nor is the province contemplating such a program in the near future. I note that this issue is pretty limited in scope (geographically) in PEI due to the relatively young age of most of our central water supply infrastructure.
George

>>> Joyce Mortimer 7/22/2016 3:51 PM >>>

CDW folks;

Please see Kim's question, below. Any feedback you can provide is greatly appreciated!

Hope everyone is having a good summer.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-07-22 02:46 PM -----

From: "Philip, Kim (SD)"
To: Joyce Mortimer
Date: 2016-07-22 01:46 PM
Subject: Question for CDW Members on LSL Replacement Programs?

Hi Joyce,

Could ask CDW members if any have, or are considering, provincial or territorial lead service line replacement programs?

….in line with Recommendation #41 of the Flint Water Advisory Task Force's March 2016 Final Report (http://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf) that the state "Develop a model LSL replacement program and funding mechanisms for financing work on private property".

Kim Philip

Kimberley A. Philip, M.Eng., P.Eng.,
Director, Office of Drinking Water
1007 Century Street, Winnipeg, MB R3H 0W4
Phone: 204-945-7010; Cell: 204-232-0022
Fax: 204-945-1365; E-mail: kim.philip@gov.mb.ca
24 Hr Emergency Response Line: 204-944-4888
Website: manitoba.ca/drinkingwater

Manitoba
Sustainable Development

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Mori, Alicia HLTH:EX

From: Norlin, J Ivor <JIvor.Norlin@interiorhealth.ca>
Sent: July 7, 2016 5:03 PM
To: Byron, Dan; Birtles, Robert; Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Subject: INFORM: study on blood Lead associated with Flint water system issues

Importance: Low

I thought the study below was interesting.

I've wondered about blood Lead levels and what impacts we might expect from a community level exposure to corrosive water. This (pretty extreme) case correlated with an increase from 3% to 5% of children having blood led levels >5ug/dL.

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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Subject: MMWR Vol. 65 / Early Release
Date: Fri, 24 Jun 2016 10:26:25 -0500
To: bobby_ivor@hotmail.com
From: cdc@service.govdelivery.com

***MMWR* Early Release**
Vol. 65, Early Release
June 24, 2016
PDF

In this report

Blood Lead Levels Among Children Aged
Chinaro Kennedy, DrPH; Ellen Yard, PhD; Timothy Dignam, PhD; et al.
MMWR Morb Mortal Wkly Rep 2016;65(Early Release)

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MMWR Masthead

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 7, 2016 2:15 PM
To: XT:Fumerton, Raina HLTH:IN; XT:HLTH Lu, James; Sylvia Struck; 'Belanger, Darrell'
Subject: Lead Health File
Attachments: Lead in Drinking Water HealthLinkBCFile_2016_V2.docx

Hi Folks:

Until we can sort out why you guys aren't getting announcements – here is draft the Lead Health File.
Tamara will follow up with you to see how we can get you setting sorted out so you get these in the future.

Dave

Health Protection Branch is working with Health Link BC to create a Health File for Lead in Drinking Water. Below is a link to the latest draft of the health file, which is posted on sharepoint within active documents. Please review and add your comments and suggested changes using track changes. Please send your comments to Manish.OmPrakash@gov.bc.ca by June 15th, 2016.

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 7, 2016 3:30 PM
To: 'Nowakowski, Craig'
Subject: RE: lead in drinking water

Thanks Craig

From: Nowakowski, Craig [mailto:Craig.Nowakowski@viha.ca]
Sent: Tuesday, June 28, 2016 8:34 AM
To: Fishwick, David HLTH:EX
Subject: FW: lead in drinking water

FYI

From: Fung, Eddie
Sent: Tuesday, June 28, 2016 8:32 AM
To: Nowakowski, Craig; Magee, Lynne
Subject: FW: lead in drinking water

SD61 water testing results.

From: Merner, Christine [mailto:cmerner@sd61.bc.ca]
Sent: Tuesday, June 28, 2016 7:53 AM
To: Fung, Eddie
Subject: RE: lead in drinking water

Hello Eddie,

Attached are our results. Let me know if you have any questions.

Thanks,

Christine Merner, BSc & Dip. OHS
Senior Occupational Health and Safety Advisor
Greater Victoria School District #61
Email: cmerner@sd61.bc.ca
Office: 250-475-4192
Fax: 250-475-4113

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From: Fung, Eddie [mailto:Eddie.Fung@viha.ca]
Sent: June-27-16 3:58 PM
To: Merner, Christine
Subject: RE: lead in drinking water

Hi Christine

Unfortunately we do not have a straight forward Q&A sheet for lead but we are in the process of working on one. In the meantime I have linked some documents from Health Canada if you would like to have a look.

http://www.hc-sc.gc.ca/ewh-semt/contaminants/lead-plomb/asked_questions-questions_posees-eng.php#a10
http://healthycanadians.gc.ca/publications/healthy-living-vie-saine/water-lead-plomb-eau/index-eng.php
http://www.healthlinkbc.ca/healthtopics/content.asp?hwid=hw119898

On another note, my supervisor asked to have a copy of your lead testing result if at all possible.

Cheers,

Eddie Fung, B. Tech, CPHI(C),
Environmental Health Officer
201 - 771 Vernon Avenue
Victoria, BC V8X 5A7
Telephone: 250.519.3643
Fax: 250.519.3402
Email: eddie.fung@viha.ca

island health

From: Merner, Christine [mailto:cmerner@sd61.bc.ca]
Sent: Monday, June 27, 2016 12:18 PM
To: Fung, Eddie
Subject: lead in drinking water

Hello Eddie,

As you know we have started our testing of lead concentration in water in our schools.

As expected several questions have come up regarding health effects of lead exposure for staff (especially those pregnant) and students.

Do you have any articles or links that you think might be useful in creating an info sheet? If you could forward any info onto me it would be greatly appreciated.

Thanks,

Christine Merner, BSc & Dip. OHS
Senior Occupational Health and Safety Advisor
Greater Victoria School District #61
Email: cmerner@sd61.bc.ca
Office: 250-475-4192
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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: July 11, 2016 4:10 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: Documents from VCH re lead
Attachments: VCH Advice re Lead in Drinking Water - Public Final_APR272016.pdf; VCH Advice re Lead in Drinking Water - School Final_APR272016.pdf; VCH School Flushing Program Development Guide_JUN172016.pdf; VCH Advice re Lead in Drinking Water - Day Care Final _APR272016.pdf

Hi Joanne and David – I just want to be sure – do you recall that I would have sent you these documents earlier? Dr Lu had asked me to share them with DWLC.
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

Mori, Alicia HLTH:EX

From: Fumerton, Raina <Raina.Fumerton@northernhealth.ca>
Sent: July 11, 2016 3:24 PM
To: Fishwick, David HLTH:EX; Belanger, Darrell
Subject: RE: Lead Health File
Attachments: NHA feedback Lead in Drinking Water HealthLinkBCFile_2016_V2 - db.docx

Hi David – NH's comments attached ☺

R

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting Northern Interior Medical Health Officer
Northern Health Authority
250-631-4261

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, July 07, 2016 3:45 PM
To: Fumerton, Raina; XT:HLTH Lu, James; Sylvia Struck; Belanger, Darrell
Subject: RE: Lead Health File

We are targeting July 15.

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Thursday, July 7, 2016 3:44 PM
To: Fishwick, David HLTH:EX; XT:HLTH Lu, James; Sylvia Struck; Belanger, Darrell
Subject: RE: Lead Health File

Thanks David – can you remind me on the deadline for feedback?

r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting Northern Interior Medical Health Officer
Northern Health Authority
250-631-4261

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, July 07, 2016 2:15 PM
To: Fumerton, Raina; XT:HLTH Lu, James; Sylvia Struck; Belanger, Darrell
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Tamara will follow up with you to see how we can get you setting sorted out so you get these in the future.

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Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Sylvia Struck <Sylvia.Struck@fnha.ca>
Sent: July 12, 2016 9:27 AM
To: Fishwick, David HLTH:EX; XT:Fumerton, Raina HLTH:IN; XT:HLTH Lu, James; Belanger, Darrell
Cc: Edwards, Joanne HLTH:EX; Clarkson, Len [STS]; 'Magee, Lynne'; [IHA] Norlin, J Ivor; [FHA] Zubel, Marc
Subject: RE: Lead Health File
Attachments: Lead in Drinking Water HealthLinkBCFile_2016_V2_SS.docx

Hi Dave,

Thanks. You will see my mark-up is very messy but I had a number of issues with the way it is currently worded.

Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, July 7, 2016 3:45 PM
To: XT:Fumerton, Raina HLTH:IN ; XT:HLTH Lu, James ; Sylvia Struck ; Belanger, Darrell
Subject: RE: Lead Health File

We are targeting July 15.

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Sent: Thursday, July 7, 2016 3:44 PM
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Northwest Medical Health Officer
Acting Northern Interior Medical Health Officer
Northern Health Authority
250-631-4261

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To: Fumerton, Raina; XT:HLTH Lu, James; Sylvia Struck; Belanger, Darrell
Subject: Lead Health File

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Mori, Alicia HLTH:EX

From: Veronique Morisset <Veronique.Morisset@hc-sc.gc.ca>
Sent: July 12, 2016 11:05 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; France Lemieux; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper; Joyce Mortimer; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha; Michele Giddings; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen; Wendy Enright
Subject: CDW: Updated lead document
Attachments: Lead 2016-0712 compared to Nov 2015.pdf

CDW members,

As per my June 15 e-mail, we have now made changes to the lead document to incorporate the random daytime (RDT) sampling protocol as an option for residential sampling. This has also resulted in changes to section 5.1.2, to provide additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.

Here's a quick list of the sections with changes and the nature/reason for each of the changes:
3.1, 3.1.1, 3.1.2 -- Additional of RDT and related changes
5.1.1 -- correction of references; correction of description of MB study, as requested by Kim
5.1.2 -- addition of background information on the RDT protocol
7.1.2.6 -- New section, to provide relevant information complementary to what is in the uranium document
10.2 -- Clarification of description of Healey et al. 2010, to amend wording that could have been misinterpreted, as requested by Satish
12.0 -- Addition of relevant references for above changes
Appendix B -- Incorporation of provincial and territorial anticipated impacts, as provided by members

(See attached file: Lead 2016-0712 compared to Nov 2015.pdf)

We are looking for an indication from members that the revisions are acceptable and do not affect the approval of the document. As we are still expecting the document to be posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by Aug 10 at the latest.

Thanks

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Veronique Morisset---2016-06-15 11:42:41 AM---CDW members, Following the discussion at the last meeting, and having reviewed your impact paragraph

From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC

Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

Please let us know if you have any concerns with this approach.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 12, 2016 4:32 PM
To: XT:Fumerton, Raina HLTH:IN
Subject: RE: Lead Health File

Thanks Raina!

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Monday, July 11, 2016 3:24 PM
To: Fishwick, David HLTH:EX; Belanger, Darrell
Subject: RE: Lead Health File

Hi David – NH's comments attached ☺

R

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting Northern Interior Medical Health Officer
Northern Health Authority
250-631-4261

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, July 07, 2016 3:45 PM
To: Fumerton, Raina; XT:HLTH Lu, James; Sylvia Struck; Belanger, Darrell
Subject: RE: Lead Health File

We are targeting July 15.

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Thursday, July 7, 2016 3:44 PM
To: Fishwick, David HLTH:EX; XT:HLTH Lu, James; Sylvia Struck; Belanger, Darrell
Subject: RE: Lead Health File

Thanks David – can you remind me on the deadline for feedback?

r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting Northern Interior Medical Health Officer
Northern Health Authority
250-631-4261

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, July 07, 2016 2:15 PM
To: Fumerton, Raina; XT:HLTH Lu, James; Sylvia Struck; Belanger, Darrell
Subject: Lead Health File

Hi Folks:

Until we can sort out why you guys aren't getting announcements – here is draft the Lead Health File.
Tamara will follow up with you to see how we can get you setting sorted out so you get these in the future.

Dave

Health Protection Branch is working with Health Link BC to create a Health File for Lead in Drinking Water. Below is a link to the latest draft of the health file, which is posted on sharepoint within active documents. Please review and add your comments and suggested changes using track changes. Please send your comments to Manish.OmPrakash@gov.bc.ca by June 15th, 2016.

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: July 13, 2016 4:40 PM
To: Fishwick, David HLTH:EX; 'Jodi Garwood'; 'Carlie Hucul'; 'Keith Kohut'; 'Mark Burger'
Subject: RE: Lead Sub-Committee

Thanks David,
I am sure it was 89, with respect to lead in solder only however.
Agree re GCDWQ changes. And that they may (or at least should) contain an ALARA statement (as low as reasonably achievable) – not just a target number as a pass / fail.
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, July 13, 2016 4:31 PM
To: Clarkson, Len [STS]; 'Jodi Garwood'; 'Carlie Hucul'; 'Keith Kohut'; 'Mark Burger'
Subject: RE: Lead Sub-Committee

Hi Mark:

Good comments Len. A couple comments of my own:

- Was the plumbing code change 1986 or 1989? – I have heard both quoted.
- A new draft lead technical guidance document from Health Canada is expected in the near future – what were BCWWA to think if it was made more stringent?
- In an ideal world, what would BCWWA like to see in a revised lead technical document ?
- Need to clarify what the benefit, intended scope and outcome of creating a TAC would be – there is a ton of information out there on technical issues.

Dave

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Wednesday, July 13, 2016 3:55 PM
To: 'Jodi Garwood'; 'Carlie Hucul'; 'Keith Kohut'; 'Mark Burger'; Fishwick, David HLTH:EX
Subject: FW: Lead Sub-Committee

Hi Mark – some quick comments..
Please feel free to use where appropriate and ignore where not.
Thanks
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Mark Burger [mailto:MBurger@kwl.ca]
Sent: Friday, July 08, 2016 9:01 PM
To: Jodi Garwood; Carlie Hucul; Keith Kohut; David Fishwick; Clarkson, Len [STS]
Cc: Marta Green; Cristina Fonseca; Michael Day
Subject: RE: Lead Sub-Committee

Hi Everyone:

I have populated a lot more of the outline based on the previous comments received from Michael Day's original notes and from the comments I got from filling out Section 1 of BCWWA's issues and analysis paper outline template. Please see attached.

I have still not quite filled it out – I have stopped at the first question of Section 4: Options and Implications. I compiled Len Clarkson's possible position points as well as a couple of suggestions of my own that I think we should discuss one by one during the call to come to a general agreement on the "position(s)" the issues analysis document would support.

In the meantime, if any of you have any comments, please let me know. Feel free to edit the outline and send back to all with Track Changes on.

Mark

Mark Burger, M.A.Sc., P.Eng.
Water Treatment Engineer

D 604-293-3115 **C** 778-322-1535
www.kwl.ca

KERR WOOD LEIDAL
consulting engineers

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KWL File #

-----Original Appointment-----
From: Jodi Garwood [mailto:jgarwood@bcwwa.org]
Sent: July-07-16 1:49 PM
To: Jodi Garwood; Carlie Hucul; Mark Burger; Keith Kohut; David Fishwick; Len Clarkson

Cc: Marta Green; Cristina Fonseca; Michael Day
Subject: Lead Sub-Committee
When: July-13-16 2:00 PM-3:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Conference line: (604) 638-5353 or 1-800-319-7310, Access code 80034#

Hi All,

Mark will have a detailed outline of the lead position statement and issue analysis paper to the group by the end of this week. This meeting is to 1) update Carlie on the issue and proposed approach, 2) discuss any edits to the outline and 3) discuss the potential opportunity to collaborate with CWWA on the development of the paper. I hope you can all make it. If you are unable to attend, please submit your feedback to me and Mark by end of day Tuesday, July 12.

Thanks,

Jodi Garwood
Technical Communications Specialist

BC Water & Waste Association
Suite 620 – 1090 W. Pender St., Vancouver, BC V6E 2N7
D: 604-630-5350 F: 604-433-9859 TF: 877-433-4389
jgarwood@bcwwa.org www.bcwwa.org

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: July 14, 2016 4:31 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Cc: XT:HLTH Lu, James; Ip, Jessica [VC]
Subject: FW: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2)
Attachments: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2).docx

Thank you James –
David and Joanne – would you please aim to address the comments as noted below in the next edition?
I also have some comment from Jessica which I will forward separately,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Lu, James [RH]
Sent: Thursday, July 07, 2016 11:13 AM
To: Clarkson, Len [STS]
Subject: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2)

Hi Len
Just had a look at this draft. The major concern I have is the section on what people can do – identifying problems. The way it is written would imply that every home owner should go and test the water or hire a plumber to assess, and perhaps rip out all the old plumbing in addition to lead service lines. It could cause a run on testing labs and good for the plumbing business but not practical.

Our own advice focused on pregnant women and children but this draft has no such focus on advice. Also silent on daycare operators

We might want our own Water committee to take a look at this?
Thanks
James

Thanks
James

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: July 14, 2016 4:34 PM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Cc: Wu, Michael [VC]; Clarkson, Len [STS]; Molder, Darren [SC]; Ip, Jessica [VC]; XT:HLTH Lu, James; Ritson, Mark [VC]; Radnidge, Michele [RH]; Massoud, Nader [NS]; Dolling, Roya [NS]; Chong, Steve [Health Protection] [NS]
Subject: FW: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2)
Attachments: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2) JIP.docx

Hi again Joanne and David,
In addition to the comments supplied by Dr Lu, please refer to the suggested edits as provided by Jessica.
Nice 2 cents worth Jessica.

Regards all,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Ip, Jessica [VC]
Sent: Thursday, July 07, 2016 5:12 PM
To: Clarkson, Len [STS]; Wu, Michael [VC]; Molder, Darren [SC]; Lu, James [RH]; Ritson, Mark [VC]; Radnidge, Michele [RH]; Massoud, Nader [NS]; Dolling, Roya [NS]; Chong, Steve [Health Protection] [NS]
Subject: RE: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2)

Attached my 2 cents on this document.

Jessica Ip, BSc(Hons), CPHI(C), MBA
Senior Environmental Health Officer
Vancouver Coastal Health, Vancouver Office
601 West Broadway, 12th floor
Vancouver, BC V5Z 4C2
Work: 604-675-3803

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From: Clarkson, Len [STS]
Sent: Thursday, July 07, 2016 11:28 AM
To: Wu, Michael [VC]; Clarkson, Len [STS]; Molder, Darren [SC]; Ip, Jessica [VC]; Lu, James [RH]; Ritson, Mark [VC]; Radnidge, Michele [RH]; Massoud, Nader [NS]; Dolling, Roya [NS]; Chong, Steve [Health Protection] [NS]
Subject: FW: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2)

Thanks James. Good plan – I will place this onto our agenda for next week.
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca

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From: Lu, James [RH]
Sent: Thursday, July 07, 2016 11:13 AM
To: Clarkson, Len [STS]
Subject: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2)

Hi Len
Just had a look at this draft. The major concern I have is the section on what people can do – identifying problems. The way it is written would imply that every home owner should go and test the water or hire a plumber to assess, and perhaps rip out all the old plumbing in addition to lead service lines. It could cause a run on testing labs and good for the plumbing business but not practical.

Our own advice focused on pregnant women and children but this draft has no such focus on advice. Also silent on daycare operators

We might want our own Water committee to take a look at this?
Thanks
James

Thanks
James

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 14, 2016 4:35 PM
To: 'Clarkson, Len [STS]'
Subject: RE: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2)

Thanks Len and Team, we will be reviewing all comements.

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Thursday, July 14, 2016 4:31 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Cc: XT:HLTH Lu, James; Ip, Jessica [VC]
Subject: FW: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2)

Thank you James –
David and Joanne – would you please aim to address the comments as noted below in the next edition?
I also have some comment from Jessica which I will forward separately,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Lu, James [RH]
Sent: Thursday, July 07, 2016 11:13 AM
To: Clarkson, Len [STS]
Subject: Lead in Drinking Water HealthLinkBCFile_2016_V2 LM (2)

Hi Len
Just had a look at this draft. The major concern I have is the section on what people can do – identifying problems. The way it is written would imply that every home owner should go and test the water or hire a plumber to assess, and perhaps rip out all the old plumbing in addition to lead service lines. It could cause a run on testing labs and good for the plumbing business but not practical.

Our own advice focused on pregnant women and children but this draft has no such focus on advice. Also silent on daycare operators

We might want our own Water committee to take a look at this?
Thanks
James

Thanks
James

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 15, 2016 3:10 PM
To: 'Norlin, J Ivor'
Subject: RE: Announcements - Health file - Lead in Drinking W...

BCCDC does have a kick at these in the approvals process, but has not yet looked at this one.

From: Norlin, J Ivor [mailto:JIvor.Norlin@interiorhealth.ca]
Sent: Friday, July 15, 2016 3:06 PM
To: Om Prakash, Manish HLTH:EX
Cc: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX; Byron, Dan; Birtles, Robert
Subject: RE: Announcements - Health file - Lead in Drinking W...

Hi,

Per the request below, see the attached comments on the proposed Health File for Lead from our team at Interior Health.

On a general note, our Medical Health Officer has asked to clarify if BCCDC completes review of these documents before they are circulated amongst the health authorities. Having BCCDC begin the process with a focused review of evidence means we at the health authorities can focus on process and how the advice/recommendations align with current practice in our respective regions.

If you need anything clarified, please don't let me know.

J. Ivor Norlin
Manager, Infrastructure Programs
Interior Health, Health Protection
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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From: Drinking Water Leadership Council [mailto:DoNotReply@SP2010.gov.bc.ca]
Sent: Monday, July 04, 2016 1:10 PM
To: Norlin, J Ivor
Subject: Announcements - Health file - Lead in Drinking W...

Drinking Water Leadership Council

Health file – Lead in Drinking W... has been added

Modify my alert settings | View Health file - Lead in Drinking W... | View Announcements | Mobile View

Title:	Health file - Lead in Drinking Water
Body:	Health Protection Branch is working with Health Link BC to create a Health File for Lead in Drinking Water. Below is a link to the latest draft of the health file, which is posted on sharepoint within active documents. Please review and add your comments and suggested changes using track changes. Please send your comments to Manish.OmPrakash@gov.bc.ca by June 15th, 2016. https://hlth005.gov.bc.ca/HPB/DWLC/Files/Active%20Documents/Lead%20in%20Drinking%20Water%20HealthLinkBCFile_2016_V2.docx
Expires:	

Last Modified 7/4/2016 1:06 PM by Edwards, Joanne HLTH:EX

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 15, 2016 3:06 PM
To: 'Joyce Mortimer'
Subject: RE: Question re: copper data from BC

Further clarification from IHA – "generally samples are taken using a 'metals bottle' pre-charged with HNO3". Let me know it that makes sense – neither Ivor nor I are lab people.

From: Fishwick, David HLTH:EX
Sent: Friday, July 15, 2016 10:26 AM
To: 'Joyce Mortimer'
Subject: RE: Question re: copper data from BC

Hi Joyce and Sarah Jane:

After speaking with Interior Health, I have been advised that we should assume they are all totals. That said, I am not confident that there is any sort of consistency, as information on factors such as sample preparation does not appear to have been recorded in their database.

Dave

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Thursday, June 23, 2016 12:46 PM
To: Fishwick, David HLTH:EX
Cc: Sarah Jane Payne
Subject: Question re: copper data from BC

Hello, David. Hope you are well!

You had kindly sent us copper monitoring data back in July 2015 (July 18 email to Anne Vezina). Sarah Jane Payne, the lead on that file, has a follow up question regarding that data (please see email below).

Thanks in advance for any assistance you can provide on her question.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-06-23 03:43 PM -----

From: Sarah Jane Payne/HC-SC/GC/CA
To: Joyce Mortimer/HC-SC/GC/CA@HWC
Date: 2016-06-23 03:04 PM
Subject: Question on CDW copper data - BC -

Hi Joyce,

Could you pass along this question to David, in BC.

Thanks so much,

SJP

****

Dear David,

I just have a quick question about the British Columbia copper data that you sent us last summer. I have attached one of original data files for your reference.

Could you clarify whether or not these are total or dissolved copper samples. If possible, could you also provide some details on copper sample preparation. . I know that there are different definitions for total and dissolved, so I just want to make sure that I describe the data as accurately as possible.

Thanks so much for your help with this. It is greatly appreciated.

Sincerely,

Sarah Jane

(See attached file: copper sample results fiscal 2014-15.pdf)

Sarah Jane Payne, PhD., P.Eng.

Water Quality Engineer, Healthy Environments Consumer Safety Branch
Health Canada / Government of Canada
sarah.jane.payne@hc-sc.gc.ca / **NEW! Tel: 613-952-9962**

Ingénieure de la qualité d'eau, Direction générale de la santé environnementale et de la sécurité des consommateurs
Santé Canada / Gouvernement du Canada
sarah.jane.payne@hc-sc.gc.ca / **NOUVEAU! Tél: 613-952-9962**

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: July 18, 2016 5:00 PM
To: Fishwick, David HLTH:EX
Subject: RE: Vanderhoof lead test

Much appreciated.
DRT.

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Monday, July 18, 2016 16:36
To: Tamblyn, Dave
Subject: RE: Vanderhoof lead test

Hi Dave:

I expect the Revised draft of the Health Canada guideline to come out for public consultation very shortly (within the next few months). I expect the proposed guideline to be more stringent than the current guideline with an ALARA statement. As far as process from that point, It will take some time (many months) for them to receive comments, decide on a final content/advice, get approval, translate to French and publish it to make it official.

Dave.

From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Monday, July 18, 2016 4:18 PM
To: Fishwick, David HLTH:EX
Subject: FW: Vanderhoof lead test

Hi Dave,
Lead in drinking water continues to be an ongoing headache. We have some new sampling data showing lead jumps from
DRT.

From: Tamblyn, Dave
Sent: Monday, July 18, 2016 16:06
To: Torng, Allan; Belanger, Darrell; Parayno, Alicia
Cc: Quibell, Doug; Fumerton, Raina
Subject: RE: Vanderhoof lead test

Hi all,

My info on a proposed new MAC was from Dave Fishwick, the BC rep on the FPTCDW (Federal-Provincial-Territorial Committee on Drinking Water), which is the committee that formally endorses the DW guidelines. The report Allan linked to is a 2013 update lead effects compared to the 1992 MAC (link: http://healthycanadians.gc.ca/publications/healthy-living-vie-saine/water-lead-plomb-eau/index-eng.php). Everything Allan says is correct viz. they consider all intakes (food, air, water, etc.) and also that lead intake

should be on a long-term decreasing trend. However, it seems epidemiological evidence is suggesting observable adverse health effects as low as 1 µg/dL lead in blood, and further no evidence for a NOAEL, which could make lead an ALARA parameter similar to arsenic.

From the Conclusion (Health Canada, 2013, p61):

> In summary, although BLLs (blood lead levels) of Canadians have declined significantly over the past 30 years, health effects are occurring below the current Canadian blood lead intervention level of 10 µg/dL. There is sufficient evidence that blood lead levels below 5 µg/dL are associated with adverse health effects. Health effects have been associated with BLLs as low as 1–2 µg/dL, levels that are present in Canadians, although there is uncertainty associated with effects observed at these levels. It is considered appropriate to apply a conservative approach when characterizing risk; accordingly, additional measures to further reduce exposures of lead to Canadians are warranted.

Where is this lead coming from? Various sources, and no single source dominates (ibid, p35)

> Overall, food, water, and ingestion of non-food items contaminated with lead including dust, lead-based paint, soil, and products, are all considered to be important sources of exposure.

I'll ask Dave F. if he has any insights into HC's timetable on lead. For the record, I wasn't basing my concern with Vanderhoof's testing results on a new MAC, but rather on the fact that lead jumps from 1 µg/L to 5 or 6 in a very short distance, and we have no idea (no sampling data) how high it gets at the end of the distribution system.

DRT.
Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 22, 2016 2:39 PM
To: 'Tin Tun, U'
Cc: Edwards, Joanne HLTH:EX
Subject: Corrosion

Hi Tintun:

Joanne and I are looking at refining the draft lead guidance document and we are scratching our heads on what some red flags would be for corrosion problems beyond pH and Alkalinity. We recognise that corrosion is about complex interactions and hard to boil down to a few items, and probably the only way to really demonstrate corrosion is through lead testing. That said, it would be useful if there were some parameters or conditions that would make a water supply "suspect" from the perspective of using these flags to prioritize which systems should be looked at first.

Do you have any ideas from an engineering perspective?

Dave

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Sam Ferris <Sam.Ferris@wsask.ca>
Sent: July 22, 2016 3:38 PM
To: Joyce Mortimer; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux
Subject: RE: Question re Lead service line replacement programs

Saskatchewan does not have and is not contemplating a provincially funded program, although we have tried to motivate cities and larger communities where systems are old enough to have lead service lines in place to address the concerns. Typically LSL are addressed by the municipality and the property owner here.

Sam

Sam Ferris - B.Sc.(Hons)
Executive Director, Environmental and Municipal Management Services
420-2365 Albert Street
Regina, SK S4P 4K1
Ph: 306.787.6193 | Cell: 306.536.1480 | Fax: 306.787.0780
wsask.ca | Sam.Ferris@wsask.ca

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Water Security Agency

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From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: July-22-16 12:52 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Sam Ferris; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux
Subject: CDW: Question re Lead service line replacement programs

CDW folks;

Please see Kim's question, below. Any feedback you can provide is greatly appreciated!

Hope everyone is having a good summer.

Regards,

Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-07-22 02:46 PM -----

From: "Philip, Kim (SD)" <Kim.Philip@gov.mb.ca>
To: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Date: 2016-07-22 01:46 PM
Subject: Question for CDW Members on LSL Replacement Programs?

Hi Joyce,

Could ask CDW members if any have, or are considering, provincial or territorial lead service line replacement programs?

….in line with Recommendation #41 of the Flint Water Advisory Task Force's March 2016 Final Report (http://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf) that the state "Develop a model LSL replacement program and funding mechanisms for financing work on private property".

Kim Philip

Kimberley A. Philip, M.Eng., P.Eng.,
Director, Office of Drinking Water
1007 Century Street, Winnipeg, MB R3H 0W4
Phone: 204-945-7010; Cell: 204-232-0022
Fax: 204-945-1365; E-mail: kim.philip@gov.mb.ca
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Sustainable Development

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Mori, Alicia HLTH:EX

From: Peter Workman <Peter_Workman@gov.nt.ca>
Sent: July 22, 2016 1:40 PM
To: LeBlanc-Havard, Michele; Fishwick, David HLTH:EX; 'Joyce Mortimer'; 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'pat.brooks@gov.yk.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'
Cc: 'Veronique Morisset'; 'France Lemieux'
Subject: RE: Question re Lead service line replacement programs

Not something in NWT at this time.
Not many lead services in place.
Peter

Peter Workman
Chief Environmental Health Officer
Population Health
Health and Social Services
867-767-9066 Ext. 49260
Cell: 867-445-8761
Fax: 867-669-7517
P.O. Box 1320, Yellowknife NT X1A 2L9

Peter Workman
Hygiéniste en chef du milieu
Santé de la population
Santé et Services sociaux
867-767-9066, poste 49260
Cell. : 867-669-7517
Téléc. : 867-669-7517
C. P. 1320, Yellowknife NT X1A 2L9

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Si vous avez besoin d'aide immédiate de l'agent d'hygiène du milieu en dehors des heures normales de travail (les soirs et les fins de semaine), communiquez avec le personnel de la ligne téléphonique confidentielle de la santé publique au 867-920-8646.

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From: LeBlanc-Havard, Michele [mailto:MLeBlanc-Havard@GOV.NU.CA]
Sent: Friday, July 22, 2016 1:59 PM
To: 'Fishwick, David HLTH:EX'; 'Joyce Mortimer'; 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'pat.brooks@gov.yk.ca'; Peter Workman; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'
Cc: 'Veronique Morisset'; 'France Lemieux'
Subject: RE: Question re Lead service line replacement programs

Not in Nunavut
M

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: July 22, 2016 3:54 PM
To: 'Joyce Mortimer'; 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; LeBlanc-Havard, Michele; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'
Cc: 'Veronique Morisset'; 'France Lemieux'
Subject: RE: Question re Lead service line replacement programs

Not something we are considering at the moment.

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Friday, July 22, 2016 11:52 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux
Subject: CDW: Question re Lead service line replacement programs

CDW folks;

Please see Kim's question, below. Any feedback you can provide is greatly appreciated!

Hope everyone is having a good summer.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-07-22 02:46 PM -----

From: "Philip, Kim (SD)" <Kim.Philip@gov.mb.ca>
To: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Date: 2016-07-22 01:46 PM
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Hi Joyce,

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….in line with Recommendation #41 of the Flint Water Advisory Task Force's March 2016 Final Report (http://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf) that the state "Develop a model LSL replacement program and funding mechanisms for financing work on private property".

Kim Philip

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 22, 2016 12:54 PM
To: 'Joyce Mortimer'; 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'
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Cc: Veronique Morisset; France Lemieux
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CDW folks;

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Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
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Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

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Mori, Alicia HLTH:EX

From: Donald Reid <donald.reid@gov.ab.ca>
Sent: July 25, 2016 6:38 AM
To: Joyce Mortimer; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux; Tricia Morris; Debra Mooney; Jeffrey Charrois
Subject: RE: Question re Lead service line replacement programs

Morning Kim

Alberta has been working on various lead-related issues for a number of years and has engaged with AUMA/AAMD&C on these issues as well as with EPCOR (City of Edmonton) and City of Calgary. To date we have left the issue of LSL replacement for municipalities to address but do have a report on our website on plumbosolvency strategies (http://aep.alberta.ca/water/programs-and-services/drinking-water/knowledge/documents/OptimisationPlumbosolvency-Feb2014A.pdf) which are being considered. It is expected that various provincial initiatives will be forthcoming over the coming months, the lead file is principally being led by colleagues in Alberta Health (Tricia Morris) and we are working with them as they progress the various elements.

Best regards

Donald

Dr. Donald Reid
Drinking-water Quality Regulator
Drinking-water and Wastewater Section, Provincial Programs Branch,
Operations Division, Environment and Parks,
1504, 15th floor, 9820 – 106 Street,
Edmonton, Alberta, T5K 2J6

donald.reid@gov.ab.ca

Tel: 780-644-8061
Fax: 780-422-4086
Cell: 780-977-1559

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Friday, July 22, 2016 12:52 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Donald Reid; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
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Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
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Mori, Alicia HLTH:EX

From: Polegato, Angelina R <Angelina.Polegato@novascotia.ca>
Sent: July 25, 2016 6:36 AM
To: Khan, Haseen; 'Joyce Mortimer'; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux
Subject: Re: Question re Lead service line replacement programs

Hi,

Halifax Water recently gave a presentation to our Deputy on the topic to get provincial support from the Department, but I have not heard anything more.

Halifax Water currently has a voluntary program where they will pay to have their portion of the lead service line replaced if the customer commits to paying to have their portion replaced. They will not do partial replacements. The work is coordinated such that both portions of the lead service line are replaced at the same time.

Have a great day,

Angelina

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Khan, Haseen
Sent: Monday, July 25, 2016 10:30 AM
To: 'Joyce Mortimer'; Polegato, Angelina R; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux
Subject: RE: Question re Lead service line replacement programs

No such program in NL at this time. Thanks.
Haseen

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Friday, July 22, 2016 4:22 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; Khan, Haseen; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux
Subject: CDW: Question re Lead service line replacement programs

CDW folks;

Please see Kim's question, below. Any feedback you can provide is greatly appreciated!

Hope everyone is having a good summer.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

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Mori, Alicia HLTH:EX

From: Deshpande, Satish (MOECC) <Satish.Deshpande@ontario.ca>
Sent: July 25, 2016 6:15 AM
To: Joyce Mortimer; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca
Cc: Veronique Morisset; France Lemieux
Subject: RE: Question re Lead service line replacement programs

Hi Kim

We don't have a provincial plan for LSL now.

Satish

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: July 22, 2016 2:52 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Deshpande, Satish (MOECC)
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Could ask CDW members if any have, or are considering, provincial or territorial lead service line replacement programs?

….in line with Recommendation #41 of the Flint Water Advisory Task Force's March 2016 Final Report (http://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf) that the state "Develop a model LSL replacement program and funding mechanisms for financing work on private property".

Kim Philip

Kimberley A. Philip, M.Eng., P.Eng.,
Director, Office of Drinking Water
1007 Century Street, Winnipeg, MB R3H 0W4
Phone: 204-945-7010; Cell: 204-232-0022
Fax: 204-945-1365; E-mail: kim.philip@gov.mb.ca
24 Hr Emergency Response Line: 204-944-4888
Website: manitoba.ca/drinkingwater

Manitoba
Sustainable Development

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Mori, Alicia HLTH:EX

From: Caroline.Robert@mddelcc.gouv.qc.ca
Sent: July 25, 2016 5:58 AM
To: Kim.Philip@gov.mb.ca; Angelina.polegato@novascotia.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique.Morisset@hc-sc.gc.ca; France.Lemieux@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca
Subject: RE: Question re Lead service line replacement programs

Hi Kim,
No such program in Québec, and no intention to develop one, as far as I know.

Caroline

Caroline Robert, directrice par intérim
Direction de l'eau potable et des eaux souterraines
Ministère du Développement durable, de l'Environnement,
et de la Lutte contre les changements climatiques
675, René-Lévesque Est, 8e étage, boîte 42
Québec (Québec) G1R 5V7
Tél. 418-521-3885, poste 4938
Fax. 418-644-2003
Courriel: caroline.robert@mddelcc.gouv.qc.ca

De : Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Envoyé : 22 juillet 2016 14:52
À : Angelina.polegato@novascotia.ca; Robert, Caroline ; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc : Veronique Morisset ; France Lemieux
Objet : CDW: Question re Lead service line replacement programs

CDW folks;

Please see Kim's question, below. Any feedback you can provide is greatly appreciated!

Hope everyone is having a good summer.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-07-22 02:46 PM -----

From: "Philip, Kim (SD)" <Kim.Philip@gov.mb.ca>
To: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Date: 2016-07-22 01:46 PM
Subject: Question for CDW Members on LSL Replacement Programs?

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delete it and the attachments (and all copies) in a secure manner. Thank you.

Mori, Alicia HLTH:EX

From: Donald Reid <donald.reid@gov.ab.ca>
Sent: July 25, 2016 9:06 AM
To: Veronique Morisset; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; France Lemieux; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper; Joyce Mortimer; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha; Michele Giddings; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen; Wendy Enright
Subject: RE: Updated lead document

No concerns from Alberta
Donald

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Tuesday, July 12, 2016 12:05 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; Donald Reid; France Lemieux; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper; Joyce Mortimer; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha; Michele Giddings; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen; Wendy Enright
Subject: CDW: Updated lead document

CDW members,

As per my June 15 e-mail, we have now made changes to the lead document to incorporate the random daytime (RDT) sampling protocol as an option for residential sampling. This has also resulted in changes to section 5.1.2, to provide additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.

Here's a quick list of the sections with changes and the nature/reason for each of the changes:
3.1, 3.1.1, 3.1.2 -- Additional of RDT and related changes
5.1.1 -- correction of references; correction of description of MB study, as requested by Kim
5.1.2 -- addition of background information on the RDT protocol
7.1.2.6 -- New section, to provide relevant information complementary to what is in the uranium document
10.2 -- Clarification of description of Healey et al. 2010, to amend wording that could have been misinterpreted, as requested by Satish
12.0 -- Addition of relevant references for above changes
Appendix B -- Incorporation of provincial and territorial anticipated impacts, as provided by members

(See attached file: Lead 2016-0712 compared to Nov 2015.pdf)

We are looking for an indication from members that the revisions are acceptable and do not affect the approval of the document. As we are still expecting the document to be posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by Aug 10 at the latest.

Thanks

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Veronique Morisset---2016-06-15 11:42:41 AM---CDW members, Following the discussion at the last meeting, and having reviewed your impact paragraph

From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

Please let us know if you have any concerns with this approach.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019
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Mori, Alicia HLTH:EX

From: Pat.Brooks@gov.yk.ca
Sent: July 26, 2016 2:49 PM
To: Kim.Philip@gov.mb.ca
Cc: Veronique.Morisset@hc-sc.gc.ca; France.Lemieux@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; MLeBlanc-Havard@GOV.NU.CA; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Subject: RE: Question re Lead service line replacement programs

Hi Kim,

There is currently no program for lead service line replacements in the Yukon.

Regards.
Pat

Patricia Brooks
Drinking Water Program Coordinator
Environmental Health Services
2 Hospital Road
Whitehorse, YT
Y1A 3H8
Phone 867-667-8351 Fax 867-667-8322

Confidentiality Notice: This e-mail communication is directed solely to the intended addressee(s). If you have received this e-mail in error, please notify the author immediately by return e-mail and permanently delete this transmission from your system without making any copy.

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: July-22-16 11:52 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; Pat.Brooks ; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset ; France Lemieux
Subject: CDW: Question re Lead service line replacement programs

CDW folks;

Please see Kim's question, below. Any feedback you can provide is greatly appreciated!

Hope everyone is having a good summer.

Regards,

Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
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Kim Philip

Kimberley A. Philip, M.Eng., P.Eng.,
Director, Office of Drinking Water
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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 27, 2016 10:34 AM
To: 'France Lemieux'
Cc: 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'John Cooper'; 'Joyce Mortimer'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'Kristina Taracha'; 'Michele Giddings'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'Richard Carrier'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'Stephanie McFadyen'; 'Veronique Morisset'; 'Wendy Enright'
Subject: RE: Updated lead document

Thanks France:

So am I interpreting this correctly for RDT - this is making an assumption that typical exposure in a school is the first and second 250mL of water that comes out of the school fountain at any given time, whereas for typical exposure in a residential environment it is assumed to include water beyond what is in the fixture, and therefore diluted/averaged by taking more volume?

Dave

From: France Lemieux [mailto:France.Lemieux@hc-sc.gc.ca]
Sent: Wednesday, July 27, 2016 10:11 AM
To: Fishwick, David HLTH:EX
Cc: 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'John Cooper'; 'Joyce Mortimer'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'Kristina Taracha'; 'Michele Giddings'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'Richard Carrier'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'Stephanie McFadyen'; 'Veronique Morisset'; 'Wendy Enright'
Subject: RE: Updated lead document

Hello David,

The volumes differ because generally in schools, the highest concentrations correspond to the fountain and its immediate connecting piping, which is typically captured in the first 250mL of a sample,

Regards,

France

France Lemieux, M. Eng.

Head, Materials and Treatment Section/Healthy Environments and Consumer Safety Branch
Health Canada/Government of Canada

France.Lemieux@hc-sc.gc.ca/Tel.: 613-941-3166

Chef, Section des produits et du traitement/Direction générale de la santé environnementale et de la sécurité des

consommateurs
Santé Canada/Gouvernement du Canada

France.Lemieux@hc-sc.gc.ca/Tél. : 613-941-3166

"Fishwick, David HLTH:EX" ---2016-07-27 12:36:09 PM---Hi Veronique: I have a question about the revised monitoring section in this (sections 3.1.1, and 3.

From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
To: "'Veronique Morisset'" <Veronique.Morisset@hc-sc.gc.ca>, "'Angelina.polegato@novascotia.ca'" <Angelina.polegato@novascotia.ca>, "'Caroline.Robert@mddelcc.gouv.qc.ca'" <Caroline.Robert@mddelcc.gouv.qc.ca>, "'donald.reid@gov.ab.ca'" <donald.reid@gov.ab.ca>, "'France Lemieux'" <France.Lemieux@hc-sc.gc.ca>, "'ghsomers@gov.pe.ca'" <ghsomers@gov.pe.ca>, "'hkhan@gov.nl.ca'" <hkhan@gov.nl.ca>, "'John Cooper'" <john.cooper@hc-sc.gc.ca>, "'Joyce Mortimer'" <Joyce.Mortimer@hc-sc.gc.ca>, "'Kevin.Gould@gnb.ca'" <Kevin.Gould@gnb.ca>, "'Kim.Philip@gov.mb.ca'" <Kim.Philip@gov.mb.ca>, "'Kristina Taracha'" <kristina.taracha@hc-sc.gc.ca>, "'Michele Giddings'" <michele.giddings@hc-sc.gc.ca>, "'MLeBlanc-Havard@GOV.NU.CA'" <MLeBlanc-Havard@GOV.NU.CA>, "'pat.brooks@gov.yk.ca'" <pat.brooks@gov.yk.ca>, "'Peter_Workman@gov.nt.ca'" <Peter_Workman@gov.nt.ca>, "'Richard Carrier'" <richard.carrier@hc-sc.gc.ca>, "'sam.ferris@wsask.ca'" <sam.ferris@wsask.ca>, "'Satish.Deshpande@ontario.ca'" <Satish.Deshpande@ontario.ca>, "'Stephanie McFadyen'" <Stephanie.McFadyen@hc-sc.gc.ca>, "'Wendy Enright'" <wendy.enright@hc-sc.gc.ca>
Date: 2016-07-27 12:36 PM
Subject: RE: Updated lead document

Hi Veronique:

I have a question about the revised monitoring section in this (sections 3.1.1, and 3.1.2) When giving advice on random daytime sampling In Section 3.1.1. It advises taking a 1L sample for residential dwellings, however for schools and large buildings in 3.1.2. it advises taking two 125ml samples (presumably consecutive) and averaging the results. Is there a reason why these volumes are different?

Dave

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Tuesday, July 12, 2016 11:05 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; France Lemieux; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper; Joyce Mortimer; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha; Michele Giddings; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen; Wendy Enright
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Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

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From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

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Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: July 29, 2016 1:11 PM
To: hkhan@gov.nl.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Angelina.Polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; MLeBlanc-Havard@GOV.NU.CA; Satish.Deshpande@ontario.ca; sam.ferris@wsask.ca; Peter_Workman@gov.nt.ca
Cc: Veronique Morisset; France Lemieux
Subject: Reminder for August 10 - CDW: Updated lead document
Attachments: Lead 2016-0712 compared to Nov 2015.pdf

CDW folks. This is the last email of the day, I promise.

Because I will be away until August 15, I wanted to also send you a reminder to respond by August 10 regarding the revised lead document. Please ensure that you respond to Véronique directly, rather than to me. I'm always glad to be c.c.'d.

Thank you so much for being patient in receiving this very large batch of emails today!

Wishing you all a great couple of weeks.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-07-29 04:03 PM -----

From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, David.Fishwick@gov.bc.ca, donald.reid@gov.ab.ca, France Lemieux/HC-SC/GC/CA@HWC, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, Kristina Taracha/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, Richard Carrier/HC-SC/GC/CA@HWC, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Stephanie McFadyen/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-07-12 02:05 PM
Subject: CDW: Updated lead document

CDW members,

As per my June 15 e-mail, we have now made changes to the lead document to incorporate the random daytime (RDT) sampling protocol as an option for residential sampling. This has also resulted in changes to section 5.1.2, to provide

additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.

Here's a quick list of the sections with changes and the nature/reason for each of the changes:
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(See attached file: Lead 2016-0712 compared to Nov 2015.pdf)

We are looking for an indication from members that the revisions are acceptable and do not affect the approval of the document. As we are still expecting the document to be posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by Aug 10 at the latest.

Thanks

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

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Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Veronique Morisset---2016-06-15 11:42:41 AM---CDW members, Following the discussion at the last meeting, and having reviewed your impact paragraph

From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
Subject: CDW: Update on lead document

CDW members,

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Please let us know if you have any concerns with this approach.

Véronique

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veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: Gould, Kevin (DH/MS) <Kevin.Gould@gnb.ca>
Sent: August 1, 2016 9:19 AM
To: 'Joyce Mortimer'; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux
Subject: RE: Question re Lead service line replacement programs

Hi Kim.
I am not aware of any such program for NB.
Kevin

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: July-22-16 3:52 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Gould, Kevin (DH/MS); Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux
Subject: CDW: Question re Lead service line replacement programs

CDW folks;

Please see Kim's question, below. Any feedback you can provide is greatly appreciated!

Hope everyone is having a good summer.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-07-22 02:46 PM -----

From: "Philip, Kim (SD)" <Kim.Philip@gov.mb.ca>
To: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Date: 2016-07-22 01:46 PM
Subject: Question for CDW Members on LSL Replacement Programs?

Hi Joyce,

Could ask CDW members if any have, or are considering, provincial or territorial lead service line replacement programs?

….in line with Recommendation #41 of the Flint Water Advisory Task Force's March 2016 Final Report (http://www.michigan.gov/documents/snyder/FWATF_FINAL_REPORT_21March2016_517805_7.pdf) that the state "Develop a model LSL replacement program and funding mechanisms for financing work on private property".

Kim Philip

Kimberley A. Philip, M.Eng., P.Eng.,
Director, Office of Drinking Water
1007 Century Street, Winnipeg, MB R3H 0W4
Phone: 204-945-7010; Cell: 204-232-0022
Fax: 204-945-1365; E-mail: kim.philip@gov.mb.ca
24 Hr Emergency Response Line: 204-944-4888
Website: manitoba.ca/drinkingwater

Manitoba
Sustainable Development

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Mori, Alicia HLTH:EX

From: Caroline.Robert@mddelcc.gouv.qc.ca
Sent: August 3, 2016 11:32 AM
To: Veronique.Morisset@hc-sc.gc.ca
Cc: Angelina.polegato@novascotia.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; France.Lemieux@hc-sc.gc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; kristina.taracha@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; richard.carrier@hc-sc.gc.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie.McFadyen@hc-sc.gc.ca; wendy.enright@hc-sc.gc.ca
Subject: RE: Updated lead document

Hi Veronique,
We reviewed the new version of the document and I have concerns about the way the added information is presented. In fact, I think it has the side effect of making Quebec's current approach completely irrelevant, which would have a major impact on us.

I would much prefer having in section 3 a more balanced summary of the pros and cons of the various sampling protocols, recognizing that the choice of a sampling protocol must be made in accordance with the objective pursued. Indeed, sections 3.1 et 5.1 recognize that there are various possible objectives : « identifying sources of lead, controlling corrosion, assessing compliance, estimating exposure to lead », which does not seem to be taken into consideration in section 3.1.1 and 5.1.2.

Some other comments :

- **Section 3.1.1** : the recommendation to define zones of 100 000 residents and randomly choose in each 20 residences is not coherent with previous sections of the document recommending to first identify sectors at risk of having lead service lines and monitor them. We are not in favour of keeping this proposed change. Also, no consideration seems to be given to small systems.
- **Section 3.1.2** : there is a high potential for confusion at the section presents contradictory information. At first, it recommends to sample all fountains and taps in every building. Then it indicates to prioritize the ones with lead service lines. And finally, for large buildings other than schools and daycares, it recommends to define the number of samples according to size and population of the building.

  We also got the same question as Kristina : why recommending to sample every tap and fountain every year ? We would consider more relevant that a intensive monitoring takes place once to identify the problems, with a lighter follow-up after.
- **Section 5.1.2** : the section indicates that the objective is to choose a protocol to assess exposure without mentioning why. After, the studies are only presented as to whether or not they are representative to assess exposure, and not for their potential benefits in meeting the chosen objective.

  Also, the fully flushed protocol is presented as inadequat to establish average concentration and only be giving indications on minimal exposure. In Québec, we chose this protocol as a first step, which then leads to more in-depth investigations with other protocols once a significant concentration is found. We have used this « hybrid » approach for a few years now, and we consider that it proved its usefulness. FYI, there is a paper from l'École Polytechnique de Montreal recently published in Water Research (http://www.sciencedirect.com/science/article/pii/S0043135416302470) showing (in figure 2 and 3) that using 2 ug/l in full flushed samples is similar as using 10 ug/l with other protocols.

Caroline Robert, directrice par intérim
Direction de l'eau potable et des eaux souterraines
Ministère du Développement durable, de l'Environnement,
et de la Lutte contre les changements climatiques
675, René-Lévesque Est, 8e étage, boîte 42
Québec (Québec) G1R 5V7
Tél. 418-521-3885, poste 4938
Fax. 418-644-2003
Courriel: caroline.robert@mddelcc.gouv.qc.ca

De : Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Envoyé : 12 juillet 2016 14:05
À : Angelina.polegato@novascotia.ca; Robert, Caroline ; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; France Lemieux ; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper ; Joyce Mortimer ; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha ; Michele Giddings ; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier ; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen ; Wendy Enright
Objet : CDW: Updated lead document

CDW members,

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Véronique

Véronique Morisset
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Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

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Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
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veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: August 5, 2016 2:53 PM
To: Fishwick, David HLTH:EX
Cc: XT:HLTH Lu, James
Subject: FW: Fish Bone diagram - VoP Lead in DW event version 3- 2016 08 05.vsd
Attachments: Fish Bone diagram - VoP Lead in DW event version 3- 2016 08 05.vsd

Hi David,
Can I ask you to put this onto the agenda for the October DWLC (James is unable to attend the Sept. meeting). It pertains to the experience we encountered with the lead issue in Pemberton and some of the background triggers that did not sit well with the public.
Please and thanks,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

From: Lu, James [RH]
Sent: Friday, August 05, 2016 11:58 AM
To: Clarkson, Len [STS]
Subject: Fish Bone diagram - VoP Lead in DW event version 3- 2016 08 05.vsd

On second thought Len, I just removed the not for distribution tag. I did not change anything else. Here is a revised version – ready to go
James

Mori, Alicia HLTH:EX

From: Philip, Kim (SD) <Kim.Philip@gov.mb.ca>
Sent: August 8, 2016 2:57 PM
To: Joyce Mortimer; hkhan@gov.nl.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Angelina.Polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; pat.brooks@gov.yk.ca; MLeBlanc-Havard@GOV.NU.CA; Satish.Deshpande@ontario.ca; sam.ferris@wsask.ca; Peter_Workman@gov.nt.ca
Cc: Veronique Morisset; France Lemieux
Subject: RE: Reminder for August 10 - CDW: Updated lead document

We are fine with the changes to 5.1.1 related to the Manitoba study. Thanks for incorporating them.

