

eNGLOBE



Quebec Moratorium: Lessons Learned

Presented by :
Nicholas Leblanc
Business Development Director NE US

Nov 1st 2023



Outline

- **Timeline**
- Effects of Moratorium on Quebec Residuals Industry - Present
- Upcoming PFAS regulations
- Lessons Learned

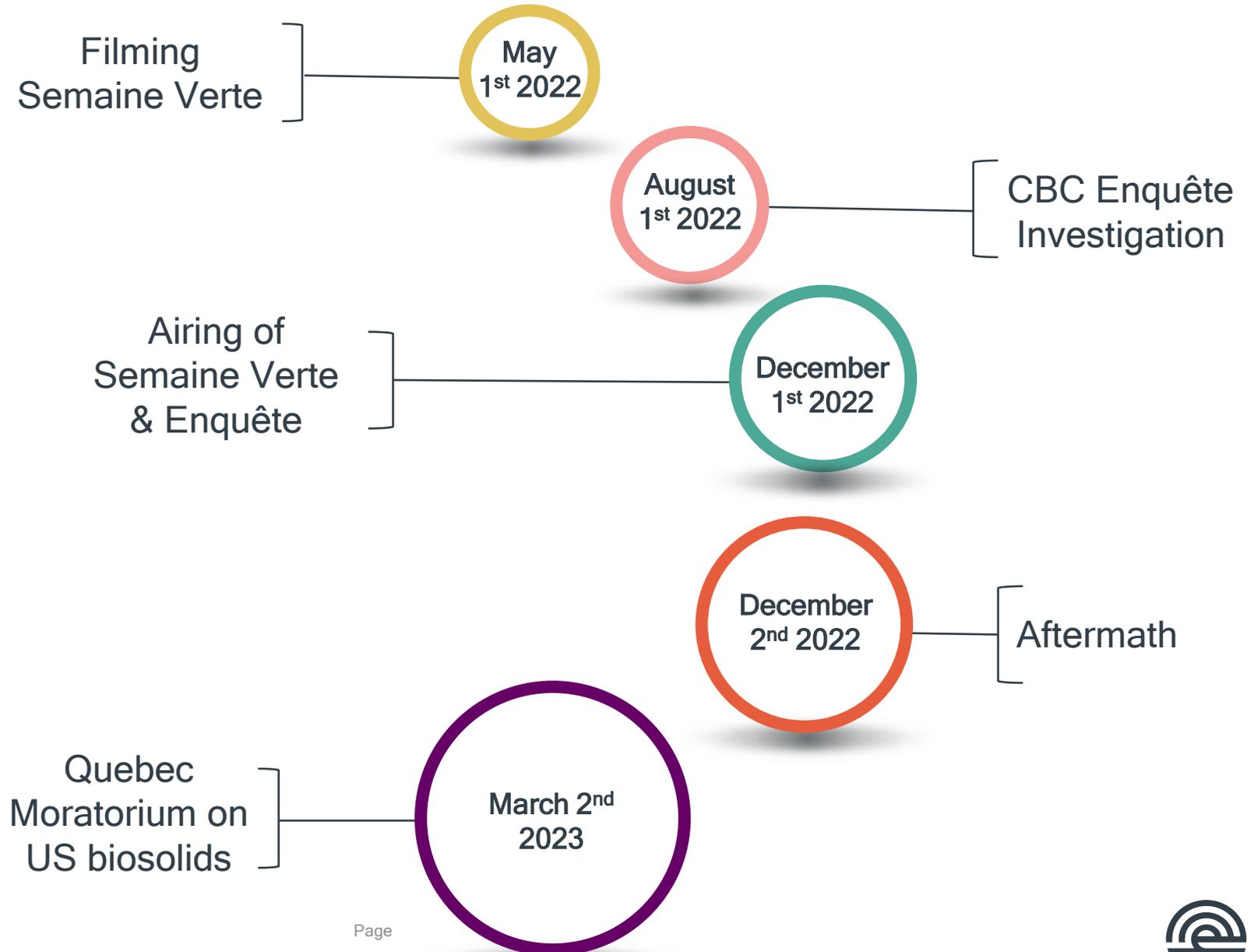


Englobe: Who we are and what we do.

- Import approx. 50,000st of paper sludge into Canada for various beneficial re-use purposes such as Cogeneration Fuel Source, agricultural lyming agent or fertilizer, mine reclamation media.
- Work with several municipalities in New England and import US municipal biosolids for composting.
- Have started sampling all our US generators for PFAS as of 2019.
 - (Hired NEBRA Ned to discuss PFAS with our team in 2018)
- Set internal PFAS guidelines so as to be able to accept/reject US projects based on PFAS levels in the absence of regulations in Quebec
- Have not spread US municipal biosolids on Quebec agricultural fields due to fears of public perception
- Continue to actively seek US residuals to complement our various activities in Quebec and Ontario



Timeline



Timeline



Filming Semaine Verte

- The CBC and its educational show “La Semaine Verte” start filming an educational segment about biosolids recycling in Quebec.
- The CBC works with Englobe and the Ministry of the Environment Quebec (MELCCFP) along with many other partners to produce the show.
- No mention of PFAS or Maine’s biosolids moratorium.



Timeline

May
1st 2022

Filming Semaine Verte

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Timeline

May
1st 2022

Filming Semaine Verte



Timeline

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Filming Semaine Verte

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ÉTIENNE DUPONT
agronome et conseiller technique
Englobe



Timeline

May
1st 2022

Filming Semaine Verte

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Timeline

May
1st 2022

Filming Semaine Verte



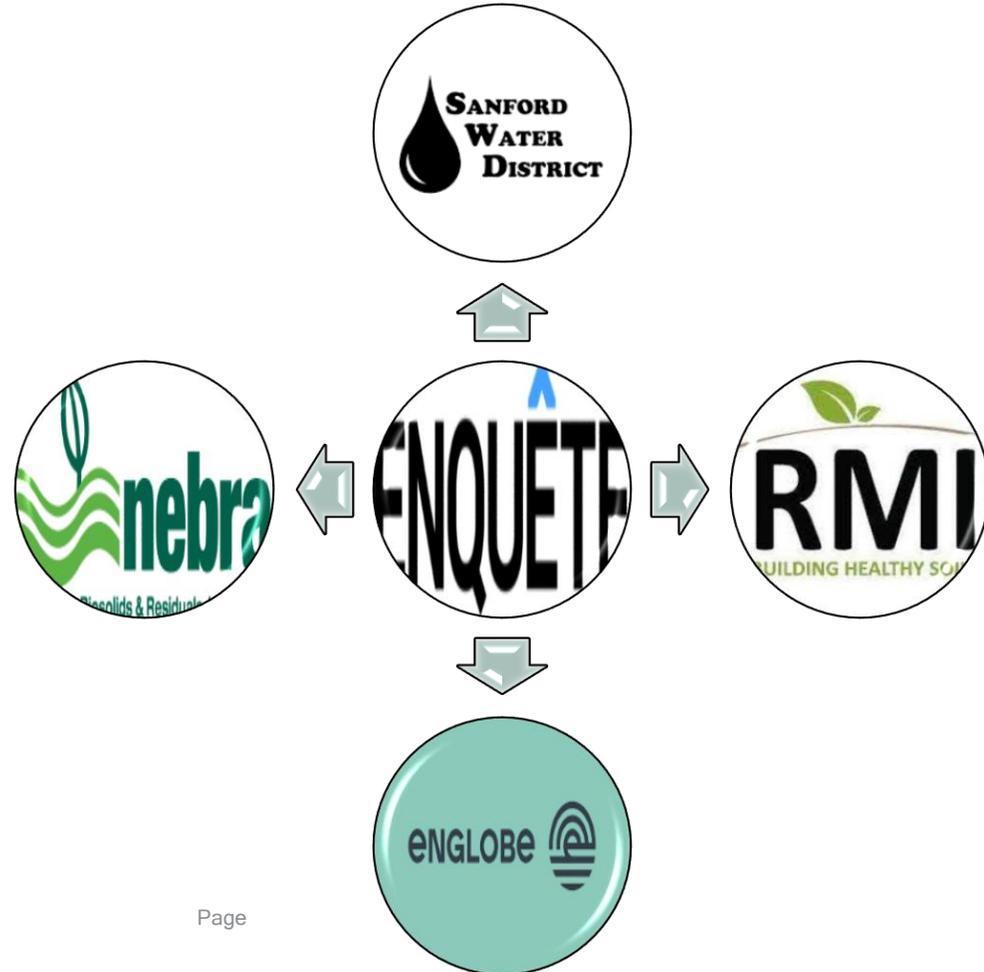
Timeline

August
1st 2022

CBC Enquête Investigation

1st August 2022 - CBC Enquête starts investigation into Maine Moratorium of biosolids

21st September 2022- CBC Enquête starts contacting RMI, NEBRA, Sanford ME.



Timeline

From: janine@nebiosolids.org <janine@nebiosolids.org>

Sent: 21 septembre 2022 08:21

From: janine@nebiosolids.org <janine@nebiosolids.org>

Sent: Friday, September 23, 2022 9:19 AM

To: 'Maude Montembeault' <maude.montembeault@radio-canada.ca>

Subject: RE: Biosolids Management in New England

From: Shelagh Connelly <shelagh.connelly@rmirecycles.com>

Sent: 5 octobre 2022 17:23

To: Maude Montembeault <maude.montembeault@radio-canada.ca>

Cc: Nicholas Leblanc <Nicholas.Leblanc@radio-canada.ca> ; Serge Dubin <Serge.Dubin@radio-canada.ca>