I find the changes to the sampling sections a bit confusing. If I'm interpreting correctly, RDT sampling of 20 randomly selected household taps per 100,000 residents is intended as a minimum compliance option for on-going monitoring? This is much less than the minimum 50 homes for 100,000 people associated with reduced monitoring in the corrosion control document (pg 10), even though the lead document says you need 2-5 or 3-5 times as many samples with RDT as with a stagnation protocol to be representative (page 4 and 14 respectively).

MB Health has also expressed concern that RDT does not provide the homeowner with sufficient information for estimating average exposure for individuals within the home – perhaps this issue could be flagged for future follow-up? I'm assuming Health Canada would be updating the factsheet for homeowners and could address the issue of assessing individual exposure at that time?

Sorry for responding with questions. We could probably live with the changes in the interest of moving forward. I am finding it a bit difficult to come up with an appropriate monitoring protocol based on an initial review of proposed changes though.

Kim Philip
Kimberley A. Philip, M.Eng., P.Eng.,
Director, Office of Drinking Water
1007 Century Street, Winnipeg, MB R3H 0W4
Phone: 204-945-7010; Cell: 204-232-0022
Fax: 204-945-1365; E-mail: kim.philip@gov.mb.ca
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Website: manitoba.ca/drinkingwater



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From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: July-29-16 3:11 PM

To: hkhan@gov.nl.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Angelina.Polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; Philip, Kim (SD); pat.brooks@gov.yk.ca; MLeBlanc-Havard@GOV.NU.CA; Satish.Deshpande@ontario.ca; sam.ferris@wsask.ca; Peter_Workman@gov.nt.ca
Cc: Veronique Morisset; France Lemieux
Subject: Reminder for August 10 - CDW: Updated lead document

CDW folks. This is the last email of the day, I promise.

Because I will be away until August 15, I wanted to also send you a reminder to respond by August 10 regarding the revised lead document. Please ensure that you respond to Véronique directly, rather than to me. I'm always glad to be c.c.'d.

Thank you so much for being patient in receiving this very large batch of emails today!

Wishing you all a great couple of weeks.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
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To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, David.Fishwick@gov.bc.ca, donald.reid@gov.ab.ca, France Lemieux/HC-SC/GC/CA@HWC, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, Kristina Taracha/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, Richard Carrier/HC-SC/GC/CA@HWC, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Stephanie McFadyen/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-07-12 02:05 PM
Subject: CDW: Updated lead document

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Thanks

Véronique

Véronique Morisset
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Gestionnaire, Division du programme de la qualité de l'eau
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Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

Please let us know if you have any concerns with this approach.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: France Lemieux <France.Lemieux@hc-sc.gc.ca>
Sent: August 10, 2016 1:47 PM
To: Philip, Kim (SD)
Cc: 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; Fishwick, David HLTH:EX; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'John Cooper'; 'Joyce Mortimer'; 'Kevin.Gould@gnb.ca'; 'Kristina Taracha'; 'Michele Giddings'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'Richard Carrier'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'Stephanie McFadyen'; 'Veronique Morisset'; 'Wendy Enright'
Subject: RE: Updated lead document

Hello Kim,

The benefit of collecting smaller volumes (i.e., 2x125 mL samples) is really a practical one in that it helps to determine where the lead source is located if results indicate the presence of lead (similar to profile sampling). With this information, you may not have to go back and sample again if you want to find the source and undertake mitigation (replace fitting, valves, etc.).

A fountain typically has 3/8" piping (OD) supply and with this diameter of type K copper tubing, you would expect to have approximately141 mL/m of piping. As an example, if you know that the first 125 mL of water contains little lead, you would then be better able to determine that the lead source is not likely very close to the fountain (i.e., unlikely to be fittings associated directly with the fountain but further upstream). If you collected one 250 mL sample, then it wouldl require more work to determine where that source is (for mitigation/remedial measures). Essentially, it would require additional sampling to investigate the source

Hope this helps to clarify.

France

France Lemieux, M. Eng.

Head, Materials and Treatment Section/Healthy Environments and Consumer Safety Branch
Health Canada/Government of Canada

France.Lemieux@hc-sc.gc.ca/Tel.: 613-941-3166

Chef, Section des produits et du traitement/Direction générale de la santé environnementale et de la sécurité des consommateurs
Santé Canada/Gouvernement du Canada

France.Lemieux@hc-sc.gc.ca/Tél. : 613-941-3166

"Philip, Kim (SD)" ---2016-08-10 04:10:59 PM---Could the schools not collect one 250 mL sample rather than two 125 mL samples? Is there significan

From: "Philip, Kim (SD)"
To: France Lemieux , "Fishwick, David HLTH:EX"
Cc: "'Angelina.polegato@novascotia.ca'" , "'Caroline.Robert@mddelcc.gouv.qc.ca'" , "'donald.reid@gov.ab.ca'" , "'ghsomers@gov.pe.ca'" , "'hkhan@gov.nl.ca'" , 'John Cooper' , 'Joyce Mortimer' , "'Kevin.Gould@gnb.ca'" , 'Kristina Taracha' , 'Michele Giddings' , "'MLeBlanc-Havard@GOV.NU.CA'" , "'pat.brooks@gov.yk.ca'"

, "'Peter_Workman@gov.nt.ca'" , 'Richard Carrier' , "'sam.ferris@wsask.ca'" , "'Satish.Deshpande@ontario.ca'" , "'Stephanie McFadyen'" , 'Veronique Morisset' , 'Wendy Enright'
Date: 2016-08-10 04:10 PM
Subject: RE: Updated lead document

Could the schools not collect one 250 mL sample rather than two 125 mL samples? Is there significant additional benefit from averaging two sample results?

Kim Philip

From: France Lemieux [mailto:France.Lemieux@hc-sc.gc.ca]
Sent: July-27-16 12:11 PM
To: Fishwick, David HLTH:EX
Cc: 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'John Cooper'; 'Joyce Mortimer'; 'Kevin.Gould@gnb.ca'; Philip, Kim (SD); 'Kristina Taracha'; 'Michele Giddings'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'Richard Carrier'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'Stephanie McFadyen'; 'Veronique Morisset'; 'Wendy Enright'
Subject: RE: Updated lead document

Hello David,

The volumes differ because generally in schools, the highest concentrations correspond to the fountain and its immediate connecting piping, which is typically captured in the first 250mL of a sample,

Regards,

France

France Lemieux, M. Eng.

Head, Materials and Treatment Section/Healthy Environments and Consumer Safety Branch
Health Canada/Government of Canada

France.Lemieux@hc-sc.gc.ca/Tel.: 613-941-3166

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Santé Canada/Gouvernement du Canada

France.Lemieux@hc-sc.gc.ca/Tél. : 613-941-3166

"Fishwick, David HLTH:EX" ---2016-07-27 12:36:09 PM---Hi Veronique: I have a question about the revised monitoring section in this (sections 3.1.1, and 3.

From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
To: "'Veronique Morisset'" <Veronique.Morisset@hc-sc.gc.ca>, "'Angelina.polegato@novascotia.ca'" <Angelina.polegato@novascotia.ca>, "'Caroline.Robert@mddelcc.gouv.qc.ca'" <Caroline.Robert@mddelcc.gouv.qc.ca>, "'donald.reid@gov.ab.ca'" <donald.reid@gov.ab.ca>, "'France Lemieux'" <France.Lemieux@hc-sc.gc.ca>, "'ghsomers@gov.pe.ca'" <ghsomers@gov.pe.ca>, "'hkhan@gov.nl.ca'" <hkhan@gov.nl.ca>, "'John Cooper'" <john.cooper@hc-sc.gc.ca>, "'Joyce Mortimer'" <Joyce.Mortimer@hc-sc.gc.ca>, "'Kevin.Gould@gnb.ca'" <Kevin.Gould@gnb.ca>, "'Kim.Philip@gov.mb.ca'" <Kim.Philip@gov.mb.ca>, "'Kristina Taracha'" <kristina.taracha@hc-sc.gc.ca>, "'Michele Giddings'" <michele.giddings@hc-sc.gc.ca>, "'MLeBlanc-Havard@GOV.NU.CA'" <MLeBlanc-Havard@GOV.NU.CA>, "'pat.brooks@gov.yk.ca'" <pat.brooks@gov.yk.ca>, "'Peter_Workman@gov.nt.ca'" <Peter_Workman@gov.nt.ca>, "'Richard Carrier'" <richard.carrier@hc-sc.gc.ca>, "'sam.ferris@wsask.ca'" <sam.ferris@wsask.ca>, "'Satish.Deshpande@ontario.ca'" <Satish.Deshpande@ontario.ca>, "'Stephanie McFadyen'" <Stephanie.McFadyen@hc-sc.gc.ca>, "'Wendy Enright'" <wendy.enright@hc-sc.gc.ca>

Date: 2016-07-27 12:36 PM
Subject: RE: Updated lead document

Hi Veronique:

I have a question about the revised monitoring section in this (sections 3.1.1, and 3.1.2) When giving advice on random daytime sampling In Section 3.1.1. It advises taking a 1L sample for residential dwellings, however for schools and large buildings in 3.1.2. it advises taking two 125ml samples (presumably consecutive) and averaging the results. Is there a reason why these volumes are different?

Dave

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Tuesday, July 12, 2016 11:05 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; France Lemieux; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper; Joyce Mortimer; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha; Michele Giddings; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen; Wendy Enright
Subject: CDW: Updated lead document

CDW members,

As per my June 15 e-mail, we have now made changes to the lead document to incorporate the random daytime (RDT) sampling protocol as an option for residential sampling. This has also resulted in changes to section 5.1.2, to provide additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.

Here's a quick list of the sections with changes and the nature/reason for each of the changes:
3.1, 3.1.1, 3.1.2 -- Additional of RDT and related changes
5.1.1 -- correction of references; correction of description of MB study, as requested by Kim
5.1.2 -- addition of background information on the RDT protocol
7.1.2.6 -- New section, to provide relevant information complementary to what is in the uranium document
10.2 -- Clarification of description of Healey et al. 2010, to amend wording that could have been misinterpreted, as requested by Satish
12.0 -- Addition of relevant references for above changes
Appendix B -- Incorporation of provincial and territorial anticipated impacts, as provided by members

(See attached file: Lead 2016-0712 compared to Nov 2015.pdf)

We are looking for an indication from members that the revisions are acceptable and do not affect the approval of the document. As we are still expecting the document to be posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by Aug 10 at the latest.

Thanks

Véronique

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Veronique Morisset---2016-06-15 11:42:41 AM---CDW members, Following the discussion at the last meeting, and having reviewed your impact paragraph

From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: August 15, 2016 10:46 AM
To: 'Deshpande, Satish (MOECC)'
Subject: RE: Lead

Yes - I think we must have misunderstood time zones -

-----Original Message-----
From: Deshpande, Satish (MOECC) [mailto:Satish.Deshpande@ontario.ca]
Sent: Monday, August 15, 2016 10:28 AM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Subject: RE: Lead

Hi Joanne and Hi David

Tomorrow ok?

Satish

-----Original Message-----
From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: August 15, 2016 11:52 AM
To: Deshpande, Satish (MOECC); Fishwick, David HLTH:EX
Subject: RE: Lead

1pm looks clear for me all week currently. Dave?

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

-----Original Message-----
From: Deshpande, Satish (MOECC) [mailto:Satish.Deshpande@ontario.ca]
Sent: Monday, August 15, 2016 7:16 AM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX
Subject: RE: Lead

Hi David

What works for a discussion for you westerners? Is a 1 pm good time to talk? I can do most days except Wednesday.

Satish

-----Original Message-----
From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: August 11, 2016 12:58 PM
To: Deshpande, Satish (MOECC)
Cc: Edwards, Joanne HLTH:EX
Subject: RE: Lead

Hi Satish:
s.22 and yes would like to talk - when is a good time? Any time today or perhaps early next week?
Dave

-----Original Message-----
From: Deshpande, Satish (MOECC) [mailto:Satish.Deshpande@ontario.ca]
Sent: Monday, July 25, 2016 2:24 AM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX
Subject: Re: Lead

Hi Dave

This is a semi long discussion.

Want to talk sometime this week?

The program works but can share other aspects...

Satish

Sent from my BlackBerry 10 smartphone on the Rogers network.
From: Fishwick, David HLTH:EX
Sent: Friday, July 22, 2016 1:21 PM
To: Deshpande, Satish (MOECC)
Cc: Edwards, Joanne HLTH:EX
Subject: Lead

Hi Satish:

We're working on developing some BC guidance for testing and flushing for lead in schools, day cares and other buildings, and have noticed you guys have a document and some web resources on testing and flushing for lead in schools, private schools day nurseries.

How are these working? Anything you would do different next time? Do you have plans to update these?

Dave

David Fishwick | Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt Victoria BC | V8W 9P1

Phone: (250) 952-1110 | Fax: (250) 952-1713 | E-mail: david.fishwick@gov.bc.ca<mailto:david.fishwick@gov.bc.ca>

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: August 15, 2016 9:19 AM
To: 'Deshpande, Satish (MOECC)'
Cc: Edwards, Joanne HLTH:EX
Subject: RE: Lead

Hi Satish:
1pm today would be ideal for me.
Dave

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From: Deshpande, Satish (MOECC) [mailto:Satish.Deshpande@ontario.ca]
Sent: Monday, August 15, 2016 7:16 AM
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David Fishwick | Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt Victoria BC | V8W 9P1

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Mori, Alicia HLTH:EX

From: Veronique Morisset <Veronique.Morisset@hc-sc.gc.ca>
Sent: August 18, 2016 1:33 PM
To: Caroline.Robert@mddelcc.gouv.qc.ca; Angelina.polegato@novascotia.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; kristina.taracha@hc-sc.gc.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; Stephanie.McFadyen@hc-sc.gc.ca; wendy.enright@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; richard.carrier@hc-sc.gc.ca; France.Lemieux@hc-sc.gc.ca
Subject: CDW: Another version of the lead document
Attachments: Lead 2016-0818 (for public consultation) ENG.pdf

CDW Members:

Please find attached another version of the lead document, which incorporates changes to address Caroline's comments. As we have been working with Caroline to address her comments, it should address her issues, but please let us know if you have any concerns with this version. The highlighted changes (in sections 3.1, 3.1.1, 3.1.2, 5.1.2 + addition of corresponding newly published reference) are from this latest round of edits only.

(See attached file: Lead 2016-0818 (for public consultation) ENG.pdf)

As we are still hoping to get the document posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by September 2 at the latest.

We will follow up with you next week with the draft Qs and As for lead that we had committed to doing, so please provide any specific question that you would like us to include.

Thanks.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
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veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

---2016-08-03 02:33:02 PM---Hi Veronique, We reviewed the new version of the document and I have concerns about the way the adde

From:
To:
Cc: ,
Date: 2016-08-03 02:33 PM
Subject: RE: Updated lead document

Hi Veronique,
We reviewed the new version of the document and I have concerns about the way the added information is presented. In fact, I think it has the side effect of making Quebec's current approach completely irrelevant, which would have a major impact on us.

I would much prefer having in section 3 a more balanced summary of the pros and cons of the various sampling protocols, recognizing that the choice of a sampling protocol must be made in accordance with the objective pursued. Indeed, sections 3.1 et 5.1 recognize that there are various possible objectives : « identifying sources of lead, controlling corrosion, assessing compliance, estimating exposure to lead », which does not seem to be taken into consideration in section 3.1.1 and 5.1.2.

Some other comments :

- **Section 3.1.1** : the recommendation to define zones of 100 000 residents and randomly choose in each 20 residences is not coherent with previous sections of the document recommending to first identify sectors at risk of having lead service lines and monitor them. We are not in favour of keeping this proposed change. Also, no consideration seems to be given to small systems.
- **Section 3.1.2** : there is a high potential for confusion at the section presents contradictory information. At first, it recommends to sample all fountains and taps in every building. Then it indicates to prioritize the ones with lead service lines. And finally, for large buildings other than schools and daycares, it recommends to define the number of samples according to size and population of the building.
  We also got the same question as Kristina : why recommending to sample every tap and fountain every year ? We would consider more relevant that a intensive monitoring takes place once to identify the problems, with a lighter follow-up after.
- **Section 5.1.2** : the section indicates that the objective is to choose a protocol to assess exposure without mentioning why. After, the studies are only presented as to whether or not they are representative to assess exposure, and not for their potential benefits in meeting the chosen objective.
  Also, the fully flushed protocol is presented as inadequat to establish average concentration and only be giving indications on minimal exposure. In Québec, we chose this protocol as a first step, which then leads to more in-depth investigations with other protocols once a significant concentration is found. We have used this « hybrid » approach for a few years now, and we consider that it proved its usefulness. FYI, there is a paper from l'École Polytechnique de Montreal recently published in Water Research (http://www.sciencedirect.com/science/article/pii/S0043135416302470) showing (in figure 2 and 3) that using 2 ug/l in full flushed samples is similar as using 10 ug/l with other protocols.

Caroline Robert, directrice par intérim
Direction de l'eau potable et des eaux souterraines
Ministère du Développement durable, de l'Environnement,
et de la Lutte contre les changements climatiques
675, René-Lévesque Est, 8e étage, boîte 42
Québec (Québec) G1R 5V7
Tél. 418-521-3885, poste 4938
Fax. 418-644-2003
Courriel: caroline.robert@mddelcc.gouv.qc.ca

De : Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Envoyé : 12 juillet 2016 14:05
À : Angelina.polegato@novascotia.ca; Robert, Caroline ; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; France Lemieux ; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper ; Joyce Mortimer ; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha ; Michele Giddings ; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier ; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen ; Wendy Enright
Objet : CDW: Updated lead document

CDW members,

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additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.

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Thanks

Véronique

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Veronique Morisset---2016-06-15 11:42:41 AM---CDW members, Following the discussion at the last meeting, and having reviewed your impact paragraph

From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

Please let us know if you have any concerns with this approach.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: August 19, 2016 1:23 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Kristina Taracha
Cc: France Lemieux; Veronique Morisset
Subject: CDW: Canadian Water Network Lead Issues Webinar Invitation

CDW Members:

At the request of the Canadian Water Network (CWN), please find below an invitation to each CDW member regarding a webinar on lead issues on September 28th from 1:00 pm – 3:00 pm EST. The webinar is titled **"Challenges related to the management of lead service lines, partial lead service line replacements, and lead occurrence in the tap water of large buildings in Canada"** and will outline key results from their research project funded by Canadian Water Network and conducted by Drs. Michèle Prévost and Graham Gagnon.

If you are interested, please respond directly to the CWN contact person indicated in the invitation below.

> It should be noted that this webinar is by invitation only for key stakeholders (including CDW and CHE members). The invitation provides for one connection for each CDW member. As there are a limited number of lines available for the webinar, please do not distribute the invitation.
>
> Regards,
>
> Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-08-19 03:48 PM -----

Good morning,

On behalf of Canadian Water Network, Polytechnique Montréal, University of Dalhousie and University of Toronto, we are pleased to invite you to an exclusive upcoming webinar, **"Challenges related to the management of lead service lines, partial lead service line replacements, and lead occurrence in the tap water of large buildings in Canada"** on September 28th from 1:00 pm – 3:00 pm EST.

Our presenters, **Dr. Michèle Prévost** from Polytechnique Montréal, and **Dr. Graham Gagnon** from Dalhousie University, will outline key results from their research project funded by Canadian Water Network, including:

- A survey of the situation in Canada regarding lead service lines (LSLs)
- An assessment of the regulatory sampling protocols and factors that impact lead release at the tap
- An investigation on LSL detection in different type of households
- Long-term monitoring of lead release following partial LSL replacement in distribution systems
- Bench-scale and pilot-scale studies on partial LSL replacements
- An evaluation of lead at the tap in schools and daycares

This invitation is for one web connection into the webinar. As space is limited, if more than one colleague would like to view the webinar, it would need to be set up in one location.

Please RSVP to me at kedwards@cwn-rce.ca by **Friday, September 9th**. I will send out the webinar links closer to the date. Please don't hesitate to contact us with any questions!

Best,
Kaitlin Edwards

ABOUT THE PRESENTERS

Dr. Michèle Prévost
NSERC Industrial Chair on Drinking Water
Professor (Civil Engineering), Polytechnique Montréal

Michèle Prévost, PhD, has more than 25 years of experience in research and technology in water treatment and distribution. She has completed several projects to investigate filtration and disinfection in treatment plants and distribution systems. She was the principal investigator on two Canadian Water Network projects: *Developing a comprehensive strategy to reduce lead at the tap in Canada* (2008-2012), and *Evaluating the impacts of partial lead service line replacements on water quality* (2012-2015).

Dr. Prévost has extensive experience in managing multidisciplinary research projects with numerous partners, including some from overseas. In 1998, she received the George Fuller Award from American Water Works Association (AWWA) for "steady production of research results that are useful to utilities.'' In June 2016, she received the A.P. Black Research Award from AWWA in recognition of her outstanding research contributions to water science and water supply over her career.

Graham Gagnon
NSERC/Halifax Water Industrial Chair
Professor (Civil and Resource Engineering), Dalhousie University

Graham Gagnon, PhD, is the Director for the Centre for Water Resources Studies at Dalhousie University. His professional and research interests focus on the management of water quality and treatment for natural and engineered systems. During his career he has worked on applied water research projects for municipalities in Atlantic Canada, as well as private companies, provincial departments, federal agencies and First Nation communities.

Dr. Gagnon was a co-investigator with Dr. Prévost in two CWN projects: *Developing a comprehensive strategy to reduce lead at the tap in Canada* (2008-2012), and *Evaluating the impacts of partial lead service line replacements on water quality* (2012-2015).

In 2014, Dr. Gagnon received the George Warren Fuller Award from AWWA in recognition of his exceptional contributions in water research.

Kaitlin Edwards, CMP
Events Manager
Canadian Water Network
519.888.4567 ext. 33288 | www.cwn-rce.ca



Mori, Alicia HLTH:EX

From: Donald Reid <donald.reid@gov.ab.ca>
Sent: August 19, 2016 6:42 AM
To: Veronique Morisset; Caroline.Robert@mddelcc.gouv.qc.ca; Angelina.polegato@novascotia.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; kristina.taracha@hc-sc.gc.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; Stephanie.McFadyen@hc-sc.gc.ca; wendy.enright@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; richard.carrier@hc-sc.gc.ca; France.Lemieux@hc-sc.gc.ca
Subject: RE: Another version of the lead document

Good to go with this version
Donald

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Thursday, August 18, 2016 2:33 PM
To: Caroline.Robert@mddelcc.gouv.qc.ca; Angelina.polegato@novascotia.ca; David.Fishwick@gov.bc.ca; Donald Reid; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; kristina.taracha@hc-sc.gc.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; Stephanie.McFadyen@hc-sc.gc.ca; wendy.enright@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; richard.carrier@hc-sc.gc.ca; France.Lemieux@hc-sc.gc.ca
Subject: CDW: Another version of the lead document

CDW Members:

Please find attached another version of the lead document, which incorporates changes to address Caroline's comments. As we have been working with Caroline to address her comments, it should address her issues, but please let us know if you have any concerns with this version. The highlighted changes (in sections 3.1, 3.1.1, 3.1.2, 5.1.2 + addition of corresponding newly published reference) are from this latest round of edits only.

(See attached file: Lead 2016-0818 (for public consultation) ENG.pdf)

As we are still hoping to get the document posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by September 2 at the latest.

We will follow up with you next week with the draft Qs and As for lead that we had committed to doing, so please provide any specific question that you would like us to include.

Thanks.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

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---2016-08-03 02:33:02 PM---Hi Veronique, We reviewed the new version of the document and I have concerns about the way the adde

From: <Caroline.Robert@mddelcc.gouv.qc.ca>
To: <Veronique.Morisset@hc-sc.gc.ca>
Cc: <Angelina.polegato@novascotia.ca>, <David.Fishwick@gov.bc.ca>, <donald.reid@gov.ab.ca>, <France.Lemieux@hc-sc.gc.ca>, <ghsomers@gov.pe.ca>, <hkhan@gov.nl.ca>, <john.cooper@hc-sc.gc.ca>, <Joyce.Mortimer@hc-sc.gc.ca>, <Kevin.Gould@gnb.ca>, <Kim.Philip@gov.mb.ca>, <kristina.taracha@hc-sc.gc.ca>, <michele.giddings@hc-sc.gc.ca>, <MLeBlanc-Havard@GOV.NU.CA>, <pat.brooks@gov.yk.ca>, <Peter_Workman@gov.nt.ca>, <richard.carrier@hc-sc.gc.ca>, <sam.ferris@wsask.ca>, <Satish.Deshpande@ontario.ca>, <Stephanie.McFadyen@hc-sc.gc.ca>, <wendy.enright@hc-sc.gc.ca>
Date: 2016-08-03 02:33 PM
Subject: RE: Updated lead document

Hi Veronique,
We reviewed the new version of the document and I have concerns about the way the added information is presented. In fact, I think it has the side effect of making Quebec's current approach completely irrelevant, which would have a major impact on us.

I would much prefer having in section 3 a more balanced summary of the pros and cons of the various sampling protocols, recognizing that the choice of a sampling protocol must be made in accordance with the objective pursued. Indeed, sections 3.1 et 5.1 recognize that there are various possible objectives : « identifying sources of lead, controlling corrosion, assessing compliance, estimating exposure to lead », which does not seem to be taken into consideration in section 3.1.1 and 5.1.2.

Some other comments :

- **Section 3.1.1** : the recommendation to define zones of 100 000 residents and randomly choose in each 20 residences is not coherent with previous sections of the document recommending to first identify sectors at risk of having lead service lines and monitor them. We are not in favour of keeping this proposed change. Also, no consideration seems to be given to small systems.
- **Section 3.1.2** : there is a high potential for confusion at the section presents contradictory information. At first, it recommends to sample all fountains and taps in every building. Then it indicates to prioritize the ones with lead service lines. And finally, for large buildings other than schools and daycares, it recommends to define the number of samples according to size and population of the building.
  We also got the same question as Kristina : why recommending to sample every tap and fountain every year ? We would consider more relevant that a intensive monitoring takes place once to identify the problems, with a lighter follow-up after.

• **Section 5.1.2** : the section indicates that the objective is to choose a protocol to assess exposure without mentioning why. After, the studies are only presented as to whether or not they are representative to assess exposure, and not for their potential benefits in meeting the chosen objective. Also, the fully flushed protocol is presented as inadequat to establish average concentration and only be giving indications on minimal exposure. In Québec, we chose this protocol as a first step, which then leads to more in-depth investigations with other protocols once a significant concentration is found. We have used this « hybrid » approach for a few years now, and we consider that it proved its usefulness. FYI, there is a paper from l'École Polytechnique de Montreal recently published in Water Research (http://www.sciencedirect.com/science/article/pii/S0043135416302470) showing (in figure 2 and 3) that using 2 ug/l in full flushed samples is similar as using 10 ug/l with other protocols.

Caroline Robert, directrice par intérim
Direction de l'eau potable et des eaux souterraines
Ministère du Développement durable, de l'Environnement,
et de la Lutte contre les changements climatiques
675, René-Lévesque Est, 8e étage, boîte 42
Québec (Québec) G1R 5V7
Tél. 418-521-3885, poste 4938
Fax. 418-644-2003
Courriel: caroline.robert@mddelcc.gouv.qc.ca

De : Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Envoyé : 12 juillet 2016 14:05
À : Angelina.polegato@novascotia.ca; Robert, Caroline <Caroline.Robert@mddelcc.gouv.qc.ca>; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; France Lemieux <France.Lemieux@hc-sc.gc.ca>; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper <john.cooper@hc-sc.gc.ca>; Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha <kristina.taracha@hc-sc.gc.ca>; Michele Giddings <michele.giddings@hc-sc.gc.ca>; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier <richard.carrier@hc-sc.gc.ca>; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen <Stephanie.McFadyen@hc-sc.gc.ca>; Wendy Enright <wendy.enright@hc-sc.gc.ca>
Objet : CDW: Updated lead document

CDW members,

As per my June 15 e-mail, we have now made changes to the lead document to incorporate the random daytime (RDT) sampling protocol as an option for residential sampling. This has also resulted in changes to section 5.1.2, to provide additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.

Here's a quick list of the sections with changes and the nature/reason for each of the changes:
3.1, 3.1.1, 3.1.2 -- Additional of RDT and related changes
5.1.1 -- correction of references; correction of description of MB study, as requested by Kim
5.1.2 -- addition of background information on the RDT protocol
7.1.2.6 -- New section, to provide relevant information complementary to what is in the uranium document
10.2 -- Clarification of description of Healey et al. 2010, to amend wording that could have been misinterpreted, as requested by Satish
12.0 -- Addition of relevant references for above changes

Appendix B -- Incorporation of provincial and territorial anticipated impacts, as provided by members

(See attached file: Lead 2016-0712 compared to Nov 2015.pdf)

We are looking for an indication from members that the revisions are acceptable and do not affect the approval of the document. As we are still expecting the document to be posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by Aug 10 at the latest.

Thanks

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

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Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
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Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: August 22, 2016 1:20 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Kristina Taracha
Cc: Veronique Morisset; France Lemieux
Subject: CDW: Qs and As regarding lead guideline document
Attachments: Lead Q&As 2016-0819.docx

CDW members:

On behalf of Véronique, and as promised, here are a few Qs and As we prepared, in anticipation of the publication of the guideline technical document on lead for public consultation. We are hoping that these will be helpful for jurisdictions to address questions. If members have comments, or questions that they would like to see included, please let us know as soon as possible and we will modify the document accordingly.

(See attached file: Lead Q&As 2016-0819.docx)

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Deshpande, Satish (MOECC) <Satish.Deshpande@ontario.ca>
Sent: August 24, 2016 8:38 AM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: EBR Posting for Drinking Water Quality Standards and other Amendments

Hello David

Here is a consultation we are carrying out in response to potential lead guideline coming out.

I am pleased to inform you of an Environmental Bill of Rights posting with the Registry Number 012-8244 entitled "Updates to Ontario's Drinking Water Quality Standards and other regulations of the Safe Drinking Water Act, 2002, related to: lead in schools and day nurseries; drinking water systems; drinking water testing services; and drinking water operator certification" was posted yesterday for stakeholder/public consultation.

You can access the posting at the following link:

https://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTI5MjUw&statusId=MTk1ODMy&language=en

The posting will be open for comments for **45 days** and is scheduled to close **October 7**.

Please forward this information to others who may be interested in this within your networks.

Mori, Alicia HLTH:EX

From: Kristina Taracha <kristina.taracha@hc-sc.gc.ca>
Sent: August 29, 2016 11:42 AM
To: Veronique Morisset
Cc: Caroline.Robert@mddelcc.gouv.qc.ca; Angelina.polegato@novascotia.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; Stephanie.McFadyen@hc-sc.gc.ca; wendy.enright@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; richard.carrier@hc-sc.gc.ca; France.Lemieux@hc-sc.gc.ca
Subject: Re: CDW: Another version of the lead document

Hi:

I am also fine with this new version.

Thank you,

Kristina

G. Kristina Taracha , P.Eng
Manager Public Health Engineering Unit
Gestionnaire, la section du génie sanitaire
First Nations & Inuit Health Branch | Direction générale
de la santé des Premières nations et des Inuits, EPHD/DSEP

Health Canada / Santé Canada
200 Eglantine Driveway, Tunney's Pasture
Ottawa, Ontario K1A 0K9
Tel.: **NEW TEL. 613-323-6447**
e-mail: kristina.taracha@hc-sc.gc.ca

Veronique Morisset---2016-08-18 04:33:17 PM---CDW Members: Please find attached another version of the lead document, which incorporates changes t

From: Veronique Morisset/HC-SC/GC/CA
To: , Angelina.polegato@novascotia.ca, David.Fishwick@gov.bc.ca, donald.reid@gov.ab.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, kristina.taracha@hc-sc.gc.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca
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[attachment "Lead 2016-0818 (for public consultation) ENG.pdf" deleted by Kristina Taracha/HC-SC/GC/CA]

As we are still hoping to get the document posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by September 2 at the latest.

We will follow up with you next week with the draft Qs and As for lead that we had committed to doing, so please provide any specific question that you would like us to include.

Thanks.

Véronique

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To:
Cc: , , ,

We also got the same question as Kristina : why recommending to sample every tap and fountain every year ? We would consider more relevant that a intensive monitoring takes place once to identify the problems, with a lighter follow-up after.

- **Section 5.1.2** : the section indicates that the objective is to choose a protocol to assess exposure without mentioning why. After, the studies are only presented as to whether or not they are representative to assess exposure, and not for their potential benefits in meeting the chosen objective.

Also, the fully flushed protocol is presented as inadequat to establish average concentration and only be giving indications on minimal exposure. In Québec, we chose this protocol as a first step, which then leads to more in-depth investigations with other protocols once a significant concentration is found. We have used this « hybrid » approach for a few years now, and we consider that it proved its usefulness. FYI, there is a paper from l'École Polytechnique de Montreal recently published in Water Research (http://www.sciencedirect.com/science/article/pii/S0043135416302470) showing (in figure 2 and 3) that using 2 ug/l in full flushed samples is similar as using 10 ug/l with other protocols.

Caroline Robert, directrice par intérim
Direction de l'eau potable et des eaux souterraines
Ministère du Développement durable, de l'Environnement,
et de la Lutte contre les changements climatiques
675, René-Lévesque Est, 8e étage, boîte 42
Québec (Québec) G1R 5V7
Tél. 418-521-3885, poste 4938
Fax. 418-644-2003
Courriel: caroline.robert@mddelcc.gouv.qc.ca

De : Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Envoyé : 12 juillet 2016 14:05
À : Angelina.polegato@novascotia.ca; Robert, Caroline ; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; France Lemieux ; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper ; Joyce Mortimer ; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha ; Michele Giddings ; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier ; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen ; Wendy Enright
Objet : CDW: Updated lead document

CDW members,

As per my June 15 e-mail, we have now made changes to the lead document to incorporate the random daytime (RDT) sampling protocol as an option for residential sampling. This has also resulted in changes to section 5.1.2, to provide additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.

Here's a quick list of the sections with changes and the nature/reason for each of the changes:
3.1, 3.1.1, 3.1.2 -- Additional of RDT and related changes
5.1.1 -- correction of references; correction of description of MB study, as requested by Kim
5.1.2 -- addition of background information on the RDT protocol
7.1.2.6 -- New section, to provide relevant information complementary to what is in the uranium document
10.2 -- Clarification of description of Healey et al. 2010, to amend wording that could have been misinterpreted, as requested by Satish
12.0 -- Addition of relevant references for above changes
Appendix B -- Incorporation of provincial and territorial anticipated impacts, as provided by members

(See attached file: Lead 2016-0712 compared to Nov 2015.pdf)

We are looking for an indication from members that the revisions are acceptable and do not affect the approval of the document. As we are still expecting the document to be posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by Aug 10 at the latest.

Thanks

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Veronique Morisset---2016-06-15 11:42:41 AM---CDW members, Following the discussion at the last meeting, and having reviewed your impact paragraph

From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

Please let us know if you have any concerns with this approach.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

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Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: September 1, 2016 11:28 AM
To: 'Sylvia Struck'
Subject: RE: Lead Health File

Hi Sylvia – I have not seen any updates of this from Healthlink BC since the email below.

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Thursday, September 1, 2016 10:21 AM
To: Fishwick, David HLTH:EX
Subject: RE: Lead Health File

Hi Dave,

Can you forward the final draft of the lead healthfile. I don't believe I have seen it.

Thank you,
Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, July 28, 2016 10:06 AM
To: Sylvia Struck <Sylvia.Struck@fnha.ca>; Om Prakash, Manish HLTH:EX <Manish.OmPrakash@gov.bc.ca>
Subject: RE: Lead Health File

Hi Sylvia:

I've attached the draft that we will send forward to HealthLinkBC for consideration. They have a further process for consultation with other stakeholders, and then they generally have a plain language technical writer re-write them to a grade 9 reading level, so it is not critical to get too hung up on the wording of the draft we put forward – we just need to make sure we are providing them with the most important key messages, as well as information that is correct to the best of our knowledge, and doesn't run contrary to our positions on issues.

The question of whether FNHA should be added as a contact to the health file was suggested by other DWLC members for this one. On further thought, whether FNHA contact info is on all or any health files is a bigger question for HealthLinkBC - the people responsible for administering the health files so they can consider the bigger picture. I will raise this issue with them.

BTW – have you been receiving DWLC announcements? (you should have had a couple yesterday)

Dave.

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Wednesday, July 27, 2016 5:40 PM
To: Om Prakash, Manish HLTH:EX

Cc: Fishwick, David HLTH:EX
Subject: RE: Lead Health File

Hi Om,

May I ask you or Dave to send the final draft of the lead health file? FNHA can be added as a health authority to files as they are updated as long we have an opportunity to review prior.

The contact information for the file:

First Nations Health Authority (604) 693 6500 Toll free: 1 866 913 0033

Please feel free to contact me if you have any other questions.

Regards,
Sylvia

Sylvia Struck, Ph.D.
Manager, Drinking Water Safety Program
First Nations Health Authority
#404 - 1138 Melville Street
Vancouver, BC V6E 4S3
Tel. (604) 693-6960
Sylvia.Struck@FNHA.ca

First Nations Health Authority
Health through wellness

From: Om Prakash, Manish HLTH:EX [mailto:Manish.OmPrakash@gov.bc.ca]
Sent: Wednesday, July 27, 2016 10:06 AM
To: Sylvia Struck <Sylvia.Struck@fnha.ca>
Cc: Fishwick, David HLTH:EX <David.Fishwick@gov.bc.ca>
Subject: RE: Lead Health File

Hi Sylvia:
As per our discussion this morning, here is my email.
Thanks,
Manish

_____

Manish Om Prakash
Senior Policy Analyst | Health Protection Branch
B.C. Ministry of Health

250-952-1116
Manish.OmPrakash@gov.bc.ca

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: September 2, 2016 9:11 AM
To: hkhan@gov.nl.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Angelina.Polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Satish.Deshpande@ontario.ca; sam.ferris@wsask.ca; Fishwick, David HLTH:EX; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; MLeBlanc-Havard@GOV.NU.CA
Subject: Reminder: CDW feedback requested - Qs and As regarding lead guideline document
Attachments: Lead Q&As 2016-0819.docx

CDW folks;

This is just a gentle reminder to let us know if you have any comments (or questions you would like to see included) regarding the lead Qs and As we prepared, below.

If you could provide any feedback by September 9, that would be greatly appreciated. As always, a nil response is helpful to receive too.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-09-02 12:01 PM -----

From: Joyce Mortimer/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: Veronique Morisset/HC-SC/GC/CA@HWC, France Lemieux/HC-SC/GC/CA@HWC
Date: 2016-08-22 04:19 PM
Subject: CDW: Qs and As regarding lead guideline document

CDW members:

On behalf of Véronique, and as promised, here are a few Qs and As we prepared, in anticipation of the publication of the guideline technical document on lead for public consultation. We are hoping that these will be helpful for jurisdictions to address questions. If members have comments, or questions that they would like to see included, please let us know as soon as possible and we will modify the document accordingly.

(See attached file: Lead Q&As 2016-0819.docx)

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: September 7, 2016 12:40 PM
To: 'Joyce Mortimer'; 'hkhan@gov.nl.ca'; 'ghsomers@gov.pe.ca'; 'Kevin.Gould@gnb.ca'; 'Angelina.Polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'Satish.Deshpande@ontario.ca'; 'sam.ferris@wsask.ca'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'MLeBlanc-Havard@GOV.NU.CA'
Subject: RE: Reminder: CDW feedback requested - Qs and As regarding lead guideline document

Hi Joyce:
I think a Q&A explaining the difference between a first flush result (likely the works case scenario) and typical exposure is important to have included.

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Friday, September 2, 2016 9:11 AM
To: hkhan@gov.nl.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Angelina.Polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Satish.Deshpande@ontario.ca; sam.ferris@wsask.ca; Fishwick, David HLTH:EX; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; MLeBlanc-Havard@GOV.NU.CA
Subject: Reminder: CDW feedback requested - Qs and As regarding lead guideline document

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If you could provide any feedback by September 9, that would be greatly appreciated. As always, a nil response is helpful to receive too.

Regards,
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Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-09-02 12:01 PM -----

From: Joyce Mortimer/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: Veronique Morisset/HC-SC/GC/CA@HWC, France Lemieux/HC-SC/GC/CA@HWC
Date: 2016-08-22 04:19 PM
Subject: CDW: Qs and As regarding lead guideline document

CDW members:

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(See attached file: Lead Q&As 2016-0819.docx)

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
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Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: September 12, 2016 12:37 PM
To: 'Veronique Morisset'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'Angelina.polegato@novascotia.ca'; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'kristina.taracha@hc-sc.gc.ca'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'
Cc: 'john.cooper@hc-sc.gc.ca'; 'Joyce.Mortimer@hc-sc.gc.ca'; 'Stephanie.McFadyen@hc-sc.gc.ca'; 'wendy.enright@hc-sc.gc.ca'; 'michele.giddings@hc-sc.gc.ca'; 'richard.carrier@hc-sc.gc.ca'; 'France.Lemieux@hc-sc.gc.ca'
Subject: RE: Another version of the lead document

Hi Folks:

Sorry to take so long to respond and drag this out further. As I have seen much confusion among stakeholders over which document or protocol to use for monitoring, I would suggest the following change to the first paragraph of 3.1 to make it crystal clear with something similar to the following: (now that I have said that I hope it makes sense)

3.1 Monitoring
Sampling protocols will differ, depending on the desired objective (i.e., identifying sources of lead, controlling corrosion, assessing compliance, estimating exposure to lead). As monitoring of lead at the tap can be done using different sampling protocols, it is important that the selected protocol be appropriate to meet the desired objective.

The objective of sampling protocols in this document is to monitor for typical community exposure to total lead to determine whether there are concerns about human health effects. Compliance monitoring should be conducted at the consumer's tap, with priority given to identifying homes with lead service lines, as these are likely to have the highest lead concentrations.

If the objective is to characterize whether water distributed by a water supply system is corrosive to the materials found throughout the distribution system and in household plumbing, the *Guidance on Controlling Corrosion in Drinking Water Distribution Systems* should be used instead.

I would also suggest that the title for 3.1.1. be tweaked to clarify the purpose. I think this is important to clarify because we are likely to see considerable variation between dwellings, and the results of this type of monitoring program will not provide certainty that any given home will not have high lead. Section 5.1.2 goes into this, however I think it should be clear here as well. Perhaps something like:

3.1.1 Monitoring to estimate typical exposure for a population by sampling at residential dwellings.

Thanks:
Dave

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Thursday, August 18, 2016 1:33 PM
To: Caroline.Robert@mddelcc.gouv.qc.ca; Angelina.polegato@novascotia.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca;

kristina.taracha@hc-sc.gc.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; Stephanie.McFadyen@hc-sc.gc.ca; wendy.enright@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; richard.carrier@hc-sc.gc.ca; France.Lemieux@hc-sc.gc.ca
Subject: CDW: Another version of the lead document

CDW Members:

Please find attached another version of the lead document, which incorporates changes to address Caroline's comments. As we have been working with Caroline to address her comments, it should address her issues, but please let us know if you have any concerns with this version. The highlighted changes (in sections 3.1, 3.1.1, 3.1.2, 5.1.2 + addition of corresponding newly published reference) are from this latest round of edits only.

(See attached file: Lead 2016-0818 (for public consultation) ENG.pdf)

As we are still hoping to get the document posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by September 2 at the latest.

We will follow up with you next week with the draft Qs and As for lead that we had committed to doing, so please provide any specific question that you would like us to include.

Thanks.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

---2016-08-03 02:33:02 PM---Hi Veronique, We reviewed the new version of the document and I have concerns about the way the adde

From: <Caroline.Robert@mddelcc.gouv.qc.ca>
To: <Veronique.Morisset@hc-sc.gc.ca>
Cc: <Angelina.polegato@novascotia.ca>, <David.Fishwick@gov.bc.ca>, <donald.reid@gov.ab.ca>, <France.Lemieux@hc-sc.gc.ca>, <ghsomers@gov.pe.ca>, <hkhan@gov.nl.ca>, <john.cooper@hc-sc.gc.ca>, <Joyce.Mortimer@hc-sc.gc.ca>, <Kevin.Gould@gnb.ca>, <Kim.Philip@gov.mb.ca>, <kristina.taracha@hc-sc.gc.ca>, <michele.giddings@hc-sc.gc.ca>, <MLeBlanc-Havard@GOV.NU.CA>, <pat.brooks@gov.yk.ca>, <Peter_Workman@gov.nt.ca>, <richard.carrier@hc-sc.gc.ca>, <sam.ferris@wsask.ca>, <Satish.Deshpande@ontario.ca>, <Stephanie.McFadyen@hc-sc.gc.ca>, <wendy.enright@hc-sc.gc.ca>
Date: 2016-08-03 02:33 PM
Subject: RE: Updated lead document

Hi Veronique,
We reviewed the new version of the document and I have concerns about the way the added information is presented. In fact, I think it has the side effect of making Quebec's current approach completely irrelevant, which would have a major impact on us.

I would much prefer having in section 3 a more balanced summary of the pros and cons of the various sampling protocols, recognizing that the choice of a sampling protocol must be made in accordance with the objective pursued. Indeed, sections 3.1 et

5.1 recognize that there are various possible objectives : « identifying sources of lead, controlling corrosion, assessing compliance, estimating exposure to lead », which does not seem to be taken into consideration in section 3.1.1 and 5.1.2.

Some other comments :

- **Section 3.1.1** : the recommendation to define zones of 100 000 residents and randomly choose in each 20 residences is not coherent with previous sections of the document recommending to first identify sectors at risk of having lead service lines and monitor them. We are not in favour of keeping this proposed change. Also, no consideration seems to be given to small systems.
- **Section 3.1.2** : there is a high potential for confusion at the section presents contradictory information. At first, it recommends to sample all fountains and taps in every building. Then it indicates to prioritize the ones with lead service lines. And finally, for large buildings other than schools and daycares, it recommends to define the number of samples according to size and population of the building.
  We also got the same question as Kristina : why recommending to sample every tap and fountain every year ? We would consider more relevant that a intensive monitoring takes place once to identify the problems, with a lighter follow-up after.
- **Section 5.1.2** : the section indicates that the objective is to choose a protocol to assess exposure without mentioning why. After, the studies are only presented as to whether or not they are representative to assess exposure, and not for their potential benefits in meeting the chosen objective.
  Also, the fully flushed protocol is presented as inadequat to establish average concentration and only be giving indications on minimal exposure. In Québec, we chose this protocol as a first step, which then leads to more in-depth investigations with other protocols once a significant concentration is found. We have used this « hybrid » approach for a few years now, and we consider that it proved its usefulness. FYI, there is a paper from l'École Polytechnique de Montreal recently published in Water Research (http://www.sciencedirect.com/science/article/pii/S0043135416302470) showing (in figure 2 and 3) that using 2 ug/l in full flushed samples is similar as using 10 ug/l with other protocols.

Caroline Robert, directrice par intérim
Direction de l'eau potable et des eaux souterraines
Ministère du Développement durable, de l'Environnement,
et de la Lutte contre les changements climatiques
675, René-Lévesque Est, 8e étage, boîte 42
Québec (Québec) G1R 5V7
Tél. 418-521-3885, poste 4938
Fax. 418-644-2003
Courriel: caroline.robert@mddelcc.gouv.qc.ca

De : Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Envoyé : 12 juillet 2016 14:05
À : Angelina.polegato@novascotia.ca; Robert, Caroline <Caroline.Robert@mddelcc.gouv.qc.ca>; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; France Lemieux <France.Lemieux@hc-sc.gc.ca>; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper <john.cooper@hc-sc.gc.ca>; Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha <kristina.taracha@hc-sc.gc.ca>; Michele Giddings <michele.giddings@hc-sc.gc.ca>; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier <richard.carrier@hc-sc.gc.ca>; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen <Stephanie.McFadyen@hc-sc.gc.ca>; Wendy Enright <wendy.enright@hc-sc.gc.ca>
Objet : CDW: Updated lead document

CDW members,

As per my June 15 e-mail, we have now made changes to the lead document to incorporate the random daytime (RDT) sampling protocol as an option for residential sampling. This has also resulted in changes to section 5.1.2, to provide additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.

Here's a quick list of the sections with changes and the nature/reason for each of the changes:
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5.1.1 -- correction of references; correction of description of MB study, as requested by Kim

5.1.2 -- addition of background information on the RDT protocol
7.1.2.6 -- New section, to provide relevant information complementary to what is in the uranium document
10.2 -- Clarification of description of Healey et al. 2010, to amend wording that could have been misinterpreted, as requested by Satish
12.0 -- Addition of relevant references for above changes
Appendix B -- Incorporation of provincial and territorial anticipated impacts, as provided by members

(See attached file: Lead 2016-0712 compared to Nov 2015.pdf)

We are looking for an indication from members that the revisions are acceptable and do not affect the approval of the document. As we are still expecting the document to be posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by Aug 10 at the latest.

Thanks

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
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veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Veronique Morisset---2016-06-15 11:42:41 AM---CDW members, Following the discussion at the last meeting, and having reviewed your impact paragraph

From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

Please let us know if you have any concerns with this approach.

Véronique

Véronique Morisset
Manager, Water Quality Program Division

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Mori, Alicia HLTH:EX

From: LeBlanc-Havard, Michele <MLeBlanc-Havard@GOV.NU.CA>
Sent: September 12, 2016 11:40 AM
To: 'Joyce Mortimer'; hkhan@gov.nl.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Angelina.Polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Satish.Deshpande@ontario.ca; sam.ferris@wsask.ca; Fishwick, David HLTH:EX; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca
Subject: RE: Reminder: CDW feedback requested - Qs and As regarding lead guideline document

Nothing on this end from Nunavut
M

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: September 2, 2016 12:11 PM
To: hkhan@gov.nl.ca; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Angelina.Polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Satish.Deshpande@ontario.ca; sam.ferris@wsask.ca; David.Fishwick@gov.bc.ca; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; LeBlanc-Havard, Michele
Subject: Reminder: CDW feedback requested - Qs and As regarding lead guideline document

CDW folks;

This is just a gentle reminder to let us know if you have any comments (or questions you would like to see included) regarding the lead Qs and As we prepared, below.

If you could provide any feedback by September 9, that would be greatly appreciated. As always, a nil response is helpful to receive too.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-09-02 12:01 PM -----

From: Joyce Mortimer/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca,

Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: Veronique Morisset/HC-SC/GC/CA@HWC, France Lemieux/HC-SC/GC/CA@HWC
Date: 2016-08-22 04:19 PM
Subject: CDW: Qs and As regarding lead guideline document

CDW members:

On behalf of Véronique, and as promised, here are a few Qs and As we prepared, in anticipation of the publication of the guideline technical document on lead for public consultation. We are hoping that these will be helpful for jurisdictions to address questions. If members have comments, or questions that they would like to see included, please let us know as soon as possible and we will modify the document accordingly.

(See attached file: Lead Q&As 2016-0819.docx)

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: September 13, 2016 4:46 PM
To: 'Kristina Taracha'
Cc: 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'France.Lemieux@hc-sc.gc.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'john.cooper@hc-sc.gc.ca'; 'Joyce.Mortimer@hc-sc.gc.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'michele.giddings@hc-sc.gc.ca'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'richard.carrier@hc-sc.gc.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'Stephanie.McFadyen@hc-sc.gc.ca'; 'Veronique Morisset'; 'wendy.enright@hc-sc.gc.ca'
Subject: RE: Another version of the lead document

Thanks Kristina:

I think you are getting at exactly what I was getting at – unless I have misread it, the description in the text below appears to me to be about collecting multiple samples to evaluate risk in the community, not about evaluating the risk in a single dwelling. The solution could be to change the title, or add a bit of discussion on how to apply this to a single dwelling.

Dave

From: Kristina Taracha [mailto:kristina.taracha@hc-sc.gc.ca]
Sent: Tuesday, September 13, 2016 10:09 AM
To: Fishwick, David HLTH:EX
Cc: 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'France.Lemieux@hc-sc.gc.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'john.cooper@hc-sc.gc.ca'; 'Joyce.Mortimer@hc-sc.gc.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'michele.giddings@hc-sc.gc.ca'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'richard.carrier@hc-sc.gc.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'Stephanie.McFadyen@hc-sc.gc.ca'; 'Veronique Morisset'; 'wendy.enright@hc-sc.gc.ca'
Subject: RE: Another version of the lead document

Dear Colleagues;

I agree with all Dave's suggestions except a suggestion to change the tile of section 3.1.1 to read as:" Monitoring to estimate typical exposure for a population by sampling at residential dwellings." I think that this new title could be misleading. For instance, if we take some samples from few old houses, and the level of lead exceeds the MAC. We cannot interpret the results as a representative for the entire population. The plumbing fixtures or lead pipes may be present in old houses, but they likely be no-existent in the new housing development. I think that the current title is more general and should be kept unchanged. Maybe I am misinterpreting Dave's suggestion?? Anyhow, these are my few cents...:)

Wish you all the best!