Subject: Additional

From: Maude Montembeault <maude.montembeault@radio-canada.ca>

Sent: Thursday, October 13, 2022 10:02 AM

To: Shelagh Connelly <shelagh.connelly@rmirecycles.com>

Subject: Re: Interview ? Yes that day works for me Wed 10/19 AM

From: Maude – I am glad
Date: trucks pick up the
To: S process the mater
Subj: the material to Ca
you want footage

We'll send you a link. Is 10am ok for you ? I wish we can have exactly the same conversation we had last time. If you don't feel comfortable with a question, you let me know. It's not live and we can do as many takes as you want :-)

I didn't get the chance to speak with Englobe. As I said, we're very very busy. It's on my to do list for the end of next week 🙏

Good
I sent
about

I have copied Nic

Le jeu. 13 oct. 2022 à 09:52, Shelagh Connelly <shelagh.connelly@rmirecycles.com> a écrit :

Please let me know

Would you like me to call in to a zoom or have an outdoor meeting or what are we trying to convey?

All the best,
Shelagh

The time works. Just fill me in on the approach and topics. Did you have a chance to connect with Nic or Serge at Englobe about discussion and footage?

Thanks!

Shelagh



Timeline

August
1st 2022

CBC Enquête Investigation

28th Nov 2022: Contact with MELCCEP

All while discussing with the CBC and our US partners, Englobe was in contact with the MELCCFP.

The relationship was and is still very good.

Ex of exchanges:

Once again, a big thank you for your cooperation and this data. It allows us to more quickly get a better picture of the situation regarding imports. Our goal is not to emphasize the origin of these materials. Our framework is more based on the risks of the materials rather than their origin, with the principle that for similar risks, there should be similar regulation.



Timeline

December
1st 2022

Airing of Semaine Verte &
Enquête

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Timeline

December
1st 2022

Airing of Semaine Verte &
Enquête

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“In Quebec, we have little or no data on the contents of biosolids in relation to emerging contaminants such as drugs, hormones, plastics, PFAS.”

INFO

CBC/Radio-Canada est une chaîne
publique canadienne.

Page

Information Regarder plus tard



Timeline

December
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Enquête

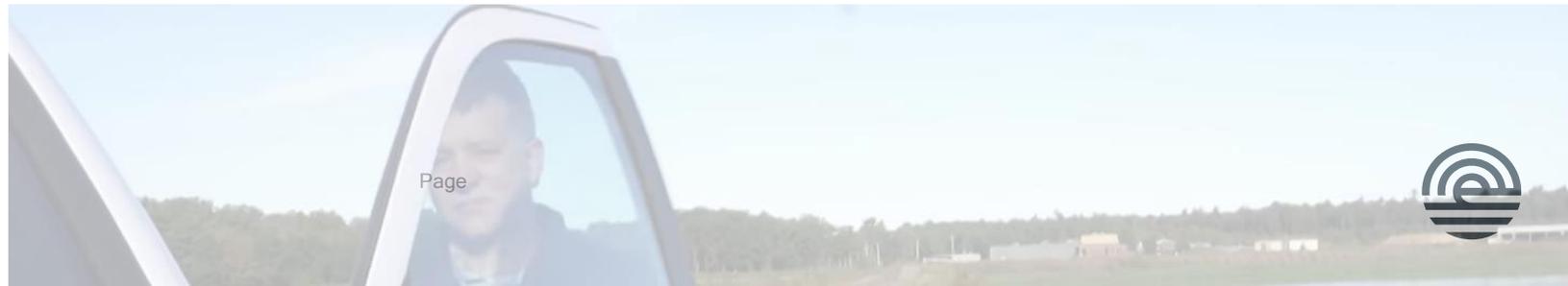
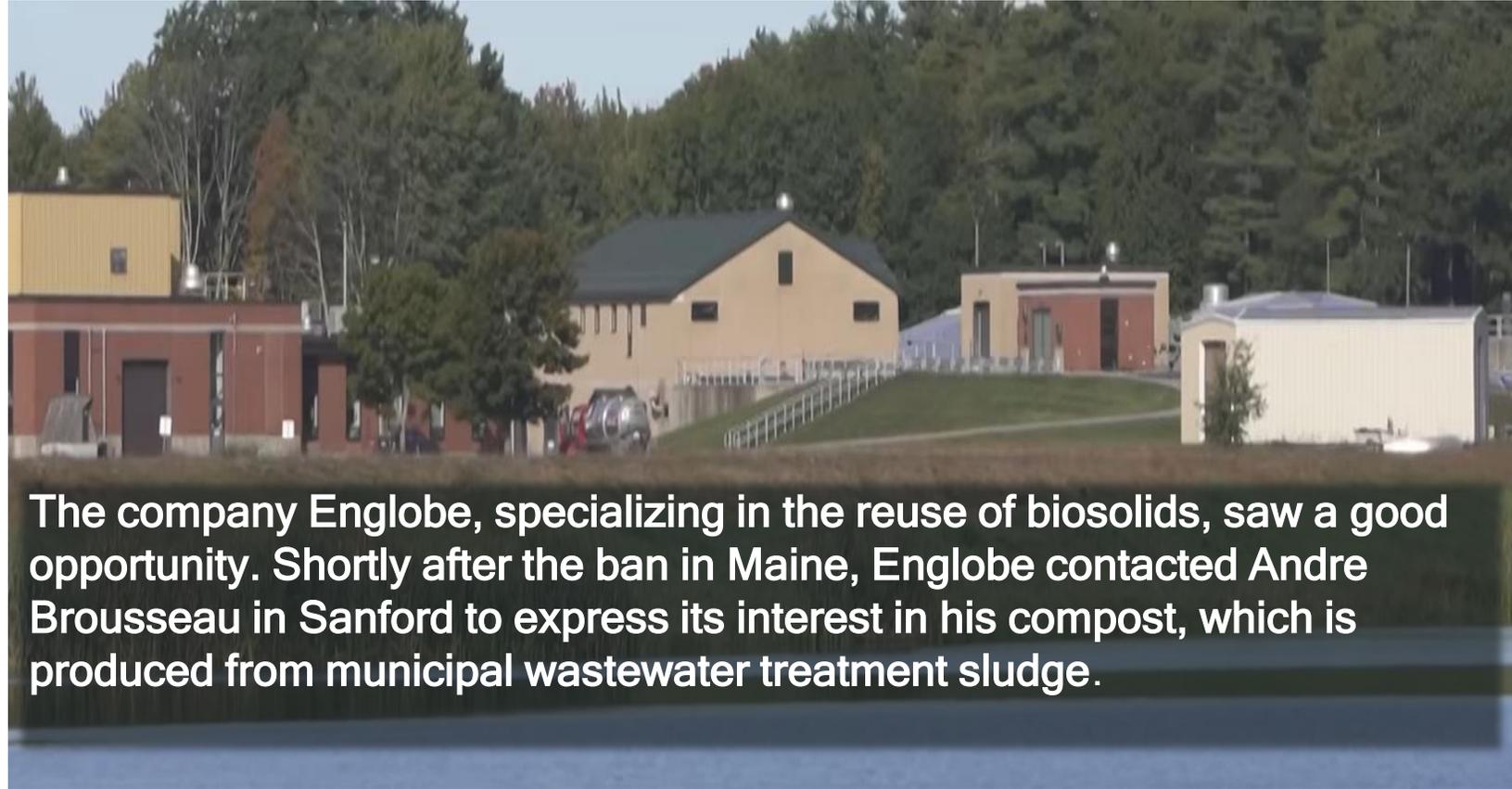
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Timeline