Kristina

G. Kristina Taracha , P.Eng
Manager Public Health Engineering Unit
Gestionnaire, la section du génie sanitaire
First Nations & Inuit Health Branch | Direction générale
de la santé des Premières nations et des Inuits, EPHD/DSEP

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e-mail: kristina.taracha@hc-sc.gc.ca

"Fishwick, David HLTH:EX" ---2016-09-12 03:37:42 PM---Hi Folks: Sorry to take so long to respond and drag this out further. As I have seen much confusion

From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
To: '"Veronique Morisset"' <Veronique.Morisset@hc-sc.gc.ca>, '"Caroline.Robert@mddelcc.gouv.qc.ca"' <Caroline.Robert@mddelcc.gouv.qc.ca>, '"Angelina.polegato@novascotia.ca"' <Angelina.polegato@novascotia.ca>, '"donald.reid@gov.ab.ca"' <donald.reid@gov.ab.ca>, '"ghsomers@gov.pe.ca"' <ghsomers@gov.pe.ca>, '"hkhan@gov.nl.ca"' <hkhan@gov.nl.ca>, '"Kevin.Gould@gnb.ca"' <Kevin.Gould@gnb.ca>, '"Kim.Philip@gov.mb.ca"' <Kim.Philip@gov.mb.ca>, '"kristina.taracha@hc-sc.gc.ca"' <kristina.taracha@hc-sc.gc.ca>, '"MLeBlanc-Havard@GOV.NU.CA"' <MLeBlanc-Havard@GOV.NU.CA>, '"pat.brooks@gov.yk.ca"' <pat.brooks@gov.yk.ca>, '"Peter_Workman@gov.nt.ca"' <Peter_Workman@gov.nt.ca>, '"sam.ferris@wsask.ca"' <sam.ferris@wsask.ca>, '"Satish.Deshpande@ontario.ca"' <Satish.Deshpande@ontario.ca>
Cc: '"john.cooper@hc-sc.gc.ca"' <john.cooper@hc-sc.gc.ca>, '"Joyce.Mortimer@hc-sc.gc.ca"' <Joyce.Mortimer@hc-sc.gc.ca>, '"Stephanie.McFadyen@hc-sc.gc.ca"' <Stephanie.McFadyen@hc-sc.gc.ca>, '"wendy.enright@hc-sc.gc.ca"' <wendy.enright@hc-sc.gc.ca>, '"michele.giddings@hc-sc.gc.ca"' <michele.giddings@hc-sc.gc.ca>, '"richard.carrier@hc-sc.gc.ca"' <richard.carrier@hc-sc.gc.ca>, '"France.Lemieux@hc-sc.gc.ca"' <France.Lemieux@hc-sc.gc.ca>
Date: 2016-09-12 03:37 PM
Subject: RE: Another version of the lead document

Hi Folks:

Sorry to take so long to respond and drag this out further. As I have seen much confusion among stakeholders over which document or protocol to use for monitoring, I would suggest the following change to the first paragraph of 3.1 to make it crystal clear with something similar to the following: (now that I have said that I hope it makes sense)

3.1 Monitoring

Sampling protocols will differ, depending on the desired objective (i.e., identifying sources of lead, controlling corrosion, assessing compliance, estimating exposure to lead). As monitoring of lead at the tap can be done using different sampling protocols, it is important that the selected protocol be appropriate to meet the desired objective.

The objective of sampling protocols in this document is to monitor for typical community exposure to total lead to determine whether there are concerns about human health effects. Compliance monitoring should be conducted at the consumer's tap, with priority given to identifying homes with lead service lines, as these are likely to have the highest lead concentrations.

If the objective is to characterize whether water distributed by a water supply system is corrosive to the materials found throughout the distribution system and in household plumbing, the *Guidance on Controlling*

Corrosion in Drinking Water Distribution Systems should be used instead.

I would also suggest that the title for 3.1.1. be tweaked to clarify the purpose. I think this is important to clarify because we are likely to see considerable variation between dwellings, and the results of this type of monitoring program will not provide certainty that any given home will not have high lead. Section 5.1.2 goes into this, however I think it should be clear here as well. Perhaps something like:

3.1.1 Monitoring to estimate typical exposure for a population by sampling at residential dwellings.

Thanks:
Dave

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Thursday, August 18, 2016 1:33 PM
To: Caroline.Robert@mddelcc.gouv.qc.ca; Angelina.polegato@novascotia.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; kristina.taracha@hc-sc.gc.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; Stephanie.McFadyen@hc-sc.gc.ca; wendy.enright@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; richard.carrier@hc-sc.gc.ca; France.Lemieux@hc-sc.gc.ca
Subject: CDW: Another version of the lead document

CDW Members:

Please find attached another version of the lead document, which incorporates changes to address Caroline's comments. As we have been working with Caroline to address her comments, it should address her issues, but please let us know if you have any concerns with this version. The highlighted changes (in sections 3.1, 3.1.1, 3.1.2, 5.1.2 + addition of corresponding newly published reference) are from this latest round of edits only.

(See attached file: Lead 2016-0818 (for public consultation) ENG.pdf)

As we are still hoping to get the document posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by September 2 at the latest.

We will follow up with you next week with the draft Qs and As for lead that we had committed to doing, so please provide any specific question that you would like us to include.

Thanks.

Véronique

Véronique Morisset
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Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
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veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

---2016-08-03 02:33:02 PM---Hi Veronique, We reviewed the new version of the document and I have concerns about the way the adde

From: <Caroline.Robert@mddelcc.gouv.qc.ca>
To: <Veronique.Morisset@hc-sc.gc.ca>

Cc: <Angelina.polegato@novascotia.ca>, <David.Fishwick@gov.bc.ca>, <donald.reid@gov.ab.ca>, <France.Lemieux@hc-sc.gc.ca>, <ghsomers@gov.pe.ca>, <hkhan@gov.nl.ca>, <john.cooper@hc-sc.gc.ca>, <Joyce.Mortimer@hc-sc.gc.ca>, <Kevin.Gould@gnb.ca>, <Kim.Philip@gov.mb.ca>, <kristina.taracha@hc-sc.gc.ca>, <michele.giddings@hc-sc.gc.ca>, <MLeBlanc-Havard@GOV.NU.CA>, <pat.brooks@gov.yk.ca>, <Peter_Workman@gov.nt.ca>, <richard.carrier@hc-sc.gc.ca>, <sam.ferris@wsask.ca>, <Satish.Deshpande@ontario.ca>, <Stephanie.McFadyen@hc-sc.gc.ca>, <wendy.enright@hc-sc.gc.ca>
Date: 2016-08-03 02:33 PM
Subject: RE: Updated lead document

Hi Veronique,
We reviewed the new version of the document and I have concerns about the way the added information is presented. In fact, I think it has the side effect of making Quebec's current approach completely irrelevant, which would have a major impact on us.

I would much prefer having in section 3 a more balanced summary of the pros and cons of the various sampling protocols, recognizing that the choice of a sampling protocol must be made in accordance with the objective pursued. Indeed, sections 3.1 et 5.1 recognize that there are various possible objectives : « identifying sources of lead, controlling corrosion, assessing compliance, estimating exposure to lead », which does not seem to be taken into consideration in section 3.1.1 and 5.1.2.

Some other comments :

- **Section 3.1.1** : the recommendation to define zones of 100 000 residents and randomly choose in each 20 residences is not coherent with previous sections of the document recommending to first identify sectors at risk of having lead service lines and monitor them. We are not in favour of keeping this proposed change. Also, no consideration seems to be given to small systems.
- **Section 3.1.2** : there is a high potential for confusion at the section presents contradictory information. At first, it recommends to sample all fountains and taps in every building. Then it indicates to prioritize the ones with lead service lines. And finally, for large buildings other than schools and daycares, it recommends to define the number of samples according to size and population of the building.
  We also got the same question as Kristina : why recommending to sample every tap and fountain every year ? We would consider more relevant that a intensive monitoring takes place once to identify the problems, with a lighter follow-up after.
- **Section 5.1.2** : the section indicates that the objective is to choose a protocol to assess exposure without mentioning why. After, the studies are only presented as to whether or not they are representative to assess exposure, and not for their potential benefits in meeting the chosen objective.
  Also, the fully flushed protocol is presented as inadequat to establish average concentration and only be giving indications on minimal exposure. In Québec, we chose this protocol as a first step, which then leads to more in-depth investigations with other protocols once a significant concentration is found. We have used this « hybrid » approach for a few years now, and we consider that it proved its usefulness. FYI, there is a paper from l'École Polytechnique de Montreal recently published in Water Research (http://www.sciencedirect.com/science/article/pii/S0043135416302470) showing (in figure 2 and 3) that using 2 ug/l in full flushed samples is similar as using 10 ug/l with other protocols.

Caroline Robert, directrice par intérim
Direction de l'eau potable et des eaux souterraines
Ministère du Développement durable, de l'Environnement,
et de la Lutte contre les changements climatiques
675, René-Lévesque Est, 8e étage, boîte 42
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Courriel: caroline.robert@mddelcc.gouv.qc.ca

De : Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Envoyé : 12 juillet 2016 14:05
À : Angelina.polegato@novascotia.ca; Robert, Caroline <Caroline.Robert@mddelcc.gouv.qc.ca>; David.Fishwick@gov.bc.ca;

donald.reid@gov.ab.ca; France Lemieux <France.Lemieux@hc-sc.gc.ca>; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; John Cooper <john.cooper@hc-sc.gc.ca>; Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; Kristina Taracha <kristina.taracha@hc-sc.gc.ca>; Michele Giddings <michele.giddings@hc-sc.gc.ca>; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Richard Carrier <richard.carrier@hc-sc.gc.ca>; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Stephanie McFadyen <Stephanie.McFadyen@hc-sc.gc.ca>; Wendy Enright <wendy.enright@hc-sc.gc.ca>
Objet : CDW: Updated lead document

CDW members,

As per my June 15 e-mail, we have now made changes to the lead document to incorporate the random daytime (RDT) sampling protocol as an option for residential sampling. This has also resulted in changes to section 5.1.2, to provide additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.

Here's a quick list of the sections with changes and the nature/reason for each of the changes:
3.1, 3.1.1, 3.1.2 -- Additional of RDT and related changes
5.1.1 -- correction of references; correction of description of MB study, as requested by Kim
5.1.2 -- addition of background information on the RDT protocol
7.1.2.6 -- New section, to provide relevant information complementary to what is in the uranium document
10.2 -- Clarification of description of Healey et al. 2010, to amend wording that could have been misinterpreted, as requested by Satish
12.0 -- Addition of relevant references for above changes
Appendix B -- Incorporation of provincial and territorial anticipated impacts, as provided by members

(See attached file: Lead 2016-0712 compared to Nov 2015.pdf)

We are looking for an indication from members that the revisions are acceptable and do not affect the approval of the document. As we are still expecting the document to be posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by Aug 10 at the latest.

Thanks

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
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veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Veronique Morisset---2016-06-15 11:42:41 AM---CDW members, Following the discussion at the last meeting, and having reviewed your impact paragraph

From: Veronique Morisset/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
Date: 2016-06-15 11:42 AM
Subject: CDW: Update on lead document

CDW members,

Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.

Please let us know if you have any concerns with this approach.

Véronique

Véronique Morisset
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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: September 21, 2016 4:32 PM
To: [IHA] Byron, Dan; [NHA] Belanger, Darrell; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Subject: VCH lead resources
Attachments: VCH Advice re Lead in Drinking Water - School Final_APR272016.pdf; VCH School Flushing Program Development Guide_JUN172016.pdf; VCH Advice re Lead in Drinking Water - Day Care Final _APR272016.pdf; VCH Advice re Lead in Drinking Water - Public Final_APR272016.pdf

Hi folks,
Sorry if I have sent this before (but better twice than not at all) – as we discussed today here are the public materials we have developed thus far for distribution within VCH.

Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

Mori, Alicia HLTH:EX

From: Magee, Lynne <Lynne.Magee@viha.ca>
Sent: September 22, 2016 9:10 AM
To: 'Zubel, Marc'; Clarkson, Len [STS]; Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX; Norlin, J Ivor; Struck, Sylvia; Wheeler, Angela
Subject: RE: Lead - Fraser Health

http://www.elkay.com/bottle-filling-stations

This company has fountains/bottle filling stations that meet NSF 53 for lead removal.

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Wednesday, September 21, 2016 10:47 AM
To: Clarkson, Len [STS]; Edwards, Joanne; Fishwick, Dave; Magee, Lynne; Norlin, J Ivor; Struck, Sylvia; Wheeler, Angela; Zubel, Marc
Subject: FW: Lead - Fraser Health

Hi all: FYI… this is what I was referring to at our call today.
Any thoughts?
Marc

From: Dean Zanutig [mailto:Dean.Zanutig@gov.ab.ca]
Sent: Thursday, September 08, 2016 3:21 PM
To: Zubel, Marc
Subject: RE: Lead - Fraser Health

Thanks Marc,

As promised. The word “chart” is all the models and reasons listed in the “notice for comments”. Just a simple way to look at it. The EPA released the “EPA (1990) Drinking Water Coolers List” after the notice for comment with significantly less fountain models on it.

Thanks,

Dean

Dean Zanutig
Policy Analyst
Health Protection
Public Health and Compliance
Alberta Health
780.638.4329

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Thursday, September 08, 2016 4:14 PM
To: Dean Zanutig
Subject: Lead - Fraser Health

Hi Dean: good to talk to you this afternoon.
Attached, FYI, are recent BC Ministry of Education's letter sent out to BC school districts, and letter from the Provincial Health Officer.
Contact information for Vancouver Coastal Health:
Len Clarkson
(604) 815-6841
Len.clarkson@vch.ca
This email and any files transmitted with it are confidential and intended solely for the use of the individual or entity to whom they are addressed. If you have received this email in error please notify the system manager. This message contains confidential information and is intended only for the individual named. If you are not the named addressee you should not disseminate, distribute or copy this e-mail.

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: October 6, 2016 10:02 AM
To: Fishwick, David HLTH:EX
Subject: Lead letter to daycares - NH
Attachments: L_Daycares_Feb-2016.3.pdf

FYI, share with DWLC if interested.
DRT.

Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: October 7, 2016 12:04 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: WQHB@hc-sc.gc.ca; Anca-Maria Tugulea; Jing Chen; Kristina Taracha; philippa.cureton@canada.ca; rocio.aranda-rodriguez@hc-sc.gc.ca; Baki Sadi; Tina Brennan
Subject: CDW agenda package for October meeting - Copper document (Item 4-E) for your review
Attachments: Copper 2016-1007 (For CDW approval for consultation).pdf

CDW members and liaison members;

Please find attached the copper document (agenda item 4-E) for insertion into your agenda package for the October 19-20 CDW meeting.

(See attached file: Copper 2016-1007 (For CDW approval for consultation).pdf)

Wishing you all a great Thanksgiving.

Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: October 7, 2016 1:05 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Anca-Maria Tugulea; Jing Chen; Kristina Taracha; philippa.cureton@canada.ca; rocio.aranda-rodriguez@hc-sc.gc.ca; Anne Vezina; France Lemieux; John Cooper; Joyce Mortimer; Michele Giddings; Richard Carrier; Stephanie McFadyen; Tina Brennan; Veronique Morisset; Wendy Enright
Subject: CDW: Advance copy of Lead Water Talk
Attachments: Water Talk on lead 2016 - fra.pdf; Water Talk on lead 2016 - eng.pdf

CDW folks:

Please find attached an advance copy of the Lead Water Talk. Please restrict distribution until it is publically available on Health Canada's web site. We expect it to be posted in a few weeks.

(See attached file: Water Talk on lead 2016 - fra.pdf)(See attached file: Water Talk on lead 2016 - eng.pdf)

Thanks!
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Gould, Kevin (DH/MS) <Kevin.Gould@gnb.ca>
Sent: October 7, 2016 10:07 AM
To: 'Veronique Morisset'; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca
Subject: RE: Quick question to CDW members

NB has not informed municipalities of a possible reduction. It has been discussed internally as well as with our colleagues at Environment and Local Government, the agency responsible for regulating drinking water systems.
It is likely to have a significant impact in NB, but this will need to be confirmed once all details pertaining to monitoring and compliance are adopted and an implementation plan has been determined and feedback received.
Kevin

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: October-07-16 1:56 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Gould, Kevin (DH/MS); Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca
Subject: Quick question to CDW members

Members,

As a follow-up to the discussion on lead at the spring meeting, would you be able to provide me with the following information:

- whether you chose to inform municipalities and other stakeholders of a possible reduction in the lead guideline; and
- whether you expect the publication of the public consultation document to have a significant impact in your jurisdiction.

Any information would be helpful.

Thanks a lot.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: Khan, Haseen <hkhan@gov.nl.ca>
Sent: October 10, 2016 4:51 AM
To: 'Veronique Morisset'; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca
Subject: RE: Quick question to CDW members

NL has not yet informed water system owners and operators regarding the possible reduction in the lead guideline. However, we intend to do it during our annual drinking water safety workshop in March 2017.

I expect there will be some impact in NL but uncertain about the scope at this point.

Haseen

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Friday, October 07, 2016 2:26 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; Khan, Haseen; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca
Subject: Quick question to CDW members

Members,

As a follow-up to the discussion on lead at the spring meeting, would you be able to provide me with the following information:

- whether you chose to inform municipalities and other stakeholders of a possible reduction in the lead guideline; and
- whether you expect the publication of the public consultation document to have a significant impact in your jurisdiction.

Any information would be helpful.

Thanks a lot.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada

veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

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Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: October 11, 2016 10:46 AM
To: Philip, Kim (SD)
Cc: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; john_cooper@hc-sc.gc.ca; joyce_mortimer@hc-sc.gc.ca; Kevin.Gould@gnb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Sam Ferris; Satish.Deshpande@ontario.ca; WQH Management
Subject: Adding a discussion re Lead in drinking water under Item 4-J at October CDW meeting

Hi, Kim. Yes, we can have a round table discussion under Item 4-J (Other Chemical) on Day 2 of the CDW meeting, after the morning coffee break, regarding:
What are other jurisdictions intending to require for compliance monitoring re: lead in drinking water; and what actions are they intending to take where monitoring identifies an exceedance of the guideline.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

"Philip, Kim (SD)" ---2016-10-11 10:48:00 AM---Manitoba sent the attached e-mail to all public water system owners advising them that the national

From: "Philip, Kim (SD)"
To: Veronique Morisset
Cc: "Angelina.polegato@novascotia.ca" , "Caroline.Robert@mddelcc.gouv.qc.ca" , "donald.reid@gov.ab.ca" , "David.Fishwick@gov.bc.ca" , "ghsomers@gov.pe.ca" , "hkhan@gov.nl.ca" , "Kevin.Gould@gnb.ca" , "MLeBlanc-Havard@GOV.NU.CA" , "pat.brooks@gov.yk.ca" , "Peter_Workman@gov.nt.ca" , "Satish.Deshpande@ontario.ca" , "joyce_mortimer@hc-sc.gc.ca" , "john_cooper@hc-sc.gc.ca" , Sam Ferris
Date: 2016-10-11 10:48 AM
Subject: RE: Quick question to CDW members

Manitoba sent the attached e-mail to all public water system owners advising them that the national guideline was under review, though not specifically that it was being lowered. The e-mail was also sent to engineering consulting firms that we work with routinely.

As per the e-mail, our intent is to put out a draft provincial monitoring protocol for comment on or around the same time the draft national guideline is posted. We haven't yet finalized the draft-for-comment protocol. I would be very interested to hear what other

jurisdictions are intending to require for compliance monitoring; and what actions they are intending to take where monitoring identifies an exceedance. Wondering if there would be time to do a round-table on this topic at the upcoming meeting?

Like Sam, we do not think that there are many communities that have lead service lines in Manitoba as most rural water systems were developed after the use of LSLs had tapered off. We have already completed a broad mail-out direct-to-users in older higher risk areas of the one Manitoba community that had been previously identified as a concern. Though we expect there will likely be some other communities-of-concern identified once we implement the monitoring requirements, our biggest impact is expected to be the monitoring itself.

Kim Philip

Mori, Alicia HLTH:EX

From: Taki, Richard [VC] <Richard.Taki@vch.ca>
Sent: October 11, 2016 8:55 AM
To: Fishwick, David HLTH:EX; XT:HLTH Kosatsky, Tom; Zemanek, Michael HLTH:EX
Cc: [PHSA] Afshari, Reza
Subject: RE: Lead in daycare water

Hi Tom
We could have someone talk with the student but would not be interested in being part of any survey involving VCH inspected facilities.
Richard

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, October 07, 2016 8:50 AM
To: [PHSA] Kosatsky, Tom; Zemanek, Michael HLTH:EX
Cc: Taki, Richard [VC]; [PHSA] Afshari, Reza
Subject: RE: Lead in daycare water

Hi Tom:
I'm happy to talk to them.

Dave

David Fishwick | *Drinking Water Manager* | *Ministry of Health* | *PO BOX 9646 Stn Prov Govt*
Victoria BC | *V8W 9P1*

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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From: Kosatsky, Tom [mailto:Tom.Kosatsky@bccdc.ca]
Sent: Thursday, October 6, 2016 6:55 PM
To: Zemanek, Michael HLTH:EX; Fishwick, David HLTH:EX
Cc: XT:HLTH Taki, Richard; Afshari, Reza
Subject: RE: Lead in daycare water

Hi Dave and Mike, and Richard,
Reza Afshari has a BCIT student interested in sampling daycare water for lead.
BCIT will do the analyses.
This should be something more than a survey and be designed to answer a practical question.

Are you OK with Reza's contacting you (or RT, a VCH colleague) on how to proceed?
Thanks
tom

Dr. Tom Kosatsky
Medical Director, Environmental Health Services (EHS)
Scientific Director, National Collaborating Centre for Environmental Health (NCCEH)
Ph: 604-707-2447

Mori, Alicia HLTH:EX

From: Philip, Kim (SD) <Kim.Philip@gov.mb.ca>
Sent: October 11, 2016 7:48 AM
To: Veronique Morisset
Cc: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Satish.Deshpande@ontario.ca; joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca; Sam Ferris
Subject: RE: Quick question to CDW members
Attachments: Lead in Drinking Water - Information for Public Water System Owners

Manitoba sent the attached e-mail to all public water system owners advising them that the national guideline was under review, though not specifically that it was being lowered. The e-mail was also sent to engineering consulting firms that we work with routinely.

As per the e-mail, our intent is to put out a draft provincial monitoring protocol for comment on or around the same time the draft national guideline is posted. We haven't yet finalized the draft-for-comment protocol. I would be very interested to hear what other jurisdictions are intending to require for compliance monitoring; and what actions they are intending to take where monitoring identifies an exceedance. Wondering if there would be time to do a round-table on this topic at the upcoming meeting?

Like Sam, we do not think that there are many communities that have lead service lines in Manitoba as most rural water systems were developed after the use of LSLs had tapered off. We have already completed a broad mail-out direct-to-users in older higher risk areas of the one Manitoba community that had been previously identified as a concern. Though we expect there will likely be some other communities-of-concern identified once we implement the monitoring requirements, our biggest impact is expected to be the monitoring itself.

Kim Philip

From: Sam Ferris [mailto:Sam.Ferris@wsask.ca]
Sent: October-07-16 12:33 PM
To: Veronique Morisset
Cc: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Philip, Kim (SD); MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; Satish.Deshpande@ontario.ca; joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca
Subject: Re: Quick question to CDW members

Saskatchewan has not yet widely advised regulated waterworks owners of the possible change to the guideline however we expect to do so typically at the SWWA conference in November.

I expect there will be some impact in SK however many of the smaller communities do not have lead service lines. Just what the impact will be based on solder and fixtures versus water quality at the lower level MAC remains to be seen.

Sam

Sent from my iPhone

On Oct 7, 2016, at 10:55 AM, Veronique Morisset <Veronique.Morisset@hc-sc.gc.ca> wrote:

> Members,
>
> As a follow-up to the discussion on lead at the spring meeting, would you be able to provide me with the following information:
>
> - whether you chose to inform municipalities and other stakeholders of a possible reduction in the lead guideline; and
> - whether you expect the publication of the public consultation document to have a significant impact in your jurisdiction.
>
> Any information would be helpful.
>
> Thanks a lot.
>
> Véronique
>
> Véronique Morisset
> Manager, Water Quality Program Division
> Healthy Environments and Consumer Safety / Health Canada / Government of Canada
> veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019
>
> Gestionnaire, Division du programme de la qualité de l'eau
> Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
> veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: Fumerton, Raina <Raina.Fumerton@northernhealth.ca>
Sent: October 13, 2016 4:28 PM
To: Edwards, Joanne HLTH:EX; Kendall, Perry HLTH:EX; Henry, Bonnie HLTH:EX; Fishwick, David HLTH:EX
Subject: FW: Concerns with Drinking Water Supplied by the City of Prince Rupert
Attachments: Letter NH-Prince Rupert Oct-13-16 .pdf

Fyi

I will also send the letter to Kitimat

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting Northern Interior Medical Health Officer
Northern Health Authority
250-631-4261

From: Thom, Rachael
Sent: Thursday, October 13, 2016 4:11 PM
To: robert.long@princerupert.ca
Cc: Allison, Sandra; Nguyen, Vu; Fumerton, Raina; garin.gardiner@princerupert.ca424
Subject: Concerns with Drinking Water Supplied by the City of Prince Rupert

Dear Mr. Long

On behalf of Dr. Raina Fumerton, Northwest Medical Health Officer for Northern Health, please see the attached letter regarding concerns with drinking water supplied by the City of Prince Rupert.

We look forward to hearing from you.

Thank you
Rachael Thom

Rachael Thom
Administrative Assistant to the MHO, NW
& Regional Manager, Environmental Health
Ph: 250-631-4212
Fax: 250-638-2209



Mori, Alicia HLTH:EX

From: Fumerton, Raina <Raina.Fumerton@northernhealth.ca>
Sent: October 13, 2016 4:28 PM
To: Edwards, Joanne HLTH:EX; Kendall, Perry HLTH:EX; Henry, Bonnie HLTH:EX; Fishwick, David HLTH:EX
Subject: FW: Concerns With the Drinking Water Supplied by the District of Kitimat
Attachments: Letter NH-Kitimat Oct-13-16.pdf

As promised☺

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting Northern Interior Medical Health Officer
Northern Health Authority
250-631-4261

From: Thom, Rachael
Sent: Thursday, October 13, 2016 3:59 PM
To: Fumerton, Raina
Subject: Concerns With the Drinking Water Supplied by the District of Kitimat

Dear Mr. Waycheshen

On behalf of Dr. Raina Fumerton, Northwest Medical Health Officer for Northern Health, please see the attached letter regarding concerns with Drinking Water Supplied by the District of Kitimat.

We look forward to hearing from you.

Thank you
Rachael Thom

Rachael Thom
Administrative Assistant to the MHO, NW
& Regional Manager, Environmental Health
Ph: 250-631-4212
Fax: 250-638-2209



Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: October 13, 2016 2:56 PM
To: 'Donald Reid'; 'Veronique Morisset'; 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'MLeBlanc-Havard@GOV.NU.CA'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'
Cc: 'joyce_mortimer@hc-sc.gc.ca'; 'john_cooper@hc-sc.gc.ca'; 'Jeffrey Charrois'; 'Debra Mooney'; 'Tricia Morris'
Subject: RE: Quick question to CDW members

Hi Folks:

1) After discussing the matter of formally pre-warning municipalities with my director, we have concluded that we do not plan to do this. In the long run, the news will be the same, just when they receive it will be different. That said, we have alluded to some stakeholder groups that they can expect a change to be proposed, and it is unlikely to be less stringent that what we currently have.
2) Recent public awareness of lead at current MAC is having impacts, however those are difficult to quantify as data is sparse. I think at best it would be fair to say that the revised document would have at least as much impact.

Dave.

From: Donald Reid [mailto:donald.reid@gov.ab.ca]
Sent: Tuesday, October 11, 2016 8:18 AM
To: Veronique Morisset; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca; Jeffrey Charrois; Debra Mooney; Tricia Morris
Subject: RE: Quick question to CDW members

Good morning Veronique

Alberta does not flag upcoming consultations with municipalities so that would likely be a “no” to question 1; the answer to question 2 is really “how long is a piece of string” (which is always easy to answer in the generality – twice as long as from the middle to the ends – but not in specific units of length) and so my stock response of “don’t know” will have to do. Doubt this helps so apologies ☹

Donald

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Friday, October 07, 2016 10:56 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Donald Reid; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca
Subject: Quick question to CDW members

Members,

As a follow-up to the discussion on lead at the spring meeting, would you be able to provide me with the following information:

- whether you chose to inform municipalities and other stakeholders of a possible reduction in the lead guideline; and

- whether you expect the publication of the public consultation document to have a significant impact in your jurisdiction.

Any information would be helpful.

Thanks a lot.

Véronique

Véronique Morisset
Manager, Water Quality Program Division
Healthy Environments and Consumer Safety / Health Canada / Government of Canada
veronique.morisset@hc-sc.gc.ca / tel: 613-957-1506 / cel: 613-277-2019

Gestionnaire, Division du programme de la qualité de l'eau
Santé environnementale et sécurité des consommateurs / Santé Canada / Gouvernement du Canada
veronique.morisset@hc-sc.gc.ca / tél : 613-957-1506 / cellulaire : 613-277-2019
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Mori, Alicia HLTH:EX

From: LeBlanc-Havard, Michele <MLeBlanc-Havard@GOV.NU.CA>
Sent: October 14, 2016 8:12 AM
To: Fishwick, David HLTH:EX; 'Donald Reid'; 'Veronique Morisset'; 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'
Cc: 'joyce_mortimer@hc-sc.gc.ca'; 'john_cooper@hc-sc.gc.ca'; 'Jeffrey Charrois'; 'Debra Mooney'; 'Tricia Morris'
Subject: RE: Quick question to CDW members

Hi All
At this point Nunavut is in the don't know phase, I suspect we won't notify communities but will bring the issue forward with community and government services as they are responsible for the community, infrastructure, development and operations of municipal services in the communities.
M

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: October 13, 2016 5:56 PM
To: 'Donald Reid'; 'Veronique Morisset'; 'Angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; LeBlanc-Havard, Michele; 'pat.brooks@gov.yk.ca'; 'Peter_Workman@gov.nt.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'
Cc: 'joyce_mortimer@hc-sc.gc.ca'; 'john_cooper@hc-sc.gc.ca'; 'Jeffrey Charrois'; 'Debra Mooney'; 'Tricia Morris'
Subject: RE: Quick question to CDW members
Hi Folks:

1) After discussing the matter of formally pre-warning municipalities with my director, we have concluded that we do not plan to do this. In the long run, the news will be the same, just when they receive it will be different. That said, we have alluded to some stakeholder groups that they can expect a change to be proposed, and it is unlikely to be less stringent that what we currently have.
2) Recent public awareness of lead at current MAC is having impacts, however those are difficult to quantify as data is sparse. I think at best it would be fair to say that the revised document would have at least as much impact.

Dave.

From: Donald Reid [mailto:donald.reid@gov.ab.ca]
Sent: Tuesday, October 11, 2016 8:18 AM
To: Veronique Morisset; Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca; Jeffrey Charrois; Debra Mooney; Tricia Morris
Subject: RE: Quick question to CDW members
Good morning Veronique
Alberta does not flag upcoming consultations with municipalities so that would likely be a "no" to question 1; the answer to question 2 is really "how long is a piece of string" (which is always easy to answer in the generality – twice as long as from the middle to the ends – but not in specific units of length) and so my stock response of "don't know" will have to do. Doubt this helps so apologies ☹
Donald

From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
Sent: Friday, October 07, 2016 10:56 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Donald Reid; David.Fishwick@gov.bc.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: joyce_mortimer@hc-sc.gc.ca; john_cooper@hc-sc.gc.ca
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Any information would be helpful.

Thanks a lot.

Véronique

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Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: October 21, 2016 1:12 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Anca-Maria Tugulea; Jing Chen; Kristina Taracha; philippa.cureton@canada.ca; rocio.aranda-rodriguez@hc-sc.gc.ca
Cc: WQH Management
Subject: CDW: "Water Talk" re: lead is now posted on HC web site

CDW folks:

"Water Talk: Reducing your Exposure to Lead from Drinking Water" is now posted on Health Canada's web site at the following links:

English:
http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/lead-plomb-eng.php

French:
http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/lead-plomb-fra.php

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: October 28, 2016 3:05 PM
To: 'Sylvia Struck'
Subject: RE: copper

Sorry I can be more precise than that.

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Friday, October 28, 2016 3:01 PM
To: Fishwick, David HLTH:EX
Subject: RE: copper

Thanks, Dave.
Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, October 28, 2016 2:58 PM
To: Sylvia Struck <Sylvia.Struck@fnha.ca>
Cc: Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>
Subject: RE: copper

Both Copper and Lead need to go to public consultation, they will then make adjustments based on comments, get CDW approval, get CHE approval, get translated, then go public. 2017 possible but probably enthusiastic.

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Friday, October 28, 2016 11:40 AM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX
Subject: RE: copper

Thanks Dave. Do you know the timeline for the public release and when they hope to finalize? Is completion anticipated for 2017?

Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, October 28, 2016 11:27 AM
To: Sylvia Struck <Sylvia.Struck@fnha.ca>
Cc: Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>
Subject: RE: copper

Hi Sylvia:
HC will be releasing public consultation doc on Copper soon. Expect a MAC in the same ballpark as EPA. Will update this and Lead at DWLC next thurs.

Dave

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Friday, October 28, 2016 9:28 AM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX
Subject: copper

Hi Dave,

Is there any more information about establishing a MAC for copper? As you know, we are currently testing schools for both lead and copper. The EPA established an actionable level at 1.3 ppm. Also, has there been any more movement on an agreed upon protocol (apologies if this has been sent – I have been out of the office traveling for a few weeks and it may be buried).

Sylvia

Sylvia Struck, Ph.D.
Manager, Drinking Water Safety Program
First Nations Health Authority
#404 - 1138 Melville Street
Vancouver, BC V6E 4S3
Tel. (604) 693-6960
Sylvia.Struck@FNHA.ca

First Nations Health Authority
Health through wellness

Mori, Alicia HLTH:EX

From: France Lemieux <France.Lemieux@hc-sc.gc.ca>
Sent: October 31, 2016 11:34 AM
To: Fishwick, David HLTH:EX
Cc: 'France.Lemieux@hc-sc.gc.ca'
Subject: Re: Lead sampling/evaluation
Attachments: Schock CNDWC 2016 Sampling.pdf

Hi David,

Here is Mike's talk.

(See attached file: Schock CNDWC 2016 Sampling.pdf)

I've tracked down the link to a UK implementation document that I think is the sampling protocols documents you're looking for but if it's not what you're looking for, let me know and I'll try to find what you're searching.

Drinking Water Inspectorate (2010). Guidance On The Implementation Of The Water Supply (Water Quality) Regulations 2000 (As Amended) In England (2010).

http://dwi.defra.gov.uk/stakeholders/guidance-and-codes-of-practice/WS(WQ)-regs-england2010.pdf

I hope this helps!

France

France Lemieux, M. Eng.

Head, Materials and Treatment Section/Healthy Environments and Consumer Safety Branch
Health Canada/Government of Canada

France.Lemieux@hc-sc.gc.ca/Tel.: 613-941-3166

Chef, Section des produits et du traitement/Direction générale de la santé environnementale et de la sécurité des consommateurs
Santé Canada/Gouvernement du Canada

France.Lemieux@hc-sc.gc.ca/Tél. : 613-941-3166

"Fishwick, David HLTH:EX" ---2016-10-31 01:08:16 PM---Hi France; I was looking for copy of Michael Schock's presentation at the conference, as well as a l

From: "Fishwick, David HLTH:EX"
To: "'France.Lemieux@hc-sc.gc.ca'"
Date: 2016-10-31 01:08 PM
Subject: Lead sampling/evaluation

Hi France;

I was looking for copy of Michael Schock's presentation at the conference, as well as a link to the UK sampling protocol. Do you have copies/links you could share?

Thanks
Dave.

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: October 31, 2016 2:40 PM
To: 'France Lemieux'
Subject: RE: Lead sampling/evaluation
Attachments: Lead Eval Draft.docx

Hi France:

Thanks for this, it will be very helpful. I have seen this link from the UK, and was wondering if they have further "how to do RDT sampling" guidance…perhaps they don't have anything.

Attached is a draft I had put together for my director before our week in Ottawa, and was happy to see that is somewhat similar to what you and Michael were thinking about. Would you have a chance to have a quick browse through and see if anything is out in left field? I'm trying to have anything we move forward with align with the new guidelines. It is an early draft so feel free to be ruthless.

Dave

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Cc: 'France.Lemieux@hc-sc.gc.ca'
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http://dwi.defra.gov.uk/stakeholders/guidance-and-codes-of-practice/WS(WQ)-regs-england2010.pdf

I hope this helps!

France

France Lemieux, M. Eng.

Head, Materials and Treatment Section/Healthy Environments and Consumer Safety Branch
Health Canada/Government of Canada

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Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: November 1, 2016 10:36 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca
Cc: Veronique Morisset; France Lemieux; Kristina Taracha
Subject: CDW: Fw: CWN Lead Issues Webinar September 28 - Recording and Slides

CDW folks:

For those of you who were unable to attend the CWN webinar on lead that was held September 28, 2016, please find below the slides and a recording of the webinar.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-11-01 01:25 PM -----

From: Kaitlin Edwards
To: undisclosed-recipients:;
Cc: Kaitlin Edwards
Date: 2016-10-31 01:47 PM
Subject: Lead Issues Webinar: September 28 Webinar Recording and Slides

---

Good afternoon,

On behalf of Canadian Water Network, Polytechnique Montréal, University of Dalhousie and University of Toronto, thank you for your interest in the September 28th webinar entitled, **"Challenges related to the management of lead service lines, partial lead service line replacements, and lead occurrence in the tap water of large buildings in Canada"** with presenters Dr. Michèle Prévost, Dr. Élise Deshommes and Dr. Graham Gagnon. It was a wonderful success.

You can find the recording along with the slides to the webinar, on the Canadian Water Network website.

To stay informed with future CWN activities, please subscribe to our website for updates!

Kind regards,
Kaitlin

Kaitlin Edwards, CMP
Events Manager
Canadian Water Network
519.888.4567 ext. 33288 | www.cwn-rce.ca



Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: November 4, 2016 7:26 AM
To: XT:Fumerton, Raina HLTH:IN; Belanger, Darrell
Cc: Fishwick, David HLTH:EX
Subject: RE: Guidance document re testing for lead to daycares
Attachments: L_Daycares_Feb-2016.3.pdf

Hi Raina – pls see attached.
DRT.
Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

From: Fumerton, Raina
Sent: Thursday, November 03, 2016 10:24 AM
To: Tamblyn, Dave ; Belanger, Darrell
Cc: Fishwick, David HLTH:EX
Subject: Guidance document re testing for lead to daycares

Hi Dave can you forward the guidance document drafted for daycares around how to test for lead in their drinking water to Dave Fishwick?

I can't find it in my email ☺

Cheers,
Raina

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 7, 2016 9:08 AM
To: 'France Lemieux'
Subject: RE: Lead sampling/evaluation

No worries:
I'm going to be talking to our policy advisory committee in early December about lead sampling, so any comments (positive or negative)before then would be very helpful.

Dave

From: France Lemieux [mailto:France.Lemieux@hc-sc.gc.ca]
Sent: Friday, November 4, 2016 1:50 PM
To: Fishwick, David HLTH:EX
Subject: RE: Lead sampling/evaluation

Hi David,

Sorry for the delay in getting back to you, I was away at meetings and I wasn't able to respond to emails. I'd be glad to look at this and see if there's something more detailed that I can track down (though I suspect not). How quickly do you need it?

Regards,

France

_____

France Lemieux, M. Eng.

Head, Materials and Treatment Section/Healthy Environments and Consumer Safety Branch
Health Canada/Government of Canada

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Sent: Monday, October 31, 2016 11:34 AM
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Subject: Re: Lead sampling/evaluation

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I hope this helps!

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Chef, Section des produits et du traitement/Direction générale de la santé environnementale et de la sécurité des consommateurs
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David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
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Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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[attachment "Lead Eval Draft.docx" deleted by France Lemieux/HC-SC/GC/CA]

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 18, 2016 9:33 AM
To: 'Sylvia Struck'
Subject: RE: Lead - hfile49e_SS

Happy to have them get this out the door soon!

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Friday, November 18, 2016 9:30 AM
To: Fishwick, David HLTH:EX
Subject: RE: Lead - hfile49e_SS

Thank you for forwarding my comments, Dave.

Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, November 18, 2016 8:57 AM
To: Campbell, Shirley HLBC:EX <Shirley.Campbell@gov.bc.ca>; Sylvia Struck <Sylvia.Struck@fnha.ca>; Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>
Subject: Lead - hfile49e_SS

Hi Shirley:

Here are Sylvia's comments – I've altered the text to reflect these.

I am good to go if FNHA is.

Dave

Mori, Alicia HLTH:EX

From: Sylvia Struck <Sylvia.Struck@fnha.ca>
Sent: November 18, 2016 9:58 AM
To: Fishwick, David HLTH:EX; Campbell, Shirley HLBC:EX; Edwards, Joanne HLTH:EX
Subject: RE: Lead - hfile49e_SS
Attachments: hfile49e_SS.docx

Hi Shirley,

I removed one of the internal comments that dealt with how to provide our contact information. If you need to reformat the contact information, I am fine with that as long as the EHO contact website link is included.

Thank you,
Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, November 18, 2016 8:57 AM
To: Campbell, Shirley HLBC:EX ; Sylvia Struck ; Edwards, Joanne HLTH:EX
Subject: Lead - hfile49e_SS

Hi Shirley:

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I am good to go if FNHA is.

Dave

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 18, 2016 8:56 AM
To: 'Sylvia Struck'
Cc: Edwards, Joanne HLTH:EX
Subject: RE: lead healthfile

Health Files belong to Healthlink BC. I've added the updated led link and mention fo pregnant women etc. as per your suggestions so they don't have to search those down, so I might as well forward it. I just wanted to know so they wouldn't be getting multiple responses.

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Friday, November 18, 2016 8:50 AM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX
Subject: RE: lead healthfile

Hi, I can send it – who is spear-heading the effort?

Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, November 18, 2016 8:44 AM
To: Sylvia Struck <Sylvia.Struck@fnha.ca>
Cc: Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>
Subject: RE: lead healthfile

I'll reword the same question: did you send this to them, or was your intent to have me do so?

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Thursday, November 17, 2016 1:00 PM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX
Subject: RE: lead healthfile

Sorry – trying to do too many things too quickly ☺

Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, November 17, 2016 12:53 PM
To: Sylvia Struck <Sylvia.Struck@fnha.ca>
Cc: Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>
Subject: RE: lead healthfile

I presume you sent the comments to Healthlink BC?

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Thursday, November 17, 2016 12:50 PM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX
Subject: lead healthfile

Hi Dave,

Sorry for the delay on the health file for Lead. I have made some additional comments and have provided FNHA contact information. Please feel free to contact me if you have any questions.

Sylvia

Sylvia Struck, Ph.D.
Manager, Drinking Water Safety Program
First Nations Health Authority
#404 - 1138 Melville Street
Vancouver, BC V6E 4S3
Tel. (604) 693-6960
Sylvia.Struck@FNHA.ca

First Nations Health Authority
Health through wellness

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: November 23, 2016 12:08 PM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Kristina Taracha
Cc: Veronique Morisset; France Lemieux
Subject: CDW: Final Qs and As for lead in Canadian drinking water
Attachments: Lead Q&As revised 2016-1108.docx

CDW folks;

As a follow up to the Qs and As on lead in Canadian drinking water that were sent to you in August for your comment, here are the final Qs and As. This finalized version includes changes made in response to the comments that we received from CDW members.

(See attached file: Lead Q&As revised 2016-1108.docx)

At this time, we expect the guideline technical document for lead in drinking water to be posted for public consultation on November 29, 2016. I will let you know if that date changes.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 24, 2016 4:19 PM
To: 'Zubel, Marc'
Subject: RE: BC Drinking Water Quality

Thanks Marc – can you send me those contacts too – I will forward them on to the other person who is interested in researching historical THM levels.

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Monday, November 21, 2016 3:47 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: RE: BC Drinking Water Quality

Thanks for your thoughts.
I will respond to her by providing her with contacts for MetroVan and City of Abbotsford.
That should give her sufficient information for at least 90% of our population in FH.
Marc

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Monday, November 21, 2016 2:17 PM
To: Edwards, Joanne HLTH:EX; Zubel, Marc
Subject: RE: BC Drinking Water Quality

Yes, I think that is about correct. I have recently had a similar request – if you have the contact info please fwd it to me and I will pass into on as well.

From: Edwards, Joanne HLTH:EX
Sent: Monday, November 21, 2016 2:06 PM
To: 'Zubel, Marc'; Fishwick, David HLTH:EX
Subject: RE: BC Drinking Water Quality

Hi Marc,

No we do not have that info either. I will send you the email I sent Tasha this morning. I agree that she is best to pick a community and contact the water supplier directly given our data limitations surrounding chemical data.

Cheers,
Joanne

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Monday, November 21, 2016 1:57 PM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX
Subject: FW: BC Drinking Water Quality

Hi Dave / Joanne: does the province have any data related to total THMs in drinking water in BC? (see request below). We don't keep track in FHA.
The only thing I can share with the enquirer is for her to contact Metro Van and City of Abbotsford which use surface water, and refer her to each HA to get info from their jurisdictions. Any thoughts?

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Tasha Narain [mailto:tasha.narain@queensu.ca]
Sent: Friday, November 18, 2016 6:43 AM
To: Zubel, Marc
Subject: BC Drinking Water Quality

Dear Mr. Zubel,

I am a research associate at Queen's University. I am interested in conducting a study relating to drinking water quality in BC. I am specifically seeking current and historical (2001) data on total trihalomethane concentration in drinking water. If possible would you be able to let me know if this information is available and what steps I can take to access it?

I sincerely appreciate your assistance in the matter.

Thank you,

Tasha

Tasha A. Narain, MSc.
Epidemiology Research Associate

Department of Public Health Science
Carruthers Hall, Queen's University
Kingston, ON, Canada
K7L 3N6

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: November 25, 2016 7:29 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Kristina Taracha
Cc: Veronique Morisset; France Lemieux
Subject: CDW: Qs and As on lead in drinking water - Please use these versions
Attachments: Lead QAs 2016-1125 Final.pdf; Lead QAs 2016-1125 FRA.pdf

CDW folks:

Please find below both the French and English versions of the Qs and As for lead in Canadian drinking water. We have corrected an error in the English Qs and As sent previously, and we have re-attached the corrected file, so please use this version instead.

(See attached file: Lead QAs 2016-1125 Final.pdf)(See attached file: Lead QAs 2016-1125 FRA.pdf)

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

----- Forwarded by Joyce Mortimer/HC-SC/GC/CA on 2016-11-24 09:43 AM -----

From: Joyce Mortimer/HC-SC/GC/CA
To: Angelina.polegato@novascotia.ca, Caroline.Robert@mddelcc.gouv.qc.ca, donald.reid@gov.ab.ca, David.Fishwick@gov.bc.ca, ghsomers@gov.pe.ca, hkhan@gov.nl.ca, Kevin.Gould@gnb.ca, Kim.Philip@gov.mb.ca, MLeBlanc-Havard@GOV.NU.CA, pat.brooks@gov.yk.ca, Peter_Workman@gov.nt.ca, sam.ferris@wsask.ca, Satish.Deshpande@ontario.ca, Kristina Taracha/HC-SC/GC/CA@HWC
Cc: Veronique Morisset/HC-SC/GC/CA@HWC, France Lemieux/HC-SC/GC/CA@HWC
Date: 2016-11-23 03:08 PM
Subject: CDW: Final Qs and As for lead in Canadian drinking water

---

CDW folks;

As a follow up to the Qs and As on lead in Canadian drinking water that were sent to you in August for your comment, here are the final Qs and As. This finalized version includes changes made in response to the comments that we received from CDW members.

[attachment deleted by Joyce Mortimer/HC-SC/GC/CA]

At this time, we expect the guideline technical document for lead in drinking water to be posted for public consultation on November 29, 2016. I will let you know if that date changes.

Regards,
Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: November 26, 2015 8:01 AM
To: Fishwick, David HLTH:EX
Subject: Request for impact paragraph for lead document

Hi, David. Yes, absolutely! Examples of impact statements can be found in the documents that are posted for public consultation on the Health Canada web site. Here is the direct link to the public consultation document for the Guideline for Canadian Drinking Water Quality for tetrachloroethylene that was posted in 2014, and which has a number of impact statements. The statements can be found in Appendix B of the document:

http://www.hc-sc.gc.ca/ewh-semt/consult/_2014/tetrachloroethylene/draft-ebauche-eng.php

I hope this is helpful. Please do not hesitate to let me know if I can be of further assistance on any of these items.

Joyce

Joyce Mortimer
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

"Fishwick, David HLTH:EX" ---2015-11-25 05:23:18 PM---Sounds good. One more question – I've been looking for examples of other impact statements that hav

From: "Fishwick, David HLTH:EX"
To: "'Joyce Mortimer'"
Date: 2015-11-25 05:23 PM
Subject: RE: Request for impact paragraph for lead document

Sounds good. One more question –

I've been looking for examples of other impact statements that have been made in the past but can't seem to find any – do you have some examples of some form the past you could share with me?

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Wednesday, November 25, 2015 2:06 PM
To: Fishwick, David HLTH:EX
Cc: Veronique Morisset
Subject: RE: Request for impact paragraph for lead document

Hi, David. For the impact statement on lead, it would be no problem to extend the deadline. Would December 15 be feasible for you?

For the impact statement on microcystin, are you still OK with the December 4 deadline? It is on a much more urgent timeline for us. If problematic for you to meet that deadline, I think we might get you to send whatever you can at that date. Let me know, though.

Thanks for this.

Regards,
Joyce

Joyce Mortimer
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

"Fishwick, David HLTH:EX" ---2015-11-25 04:50:45 PM---HI Joyce: I'm wondering if we can have an extension on this date, as I will be meeting with our regi

From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
To: "'Joyce Mortimer'" <Joyce.Mortimer@hc-sc.gc.ca>
Date: 2015-11-25 04:50 PM
Subject: RE: Request for impact paragraph for lead document

HI Joyce:
I'm wondering if we can have an extension on this date, as I will be meeting with our regional folks on December 3rd to discuss this and other issues.
Dave.

From: Joyce Mortimer [mailto:Joyce.Mortimer@hc-sc.gc.ca]
Sent: Friday, November 13, 2015 11:34 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Leigh Anne Lepine; Joyce Mortimer; Anne Vezina; Wendy Enright
Subject: CDW: Request for impact paragraph for lead document

CDW members,

The Guideline Technical Document for lead was approved at the May 2015 meeting. The current draft is attached below for your information.

(See attached file: Lead 2015-1113 (draft for public consultation).pdf)

Please send us your impact paragraph to add into the consultation document (or a nil response) by December 4, 2015.

Thank you!

Joyce Mortimer (on behalf of Anne Vézina)
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
email: Joyce.mortimer@hc-sc.gc.ca
Tel: (613)-952-9962
Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: November 28, 2016 11:38 AM
To: Angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Kristina Taracha
Cc: France Lemieux; Veronique Morisset
Subject: CDW: Revised timeline for posting of lead guideline technical document

CDW folks:

Due to an unexpected issue that has arisen, the posting of the lead GTD for public consultation will be delayed by a week. The revised expected date is December 6. I will let you know if there are any more changes.

Apologies for this, and thanks for your understanding.

Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 1, 2016 10:24 AM
To: Edwards, Joanne HLTH:EX; 'Tamblyn, Dave'
Subject: FW: DWLC flushing for lead - sharing info
Attachments: PHP School flushing program development guide.pdf; PHE guideline - Distribution System Sampling.pdf

Thanks Dave:

Forwarding to Joanne for now.

Dave

From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Thursday, December 1, 2016 10:11 AM
To: Fishwick, David HLTH:EX
Subject: DWLC flushing for lead - sharing info

Further to the discussion on how long to flush, you may be interested in the attached NH document we prepared earlier this year. It is based on Ontario guidelines, I believe.

> Taps at the end of a branch of plumbing should receive the primary flush of 5 minutes (or until as cold as possible, and then 2 minutes more). Other taps then only need a 10 second secondary flush. Taps that are protected with a filter certified to remove lead (NSF 53 or NSF 58), should not be used for primary flushing to preserve filter life. They may optionally receive the secondary 10 second flush. Taps that are not plumbed-in and not connected to metal plumbing of any kind likewise may optionally receive the secondary 10 second flush.

I also attach a NH PHE document on collecting distribution system samples – which is really what the cold water sample is supposed to be. It cites AWWA references. The interpretation bit on suspended (particulate) lead versus dissolved lead is often overlooked, I believe.

Pls share these with anyone on DWLC who may be interested.

Regards,
DRT.
Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

Mori, Alicia HLTH:EX

From: Fumerton, Raina <Raina.Fumerton@northernhealth.ca>
Sent: December 6, 2016 4:22 PM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Subject: FW: Draft lead polciy
Attachments: Draft BC Lead Policy November 3 DRT comments.pdf

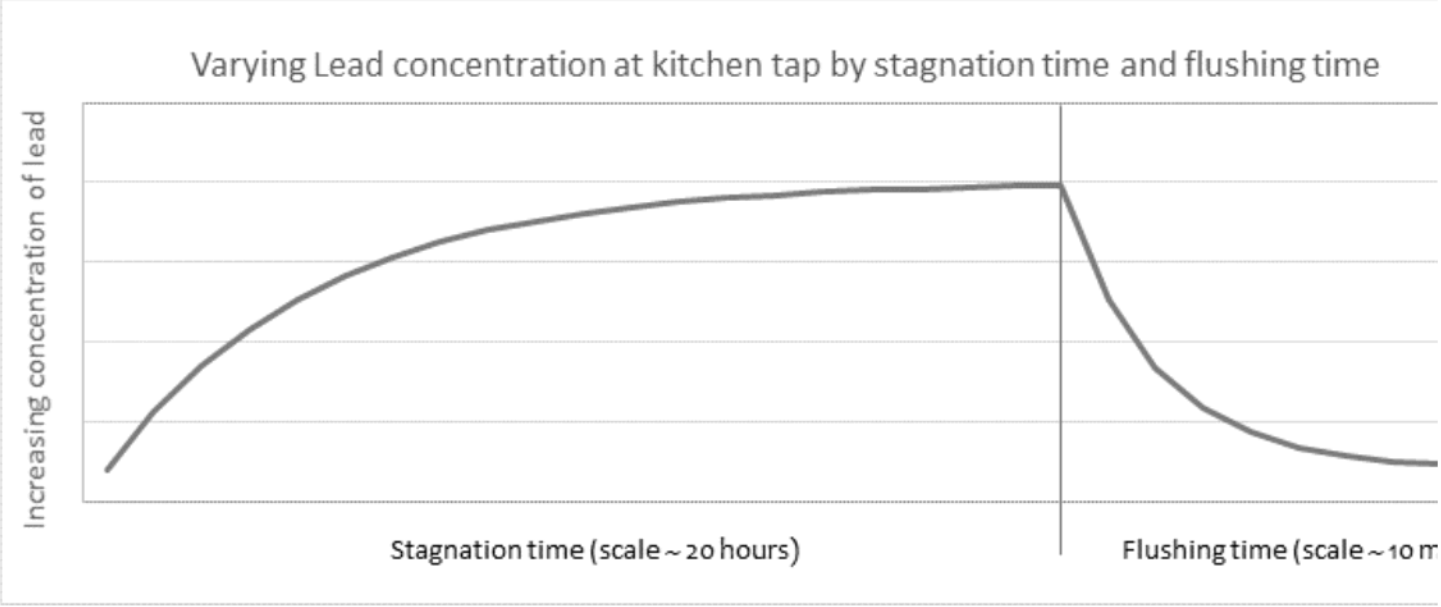
Hi Joanne and David some additional comments from NH on the lead policy document from our public health engineer Dave Tamblyn – see note below as well as he has put comments into the pdf which is attached!
Thanks – good to hear you today on the EHPAC meeting!
r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

From: Tamblyn, Dave
Sent: Tuesday, December 06, 2016 4:19 PM
To: Fumerton, Raina; Torng, Allan; Belanger, Darrell; Quibell, Doug; Almeida, Talina; Nguyen, Vu; Waymark, Val
Cc: Allison, Sandra; Thom, Rachael
Subject: RE: Draft lead polciy

Hi Raina,
Sorry, it took me a long time to go through this document. I think it's good. A bit short on pictures! Clarifies the complex issue pretty well.