December
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Airing of Semaine Verte & Enquête

Casella

However, as a result of this new legislation, our management program for the compost products produced by Hawk Ridge is being forced to change. Moving forward, Casella will have to bear the considerable cost for the compost in southern New England, New York **Canada.** including marketing, personnel costs, significant addition of loading costs, permitting work, and

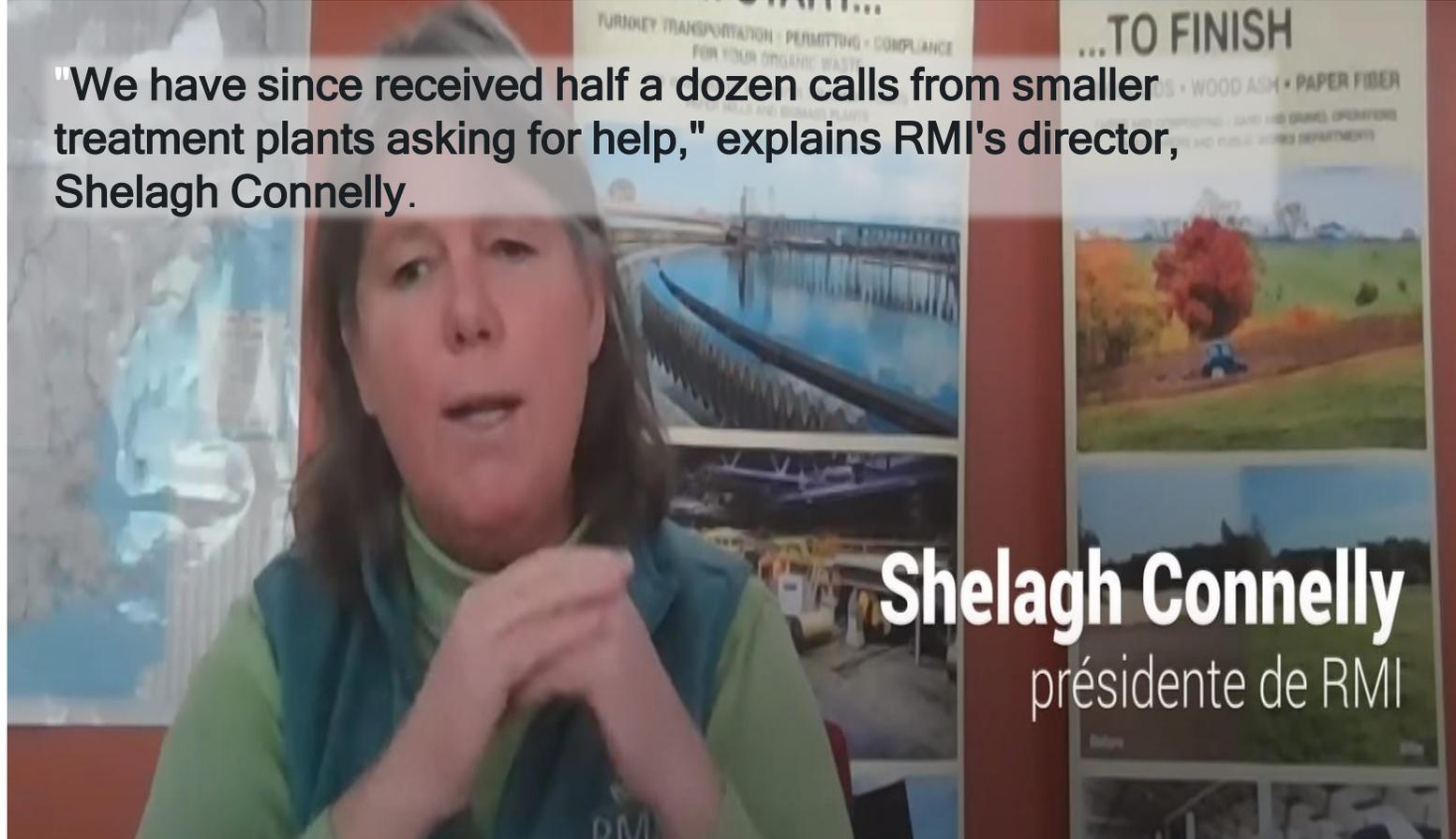


Timeline

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1st 2022

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England, New York Canada.
costs, significant addition
including marketing, personnel
loading costs, permitting work, and



"We have since received half a dozen calls from smaller treatment plants asking for help," explains RMI's director, Shelagh Connelly.