One of the main images I have in mind when I think about lead in water is the dynamics of stagnation time and flushing time. I made this graphic to convey the essential non-linearity of the processes involved:



The other main comments I had were:

1. Too much focus on "health hazards" which is a quite specific and restrictive category, and no mention of threats (less restrictive) or risks (quite loose) as triggers for PH action.
2. Public participation missing.
3. MACs are guidelines, not standards
4. Water conservation versus flushing (issue box)
5. Other corrosion products (iron, copper) and their effects (issue box).

I made extensive comments in the pdf. There is an export comments tool in Adobe, but it isn't working at present. So I think it may be easiest to send on my comments in the pdf, rather than trying to collate them into an overall Northern Health response. I'll try to export my comments at home – might work.

DRT.

Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

From: Fumerton, Raina
Sent: Monday, December 05, 2016 14:16
To: Torng, Allan <Allan.Torng@northernhealth.ca>; Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>; Belanger, Darrell <Darrell.Belanger@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; Almeida, Talina <Talina.Almeida@northernhealth.ca>; Nguyen, Vu <Vu.Nguyen@northernhealth.ca>; Waymark, Val <Val.Waymark@northernhealth.ca>
Cc: Allison, Sandra <Sandra.Allison@northernhealth.ca>; Thom, Rachael <Rachael.Thom@northernhealth.ca>
Subject: RE: Draft lead polciy

Hi everyone – I have only heard back from Val thus far if anyone else has any feedback please send it my way by **end of day today**.

Thanks very much
Raina

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

From: Fumerton, Raina
Sent: Thursday, December 01, 2016 10:04 AM
To: Torng, Allan; Tamblyn, Dave; Belanger, Darrell; Quibell, Doug; Almeida, Talina; Nguyen, Vu
Cc: Allison, Sandra; Thom, Rachael
Subject: FW: Draft lead polciy

Feedback on this is due by next Tuesday. Please send any feedback to myself and Rachael by end of day Monday – Rachael will help to collate (thank you Rachael) and we will send our combined NH comments to Joanne on Tuesday ☺

r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Thursday, December 01, 2016 10:00 AM
To: Clarkson, Len [STS]; Magee, Lynne; Zubel, Marc; Norlin, J Ivor; Belanger, Darrell; XT:HLTH TINTUN@Fraserhealth.ca; Parsonage, Roger; XT:HLTH Hasselback, Paul; XT:HLTH Lu, James; Fumerton, Raina; Sylvia Struck
Subject: Draft lead polciy

Hi all,

Just a reminder that the draft BC lead policy is posted on the DWLC sharepoint site. https://hlth005.gov.bc.ca/HPB/DWLC/Lists/Announcements/DispForm.aspx?ID=339&Source=https%3A%2F%2Fhlth005%2Egov%2Ebc%2Eca%2FHPB%2FDWLC%2Fdefault%2Easpx (the policy was posted on Nov 3rd in the announcements)

Please make sure you review the document and share your feedback with your EHPAC representatives prior to next Tuesday (i.e., your MHO rep and Regional Director). Please feel free to forward on the document to them as well if they have not yet seen it. BCCDC should be forwarding it on as well with the agenda to EHPAC soon.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>
Sent: December 7, 2016 12:06 PM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; Kristina Taracha
Cc: Veronique Morisset; France Lemieux
Subject: CDW: Posting of lead guideline technical document is delayed

CDW folks:

The posting of the lead guideline technical document for public consultation has been delayed. I will let you know as soon as we have a revised expected posting date.

Once again, my apologies and thank you for your patience.

Joyce

Joyce Mortimer

Coordinator of the F/P/T Committee on Drinking Water
Water and Air Quality Bureau, Safe Environments Directorate
Health Canada / Government of Canada

Coordonatrice du Comité F/P/T sur l'eau potable
Bureau de la qualité de l'eau et de l'air, Direction de la sécurité des milieux
Santé Canada / Gouvernement du Canada

Joyce.mortimer@hc-sc.gc.ca / Tel: (613)-957-3130 / Fax: (613)-952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 8, 2016 9:17 AM
To: XT:Fumerton, Raina HLTH:IN; Edwards, Joanne HLTH:EX
Cc: 'Tamblyn, Dave'
Subject: RE: Draft lead polciy

Thanks Raina! We always appreciate Dave's attention to detail!

Also - thanks for your active and constructive participation on the conference call – very much appreciated!

Dave.

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Tuesday, December 6, 2016 4:22 PM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Subject: FW: Draft lead polciy

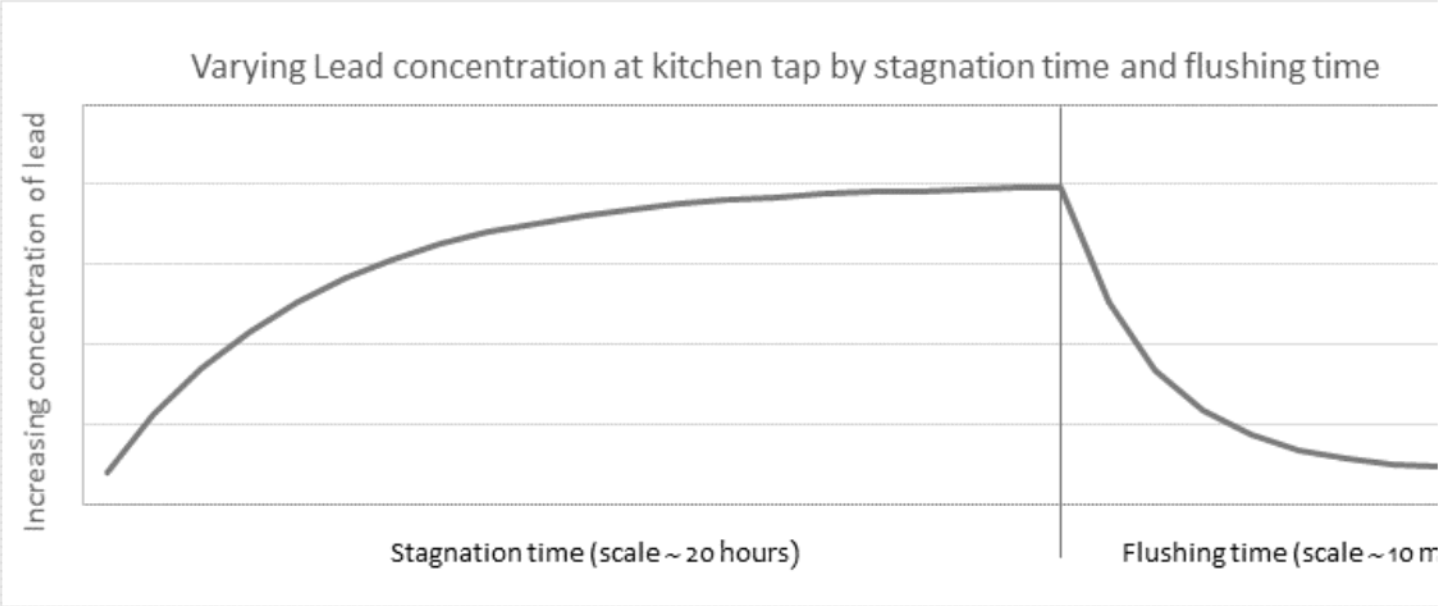
Hi Joanne and David some additional comments from NH on the lead policy document from our public health engineer Dave Tamblyn – see note below as well as he has put comments into the pdf which is attached!
Thanks – good to hear you today on the EHPAC meeting!
r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

From: Tamblyn, Dave
Sent: Tuesday, December 06, 2016 4:19 PM
To: Fumerton, Raina; Torng, Allan; Belanger, Darrell; Quibell, Doug; Almeida, Talina; Nguyen, Vu; Waymark, Val
Cc: Allison, Sandra; Thom, Rachael
Subject: RE: Draft lead polciy

Hi Raina,
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2. Public participation missing.
3. MACs are guidelines, not standards
4. Water conservation versus flushing (issue box)
5. Other corrosion products (iron, copper) and their effects (issue box).

I made extensive comments in the pdf. There is an export comments tool in Adobe, but it isn't working at present. So I think it may be easiest to send on my comments in the pdf, rather than trying to collate them into an overall Northern Health response. I'll try to export my comments at home – might work.

DRT.
Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

From: Fumerton, Raina
Sent: Monday, December 05, 2016 14:16
To: Torng, Allan <Allan.Torng@northernhealth.ca>; Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>; Belanger, Darrell <Darrell.Belanger@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; Almeida, Talina <Talina.Almeida@northernhealth.ca>; Nguyen, Vu <Vu.Nguyen@northernhealth.ca>; Waymark, Val <Val.Waymark@northernhealth.ca>
Cc: Allison, Sandra <Sandra.Allison@northernhealth.ca>; Thom, Rachael <Rachael.Thom@northernhealth.ca>
Subject: RE: Draft lead polciy

Hi everyone – I have only heard back from Val thus far if anyone else has any feedback please send it my way by **end of day today**.

Thanks very much
Raina

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

From: Fumerton, Raina
Sent: Thursday, December 01, 2016 10:04 AM
To: Torng, Allan; Tamblyn, Dave; Belanger, Darrell; Quibell, Doug; Almeida, Talina; Nguyen, Vu
Cc: Allison, Sandra; Thom, Rachael
Subject: FW: Draft lead polciy

Feedback on this is due by next Tuesday. Please send any feedback to myself and Rachael by end of day Monday – Rachael will help to collate (thank you Rachael) and we will send our combined NH comments to Joanne on Tuesday ☺

r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Thursday, December 01, 2016 10:00 AM
To: Clarkson, Len [STS]; Magee, Lynne; Zubel, Marc; Norlin, J Ivor; Belanger, Darrell; XT:HLTH TINTUN@Fraserhealth.ca; Parsonage, Roger; XT:HLTH Hasselback, Paul; XT:HLTH Lu, James; Fumerton, Raina; Sylvia Struck
Subject: Draft lead polciy

Hi all,

Just a reminder that the draft BC lead policy is posted on the DWLC sharepoint site. https://hlth005.gov.bc.ca/HPB/DWLC/Lists/Announcements/DispForm.aspx?ID=339&Source=https%3A%2F%2Fhlth005%2Egov%2Ebc%2Eca%2FHPB%2FDWLC%2Fdefault%2Easpx (the policy was posted on Nov 3rd in the announcements)

Please make sure you review the document and share your feedback with your EHPAC representatives prior to next Tuesday (i.e., your MHO rep and Regional Director). Please feel free to forward on the document to them as well if they have not yet seen it. BCCDC should be forwarding it on as well with the agenda to EHPAC soon.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: December 13, 2016 1:06 PM
To: XT:Fumerton, Raina HLTH:IN
Subject: RE: do you have time for a quick chat?

Too early to say. Although I think what may come out is language around THMs also being the an indicator of other associated nasty DBPs.

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Tuesday, December 13, 2016 1:00 PM
To: Fishwick, David HLTH:EX
Subject: RE: do you have time for a quick chat?

Thanks david! Is your sense that the mac will likely be increased or decreased?

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, December 13, 2016 12:10 PM
To: Fumerton, Raina
Subject: RE: do you have time for a quick chat?

OK – found it – They are in the drafting stage, and also plan to include HAAs. I don't have a timeline form them, but my experience with this group would have me guess that it might expect I will see a draft in fall 2017, although they may surprise me and have something in May. Long story short I think it is probably at least a year before we see a public consultation and another year before a final revised document.

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Tuesday, December 13, 2016 11:58 AM
To: Fishwick, David HLTH:EX
Subject: RE: do you have time for a quick chat?

Do you know if Health Canada is planning on reviewing/updating the Tri Halo Methane MAC?

Cheers
r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

From: Fumerton, Raina
Sent: Tuesday, December 13, 2016 11:56 AM
To: 'Fishwick, David HLTH:EX'
Subject: do you have time for a quick chat?
Importance: High

Would only take two minutes
r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 12, 2016 4:22 PM
To: 'Sylvia Struck'
Subject: RE: Lead Health File

Thanks – that's why we send these out for comments!

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Tuesday, July 12, 2016 9:27 AM
To: Fishwick, David HLTH:EX; XT:Fumerton, Raina HLTH:IN; XT:HLTH Lu, James; Belanger, Darrell
Cc: Edwards, Joanne HLTH:EX; Clarkson, Len [STS]; 'Magee, Lynne'; [IHA] Norlin, J Ivor; [FHA] Zubel, Marc
Subject: RE: Lead Health File

Hi Dave,

Thanks. You will see my mark-up is very messy but I had a number of issues with the way it is currently worded.

Sylvia

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, July 7, 2016 3:45 PM
To: XT:Fumerton, Raina HLTH:IN <Raina.Fumerton@northernhealth.ca>; XT:HLTH Lu, James <james.lu@vch.ca>; Sylvia Struck <Sylvia.Struck@fnha.ca>; Belanger, Darrell <Darrell.Belanger@northernhealth.ca>
Subject: RE: Lead Health File

We are targeting July 15.

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Thursday, July 7, 2016 3:44 PM
To: Fishwick, David HLTH:EX; XT:HLTH Lu, James; Sylvia Struck; Belanger, Darrell
Subject: RE: Lead Health File

Thanks David – can you remind me on the deadline for feedback?

r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting Northern Interior Medical Health Officer
Northern Health Authority
250-631-4261

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, July 07, 2016 2:15 PM
To: Fumerton, Raina; XT:HLTH Lu, James; Sylvia Struck; Belanger, Darrell
Subject: Lead Health File

Hi Folks:

Until we can sort out why you guys aren't getting announcements – here is draft the Lead Health File.
Tamara will follow up with you to see how we can get you setting sorted out so you get these in the future.

Dave

Health Protection Branch is working with Health Link BC to create a Health File for Lead in Drinking Water. Below is a link to the latest draft of the health file, which is posted on sharepoint within active documents. Please review and add your comments and suggested changes using track changes. Please send your comments to Manish.OmPrakash@gov.bc.ca by June 15th, 2016.

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Magee, Lynne <Lynne.Magee@viha.ca>
Sent: January 4, 2017 9:39 AM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Subject: Lead for Schools
Attachments: Lead info handout for Schools provincial draft - Island Health Comments.docx

Lynne Magee, BSc, CPHI(C)
Regional Drinking Water Coordinator

Island Health
3rd Floor, 6475 Metral Drive
Nanaimo, BC V9T 2L9
Phone: 250-755-3339
Fax: 250-755-3372

Email: lynne.magee@viha.ca

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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: January 4, 2017 2:50 PM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Cc: [NHA] Belanger, Darrell; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Subject: Lead in schools
Attachments: VCH Advice re Lead in Drinking Water - School Final_APR272016.pdf; VCH School Flushing Program Development Guide_JUN172016.pdf; VCH Advice re Lead in Drinking Water - Day Care Final _APR272016.pdf; VCH Advice re Lead in Drinking Water - Public Final_APR272016.pdf

Hi Joanne and David,
I believe I have sent these to you before but just to be certain – here are the guidance documents we have used with respect to lead. With respect to schools specifically, our experience has been that the flushing is deemed to be too time consuming and there has also been some concerns expressed over the volume of water to be flushed to waste. In the alternative – at least one SD has opted to shut down the hallway fountains in favor of installing one or two (per school) lead free bottle filling stations with filtration for lead reduction.
I am uncertain if your draft document will have the desired effect.
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: January 4, 2017 4:33 PM
To: XT:Fumerton, Raina HLTH:IN; Edwards, Joanne HLTH:EX
Cc: Tamblyn, Dave; Belanger, Darrell
Subject: RE: New announcement on Drinking Water Leasdership Council SP Site

Hi Raina:
I think the answer to your question is…"it depends what you are trying to demonstrate".

To answer a question such as "should I be worried that my child has been exposed to enough lead from school drinking water to be a health concern?", then random daytime sampling will give you an estimate of what kind of concentrations kids are typically actually drinking during the day, which can be compared to the MAC in the GCDWQ. (of course a number of these samples averaged together will be better)

Alternately, If you want to determine "is a specific fountain contributing to lead in the water and should it be changed out/flushed or other mitigation measure taken?", then taking a first draw sample as part of a systematic assessment should help expose the culprits.

I wish it were simpler, but does that make sense?

Dave

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Wednesday, January 4, 2017 4:09 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Cc: Tamblyn, Dave; Belanger, Darrell
Subject: FW: New announcement on Drinking Water Leasdership Council SP Site

Looks great just a couple comments – see attached.
Darrell/Dave can you take a look at my comment re: our NH recommendations to schools and daycares? I just want to confirm that our recommendation to date has been to use the "first draw" method.
r
Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Acting North East Medical Health Officer
Northern Health Authority
250-631-4261

From: Drinking Water Leadership Council [mailto:DoNotReply@SP2010.gov.bc.ca]
Sent: Wednesday, January 04, 2017 1:40 PM
To: Yamada, Christina; Byron, Dan; Belanger, Darrell; Tamblyn, Dave; [IHA] Larder, Dr. Andrew; Allison, Sandra; Gary.Anderson@viha.ca; Norlin, J Ivor; james.lu@vch.ca; Gola, Juliana; len.clarkson@vch.ca; Stajduhar, Linda; lisa.mu@fraserhealth.ca; Crowe, Marianne; michael.wu@vch.ca; murray.sexton@viha.ca; marc.zubel@fraserhealth.ca; paul.hasselback@viha.ca; Fumerton, Raina; Parsonage, Roger; sylvia.struck@fnha.ca; tintun@fraserhealth.ca
Subject: New announcement on Drinking Water Leasdership Council SP Site

Please visit the DWLC SharePoint site to view new announcement.

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: January 4, 2017 2:53 PM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Cc: XT:HLTH Lu, James; [NHA] Belanger, Darrell; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Subject: water corrosivity - draft guideline
Attachments: Draft Policy on Reducing Exposure to Lead through Drinking Water.docx; Draft BC Lead Policy November 3.pdf

Hi Joanne and David,
Here are our comments on your draft policy document – for discussion tomorrow I believe. Unfortunately James Lu will not be able to attend the call.

Regards,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: January 9, 2017 11:10 AM
To: 'Anne Vezina'; 'angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'Peter_Workman@gov.nt.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'pat.brooks@gov.yk.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'MLeBlanc-Havard@GOV.NU.CA'
Cc: 'John Cooper'; 'Michele Giddings'; 'Stephanie McFadyen'; 'Richard Carrier'; 'France Lemieux'; 'Veronique Morisset'; 'Tina Brennan'; 'Julie Bourdon-Lacombe'; 'Joyce Mortimer'; 'Richard Charron'
Subject: RE: Lead - consultation document to be posted this week

Super! I'm crossing my fingers, as I think this will help us immensely in moving forward here.

From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: Monday, January 9, 2017 10:22 AM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tina Brennan; Julie Bourdon-Lacombe; Joyce Mortimer; Richard Charron
Subject: Lead - consultation document to be posted this week

CDW members,

For your information, the Guideline Technical Document on lead in drinking water got internal approval for posting for public consultation. Posting date is expected to be **Wednesday of this week, January 11th.** We have be assured it should not be delayed this time around but If it does we will let you know as soon as we can.

Thank you,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Anne Vezina <anne.vezina@hc-sc.gc.ca>
Sent: January 11, 2017 8:37 AM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tina Brennan; Joyce Mortimer; Julie Bourdon-Lacombe; Richard Charron; Kristina Taracha
Subject: Guideline Technical Document for lead in drinking water - now posted for public comment!

CDW folks,

The Guideline Technical Document for lead in drinking water is now posted for a 2-month public comment period **ending March 15 2017**:

www.healthycanadians.gc.ca/health-system-systeme-sante/consultations/lead-drinking-water-plomb-eau-potable/document-eng.php
www.canadiensensante.gc.ca/health-system-systeme-sante/consultations/lead-drinking-water-plomb-eau-potable/document-fra.php

Please make sure your folks know and have a chance to review it!

Cheers,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: January 11, 2017 4:31 PM
To: 'Anne Vezina'
Cc: Zemanek, Michael HLTH:EX
Subject: Impact Statement - Draft Health Canada Copper Guidelines

Hi Anne:

s.22 Here is an impact statement for copper.

The proposed change to the copper guidelines to maintain the Aesthetic Objective (AO) at 1.0mg/L as well as the addition of a Maximum Acceptable Concentration (MAC) of 2.0 mg/L based on studies citing an association between long term exposure to copper and liver and kidney effects is anticipated to have some notable shifts in how copper in drinking water is measured. Similar to lead, a notable impact of the new MAC will be the shift in focus from centralized sampling to point of consumption based programs. Sampling of buildings, particularly high risk institutions such as schools and daycares, will remain a cost pressure. Questions of whether this is responsibility of water suppliers or building owners will be raised.

Given that the data on water concentrations reported in section 5.2 shows very few exceedances of the MAC, it is anticipated the proposed change in the guideline will have little impact on the water delivered by water supply systems. However, as leaching from fixtures within individual buildings is likely the most significant contributor to copper concentration in water, it is therefore difficult to anticipate copper concentrations delivered at individual taps, as this will vary from building to building, depending on plumbing, and system to system, depending on how corrosive water is.

The proposed addition of a Maximum Acceptable Concentration will also mean significantly different messaging from what health officials have historically given regarding copper. It will also require the need for clear and meaningful advice to those that have been consuming water sources that exceed the proposed MAC, who have previously been told that elevated copper is merely an aesthetic concern.

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Belanger, Darrell <Darrell.Belanger@northernhealth.ca>
Sent: January 18, 2017 10:13 AM
To: Edwards, Joanne HLTH:EX; Zubel, Marc; Clarkson, Len [STS]; Magee, Lynne; Sylvia Struck
Cc: Norlin, J Ivor; Hesketh, Courtney; Fishwick, David HLTH:EX
Subject: RE: Point person for schools

Hi Joanne,
NH doesn't have a point person. A number of EHOs have connected with school district representatives in their respective geographical areas.

Darrell Belanger, P.Eng
NW Team Lead
Public Health Protection
3412 Kalum St. | Terrace, BC | V8G 4T2
p: 250.631.4222 | fx: 250.638.2209



From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Wednesday, January 18, 2017 9:45 AM
To: Zubel, Marc; Clarkson, Len [STS]; Belanger, Darrell; Magee, Lynne; Sylvia Struck
Cc: Norlin, J Ivor; Hesketh, Courtney; Fishwick, David HLTH:EX
Subject: Point person for schools

Hi all,

I am just checking in to see if any of your RHAs have a point person for receiving questions for schools regarding testing for lead? Our office has received a couple of enquiries from Independent schools – the Ministry of Education Independent School Branch has informed me that their policy requiring testing of independent schools for lead will be posted online within the next week. I will send you the link to the policy once it goes live. It is very similar to the policy released last year by the Ministry of Education for public schools, which for example requires schools test for lead in buildings built prior to 1990. If there is someone besides yourselves you wish that you wish me to direct them towards if we receive more please let me know. IH let me know they have an EHO (Juliana Gola) designated to work with schools on the issue so I thought I would ask everyone else as well. Otherwise, I will continue to direct people to yourselves so that you can connect them with the appropriate geographical EHO.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: January 18, 2017 2:06 PM
To: 'Anne Vezina'; 'angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'Peter_Workman@gov.nt.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'pat.brooks@gov.yk.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'MLeBlanc-Havard@GOV.NU.CA'
Cc: 'John Cooper'; 'Michele Giddings'; 'Stephanie McFadyen'; 'Richard Carrier'; 'France Lemieux'; 'Veronique Morisset'; 'Tina Brennan'; 'Joyce Mortimer'
Subject: RE: Request for THM data from Department of Cancer Epidemiology and Prevention Research, Alberta Health Services

Yes I had heard from them – We don't have a central data base of this data so I recommended they approach individual suppliers.

From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: Wednesday, January 18, 2017 11:44 AM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tina Brennan; Joyce Mortimer
Subject: Fw: Request for THM data from Department of Cancer Epidemiology and Prevention Research, Alberta Health Services

CDW folks,

It seems that Donald and Kim got a request for THMs data from the Department of Cancer Epidemiology and Prevention Research, Alberta Health Services. Could you please let me know if you also got this request? (see email from Donald below).

Cheers,

Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

----- Forwarded by Anne Vezina/HC-SC/GC/CA on 2017-01-18 03:40 PM -----

From: Donald Reid <donald.reid@gov.ab.ca>

To: "Anne Vezina (anne.vezina@hc-sc.gc.ca)" <anne.vezina@hc-sc.gc.ca>
Cc: "Veronique Morisset (Veronique.Morisset@hc-sc.gc.ca)" <Veronique.Morisset@hc-sc.gc.ca>
Date: 2017-01-18 02:24 PM
Subject: Request for THM data from Department of Cancer Epidemiology and Prevention Research, Alberta Health Services

---

Good afternoon Anne

Can you ask CDW members if they been contacted by the Department of Cancer Epidemiology and Prevention Research, Alberta Health Services, to provide provincial THM data in drinking-water? We've been approached but were unaware of the project and sop are trying to find out who has been approached.

Many thanks

Donald

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Mori, Alicia HLTH:EX

From: Philip, Kim (SD) <Kim.Philip@gov.mb.ca>
Sent: January 18, 2017 2:09 PM
To: Anne Vezina
Cc: Michele Giddings; donald.reid@gov.ab.ca; Roberecki, Susan (HSAL); Coulibaly, Housseini (SD); Peter_Workman@gov.nt.ca; Fishwick, David HLTH:EX
Subject: RE: THM data from Manitoba for epidemiological research study
Attachments: FW: THM data from Manitoba for epidemiological research study

Hi Anne,

Yes, we did get information on their study. I've attached the entire e-mail chain, including our request for more information, their response, and some initial comments/concerns from Dr. Susan Roberecki the medical lead who would most likely be responding to any concerns generated by the study. Xin's scientific protocol is attached to the e-mail attached. Dr. Housseini Coulibaly from our office will be responding to the data request. We don't actually have the full data set requested. Lots of caveats on the data we do have; but we're doing our best to respond.

Copying Susan and Housseini for information; also Donald, David and Peter as I think they were the only others who got the same request.

Kim Philip

From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: January-18-17 2:03 PM
To: Philip, Kim (SD)
Cc: Michele Giddings
Subject: Fw: THM data from Manitoba for epidemiological research study

Hi again, Kim,

You are probably super busy with tons of other stuff, but did you get a chance to ask for information from the researcher about their study (see my previous email below)?

Thanks again,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada

Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574
----- Forwarded by Anne Vezina/HC-SC/GC/CA on 2017-01-18 04:00 PM -----

From: Anne Vezina/HC-SC/GC/CA
To: "Philip, Kim (SD)" <Kim.Philip@gov.mb.ca>
Date: 2017-01-06 11:49 AM
Subject: Re: FW: THM data from Manitoba for epidemiological research study

---

Hi again, Kim.

We are not aware of this study. What was discussed at CDW was a similar study **but done in the US** (actually an international review of cancer and THM exposure in 7 countries) and a request for THM data was sent by that researcher to CDW members (with a cc to us). We will ask around to see if anyone is aware of this one or was asked to comment on the proposal.

Could you ask the researcher to send you more information about the study (funding source, goals, protocol etc), particularly since it appears that all CDW members will be getting a similar request for data. We would also like to be aware of that study and what its goals are. Obviously we rather prefer these requests to go through the CDW Secretariat to avoid confusion...

Thank you,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
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Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

"Philip, Kim (SD)" ---2017-01-05 05:13:36 PM---Could you remind me if this was discussed at the last meeting? Did all CDW members get the same req

From: "Philip, Kim (SD)" <Kim.Philip@gov.mb.ca>
To: Joyce Mortimer <Joyce.Mortimer@hc-sc.gc.ca>, Anne Vezina <anne.vezina@hc-sc.gc.ca>
Date: 2017-01-05 05:13 PM
Subject: FW: THM data from Manitoba for epidemiological research study

---

Could you remind me if this was discussed at the last meeting? Did all CDW members get the same request?

Kim Philip

Kimberley A. Philip, M.Eng., P.Eng.,
Director, Office of Drinking Water
1007 Century Street, Winnipeg, MB R3H 0W4
Phone: 204-945-7010; Cell: 204-232-0022
Fax: 204-945-1365; E-mail: kim.philip@gov.mb.ca
24 Hr Emergency Response Line: 204-944-4888
Website: manitoba.ca/drinkingwater

Manitoba
Sustainable Development

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> **From:** Xin Grevers [mailto:Xin.Grevers@albertahealthservices.ca]
> **Sent:** January-05-17 3:09 PM
> **To:** Philip, Kim (SD)
> **Subject:** THM data from Manitoba for epidemiological research study
>
> Dear Ms. Kim Philip,
>
> My name is Xin Grevers, I am a research study coordinator from the Department of Cancer Epidemiology and Prevention Research, Alberta Health Services.
>
> Our research team is part of a collaborative team that is conducting a national research study on population attributable cancer risk associated with modifiable risk factors in Canada. I are seeking provincial data on Trihalomethanes (THM) levels in drinking water and associated population data from each province and territory for year 1985 to present.
>
> I am contacting you as you are listed on the Federal-Provincial-Territorial Committee on Drinking Water as the representative for Manitoba. I was wondering if you could kindly advise me on how to acquire the provincial THM and population data for Manitoba. If you are unable to provide the information, I would greatly appreciate it if you could kindly point me to the appropriate contact.
>
> Thank you very much for your help.
>
> Kind regards,
>
> Xin
> **Xin Grevers,** M.Sc.

Study Coordinator
Department of Cancer Epidemiology and Prevention Research,
Alberta Health Services - Cancer Control Alberta
5th Floor, Holy Cross Centre
Box ACB, 2210 2nd St. SW, Calgary, AB T2S 3C3
Tel: 403-698-8060
Fax: 403-476-2654
E-mail: xin.grevers@albertahealthservices.ca



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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: January 19, 2017 3:43 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Cc: Zemanek, Michael HLTH:EX
Subject: RE: 2016 Drinking Water [Pb] Schools Report & Updated guidance documents

Hi David,
Thanks for the call back (even though I didn't leave a message!).
Yes – we are aware of the underlying intent of the GCDWQ and the issue of average concentrations but we needed some reference point. This is not a change from past school surveys and recommendations by VCH. Our media folks are aware that it may attract some attention but we are not expecting much.
As we discussed our findings are based on a limited data set from our latest survey of school lead levels, which did not assess rebound effects post flush. With regard to our sampling protocol, it was developed after a review of other jurisdictions and our past experience, but before any provincial consensus. We would be happy to work towards a consistent approach.

Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, January 19, 2017 11:30 AM
To: Edwards, Joanne HLTH:EX; Clarkson, Len [STS]
Cc: Zemanek, Michael HLTH:EX
Subject: RE: 2016 Drinking Water [Pb] Schools Report & Updated guidance documents

Hi Len
I think the paper is very interesting and provides evidence to supports what we have suspected – flushing can be an effective means of reducing lead concentration in water. It is helpful to demonstrate this locally.

I know you weren't looking for comments , but I thought I'd give you a heads up on one thing I noticed in the report anyways. It may be innocuous or it may raise questions later when the media gets a hold of it.

The comment is regarding a theme that starts with the first sentence of the document and repeats itself throughout: The paper compares pre-flush samples to the MAC. This is inconsistent with the GCDWQ, which specifically states that it should not be used for this purpose. See the following excerpts from the GCDWQ below:

> Pg. 1
> The maximum acceptable concentration (MAC) for lead in drinking water is 0.010 mg/L (10 µg/L). It is recommended that faucets be flushed before water
> is taken for analysis or consumption.
> Pg. 3

> Because the maximum acceptable concentration (MAC) for lead in drinking water is intended to apply to average concentrations in distributed water, sampling should be carried out on flushed samples at the point of consumption.
> Pg. 9
> Because the MAC for lead is based on chronic effects, it is intended to apply to average concentrations in water consumed for extended periods; short-term consumption of water containing lead at concentrations above the MAC does not necessarily pose undue risk to health.

While I may sound like I am splitting hairs here, my point is that the MAC is designed to evaluate health risk, and should not be used to evaluate pre-flush samples. It is fine to choose a 10µg/L value as an evaluation/screening threshold, it just should not be referred to as the MAC in this context. This is why the USEPA and HC corrosion control documents refer to "action levels" for pre-flush samples rather than MAC, and it is noteworthy that these action levels are higher values than the MAC. That said, if flushing programs that can be demonstrated to reduce lead Levels to below 10µg/L, then they will in effect, meet the MAC, provided the lead levels don't jump back up 30 minutes or an hour later.

This all sounds like semantics, however the end effect is that I see a risk that someone is going to point to the pre-flush part of the report, which currently says that schools don't meet the MAC (sound alarm bells), when in fact, the report is actually demonstrating that for schools that triggered the action level, flushing was an effective method of ensuring that the water typically consumed met the MAC (stand down on the alarm bells).

The one question the report doesn't answer for me is what happens to lead levels after flushing – how long does it take for concentrations to spike back up again. That is a question for another day though.

As for how does your proposed sampling guidance impact the document that we have drafted? I am concerned it may undermine provincial consistency, but perhaps it simply raises yet another sampling objective in addition to the ones we list – to screen for possible problems requiring further action. I'll compare them through this lens. With a little tweaking this approach may fill a potential gap in the context of how the MoEd wrote their letter.

Dave

From: Edwards, Joanne HLTH:EX
Sent: Wednesday, January 18, 2017 3:21 PM
To: 'Clarkson, Len [STS]'; Fishwick, David HLTH:EX
Subject: RE: 2016 Drinking Water [Pb] Schools Report & Updated guidance documents

Hi Len,

I think there may be a few points worth discussing.

For example, the guidance on flushing does not align (i.e., you would not need to flush every tap for five minutes) with the recommendations from Ontario or the draft flushing guidance from MoH, which also was based on the guidance from Ontario. Their guidance is to fully flush the tap at the end of a line (five minutes or more depending on configuration) and the work your way back and flush the taps leading up to the end of the line for 10 seconds. As the line has been fully flushed you only need to flush the line leading to the fixtures. Flushing every tap for five minutes would be more than required.

It may also be worth a chat on sampling protocol going forward given the draft guidance coming from MoH and Health Canada.

Cheers,

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Wednesday, January 18, 2017 2:55 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: RE: 2016 Drinking Water [Pb] Schools Report & Updated guidance documents

No it was just fyi David.
We will be posting it on our website next week I believe, at which time I will also circulate to hadwc.

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, January 18, 2017 2:53 PM
To: Clarkson, Len [STS]; Edwards, Joanne HLTH:EX
Subject: RE: 2016 Drinking Water [Pb] Schools Report & Updated guidance documents

Thanks Len – Are you looking for comments?

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Tuesday, January 17, 2017 1:24 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: FW: 2016 Drinking Water [Pb] Schools Report & Updated guidance documents
Importance: High

Hi Joanne and David,
Here is our finalized report on lead as well as our updated guidance documents. As you will see we are still rolling this out so please do not distribute further at this time. I will send this along to HADWC in the next week or so.
Thanks
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841

www.vch.ca

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From: Chong, Steve [Health Protection] [NS]
Sent: Friday, January 13, 2017 2:14 PM
To: Clarkson, Len [STS]
Subject: FW: 2016 Drinking Water [Pb] Schools Report & Updated guidance documents
Importance: High

Len, It's OK to share with the Ministry of Health now, but can you let them know that we are still in process of meeting with our school districts to share the report and hope to have contacted them all by the end of next week. After meeting with all our school districts, our plan is to have the documents available on our website and further shared with our water system operators.

Steve Chong
Manager, Environmental Health
Vancouver Coastal Health
Tel. 604-983-6813
Fax. 604-983-6702
Email. steve.chong@vch.ca

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From: Chong, Steve [Health Protection] [NS]
Sent: Thursday, January 12, 2017 2:39 PM
To: Molder, Darren [SC]; Watson, Cindy [SC]; Massoud, Nader [NS]; Ritson, Mark [VC]; Ip, Jessica [VC]; Kassimatis, Jennifer [VC]; Radnidge, Michele [RH]; Cross, Dalton [RH]; Clarkson, Len [STS]
Cc: Taki, Richard [VC]; Lu, James [RH]; Kouris, Angelo [VC]; Wu, Michael [VC]; Ash, Randy [VC]; Kurzac, Claudia [RH]; Dawar, Meena [VC]; Lysyshyn, Mark [NS]; Martiquet, Paul [SC]; Daly, Patty [VC]; Choi, Jonathan [VC]
Subject: RE: 2016 Drinking Water [Pb] Schools Report & Updated guidance documents

The pdf conversion issue has been corrected with the report. Apologies again.

Steve Chong
Manager, Environmental Health
Vancouver Coastal Health
Tel. 604-983-6813
Fax. 604-983-6702
Email. steve.chong@vch.ca

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From: Chong, Steve [Health Protection] [NS]
Sent: Thursday, January 12, 2017 2:05 PM
To: Molder, Darren [SC]; Watson, Cindy [SC]; Massoud, Nader [NS]; Ritson, Mark [VC]; Ip, Jessica [VC]; Kassimatis, Jennifer [VC]; Radnidge, Michele [RH]; Cross, Dalton [RH]; Clarkson, Len [STS]
Cc: Taki, Richard [VC]; Lu, James [RH]; Kouris, Angelo [VC]; Wu, Michael [VC]; Ash, Randy [VC]; Kurzac, Claudia [RH]; Dawar, Meena [VC]; Lysyshyn, Mark [NS]; Martiquet, Paul [SC]; Daly, Patty [VC]
Subject: 2016 Drinking Water [Pb] Schools Report & Updated guidance documents
Importance: High

Attached is the 2016 results and recommendations from our sampling of drinking water lead concentrations in public schools within VCH. We have modified our flushing recommendation to flush every drinking water tap and fountain daily *for 5 minutes or until the water turns cold*, whichever comes first. This is an interim recommendation based on our limited data, guidance from other jurisdictions, as well as practicality. The guidance documents have been updated to reflect this change.

Please share this report and the updated guidance documents with your school districts. Also, feel free to share with your private schools that are asking for additional information and your water purveyors that supply drinking water to schools. Thanks.

Steve Chong
Manager, Environmental Health
Vancouver Coastal Health
Tel. 604-983-6813
Fax. 604-983-6702
Email. steve.chong@vch.ca

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Mori, Alicia HLTH:EX

From: George Somers <ghsomers@gov.pe.ca>
Sent: January 19, 2017 4:11 AM
To: Kevin.Gould@gnb.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; Kim.Philip@gov.mb.ca; hkhan@gov.nl.ca; Peter_Workman@gov.nt.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; anne.vezina@hc-sc.gc.ca; Caroline.Robert@mddelcc.gouv.qc.ca; angelina.polegato@novascotia.ca; Satish.Deshpande@ontario.ca; Sam.Ferris@wsask.ca
Cc: France.Lemieux@hc-sc.gc.ca; john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; richard.carrier@hc-sc.gc.ca; Stephanie.McFadyen@hc-sc.gc.ca; Tina.Brennan@hc-sc.gc.ca; Veronique.Morisset@hc-sc.gc.ca
Subject: Re: Request for THM data from Department of Cancer Epidemiology andPrevention Research, Alberta Health Services
Attachments: Portable Network Graphics Format.png

Sam from the correspondence I have I believe it is the same initiative...this fellow refers to Tasha as a colleague and infers that he is picking up the data collection from her.

Cheers

George

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Sam Ferris
Sent: Wednesday, January 18, 2017 6:44 PM
To: George Somers; Kevin.Gould@gnb.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; Kim.Philip@gov.mb.ca; hkhan@gov.nl.ca; Peter_Workman@gov.nt.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Anne Vezina; Caroline.Robert@mddelcc.gouv.qc.ca; angelina.polegato@novascotia.ca; Satish.Deshpande@ontario.ca
Cc: France Lemieux; John Cooper; Joyce Mortimer; Michele Giddings; Richard Carrier; Stephanie McFadyen; Tina Brennan; Veronique Morisset
Subject: RE: Request for THM data from Department of Cancer Epidemiology and Prevention Research, Alberta Health Services

Hello Anne, Donald: I have not seen this request yet, but conceivably it could be somewhere else here in the agency. I did receive a request a couple of weeks back for historical THM and community specific data from a researcher by the name of Tasha Narain out of the department of public health science from Queen's University. That data has been provided to Tasha directly.
Sam

Sam Ferris - B.Sc.(Hons)
Executive Director, Environmental and Municipal Management Services
420-2365 Albert Street
Regina, SK S4P 4K1
Ph: 306.787.6193 | Cell: 306.536.1480 | Fax: 306.787.0780
wsask.ca | Sam.Ferris@wsask.ca



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From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: January-18-17 1:44 PM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; Sam Ferris; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tina Brennan; Joyce Mortimer
Subject: Fw: Request for THM data from Department of Cancer Epidemiology and Prevention Research, Alberta Health Services

CDW folks,

It seems that Donald and Kim got a request for THMs data from the Department of Cancer Epidemiology and Prevention Research, Alberta Health Services. Could you please let me know if you also got this request? (see email from Donald below).

Cheers,

Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

----- Forwarded by Anne Vezina/HC-SC/GC/CA on 2017-01-18 03:40 PM -----

From: Donald Reid <donald.reid@gov.ab.ca>
To: "Anne Vezina (anne.vezina@hc-sc.gc.ca)" <anne.vezina@hc-sc.gc.ca>

Cc: "Veronique Morisset (Veronique.Morisset@hc-sc.gc.ca)" <Veronique.Morisset@hc-sc.gc.ca>
Date: 2017-01-18 02:24 PM
Subject: Request for THM data from Department of Cancer Epidemiology and Prevention Research, Alberta Health Services

---

Good afternoon Anne

Can you ask CDW members if they been contacted by the Department of Cancer Epidemiology and Prevention Research, Alberta Health Services, to provide provincial THM data in drinking-water? We've been approached but were unaware of the project and sop are trying to find out who has been approached.

Many thanks

Donald

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Mori, Alicia HLTH:EX

From: Caroline.Robert@mddelcc.gouv.qc.ca
Sent: January 19, 2017 4:59 AM
To: ghsomers@gov.pe.ca; Kevin.Gould@gnb.ca; donald.reid@gov.ab.ca; Fishwick, David HLTH:EX; Kim.Philip@gov.mb.ca; hkhan@gov.nl.ca; Peter_Workman@gov.nt.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; anne.vezina@hc-sc.gc.ca; angelina.polegato@novascotia.ca; Satish.Deshpande@ontario.ca; Sam.Ferris@wsask.ca
Cc: France.Lemieux@hc-sc.gc.ca; john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; richard.carrier@hc-sc.gc.ca; Stephanie.McFadyen@hc-sc.gc.ca; Tina.Brennan@hc-sc.gc.ca; Veronique.Morisset@hc-sc.gc.ca
Subject: Re: Request for THM data from Department of Cancer Epidemiology andPrevention Research, Alberta Health Services

We got a request from Queens's University a few weeks ago, but no request from Alberta Health Services.

Envoyé de mon smartphone BlackBerry 10 sur le réseau TELUS.

De: George Somers
Envoyé: jeudi 19 janvier 2017 7:11 AM
À: Kevin.Gould@gnb.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; Kim.Philip@gov.mb.ca; hkhan@gov.nl.ca; Peter_Workman@gov.nt.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; anne.vezina@hc-sc.gc.ca; Robert, Caroline; angelina.polegato@novascotia.ca; Satish.Deshpande@ontario.ca; Sam.Ferris@wsask.ca
Cc: France.Lemieux@hc-sc.gc.ca; john.cooper@hc-sc.gc.ca; Joyce.Mortimer@hc-sc.gc.ca; michele.giddings@hc-sc.gc.ca; richard.carrier@hc-sc.gc.ca; Stephanie.McFadyen@hc-sc.gc.ca; Tina.Brennan@hc-sc.gc.ca; Veronique.Morisset@hc-sc.gc.ca
Objet: Re: Request for THM data from Department of Cancer Epidemiology andPrevention Research, Alberta Health Services

Sam from the correspondence I have I believe it is the same initiative...this fellow refers to Tasha as a colleague and infers that he is picking up the data collection from her.

Cheers

George

Sent from my BlackBerry 10 smartphone on the Bell network.

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Sent: Wednesday, January 18, 2017 6:44 PM
To: George Somers; Kevin.Gould@gnb.ca; donald.reid@gov.ab.ca; David.Fishwick@gov.bc.ca; Kim.Philip@gov.mb.ca; hkhan@gov.nl.ca; Peter_Workman@gov.nt.ca; MLeBlanc-Havard@GOV.NU.CA; pat.brooks@gov.yk.ca; Anne Vezina; Caroline.Robert@mddelcc.gouv.qc.ca; angelina.polegato@novascotia.ca; Satish.Deshpande@ontario.ca
Cc: France Lemieux; John Cooper; Joyce Mortimer; Michele Giddings; Richard Carrier; Stephanie McFadyen; Tina Brennan; Veronique Morisset
Subject: RE: Request for THM data from Department of Cancer Epidemiology and Prevention Research, Alberta Health Services

Hello Anne, Donald: I have not seen this request yet, but conceivably it could be somewhere else here in the agency. I did receive a request a couple of weeks back for historical THM and community specific data from a

researcher by the name of Tasha Narain out of the department of public health science from Queen's University. That data has been provided to Tasha directly.
Sam

Sam Ferris - B.Sc.(Hons)
Executive Director, Environmental and Municipal Management Services
420-2365 Albert Street
Regina, SK S4P 4K1
Ph: 306.787.6193 | Cell: 306.536.1480 | Fax: 306.787.0780
wsask.ca | Sam.Ferris@wsask.ca

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Water Security Agency

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From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: January-18-17 1:44 PM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; Sam Ferris; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tina Brennan; Joyce Mortimer
Subject: Fw: Request for THM data from Department of Cancer Epidemiology and Prevention Research, Alberta Health Services

CDW folks,

It seems that Donald and Kim got a request for THMs data from the Department of Cancer Epidemiology and Prevention Research, Alberta Health Services. Could you please let me know if you also got this request? (see email from Donald below).

Cheers,

Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

----- Forwarded by Anne Vezina/HC-SC/GC/CA on 2017-01-18 03:40 PM -----

From: Donald Reid <donald.reid@gov.ab.ca>
To: "Anne Vezina (anne.vezina@hc-sc.gc.ca)" <anne.vezina@hc-sc.gc.ca>
Cc: "Veronique Morisset (Veronique.Morisset@hc-sc.gc.ca)" <Veronique.Morisset@hc-sc.gc.ca>
Date: 2017-01-18 02:24 PM
Subject: Request for THM data from Department of Cancer Epidemiology and Prevention Research, Alberta Health Services

---

Good afternoon Anne

Can you ask CDW members if they been contacted by the Department of Cancer Epidemiology and Prevention Research, Alberta Health Services, to provide provincial THM data in drinking-water? We've been approached but were unaware of the project and sop are trying to find out who has been approached.

Many thanks

Donald

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Mori, Alicia HLTH:EX

From: Lu, James [RH] <James.Lu@vch.ca>
Sent: January 23, 2017 4:16 PM
To: Edwards, Joanne HLTH:EX; Dolling, Roya [NS]
Cc: Fishwick, David HLTH:EX; Zemanek, Michael HLTH:EX; Chong, Steve [Health Protection] [NS]; Clarkson, Len [STS]; Wu, Michael [VC]
Subject: Re: lead guidance VCH & MoH

Hi Joanne
Roya could help set up a conf call . I would also invite Steve, Len, and Michael on the call as well

Thanks

James Lu
Medical Health Officer
VCH
From: Edwards, Joanne HLTH:EX
Sent: Monday, January 23, 2017 3:49 PM
To: Lu, James [RH]
Cc: Fishwick, David HLTH:EX; Zemanek, Michael HLTH:EX
Subject: lead guidance VCH & MoH

Good afternoon James,

David Fishwick, Mike Zemanek and I were hoping to set up a time to have a call with you regarding the report VCH recently completed and its accompanying flushing and sampling guidance for schools. Thank you for sharing the report. It has many interesting findings that provide further evidence to support the recommendations and work being done in schools and the community around lead. We have noted some differences in the guidance developed by VCH and the draft guidance under development from the Ministry. While the differing guidance is similar and not contradictory, we thought it would be best to have a discussion on how we can best move things forward together to develop policies and recommendations at a provincial level around lead evaluation and mitigation in different settings as per EHPAC's request.

Could you let me know some times when you might be available and I will arrange a call with the folks here as well?

Our best,

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: February 10, 2017 4:28 PM
To: 'Tamblyn, Dave'
Subject: RE: Graphic you created

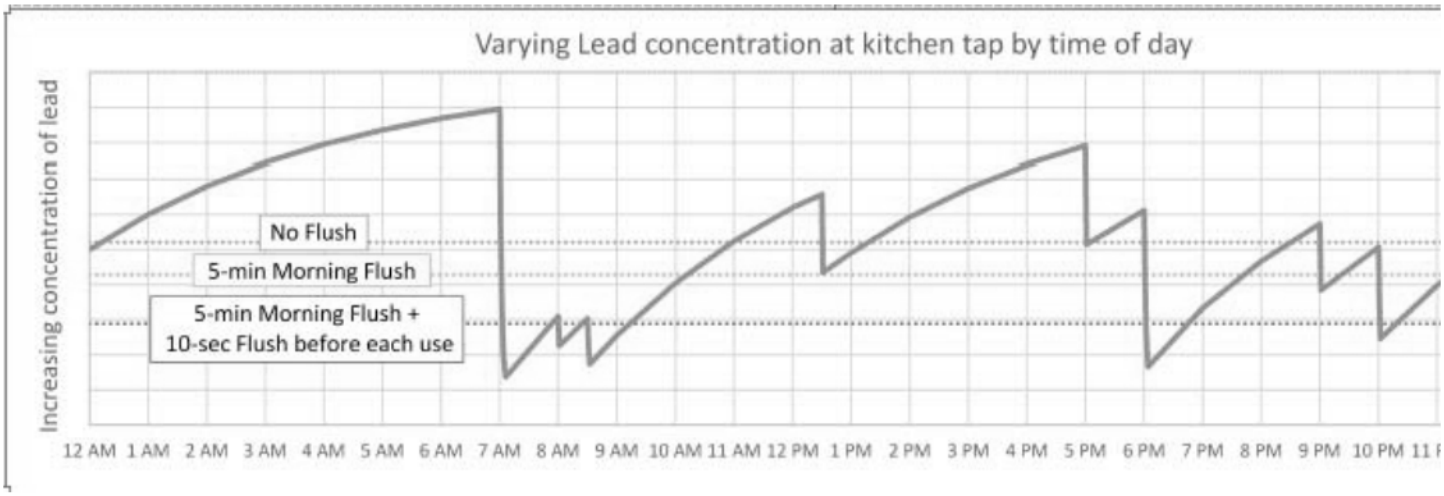
Great, thanks!

From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Friday, February 10, 2017 1:36 PM
To: Fishwick, David HLTH:EX
Subject: RE: Graphic you created

Hi Dave,
Yes, I have the original … just have to find it. It's the "example" tab on the attached xlsx. You have my permission to use it or modify the model parameters to make a different one.
DRT.
Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, February 09, 2017 11:00
To: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Subject: Graphic you created

Hey dave – you had pasted this into the PDF you sent with comments on our lead document. It provides a great visual on how lead concentrations can fluctuate throughout the day and determining a MAC is difficult. Do you mind if I steal it and use it? Do you have the original version?



David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*

Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: February 20, 2017 9:48 AM
To: 'Anne Vezina'
Subject: FW: NSF-ANSI 53 - Lead Reduction

Hi Anne:

Forwarding this email trail along to you guys for consideration. The question being whether there has been any thought given to implications of dropping the MAC for lead to 5ug/L+ALARA if NSF/ANSI only certifies units to 10ug/l?

I don't recall if any of our discussions touched on this issue.

Dave

From: Zemanek, Michael HLTH:EX
Sent: Monday, February 20, 2017 9:31 AM
To: Fishwick, David HLTH:EX
Subject: FW: NSF-ANSI 53

Hi Dave,

Can you check to see if HC has considered the information below from Michael Wu? i.e. are there technical limits to lead reduction to the lower guideline?

M

From: Wu, Michael [VC] [mailto:Michael.Wu@vch.ca]
Sent: Monday, February 20, 2017 9:08 AM
To: Zemanek, Michael HLTH:EX
Cc: XT:HLTH Lu, James; Chong, Steve [Health Protection] [NS]; Clarkson, Len [STS]
Subject: FW: NSF-ANSI 53

Hi Mike
You may want to consider if the suggestion below should be followed up, please?
I first made the enquiry to NSF because we are advising school to use NSF certified Lead reduction equipment as one of the options. I then realized that NSF53 is certified for reduction limit down to 10 ug/L. I wonder if the NSF-53 standard will still meet the intent of the proposed changes to Health Canada ALARA MAC to 5 ug/L?

Michael Wu, P.Eng.
Public Health Engineer
Vancouver Coastal Health
Phone: 604-675-3860

From: Leslie, Monica [mailto:mleslie@nsf.org]
Sent: Monday, February 20, 2017 6:44 AM
To: Wu, Michael [VC]
Subject: Re: NSF-ANSI 53

Good Morning,

I am the secretariat for the Joint Committee on Drinking Water Treatment Units. Your inquiry regarding the lead reduction level in NSF/ANSI 53 was forwarded to me. To my knowledge, there has not been any discussions of changing the current lead effluent level. The current value is based on the U.S. EPA MCL so it would probably be unlikely to move unless the U.S. EPA changes their number. However, you are welcome to submit an issue paper to propose a revision to the standard at any time. The annual Joint Committee meeting is in May, so if you did wish to propose a revision, it would likely be presented at that meeting. Attached is the issue paper form. Please feel free to contact me if you have any other questions or if I can be of additional assistance.

Kind Regards,

Monica Leslie

Monica H. Leslie, MPH | Standards Development Liaison |Tel : +1-734-827-5643 | Email: mleslie@nsf.org|
NSF International | 789 N. Dixboro Road | Ann Arbor, MI | 48105 | USA | www.nsf.org

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this transmission are solely of the author and do not necessarily represent those of NSF International or its affiliates.

Mori, Alicia HLTH:EX

From: Zemanek, Michael HLTH:EX
Sent: February 20, 2017 9:31 AM
To: Fishwick, David HLTH:EX
Subject: FW: NSF-ANSI 53

Hi Dave,

Can you check to see if HC has considered the information below from Michael Wu? i.e. are there technical limits to lead reduction to the lower guideline?

M

From: Wu, Michael [VC] [mailto:Michael.Wu@vch.ca]
Sent: Monday, February 20, 2017 9:08 AM
To: Zemanek, Michael HLTH:EX
Cc: XT:HLTH Lu, James; Chong, Steve [Health Protection] [NS]; Clarkson, Len [STS]
Subject: FW: NSF-ANSI 53

Hi Mike
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I first made the enquiry to NSF because we are advising school to use NSF certified Lead reduction equipment as one of the options. I then realized that NSF53 is certified for reduction limit down to 10 ug/L. I wonder if the NSF-53 standard will still meet the intent of the proposed changes to Health Canada ALARA MAC to 5 ug/L?

Michael Wu, P.Eng.
Public Health Engineer
Vancouver Coastal Health
Phone: 604-675-3860

From: Leslie, Monica [mailto:mleslie@nsf.org]
Sent: Monday, February 20, 2017 6:44 AM
To: Wu, Michael [VC]
Subject: Re: NSF-ANSI 53

Good Morning,

I am the secretariat for the Joint Committee on Drinking Water Treatment Units. Your inquiry regarding the lead reduction level in NSF/ANSI 53 was forwarded to me. To my knowledge, there has not been any discussions of changing the current lead effluent level. The current value is based on the U.S. EPA MCL so it would probably be unlikely to move unless the U.S. EPA changes their number. However, you are welcome to submit an issue paper to propose a revision to the standard at any time. The annual Joint Committee meeting is in May, so if you did wish to propose a revision, it would likely be presented at that meeting. Attached is the issue paper form. Please feel free to contact me if you have any other questions or if I can be of additional assistance.

Kind Regards,

Monica Leslie

Monica H. Leslie, MPH | Standards Development Liaison |Tel : +1-734-827-5643 | Email: mleslie@nsf.org|
NSF International | 789 N. Dixboro Road | Ann Arbor, MI | 48105 | USA | www.nsf.org

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: February 20, 2017 12:07 PM
To: 'Anne Vezina'
Subject: RE: FW: NSF-ANSI 53 - Lead Reduction

Brilliant, thanks

From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: Monday, February 20, 2017 12:03 PM
To: Fishwick, David HLTH:EX
Subject: Re: FW: NSF-ANSI 53 - Lead Reduction

Hi David,

We work closely with NSF. Actually, France is very involved in the harmonization exercise. When a jurisdiction (either US or Canada) lowers their guideline/standard, it starts a process to modify the requirement of the NSF standard to the new harmonized level.

Chicken or the egg kind of thing!

Anne

_____
Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

"Fishwick, David HLTH:EX" ---2017-02-20 12:48:45 PM---Hi Anne: Forwarding this email trail along to you guys for consideration. The question being whether

From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
To: "'Anne Vezina'" <anne.vezina@hc-sc.gc.ca>
Date: 2017-02-20 12:48 PM
Subject: FW: NSF-ANSI 53 - Lead Reduction

Hi Anne:

Forwarding this email trail along to you guys for consideration. The question being whether there has been any thought given to implications of dropping the MAC for lead to 5ug/L+ALARA if NSF/ANSI only certifies units to 10ug/l?

I don't recall if any of our discussions touched on this issue.

Dave

From: Zemanek, Michael HLTH:EX
Sent: Monday, February 20, 2017 9:31 AM
To: Fishwick, David HLTH:EX
Subject: FW: NSF-ANSI 53

Hi Dave,

Can you check to see if HC has considered the information below from Michael Wu? i.e. are there technical limits to lead reduction to the lower guideline?

M

From: Wu, Michael [VC] [mailto:Michael.Wu@vch.ca]
Sent: Monday, February 20, 2017 9:08 AM
To: Zemanek, Michael HLTH:EX
Cc: XT:HLTH Lu, James; Chong, Steve [Health Protection] [NS]; Clarkson, Len [STS]
Subject: FW: NSF-ANSI 53

Hi Mike
You may want to consider if the suggestion below should be followed up, please?
I first made the enquiry to NSF because we are advising school to use NSF certified Lead reduction equipment as one of the options. I then realized that NSF53 is certified for reduction limit down to 10 ug/L. I wonder if the NSF-53 standard will still meet the intent of the proposed changes to Health Canada ALARA MAC to 5 ug/L?

Michael Wu, P.Eng.
Public Health Engineer
Vancouver Coastal Health
Phone: 604-675-3860
From: Leslie, Monica [mailto:mleslie@nsf.org]
Sent: Monday, February 20, 2017 6:44 AM
To: Wu, Michael [VC]
Subject: Re: NSF-ANSI 53

Good Morning,

I am the secretariat for the Joint Committee on Drinking Water Treatment Units. Your inquiry regarding the lead reduction level in NSF/ANSI 53 was forwarded to me. To my knowledge, there has not been any discussions of changing the current lead effluent level. The current value is based on the U.S. EPA MCL so it would probably be unlikely to move unless the U.S. EPA changes their number. However, you are welcome to submit an issue paper to propose a revision to the standard at any time. The annual Joint Committee meeting is in May, so if you did wish to propose a revision, it would likely be presented at that meeting. Attached is the issue paper form. Please feel free to contact me if you have any other questions or if I can be of additional assistance.

Kind Regards,

Monica Leslie

Monica H. Leslie, MPH | Standards Development Liaison |Tel : +1-734-827-5643 | Email: mleslie@nsf.org|
NSF International | 789 N. Dixboro Road | Ann Arbor, MI | 48105 | USA | www.nsf.org

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reading it and do not take any action based on its contents or otherwise copy or disclose it to anyone. Any opinions or views expressed in
this transmission are solely of the author and do not necessarily represent those of NSF International or its affiliates.[attachment "image001.png" deleted by Anne Vezina/HC-SC/GC/CA]

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: February 20, 2017 12:09 PM
To: Zemanek, Michael HLTH:EX; 'Wu, Michael [VC]'
Cc: XT:HLTH Lu, James; Chong, Steve [Health Protection] [NS]; Clarkson, Len [STS]
Subject: RE: NSF-ANSI 53

Hi Folks.
Health Canada informs me that NSF /ANSI generally do look at harmonizing these certifications when standards change, but not until after the standard has actually changed.

From: Zemanek, Michael HLTH:EX
Sent: Monday, February 20, 2017 11:25 AM
To: 'Wu, Michael [VC]'
Cc: XT:HLTH Lu, James; Chong, Steve [Health Protection] [NS]; Clarkson, Len [STS]; Fishwick, David HLTH:EX
Subject: RE: NSF-ANSI 53

Hi Michael,

Thanks for your question. Dave Fishwick, our representative on the Canadian Drinking Water Committee, will send a note to Health Canada to see if they have come across any related issues in developing the proposed guideline.

Regards,
Mike

Mike Zemanek, M.Sc. P.Eng.
Director
Healthy Community Environments
B.C. Ministry of Health
PO BOX 9646 Stn Prov Govt
Victoria BC V8W 9P1

ph.: 250-952-2372
e-mail: Michael.Zemanek@gov.bc.ca

From: Wu, Michael [VC] [mailto:Michael.Wu@vch.ca]
Sent: Monday, February 20, 2017 9:08 AM
To: Zemanek, Michael HLTH:EX
Cc: XT:HLTH Lu, James; Chong, Steve [Health Protection] [NS]; Clarkson, Len [STS]
Subject: FW: NSF-ANSI 53

Hi Mike
You may want to consider if the suggestion below should be followed up, please?
I first made the enquiry to NSF because we are advising school to use NSF certified Lead reduction equipment as one of the options. I then realized that NSF53 is certified for reduction limit down to 10 ug/L. I wonder if the NSF-53 standard will still meet the intent of the proposed changes to Health Canada ALARA MAC to 5 ug/L?

Michael Wu, P.Eng.

Public Health Engineer
Vancouver Coastal Health
Phone: 604-675-3860

From: Leslie, Monica [mailto:mleslie@nsf.org]
Sent: Monday, February 20, 2017 6:44 AM
To: Wu, Michael [VC]
Subject: Re: NSF-ANSI 53

Good Morning,

I am the secretariat for the Joint Committee on Drinking Water Treatment Units. Your inquiry regarding the lead reduction level in NSF/ANSI 53 was forwarded to me. To my knowledge, there has not been any discussions of changing the current lead effluent level. The current value is based on the U.S. EPA MCL so it would probably be unlikely to move unless the U.S. EPA changes their number. However, you are welcome to submit an issue paper to propose a revision to the standard at any time. The annual Joint Committee meeting is in May, so if you did wish to propose a revision, it would likely be presented at that meeting. Attached is the issue paper form. Please feel free to contact me if you have any other questions or if I can be of additional assistance.

Kind Regards,

Monica Leslie

Monica H. Leslie, MPH | Standards Development Liaison |Tel : +1-734-827-5643 | Email: mleslie@nsf.org|
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Mori, Alicia HLTH:EX

From: Docker, Jennifer [VC] <Jennifer.Docker@vch.ca>
Sent: March 3, 2017 12:04 PM
To: Paton, Arlene HLTH:EX; Kendall, Perry HLTH:EX
Cc: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; [FHA] Tyson, Oonagh; XT:Golmohammadi, Dr. Kamran HLTH:IN; XT:HLTH Parsonage, Roger; XT:Fumerton, Raina HLTH:IN; [NHA] Torng, Allan; XT:HLTH Galanis, Eleni; XT:HLTH Kosatsky, Tom; XT:Lavery, John HLTH:IN; [PHSA] Valentine, Mandy; XT:Larder, Andrew Fraser Health Authority EAO:IN; XT:HLTH Thomas, Ann V; Henry, Bonnie HLTH:EX; [NHA] Quibell, Doug; XT:HLTH Stanwick, Richard; [PHSA] Hassam, Noorjean; XT:HLTH Lu, James; 'Linda Pillsworth'; 'Robert Parker (FNHA)'; XT:HLTH Taki, Richard; Lambert, Tim HLTH:EX
Subject: VCH Comments On MOH Draft Policy (February 17, 2017) On Reducing Exposure To Lead Through Drinking Water
Attachments: VCH Comments on MOH Draft Policy on Reducing Exposure to Lead through Dr....pdf

Dear Ms. Paton and Dr. Kendall,

The attached letter is forwarded on behalf of Richard Taki and Dr. James Lu.

Kind regards,

Jennifer Docker
Administrative Assistant to
Richard Taki, Executive Director, Health Protection
Angelo Kouris, Director, Environmental Health

Vancouver Coastal Health
#1200-601 West Broadway, Vancouver, BC V5Z 4C2
Telephone: 604 675 3854 | Email: jennifer.docker@vch.ca | Website: http://www.vch.ca/your_environment/

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: April 7, 2017 9:33 AM
To: 'Anne Vezina'
Subject: RE: Draft minutes from the October meeting

Hi Anne:
Sorry for the late response s.22 A couple suggested tweaks:

Pg 11:

British Columbia

D. Fishwick indicated that work continues on the lead file. New non-potable water guidelines for flushing toilets and other lower risk uses have been developed. Also, work is continuing with system risk management
plans, revamping operator qualifications and the outreach program with BCWWA. A first draft for setting up agreements amongst users and operators for point-of-entry and point-of-use systems has been prepared. New distribution system
guidelines and emergency response guidelines have been prepared.

Thanks,
Dave

From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: Wednesday, March 22, 2017 6:44 AM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tina Brennan; Wendy Enright
Subject: Draft minutes from the October meeting

CDW members,

You will find attached the draft minutes from the October 2016 meeting.
(See attached file: CDW 2016-10 (Draft Minutes 2017-0322).pdf)
Could you please have a quick look and let me know by the end of next week (March 31st) if you have any comments?

Thank you,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Anne Vezina <anne.vezina@hc-sc.gc.ca>
Sent: April 7, 2017 10:32 AM
To: Fishwick, David HLTH:EX
Subject: Re: FW: Announcements - New Health Canada Draft Lead Gui...

Thank you for the comments. We will look at them.

Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

"Fishwick, David HLTH:EX" ---2017-04-07 12:48:26 PM---Hi Anne: Fraser Health recently forwarded some comments to me on the Lead consultation document. I

From: "Fishwick, David HLTH:EX"
To: "'Anne Vezina'"
Date: 2017-04-07 12:48 PM
Subject: FW: Announcements - New Health Canada Draft Lead Gui...

Hi Anne:
Fraser Health recently forwarded some comments to me on the Lead consultation document. I am aware the consultation period closed March 15th, so am forwarding them to you FYI, and I'll leave it up to you to decide whether or not to consider them in this process.

Dave

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Wednesday, March 22, 2017 1:52 PM
To: Fishwick, David HLTH:EX
Subject: FW: Announcements - New Health Canada Draft Lead Gui...

Hi Dave: as requested, here is the main response we have from our Risk Assessment Specialist.
Hope it's not too late to consider.

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917

Cell: 604-613-0145

From: Krstic, Goran
Sent: Wednesday, March 22, 2017 10:26 AM
To: Zubel, Marc
Cc: Shaw, Ken
Subject: RE: Announcements - New Health Canada Draft Lead Gui...

Hi Marc,

As discussed, it would be important to consider the rate of compliance with the current lead (Pb) in drinking water maximum acceptable concentration (MAC) of 0.01 mg/L (10 µg/L) and to establish practical enforceability of the proposed stricter MAC of 0.005 mg/L (5 µg/L).

Health Canada indicates the following in the Purpose of Consultation for Lead in Drinking Water (HC, 2017):
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There are considerable limitations and uncertainties in the epidemiological studies on the association between low level drinking water lead concentrations vs. intelligence quotient (IQ) or other adverse health effects. The WHO indicates the following in their background document for development of WHO Guidelines for Drinking-water Quality (WHO, 2011: http://www.who.int/water_sanitation_health/dwq/chemicals/lead.pdf):
Copyright

The European Commission's Scientific Committee on Health and Environmental Risks (SCHER) also recommended to maintain the Lead Standard in Drinking Water at 0.01 mg/L (10 µg/L) (EC, 2011: http://ec.europa.eu/health/scientific_committees/environmental_risks/docs/scher_o_128.pdf). The authors indicate that Copyright
Copyright

Although some uncertainties have been acknowledged by the authors, a separate section titled "Study Limitations and Uncertainties" should be included in the paper to inform the reader on all reasonably foreseeable limitations of epidemiological study design, sample size, exposure assessment, modeling assumptions and uncertainties in the interpretation of the results.

The proposed stricter MAC for lead in drinking water is expected to be more difficult to achieve/enforce and may result in higher incidence of failure to comply with the regulatory requirements. In addition, an analytical achievability may not be equivalent to a cost-effective water treatment achievability.

Regards
Goran

Dr. Goran Krstić, B.Sc., Ph.D., R.P.Bio.
Human Health Risk Assessment Specialist

Fraser Health Authority
Environmental Health Services
#218 - 610 Sixth Street
New Westminster, BC
V3L 3C2
Tel.: (604) 777-6728
Fax: (604) 525-3608
e-Mail: Goran.Krstic@fraserhealth.ca
Webpage: www.fraserhealth.ca



From: Zubel, Marc
Sent: Wednesday, February 22, 2017 2:35 PM
To: Krstic, Goran
Cc: Shaw, Ken
Subject: FW: Announcements - New Health Canada Draft Lead Gui...

Hi Goran: at our last Drinking Water Team meeting two weeks ago we discussed Health Canada's proposed guideline for Lead. Please see hyperlink below.
We thought it might be useful to have you review the document and provide us with any initial thoughts / comments.

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Drinking Water Leadership Council [mailto:DoNotReply@SP2010.gov.bc.ca]
Sent: Wednesday, January 11, 2017 9:15 AM
To: Zubel, Marc
Subject: Announcements - New Health Canada Draft Lead Gui...
Drinking Water Leadership Council

New Health Canada Draft Lead Gui... has been changed

Modify my alert settings	View New Health Canada Draft Lead Gui...	View Announcements	Mobile View

Title:	New Health Canada Draft Lead Guideline	

Body:	Health Canada's Draft Guideline Technical Document for lead in drinking water is now posted for a 2-month public comment period **ending March 15 2017**: www.healthycanadians.gc.ca/health-system-systeme-sante/consultations/lead-drinking-water-plomb-eau-potable/document-eng.php Please take the tim! e to have a look at this one as it has substantially changed from their existing guidance. Comments can be sent directly to Health Canada via their consultation page, and I would be happy to hear your thoughts as well. Dave	
Status:	New	Edited
Set Status:		
Last Modified 1/11/2017 9:10 AM by Fishwick, David HLTH:EX		

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: April 7, 2017 2:17 PM
To: 'Anne Vezina'; 'angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'Peter_Workman@gov.nt.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'Kim.Philip@gov.mb.ca'; 'pat.brooks@gov.yk.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'MLeBlanc-Havard@GOV.NU.CA'
Cc: 'John Cooper'; 'Michele Giddings'; 'Stephanie McFadyen'; 'Richard Carrier'; 'France Lemieux'; 'Veronique Morisset'; 'Tina Brennan'; 'Wendy Enright'; 'Erin Ducharme'
Subject: RE: Provincial Approaches In Preparing for the New Lead Guideline

Hi Erin:

1) What is the province's policy on lead? Is it part of its current routine chemical sampling?
Currently it is treated like other chemical parameters, however we are revising our policy/guidance to account for the decentralized nature of potential problems related to corrosion.
2) What is the province's routine sampling protocol for distribution systems?
Same answer as #1
3) Is there a policy on monitoring lead in individual homes? If so, what is the frequency of sampling? Is it on request of the homeowner?
Currently, individuals would generally have to take their own samples to a lab. We are developing policy on how sampling in homes may be done for the assessment of the need for corrosion control programs as per the GCDWQ corrosion control guidelines.
4) Is there any sampling protocol for individual homes? If so, who pays for what? Is it subsidised, or does the homeowner pay?
Currently the homeowner would pay. In the future it may fall to the water supplier if done as part of a for the assessment of the need for corrosion control programs
5) Has the province developed any risk communication materials? If so, could we have a copy or a link to related resources?
https://www.healthlinkbc.ca/healthlinkbc-files/lead-drinking-water
6) Are there any approaches or resources that may be of assistance to FNIHB in its development of policy options?
The Health Canada draft that was posted for public consultation is our primary “go-to” document at the moment.

Hope this helps. Feel free to write if you have further questions.
Dave

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: Thursday, April 6, 2017 12:04 PM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA

Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tina Brennan; Wendy Enright; Erin Ducharme
Subject: Fw: Provincial Approaches In Preparing for the New Lead Guideline

CDW folks,

Our colleague Erin Ducharme from FNIHB (working with Kristina Taracha) would need your P/T input on the questions on lead below.

Could you please get back to Erin by early May?

Thank you all in advance,

Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

----- Forwarded by Anne Vezina/HC-SC/GC/CA on 2017-04-06 03:01 PM -----

From: Erin Ducharme/HC-SC/GC/CA
To: Anne Vezina/HC-SC/GC/CA@HWC
Cc: Kristina Taracha/HC-SC/GC/CA@HWC
Date: 2017-04-05 10:57 AM
Subject: Provincial Approaches In Preparing for the New Lead Guideline

---

Hi Anne,

My name is Erin Ducharme, and I work with the Drinking Water Program within the First Nations & Inuit Health Branch. Kristina Taracha suggested that I contact you for assistance in obtaining some guidance from the provinces on how they are preparing for the new lead guideline.

We are in the midst of developing some policy options for monitoring lead in individual homes in FN communities. In order to assist with this, we would like pose the following questions to the F/P/T Committee on Drinking Water:

1) What is the province's policy on lead? Is it part of its current routine chemical sampling?

2) What is the province's routine sampling protocol for distribution systems?

3) Is there a policy on monitoring lead in individual homes? If so, what is the frequency of sampling? Is it on request of the homeowner?

4) Is there any sampling protocol for individual homes? If so, who pays for what? Is it subsidised, or does the homeowner pay?

5) Has the province developed any risk communication materials? If so, could we have a copy or a link to related resources?

6) Are there any approaches or resources that may be of assistance to FNIHB in its development of policy options?

If you could please advise as to the most appropriate approach to providing these questions to the F/P/T Committee on Drinking Water, it would be greatly appreciated. Ideally we would like to receive responses by the beginning of May.

If you should have any questions, please feel free to contact me.

Thank you, and have a good day!

Erin Ducharme

Environmental Public Health Division, First Nations and Inuit Health Branch
Health Canada / Government of Canada
erin.ducharme@hc-sc.gc.ca / Tel: **613-878-3527**

Division de la santé environnementale, Direction générale de la santé des Premières nations et des Inuits
Santé Canada / Gouvernement du Canada
erin.ducharme@hc-sc.gc.ca / Tél. : **613-878-3527**

Mori, Alicia HLTH:EX

From: Sam Ferris <Samuel.Ferris@wsask.ca>
Sent: April 11, 2017 8:27 AM
To: Anne Vezina; Erin Ducharme
Cc: Michele Giddings; angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Subject: RE: Provincial Approaches In Preparing for the New Lead Guideline

Hello Erin, Anne: Please see answers for Saskatchewan below.

Thanks

Sam

Sam Ferris - B.Sc.(Hons)
Executive Director, Environmental and Municipal Management Services
420-2365 Albert Street
Regina, SK S4P 4K1
Ph: 306.787.6193 | Cell: 306.536.1480 | Fax: 306.787.0780
wsask.ca | Sam.Ferris@wsask.ca

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Water Security Agency

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From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: April-06-17 1:04 PM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; Sam Ferris; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: John Cooper; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tina Brennan; Wendy Enright; Erin Ducharme
Subject: Fw: Provincial Approaches In Preparing for the New Lead Guideline

CDW folks,

Our colleague Erin Ducharme from FNIHB (working with Kristina Taracha) would need your P/T input on the questions on lead below.

Could you please get back to Erin by early May?

Thank you all in advance,

Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

----- Forwarded by Anne Vezina/HC-SC/GC/CA on 2017-04-06 03:01 PM -----

From: Erin Ducharme/HC-SC/GC/CA
To: Anne Vezina/HC-SC/GC/CA@HWC
Cc: Kristina Taracha/HC-SC/GC/CA@HWC
Date: 2017-04-05 10:57 AM
Subject: Provincial Approaches In Preparing for the New Lead Guideline

---

Hi Anne,

My name is Erin Ducharme, and I work with the Drinking Water Program within the First Nations & Inuit Health Branch. Kristina Taracha suggested that I contact you for assistance in obtaining some guidance from the provinces on how they are preparing for the new lead guideline.

We are in the midst of developing some policy options for monitoring lead in individual homes in FN communities. In order to assist with this, we would like pose the following questions to the F/P/T Committee on Drinking Water:

1) What is the province's policy on lead? Is it part of its current routine chemical sampling?
Saskatchewan requires waterworks owners to monitor for lead as a standard set of parameters known as the "Health and Toxicity" panel. Monitoring is to be performed either once every 2 years, once per year or twice per year depending on the population sized served and source type. This is essentially applied to monitoring or water at the treatment plant reservoir. As for distribution system monitoring, Saskatchewan has surveyed communities to determine which have LSL's or lead mains and most do not. Where LSL's are in place monitoring in accordance with the HC Corrosion Control Document is strongly recommended to the waterworks owners. Typically the Water Security Agency works with the local Health Region officials to advance such efforts.

2) What is the province's routine sampling protocol for distribution systems?
As noted above, the province applies the Corrosion Control document in informing waterworks owners to undertake monitoring in the distribution system however this is typically applied at the consumer tap.

3) Is there a policy on monitoring lead in individual homes? If so, what is the frequency of sampling? Is it on request of the homeowner?
There is no specific policy. At locations with known use of LSL the waterworks owners, typically municipalities, are advised to use the corrosion control document in performing monitoring at individual homes in general as well as when specifically requested. WSA typically requires the waterworks owners to perform monitoring in relation to consumer calls.

4) Is there any sampling protocol for individual homes? If so, who pays for what? Is it subsidised, or does the homeowner pay?
Corrosion control document is followed. Typically the waterworks owners pays for monitoring.

5) Has the province developed any risk communication materials? If so, could we have a copy or a link to related resources?
We have nothing specific to lead in drinking water, typically relying on direct communication with the affected communities, use of the Corrosion Control and national guidelines documents.

6) Are there any approaches or resources that may be of assistance to FNIHB in its development of policy options?
Nothing specific beyond what is noted above.

If you could please advise as to the most appropriate approach to providing these questions to the F/P/T Committee on Drinking Water, it would be greatly appreciated. Ideally we would like to receive responses by the beginning of May.

If you should have any questions, please feel free to contact me.

Thank you, and have a good day!

Erin Ducharme

Environmental Public Health Division, First Nations and Inuit Health Branch
Health Canada / Government of Canada
erin.ducharme@hc-sc.gc.ca / Tel: **613-878-3527**

Division de la santé environnementale, Direction générale de la santé des Premières nations et des Inuits
Santé Canada / Gouvernement du Canada
erin.ducharme@hc-sc.gc.ca / Tél. : **613-878-3527**

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: May 3, 2017 1:51 PM
To: Anne Vezina
Subject: Fwd: Lead Docs - Most Recent
Attachments: Draft Guideline on Reducing Exposure to Lead through Drinking Water_March16.docx; ATT00001.htm; Lead – Path Forward Q&A.pptx; ATT00002.htm

Can you please fwd to France

Sent from my iPhone

Begin forwarded message:

> **From:** "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
> **Date:** March 20, 2017 at 14:23:47 EDT
> **To:** "Zemanek, Michael HLTH:EX" <Michael.Zemanek@gov.bc.ca>, "Edwards, Joanne HLTH:EX" <Joanne.Edwards@gov.bc.ca>
> **Subject: Lead Docs - Most Recent**
>
> Hi Guys:
> s.22 Here are the most recent versions of the lead docs in case there is an opportunity to get them towards EH Policy.
> All changes based on feedback form VCH and verbal comments from EH policy are incorporated the best of my ability. The one tweak that I am leaving with Joanne is to coordinate a simplification of the table on pipe volumes for flushing.
> I've also attached the PPT of Q's and As. This may be better off as just a Q&A sheet to send out, but we can see what the appetite is for this, and then it would be a simple cut and paste.
> Joanne is going to look into when the next EH Policy is in an effort to get this out well ahead of time for their review.
> These files are also found on the LAN at Z:\HP_All\Drinking Water - 30510\Issues\Lead
> Any thoughts on a need to run this path forward by Tim or Arlene?
> Dave
> **David Fishwick |** *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt Victoria BC | V8W 9P1*
> *Phone:* (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca
> ***Warning:*** *This email is intended only for the use of the individual or organization to whom it is addressed. It may contain information that is privileged or confidential. Any distribution, disclosure, copying, or other use by anyone else is strictly prohibited. If you have received this in error, please telephone or e-mail the sender immediately and delete the message.*

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: May 19, 2017 11:39 AM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Cc: XT:HLTH Taki, Richard; Wu, Michael [VC]; Clarkson, Len [STS]; Molder, Darren [SC]; Ip, Jessica [VC]; XT:HLTH Lu, James; Ritson, Mark [VC]; Radnidge, Michele [RH]; Massoud, Nader [NS]; Dolling, Roya [NS]; Chong, Steve [Health Protection] [NS]
Subject: VCH comments on MOH draft Pb guideline (April 2017)
Attachments: VCH comments on MOH Pb draft guideline (April 2017).docx; VCH Comments on MOH Draft Policy on Reducing Exposure to Lead through Dr....pdf

Hello David and Joanne,
On behalf of VCH, here is our response with respect to your latest draft of the Pb guideline.
I look forward to our discussions at DWLC

Regards
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 2, 2017 4:27 PM
To: 'Anne Vezina'; 'Jennifer Dumais'
Subject: RE: THMs exceedances - a few more questions

Answers in email below:

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: Thursday, May 25, 2017 8:55 AM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Greg Carreau; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tanya Boucher; Wendy Enright; Jennifer Dumais; Dominique Poulin
Subject: THMs exceedances - a few more questions

CDW members,

Over a year ago, I sent you some questions from Kristina Taracha (FNIHB) about THMs exceedances. Jennifer Dumais from her group is looking into getting some additional information and would need your input on the questions below. Could you please respond to Jennifer at jennifer.dumais@hc-sc.gc.ca (and cc me) before **June 16th**?

Thank you all in advance for your help on this.

Anne

_____
Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

My name is Jennifer Dumais, and I work with the Drinking Water Program within the First Nations & Inuit Health Branch. Dominique Poulin suggested that I contact you for assistance in obtaining some guidance from the provinces on how they are dealing with THMs.

As you know, we are in the process of developing communication materials for THMs for first nation community members including residents, Water Treatment Plant Operator, Environmental Health Officers and Chief and Council . With your help we would like to query the provinces and learn from their experiences. In order to assist with this, we would like pose the following questions to the F/P/T Committee on Drinking Water:

1-What is the province's sampling protocol for THMs in distribution systems?
no specific policy – would refer to the GCDWQ
2-What is the province's policy on THMs exceedances? What is the Province doing when there is an exceedance?
similar to another exceedances. Local MHO would look at the magnitude of exceedance and make a call as to what corrective action is practical
3-Has the province developed any risk communication material for the general public? If so, can we have a copy or link to related resources?
not that I am aware of
4-Has the province developed technical materials for use by Water Treatment Operators or Environmental Health Leaders on how best to manage and take action on THMs?
Not that I am aware of

If you should have any questions, please feel free to contact me.

Thank you, and have a good day!

Jennifer Dumais

A/Policy Analyst
Drinking Water Program
Environmental Public Health Division
First Nations and Inuit Health Branch
Health Canada / Government of Canada
jennifer.dumais@hc-sc.gc.ca
Phone: 613-291-3887 **New**

I/Analyste de politiques
Programme de l'eau potable
La direction générale des Premières nations et des Inuits
Santé Canada / Gouvernement du Canada
jennifer.dumais@hc-sc.gc.ca

Mori, Alicia HLTH:EX

From: Anne Vezina <anne.vezina@hc-sc.gc.ca>
Sent: June 6, 2017 11:21 AM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Greg Carreau; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Tanya Boucher; Wendy Enright
Subject: Fw: PBS NOVA: Flint documentary

CDW folks,

In case you are interested, France provided the link to watch the recent documentary on the Flint water crisis (see the link below).

Enjoy!
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

----- Forwarded by Anne Vezina/HC-SC/GC/CA on 2017-06-06 02:20 PM -----

From: France Lemieux/HC-SC/GC/CA
To: Anne Vezina/HC-SC/GC/CA@HWC
Date: 2017-06-06 02:18 PM
Subject: PBS NOVA: Flint documentary

Anne,

CDW members may be interested in viewing the PBS NOVA documentary 'Poisoned Water' on the Flint water crisis. It's extremely well made and worth viewing. It's been made available on YouTube at:
https://www.youtube.com/watch?v=mHiNU_GSM3o

France

France Lemieux, M. Eng.

Head, Materials and Treatment Section/Healthy Environments and Consumer Safety Branch

Health Canada/Government of Canada

France.Lemieux@hc-sc.gc.ca/Tel.: 613-941-3166

Chef, Section des produits et du traitement/Direction générale de la santé environnementale et de la sécurité des consommateurs
Santé Canada/Gouvernement du Canada

France.Lemieux@hc-sc.gc.ca/Tél. : 613-941-3166

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 8, 2017 11:28 AM
To: 'Satish.Deshpande@ontario.ca'
Subject: Lead - Looking for someone to do a webinar on sampling.

Hi Satish:

s.13

s.13 . I seem to recall Ontario has crossed that bridge quite some time ago. I think it would be helpful for us if we could provide some examples of where other jurisdictions had implemented such programs. Is there anyone in your area who could do a brief webinar sharing: how that was rolled out, Challenges & How they were overcome, Success stories, Advice?

Dave

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: June 8, 2017 9:10 AM
To: 'Anne Vezina'
Subject: RE: Quick question

Parfait! Merci!

From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: Thursday, June 8, 2017 7:00 AM
To: Fishwick, David HLTH:EX
Subject: Re: Quick question

For your information, you can find the published information on this in the CEPA annual report:

CEPA Annual Report (2015-2016) https://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&n=5AE12597-1&offset=2#X-2017031313182852

Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

"Fishwick, David HLTH:EX" ---2017-06-07 06:19:16 PM---Hi Anne: Are the parameters that CDW is working on public information? In other words, would it be

From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
To: "'Anne Vezina'" <anne.vezina@hc-sc.gc.ca>
Date: 2017-06-07 06:19 PM
Subject: Quick question

Hi Anne:
Are the parameters that CDW is working on public information? In other words, would it be OK for our provincial health officer to publish in a report that CDW is currently working on development of revised guidelines for lead, copper, uranium etc?

Dave

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: July 14, 2017 3:47 PM
To: Edwards, Joanne HLTH:EX; 'Diplock, Cole'
Subject: RE: Status of Lead in Schools Document
Attachments: 1083852_Draft Guideline on Reducing Exposure to Lead through Drinking Wa....docx

Hi Cole:

Attached is the draft that was shared with Paul, Lynne and the rest of DWLC. Please use it for your reference only for the time being and do not distribute. We hope to have a finalized version that can be shared soon.

There have been some minor tweaks in the version awaiting ADM approval, however the section on sampling is essentially the same, and this should give you an idea of what we are proposing.
The draft contains a number of protocols, and are based on the latest Lead draft produced by Health Canada as well as their corrosion control guidelines. The most appropriate protocol to use depends on what you are trying to evaluate/demonstrate.

Let me know if you have any questions.

Dave

From: Edwards, Joanne HLTH:EX
Sent: Thursday, July 13, 2017 2:56 PM
To: Fishwick, David HLTH:EX
Subject: FW: Status of Lead in Schools Document

This guidance on the policy may be best to come from HPB.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

From: Diplock, Cole [mailto:Cole.Diplock@viha.ca]
Sent: Thursday, July 13, 2017 2:46 PM
To: Edwards, Joanne HLTH:EX
Subject: Status of Lead in Schools Document

Hi Joanne,

We are moving forward with contacting School Districts about their recent lead sampling results and their plans for completing the required sampling for the remaining schools within their districts. I understand that the provincial lead document is nearing completion and I wanted to confirm with you what guidance the document will provide around testing protocol. Will it be:

- First flush test then 3 test follow-up if positive
- Random test then 3 test follow-up if positive
- Something else??

What we recommended to School Districts last year was they take a direct sample from a fixture that hasn't been used in several hours, then a 30 second flush sample and a run cold/5 minute sample. We would like to follow the guidance coming out of your office, so would appreciate a quick response as we are moving forward soon.

Thanks for your help.

Cole Diplock
Acting Regional Manager
Health Protection and Environmental Services
Island Health
3rd Floor – 6475 Metral Dr.
Nanaimo, BC V9T 2L9
Phone: (250) 740-6988
Fax: (250) 755-3372

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: August 11, 2017 4:36 PM
To: 'Tamblyn, Dave'; Zemanek, Michael HLTH:EX
Subject: RE: quick consult about water system definition

Hi Dave:
I'd say you are generally on the right track. The one caveat I could think of is if the nature of the water delivered reacts with the building plumbing causes the problem – (i.e. corrosive water and lead pipes) then there would be a shared responsibility. If the building plumbing was installed contrary to the plumbing code, then I would think that it would be a building code / local government issue. Otherwise the Health Act I think could be used.

From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Friday, August 11, 2017 1:00 PM
To: Fishwick, David HLTH:EX; Zemanek, Michael HLTH:EX
Subject: quick consult about water system definition

Scenario: There is an existing facility in a city. The municipal CWS water is generally ok. The facility (1 building) receives potable water from the CWS, but within the facility, the plumbing makes the water non-potable. (see image below with some sort of floc at the bottom)

> **"building system"** means a system, within a building, to which the British Columbia Plumbing Code applies, that receives water from a water supply system operating under a valid operating permit under the Act

Since a building system is not a water supply system, I don't see how we can use the Drinking Water Protection Act to regulate them – it would have to be under the Public Health Act. Do you agree? If yes, doesn't that seem wrong? If it's a Plumbing Code issue, does that then fall to local government to enforce?



Thanks for your thoughts,
DRT.

Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: August 25, 2017 11:32 AM
To: 'Zubel, Marc'
Subject: RE: Announcements - Interim Lead Document Now Posted...

We have no current plans to do so – Maybe bring it up at DWLC and see if other HAs are interested, and if so how many copies, and we can see if we can get some budget money for it.

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Friday, August 25, 2017 11:30 AM
To: Fishwick, David HLTH:EX
Subject: FW: Announcements - Interim Lead Document Now Posted...

Hi Dave: looks like we have some interest in getting hard copies of the ERCP document to give to our water system ops. Are you guys planning on printing any of these in the near future?

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Freer, Kevin
Sent: Friday, August 25, 2017 11:02 AM
To: Zubel, Marc; Haworth, Barb; Choquette, Blair; Lutz, Jeniene; Struck, LLoyd; Sivia, Binny
Subject: RE: Announcements - Interim Lead Document Now Posted...

Marc, are we receiving any physical copies of the ERCP template the Ministry created?

http://www2.gov.bc.ca/assets/gov/health/keeping-bc-healthy-safe/healthy-communities/ercp-sws-final-july-14-2016.pdf

Kevin Freer, B.Sc., B.Tech, CPHI(C)
Environmental Health Officer
Drinking Water/Healthy Built Environment Program
Fraser Health

#207 - 2776 Bourquin Crescent West
Abbotsford, BC, V2S 6A4
Tel: (604) 870-7918
Fax: (604) 870-7901

From: Zubel, Marc
Sent: Friday, August 25, 2017 10:58 AM

To: Haworth, Barb; Choquette, Blair; Lutz, Jeniene; Freer, Kevin; Struck, LLoyd; Sivia, Binny
Subject: FW: Announcements - Interim Lead Document Now Posted...

From: Drinking Water Leadership Council [mailto:DoNotReply@SP2010.gov.bc.ca]
Sent: Friday, August 25, 2017 10:36 AM
To: Zubel, Marc
Subject: Announcements - Interim Lead Document Now Posted...

Drinking Water Leadership Council

Interim Lead Document Now Posted... has been added

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Title:	Interim Lead Document Now Posted on-Line
Body:	Hi Everyone: The Interim Lead Document is now posted on our public website: http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/drinking-water-quality/how-drinking-water-is-protected-in-bc Dave
Expires:	

Last Modified 8/25/2017 10:31 AM by Fishwick, David HLTH:EX

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: August 25, 2017 10:55 AM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: RE: Interim lead guidelines

Thanks Dave and Joanne.
DRT.

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, August 25, 2017 10:52
To: Edwards, Joanne HLTH:EX ; Tamblyn, Dave
Subject: RE: Interim lead guidelines

Hi Dave:

1. This is based on the GCDWQ corrosion control document, which is in turn based on USEPA, but not exactly the same. I have enquired with Health Canada as to whether they intend to update this to reflect the new guidelines at our last meeting, however I have no indication as to if an when they may do this. s.16

   s.16

2. Health Canada is in the early stages of updating their copper guideline, so perhaps we can cross that bridge then. While I concur that corrosion is more than Lead, the scope of this task was limited to address lead.

All good stuff to consider – Hold these thoughts and bring them back out for discussion when HC releases their final Doc and we make adjustments to this one.

Dave

From: Edwards, Joanne HLTH:EX
Sent: Tuesday, August 22, 2017 9:00 AM
To: 'Tamblyn, Dave'
Cc: Fishwick, David HLTH:EX
Subject: RE: Interim lead guidelines

Hi Dave T.,

Good questions. I'll let Dave F. respond on this one as this is a Health Protection guidance document so any recommended changes need to go directly to them.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Monday, August 21, 2017 4:21 PM
To: Edwards, Joanne HLTH:EX
Cc: Fishwick, David HLTH:EX
Subject: Interim lead guidelines

Hi Joanne (and maybe Dave if you want to chime in)

Reviewing the MoH interim guidelines document, I have a question about section 2.1. TO EVALUATE IF CENTRALIZED WATER SYSTEM CORROSION CONTROL IS APPROPRIATE. It says:

> **Interpreting Results**
> Where the sampling program shows more than 10% of the sampled residential sites have a lead concentration greater than the action level of 15 µg/L the water supply system should consider mitigation programs.

This wording implies that if **less** than 10% of sampled sites have lead concentrations above 15 µg/L then the WSS need **not** consider mitigation. This is problematic for two separate reasons:

1. The 15 µg/L LAL is explicitly derived in USEPA (1991)to detect, with 90% confidence, all water systems with first flush lead above 10 µg/L. Since it is derived with regard to a concentration of lead of 10 µg/L, which happens to be the current MAC in Canada, this LAL may seem appropriate. But as you are aware, the MAC may soon be dropped to 5, and in any case the rationale for dropping the MAC to 5 has already been published. Since the *Guidelines for Canadian Drinking Water Quality* have no statutory status in BC, and DWOs are supposed to make decisions based on the best information available, it could be argued that the de facto comparator for lead ought already to be 5. In any event, if the MAC should be reduced from 10 to 5, why wouldn't the LAL change too?
2. The second issue is that corrosive water affects more than just lead. Hence in the US it's the lead *and copper* rule. By publishing a guideline that suggests that decisions on corrosion control can be made based solely on lead levels, it clearly omits concern about other types of corrosion that could reasonably lead to corrosion control being appropriate.

Do you think there could be flexibility to consider a reduced LAL, or other triggers for corrosion control (eg, copper or iron)?

DRT.

Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: August 28, 2017 11:57 AM
To: 'Zubel, Marc'
Subject: RE: Announcements - Interim Lead Document Now Posted...

Is Reza's report public?

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Monday, August 28, 2017 9:07 AM
To: Fishwick, David HLTH:EX
Subject: RE: Announcements - Interim Lead Document Now Posted...

Okay, I will let Reza know to plan for Oct 5.
Thanks,
Marc

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Monday, August 28, 2017 8:56 AM
To: Zubel, Marc
Subject: RE: Announcements - Interim Lead Document Now Posted...

I wonder if it is better to plan for this one at the October 5th meeting? I think two presentations may be a bit much for one DWLC.

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Monday, August 28, 2017 8:11 AM
To: Fishwick, David HLTH:EX
Subject: RE: Announcements - Interim Lead Document Now Posted...

Hi Dave: as soon as you can confirm that Reza (BCCDC) can give his presentation at the Sept DWLC meeting, I will contact him directly to ensure that the timing will work.
Marc

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, August 25, 2017 11:49 AM
To: Zubel, Marc
Cc: Edwards, Joanne HLTH:EX
Subject: RE: Announcements - Interim Lead Document Now Posted...

Good Idea. We've also trying to get folks from Ontario to give us a presentation at that meeting on their experience with their lead legislation/guidelines. Joanne hasn't heard back from them yet on details , so we'll see if there is enough time for 2 presentations.

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Friday, August 25, 2017 11:42 AM
To: Fishwick, David HLTH:EX
Subject: RE: Announcements - Interim Lead Document Now Posted...

Thanks Dave, will do.

Also, while I have you on my radar screen, I've been asked by BCCDC to share the results of a project on Lead in daycare drinking water by Reza Afshari; by way of a short presentation (about 15-20 minutes) by Reza to our group (see attached report). Any chance of adding this to our agenda for the next DWLC meeting?

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Friday, August 25, 2017 11:32 AM
To: Zubel, Marc
Subject: RE: Announcements - Interim Lead Document Now Posted...

We have no current plans to do so – Maybe bring it up at DWLC and see if other HAs are interested, and if so how many copies, and we can see if we can get some budget money for it.

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Friday, August 25, 2017 11:30 AM
To: Fishwick, David HLTH:EX
Subject: FW: Announcements - Interim Lead Document Now Posted...

Hi Dave: looks like we have some interest in getting hard copies of the ERCP document to give to our water system ops. Are you guys planning on printing any of these in the near future?

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Freer, Kevin
Sent: Friday, August 25, 2017 11:02 AM
To: Zubel, Marc; Haworth, Barb; Choquette, Blair; Lutz, Jeniene; Struck, LLoyd; Sivia, Binny
Subject: RE: Announcements - Interim Lead Document Now Posted...

Marc, are we receiving any physical copies of the ERCP template the Ministry created?

http://www2.gov.bc.ca/assets/gov/health/keeping-bc-healthy-safe/healthy-communities/ercp-sws-final-july-14-2016.pdf

Kevin Freer, B.Sc., B.Tech, CPHI(C)
Environmental Health Officer
Drinking Water/Healthy Built Environment Program
Fraser Health

#207 - 2776 Bourquin Crescent West

Abbotsford, BC, V2S 6A4
Tel: (604) 870-7918
Fax: (604) 870-7901

From: Zubel, Marc
Sent: Friday, August 25, 2017 10:58 AM
To: Haworth, Barb; Choquette, Blair; Lutz, Jeniene; Freer, Kevin; Struck, LLoyd; Sivia, Binny
Subject: FW: Announcements - Interim Lead Document Now Posted...

From: Drinking Water Leadership Council [mailto:DoNotReply@SP2010.gov.bc.ca]
Sent: Friday, August 25, 2017 10:36 AM
To: Zubel, Marc
Subject: Announcements - Interim Lead Document Now Posted...

Drinking Water Leadership Council

Interim Lead Document Now Posted... has been added

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Title:	Interim Lead Document Now Posted on-Line
Body:	Hi Everyone: The Interim Lead Document is now posted on our public website: http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/drinking-water-quality/how-drinking-water-is-protected-in-bc Dave
Expires:	

Last Modified 8/25/2017 10:31 AM by Fishwick, David HLTH:EX

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: September 7, 2017 2:43 PM
To: 'Clarkson, Len [STS]'
Subject: RE: web articles

Which leads you here:
http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/drinking-water-quality/how-drinking-water-is-protected-in-bc
Both documents are on the same page.

Dave

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Thursday, September 7, 2017 2:06 PM
To: Fishwick, David HLTH:EX
Subject: web articles

HI David – I'm having trouble finding the DWO guide and lead guideline – would you be able to send me those links please? Or just the PDF's??
Please and thanks
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

Mori, Alicia HLTH:EX

From: Anne Vezina <anne.vezina@hc-sc.gc.ca>
Sent: September 15, 2017 9:18 AM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Greg Carreau; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Wendy Enright; Jelena Zuric; Richard Charron; kristina.taracha@hc-sc.gc.ca; Anca-Maria Tugulea; Rocio Aranda-Rodriguez
Subject: Revised document on lead
Attachments: Lead 2017-0915 (for final approval) tracked changes from consultation.pdf; LEAD Comments Table 2017-0915.CDW.pdf

CDW members and Secretariat,

As promised at the last CDW meeting, we are sending the post-consultation document on lead in drinking water ahead of the agenda package for the meeting to give you extra time for review. Attached is the revised document, with all changes made since public consultation highlighted. As a reminder, most changes made to section 10.2 have already been shared at the last CDW meeting and discussed but are still highlighted since they were made after the consultation period.
(See attached file: Lead 2017-0915 (for final approval) tracked changes from consultation.pdf)

Also, please find attached the table of comments and responses from public consultation.
(See attached file: LEAD Comments Table 2017-0915.CDW.pdf)

It would be appreciated if you could send your comments in advance, if you have any, so we can have an informed discussion at the meeting and hopefully get the final CDW approval.

Cheers,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: September 26, 2017 2:41 PM
To: 'anne.vezina@hc-sc.gc.ca'
Subject: FW: Upcoming CDW meeting - session on lead
Attachments: Interim Guideline on Reducing Exposure to Lead through Drinking Water July 2017.pdf

Hi Anne:
FYI here is our BC Interim Lead Guidance Document, as well as its link on the Web. I can't recall if I had already shared this with the group. But if not, please share with the others.
http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/drinking-water-quality/how-drinking-water-is-protected-in-bc

Dave

From: Fishwick, David HLTH:EX
Sent: Tuesday, August 8, 2017 11:24 AM
To: 'Philip, Kim (SD)'; 'Anne Vezina'; 'angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'Peter_Workman@gov.nt.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'pat.brooks@gov.yk.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'MLeBlanc-Havard@GOV.NU.CA'
Cc: 'Greg Carreau'; 'Michele Giddings'; 'Stephanie McFadyen'; 'Richard Carrier'; 'France Lemieux'; 'Veronique Morisset'; 'Wendy Enright'; 'Jelena Zuric'; 'Anca-Maria Tugulea'; 'Rocio Aranda-Rodriguez'; 'kristina.taracha@hc-sc.gc.ca'; 'Philippa.cureton@canada.ca'; 'Roberecki, Susan (HSAL)'
Subject: RE: Upcoming CDW meeting - session on lead

Likewise.

From: Philip, Kim (SD) [mailto:Kim.Philip@gov.mb.ca]
Sent: Wednesday, August 2, 2017 12:48 PM
To: Anne Vezina; angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Greg Carreau; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Wendy Enright; Jelena Zuric; Anca-Maria Tugulea; Rocio Aranda-Rodriguez; kristina.taracha@hc-sc.gc.ca; Philippa.cureton@canada.ca; Roberecki, Susan (HSAL)
Subject: RE: Upcoming CDW meeting - session on lead

I'd be happy to provide a status update on Manitoba's tentative partially-developed plan for implementing the new guideline. Also happy to defer to other jurisdictions that might be further ahead in formulating their strategy.

Kim Philip

Kimberley A. Philip, M.Eng., P.Eng.,
Director, Office of Drinking Water
1007 Century Street, Winnipeg, MB R3H 0W4
Phone: 204-945-7010; Cell: 204-232-0022
Fax: 204-945-1365; E-mail: kim.philip@gov.mb.ca
24 Hr Emergency Response Line: 204-944-4888
Website: manitoba.ca/drinkingwater

Manitoba
Sustainable Development

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From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: August-02-17 2:11 PM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Philip, Kim (SD) <Kim.Philip@gov.mb.ca>; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Greg Carreau <greg.carreau@hc-sc.gc.ca>; Michele Giddings <michele.giddings@hc-sc.gc.ca>; Stephanie McFadyen <Stephanie.McFadyen@hc-sc.gc.ca>; Richard Carrier <richard.carrier@hc-sc.gc.ca>; France Lemieux <France.Lemieux@hc-sc.gc.ca>; Veronique Morisset <Veronique.Morisset@hc-sc.gc.ca>; Wendy Enright <wendy.enright@hc-sc.gc.ca>; Jelena Zuric <jelena.zuric@hc-sc.gc.ca>; Anca-Maria Tugulea <anca-maria.tugulea@hc-sc.gc.ca>; Rocio Aranda-Rodriguez <Rocio.Aranda-Rodriguez@hc-sc.gc.ca>; kristina.taracha@hc-sc.gc.ca; Philippa.cureton@canada.ca
Subject: Upcoming CDW meeting - session on lead

CDW folks,

The upcoming CDW meeting will be held **November 7, 8 and 9** (don't forget, this time it will be Tuesday, Wednesday and Thursday). As discussed at the last meeting, we are planning a morning session on lead for the Thursday morning and would like to know if you could present on your jurisdiction's perspective to implement the guideline for lead. I am hoping to have at least 2 or 3 members' presentations and a following plenary discussion. Of course, the post-consultation guideline technical document will be discussed and up for approval as well.

Let me know if there are any other issues with lead you would like to discuss during that morning session.

Cheers,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: September 27, 2017 9:04 AM
To: 'Vezina, Anne (HC/SC)'
Subject: RE: Upcoming CDW meeting - session on lead

Public Document – share with anyone who might have a interest!

From: Vezina, Anne (HC/SC) [mailto:anne.vezina@canada.ca]
Sent: Wednesday, September 27, 2017 4:24 AM
To: Fishwick, David HLTH:EX
Subject: RE: Upcoming CDW meeting - session on lead
Thank you David. You want me to share with HC or CDW?