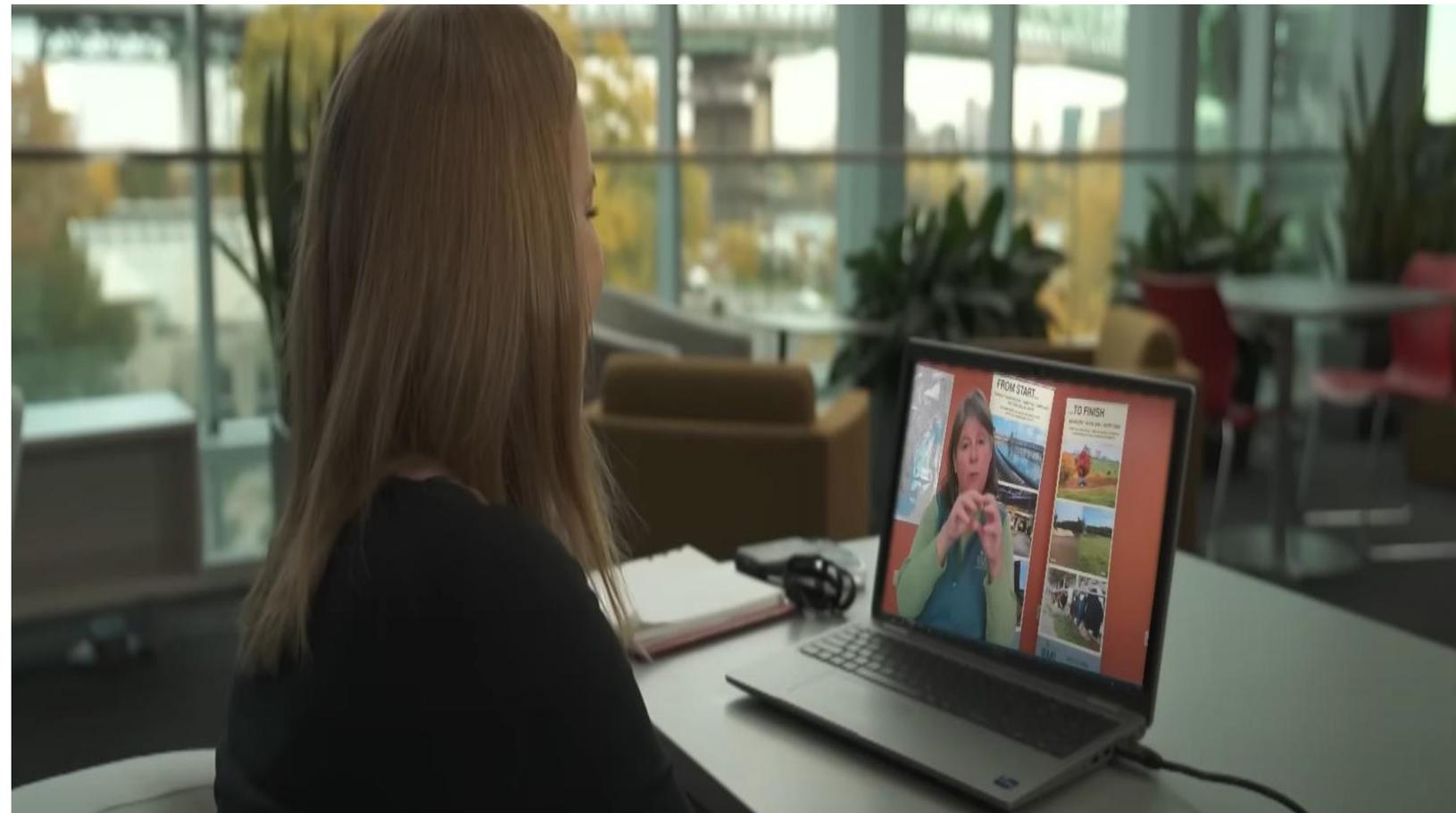
Shelagh Connelly
présidente de RMI

Timeline

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Timeline

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At the Canadian border, our team was able to locate one of these trucks, which crosses customs smoothly.



Timeline

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Airing of Semaine Verte &
Enquête



The company refused to reveal the quantities imported into Quebec, as well as all the places in the United States where the biosolids come from. These are confidential commercial contracts, he invokes.



Timeline

December
1st 2022

Airing of Semaine Verte &
Enquête

We were not made aware that there was a desire to import specifically this sludge, indicated Agathe Vialle, advisor to the deputy directorate of organic matter.

AGATHE VIALLE
ministère de l'Environnement, Qc



Timeline

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Timeline

December
1st 2022

Airing of Semaine Verte &
Enquête

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Timeline

December
2nd 2022

Aftermath

2nd December - Official Tweet from Minister of Environment Quebec



Benoit Charette @CharetteB · Dec 2, 2022
La situation soulevée dans le reportage est inacceptable. Jamais je ne prendrai de risque avec la santé des Québécois, le bien-être animal et l'intégrité de nos terres agricoles. 1/2 urlz.fr/kObT

16 replies 9 retweets 16 likes

Benoit Charette @CharetteB · Dec 2, 2022
On va interdire l'épandage de ces boues en provenance des États-Unis sur nos terres agricoles et nous allons resserrer les conditions d'épandage des biosolides québécois. 2/2

7 replies 8 retweets 18 likes

The situation raised in the report is unacceptable. I will never take a risk with the health of Quebecers, animal welfare and the integrity of our agricultural lands.

We will ban the spreading of this sludge from the United States on our agricultural land and we will tighten the conditions for spreading Quebec biosolids.



Timeline

December
2nd 2022

Aftermath

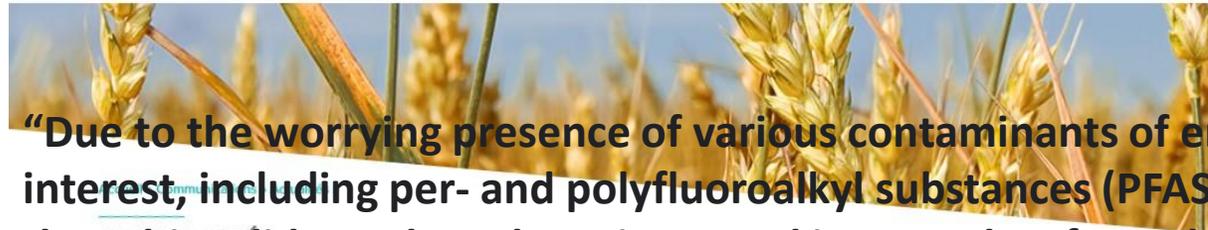
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8th December - Communiqué from Quebec order of Chemists, Quebec order of Agronomes and Quebec order of Veterinarian doctors



Trouvez un agronome | Carrières | Communications | FAQ | Nous joindre

LA PROFESSION | DEVENIR AGRONOME | PROTECTION DU PUBLIC | MEMBRES | L'ORDRE | CONGRÈS 2023 | Q



“Due to the worrying presence of various contaminants of emerging interest, including per- and polyfluoroalkyl substances (PFAS), in some of these biosolids, such as those imported into Quebec from the United States (U.S.), three professional orders recommend that the population and businesses refrain from using municipal and industrial biosolids from the state of Maine.

Likewise, it is also recommended not to use compost to which such biosolids are added or any other derived product.