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, September 26, 2017 5:41 PM
To: Vezina, Anne (HC/SC)
Subject: FW: Upcoming CDW meeting - session on lead
Hi Anne:
FYI here is our BC Interim Lead Guidance Document, as well as its link on the Web. I can't recall if I had already shared this with the group. But if not, please share with the others.
http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/drinking-water-quality/how-drinking-water-is-protected-in-bc
Dave

From: Fishwick, David HLTH:EX
Sent: Tuesday, August 8, 2017 11:24 AM
To: 'Philip, Kim (SD)'; 'Anne Vezina'; 'angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'Peter_Workman@gov.nt.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'pat.brooks@gov.yk.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'MLeBlanc-Havard@GOV.NU.CA'
Cc: 'Greg Carreau'; 'Michele Giddings'; 'Stephanie McFadyen'; 'Richard Carrier'; 'France Lemieux'; 'Veronique Morisset'; 'Wendy Enright'; 'Jelena Zuric'; 'Anca-Maria Tugulea'; 'Rocio Aranda-Rodriguez'; 'kristina.taracha@hc-sc.gc.ca'; 'Philippa.cureton@canada.ca'; 'Roberecki, Susan (HSAL)'
Subject: RE: Upcoming CDW meeting - session on lead
Likewise.

From: Philip, Kim (SD) [mailto:Kim.Philip@gov.mb.ca]
Sent: Wednesday, August 2, 2017 12:48 PM
To: Anne Vezina; angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Greg Carreau; Michele Giddings; Stephanie McFadyen; Richard Carrier; France Lemieux; Veronique Morisset; Wendy Enright; Jelena Zuric; Anca-Maria Tugulea; Rocio Aranda-Rodriguez; kristina.taracha@hc-sc.gc.ca; Philippa.cureton@canada.ca; Roberecki, Susan (HSAL)
Subject: RE: Upcoming CDW meeting - session on lead
I'd be happy to provide a status update on Manitoba's tentative partially-developed plan for implementing the new guideline. Also happy to defer to other jurisdictions that might be further ahead in formulating their strategy.

Kim Philip

Kimberley A. Philip, M.Eng., P.Eng.,
Director, Office of Drinking Water
1007 Century Street, Winnipeg, MB R3H 0W4
Phone: 204-945-7010; Cell: 204-232-0022
Fax: 204-945-1365; E-mail: kim.philip@gov.mb.ca
24 Hr Emergency Response Line: 204-944-4888

Website: manitoba.ca/drinkingwater

Manitoba
Sustainable Development

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From: Anne Vezina [mailto:anne.vezina@hc-sc.gc.ca]
Sent: August-02-17 2:11 PM
To: angelina.polegato@novascotia.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; Peter_Workman@gov.nt.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Philip, Kim (SD) <Kim.Philip@gov.mb.ca>; pat.brooks@gov.yk.ca; sam.ferris@wsask.ca; Satish.Deshpande@ontario.ca; MLeBlanc-Havard@GOV.NU.CA
Cc: Greg Carreau <greg.carreau@hc-sc.gc.ca>; Michele Giddings <michele.giddings@hc-sc.gc.ca>; Stephanie McFadyen <Stephanie.McFadyen@hc-sc.gc.ca>; Richard Carrier <richard.carrier@hc-sc.gc.ca>; France Lemieux <France.Lemieux@hc-sc.gc.ca>; Veronique Morisset <Veronique.Morisset@hc-sc.gc.ca>; Wendy Enright <wendy.enright@hc-sc.gc.ca>; Jelena Zuric <jelena.zuric@hc-sc.gc.ca>; Anca-Maria Tugulea <anca-maria.tugulea@hc-sc.gc.ca>; Rocio Aranda-Rodriguez <Rocio.Aranda-Rodriguez@hc-sc.gc.ca>; kristina.taracha@hc-sc.gc.ca; Philippa.cureton@canada.ca
Subject: Upcoming CDW meeting - session on lead

CDW folks,

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Let me know if there are any other issues with lead you would like to discuss during that morning session.

Cheers,
Anne

Anne Vézina
Coordinator of the F/P/T Committee on Drinking Water
Coordonatrice du Comité F/P/T sur l'eau potable
Water and Air Quality Bureau
Bureau de la qualité de l'eau et de l'air
Safe Environments Directorate
Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: September 27, 2017 9:05 AM
To: 'Vezina, Anne (HC/SC)'
Subject: RE: Upcoming CDW meeting - session on lead

Probably best to share the link – we've found a couple typos that we will fix shortly.

From: Vezina, Anne (HC/SC) [mailto:anne.vezina@canada.ca]
Sent: Wednesday, September 27, 2017 4:24 AM
To: Fishwick, David HLTH:EX
Subject: RE: Upcoming CDW meeting - session on lead
Thank you David. You want me to share with HC or CDW?

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, September 26, 2017 5:41 PM
To: Vezina, Anne (HC/SC)
Subject: FW: Upcoming CDW meeting - session on lead
Hi Anne:
FYI here is our BC Interim Lead Guidance Document, as well as its link on the Web. I can't recall if I had already shared this with the group. But if not, please share with the others.
http://www2.gov.bc.ca/gov/content/environment/air-land-water/water/water-quality/drinking-water-quality/how-drinking-water-is-protected-in-bc
Dave

From: Fishwick, David HLTH:EX
Sent: Tuesday, August 8, 2017 11:24 AM
To: 'Philip, Kim (SD)'; 'Anne Vezina'; 'angelina.polegato@novascotia.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; 'donald.reid@gov.ab.ca'; 'Peter_Workman@gov.nt.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kevin.Gould@gnb.ca'; 'pat.brooks@gov.yk.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ontario.ca'; 'MLeBlanc-Havard@GOV.NU.CA'
Cc: 'Greg Carreau'; 'Michele Giddings'; 'Stephanie McFadyen'; 'Richard Carrier'; 'France Lemieux'; 'Veronique Morisset'; 'Wendy Enright'; 'Jelena Zuric'; 'Anca-Maria Tugulea'; 'Rocio Aranda-Rodriguez'; 'kristina.taracha@hc-sc.gc.ca'; 'Philippa.cureton@canada.ca'; 'Roberecki, Susan (HSAL)'
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Cc: Greg Carreau <greg.carreau@hc-sc.gc.ca>; Michele Giddings <michele.giddings@hc-sc.gc.ca>; Stephanie McFadyen <Stephanie.McFadyen@hc-sc.gc.ca>; Richard Carrier <richard.carrier@hc-sc.gc.ca>; France Lemieux <France.Lemieux@hc-sc.gc.ca>; Veronique Morisset <Veronique.Morisset@hc-sc.gc.ca>; Wendy Enright <wendy.enright@hc-sc.gc.ca>; Jelena Zuric <jelena.zuric@hc-sc.gc.ca>; Anca-Maria Tugulea <anca-maria.tugulea@hc-sc.gc.ca>; Rocio Aranda-Rodriguez <Rocio.Aranda-Rodriguez@hc-sc.gc.ca>; kristina.taracha@hc-sc.gc.ca; Philippa.cureton@canada.ca
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Direction de la sécurité des milieux
Health Canada
Santé Canada
Ottawa
Tel.: (613) 957-3130
Fax: (613) 952-2574

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: September 29, 2017 12:20 PM
To: 'Zubel, Marc'
Cc: 'Afshari, Reza'; Mitchell, Tamara HLTH:EX
Subject: RE: Lead in Day Cares Presentation

Hi Marc:
Thanks for the reminder. Tamara Mitchell will be setting up the AV/Conference call system, So by way of this email, I will put the two of them in touch with each other so they can work out the details.

The DWLC call is at 9:00 am on Thursday October the 5th, And we could allocate up to about an hour – so Reza, just let us know how long you anticipate your presentation to be. Some of us will be physically meeting at 1515 Blanshard but nearly all participants will be calling in.

Dave

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Friday, September 29, 2017 11:33 AM
To: Fishwick, David HLTH:EX
Subject: FW: Lead in Day Cares Presentation

Hi Dave: are you guys still planning on having BCCDC give their presentation on their recent study on Lead Testing in Day Cares at the upcoming DWLC meeting? could you connect with Reza and let me know. Here's his contact info:

Reza Afshari, MD, MPH, PhD
Senior Scientist, Toxicology
Environmental Health Services
BC Centre for Disease Control

655 West 12th Avenue, Vancouver, BC, V5Z 4R4
Ph: 604-707-2462
Fx: 604-707-2441
Email: Reza.Afshari@bccdc.ca

From: Afshari, Reza
Sent: Friday, September 29, 2017 10:27 AM
To: Zubel, Marc
Subject: RE: Lead in Day Cares Presentation

Hi Marc,
May I have an update as regard to the Oct. 5th meeting please? Where the meeting would take place?
BW
Reza

From: [FHA] Zubel, Marc
Sent: Tuesday, September 19, 2017 7:36 AM

To: Afshari, Reza
Subject: RE: Lead in Day Cares Presentation

Thanks Reza for the reference.
Marc

From: Afshari, Reza
Sent: Monday, September 18, 2017 4:47 PM
To: Zubel, Marc
Subject: RE: Lead in Day Cares Presentation

Hi Marc,

Just wondering whether you have seen this report from Vancouver Sun and what you think about it?
http://vancouversun.com/news/local-news/more-than-half-of-b-c-s-school-districts-had-unsafe-lead-levels-in-drinking-water-sources-in-2016

They quoted you as well (it could be an old interview of yours)

BW
Reza

From: [FHA] Zubel, Marc
Sent: Monday, August 28, 2017 12:00 PM
To: Afshari, Reza
Subject: Lead in Day Cares Presentation

Hi Reza, can you advise if your report is public?

Marc Zubel, P.Eng
Regional Manager
Drinking Water Program
Office: 604-870-7917
Cell: 604-613-0145

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Monday, August 28, 2017 11:57 AM
To: Zubel, Marc
Subject: RE: Announcements - Interim Lead Document Now Posted...

Is Reza's report public?

From: Zubel, Marc [mailto:Marc.Zubel@fraserhealth.ca]
Sent: Monday, August 28, 2017 9:07 AM
To: Fishwick, David HLTH:EX
Subject: RE: Announcements - Interim Lead Document Now Posted...

Okay, I will let Reza know to plan for Oct 5.
Thanks,
Marc

Mori, Alicia HLTH:EX

From: Gould, Kevin (ELG/EGL) <Kevin.Gould@gnb.ca>
Sent: October 19, 2017 4:28 AM
To: 'Pat.Brooks@gov.yk.ca'; 'POLEGAAR@gov.ns.ca'; 'Caroline.Robert@mddelcc.gouv.qc.ca'; Fishwick, David HLTH:EX; 'donald.reid@gov.ab.ca'; 'ghsomers@gov.pe.ca'; 'hkhan@gov.nl.ca'; 'Kim.Philip@gov.mb.ca'; 'MLeBlanc-Havard@GOV.NU.CA'; 'Peter_Workman@gov.nt.ca'; 'sam.ferris@wsask.ca'; 'Satish.Deshpande@ene.gov.on.ca'
Cc: 'anne.vezina@canada.ca'
Subject: RE: Protocol for lead exceedances in school drinking water

Also, here are some Q&A's that were developed (not by me) and are on our website.

http://www2.gnb.ca/content/gnb/en/departments/education/k12/content/safe_healthy/q_a.html

---

From: Gould, Kevin (ELG/EGL)
Sent: Thursday, October 19, 2017 8:26 AM
To: 'Pat.Brooks@gov.yk.ca'; POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca
Cc: anne.vezina@canada.ca
Subject: RE: Protocol for lead exceedances in school drinking water

Hi Pat.
This Health Canada document may be very helpful if you are looking for advice on how to develop a sampling program with the intent of locating from where the lead might be originating.

https://www.canada.ca/content/dam/canada/health-canada/migration/healthy-canadians/publications/healthy-living-vie-saine/water-corrosion-eau/alt/water-corrosion-eau-eng.pdf

In terms of protocols in how to deal with exceedances directly, I don't think NB has any document. NB undertook a fairly large lead in school initiative a few years ago and I believe for any fountains, tap, etc that were used by students that high lead levels, they were either turned off or regularly flushed. It depended on the originating source and cause of led exceedances. This was a very precautionary approach I feel. Let me know if you'd like to talk further.

Kevin Gould, P.Eng.
Public Health Engineer
Healthy Environments Branch
Department of Environment and Local Government
Tel: (506) 444-4096

From: Pat.Brooks@gov.yk.ca [mailto:Pat.Brooks@gov.yk.ca]
Sent: Wednesday, October 18, 2017 3:40 PM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Gould, Kevin (ELG/EGL); Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; Pat.Brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca

Cc: anne.vezina@canada.ca
Subject: Protocol for lead exceedances in school drinking water
Importance: High

Hi Everyone,

We find ourselves unexpectedly immersed in a lead issue in one of our schools.

If f any of you have a protocol that would be helpful for dealing with lead exceedances in drinking water in schools that you can forward on, it would be very much appreciated.

Regards.
Pat

Patricia Brooks
Drinking Water Program Coordinator
Environmental Health Services
2 Hospital Road
Whitehorse, YT
Y1A 3H8
Phone 867-667-8351 Fax 867-667-8322

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Mori, Alicia HLTH:EX

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Cc: 'anne.vezina@canada.ca'
Subject: RE: Protocol for lead exceedances in school drinking water

Hi Pat:
This may fit the bill:
https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/interim_guideline_on_reducing_exposure_to_lead_through_drinking_water_july_2017.pdf
Dave

From: Pat.Brooks@gov.yk.ca [mailto:Pat.Brooks@gov.yk.ca]
Sent: Wednesday, October 18, 2017 11:40 AM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; Pat.Brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Satish.Deshpande@ene.gov.on.ca
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Mori, Alicia HLTH:EX

From: Deshpande, Satish (MOECC) <Satish.Deshpande@ontario.ca>
Sent: October 24, 2017 7:00 AM
To: Pat.Brooks@gov.yk.ca; POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca
Cc: anne.vezina@canada.ca
Subject: RE: Protocol for lead exceedances in school drinking water

Hi Pat,

Here is something that might help:

https://www.ontario.ca/page/flushing-and-sampling-lead#section-3

Satish

From: Pat.Brooks@gov.yk.ca [mailto:Pat.Brooks@gov.yk.ca]
Sent: October 18, 2017 2:40 PM
To: POLEGAAR@gov.ns.ca; Caroline.Robert@mddelcc.gouv.qc.ca; David.Fishwick@gov.bc.ca; donald.reid@gov.ab.ca; ghsomers@gov.pe.ca; hkhan@gov.nl.ca; Kevin.Gould@gnb.ca; Kim.Philip@gov.mb.ca; MLeBlanc-Havard@GOV.NU.CA; Pat.Brooks@gov.yk.ca; Peter_Workman@gov.nt.ca; sam.ferris@wsask.ca; Deshpande, Satish (MOECC)
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From: Khan, Haseen <hkhan@gov.nl.ca>
Sent: October 27, 2017 6:49 AM
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Cc: anne.vezina@canada.ca
Subject: RE: Protocol for lead exceedances in school drinking water
Attachments: DrinkingWaterQualityGuide_2016_MemorialUniversity.pdf

Good Morning Pat;

Current Status:
Grade schools and post-secondary institutes undergo regular bacteriological testing but chemical water testing is not normal practice. This would be the responsibility of the school/school board. NL utilizes the Health Canada Guideline Technical Document: Lead for sampling protocol for the evaluation of lead exposure.

History of school sampling/lead exceedances in NL:
The province of NL conducted a study on water quality of schools in 2001-2002. This study was based on water supplies that were owned by the schools and did not include any schools that were on municipal water supplies. These samples were classed as source water samples as they were tested before any treatment and before entering the school's plumbing system. During this study 2 lead exceedances were identified. Lead exceedances were thought to be caused by plumbing between the well and the sampling point. Resampling of one sample allowed for a longer flushing time rectified this situation which confirms the conclusion that the lead is not a natural occurring contaminant of the well.

In the Fall of 2016, Memorial University's St. John's campus identified lead exceedances in a number of their facilities. Prior to this sampling, water quality sampling for chemical parameters was not regularly scheduled. The University put the St. John's campus on non-consumption to ensure the safety of their students and staff. An extensive sampling program was developed using lead sampling protocols based on Health Canada's recommendations. Once determined which buildings and/or areas had issues with lead exceedances various corrective measure were implemented: lead removal filtration systems, provision of bottled water and removal of tap/water fountain. As a result of this incident, the University developed a Drinking Water Quality Guide (attached) to ensure an adequate supply of safe drinking water for all campuses.

I trust this is helpful.

Haseen Khan, P.Eng.
Director
Water Resources Management Division
Department of Municipal Affairs and Environment
4th Floor, Confederation Building West Block
PO Box 8700
St. John's NL Canada A1B 4J6
T (709) 729-2563
F (709) 729-0320
E hkhan@gov.nl.ca
www.gov.nl.ca/env

From: Pat.Brooks@gov.yk.ca [mailto:Pat.Brooks@gov.yk.ca]
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Phone 867-667-8351 Fax 867-667-8322

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 9, 2017 4:13 PM
To: Gould, Kevin (ELG/EGL)
Subject: Re: Updated lead document

More importantly, you forgot to buy m&ms before the airport!

Sent from my iPhone

> On Nov 9, 2017, at 18:24, Gould, Kevin (ELG/EGL) <Kevin.Gould@gnb.ca> wrote:
>
> Ok, no worries. Was going through old emails and cleaning up some things. I had a bunch of lead one's stashed leading up to the meeting.
>
>
>
> Sent from my Bell Samsung device over Canada's largest network.
>
>
> -------- Original message --------
> From: "Fishwick, David HLTH:EX" <David.Fishwick@gov.bc.ca>
> Date: 2017-11-09 6:16 PM (GMT-05:00)
> To: "Gould, Kevin (ELG/EGL)" <Kevin.Gould@gnb.ca>
> Subject: Re: Updated lead document
>
> Hmmm. Can't honestly remember. And if I did, I cant find it on my phone. I seem to recall something about the first sample tells you about the fountain itself, and the next one is about what is in the pipe immediately behind the fountain. I can check again from my desk Tuesday.
>
> Sent from my iPhone
>
> On Nov 9, 2017, at 17:02, Gould, Kevin (ELG/EGL) <Kevin.Gould@gnb.ca<mailto:Kevin.Gould@gnb.ca>> wrote:
>
> Dave, did you get a response to this question?
>
> From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
> Sent: Wednesday, July 27, 2016 2:35 PM
> To: 'France Lemieux'
> Cc: 'Angelina.polegato@novascotia.ca<mailto:Angelina.polegato@novascotia.ca>'; 'Caroline.Robert@mddelcc.gouv.qc.ca<mailto:Caroline.Robert@mddelcc.gouv.qc.ca>'; 'donald.reid@gov.ab.ca<mailto:donald.reid@gov.ab.ca>'; 'ghsomers@gov.pe.ca<mailto:ghsomers@gov.pe.ca>'; 'hkhan@gov.nl.ca<mailto:hkhan@gov.nl.ca>'; 'John Cooper'; 'Joyce Mortimer'; Gould, Kevin (DH/MS); 'Kim.Philip@gov.mb.ca<mailto:Kim.Philip@gov.mb.ca>'; 'Kristina Taracha'; 'Michele Giddings'; 'MLeBlanc-Havard@GOV.NU.CA<mailto:MLeBlanc-Havard@GOV.NU.CA>'; 'pat.brooks@gov.yk.ca<mailto:pat.brooks@gov.yk.ca>'; 'Peter_Workman@gov.nt.ca<mailto:Peter_Workman@gov.nt.ca>'; 'Richard Carrier'; 'sam.ferris@wsask.ca<mailto:sam.ferris@wsask.ca>'; 'Satish.Deshpande@ontario.ca<mailto:Satish.Deshpande@ontario.ca>'; 'Stephanie McFadyen'; 'Veronique Morisset'; 'Wendy Enright'

> Subject: RE: Updated lead document
>
> Thanks France:
>
> So am I interpreting this correctly for RDT - this is making an assumption that typical exposure in a school is the first and second 250mL of water that comes out of the school fountain at any given time, whereas for typical exposure in a residential environment it is assumed to include water beyond what is in the fixture, and therefore diluted/averaged by taking more volume?
>
> Dave
>
> From: France Lemieux [mailto:France.Lemieux@hc-sc.gc.ca]
> Sent: Wednesday, July 27, 2016 10:11 AM
> To: Fishwick, David HLTH:EX
> Cc: 'Angelina.polegato@novascotia.ca<mailto:Angelina.polegato@novascotia.ca>';
'Caroline.Robert@mddelcc.gouv.qc.ca<mailto:Caroline.Robert@mddelcc.gouv.qc.ca>';
'donald.reid@gov.ab.ca<mailto:donald.reid@gov.ab.ca>'; 'ghsomers@gov.pe.ca<mailto:ghsomers@gov.pe.ca>';
'hkhan@gov.nl.ca<mailto:hkhan@gov.nl.ca>'; 'John Cooper'; 'Joyce Mortimer';
'Kevin.Gould@gnb.ca<mailto:Kevin.Gould@gnb.ca>'; 'Kim.Philip@gov.mb.ca<mailto:Kim.Philip@gov.mb.ca>'; 'Kristina Taracha'; 'Michele Giddings'; 'MLeBlanc-Havard@GOV.NU.CA<mailto:MLeBlanc-Havard@GOV.NU.CA>';
'pat.brooks@gov.yk.ca<mailto:pat.brooks@gov.yk.ca>';
'Peter_Workman@gov.nt.ca<mailto:Peter_Workman@gov.nt.ca>'; 'Richard Carrier';
'sam.ferris@wsask.ca<mailto:sam.ferris@wsask.ca>';
'Satish.Deshpande@ontario.ca<mailto:Satish.Deshpande@ontario.ca>'; 'Stephanie McFadyen'; 'Veronique Morisset';
'Wendy Enright'
> Subject: RE: Updated lead document
>
>
> Hello David,
>
> The volumes differ because generally in schools, the highest
> concentrations correspond to the fountain and its immediate connecting
> piping, which is typically captured in the first 250mL of a sample,
>
>
> Regards,
>
> France
> _____
>
> France Lemieux, M. Eng.
>
> Head, Materials and Treatment Section/Healthy Environments and
> Consumer Safety Branch Health Canada/Government of Canada
>
> France.Lemieux@hc-sc.gc.ca/Tel<mailto:France.Lemieux@hc-sc.gc.ca/Tel>.
> : 613-941-3166
>
> Chef, Section des produits et du traitement/Direction générale de la
> santé environnementale et de la sécurité des consommateurs Santé
> Canada/Gouvernement du Canada
>

> France.Lemieux@hc-sc.gc.ca/Tél<mailto:France.Lemieux@hc-sc.gc.ca/Tél>.
> : 613-941-3166
>
> <image001.gif>"Fishwick, David HLTH:EX" ---2016-07-27 12:36:09 PM---Hi Veronique: I have a question about the revised monitoring section in this (sections 3.1.1, and 3.
>
> From: "Fishwick, David HLTH:EX"
> <David.Fishwick@gov.bc.ca<mailto:David.Fishwick@gov.bc.ca>>
> To: "'Veronique Morisset'"
> <Veronique.Morisset@hc-sc.gc.ca<mailto:Veronique.Morisset@hc-sc.gc.ca>
> >,
> "'Angelina.polegato@novascotia.ca<mailto:Angelina.polegato@novascotia.
> ca>'"
> <Angelina.polegato@novascotia.ca<mailto:Angelina.polegato@novascotia.c
> a>>,
> "'Caroline.Robert@mddelcc.gouv.qc.ca<mailto:Caroline.Robert@mddelcc.go
> uv.qc.ca>'"
> <Caroline.Robert@mddelcc.gouv.qc.ca<mailto:Caroline.Robert@mddelcc.gou
> v.qc.ca>>, "'donald.reid@gov.ab.ca<mailto:donald.reid@gov.ab.ca>'"
> <donald.reid@gov.ab.ca<mailto:donald.reid@gov.ab.ca>>, "'France
> Lemieux'"
> <France.Lemieux@hc-sc.gc.ca<mailto:France.Lemieux@hc-sc.gc.ca>>,
> "'ghsomers@gov.pe.ca<mailto:ghsomers@gov.pe.ca>'"
> <ghsomers@gov.pe.ca<mailto:ghsomers@gov.pe.ca>>,
> "'hkhan@gov.nl.ca<mailto:hkhan@gov.nl.ca>'"
> <hkhan@gov.nl.ca<mailto:hkhan@gov.nl.ca>>, "'John Cooper'"
> <john.cooper@hc-sc.gc.ca<mailto:john.cooper@hc-sc.gc.ca>>, "'Joyce
> Mortimer'"
> <Joyce.Mortimer@hc-sc.gc.ca<mailto:Joyce.Mortimer@hc-sc.gc.ca>>,
> "'Kevin.Gould@gnb.ca<mailto:Kevin.Gould@gnb.ca>'"
> <Kevin.Gould@gnb.ca<mailto:Kevin.Gould@gnb.ca>>,
> "'Kim.Philip@gov.mb.ca<mailto:Kim.Philip@gov.mb.ca>'"
> <Kim.Philip@gov.mb.ca<mailto:Kim.Philip@gov.mb.ca>>, "'Kristina
> Taracha'"
> <kristina.taracha@hc-sc.gc.ca<mailto:kristina.taracha@hc-sc.gc.ca>>,
> "'Michele Giddings'"
> <michele.giddings@hc-sc.gc.ca<mailto:michele.giddings@hc-sc.gc.ca>>,
> "'MLeBlanc-Havard@GOV.NU.CA<mailto:MLeBlanc-Havard@GOV.NU.CA>'"
> <MLeBlanc-Havard@GOV.NU.CA<mailto:MLeBlanc-Havard@GOV.NU.CA>>,
> "'pat.brooks@gov.yk.ca<mailto:pat.brooks@gov.yk.ca>'"
> <pat.brooks@gov.yk.ca<mailto:pat.brooks@gov.yk.ca>>,
> "'Peter_Workman@gov.nt.ca<mailto:Peter_Workman@gov.nt.ca>'"
> <Peter_Workman@gov.nt.ca<mailto:Peter_Workman@gov.nt.ca>>, "'Richard
> Carrier'"
> <richard.carrier@hc-sc.gc.ca<mailto:richard.carrier@hc-sc.gc.ca>>,
> "'sam.ferris@wsask.ca<mailto:sam.ferris@wsask.ca>'"
> <sam.ferris@wsask.ca<mailto:sam.ferris@wsask.ca>>,
> "'Satish.Deshpande@ontario.ca<mailto:Satish.Deshpande@ontario.ca>'"
> <Satish.Deshpande@ontario.ca<mailto:Satish.Deshpande@ontario.ca>>,
> "'Stephanie McFadyen'"
> <Stephanie.McFadyen@hc-sc.gc.ca<mailto:Stephanie.McFadyen@hc-sc.gc.ca>
> >, "'Wendy Enright'"

> <wendy.enright@hc-sc.gc.ca<mailto:wendy.enright@hc-sc.gc.ca>>
> Date: 2016-07-27 12:36 PM
> Subject: RE: Updated lead document
> _____
>
>
>
> Hi Veronique:
>
> I have a question about the revised monitoring section in this (sections 3.1.1, and 3.1.2) When giving advice on random daytime sampling In Section 3.1.1. It advises taking a 1L sample for residential dwellings, however for schools and large buildings in 3.1.2. it advises taking two 125ml samples (presumably consecutive) and averaging the results. Is there a reason why these volumes are different?
>
> Dave
>
> From: Veronique Morisset [mailto:Veronique.Morisset@hc-sc.gc.ca]
> Sent: Tuesday, July 12, 2016 11:05 AM
> To:
> Angelina.polegato@novascotia.ca<mailto:Angelina.polegato@novascotia.ca
> >;
> Caroline.Robert@mddelcc.gouv.qc.ca<mailto:Caroline.Robert@mddelcc.gouv
> .qc.ca>; Fishwick, David HLTH:EX;
> donald.reid@gov.ab.ca<mailto:donald.reid@gov.ab.ca>; France Lemieux;
> ghsomers@gov.pe.ca<mailto:ghsomers@gov.pe.ca>;
> hkhan@gov.nl.ca<mailto:hkhan@gov.nl.ca>; John Cooper; Joyce Mortimer;
> Kevin.Gould@gnb.ca<mailto:Kevin.Gould@gnb.ca>;
> Kim.Philip@gov.mb.ca<mailto:Kim.Philip@gov.mb.ca>; Kristina Taracha;
> Michele Giddings;
> MLeBlanc-Havard@GOV.NU.CA<mailto:MLeBlanc-Havard@GOV.NU.CA>;
> pat.brooks@gov.yk.ca<mailto:pat.brooks@gov.yk.ca>;
> Peter_Workman@gov.nt.ca<mailto:Peter_Workman@gov.nt.ca>; Richard
> Carrier; sam.ferris@wsask.ca<mailto:sam.ferris@wsask.ca>;
> Satish.Deshpande@ontario.ca<mailto:Satish.Deshpande@ontario.ca>;
> Stephanie McFadyen; Wendy Enright
> Subject: CDW: Updated lead document
>
>
> CDW members,
>
> As per my June 15 e-mail, we have now made changes to the lead document to incorporate the random daytime (RDT) sampling protocol as an option for residential sampling. This has also resulted in changes to section 5.1.2, to provide additional information on the RDT protocol. The attached file highlights all content changes made since November 2015, which is the last version that you saw.
>
> Here's a quick list of the sections with changes and the nature/reason for each of the changes:
> 3.1, 3.1.1, 3.1.2 -- Additional of RDT and related changes
> 5.1.1 -- correction of references; correction of description of MB
> study, as requested by Kim
> 5.1.2 -- addition of background information on the RDT protocol
> 7.1.2.6 -- New section, to provide relevant information complementary
> to what is in the uranium document

> 10.2 -- Clarification of description of Healey et al. 2010, to amend
> wording that could have been misinterpreted, as requested by Satish
> 12.0 -- Addition of relevant references for above changes Appendix B
> -- Incorporation of provincial and territorial anticipated impacts, as
> provided by members
>
>
> (See attached file: Lead 2016-0712 compared to Nov 2015.pdf)
>
> We are looking for an indication from members that the revisions are acceptable and do not affect the approval of the document. As we are still expecting the document to be posted for public consultation prior to the next CDW meeting, an early response would be appreciated. We are looking for a response from all members by Aug 10 at the latest.
>
> Thanks
>
> Véronique
>
> Véronique Morisset
> Manager, Water Quality Program Division Healthy Environments and
> Consumer Safety / Health Canada / Government of Canada
> veronique.morisset@hc-sc.gc.ca<mailto:veronique.morisset@hc-sc.gc.ca>
> / tel: 613-957-1506 / cel: 613-277-2019
>
> Gestionnaire, Division du programme de la qualité de l'eau Santé
> environnementale et sécurité des consommateurs / Santé Canada /
> Gouvernement du Canada
> veronique.morisset@hc-sc.gc.ca<mailto:veronique.morisset@hc-sc.gc.ca>
> / tél : 613-957-1506 / cellulaire : 613-277-2019
>
> <image001.gif>Veronique Morisset---2016-06-15 11:42:41 AM---CDW
> members, Following the discussion at the last meeting, and having
> reviewed your impact paragraph
>
> From: Veronique Morisset/HC-SC/GC/CA
> To:
> Angelina.polegato@novascotia.ca<mailto:Angelina.polegato@novascotia.ca
> >,
> Caroline.Robert@mddelcc.gouv.qc.ca<mailto:Caroline.Robert@mddelcc.gouv
> .qc.ca>, donald.reid@gov.ab.ca<mailto:donald.reid@gov.ab.ca>,
> David.Fishwick@gov.bc.ca<mailto:David.Fishwick@gov.bc.ca>,
> ghsomers@gov.pe.ca<mailto:ghsomers@gov.pe.ca>,
> hkhan@gov.nl.ca<mailto:hkhan@gov.nl.ca>,
> Kevin.Gould@gnb.ca<mailto:Kevin.Gould@gnb.ca>,
> Kim.Philip@gov.mb.ca<mailto:Kim.Philip@gov.mb.ca>,
> MLeBlanc-Havard@GOV.NU.CA<mailto:MLeBlanc-Havard@GOV.NU.CA>,
> pat.brooks@gov.yk.ca<mailto:pat.brooks@gov.yk.ca>,
> Peter_Workman@gov.nt.ca<mailto:Peter_Workman@gov.nt.ca>,
> sam.ferris@wsask.ca<mailto:sam.ferris@wsask.ca>,
> Satish.Deshpande@ontario.ca<mailto:Satish.Deshpande@ontario.ca>,
> Kristina Taracha/HC-SC/GC/CA@HWC
> Cc: France Lemieux/HC-SC/GC/CA@HWC, John Cooper/HC-SC/GC/CA@HWC, Joyce
> Mortimer/HC-SC/GC/CA@HWC, Michele Giddings/HC-SC/GC/CA@HWC, Richard

> Carrier/HC-SC/GC/CA@HWC, Stephanie McFadyen/HC-SC/GC/CA@HWC, Veronique
> Morisset/HC-SC/GC/CA@HWC, Wendy Enright/HC-SC/GC/CA@HWC
> Date: 2016-06-15 11:42 AM
> Subject: CDW: Update on lead document
>
> _____
>
>
>
> CDW members,
>
> Following the discussion at the last meeting, and having reviewed your impact paragraphs, we have been working on a path forward to reduce the burden of implementing the lead guideline. As the guideline must be compared to levels measured at the tap to be meaningful, the only flexibility that we have would be on the sampling protocol. Section 3.1.1 of the document currently focuses on a residential sampling protocol of a 5 minute flush, followed by a 30 minute stagnation and then collecting a 2 L sample of water in the consumer's home, while recommending a random daytime approach in section 3.1.2 for larger buildings. We are now working on a more practical approach that would be still be scientifically rigorous but reduce the burden on jurisdictions by incorporating a random daytime sampling protocol for residences. This will likely have an impact on the number and size of samples recommended. We are planning to modify some sections of the document and circulate it to you in late June/early July.
>
> Please let us know if you have any concerns with this approach.
>
> Véronique
>
> Véronique Morisset
> Manager, Water Quality Program Division Healthy Environments and
> Consumer Safety / Health Canada / Government of Canada
> veronique.morisset@hc-sc.gc.ca<mailto:veronique.morisset@hc-sc.gc.ca>
> / tel: 613-957-1506 / cel: 613-277-2019
>
> Gestionnaire, Division du programme de la qualité de l'eau Santé
> environnementale et sécurité des consommateurs / Santé Canada /
> Gouvernement du Canada veronique.morisset@hc-sc.gc.ca<mailto:veronique.morisset@hc-sc.gc.ca> / tél : 613-957-1506 / cellulaire : 613-277-2019

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 15, 2017 9:57 AM
To: 'Polegato, Angelina R'; 'Caroline.Robert@mddelcc.gouv.qc.ca'
Subject: RE: Lead Sampling Requirements

Hi Angelina:
Depends on the nature of the testing – i.e. what you are trying to demonstrate/the problem you are trying to solve.

- If the testing is to determine if there are problems with lead in the building plumbing, then the school board is responsible (they have control over the safety of their building), and they should use a testing protocol suitable for diagnosing building plumbing. In this case all fountains/water taps should be tested.
- If the testing is to determine if the community water supply system is causing leaching and help decide whether centralized conditioning /corrosion control is appropriate, and the schools are being used as easily accessible sites for sampling, then the water supplier would be responsible for testing (as they have control over the water treatment), and they should use a testing protocol such as that in the corrosion control guidelines.

Hope that helps. More details are here: https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/interim_guideline_on_reducing_exposure_to_lead_through_drinking_water_july_2017.pdf

Dave

From: Polegato, Angelina R [mailto:Angelina.Polegato@novascotia.ca]
Sent: Wednesday, November 15, 2017 9:32 AM
To: Caroline.Robert@mddelcc.gouv.qc.ca; Fishwick, David HLTH:EX
Subject: Lead Sampling Requirements

Bonjour Caroline/Hello David,

I have a question regarding lead sampling, I hope you can assist with. For schools and daycares connected to municipally owned systems, who is responsible for collecting the sample(s) for lead (the building owner, schoolboard, Department of Education, utility, etc.)? Do you require they collect samples from all fountains and cold water taps?

Thank-you and take care,

Angelina

Mori, Alicia HLTH:EX

From: Caroline.Robert@mddelcc.gouv.qc.ca
Sent: November 16, 2017 7:26 AM
To: Angelina.Polegato@novascotia.ca
Cc: Fishwick, David HLTH:EX
Subject: RE: Lead Sampling Requirements

Hi Angelina,
In such cases, according to the regulation, the municipality has a requirement to take 10% of its annual samples in « educational institutions or health and social services institutions providing services to children 6 years of age or under » served by the system. The requirement is found in Schedule 4 of the regulation (see below).
We are currently looking at ways (regulatory or not) to insure a better coverage of such institutions in the future.

Caroline

Caroline Robert, directrice
Direction de l'eau potable et des eaux souterraines
Ministère du Développement durable, de l'Environnement,
et de la Lutte contre les changements climatiques
675, René-Lévesque Est, 8e étage, boîte 42
Québec (Québec) G1R 5V7
Tél. 418-521-3885, poste 4938
Fax. 418-644-2003
Courriel: caroline.robert@mddelcc.gouv.qc.ca

---

http://legisquebec.gouv.qc.ca/en/ShowDoc/cr/Q-2,%20r.%2040

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De : Polegato, Angelina R [mailto:Angelina.Polegato@novascotia.ca]
Envoyé : 15 novembre 2017 12:32
À : Robert, Caroline ; David.Fishwick@gov.bc.ca
Objet : Lead Sampling Requirements

Bonjour Caroline/Hello David,

I have a question regarding lead sampling, I hope you can assist with. For schools and daycares connected to municipally owned systems, who is responsible for collecting the sample(s) for lead (the building owner, schoolboard, Department of Education, utility, etc.)? Do you require they collect samples from all fountains and cold water taps?

Thank-you and take care,

Angelina

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 16, 2017 10:19 AM
To: 'Vezina, Anne (HC/SC)'
Subject: RE: Reports summary for the minutes

Hi Anne. Here is my high level summary:

- BCMoH has posted new INTERIM GUIDELINES ON EVALUATING AND MITIGATING LEAD IN DRINKING WATER SUPPLIES, SCHOOLS, DAYCARES AND OTHER BUILDINGS. Once the Health Canada Guidelines are finalized and posted, we will update and finalize.
- Schools have begun testing as required by the Ministry of Education.
- Many communities Impacted by forest fires this past summer. Potential short and long term impacts. Handouts "Health Files" created providing drinking water information for communities affected by fire produced for use by EHOs.
- Cyanobacteria. Testing works fine for larger utilities, but additional guidance being prepared for small communities without resource to do regular testing.
- A review of operator certification and facility classification in progress, including how to evaluate and enforce compliance with operator training requirements.

Hop that works for you!
Dave.

From: Vezina, Anne (HC/SC) [mailto:anne.vezina@canada.ca]
Sent: Friday, November 10, 2017 9:24 AM
To: Angelina Polegato (POLEGAAR@gov.ns.ca); Caroline Robert (Caroline.Robert@mddelcc.gouv.qc.ca); Fishwick, David HLTH:EX; George Somers (ghsomers@gov.pe.ca); Haseen Khan (hkhan@gov.nl.ca); Kevin Gould (Kevin.Gould@gnb.ca); Kim Philip (Kim.Philip@gov.mb.ca); Michele LeBlanc-Havard (MLeBlanc-Havard@GOV.NU.CA); Pat Brooks (pat.brooks@gov.yk.ca); Peter Workman (Peter_Workman@gov.nt.ca); Satish Deshpande (Satish.Deshpande@ene.gov.on.ca)
Cc: Beattie, Tim (HC/SC); Brooks, Teresa (HC/SC); Carney, Jenny (HC/SC); Carreau, Greg (HC/SC); Carrier, Richard (HC/SC); Charron, Richard (HC/SC); Cherry, Andrea (HC/SC); Enright, Wendy (HC/SC); Giddings, Michele (HC/SC); Labib, Sarah (HC/SC); Lemieux, France (HC/SC); Loos, Michele (HC/SC); MacAulay, Jane (HC/SC); MacDonald, Judy (HC/SC); Martinova, Nadia (HC/SC); McFadyen, Stephanie (HC/SC); Medeiros, Diane (HC/SC); Moffat, Ivy (HC/SC); Morisset, Veronique (HC/SC); Mortimer, Joyce (HC/SC); Payne, Sarah Jane (HC/SC); Yasvinski, Gordon (HC/SC); Zuric, Jelena (HC/SC); Aranda-Rodriguez, Rocio (HC/SC); Taracha, Kristina (HC/SC); Tugulea, Anca-Maria (HC/SC); Chen2, Jing (HC/SC); Cureton, Philippa (EC)
Subject: Reports summary for the minutes

CDW members and Secretariat,

Thank you for participating in another successful CDW meeting in Ottawa this week.

As we are drafting the meeting minutes, I would gently remind you to provide me with a summary of your report or update, which will be added to the minutes. In an effort to increase transparency, the minutes will be made publically available on our website once finalized and approved by CDW.

Thank you all and I hope you have a great weekend!

Anne

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: March 14, 2018 2:30 PM
To: Fishwick, David HLTH:EX
Cc: Edwards, Joanne HLTH:EX
Subject: RE: 20180312_DRAFT_PR_TIPS TO ENSURE THE BEST WATER QUALITY_v1_PDWOcomments

Brilliant stuff Dave. Thank you. I especially liked that the volume they showed on the graph matched my volume of 7L.
I know LSLs are a big issue in the US, but I have not heard of ANY in Northern BC, and indeed I wonder if there are any in ANY of BC… If there are none, then we don't need to worry about them, right? Unless LSLs are now considered an invasive species, like *N. fowleri*, which like lead, also eats your brain.
Thanks,
DRT.

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, March 14, 2018 13:33
To: Tamblyn, Dave
Cc: Edwards, Joanne HLTH:EX
Subject: RE: 20180312_DRAFT_PR_TIPS TO ENSURE THE BEST WATER QUALITY_v1_PDWOcomments

Hey Dave – my intent was not to over-complicate things – just it was just to point out that when flushing is done in a community with lead service lines, you can expect to have a slug of a few litres of high lead concentration water that has been stagnating in the service lines come through – and that this slug would correspond with the first few seconds of the water turning cold as those lines are found in the ground. See slide below. After that the water from the distribution systems comes through and the lead concentration drops. Some communities actually use this artifact to help determine if there are lead service lines without digging them up.

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From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Wednesday, March 14, 2018 11:56 AM
To: Fishwick, David HLTH:EX

Cc: Edwards, Joanne HLTH:EX
Subject: RE: 20180312_DRAFT_PR_TIPS TO ENSURE THE BEST WATER QUALITY_v1_PDWOcomments

Dave, re lead service lines… First, there are no LSLs in Prince Rupert, as far as the City knows or has told us – we've specifically asked. Second, even if there were… I would think the kinetics of dissolution are complicated, but I would doubt that there would be enough contact time for significant lead to dissolve in running cold water. This is just my intuition – I haven't seen any scientific study to back it up – but nor have I seen any results to suggest that cold water from the distribution system can exceed 10 or 15 µg/L lead, in a residential plumbing context. With a pH of 5.4, Rupert is a pretty good test case, but that of course will have to wait until the residential sampling program is implemented. Kitimat, by the way, is undertaking a preliminary, non-random sampling survey in employees' homes, to be followed by a formal random survey in late summer or early fall, or whenever the water temperature is maximum.

Joanne, re flushing time, do you have any "not to exceed" suggestions? I'm more concerned about folks running their taps for ½ hour than for them only running it for 5 seconds. Can we say, 30 seconds to 2 minutes during the day, and not to exceed 5 minutes in the morning? (I'm mindful of water conservation and sewage treatment cost concerns.) I'm hesitant to even enter into the discussion, because of course it actually depends on tubing diameters and lengths, and water pressure at the tap.

Below, I calculate a **maximum flushing time of 5 minutes**, based on a minimum tap flow of 4 L/min, and a maximum tubing length of 50 m, which creates a plumbing storage volume of 17 L. This assumes no pressure tank or other storage device is present. The corresponding **minimum flushing time is 40 seconds**, based on a maximum tap flow of 10 L/min, and minimum plumbing storage of 7 L.

Do those numbers seem reasonable to you?

DRT.

MAXIMUM Flushing Time

D		m	L		V		
1	inch	0.0254	20	m	10.1	Litres	
0.75	inch	0.01905	20	m	5.7	Litres	
0.5	inch	0.0127	10	m	1.3	Litres	
Q.min	4	L/min		V.max	17.1	Litres	
time to flush		t.f.max	4.28	minutes	say	5	min
MINIMUM Flushing Time							
D		m	L		V		
1	inch	0.0254	0	m	0	Litres	
0.75	inch	0.01905	20	m	5.7	Litres	
0.5	inch	0.0127	10	m	1.3	Litres	
Q.max	10	L/min			7.	Litres	
time to flush		t.f.min	0.696723	minutes	say	40	seconds

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, March 14, 2018 09:27
To: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>; Fumerton, Raina <Raina.Fumerton@northernhealth.ca>; Palmer, Andrea <Andrea.Palmer@northernhealth.ca>
Cc: Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>
Subject: 20180312_DRAFT_PR_TIPS TO ENSURE THE BEST WATER QUALITY_v1_PDWOcomments

Hi Folks – I've added my two cents to Joanne's

Dave

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: March 20, 2018 11:54 AM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: Lead bulletin for NH web site
Attachments: Northern Health Bulletin - Lead v2.docx

Northern Health web bulletin re lead testing. I am a big fan of the interim guidelines for lead, but felt we had to simplify them down for residential consumption…

Could you please review the attached bulletin, and forward your feedback and comments to me at your earliest convenience? This bulletin will be cited in an upcoming public communications campaign by the City of Prince Rupert regarding lead.

Thanks for your continued collaboration!
Best,
DRT.

Dave Tamblyn
Public Health Engineer
Northern Health
Prince George
250.565.2150

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: March 20, 2018 1:58 PM
To: 'Tamblyn, Dave'; Edwards, Joanne HLTH:EX
Subject: Northern Health Bulletin - Lead v2
Attachments: Northern Health Bulletin - Lead v2.docx

I like this a lot. I've suggested made a couple minor edits, but otherwise think this gets to the point quite well.

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: March 21, 2018 12:32 PM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Subject: RE: Northern Health Bulletin - Lead v2
Attachments: Northern Health Bulletin - Lead v3.docx

Thanks Joanne and Dave – new and improved version attached, which I think and hope addresses all the excellent points you raised. Thanks again for your help.
DRT.

From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Wednesday, March 21, 2018 11:16
To: Fishwick, David HLTH:EX ; Tamblyn, Dave
Subject: Northern Health Bulletin - Lead v2

Hi Dave,

A couple more comments. I think it is well done as well.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Sent: March 22, 2018 8:15 AM
To: Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Cc: Zemanek, Michael HLTH:EX
Subject: RE: Northern Health Bulletin - Lead v5
Attachments: Northern Health Bulletin - Lead v5.docx

Joanne and Dave,
Thanks very much for your valuable and timely input. I think it's a good document. I'll send you the link once it's up.
Also, the City of Prince Rupert is creating a new web page devoted to drinking water issues – possibly http://princerupert.ca/drinkingwater - which will include their "reducing home-source lead in drinking water" mail out, and link to this Northern Health bulletin, so the project is moving forward nicely.
Best,
DRT.

From: Tamblyn, Dave
Sent: Wednesday, March 21, 2018 14:36
To: 'Edwards, Joanne HLTH:EX' ; Fishwick, David HLTH:EX
Subject: RE: Northern Health Bulletin - Lead v4

I caved. Thank you for pushing me on filters and flushing times. It will make for a better guide. I couldn't in good conscience put in flushing times without also noting the water conservation side-bar. Thus, I will always think of this (happily) as the "can of worms" version. Also noted CSA low lead plumbing markings, and NSF guide to lead filters. Hope it is fair and clear.
Best,
DRT.

From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Wednesday, March 21, 2018 13:58
To: Fishwick, David HLTH:EX <David.Fishwick@gov.bc.ca>; Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>
Subject: Northern Health Bulletin - Lead v3

Comments in the attached

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: March 27, 2018 11:31 AM
To: Edwards, Joanne HLTH:EX; 'Tamblyn, Dave'
Subject: RE: Public Consultation: Guidelines for Canadian Drinking Water Quality - Guideline Technical Document on Copper

Hi Dave:
No specific plans for provincial copper guidelines at this point.
Dave

From: Edwards, Joanne HLTH:EX
Sent: Monday, March 26, 2018 1:32 PM
To: 'Tamblyn, Dave'
Cc: Fishwick, David HLTH:EX
Subject: RE: Public Consultation: Guidelines for Canadian Drinking Water Quality - Guideline Technical Document on Copper

I'll forward your question to Dave F. who is BC's current rep on CDW.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

From: Tamblyn, Dave [mailto:Dave.Tamblyn@northernhealth.ca]
Sent: Monday, March 26, 2018 12:41 PM
To: Edwards, Joanne HLTH:EX
Subject: FW: Public Consultation: Guidelines for Canadian Drinking Water Quality - Guideline Technical Document on Copper

Are you working on "interim guidelines for copper" ????
I've always said we were oversimplifying to focus so much on lead. Is iron next?
DRT.

From: Water News Canada [mailto:water_eau@hc-sc.gc.ca]
Sent: Monday, March 26, 2018 11:45
To: WATER_NEWS_CANADA@LIST.HC-SC.GC.CA
Subject: Public Consultation: Guidelines for Canadian Drinking Water Quality - Guideline Technical Document on Copper

The proposed guideline technical document on copper in drinking water is available for public comment at the following address:

www.canada.ca/en/health-canada/programs/consultation-copper-drinking-water/document.html

Interested parties are encouraged to provide comments and suggestions to water_eau@hc-sc.gc.ca by May 25, 2018.

Questions or comments? Contact us at water_eau@hc-sc.gc.ca

To unsubscribe, please visit this website: www.canada.ca/en/health-canada/services/environmental-workplace-health/water-quality/mailing-list-water-quality-environmental-workplace-health.html

Pour recevoir ces messages en français, veuillez vous abonner en visitant : www.canada.ca/fr/sante-canada/services/sante-environnement-milieu-travail/qualite-eau/liste-distribution-qualite-eau-sante-environnement-milieu-travail.html

Water and Air Quality Bureau / Bureau de la qualité de l'air et de l'eau
Safe Environments Directorate, HECSB / Direction de la sécurité des milieux/DGSESC
Health Canada / Santé Canada
269 Laurier Ave West, AL 4903D, Ottawa, Ont.
water_eau@hc-sc.gc.ca

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: April 9, 2018 2:49 PM
To: Fishwick, David HLTH:EX
Subject: copper
Attachments: Vancouver Led Levels.xls; Childcare survey CG (rev.2012.05.11).xls; Lead and Copper October2013 final .docx; North Shore Led Levels.xls; Richmond Lead and Copper Drinking Water Childcare Survey 2012.xls

Hi David – for some reason I cannot find the 2012 data for Coast Garibaldi but here is the info for our other areas…

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: April 17, 2018 9:56 AM
To: XT:Fumerton, Raina HLTH:IN; Thompson, Laurel HLTH:EX; Edwards, Joanne HLTH:EX; Henry, Bonnie HLTH:EX; Zemanek, Michael HLTH:EX
Cc: XT:Allison, Sandra HLTH:IN; Wheeler, Jennifer; Tamblyn, Dave; Quibell, Doug; XT:Palmer, Andrea GCPE:IN; XT:Panessa, Ciro HLTH:IN
Subject: RE: Materials relevant to briefing Minister Dix Re Prince Rupert Drinking Water

Hi Raina:
I'm curious myself as to what may have transpired. I will let you know if I learn anything.
Dave
David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1
Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca
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From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Tuesday, April 17, 2018 9:42 AM
To: Fishwick, David HLTH:EX; Thompson, Laurel HLTH:EX; Edwards, Joanne HLTH:EX; Henry, Bonnie HLTH:EX; Zemanek, Michael HLTH:EX
Cc: XT:Allison, Sandra HLTH:IN; Wheeler, Jennifer; Tamblyn, Dave; Quibell, Doug; XT:Palmer, Andrea GCPE:IN; XT:Panessa, Ciro HLTH:IN
Subject: RE: Materials relevant to briefing Minister Dix Re Prince Rupert Drinking Water
Hi just following up on this – is it possible to share the outcome of this meeting with NH?
Thanks,
Raina
Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Northern Health Authority
250-631-4261

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Monday, April 09, 2018 8:28 AM
To: Fumerton, Raina <Raina.Fumerton@northernhealth.ca>; Thompson, Laurel HLTH:EX <Laurel.Thompson@gov.bc.ca>; Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>; Henry, Bonnie HLTH:EX <Bonnie.Henry@gov.bc.ca>; Zemanek, Michael HLTH:EX <Michael.Zemanek@gov.bc.ca>
Cc: Allison, Sandra <Sandra.Allison@northernhealth.ca>; Wheeler, Jennifer <Jennifer.Wheeler@northernhealth.ca>; Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; Palmer, Andrea <Andrea.Palmer@northernhealth.ca>; Panessa, Ciro <Ciro.Panessa@northernhealth.ca>
Subject: RE: Materials relevant to briefing Minister Dix Re Prince Rupert Drinking Water
Thanks Raina:
I will let you know if we have further questions
Dave

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Friday, April 6, 2018 5:26 PM
To: Thompson, Laurel HLTH:EX; Edwards, Joanne HLTH:EX; Henry, Bonnie HLTH:EX; Fishwick, David HLTH:EX; Zemanek, Michael HLTH:EX
Cc: XT:Allison, Sandra HLTH:IN; Wheeler, Jennifer; Tamblyn, Dave; Quibell, Doug; XT:Palmer, Andrea GCPE:IN; XT:Panessa, Ciro HLTH:IN
Subject: Materials relevant to briefing Minister Dix Re Prince Rupert Drinking Water

As per your request see attached above documents. Also, the most updated proposed COPs and proposed timelines for our meeting with the City on Dec 4th 2017 can be found attached below:



Let me know if there is anything else you require (e.g. minutes of our meetings with the City?) or if you have any additional questions. I am travelling on Monday so best way to get hold of me is my cell 250-641-1758. Some additional updates of relevance are as follows.

- The revised permit you will find attached in pdf format displays the shorter term requirements on which we have assigned timelines. The longer term requirements will be assigned timelines at a later date and as such are not outlined in their current permit to operate. We wanted to start with tangible first steps and continue to build relationships, and to not overwhelm.
- One key factor that may not be highlighted in the existing documentation or in BNs, because we only became aware of the effects recently, is that the City switched to using its backup water source last year in preparation for the construction of a new dam on the primary source. The backup water source is more coloured, and has higher turbidity, as well as a lower pH. (even lower than the primary source) The higher turbidity requires the City to use a higher level of chlorination, which in turn increases the levels of disinfection by products and further reduces the pH (they use gas chlorine). The result is that the pH in the distribution is now in the range of 5.4 (compare OG 7.0) and HAAs and THMs are both approximately 200 µg/L, about 2 to 2.5 times their respective MACs. Since this is a short term change, and the MACs are derived based on lifetime exposure, we have not required any corrective treatment actions at this point. We have advised the City to:
  1. advise residents that these health parameters exceed guidelines, and recommend methods to reduce exposure, and
  2. study water treatment options to reduce organics.
- We recently had a very successful and collaborative experience working with Rupert city staff on the City's first condition of permit, which was for them to publicly communicate the risk of lead exposure via drinking water, and ways to mitigate this exposure. Northern Health supported them with the content (Joanne and Dave F also provided us with some excellent suggestions and input☺). Here is their final product:

http://www.princerupert.ca/cityservices/utilities/drinking-water-report/advisory

- The hospital in Prince Rupert has had longstanding issues with water quality issues (dark brown sediments/turbidity) likely due to the combination of old infrastructure and the municipal water characteristics. A patient complaint arose in the summer about the tap water quality (possibly aggravated by the change to the secondary/back up water source which is even worse than the original). NH is in the process of hiring a contractor to do a comprehensive assessment of the PR Regional Hospital drinking water system and come up with options for mitigation. The RFP to do this work has just closed and the assessment will begin soon. In the meantime the hospital has instituted a comprehensive flushing program. Three have been no known health impacts from the PR hospital water issues to date.
- The city frequently cites financial instability but it is my understanding that they are actually in a decent financial position compared to other communities of a similar nature and size with in the province. We have committed to work with the city in supporting external funding requests and efforts – we have acknowledged that while such work should have been done years ago, that any expenditure to meet treatment expectations has costs and so we are being very mindful of taking a stepwise approach, and ensuring reasonable/achievable timeframes. We have not yet set dates for the longer term COPs that will require major capital funding, as the specific mitigation interventions will depend first on them hiring a qualified professional to do a comprehensive assessment and provide recommended options to address the concerns. I suspect that all in all, realistically, for the City to have all the COPs met will be a 10-15 year endeavour. Given several decades of inaction around this issue, I am very pleased that a plan has been initiated and am hopeful that ultimately it will be successfully and fully implemented.

- As you know we are taking essentially the same approach with Kitimat. That is going very smoothly. No concerns. Let me know if you would like a separate update on Kitimat with more specifics. I suspect that they will be able to comply with all their COPs in less than ten years.

I hope this is helpful.
If anyone from NH has any additional comments to add that I have missed please do so!
Best,
Raina
Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Northern Health Authority
250-631-4261

Mori, Alicia HLTH:EX

From: Fumerton, Raina <Raina.Fumerton@northernhealth.ca>
Sent: April 17, 2018 1:55 PM
To: Fishwick, David HLTH:EX; Thompson, Laurel HLTH:EX; Edwards, Joanne HLTH:EX; Henry, Bonnie HLTH:EX; Zemanek, Michael HLTH:EX
Cc: XT:Allison, Sandra HLTH:IN; Wheeler, Jennifer; Tamblyn, Dave; Quibell, Doug; XT:Palmer, Andrea GCPE:IN; XT:Panessa, Ciro HLTH:IN
Subject: RE: Materials relevant to briefing Minister Dix Re Prince Rupert Drinking Water

Thanks for the update:)
r

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Northern Health Authority
250-631-4261

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
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Cc: Allison, Sandra ; Wheeler, Jennifer ; Tamblyn, Dave ; Quibell, Doug ; Palmer, Andrea ; Panessa, Ciro
Subject: RE: Materials relevant to briefing Minister Dix Re Prince Rupert Drinking Water

Hi Raina:

I have been told that they were unable to make a time work so they are looking to schedule at a future date

Dave

From: Fumerton, Raina [mailto:Raina.Fumerton@northernhealth.ca]
Sent: Tuesday, April 17, 2018 9:42 AM
To: Fishwick, David HLTH:EX; Thompson, Laurel HLTH:EX; Edwards, Joanne HLTH:EX; Henry, Bonnie HLTH:EX; Zemanek, Michael HLTH:EX
Cc: XT:Allison, Sandra HLTH:IN; Wheeler, Jennifer; Tamblyn, Dave; Quibell, Doug; XT:Palmer, Andrea GCPE:IN; XT:Panessa, Ciro HLTH:IN
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Cc: Allison, Sandra <Sandra.Allison@northernhealth.ca>; Wheeler, Jennifer <Jennifer.Wheeler@northernhealth.ca>; Tamblyn, Dave <Dave.Tamblyn@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; Palmer, Andrea <Andrea.Palmer@northernhealth.ca>; Panessa, Ciro <Ciro.Panessa@northernhealth.ca>
Subject: RE: Materials relevant to briefing Minister Dix Re Prince Rupert Drinking Water

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Best,
Raina

Dr. Raina Fumerton MD, MPH, FRCPC
Northwest Medical Health Officer
Northern Health Authority
250-631-4261

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: May 24, 2018 12:11 PM
To: Laughlin, Keri HLTH:EX; [FHA] Zubel, Marc
Cc: Fishwick, David HLTH:EX
Subject: RE: New Westminster tenant concerned with lead in residence

Hi Keri,

New Westminster is in FHA jurisdiction so I'll loop in Marc with this.

However we tend not to use s 29 investigations for this – reserving that typically for source contamination concerns (ie aquifer or watershed).
I suspect Marc would want to start off with having a DWO phone the resident on their inquiry.

Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

From: Laughlin, Keri HLTH:EX [mailto:Keri.Laughlin@gov.bc.ca]
Sent: Thursday, May 24, 2018 11:42 AM
To: Clarkson, Len [STS]
Cc: Fishwick, David HLTH:EX
Subject: New Westminister tenant concerned with lead in residence

Hi Len,
We've had a public inquiry come through re: Drinking water concern in residence bldg. The tenant is asking for help to investigate whether the drinking water is safe, and says it's an older bldg. and could possibly have lead pipes. Just wondering if VCH's online document entitled 'Request an investigation under Section 29 of the DWPA' would be useful and up-to-date for them? It looks more as though its for a well, however, it might be useful.

I'm thinking they should contact a local EHO/DWO for New Westminister if they wanted to perform a sample test. The issue here, is that it's not the owner of the building whose contacted us, so it may become a civil issue (i.e. tenant and owner).

Let me know your thoughts.
Keri

Keri Laughlin

Health Policy Analyst
Population and Public Health, Health Protection Branch
Ministry of Health

T: 250.952.1501
E: Keri.laughlin@gov.bc.ca

Mori, Alicia HLTH:EX

From: Jacobsen, Jennifer <Jennifer.Jacobsen@interiorhealth.ca>
Sent: July 16, 2018 9:40 AM
To: Fishwick, David HLTH:EX
Cc: Moseley, Gordon
Subject: Lead in DW in schools

Hi Dave – I understand that you are the contact for the Lead in Drinking water in Schools program. I was just getting up to speed on the program and notice that the highlighted link on your website is not working. Can you suggest another resource to direct the schools on sampling protocol.

thanks
Jennifer Jacobsen
Team Leader, Environmental Management
Interior Health Authority
3090 Skaha Lake Road, Penticton, BC V2A 7H2
Direct: (250) 492-4000 ext 2786
Cell: (250) 462-2465
jennifer.jacobsen@interiorhealth.ca

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- Manual of School Law
  - Library Act and Regulations
  - School Calendars
  - School Trustee Election Procedures
  - What is Policy?
  - How to Read Policy
- Public School Policies
- Independent School Policies
  - Adult Non-Graduated Funding Policy - Independent Schools
  - BC Teacher Education Program Standards
  - Classification of Independent Schools
  - Distributed Learning – homeschoolers
  - Distributed Learning - Independent Schools
  - Distributed Learning – Requirements and Guidelines for Students with Special Needs
  - Educational Standards for Independent Schools
  - Establishing an Independent School
  - External Evaluation and

Testing Lead Content in Drinking Water of Independent School Facilities

Date came into force or revised

Effective January 1, 2017

Status

Current

Policy statement

Independent school authorities are expected to test for lead conte water in their school facilities to ensure it meets provincial require established by the Ministry of Health, such as the Guidelines for Ca Water Quality for lead.

Authorities should take reasonable and prompt steps to resolve el levels that are outside established guidelines on any drinking wat results.

While this policy specifically addresses lead content in drinking wa of Education expects independent school authorities will work wit health authorities to address other issues that affect the quality of prescribed under applicable provincial and federal legislation.

Band operated schools operating on First Nations reserves should

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: October 30, 2018 1:44 PM
To: Edwards, Joanne HLTH:EX; [IHA] Hesketh, Courtney; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Sylvia Struck; XT:McClure, Shelley HLTH:IN; Wetherill, Anne MCF:EX
Subject: RE: Task Group to Clarify Lead Sampling Requirements in Daycares

Hi Joanne,
Yes this is fine – please send along the meeting materials when you are able.

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Tuesday, October 30, 2018 1:03 PM
To: Hesketh, Courtney; Clarkson, Len [STS]; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Sylvia Struck; XT:McClure, Shelley HLTH:IN; Wetherill, Anne MCF:EX
Subject: RE: Task Group to Clarify Lead Sampling Requirements in Daycares

Hello all,

This is just a quick email reminder about our first task group tele-conference next Tuesday (Nov 6) at 2:30.

We did our best to accommodate everyone's schedule. If you cannot make the call due to a scheduling conflict, please ensure you have an alternate arranged to represent your agency/stakeholder group as per the Terms of Reference for the task group. Please let us know who that person would be so we can ensure to send them the necessary call information and materials.

Thanks again for your participation,

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

From: Edwards, Joanne HLTH:EX
Sent: Friday, October 5, 2018 2:38 PM
To: Hesketh, Courtney; Clarkson, Len [STS]; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Sylvia Struck; XT:McClure,

Shelley HLTH:IN; Wetherill, Anne MCF:EX; Edwards, Joanne HLTH:EX
Subject: Task Group to Clarify Lead Sampling Requirements in Daycares

Hello all,

Thank you for agreeing to participate in the Task Group to Clarify Lead Sampling Requirements in Daycares assembled at the request of the BC Environmental Health Policy Advisory Committee (EHPAC). EHPAC has approved the attached Project Charter to guide the work of the group, which will be co-chaired by Courtney Hesketh from Interior Health and I. We've asked each of you to participate and represent your department and colleagues on the group. Please feel free to share it with you team and alternate. This will be a time limited group and we hope to limit it to a small number of calls. Courtney will arrange a doodle poll to be sent out next week to try to schedule our first call.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: November 1, 2018 11:00 AM
To: 'Clarkson, Len [STS]'
Subject: RE: September Minutes

Thanks Len, I've changed it to "Len/Paul suggested it would be helpful if Min of Ed revisited their policy (frequency, locations, communication, path forward)" if that works for you.
Dave

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Thursday, November 1, 2018 9:46 AM
To: Fishwick, David HLTH:EX; Bedford, Brian MAH:EX; [IHA] Hesketh, Courtney; [NHA] Quibell, Doug; Edwards, Joanne HLTH:EX; [IHA] Norlin, J Ivor; XT:HLTH Lu, James; Laughlin, Keri HLTH:EX; [FHA] Zubel, Marc; XT:HLTH Hasselback, Paul; [NHA] Kling, Rakel; Rieberger, Kevin ENV:EX; Beise, Rory HLTH:EX; Russo, Geneen HLTH:EX; [NHA] Wadden, Shane; 'Sylvia Struck'; XT:HLTH Radomske, Wayne; Zemanek, Michael HLTH:EX
Subject: RE: September Minutes

One item seems to be incorrect as noted re MOEd policy on school Pb testing.

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Thursday, November 01, 2018 8:50 AM
To: Bedford, Brian MAH:EX; 'Courtney Hesketh'; [NHA] Quibell, Doug; Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX; 'Ivor Norlin'; Lu, James [RH]; Laughlin, Keri HLTH:EX; Clarkson, Len [STS]; [FHA] Zubel, Marc; XT:HLTH Hasselback, Paul; 'Rakel Kling'; Rieberger, Kevin ENV:EX; Beise, Rory HLTH:EX; Russo, Geneen HLTH:EX; 'Shane Wadden'; 'Sylvia Struck'; XT:HLTH Radomske, Wayne; Zemanek, Michael HLTH:EX
Subject: September Minutes

Hi Folks:
Minutes from last DWLC.
My apologies these were not posted earlier.

Dave

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: November 7, 2018 5:07 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck; [NHA] Wadden, Shane
Subject: Lead in day care task group
Attachments: Options table - lead in daycare DW.docx; Potential Options Re daycare testing.docx; Lead in Day Care DW task group Project Charter_revised Oct 1.doc

Hi Ivor,

For the agenda under lead issues can we include a brief discussion of the day care working group? We had our first call yesterday (Nov. 6th) and while we don't have the official minutes yet here are my notes:

1. We have approx. 6000 licenced child care facilities in BC. The majority of these are the smaller family day care settings (max 7).
2. CCFL is funded by Min of Children and Fam, and there is some resistance to using funds for anything other than capacity building. Also the facilities are struggling financially with many of them operating at the margin – so cost control is sensitive – likely greatest with the smaller / more numerous facilities.
3. The attached charts are just for starters – we would like to identify as many options as possible.

I would like to hear everyone's views but my first thoughts are:

1. We should avoid using the GCDWQ as a legal document – we may need to pick a threshold number (say 5 ppb) but aim for an ALARA approach.
2. We should adopt a multi-faceted approach
3. Flushing till cold should be a viable option – especially for family day care and at least as a start even in the absence of test data. Subsequently we can add on more detail such as: plans for facilities, resources for parents to have at home.
4. Further to 3, we may be able to have higher requirements for the larger group facilities – ie more testing / data. For the family day care we may wish to periodically some properly designed surveys to provide evidence of success.
5. Flushing followed by an NSF pour through filter and have the finished water stored in a fridge could be very cost effective.

All initial feedback is welcome – please let me know what you think by November 21st so that I can assemble an initial reply on behalf of DWO's
Our next meeting is set for December 11th but feedback due by Nov 23rd as I'll be on a little vacation after that.

Chat soon,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca

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Mori, Alicia HLTH:EX

From: Magee, Lynne <Lynne.Magee@viha.ca>
Sent: November 13, 2018 4:22 PM
To: 'Clarkson, Len [STS]'; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck; [NHA] Wadden, Shane
Subject: RE: Lead in day care task group
Attachments: CCFL 6.1 Food Safety, Drinking Water and Sewage Disposal.doc

Hi Len

FYI, Island Health has an internal policy on what Island Health does about water and sewage disposal for our smaller licensed care facilities, which is attached.

Footnote 7, (2) (C) (i) , pages 13 and 14/86 in DWOG, Part A , the DWPA does not apply to the care facility if the provision would "apply to the CCF only because it is not being used as a SFD house, or because it operates as a CCF, charitable enterprise or a commercial venture." Do we have a role, or is it entirely up to the operators to sample and do what they need to do, to mitigate any threats?

Having said that, I like the 5 options you provided below.

Personally, I like the Brita on tap fixture!

Lynne

From: Clarkson, Len [STS]
Sent: Wednesday, November 07, 2018 5:07 PM
To: David Fishwick ; Joanne Edwards ; Magee, Lynne ; [FHA] Zubel, Marc ; [IHA] Norlin, J Ivor ; Sylvia Struck ; [NHA] Wadden, Shane
Subject: Lead in day care task group

Hi Ivor,

For the agenda under lead issues can we include a brief discussion of the day care working group? We had our first call yesterday (Nov. 6th) and while we don't have the official minutes yet here are my notes:

1. We have approx. 6000 licenced child care facilities in BC. The majority of these are the smaller family day care settings (max 7).
2. CCFL is funded by Min of Children and Fam, and there is some resistance to using funds for anything other than capacity building. Also the facilities are struggling financially with many of them operating at the margin – so cost control is sensitive – likely greatest with the smaller / more numerous facilities.
3. The attached charts are just for starters – we would like to identify as many options as possible.

I would like to hear everyone's views but my first thoughts are:

1. We should avoid using the GCDWQ as a legal document – we may need to pick a threshold number (say 5 ppb) but aim for an ALARA approach.
2. We should adopt a multi-faceted approach

3. Flushing till cold should be a viable option – especially for family day care and at least as a start even in the absence of test data. Subsequently we can add on more detail such as: plans for facilities, resources for parents to have at home.
4. Further to 3, we may be able to have higher requirements for the larger group facilities – ie more testing / data. For the family day care we may wish to periodically some properly designed surveys to provide evidence of success.
5. Flushing followed by an NSF pour through filter and have the finished water stored in a fridge could be very cost effective.

All initial feedback is welcome – please let me know what you think by November 21st so that I can assemble an initial reply on behalf of DWO's
Our next meeting is set for December 11th but feedback due by Nov 23rd as I'll be on a little vacation after that.

Chat soon,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: November 22, 2018 6:21 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; 'Lynne Magee'; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; 'Sylvia Struck'; [NHA] Wadden, Shane
Subject: FW: Lead in day care task group
Attachments: Options table - lead in daycare DW.docx; Potential Options Re daycare testing.docx; Lead in Day Care DW task group Project Charter_revised Oct 1.doc

Hi all,
I will need to send my feedback to Joanne and Courtenay Friday – sorry this is short notice s.22
s.22
Thanks to those I have spoken to and received feedback. I hope I haven't missed anything but here is what I was thinking of based on feedback:

1. From a total ecologic perspective, children exposure to lead through drinking water is a relatively minor issue. Still we know there is no safe threshold exposure to lead for young children. Accordingly from a DWO perspective we recommend educational resources be provided to all day care facilities advising them of the issue and that flushing until cold is a reasonable precaution / recommendation. Ideally to keep this simple and to drive the Pb levels as low as reasonably achievable this should apply to all facilities. When developing educational resources consideration should be given to saving stored water in the fridge, and we may wish to promote further reduction via an appropriate (ie NSF approved pour through filter).
2. Any messaging pursuant to #1 above should also contain a component for the children to take home, where the majority of drinking water exposure occurs and where siblings may then receive similar protection. Furthermore messages should also describe risks of lead exposure to lead paint, etc.
3. Child care facilities need to be supported to at least maintain the number of spaces providing supervised care for children. Accordingly it is not thought to be appropriate for facility staff and owners to carry the burden of conducing a sampling program. We are unsure of how the data would be used, but if data is required it should be considered in a thoughtful way, and then if resource allocation can be justified – proceed to conduct a limited but statistically significant survey in a controlled fashion.
4. A controlled but limited response is appropriate for lead in the water supplies of child care facilities – particularly in view of greater environmental risks such as radon gas exposure (especially in basement or ground level care facilities). Except, if it can be determined that the care facility is serviced by an elemental Pb service line, then bottled water should be used until the service line can be replaced.

Please let me know if this is acceptable. I will be working away from my office tomorrow so I am hoping it doesn't need editing. If it does I may need a volunteer to help with that.
Sorry for the short turn around but I'd like to send this out tomorrow…

Best regards all,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Clarkson, Len [STS]
Sent: Wednesday, November 07, 2018 5:07 PM
To: David Fishwick; Joanne Edwards; Lynne Magee; [FHA] Zubel, Marc; Norlin, J Ivor; Sylvia Struck; 'Shane Wadden'
Subject: Lead in day care task group

Hi Ivor,

For the agenda under lead issues can we include a brief discussion of the day care working group? We had our first call yesterday (Nov. 6th) and while we don't have the official minutes yet here are my notes:

1. We have approx. 6000 licenced child care facilities in BC. The majority of these are the smaller family day care settings (max 7).
2. CCFL is funded by Min of Children and Fam, and there is some resistance to using funds for anything other than capacity building. Also the facilities are struggling financially with many of them operating at the margin – so cost control is sensitive – likely greatest with the smaller / more numerous facilities.
3. The attached charts are just for starters – we would like to identify as many options as possible.

I would like to hear everyone's views but my first thoughts are:

1. We should avoid using the GCDWQ as a legal document – we may need to pick a threshold number (say 5 ppb) but aim for an ALARA approach.
2. We should adopt a multi-faceted approach
3. Flushing till cold should be a viable option – especially for family day care and at least as a start even in the absence of test data. Subsequently we can add on more detail such as: plans for facilities, resources for parents to have at home.
4. Further to 3, we may be able to have higher requirements for the larger group facilities – ie more testing / data. For the family day care we may wish to periodically some properly designed surveys to provide evidence of success.
5. Flushing followed by an NSF pour through filter and have the finished water stored in a fridge could be very cost effective.

All initial feedback is welcome – please let me know what you think by November 21st so that I can assemble an initial reply on behalf of DWO's
Our next meeting is set for December 11th but feedback due by Nov 23rd s.22

Chat soon,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca

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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: November 23, 2018 5:07 PM
To: [IHA] Hesketh, Courtney; 'Dave Tamblyn [C]'; Murrell, Joanne MCF:EX; Cotie, Kate L MCF:EX; Fishwick, David HLTH:EX; Wetherill, Anne MCF:EX; Butler, Teresa MCF:EX; Bedford, Sue HLTH:EX; Markey, Paul [VC]; Edwards, Joanne HLTH:EX
Cc: Ritson, Mark [VC]; XT:HLTH Taki, Richard; XT:HLTH Lu, James; Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck
Subject: RE: Reminder - Feedback on Lead in Childcare Matrix

Hi Courtney and Joanne,
On behalf of the HADWC here is our preliminary feedback:

1. From a total ecologic perspective, childhood exposure to lead in drinking water while attending day care, is thought to be low, considering drinking water is not the only source. Still, no risk is acceptable if it can easily be avoided, and we know there is no safe threshold exposure to lead for young children. Accordingly from a DWO perspective we recommend educational resources be provided to all day care facilities advising them of the issue and that flushing until cold is a reasonable precaution / recommendation to effectively reduce lead in drinking water. Ideally to keep this simple and to drive the Pb levels as low as reasonably achievable this should apply to all facilities. When developing educational resources consideration should be given to saving stored water in the fridge, and we may wish to promote further reduction via an appropriate (ie NSF approved pour through filter).
2. Any messaging pursuant to #1 above should also contain a component for the children to take home, where the majority of drinking water exposure occurs and where siblings may then receive similar protection. Furthermore messages should also describe risks of lead exposure to lead paint, etc.
3. Child care facilities need to be supported to at least maintain the number of spaces providing supervised care for children. Accordingly it is not thought to be appropriate for facility staff and owners to carry the burden of conducing a sampling program. We are unsure of how the data would be used, but if data is required it should be considered in a thoughtful way, and then if resource allocation can be justified – proceed to conduct a limited but statistically significant survey in a controlled fashion.
4. A controlled but limited response is appropriate for lead in the water supplies of child care facilities – particularly in view of greater environmental risks such as radon gas exposure (especially in basement or ground level care facilities). Except, if it can be determined that the care facility is serviced by an elemental Pb service line, then bottled water should be used until the service line can be replaced.

Hope this helps to develop some final options.
Please let Ivor and I know of the next meeting date.

Best regards,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841

www.vch.ca

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From: Hesketh, Courtney [mailto:Courtney.Hesketh@interiorhealth.ca]
Sent: Friday, November 23, 2018 4:30 PM
To: 'Dave Tamblyn [C]'; Murrell, Joanne MCF:EX; 'Cotie, Kate L MCF:EX'; ''Fishwick, David HLTH:EX' (David.Fishwick@gov.bc.ca)'; 'anne.wetherill@gov.bc.ca'; Clarkson, Len [STS]; 'Butler, Teresa MCF:EX'; 'Bedford, Sue HLTH:EX (Sue.Bedford@gov.bc.ca)'; Markey, Paul [VC]; 'joanne.edwards@gov.bc.ca'
Subject: Reminder - Feedback on Lead in Childcare Matrix

Happy Friday all,

I just wanted to send a reminder that Joanne & I were looking for feedback on the attached documents and your groups opinions on the options by November 27th …which unbelievably is next week!

Thanks,

Courtney Hesketh
Director Environmental Public Health
Interior Health Authority

Interior Health

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: December 24, 2018 3:17 PM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Lynne Magee; [FHA] Zubel, Marc; [IHA] Norlin, J Ivor; Sylvia Struck; [NHA] Wadden, Shane; [NHA] Quibell, Doug
Subject: FW: Lead Task Force minutes_dec 11

Hi all,
Just fyi but please let me know if you have any concerns.

Merry Christmas,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Clarkson, Len [STS]
Sent: Monday, December 24, 2018 3:16 PM
To: 'Edwards, Joanne HLTH:EX'; [IHA] Hesketh, Courtney; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Murrell, Joanne MCF:EX; Cotie, Kate L MCF:EX; Markey, Paul [VC]; Sylvia Struck
Cc: Sullivan, Michelle A HLTH:EX
Subject: RE: Lead Task Force minutes_dec 11

Thank you Joanne and all,

From our last call, let me give you my recommendations. I have discussed this with some of the HADWC and believe I have their support – but I'll certainly let you know if I hear of any counterpoints. As well, I will check back with my VCH colleagues and let you know if I discover any requests for change.

1. It would probably be best if we just gave EHPAC our best recommendation as a single option. If they disagree they can always send us back.
2. We should de-escalate the priority need for sampling. We already know quite a lot and that the presence of Pb is essentially ubiquitous although at varying levels that cannot reasonably be predicted. Extensive sampling can help to described the problem in greater detail but it alone does nothing to protect or the exposure.
3. We already know there is no safe level of Pb exposure. If there is an identified need and budget – resources could be expended to conduct some focused / controlled sampling, but if so it should be only on the water to be purveyed. It should be relatively to achieve 2 or 3 ppb through a combination of flushing and possibly including a pour through filter (even a non NSF one should provide a reduction). If sampling is conducted it should be framed in a positive outcome and identify the most effective strategy (consider health related prizes).
4. We should be careful not to use language such as wasting water. There is no need for this if water can be collected in stored (space allowing) especially after the fixture has been in use.
5. Rather than use scarce resources paying for lab services – preference should be given to providing assistance such as jug style water filters. Are we allowed to partner with industry to enlist some sponsorship/reduced pricing?

6. Under counter POU treatment devices are OK but tend to be more expensive, they are hard to see, and they are typically maintained at room temperature. This has the potential to culture total coliform bacteria. For these reasons – batch flushing/filter/cold storage are preferred.

The above comments are hopefully in alignment with the VCH brochures as follows:

http://www.vch.ca/Documents/Lead-in-drinking-water-protecting-yourself.pdf

http://www.vch.ca/Documents/Lead-in-drinking-water-protecting-children-at-day-care-facilities.pdf

Best regards all,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
Save a tree, please do not print this email unless you really need to!

From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Thursday, December 20, 2018 11:26 AM
To: 'Hesketh, Courtney'; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Murrell, Joanne MCF:EX; Cotie, Kate L MCF:EX; Markey, Paul [VC]; Clarkson, Len [STS]; Sylvia Struck
Cc: Sullivan, Michelle A HLTH:EX
Subject: Lead Task Force minutes_dec 11

Hi all,

Attached are the minutes of our call on Dec 11. Please let Courtney or I know of any concerns or corrections that may be required before the next call on January 28th. Also please note the Action Item to send any additional comments you may have regarding the option table and the discussions thus far before the end of 2018.

Thanks and have a great holiday!

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: January 9, 2019 11:55 AM
To: 'Beise, Rory'
Subject: RE: Health Canada Lead

Yes. Next month.

From: Beise, Rory [mailto:Rory.Beise@viha.ca]
Sent: Wednesday, January 9, 2019 11:54 AM
To: Fishwick, David HLTH:EX
Subject: RE: Health Canada Lead

2019?

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, January 09, 2019 11:54 AM
To: Beise, Rory
Subject: RE: Health Canada Lead

Last I heard from HC they were planning February.

From: Beise, Rory [mailto:Rory.Beise@viha.ca]
Sent: Wednesday, January 9, 2019 11:53 AM
To: Fishwick, David HLTH:EX
Subject: Health Canada Lead

Dave,

Any thoughts on when the Lead MAC will be changed to 0.005? The consultation period was supposed to end on March 15, 2017…

Thanks,

Rory Beise
Drinking Water/Land Use Consultant
Island Health
Gateway Office
201-771 Vernon Ave
Victoria, BC V8X 5A7
Phone: 250-519-3645
Fax: 250-519-3402
Email: rory.beise@viha.ca

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: February 5, 2019 11:39 AM
To: 'Clarkson, Len [STS]'; Edwards, Joanne HLTH:EX
Cc: [IHA] Hesketh, Courtney; Bedford, Sue HLTH:EX; Markey, Paul [VC]; Sylvia Struck; Murrell, Joanne MCF:EX; Cotie, Kate L MCF:EX
Subject: RE: Lead Task Force minutes_dec 11

Hi Len:
I agree sampling is not protective, it is a screening tool to evaluate if there is a problem. The protective part what you do mitigate the problem (if there is one).

Thanks also for doing the math on the water cost Len – according to your math I think that comes to about $5 a year. While I don't see a lot of value in debating this further, I think the costs discussed was not so much in the actual water bill so much as either a) the cost of time invested by busy staff in flushing – if an ECE making $20/hr spends 0.1 hours a day flushing and filling bottles, the cost is $2/day or $260/year, or b) a rural day care on its own well with low yield need to upgrade their pressure tank to increase their water storage capacity running into the thousands of dollars, or c) or Buying pitchers from London Drugs or wherever at $30 each to store in the fridge. The point being nto to get hung up on numbers, but that each avenue/option has its own costs, and there are multiple avenues to achieving the same outcome.

All that said, I also agree that flushing reduces lead by some amount, and any reduction is better than no reduction. And maybe most people flush water in the morning anyways just because warm stagnant water (even in low lead plumbing) tastes gross. I've done that since I was a kid, long before I ever had thought about lead.

Dave

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Friday, February 1, 2019 4:16 PM
To: Edwards, Joanne HLTH:EX
Cc: [IHA] Hesketh, Courtney; Bedford, Sue HLTH:EX; Fishwick, David HLTH:EX; Clarkson, Len [STS]; Markey, Paul [VC]; Sylvia Struck; Murrell, Joanne MCF:EX; Cotie, Kate L MCF:EX
Subject: FW: Lead Task Force minutes_dec 11

Hi Joanne,
I am offering one suggestion as an edit to your document.

The two fundamental points I wish to maintain are:

1. Sampling can be used to describe the problem in greater detail but it should not be confused with protection. In view of the cost, complexity and uncertainty in how we would use the results, I wouldn't encourage that approach.
2. Flushing will lower the level of lead. VCH has incorporated this important measure as part of our messaging as you will note in the links below. I do not anticipate VCH will wish to change that.

During our last call I think I heard some concern for the financial cost of flushing, so I offer the following example:

The District of Coldstream has a variable water billing rate to encourage conservation (increasing as you use more):

For 0-40 cubic meters per quarter $.84/cubic Meter. For 40-80 cubic M per quarter $1.69/cubic M. For over 80 cubic M per quarter $2.54/ cubic M.
Add to that $90/ quarterly for basic service and $7.20 quarterly for the water meter renewal fee.

For easy figures let's use $1.00 per cubic M

Assume 100' of ¾" water pipe to be flushed. Volume = 2 USGal or about 8 liters (this would take 1 to 2 minutes of flushing typically, depending on the valve positon)
Since we may be a little low on the cost let's use an easy figure of 10 liters.

We therefore have $1.00 x 10 liters / 1000 liters per cubic M = approx. 1 cent per flush, prior to collecting water. A group care facility with 25 spaces may need to store several jugs of water and likely collect it twice per day, however the length of flushing can be reduced as stagnation decreases. Furthermore with only a little creativity, the flushed water could be conserved for other beneficial uses such as washing play equipment and surfaces, watering plants, etc.

Ideally we would aim to have facilities adopt a multi – faceted approach with additional measures such as filters, and even plumbing modifications however this will need to be promoted opportunistically over time to avoid creating financial hardship with the facility. If parents are supplying water from home to send with children, then that would also help. VCH is providing guidance in this regard as you will further note in the links below.

For consistency, it would be helpful to adopt a similar approach I think.

Hope this helps,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
www.vch.ca
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From: Clarkson, Len [STS]
Sent: Monday, December 24, 2018 3:18 PM
To: Muirhead, Phil [NS]; Wu, Michael [VC]; Chan, Elden [RH]; Clarkson, Len [STS]; Molder, Darren [SC]; Jantzen, David [VC]; Pickles, John [NS]; Choi, Jonathan [VC]; Lu, James [RH]; Ritson, Mark [VC]; Radnidge, Michele [RH]; Dolling, Roya [NS]
Subject: FW: Lead Task Force minutes_dec 11

Hi all – I'll put this onto our WSC agenda for February, but please let me know if you have any concerns in the meantime.
Season's Greetings all,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
www.vch.ca
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From: Clarkson, Len [STS]
Sent: Monday, December 24, 2018 3:16 PM

To: 'Edwards, Joanne HLTH:EX'; [IHA] Hesketh, Courtney; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Murrell, Joanne MCF:EX; Cotie, Kate L MCF:EX; Markey, Paul [VC]; Sylvia Struck
Cc: Sullivan, Michelle A HLTH:EX
Subject: RE: Lead Task Force minutes_dec 11

Thank you Joanne and all,

From our last call, let me give you my recommendations. I have discussed this with some of the HADWC and believe I have their support – but I'll certainly let you know if I hear of any counterpoints. As well, I will check back with my VCH colleagues and let you know if I discover any requests for change.

1. It would probably be best if we just gave EHPAC our best recommendation as a single option. If they disagree they can always send us back.
2. We should de-escalate the priority need for sampling. We already know quite a lot and that the presence of Pb is essentially ubiquitous although at varying levels that cannot reasonably be predicted. Extensive sampling can help to described the problem in greater detail but it alone does nothing to protect or the exposure.
3. We already know there is no safe level of Pb exposure. If there is an identified need and budget – resources could be expended to conduct some focused / controlled sampling, but if so it should be only on the water to be purveyed. It should be relatively to achieve 2 or 3 ppb through a combination of flushing and possibly including a pour through filter (even a non NSF one should provide a reduction). If sampling is conducted it should be framed in a positive outcome and identify the most effective strategy (consider health related prizes).
4. We should be careful not to use language such as wasting water. There is no need for this if water can be collected in stored (space allowing) especially after the fixture has been in use.
5. Rather than use scarce resources paying for lab services – preference should be given to providing assistance such as jug style water filters. Are we allowed to partner with industry to enlist some sponsorship/reduced pricing?
6. Under counter POU treatment devices are OK but tend to be more expensive, they are hard to see, and they are typically maintained at room temperature. This has the potential to culture total coliform bacteria. For these reasons – batch flushing/filter/cold storage are preferred.

The above comments are hopefully in alignment with the VCH brochures as follows:

http://www.vch.ca/Documents/Lead-in-drinking-water-protecting-yourself.pdf

http://www.vch.ca/Documents/Lead-in-drinking-water-protecting-children-at-day-care-facilities.pdf

Best regards all,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
phone 604-815-6841
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From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Thursday, December 20, 2018 11:26 AM
To: 'Hesketh, Courtney'; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Murrell, Joanne MCF:EX; Cotie, Kate L MCF:EX; Markey, Paul [VC]; Clarkson, Len [STS]; Sylvia Struck
Cc: Sullivan, Michelle A HLTH:EX
Subject: Lead Task Force minutes_dec 11

Hi all,

Attached are the minutes of our call on Dec 11. Please let Courtney or I know of any concerns or corrections that may be required before the next call on January 28th. Also please note the Action Item to send any additional comments you may have regarding the option table and the discussions thus far before the end of 2018.

Thanks and have a great holiday!

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: February 11, 2019 10:55 AM
To: Edwards, Joanne HLTH:EX; 'Courtney.Hesketh@interiorhealth.ca'
Subject: RE: DECISION_BN_Option for addressing lead in daycares_jan 28 2019_MCFD

Just change the “for discussion” back to “for decision” in the title. There has been a ton of discussion, we need to move on.

From: Edwards, Joanne HLTH:EX
Sent: Monday, February 11, 2019 10:28 AM
To: 'Courtney.Hesketh@interiorhealth.ca'; Fishwick, David HLTH:EX
Subject: RE: DECISION_BN_Option for addressing lead in daycares_jan 28 2019_MCFD

Any feedback on the BN?

Joanne

From: Edwards, Joanne HLTH:EX
Sent: Thursday, February 7, 2019 5:02 PM
To: Courtney.Hesketh@interiorhealth.ca; Fishwick, David HLTH:EX
Subject: DECISION_BN_Option for addressing lead in daycares_jan 28 2019_MCFD

Courtney/Dave

Its 5 and I gotta run and I’m not in tomorrow. I’m including Dave as he is the guru of BNs and super helpful on this file.

I added in the MCFD info and reworded the recommendation. AGAIN. I also deleted the bit about consenus for option 1 (I left it in track changes so you could see where it was.) I also left the old recommendation in track changes so you could compare.

I welcome your thoughts. s.22

Talk Monday.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
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Victoria, BC V8W 9P4
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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: February 13, 2019 11:58 AM
To: Edwards, Joanne HLTH:EX; Murrell, Joanne MCF:EX; Hesketh, Courtney (Courtney.Hesketh@interiorhealth.ca)
Cc: Bedford, Sue HLTH:EX; Cotie, Kate L MCF:EX
Subject: RE: lead in daycares - briefing note for EHPAC

I think you've pretty much covered it Joanne. Plumbing installed prior to 1990 is likely higher risk that that installed after, presuming work was done to code. The only other thing to add is that old buildings in which plumbing has been re-done under the newer code will also be at lower risk.

A related but different question is service lines on properties - we don't really know much information about the prevalence of old lead services lines that connect buildings to municipal services. But that is a different question.

Dave

From: Edwards, Joanne HLTH:EX
Sent: Wednesday, February 13, 2019 11:16 AM
To: Murrell, Joanne MCF:EX; Hesketh, Courtney (Courtney.Hesketh@interiorhealth.ca)
Cc: Bedford, Sue HLTH:EX; Cotie, Kate L MCF:EX; Fishwick, David HLTH:EX
Subject: RE: lead in daycares - briefing note for EHPAC

Hi Joanne,

I'm going to include Dave Fishwick from Health Protection at MoH (Manager of Drinking Water) here as well as he leads policy development in the area of drinking water. In BC, the building code was updated in 1989, which restricted the use of lead plumbing in buildings. In 2012, more changes restricted it even further in fixtures. These dates are referenced in the BC guidelines for lead that Dave's shop released in 2017. In those guidelines, we state that building built prior to 1990 have a higher risk of lead content in their plumbing. Obviously, very old buildings may have even greater chances of having older plumbing (lead pipes). This said, newer construction can sometimes contain older fixtures or have used older solder with higher lead content, so it is not a silver bullet for assessing risk. Dave, would you like to chime in further?

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
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Victoria, BC V8W 9P4
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From: Murrell, Joanne MCF:EX
Sent: Wednesday, February 13, 2019 10:06 AM
To: Edwards, Joanne HLTH:EX; Hesketh, Courtney (Courtney.Hesketh@interiorhealth.ca)

Cc: Bedford, Sue HLTH:EX; Cotie, Kate L MCF:EX
Subject: RE: lead in daycares - briefing note for EHPAC

Joanne and Courtney,
We are seeking your advice. Currently we have no information about the age of the child care infrastructure across the province. We know that this isn't the only picture of the scope of risk we may face in regards to lead, but it will help us potentially have a sense of the size. Our annual provider profile is being finalized and we are proposing to add in a question about the age of the building.
We are trying to keep it simple (as many providers won't know exactly), so we are seeking your advice on what might be an appropriate timeframe:
Please let us know if this works of if additional years should be included.
Thanks in advance,
Joanne M

What is the year of construction of the building/dwelling out of which you run your child care?

- Built prior to 1990
- Built in 1990 or later

From: Edwards, Joanne HLTH:EX
Sent: Tuesday, February 12, 2019 3:56 PM
To: Hesketh, Courtney (Courtney.Hesketh@interiorhealth.ca); Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Clarkson, Len [STS]; Sylvia Struck; 'Paul.Markey@vch.ca'; Murrell, Joanne MCF:EX; Cotie, Kate L MCF:EX
Subject: lead in daycares - briefing note for EHPAC

HI all,

Here is the revised briefing note for EHPAC. Since our last call we received some information from MCFD which was a bit of a show stopper for recommending option 1 as an agreed upon starting place. It looks as though there are potential significant costs associated with each option and we believe a more detailed cost analysis is needed regarding sampling and mitigation costs. Please let me know if you have any concerns asap as I will be sending the BN in for the agenda package tomorrow (Weds).

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: February 19, 2019 11:59 AM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Magee, Lynne; Zubel, Marc; Norlin, J Ivor; Sylvia Struck; Wadden, Shane; Quibell, Doug
Subject: FW: Lead Task Force minutes_Jan 28
Attachments: Lead Task Force minutes_Jan 28.docx

Just fyi folks – since this meeting, it sounds like EHPAC will have to consider the concerns of MCF.

Regards all
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
www.vch.ca
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From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Tuesday, February 19, 2019 10:32 AM
To: Clarkson, Len [STS]; Hesketh, Courtney; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Cotie, Kate L MCF:EX; Murrell, Joanne MCF:EX; Sylvia Struck; Markey, Paul [VC]
Subject: RE: Lead Task Force minutes_Jan 28

HI all, here are the corrected minutes. Thanks Len for reviewing and flagging that mistake.

Joanne

From: Clarkson, Len [STS] [mailto:Len.Clarkson@vch.ca]
Sent: Tuesday, February 19, 2019 10:25 AM
To: Edwards, Joanne HLTH:EX; Hesketh, Courtney; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Cotie, Kate L MCF:EX; Murrell, Joanne MCF:EX; Sylvia Struck; Markey, Paul [VC]
Subject: RE: Lead Task Force minutes_Jan 28

Hi Joanne – this is not what I was saying….. Len suggested universal sampling,

Rather my suggestion was universal flushing. Especially first thing in the morning if the water has been stagnant.

Would you please correct that?

Thanks

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
www.vch.ca
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From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Tuesday, February 19, 2019 9:45 AM
To: Hesketh, Courtney; Fishwick, David HLTH:EX; Bedford, Sue HLTH:EX; Cotie, Kate L MCF:EX; Murrell, Joanne MCF:EX; Sylvia Struck; Clarkson, Len [STS]; Markey, Paul [VC]; Edwards, Joanne HLTH:EX
Subject: Lead Task Force minutes_Jan 28

Here are the draft minutes from our last call.

Please review the minutes and send back any comments regarding any needed additions or edits by the end of this week. Please feel free to use track changes function to do so.

Thanks again everyone for your time and contributions.

Joanne Edwards, MPH, CPHI(C)
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Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: February 21, 2019 3:50 PM
To: Magee, Lynne; Zubel, Marc; Norlin, J Ivor; Sylvia Struck; Wadden, Shane; Quibell, Doug
Cc: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX
Subject: FW: update from EHPAC

Greetings colleagues,

This is the latest on the Pb in daycare issue – thanks to Joanne.

Regards all,
Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
www.vch.ca
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From: Edwards, Joanne HLTH:EX [mailto:Joanne.Edwards@gov.bc.ca]
Sent: Thursday, February 21, 2019 2:52 PM
To: Hesketh, Courtney; Fishwick, David HLTH:EX; Clarkson, Len [STS]; Markey, Paul [VC]; Cotie, Kate L MCF:EX; Murrell, Joanne MCF:EX; Sylvia Struck; Bedford, Sue HLTH:EX
Subject: update from EHPAC

Courtney and I would like to update everyone on the outcome of the EHPAC meeting on February 20th in Vancouver. Courtney and I presented the briefing note to the committee and let them know we were unable to put forward a single recommendation due to the unanswered concerns surrounding sampling costs and MCFD's maintenance fund as wells as the lack of consensus around sampling and universal flushing. The committee discussed the issue and made a decision that the committee (EHPAC) should put forward a recommendation to the Public Health Executive Committee that a policy be developed and implemented requiring lead sampling of drinking water in daycares as a condition of a license. The committee expressed strongly that they felt it was imperative that facilities are tested to identify any facilities that may exceed that Maximum Allowable Concentration (which is set to be reduced by Health Canada to 5ppb on March 8th, 2019) so that appropriate mitigation can be put in place where required (e.g., flushing, lead filters, replace problem fixtures, etc.). EHPAC did not recommend any specifics on what that policy should look like (that would be done later through a technical working group). If the Public Health Executive Committee accepts the recommendation then the Executive Lead from Population and Public Health would liaise with the ADM's from Licensing and MCFD as necessary on next steps.

Joanne Edwards, MPH, CPHI(C)
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Page 143 of 186

Withheld pursuant to/removed as

DUPLICATE

Mori, Alicia HLTH:EX

From: Clarkson, Len [STS] <Len.Clarkson@vch.ca>
Sent: February 21, 2019 1:56 PM
To: Norlin, J Ivor; Zubel, Marc; Beise, Rory; 'Sylvia.Struck@fnha.ca'; Magee, Lynne; Wadden, Shane
Cc: Muirhead, Phil [NS]; Edwards, Joanne HLTH:EX; Fishwick, David HLTH:EX
Subject: RE: SHARE: Vancouver Coastal Health lead in drinking water initiative

Thank you Ivor.

VCH has been using these documents over the last 2 years and have not had any issues with them. I expect we will revisit them when the new HC guideline is released, but I do not anticipate VCH will want to make significant changes to our message.

Len

Len Clarkson
Water Specialist and Drinking Water Officer
Vancouver Coastal Health
www.vch.ca
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From: Norlin, J Ivor [mailto:JIvor.Norlin@interiorhealth.ca]
Sent: Wednesday, February 20, 2019 10:06 AM
To: Zubel, Marc; Beise, Rory; 'Sylvia.Struck@fnha.ca'; Magee, Lynne; Wadden, Shane
Cc: Clarkson, Len [STS]; Muirhead, Phil [NS]; 'Edwards, Joanne HLTH:EX (Joanne.Edwards@gov.bc.ca)'; "Fishwick, David HLTH:EX' (David.Fishwick@gov.bc.ca)'
Subject: SHARE: Vancouver Coastal Health lead in drinking water initiative

Hi,

Further to my action item, below are the links to the VCH brochures on managing exposure to lead in drinking water. As Len shared, VCH has found this approach to be effective and suggests we consider it as an interim measure with our facilities.

http://www.vch.ca/Documents/Lead-in-drinking-water-protecting-yourself.pdf

http://www.vch.ca/Documents/Lead-in-drinking-water-protecting-children-at-day-care-facilities.pdf

J. Ivor Norlin
Manager, Drinking Water Systems Program
Environmental Public Health, Interior Health
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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From: Norlin, J Ivor
Sent: Thursday, February 14, 2019 11:49 AM
To: 'Fishwick, David HLTH:EX' (David.Fishwick@gov.bc.ca); Marc Zubel (Marc.Zubel@fraserhealth.ca); 'Beise, Rory' (Rory.Beise@viha.ca); Edwards, Joanne HLTH:EX (Joanne.Edwards@gov.bc.ca); 'Sylvia.Struck@fnha.ca'; Len.Clarkson@vch.ca; Magee, Lynne (Lynne.Magee@viha.ca); 'Muirhead, Phil [NS]'
Subject: RE: Health Authority Drinking Water Council

Hi,

Here are my notes from the call this morning. Please let me know what should be changed or added.
<< File: HADWC MINUTES February 14 2019.doc >>
Thank you.

J. Ivor Norlin
Manager, Drinking Water Systems Program
Environmental Public Health, Interior Health
P.O. Box 627, Salmon Arm, BC, V1E 4N7
Phone: 250-833-4173
Fax: 250-833-4117

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-----Original Appointment-----
From: Norlin, J Ivor
Sent: Tuesday, October 09, 2018 11:43 AM
To: Norlin, J Ivor; Norlin, J Ivor; 'Fishwick, David HLTH:EX' (David.Fishwick@gov.bc.ca); Marc Zubel (Marc.Zubel@fraserhealth.ca); 'Beise, Rory' (Rory.Beise@viha.ca); Edwards, Joanne HLTH:EX (Joanne.Edwards@gov.bc.ca); Wadden, Shane [NHA]; 'Sylvia.Struck@fnha.ca'; Len.Clarkson@vch.ca; Magee, Lynne (Lynne.Magee@viha.ca); 'Muirhead, Phil [NS]'
Subject: Health Authority Drinking Water Council
When: Thursday, February 14, 2019 9:00 AM-11:00 AM (UTC-08:00) Pacific Time (US & Canada).
Where: by teleconference 1-877-977-0888, #9203

WebEx videoconference link: https://iha.webex.com/iha/j.php?MTID=mc2222bb5385b57401e92cafaf81180e6

February 14th, 2019 agenda
<< File: HADWC Agenda February 14, 2019.doc >>
HADWC November 8th, 2018 meeting minutes
<< File: HADWC MINUTES November 8, 2018.doc >>
HADWC terms of reference (or at least the version I have).
<< File: Health Authority Director's Drinking Water Council Terms of Reference (January 2013 draft) edited.docx >>

Mori, Alicia HLTH:EX

From: Diplock, Cole <Cole.Diplock@viha.ca>
Sent: February 26, 2019 9:01 AM
To: Fishwick, David HLTH:EX; Edwards, Joanne HLTH:EX; Sowa, Stacey
Subject: RE: Lead in Schools

Hi Dave,

What is your timeline for review? We are currently getting requests from school districts and want to respond with a consistent approach.

Thanks

Cole

From: Fishwick, David HLTH:EX
Sent: Monday, February 25, 2019 10:46 AM
To: Edwards, Joanne HLTH:EX ; Sowa, Stacey
Cc: Diplock, Cole
Subject: RE: Lead in Schools

Hi Stacey:

Thanks for sending in your comments. We will be looking at reviewing the interim guidelines in the near future in light of health Canada's plans to revise their guidelines, so we will review your comments in this process.

Dave

David Fishwick | *Drinking Water Manager | Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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From: Edwards, Joanne HLTH:EX
Sent: Monday, February 25, 2019 8:52 AM
To: Fishwick, David HLTH:EX; Sowa, Stacey
Cc: Diplock, Cole
Subject: FW: Lead in Schools

Hi Stacey,

I am going to refer you to Dave Fishwick of the Health Protection Branch by way of this email that develops provincial policy for drinking water. With the upcoming change to the MAC they are looking at their policy document for lead to examine any places that may need revisiting.

My best,

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
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PO box 9648 Stn Prov Govt
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From: Sowa, Stacey [mailto:Stacey.Sowa@viha.ca]
Sent: Friday, February 22, 2019 2:16 PM
To: Edwards, Joanne HLTH:EX
Cc: Diplock, Cole
Subject: FW: Lead in Schools

Hi Joanne,

We are nearing the end of the first three year cycle since the Ministry of Education's directive was released for testing lead content in drinking water in school facilities. Many of the school districts and independent schools have completed or are nearing completion of their initial screening process. Island Health has had some inquiries about ongoing/routine lead testing and we have been looking into the next phase. We're finding that there is not necessarily a "one-size-fits-all" approach for ongoing testing as there is huge variability with sample results and remediation measures taken but below are our recommendations:

- Where a school has not had exceedances, the Random Day Time (RDT) sampling outlined in the Interim Guidelines on Evaluating and Mitigating Leads in Drinking Water Supplies, Schools, Daycares, and Other Buildings would be a suitable sampling program to "capture typical exposures". Perhaps suggesting a percentage be targeted (eg. 1 in every 10 fixtures) every 3 years.
- Where a school has shown exceedances but replaced fixtures/plumbing or installed lead filtering devices and subsequently completed follow-up testing to verify that the remediation has worked, the RDT sampling could be used as above.
- Where a school has shown exceedances and replaced fixtures or plumbing, more robust sampling could be completed to verify the effectiveness of the remediation measure. For example, they could conduct similar testing to the initial screening on remediated sites to verify the remediation worked. It is unlikely this has to be done on every site where the exact new fixture is installed or where a filtering system was installed, but perhaps a percentage of them to give a good indication that the particular fixture or filter type has remediated the issue. We have been recommending all of the schools conduct follow-up testing to ensure the remediation measures were effective.
- Where a school has shown exceedances and is still using a flushing program as the remediation measure, they should either undergo a robust sampling program similar if not identical to the initial screening process or test fixtures throughout the day to see if lead is accumulating in the drinking water throughout the day after the morning flush program. They could be further encouraged to provide a long term remediation measure, however, flushing programs that are proven to be effective could still be considered as a long term solution.

- We have had some schools constructed after 1990 that have been tested for lead. In some of these samples, exceedances for lead have been identified with first draw and occasional flush samples. This has raised the question as to whether schools newer than 1990 should be included in the lead in schools program.

In recognition that monitoring for lead in schools is a provincial initiative, we want to ensure that our recommendations are consistent with the provincial approach. Are you able to provide some direction moving forward with this program?

Thank you,

Stacey Sowa CPHI(C) |Environmental Health Officer | Island Health
489 Alberni Highway | Parksville, British Columbia V9P 1J9 | Canada
☎ 250.947.8222 | Email: stacey.sowa@viha.ca

Mori, Alicia HLTH:EX

From: Beise, Rory <Rory.Beise@viha.ca>
Sent: February 28, 2019 9:41 AM
To: Fishwick, David HLTH:EX
Subject: RE: From DWLC meeting minutes

Dave,

No comments from my end of things. The document looks good, is straightforward in identifying roles and responsibilities and has clear communication on sample collecting.

Let me know when this thing goes live I think it will be useful in the field.