ÉPANDAGE DE BIOSOLIDES EN PROVENANCE DES ÉTATS-UNIS: TROIS ORDRES PROFESSIONNELS INVITENT LA POPULATION ET LE GOUVERNEMENT À LA PLUS GRANDE PRUDENCE

Montréal, 8 décembre 2022 – L'Ordre des chimistes du Québec (OCQ), l'Ordre des agronomes du Québec (OAQ) ainsi que l'Ordre des médecins vétérinaires du Québec (OMVQ) expriment à l'occasion leur plus grande préoccupation quant à la présence de contaminants émergents, notamment les substances per- et polyfluoroalkyles (PFAS), dans certains de ces biosolides, comme ceux importés au Québec depuis les États-Unis (É.-U.). Les trois ordres professionnels recommandent à la population et aux entreprises de s'abstenir d'utiliser des biosolides municipaux et industriels en provenance des É.-U., notamment de l'État du Maine. De même, il est également recommandé de ne pas utiliser de compost auquel de tels biosolides sont ajoutés ou tout autre produit dérivé.

En raison de la présence croissante de divers contaminants émergents, dont les substances per- et polyfluoroalkyles (PFAS), dans certains de ces biosolides, comme ceux importés au Québec depuis les États-Unis (É.-U.), les trois ordres professionnels recommandent à la population et aux entreprises de s'abstenir d'utiliser des biosolides municipaux et industriels en provenance des É.-U., notamment de l'État du Maine. De même, il est également recommandé de ne pas utiliser de compost auquel de tels biosolides sont ajoutés ou tout autre produit dérivé.

Les trois ordres professionnels prennent aussi acte de l'intention exprimée par le gouvernement du Québec de resserrer la réglementation en matière de biosolides et de contaminants émergents. En ce sens, les trois ordres professionnels rappellent qu'il y a urgence de légiférer concernant les contaminants d'intérêts émergents, afin de mieux les répertorier et d'outiller les professionnels qui ont besoin d'un cadre clair pour baser leurs décisions tout en protégeant la santé et l'environnement. Les trois ordres professionnels s'engagent à être impliqués dans la modernisation de la réglementation appropriée et offrent leur pleine collaboration à sa mise en vigueur dès que possible.

De manière plus large, les trois ordres professionnels invitent la population, les entreprises et le gouvernement à mener une importante réflexion collective sur la valorisation de nos matières résiduelles et en tenant compte du risque associé pour la santé et l'environnement.

« Les PFAS et autres contaminants d'intérêts émergents sont très persistants dans l'environnement, bioaccumulables et leurs impacts dommageables sur la santé sont bien documentés. Les chimistes et biochimistes sont des experts des substances chimiques et de leurs diverses interactions. Plusieurs d'entre eux sont à pied d'œuvre pour caractériser les biosolides importés de l'étranger, évaluer les risques de contamination et de valorisation en accord avec le mandat de protection du public », déclare le président de l'OCQ M. Michel Akwaouch.



Timeline

March 2nd
2023

Quebec Moratorium



2nd March. Addenda 8 on the MRF Guide

“Currently, the indicators monitored by the Ministry on per- and polyfluoroalkyl substances (PFAS), or group of contaminants of emerging interest, provide sufficient information to enable it to assess that their presence in municipal and industrial biosolids in Quebec is at relatively low levels and that the recycling of these biosolids is a safe environmental and agricultural practice;

- Drinking residues;
- Municipal biosolids;

Furthermore, until a national standard is put in place to ensure that materials generated outside of Canada have low levels of PFAS desired, the Ministry establishes a moratorium on their agricultural spreading, through the publication of this addendum in the Guide to the recycling of fertilizing residual materials.”



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- Upcoming PFAS regulations
- Lessons Learned



Moratorium Effects on Quebec's Residuals Recycling Industry

Similar experience as felt in the North East in 2020

- Gradual loss of agricultural clients (postponing until next year, choosing alternative fertilizers for now etc..)
- From March - December 2022, loss of approx. 30% of agricultural clients
- Moratorium affected confidence in all biosolids even those from Quebec
- Biosolids compost sales were and still are negatively affected
- Alternative disposal outlets like mine reclamation, composting and landfilling were all highly solicited.
- Major disruptions and changes for regular biosolids outlets used
- Increase in disposal prices
- Return to 'new normal' business after 1-2years
- One step back in terms of public perception (I still hear : "Ah.. Yes, you guys were on that reporting show" ...)



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Upcoming PFAS regulations:

Federal

Federal: Canadian Food Inspection Agency (CFIA)

- The Canadian Food Inspection Agency (CFIA) is signaling its intent to engage on proposed interim standard for per- and polyfluoroalkyl substances (PFAS) **in biosolids imported or sold in Canada as fertilizers.**
- The CFIA's proposed interim standard will require that biosolids contain less than **50 ppb ($\mu\text{g}/\text{kg}$)** of per-fluorooctane sulfonate (**PFOS**) as an indicator before to they can be imported or sold in Canada.



Upcoming PFAS regulations:

Quebec

Quebec: MELCCFP (Ministry of Environment et al.)