Rory

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Tuesday, February 26, 2019 10:28 AM
To: Beise, Rory; Diplock, Cole
Subject: RE: From DWLC meeting minutes

Hi Rory & Cole:
I think this should address both of your e-mails

Yes, the July 13 version is the latest – here is the link:
https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/interim_guideline_on_reducing_exposure_to_lead_through_drinking_water_july_2017.pdf
Obviously we will be updating the number to the new MAC, but since your team has had eyes on this since then, if there is anything else in there that needs adjusting please let me know ASAP as Health Canada is releasing their new guideline March 8th. That said, given the tight time frame, it may only be realistic to update the number at this time, and we can do a more fulsome review for bigger changes later.

As per Lynee's question – A one pager on what aspect? The following one-pagers already exist:
https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/what-about-lead.html
https://www.healthlinkbc.ca/healthlinkbc-files/lead-drinking-water

Dave

From: Beise, Rory [mailto:Rory.Beise@viha.ca]
Sent: Tuesday, February 26, 2019 9:19 AM
To: Fishwick, David HLTH:EX
Subject: FW: From DWLC meeting minutes

Dave,

See Lynne's comments regarding "Lead in Buildings Guideline". Can you send me a copy of the version I can send around to our water committee to review and comment on. Is it the July 13, 2017 version? I didn't even see that in the action items.

Thanks,
Rory

From: Magee, Lynne
Sent: Tuesday, February 26, 2019 9:00 AM
To: Beise, Rory
Subject: From DWLC meeting minutes

Comments - Guidelines of lead in buildings – way too long. Can there be a quick one pager that we could handout to systems?

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: March 7, 2019 3:01 PM
To: 'Sylvia Struck'
Subject: RE: information on lead MAC update

Looks good Sylvia!

From: Sylvia Struck [mailto:Sylvia.Struck@fnha.ca]
Sent: Wednesday, March 6, 2019 10:59 AM
To: 'Norlin, J Ivor'; 'Magee, Lynne (Lynne.Magee@viha.ca)'; 'Len.Clarkson@vch.ca'; 'Marc Zubel (Marc.Zubel@fraserhealth.ca)'; Fishwick, David HLTH:EX; 'Wadden, Shane [NHA]'; Edwards, Joanne HLTH:EX; 'Quibell, Doug [NHA]'; Muirhead, Phil [NS]
Subject: information on lead MAC update

Hi All,

In anticipation of the lowering of the MAC for lead in DW on March 9, I produced an information sheet based on the First Nations and Inuit Health Branch Q&A. The attached has been sent to the FNHA EPHS regional managers to distribute to their EHOs to information FN communities and also to regional Head start programs. I am providing you this information as an FYI and also to ask that you provide to your licensing group as an FYI.

Thank you,
Sylvia

Dr. Sylvia Struck
Manager, Drinking Water Safety Program

First Nations Health Authority
#404 - 1138 Melville Street
Vancouver, BC V6E 4S3
Tel. (604) 693-6960
Sylvia.Struck@FNHA.ca

First Nations Health Authority
Health through wellness

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: March 21, 2019 9:23 AM
To: 'Christoph Moch'; Beise, Rory
Subject: RE: Lead Sampling

Hi Christoph –

I am a bit fuzzy on exactly what Health Canada is wanting to do, but I can push for more info if I know at least one water supplier has some interest.

What I do know so far is this:

- Health Canada is looking to do a comparison of tap vs distribution system water in a number of places across the country, about a 100 samples total across the country.
- Participants for the "tap water" side of things must be owners of the dwelling samples are taken from, so Health Canada can send them the results without data ownership issues.
- Water suppliers could either take new samples or just submit existing data if it is from approximately the same time.
- They will send the bottles to participants who will take samples and then ship them back to Health Canada for analysis.
- So this challenge is to find a water system that is willing to participate and a number of home owners on the same system.

- I am happy to volunteer to take a sample from my home if that help.

Give me a quick call when you have a chance and we can discuss if CRD is interested in pursuing this further and then I can get back to Health Canada.

Dave

David Fishwick | *Drinking Water Manager | BC Ministry of Health | PO BOX 9646 Stn Prov Govt*
Victoria BC | V8W 9P1

Phone: (250) 952-1110 | *Fax:* (250) 952-1713 | *E-mail:* david.fishwick@gov.bc.ca

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From: Christoph Moch
Sent: March 21, 2019 8:56 AM
To: Beise, Rory ; Fishwick, David HLTH:EX
Subject: RE: Lead Sampling

Thanks, Rory!
Dave, we should chat to coordinate if you plan on doing something here in Greater Victoria.

Cheers,

Christoph Moch | Dipl.-Ing., P.Eng.
Manager, Water Quality Operations

Capital Regional District
479 Island Highway
Victoria, BC V9B 1H7
T. 250.474.9603 | **F.** 250.474.9691
email: cmoch@crd.bc.ca web: www.crd.bc.ca

From: Beise, Rory [mailto:Rory.Beise@viha.ca]
Sent: Wednesday, March 20, 2019 8:48 AM
To: Christoph Moch <cmoch@crd.bc.ca>
Cc: Fishwick, David HLTH:EX <David.Fishwick@gov.bc.ca>
Subject: Lead Sampling

Christoph,

It sounds like Health Canada is going to conduct some Lead sampling across the country and if you are interested in participating please get a hold of Dave Fishwick, Ministry of Health. 250-952-1110 or david.fishwick@gov.bc.ca

I've cc'd him on this email.

Rory Beise
Drinking Water/Land Use Consultant
Island Health
Gateway Office
201-771 Vernon Ave
Victoria, BC V8X 5A7
Phone: 250-519-3645
Fax: 250-519-3402
Email: rory.beise@viha.ca

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Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: March 28, 2019 4:27 PM
To: 'Beise, Rory'
Subject: RE: MOH Lead Guideline

DWLC is scheduled for April 4th. s.22 so if you have questions touch base with Mike Z.

Dave

From: Beise, Rory
Sent: March 28, 2019 8:41 AM
To: Fishwick, David HLTH:EX
Subject: RE: MOH Lead Guideline

Thanks Dave.. I just got your message. I have DWLC in my calendar as next Thursday April 4? Is it today?

From: Fishwick, David HLTH:EX [mailto:David.Fishwick@gov.bc.ca]
Sent: Wednesday, March 27, 2019 4:11 PM
To: Beise, Rory
Subject: RE: MOH Lead Guideline

I had planned on March 8th, but it has been stuck in Bureaucracy. All we have changed is the number. I'll let everyone know as soon as it is up.

From: Beise, Rory <Rory.Beise@viha.ca>
Sent: March 27, 2019 3:55 PM
To: Fishwick, David HLTH:EX <David.Fishwick@gov.bc.ca>
Subject: MOH Lead Guideline

Dave,

I was asked to ask you if/when the MOH Guideline on Lead will be released. DWO's were asking about it at a meeting we had today.

Thanks,

Rory Beise
Drinking Water/Land Use Consultant
Island Health
Gateway Office
201-771 Vernon Ave
Victoria, BC V8X 5A7
Phone: 250-519-3645
Fax: 250-519-3402
Email: rory.beise@viha.ca

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: April 9, 2019 1:59 PM
To: XT:HLTH Hasselback, Paul
Subject: RE: lead MAC differences CDWQG

Thanks Paul:
Yes, the summary table often lags behind the actual guideline as they only update it every couple years or so (the link below is to the 2017 version, so yes, they are overdue). The corrosion control guideline has also been made out of date by the new lead guideline. They are aware both need updating.

Dave

From: Hasselback, Paul
Sent: April 9, 2019 11:12 AM
To: Fishwick, David HLTH:EX
Subject: FW: lead MAC differences CDWQG

David – I have to assume that someone at Health Canada is tracking the impacts of a change in MAC – but in case they aren't – know that there are folks that love finding anomalies ☺

P

From:
Sent: Tuesday, April 09, 2019 9:34 AM
To: Hasselback, Paul <Paul.Hasselback@viha.ca>
Subject: lead MAC differences CDWQG

Hi Paul, as per your request at the last EHO staff meeting, the MAC lead level is at 2 different values in the Health Canada CDWQG site….

The CDWQ summary table link https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html#t2 (10 µg old lead level still there)

The CDWQ technical document link https://www.canada.ca/en/health-canada/services/publications/healthy-living/guidelines-canadian-drinking-water-quality-guideline-technical-document-lead.html (new 5µg MAC listed here)

Mori, Alicia HLTH:EX

From: Fishwick, David HLTH:EX
Sent: April 24, 2019 3:00 PM
To: 'Wadden, Shane'
Subject: RE: Prince Rupert Water Sampling Plan

Great. It took me forever to figure that out!

From: Wadden, Shane
Sent: April 24, 2019 2:09 PM
To: Fishwick, David HLTH:EX ; Edwards, Joanne HLTH:EX ; Nguyen, Vu ; Quibell, Doug ; XT:Kling, Rakel HLTH:IN
Cc: Peiris, Kavindya
Subject: RE: Prince Rupert Water Sampling Plan
Makes perfect sense Dave.
Thanks for the quick reply
Shane Wadden,
Team Lead NW, Environmental Health
phone: (250) 847-6410
fax: (250) 847-5908
shane.wadden@northernhealth.ca

From: Fishwick, David HLTH:EX <David.Fishwick@gov.bc.ca>
Sent: Wednesday, April 24, 2019 1:55 PM
To: Wadden, Shane <Shane.Wadden@northernhealth.ca>; Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>; Nguyen, Vu <Vu.Nguyen@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; Kling, Rakel <Rakel.Kling@northernhealth.ca>
Cc: Peiris, Kavindya <Kavindya.Peiris@northernhealth.ca>
Subject: RE: Prince Rupert Water Sampling Plan
Hi Shane:
For our revised BC document, I am hoping hours, but am not that optimistic. Realistically days-weeks.
As far as corrosion control – the GCDWQ Corrosion Control Guidelines are not based on the MAC (new or old), but on 10% of samples exceeding an action level of 0.015mg/L. This is a measure of corrosion, not health risk. While this is on Health Canada's radar to update, I wouldn't count on this happening for at least a couple years. We are not planning on changing our reference to this in section 2.1 of our guide part unless Health Canada does.
That said, section 2.3.1 of our guide on evaluating health risk at the community level would change to 0.005 ppm to reflect the new MAC.
Does that make sense?
Dave

From: Wadden, Shane <Shane.Wadden@northernhealth.ca>
Sent: April 24, 2019 1:17 PM
To: Fishwick, David HLTH:EX <David.Fishwick@gov.bc.ca>; Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>; Nguyen, Vu <Vu.Nguyen@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; XT:Kling, Rakel HLTH:IN <rakel.kling@northernhealth.ca>
Cc: Peiris, Kavindya <Kavindya.Peiris@northernhealth.ca>
Subject: RE: Prince Rupert Water Sampling Plan
Thanks for the response Dave.
We have 2 communities (Prince Rupert and Kitimat) moving forward with their Lead sampling plans and are requesting advice/input from us. Not trying to put you on the spot of course but do you have any idea what "soon" might mean? Weeks/Months/other?

Also Prince Rupert is planning to use 0.015mg/L to go to the second tier….do you know what number is being used for that section in the new/revised document.
I appreciate any help you can offer.

Shane Wadden,
Team Lead NW, Environmental Health
phone: (250) 847-6410
fax: (250) 847-5908
shane.wadden@northernhealth.ca

From: Fishwick, David HLTH:EX <David.Fishwick@gov.bc.ca>
Sent: Wednesday, April 24, 2019 1:12 PM
To: Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>; Nguyen, Vu <Vu.Nguyen@northernhealth.ca>; Wadden, Shane <Shane.Wadden@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; Kling, Rakel <Rakel.Kling@northernhealth.ca>
Cc: Peiris, Kavindya <Kavindya.Peiris@northernhealth.ca>
Subject: RE: Prince Rupert Water Sampling Plan
Hi Everyone:
We're working on getting the revised guide out to reflect the new MAC and remove the word "interim". It is complete but just hung up in process - should be posted soon.
Dave

From: Edwards, Joanne HLTH:EX
Sent: April 24, 2019 9:18 AM
To: Nguyen, Vu <Vu.Nguyen@northernhealth.ca>; Wadden, Shane <Shane.Wadden@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; XT:Kling, Rakel HLTH:IN <rakel.kling@northernhealth.ca>; Fishwick, David HLTH:EX <David.Fishwick@gov.bc.ca>
Cc: Peiris, Kavindya <Kavindya.Peiris@northernhealth.ca>
Subject: RE: Prince Rupert Water Sampling Plan
Hi Vu,
I'm going to forward this question to Dave Fishwick from Health Protection who holds the pen on this guideline. He has been also working on updating the guideline to reflect the change in number.

Joanne Edwards, MPH, CPHI(C)
Provincial Drinking Water Officer
Ministry of Health
PO box 9648 Stn Prov Govt
1515 Blanchard St., 4th fl.
Victoria, BC V8W 9P4
T (250)952-1572, F (250)952-1570

From: Nguyen, Vu <Vu.Nguyen@northernhealth.ca>
Sent: April 16, 2019 4:37 PM
To: Wadden, Shane <Shane.Wadden@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; XT:Kling, Rakel HLTH:IN <rakel.kling@northernhealth.ca>; Edwards, Joanne HLTH:EX <Joanne.Edwards@gov.bc.ca>
Cc: Peiris, Kavindya <Kavindya.Peiris@northernhealth.ca>
Subject: RE: Prince Rupert Water Sampling Plan
Looping in Joanne Edwards…

I've been a little behind the times with lead and it appears that 0.005mg/L is now the new MAC for lead in water. Since development of the guideline https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/interim_guideline_on_reducing_exposure_to_lead_through_drinking_water_july_2017.pdf
Joanne: Was this document based on a MAC of 0.005mg/L Pb (in anticipation) or was it based on 0.010mg/L? If the MAC changed recently will all the action level targets described in the document be adjusted by (-)0.005mg/L. Currently the city of Prince Rupert is planning to use 0.015mg/L to go to the second tier and I am wondering now if it needs to be

'calibrated' to 0.010mg/L based on Health Canada's adjustment

Thanks,
Vu Nguyen, CPHI(C)
Environmental Health Officer / Drinking Water Officer
Health Protection and Disease Prevention
Prince Rupert & Haida Gwaii
300 3rd Avenue W, Prince Rupert, BC V8J 1L4
Tel: (250) 622-6380 Fax: (250) 622-6391



From: Wadden, Shane
Sent: Tuesday, April 16, 2019 4:33 PM
To: Nguyen, Vu; Quibell, Doug; Kling, Rakel
Cc: Peiris, Kavindya
Subject: RE: Prince Rupert Water Sampling Plan

I think that makes total sense Vu but the MAC has changed (March 2018) since the creation of the document (2017) so maybe reaching out to the province (Joanne Edwards) to see if they would now suggest a lower target would be of value.
Thanks
Shane Wadden,
Team Lead NW, Environmental Health
phone: (250) 847-6410
fax: (250) 847-5908
shane.wadden@northernhealth.ca

From: Nguyen, Vu <Vu.Nguyen@northernhealth.ca>
Sent: Tuesday, April 16, 2019 4:25 PM
To: Wadden, Shane <Shane.Wadden@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; Kling, Rakel <Rakel.Kling@northernhealth.ca>
Cc: Peiris, Kavindya <Kavindya.Peiris@northernhealth.ca>
Subject: RE: Prince Rupert Water Sampling Plan

Thanks Shane for pointing that out and it is a good exercise that we need to get used to hard questions from the public. Although we have the MACs as 0.010 moving to potentially 0.005 mg/L in the future from health Canada I am going to think that the protocol has taken that into account in looking at it from a population risk perspective. They are using the Ministry's doc on their protocol so I have no objections.
In the next paragraph in the letter they mention that they got that 0.015mg/L from appendix C section 2.1 from the resource I provided as an approved guideline.

This is what they are referring to:
https://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/waterquality/how-drinking-water-is-protected-in-bc/interim_guideline_on_reducing_exposure_to_lead_through_drinking_water_july_2017.pdf
This is the section:
"First Tier: Sample to establish whether the community water system has corrosion concerns.
• 6 hour stagnation, then collect 1L of water.
• If more than 10% of the sampled residential sites have a lead concentration greater than the action level of 15 µg/L, go to second tier. Note that this action level is different than the MAC for lead, as this is a measure of corrosion risk, not health risk."
Thanks,
Vu Nguyen, CPHI(C)
Environmental Health Officer / Drinking Water Officer
Health Protection and Disease Prevention
Prince Rupert & Haida Gwaii
300 3rd Avenue W, Prince Rupert, BC V8J 1L4
Tel: (250) 622-6380 Fax: (250) 622-6391

From: Wadden, Shane
Sent: Tuesday, April 16, 2019 2:20 PM
To: Nguyen, Vu; Quibell, Doug; Kling, Rakel
Cc: Peiris, Kavindya
Subject: RE: Prince Rupert Water Sampling Plan
Comments to discuss with your operator Vu:
Letter to Northern Health Re Corrosion Field Sampling Program

- Sampling indicates that if 10% of samples are greater than 0.015mg/L….why use 0.015mg/L
    - Old MAC – 0.01mg/L
    - New MAC (focus) – 0.005mg/L

Water Quality Mailout

- Would it be valuable to list the new MAC here somewhere so people know more about what results mean? More information at: https://www.canada.ca/en/health-canada/news/2019/03/health-canada-sets-new-guideline-for-lead-in-drinking-water-latest-in-series-of-government-actions-to-protect-canadians-from-exposure-to-lead.html

Thanks

Shane Wadden,
Team Lead NW, Environmental Health
phone: (250) 847-6410
fax: (250) 847-5908
shane.wadden@northernhealth.ca

From: Nguyen, Vu <Vu.Nguyen@northernhealth.ca>
Sent: Tuesday, April 16, 2019 1:51 PM
To: Wadden, Shane <Shane.Wadden@northernhealth.ca>; Quibell, Doug <Doug.Quibell@northernhealth.ca>; Kling, Rakel <Rakel.Kling@northernhealth.ca>
Cc: Peiris, Kavindya <Kavindya.Peiris@northernhealth.ca>
Subject: FW: Prince Rupert Water Sampling Plan

Update:

Formal letter at my request to respond to the following conditions of permit for my review and approval attached.
>By 31 Mar 2019, working with the Drinking Water Officer and using for reference approved guidance documents, develop a monitoring program for assessing corrosion of materials in residential distribution system (the "field sampling program").

Remaining conditions pertaining to lead:
>By 31 Jul 2019, complete the field sampling program.
>By 30 Sep 2019, forward a project report and complete results of field sampling program to Northern Health for review.

Thanks,

Vu Nguyen, CPHI(C)
Environmental Health Officer / Drinking Water Officer
Health Protection and Disease Prevention
Prince Rupert & Haida Gwaii
300 3rd Avenue W, Prince Rupert, BC V8J 1L4
Tel: (250) 622-6380 Fax: (250) 622-6391

From: Hans Seidemann [mailto:Hans.Seidemann@princerupert.ca]
Sent: Tuesday, April 16, 2019 1:45 PM
To: Nguyen, Vu
Subject: FW: Prince Rupert Water Sampling Plan

Hey Vu,
Looks like it got sent out last Monday. Might be that it got lost in your inbox coming back from Haida Gwaii.
I've attached it all again here, so take a look, and let me know if we're approved to proceed or if there are any requested changes to be made.

Thanks,
Hans

From: Brianne Bunko
Sent: Tuesday, April 16, 2019 1:44 PM
To: Hans Seidemann <Hans.Seidemann@princerupert.ca>
Subject: FW: Prince Rupert Water Sampling Plan
As requested, see below and attached.

Brianne Bunko

Executive Assistant
Administration
CITY OF PRINCE RUPERT
Tel: (250) 627-0939

www.princerupert.ca

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From: Brianne Bunko
Sent: Monday, April 08, 2019 10:36 AM
To: 'Vu.Nguyen@northernhealth.ca' <Vu.Nguyen@northernhealth.ca>
Cc: Veronika Stewart <Veronika.Stewart@princerupert.ca>; Richard Pucci <Richard.Pucci@princerupert.ca>; Robert Long <robert.long@princerupert.ca>
Subject: Prince Rupert Water Sampling Plan
Good morning Vu,
On behalf of Richard Pucci, Director of Operations at the City of Prince Rupert, please find the attached letter and enclosures in regards to the City's Water Sampling Plan.
Kind regards,
Brianne

Brianne Bunko

Executive Assistant
Administration
CITY OF PRINCE RUPERT
Tel: (250) 627-0939

www.princerupert.ca

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Date

↳ HISTORY OF BLOOMS?

↳ VIS → POND TEST → MORE

HC DOES NOT WANT TO SPECIFY FREQUENCY

* ↳ WHAT IS OUR LAB CAPACITY?

- HC WILL DEVELOP A SCHEDULE.

1,4 DIOXANE

↳ SAMPLED, PERMIT CAN

LAB

CANNOT SPLIT → DOES NOT DEGRADE WELL.

DO WE EVEN HAVE ANY (PROBABLY, BUT WAS WE LOOKED?)

URANIUM

↳ CHEMICAL TOXICITY → NOT RADIOLOGICAL

TARGET ORGAN → KIDNEY BONE, REPRODUCTIVE

Δ FROM 'GUIDANCE' STUDY → RISK BASED EPIDEMIOLOGY

10 - 20 → BASED ON ACHIEVABILITY

pH →

— WANTED TO CLARIFY THIS IS AN OPERATIONAL GUIDELINE

NOT A MAC

IF LEAD IS OK, NOT A BIG DEAL

IRON + PIPE/WATER HEAD ONE RELATED

Page

Date

ALUMINUM –

<2% OF INTAKE FROM DW.

HEALTH BASED VALUE VS OPERATIONAL + AESTHETIC.

LINK TO ALZEIMERS IS NOT VALID.

↳ IS IT PROBLEM

COPPER → EXPECT DOUBLING IN FALL

SHORT TERM GI EFFECTS – LOOP

LONG-TERM EXPOSURE – GI, LIVER, KIDNEY

PEER REVIEW SUMMER 2016

PFAS, PFOS – BEING MONITORED

- MICHIGAN MAPS

- FYI ONLY → DRAFT, NOT READY – STILL COMMENTING ON N.C.

→ EXPECT DRAFT IN SUMMER/FALL

NOT BEING MONITORED IN CANADA

- FIREFIGHTING FOAMS – i.e. AIRPORTS, OTHER AREAS/MANUFACTURING

↳ TRAINING

- FOOD EXPOSURE

- FOUND IN MOST CANADIAN BLOOD SAMPLES

PFAS – IMMUNE SUPPRESSION, LIVER, CANCERS (LIVER)

PFOA – MAMMARY GLAND EXPANSION

- DETECTION LIMITS NOT BE CONSISTENT

LEAD → INSPECTIONS INTO PLUMBING STDS/CODES – INSPECTION DUE.

IN PLUMBING FITTINGS

Page

Date

CDW

Nov 4
2015

BWN → To be posted Nov 27

Lead → Need impact statement from us.

Microbeads → Need impact statement from us too.

Old Guidelines Withdrawn

- will ID list of changes to CDW
- The public consultation prior to withdrawal
  - ↳ what are implications if there are lists after withdrawal
  - But value of ancient guidelines is questionable
- ✳ → share w/ N.Ds + MoE. (Hermann → Jonathan)

By January 15

ECME → staff changes

(Phillips) → Soil → DW value for Cr

- → Soil Guideline for Nickel, Beryllium, Soil Uptake
- → Ecol Risk Guidance
- → Threshold Soil Re-use Guidelines.
- → Permafrost Containing Sites → Global Warming

FNIHB → TMMS → Need lots of Followthrough.

- → How to Deal with Long-Term Exceedances

MAA/NB → Where there are Exceedances, they need an Compliance Plan. WQN

Still "Nitrate" find new source of Urban

Date

LOW WATER FIXTURES

LEAD → BEING EDITED → WILL BE UP FOR PUBLIC CONSULTATION SOON.

- LAUNDRY FACILITIES, FIRE HYDRANTS & NOT FOR DW

NATIONAL CONF. ON DW.

- OCT 16-18 2016, DELTA, OTTAWA.

$525, $100 STUDENTS

- WEBSITE / SOCIAL MEDIA.

LOOKING FOR HELP:

- ABSTRACT SELECTION PROCESS
- CO-CHAIR - OPEN EVENT, INTRO KEYNOTE SPEAKER (SATISH)
- IDENTIFY TOPICS (DECEMBER)

FNIB REPORT

- SDWFNA → 3 PHASES FOR REG DEV
  - 1 ON, 2 MD, 3 - WEST.

CONTINUED TO DETERMINE COST OF COMPLIANCE/ENFORCEMENT.

WATER SAFETY PLAN ELECTRONIC TOOL

QA/QC - ONSITE MICROBIAL TESTING

- TRAINING LEADS + WATER MONITORS. - AVAILABLE SOON

DONALD → INCUBATORS SHOULD NOT BE USED TO HEAT LUNCHES

Date

PHARMACEUTICALS – NDMS.

SEARCH BY PRICE → DID NOT GIVE VOLUME

- IBU/NAPROXEN – HIGH FREQ. DICLOFENAC

- METOPROLOL PHOTOLYSIS PRODUCTS ~~[illegible]~~ DISINFECT-BY-PRODUCTS

VALUES LOW TO HAVE ANY EFFECT

BUT

FOUND ALMOST EVERYWHERE

COPPER –

ANTICIPATE A MAL BEING DEVELOPED.

NO LINER LEVEL YET.

- CARCINOGEN

- MAY 2016

TOC (A.K.A. NATURAL ORGANIC MATTER)

- DOCUMENT FOR FALL 2016

- FOCUS ON EASY TO MEASURE PARAMETERS

SUVA – "SPECIFIC ULTRAVIOLET ABSORBANCE"

- TREND IS THAT THESE Δ ARE ON AN UPWARD TREND

254 nm

- DIFFICULT TO SET MAL

↳ MAY LOOK FOR PERCENT REMOVAL

- UPDATE ON PROCESS IN MAY 2016

- COAGULANT

- FILTRATION

GUIDELINE VS. GUIDANCE.

[illegible] ASK KIM AND TIM [illegible]

CINPHI TOOLS (TIM BETTY)

NEW

- SYSTEM INFRASTRUCTURE, LOCATION, HISTORY

- SERVICE RELATIONSHIPS

- MONITORING DATA MGT. TOOL. ← MICRO + CHEM MAINTENANCE

COULD PLEASE PEOPLE IF THEY DRINK BLUE ANTS

→ CINPHI "ON THE GO"

Page

METHANE - ALUM - NO HOW IT CAN

BUT.

ONE OF MANY SOURCES

- WE DON'T KNOW THE BIG IT IS - RESIDENTIAL PLUMBING
- SCHOOLS / COM CAMP
- MUNICIPAL BUILDINGS
- FLUSHING

Date

LOW

DIV

- DO WE SEE A BLOOD LEVELS

FTP
CDW
MAY 4
TUES

LEAD → BEEN A BIG ISSUE

→ CONCERN ABOUT LEAD GUIDELINE

→ ENGAGE MUNICIPALITIES → EXPECT COST PUSHBACK

IF CHEMICAL CORROSION CONTROL WILL IT BE EFFECTIVE

LEAD SERVICE LINES

UNCLEAR IF ANYONE SAMPLE AT TAP

- SCOPE OF PROBLEM IS UNKNOWN

ONT → LOOKS STOP AT CURBSTOP

→ EDUCATION CAMPAIGN → PRIMARY

→ CAN BE SEEN "NON-CORROSIVE" WATER WILL NOT STRIP LEAD LOCALLY.

SASK → LOTS OF LEAD SERVICE LINES

PEI → SOME SERVICE LINES

ALTA → CORROSION CONTROL PROGRAMS + SERVICE LINE REPLACEMENT PROGRAMS

NEED - CAN DEAL WITH SOLDER + FIXTURES.

- RANDOM DAYTIME SAMPLING → NOT FIRST DRAW

QUE - HAVE BEEN MONITORING AT TAPS FOR SEVERAL YEARS

- PRIORITIZING OLDER HOMES.
- LOTS OF LEAD SERVICE LINES
- EVEN MONITORING THAT HAS NON-CORROSIVE WATER

GOAL HERE 710.

NB → PROGRAM QUESTIONS - WHAT DO THEY GO AFTER

MANITOBA - BRANDON IS CHALLENGED

13% OVER GUIDELINES

ANALYSIS IS CRITICAL

→ CORROSION CONTROL → NOT IT MADE A DIFFERENCE?

SEEMS TO WORK QUITE WELL TO PROTECT LINE

→ DON'T KNOW HOW EFFECTIVE IT IS AT TAP

- LIST OF RECALLED DW FOUNTAINS

PROBLEM IS PROBABLY PROTECTED

VENDOR/VIEW MONITOR
↑ TO IS CONTROL.

Date

OUTCOME
- DOOPIN PROBIOTIC THE WAY TO GO
- ENGAGEMENT WITH MUNICIPALITIES CRITICAL — PRE-CONSULTATION BY PROVINCES?
- EDUCATIONAL PROGRAM IS A CRITICAL COMPONENT
- 2 MONTH TARGET. ? → FACT SHEET IN 2-3 WEEKS.

UBCM? HEADS-UP at PUB CONSULTATION

NFLO → MONITORING M TAP
↳ MULTI PARA APPROACH →
→ SEMI-PUBLIC WATER SUPPLIES → SEWAGE SEPTIC PARAMETERS

CNE - CLIMATE CHANGE
→ TIM - KILL CNE OR BRING IT BACK TO LIFE
→ NEED A CHAIR FOR CLIMATE CZEEE?
SUGGESTIONS?

LOST TIM
- BENZO-A-PYRENE - APPROVED
-

JUDY MACDONALD
DIANE
ANDREA

VIRUSES
↳ LAST IS 2011
PEER REVIEW → LOOKING FOR
NEW - IN-SITU FILTRATION
3+ YEAR SURVIVAL, + TIMES LA DITCH OR SHOR TIME
OCCURRENCE VS VIABILITY/INFECTIVITY
→ YES THEY ARE THERE, BUT ARE THEY INFECTIOUS.

SMALL SYSTEMS VS LARGE SYSTEMS ADVICE → CHALLENGING
↳ POU/POE: INSPECTION

DONALD → LED SYSTEM EFFICIENCY

Page

Date

THMs — SARAH.

EVAL OF NEED TO UPDATE 2006 REPORT BASED ON CHLOROFORM
- BASED ON LIVER TOXICITY IN DOGS 0.1 ppm
140+ STUDIES FOUND SINCE THEN
- NEW DATA SUPPORTS EXISTING MCL

CYTOTOXICITY, NOT GENOTOXICITY (ANIMAL)
HUMAN
↳ TTHMs USED AS MARKER FOR DBPs.
- STILL ASSOCIATION WITH BLADDER CANCER
- MAY BE DUE TO OTHER FACTORS - NITROGEN DBPs.
- DOES NOT WARRANT A FULL UPDATE.
- BASED ON ALL ROUTES OF EXPOSURE

BROMO-DICHLOROMETHANE

SAMPLING IS CRITICAL
- MAY INCREASE IN TIME PRIOR TO TESTING.

PERIODIC EXCEEDANCE GUIDANCE ?
- VIRTUALLY IMPOSSIBLE DUE TO VARIATION IN EXPOSURE

HAAs
↳ 2008 DBL 0.08 mg/L
- STILL GOING THROUGH SCIENCE

IODINATED DBPs + NITROGENOUS DBPs - I.E NDMA
↳ MAY BE ACTUAL CARCINOGEN, NOT THMs.
- MAY BE FOUND CONCURRENTLY

Page

Date

COPPER

↳ EXPOSURE - FOOD, VITAMINS, INFANT FORMULA

NEW

↳ GI TRACT EFFECTS, HEPATO NEPHROTOX (HIGH DOSE >1500 ppm)

- NOT CARCINOGENIC

COPPER/MANGANESE DEPOSIT

- WHEN NEXT TO Pb MAY ↓ CORROSION OF Pb

- TASTE THRESHOLD 2.5-3.5 (>MBV)

PEER REVIEW SUMMER 2016

OCTOBER - DOC

PFOS/PFOA

OTHER - BARIUM, BORON, CADMIUM, AL,

- CADMIUM BORON DATA REQUEST EXPECTED

- IMPACT SODIUM - VIRUS, URANIUM.

LEAD (AGAIN)

KEVIN GOULD → JURISDICTIONAL SCAN

SAMPLER PROBLEMS

NEW SERVICE BLOCKS

HOW DO YOU GET SOMEONE INTO PRIV HOMES

LEAD SERVICE LINE INVENTORY/REPLACEMENT PROGRAM

SASK - SERVICE LINE SURVEYS, HOME LEAD MONITORING UNDERWAY

- SAMPLING AT CURB STOP + TAP → SASK CONSIDERED BUT DID NOT DO ORIGINAL COMM. CONTROL

NVN - NOTHING

NFLD - HAS INVENTORY OF SERVICE LINES, DOES FIELD PROTOCOL SAMPLING

Page

Date

CONFERENCE – N/20 participants

- ORGANIZING CTTEE TO START – NEED AN AFFILIATE TO BE SUSTAINABLE
  - MAYBE AWWA (CWWA) ← SPONSORS, ADVOCATING, ORGANIZING, EDU CREDITS
- CHANGE IN VENUE – NEXT – 2 YRS?
- COPIES OF PRESENTATIONS?
  - ↳ ABSTRACTS POSTED ON WEBSITE – DALHOUSIE
- CDN BANK ACCOUNT EMPTY ~ 65K LOST

BANKS

URANIUM

↳ PEER REVIEWED SIX60STAN BODER ADDITIONAL UNCERTAINTY FACTOR

- NEW DATA OBSERVED

ORIGINAL HBV TO → MAC WAS (20)

NOW PLANNING TO DRAW CONCLUSION

REFERENCE – (14) IS WRONG

BUT REMOVED IT LATER DUE TO OTHER DATA (26 REF) PUBLISHED

↳ IS THERE REALLY A DIFFERENCE?

IF STAY @ 20 – NO IMPACT FUTURE MINING

↳ TO STAY @ 20 mg/L

LEAD

↳ ANTICIPATE TO BE POSTED IN NOVEMBER

QMRA

- SOFTWARE / EXCEL SPREADSHEET TO COME (ONE DAY)

ROTATIONS USED INSTEAD OF NONCIRCULAR – THINKING ABOUT INCLUSION

DIFFERENCE BTW DAILY / OVERALL RISK

Page

GUIDELINE
GUIDANCE DOC
SCREENING VALUE

Date

TOTAL COLIFORMS

- NO REAL SPECIFIC CHANGES
- AGAIN – GUIDANCE VS. GUIDELINE?

THM+HAA5

- PREPRINT DOCUMENT - PEER REVIEW

HAA5
↳ MCA, TCA, DCA, MBA, DBA
- CURRENTLY BASED ON DCA ONLY.

1-4 DIOXANE

- SOLVENT ~ LACQUER, PAINTING, PLASTICS
- VOLATILE
  ∴ GW ISSUE
- WATER SOLUBLE - RESILIENT IN ENV, MOVES QUICKLY
EXPOSURE – 90's?
- IS IT UBIQUITOUS, OR SPILL RELATED?
- SPILL RELATED, OR HISTORICAL USE

WHILE PARAMETERS ARE SCREENING VALUES ~~OTHER~~ SHOULD NOT BE ON RECREATIONAL

RECREATIONAL WATER QUALITY

- 2012 DOCUMENT (2004 PROJECT)
- SCOPE FOR NEW INFO
- PUTTING TOGETHER WORKING GROUP
↳ ~~DO WE~~ HAVE A KEY PERSON?
EXPECT EMAIL FROM STEPHANIE

- GENOMIC PROBES ON CYANOBACTERIA
↳ LOOKING FOR PARTICIPANTS

Page

Date

VIRUSES — MINOR CHANGES TO GUIDELINE + 3.2.
STANDARDS

COPPER - OLD AO 1.0 mg/L - NOTICEABLE @ 0.3
- 6.0 mg/L WILL BE REALLY BLUE
- 1-2 mg/L - RESIDUE ON TASTE

- NEWEST PLUMBING @ HIGHEST RISK FOR CORROSION
- MAL PROPOSED 2.0 mg/L - GI / LIVER IN INFANTS

NOTE → HIGHEST MEASUREMENTS BY PROVIDERS WERE IN THOSE MEASURED AT THE TAP.

SAMPLING → MAY NEED TO BE TIED IN TO LEAD

ESEPA REVISES ON LEAD + COPPER RULE (IF THEY NEED TO TALK AGAIN)
- DON'T DO TWO TARGETED AS POLICY
- DIFFERENT SCENARIOS

BUT
YOU GET BOTH RESULTS FOR YOUR METALS SAMPLE BOTTLE.
OR COULD DO INDIVIDUALS

- APPROVED FOR CONSUMPTION

CYANO → FOR CYANOTOXINS - NOT ENOUGH DATA TO DERIVE MAL
→ LANGUAGE FROM 1.0 MG/L TO 2.1 AND NUMBER CHANGED TO 3.1

- TESTING → ELISA → ADDA - EMERGING AS PREFERRED METHOD
- FOLLOW-UP?
LCMS → SUM RESULTS TO GIVE TOTAL

DONE

MCLR EQUIVALENT

ALUMINUM

PLUMBING NOT TO DESIGNS
RESIN LEAKS

Date

STRONTIUM
- NOT A KNOWN CONTAMINANT
- DOCUMENT - FALL WINTER DRAFT.

OTHER NEW DOCS
- BORON
- ACRYLAMIDE
- ALUMINUM
- CHLORAMINES
} EA
- PFOS/PFOA → COMMISH FOR NEXT MTG

LEAD SAMPLING
KIM → RDT → WHAT IF YOU GET HITS

SASHA → SCRATCH FORMULA FOR CONCEIL CONTROL
→ TRAINING FOR SAMPLING

DANIEL → RDS DOC IN EDMONTON THIS SUMMER
- INFO
- PROPOSAL TO CHANGE LOCUS TO CAUSE
ALL SAMPLING (ALL PARAMETERS) AT THE TAP

SHIFT MOLD

Page

TUES.
7:30
-11:30 (-3)
13 HRS

GORDON RICHARD
JOHN RICHARD

JANE
JOYCE
ANCA

Date PHILLIPS (ENV. CAN)
BOURQUE

OTTAWA

- NEW DIRECTOR – GREG CARREAU

- ARSENIC – Δ MODE OF ACTION - THRESHOLD VS NO-THRESHOLD
  ↳ NEW REPORT FROM EPA EXPECTED
  HBV MAY GO UP BUT CURRENT NUMBER IS RISK MANAGED

PENTACHLOROPHENOL
↳ MAY GO BACK (WAS SLATED FOR WITHDRAWAL) DUE TO USE.

BILL C-326 – 1ST READING DEC 5

- ASKING TO REVIEW 35 OLD CONSTITUTED
- ↑ TRANSPARENCY FOR GUIDELINES + DEV
- GUIDELINES (CANADA) TO CANADA GAZETTE → WILL ↑ PROCESS DELAYS
  + ON WEBSITE AS USUAL.

* NOTE – LISTSERV – PEOPLE CAN SUBSCRIBE

PRIORITY LIST

1 As
2 THM
3 Sb
4 Chromium
5 1-4 DIOXANE
6 NDMA
7 Ba
8 Cu
9 B
10 Al

CONSIDERED IN RE-EVALUATION
↓
NEW LIST FOR NEXT MTG.

Page

W

Date

PFOS/PFOA – SOURCE/WIDER. ng/L (0.0006 mg/L)

↳ PERSISTANT

↳ BASED ON LIVER HYPERTROPHY

- MAL 0.6 ADOPTED

↳ [redacted]

GAC IS EFFECTIVE BUT EXPENSIVE (UNLESS THEY ALREADY DO FOR GAC REASON)

SOCCSN – NERVOUS ABOUT GUIDELINE

- PRESENCE REMINDS US SMALL SITUATION

- CONCERN USEPA # IS LOWER [redacted] 0.09 ng/L

- ARGUE THAT N.C. # IS PROTECTIVE OF HEALTH, AND USEPA DOES NOT PROVIDE ADDITIONAL BENEFIT.

- WHY DOES THIS NOT GO BEYOND PFOS + PFOA ?

↳ ADD SOMETHING THAT THIS IS AN INDICATOR YOU NEED TO LOOK FOR MORE IF YOU FIND THIS

CONFERENCE BILL SIZE

FRANCE HAS OLD LEAD TOOL

SEND NEW VERSION

LEAD – FINALE JULIE

POINT OF DEPARTURE 1% DLQP 1.2 µg/dL → 0.4 µg/dL (ref)

- NEGLIGIBLE RISK ESTIMATES → REVISED APPROACH

- SAME POINT OF DEPARTURE

- NO IMPACT ON MAL ↓ → 1 CASE/1000

COMMENTS

- GENERALLY (ALL BUT 1) SUPPORTIVE OF LOWERING

COSTS, SAMPLING, ADDITIONAL GUIDANCE

MOTION 69

IN HOUSE

- RESP. OF HOMEOWNER

REVISED DOC FOR NOVEMBER

HAVE WE DISCUSSED WITH CHE REPS? SUPPORTIVE

Page

Date

LEAD - MAC 10-5 ug/L LEAD.

- EXPOSURE BASED - NOT FLUSH BASED

* GALVANIZED PIPE MAY BE AS BAD OR WORSE THAN LEAD PIPE

- CONCERN STILL BEING RAISED ABOUT HOW TO APPLY RESPONSIBILITIES - SAMPLING, CORROSION CONTROL, SOURCE ROTATION

CNPHI - TIM

DWA APPLIED - 9/13 JURISDICTIONS PARTICIPATING

APPLE APP FROM

BWA - SMALL PROGRAM FROM E. COLI

- MORE BASED ON PRECAUTIONARY

INFRASTRUCTURE CANADA

RELATIONSHIP → FUNDING & BWA.

NATIONAL DEFINITION OF LONG TERM BWA?

BWA - INTENDED TO BE SHORT-TERM

- VULNERABLE

LSL REPLACEMENT - INFRASTRUCTURE CANADA.

ENV. & CLIMATE DEVELOPMENT

FEDERAL BINDING GUIDELINES? - ANY THOUGHTS?

UPDATE LAUNCHED!!

BILL C-326, MOTION M-69 - INFORMAL RESPONSE

TO PARLIAMENTARY COMMITTEE

↳ WHAT PROVINCIAL CONSULTATION? - CLIMATE?

Page

Date

SOIL GUIDELINES

- MERCURY [illegible]
- ZINC - AQUATIC LIFE, CONTAMINATION
- PERMAFROST — NO LONGER A CONTAINMENT STRATEGY
- MANGANESE, PFOS, PFOA.

→ CONTAMINATED SITES GUIDELINE - GROUNDWATER

2015 PROTOCOL - ECOLOGICAL/DW PROTECTION

& THEY TAKE FROM A COW

FNIB. - THMS - LOOKING FOR PROTOCOL TO NOVA PUBLIC — LEVELS? SHORT/LONG TERM?

- SURVEY OF HOW FNS VIEW DW QUALITY
- PERCEPTION OF SUPPLY HAS IMPROVED
- CONFIDENCE

ONTARIO
- FOCUS IS ON EFFECTIVE DISINFECTION

→ TELLS STAFF TO REGULATE

QUEBEC + NOVA SCOTIA HAVE LEGISLATION

ALBERTA
- LOOK AT CONTEXT
- SINGLE SYSTEM OR COMMUNITY

- INAC → NO-SHOW TO MEETING

NEXT MTG - SPRING 2019 BC MAY 7, 8, 9
NOV 6-8 AB 2018

NB - Ø NS
NFLD - Ø
N.S. - LAB EXCLUSIONS REPORTING. QUESTION OF CLIENT PRIVACY
- STUDY ON LEAD IMPLICATIONS BEGUN BUT ON HOLD

Page

Date

HOW TO ESTABLISH IF GW IS CONNECTIVE?
H.C. ASKING HOW THIS IS POSSIBLE?
ONT - DW IS NOW WITH WW IN ONT
GUDI TERMS OF REFERENCE
↳ SOME ONES HAVE UV (No RESIDUAL)
MAN - ACT CHANGES
- RED TAPE CUT
- NON-POTABLE POLICY
SASK [redacted] -
ALTA - LOTS OF EMPTY POSITIONS
YUKON - RAD ON REGS -
PQ - O+G HAS EXPLORATION SETBACKS - 2 KM RADIUS FROM WELLS.
- MN ACTION PLAN - 15% OF MUNICIPAL GW SYSTEMS IMPACTED,

LEAD
↳ WATER REGS INCLUDE CHANGE OF BLAME
AS BEING RESPONSIBLE FOR DW QUALITY
- CONCERNED THAT LEAD EXCEEDANCE WILL QUANTIFY
COMPLIANCE
- SAMPLING - REGARDING QUESTION FOR SAMPLING
REGULATION
↳ # OF SAMPLES, LOCATION, ACTION
GUIDANCE
↳ TYPES OF NON-COMPLIANCE, APPROPRIATE ACTIONS
↳ OF WEBSITE - FRENCH
→ 5 MIN FLUSH., 5 MIN FLU + 30 MIN STAG
+ FIRST DRAW - TUBE
SCREENING
+ PRIORITIZE
DO WORST HOUSE FIRST.

Page

Date

ACCESS TO RESIDENCES TO SAMPLE? PROBLEMATIC?
- LOCKED DOOR HANDLES, THEN PHONE, THEN SHOW UP.

MIKE → COMOX

BC FERRIES — WHAT DO PUBLIC PEOPLES DECISION DO ON FERRIES

- HOW MUCH TIME IS SPENT?
  CAN WE GET A SUMMARY OF WHAT THEY DO?
- DO THEY HAVE A SCALE SHOWN ON TOOTH PICK?

JOANNE

- EXTENSION OF IMPROVEMENT DISTRICT BOUNDARIES.
- RED FLAGS?
  ↳ WHO TEAM BUILD?
  → PLAN IN PLACE

Page

Date

HL – PLANS TO DEVELOP ACUTE VALUES FOR 3 CHEMICALS

PMRA → WILL SHARE DRAFT + Q+As.

NEED MORE THAN 2 WKS TO REVIEW

↳ INTERNAL COMM.

COMMENTS BY DEC 7

6-B – CERTIFICATION BODIES.

LOW LEAD – NSF 372.

ED. LOOKING AT 5 µg/L FOR LEAD TAP, BUT NOT U.S. (YET)

2-G – WITHDRAWAL OF OLD GUIDELINES

- 15 PESTICIDES + 4 CHEMS PROPOSED TO BE WITHDRAWN

TRANSBOUNDARY ISSUES → S-N MOVEMENT.

ADD REF TO: HHRV's → COULD SUBSTITUTE FOR MALS.

BROMOXYNIL → PENNSB; KEEP → TO PROCESS SOLUTION STRING (LEAVE AS FOR NOW)

SCREENING VALUES (~2 WKS) – NO PEER REVIEW

HHRV → (MONTHS) – HAS A PEER REVIEW.

CONSULTATION

↳ COULD BE DONE TALKED W PMRA

LEAD/MANGANESE UPDATES

- WENT TO CHE → Q's ON READINGS, SAMPLING.
- LEAD INFOGRAPHIC → SENT OUT
  - Q's + A's.
- Mn → JANUARY
  → RISK COMMUNICATIONS – Q+As ??
  MICHELE → (NUNAVUT) → N.C. HELPED HER
  STILL COMING?

Page

Vdt

Date

NFLD → ANY EXCEEDANCE MUST BE REPORTED

SASK → ANY INFO ON SAMPLING WOULD BE HELPFUL

ALTA (EDMON) → Q+A's ARE CRITICAL

SEASONAL BLIPS/PATTERNS

2 TIER APPROACH? ORTHOPHOSPHATE?

5 YEAR PLAN?? "TIME TO IMPLEMENT"

QUEBEC → COMMUNICATION > 1 YR W. COMMUNITIES

FN - SARAH BOT

CONTACT W LIN
AND SYLVIA O
MANGANESE

CORROSION CONTROL

→ WQTC

FN.

RL

3-B → BACTERIAL HPC

BIOSTABILITY → IS THERE A CORRELATION W. BIOSTABILITY?

RECOMMEND → ATP + HPC

→ NOT FEASIBLE FOR ALL (SWS)

PROPOSE CONF. CALL IN 1 MONTH.

ILL) LUMINULTRA → PROVIDED A KIT.

LONG TERM → CHEAPER THAN HPC AFTER INITIAL INVESTMENT.

PART OF SUITE OF DIFF SYSTEM INDICATORS

CIRCLE BASELINE AND LOOK FOR VARIANCE, NOT NECESSARILY A SPECIFIC #.

EcoLogix 100% post-consumer paper papier postconsommation

Date

5-B RADON → IF IN WELL WATER → LEVELS IN AIR MAY BE HIGHER IN UPSTAIRS BEDROOMS.
→ % WELL WATER MAY BE A SIGNIFICANT CONTRIBUTOR.
↳ SHOWER, WASHING MACHINE etc.
↳ OFF GASSING (RADON, MIXOL)

5-C RADIOLOGICAL PARAMETERS
- DEVELOPMENT PROCESS STARTING - STAFF CHANGES
- MCLs (HOW MANY), WAYS TO MANAGE HEALTH RISK
↓ IF OVER THE MCL.
DIFFERENT TEAMS?
GEOGRAPHICAL DIFFERENCES / FOCUSES

50

4-A STRONTIUM
↳ RECYCLED CONCRETE (NOT CURRENT)
~~↳ RECYCLED CONCRETE~~
CANADA → WHY MONITOR BOTH SOURCE + TREATED H_2O?
→ SCALE DEPOSITS MAY RELEASE IN DIST SYSTEM

4-B COPPER
↳ NEW MCL OF 2 mg/L AT TAP. (+AO 1 mg/L)
- G.I. EFFECTS (ACUTE) LIVER/KIDNEY (LOW TEAM)
- COPPER SENSITIVES (GENETIC)
REF TO CORROSION CONTROL DOCUMENT.
- MALOCCLUSION; WHO, USEPA - 1.3

TASTE THRESHOLD FOR 70% OF PEOPLE.

Page

2019

VG

Date

HOW DOES CU DIFFER FROM LEAD
NEW BLDG VS. OLD.

HC WILL DEVELOP Q+As. → 2 DOCS? ↔ TECH - FOR DWGs/OPS
↳ PUBLIC FACING (ON H

HIGH IMPACT ARE PRIORITY.

- WHAT'S HIGHLY CU ABSORBTION
- COULD THIS BE RELEASED IN CONJUNCT WITH NEW CORROSION CONTROL DOC.

OR.

INTERIM GUIDANCE? QUEBEC GUIDANCE?
HOW TO RECONCILE DIFFERENCES?

F

R

GLYPHOSATE –

- POST-PCPIM GUIDELINE DEVELOPMENT. WHILE WAITING FOR US LAWSUITS (5?a ±)
- MONSANTO'S DOCS SHOW UNDERHANDED PRACTICES – GHOST WRITING → COLLUSION W GH
- OTHER INGREDIENTS IN ROUNDUP MAY BE MORE TOXIC THAN GLYPHOSATE ITSELF

EU → RENEWED USE OF GLYPHOSATE, BUT NOT FULLY SUPPORTED

- NO MOVEMENT IS A CONSERVATIVE APPROACH.

PMRA - HPV 3 mg/L, BUT CURRENT MDL IS 0.28 mg/L
SO 0% MORE PROTECTIVE USING OLD DATA

WHAT TYPES OF TREATMENT REMOVE GLYPHOSATE - PRETTY MUCH ANY
CONVENTIONAL TREATMENT - 74% REDUCTION.

1

Date

OTHER CHEMICALS -

- URANIUM → RADIATION NOT DRIVER.
- ARSENIC → SCOPING ASSESSMENT NEXT SPRING. ✱ LOOKING FOR DATA.

5-D CNPHI

NEW - PHONE-BASED APPLICATIONS → INPUT/RECEIVE "ON THE GO"

- PILOT EXERCISE NEXT WEEK.
- DOWNLOAD FROM ISTORE WHEN READY

5:E - PARLIAMENTARY BUSINESS

① LEAD IN PIPES → FED COST INFRASTRUCTURE $ - SERVICE LINE REPLACEMENT.

CANNOT BE USED FOR PRIVATE

MOTION NOT GUARANTEED.

② DISC → TO TABLE TO HOPEFN COMMUNITY ABOUT LEAD SERVICE LINE CMHC - SMALL AMOUNT OF $

C 326 → PROPOSED AMENDMENTS - CONTAINS PENDING PERFORMANCE OF DW STDS.

- TRANSPARENCY.

→ MAKING GUIDELINES LEGALLY BINDING

→ NOT SUPPORTED TO RESPONSE - "MISCELLANEOUS"

Date

NEW PUBLICATION FROM CCME

- ZINC - SOIL
- ZINC - AQUATIC LIFE
- MN - AQUATIC LIFE
- SOIL VAPOR
- Ni
- PFOS

IF Ni CCME ↑ → PROCESS FOR ADOPTION ANOTHER JURISDICTION

LEAN ASSESSMENT OF PROCESS.

5-6 - SAMPLING AT THE TAP.

SATISH → HAND TO ENGAGE PEOPLE TO DO TESTING AT THE TAP

HASEEN → PROV GOVT DOES SAMPLING

CAROLINE → WELL IMPLEMENTED

→ WILL MEAN IF Mn + Cu ALSO TO BE SAMPLED.

AECB → IF NOTHING ELSE, I.D. RISKS TO HOMEOWNERS

50-60pg

HEALTH CANADA WILL TRANSLATE

IT IS ON THE WEB.

CAN WE CONNECT WITH DAY CARES + MUNICIPALITIES FOR "AT THE TAP" SAMPLING.

↳ $ SAVINGS/CONSUM

- SCHOOLS TOO
- MUNICIPAL BLDGS
- STAFF HOMES

AECB → DATA/PROCESS PIECE

→ ONCE YOU START, YOU CAN'T STOP.

US 3-T DOCUMENT.