- The MELCCFP has been working on sampling efforts, laboratory standards and regulatory limits concerning PFAS.
- We expect the MELCCFP to come out with PFAS regulations/limits on recycled residuals in the coming months.
- 10x PFAS (including **PFOS & PFOA**) will be regulated
- We expect the MELCCFP limits to be a **sum of 10x compounds** with a **tiered approach like Michigan**.

*Ministère
du Développement durable,
de l'Environnement
et de la Lutte contre les
changements climatiques*

Québec 



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Lessons Learned



We had lost the fight before it even started.

- **Lack of Public Education:** The technical aspects of biosolids recycling is not widely communicated to the general public, leading to a lack of awareness and understanding.
- **Perception and Stigma:** There is stigma associated with the use of biosolids in agriculture or other applications. Most people perceive biosolids as unclean or hazardous, leading to a reluctance to discuss or promote the practice of biosolids recycling.
- **Limited Media Coverage:** Biosolids recycling does not receive significant media coverage compared to other environmental or agricultural practices. As a result, the general public is not exposed to information about the benefits and safety measures associated with biosolids recycling.
- **Geographic Variations:** The awareness of biosolids recycling may also differ based on regional or local practices and regulations.



Lessons Learned

We fear what we do not know

- **“What we don’t understand, we fear. What we fear, we judge as evil. What we judge as evil, we attempt to control. And what we cannot control...we attack.”**



Lessons Learned



The media is a double edge sword

- Using various forms of media to promote our industry and educate everyday folks in the history & necessity of biosolids recycling can be extremely beneficial
- Choosing or working with specific media companies or content generators needs to be taken very seriously.
- Even the most reputable media companies tell a story



Lessons Learned



Government bodies, professional orders & associations and industry groups are all highly influenced by public perception

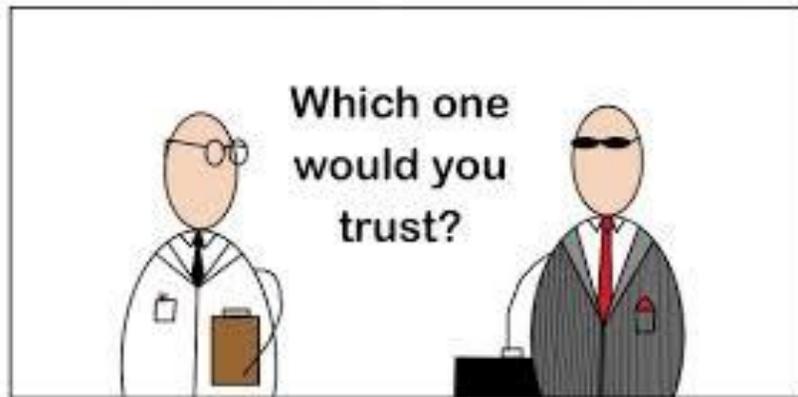
- **Public Mandate and Support:** Elected officials often rely on public support and approval to maintain their positions of power, leading them to consider public opinion when making key decisions.
- **Policy Priorities:** Public outcry or support for particular causes can prompt policymakers or associations to prioritize certain issues over others, aligning their agendas with the prevailing sentiments of their constituents.
- **Legitimacy and Accountability:** Governmental bodies, Associations and professional orders derive their legitimacy from the public's trust and confidence. Negative public perception can lead to a loss of credibility and impact the legitimacy of the institution
- **Political Will and Reforms:** Pressure from the public can lead to the introduction of new laws, regulations, or initiatives that address public concerns
- **Kill the News:** Instantaneous reaction to control and mitigate the perception of mismanagement.



Lessons Learned

No independent point of view

- **No partnerships with Universities:** While it takes time, effort and investments, we should have had several partnerships with Quebec and Canadian Universities conducting PFAS studies with biosolids recycled on agricultural fields.
- We were basically left defending our project and recycling efforts without any independent scientist. It was the big bad biosolids industry vs. clean and objective university professors.



Lessons Learned



Biosolids are the black sheep of life

- **Cultural Education:** Wash your hands after going to the washroom, poop = bacteria, e-coli, salmonella, makes you sick
- **Olfactory Danger:** Stinks therefore is inherently bad...
- **Media Portrayal:** Sh*t = bad, everything is sh*tty
- **Easy Target:** It is contaminated, it stinks, it is bad therefore they are the problem.

Ex:

- Would you rather pick up with your bare hands dog poop or human poop?
- Parcopresis.... The fear of pooping in public.



Lessons Learned

Microplastics

- **Future predictions: Microplastics**
 - Microplastics have been on the radar of various regulatory bodies for several years
 - Several plastic bans have come into effect in Canada and the USA
 - No current regulations pertaining to the release of microplastics in the environment
 - Biosolids incidentally contain microplastics
 - Growing body of research into negative health effects of microplastics in the blood stream



THANK YOU

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