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## Organic Waste Management Protocol Stakeholder Meeting

Ontario & Quebec Adaptation  
August 10, 2017

# Agenda



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1. Background & Introductions
2. Process Overview
3. Candidate Protocol Review
4. Stakeholder Questions/Discussion
5. Next Steps



Item 1

# BACKGROUND

- Ontario & Quebec have retained the Reserve and Partners to develop 13 offset project protocols to support cap-and-trade
  1. Landfill Gas Destruction
  2. Mine Methane Destruction
  3. ODS Destruction
  4. Fertilizer Management
  5. Livestock (Enteric)
  6. Anaerobic Digestion (Organic Waste & Manure)
  - 7. Organic Waste Management**
  8. Forest
  9. Afforestation/Reforestation
  10. Urban Forest
  11. Grassland
  12. Conservation Cropping
  13. Refrigeration Systems



- **MOECC** = Ontario Ministry of Environment and Climate Change
- **MDDELCC** = Quebec Ministry of Sustainable Development, Environment, and Fight Against Climate Change

# Climate Action Reserve



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- Nonprofit founded in 2001
- Developed GHG inventory & verification protocols for commercial and industrial entities
  - Operated a public registry for hundreds of entities in California
- Launched online offset project registry in 2008
  - Developed or adapted 18 project protocols for the US and Mexico
  - Work directly informed the CA and QC compliance protocols
  - Registered hundreds of voluntary and compliance projects, generating >99M tCO<sub>2</sub>e in GHG reductions
- Partners: Viresco Solutions, Brightspot Climate, Cap-Op Energy, Green Analytics, and EcoRessources

# Organic Waste Management Protocol Adaptation Team



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Organizations	Names
<b>Climate Action Reserve</b>	<ul style="list-style-type: none"><li>• Sami Osman (<i>Team Lead</i>)</li></ul>
<b>Brightspot climate</b>	<ul style="list-style-type: none"><li>• Aaron Schroeder (Deputy Project Manager)</li></ul>
<b>Cap-Op Energy</b>	<ul style="list-style-type: none"><li>• Cooper Robinson</li><li>• Peter Macleod</li></ul>
<b>Viresco Solutions</b>	<ul style="list-style-type: none"><li>• Jonathon Alcock</li><li>• Liz Brennan</li></ul>
<b>EcoRessources</b>	<ul style="list-style-type: none"><li>• Nathan DeBaets</li></ul>

# Organic Waste Management Technical Task Team



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Name	Title	Organization
<b>Dr. Andrew VanderZaag</b>	Research Scientist	Agriculture and Agri-Food Canada
<b>Dr. Frank Larney</b>	Research Scientist	Agriculture and Agri-Food Canada
<b>Keith Reid</b>	Soil Scientist	Agriculture and Agri-Food Canada
<b>Mike von Massow</b>	Associate Professor	University of Guelph
<b>Michael Fagan</b>	P. Eng	Bloom Centre for Sustainability



# Organic Waste Management Technical Task Team



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Name	Title	Organization
<b>David Coates</b>	Project Manager	Ontario Ministry of Environment & Climate Change (MOECC)
<b>Dushan Jojkic</b>	Senior Program Advisor	MOECC
<b>John Hutchison</b>	Senior Policy Advisor	MOECC
<b>Lucie Guichelaar</b>	Policy Advisor	MOECC
<b>Shelley Hyatt</b>	Senior Analyst	MOECC
<b>Phil Dick</b>	Business Resource Specialist	Ontario Ministry of Agriculture Food and Rural Affairs (OMAFRA)
<b>Sara Peckford</b>	Senior Program Advisor	OMAFRA

# Organic Waste Management Technical Task Team



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Name	Title	Organization
<b>Suzanne Burelle</b>	Direction des matières résiduelles	Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques (MDDELCC)
<b>Vincent Chouinard-Thibaudeau</b>	Direction du marché du carbone, Direction générale de la réglementation carbone et des données d'émission	MDDELCC
<b>Sophie Houplain</b>	Direction du marché du carbone, Direction générale de la réglementation carbone et des données d'émission	MDDELCC

# Organic Waste Management Stakeholder Team



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- Targeted group to provide feedback during the adaptation process
- Approx. 100 stakeholders from diverse sectors:
  - Government
  - Industry
  - Consulting
  - Academia
  - NGOs



Item 2

# PROCESS OVERVIEW

# Process Overview



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- High-level review of all organic waste management (composting & incineration) protocols
- Narrow down list to 1-3 candidate protocols as starting point for adaptation
- Stakeholders asked to review and comment on candidate list & short list
- All protocols will use a common template
- Key issues to be identified prior to drafting
- Stakeholder drafts will incorporate feedback from Technical Task Team (TTT)
- After Stakeholder review, additional comments/feedback will be reviewed and incorporated

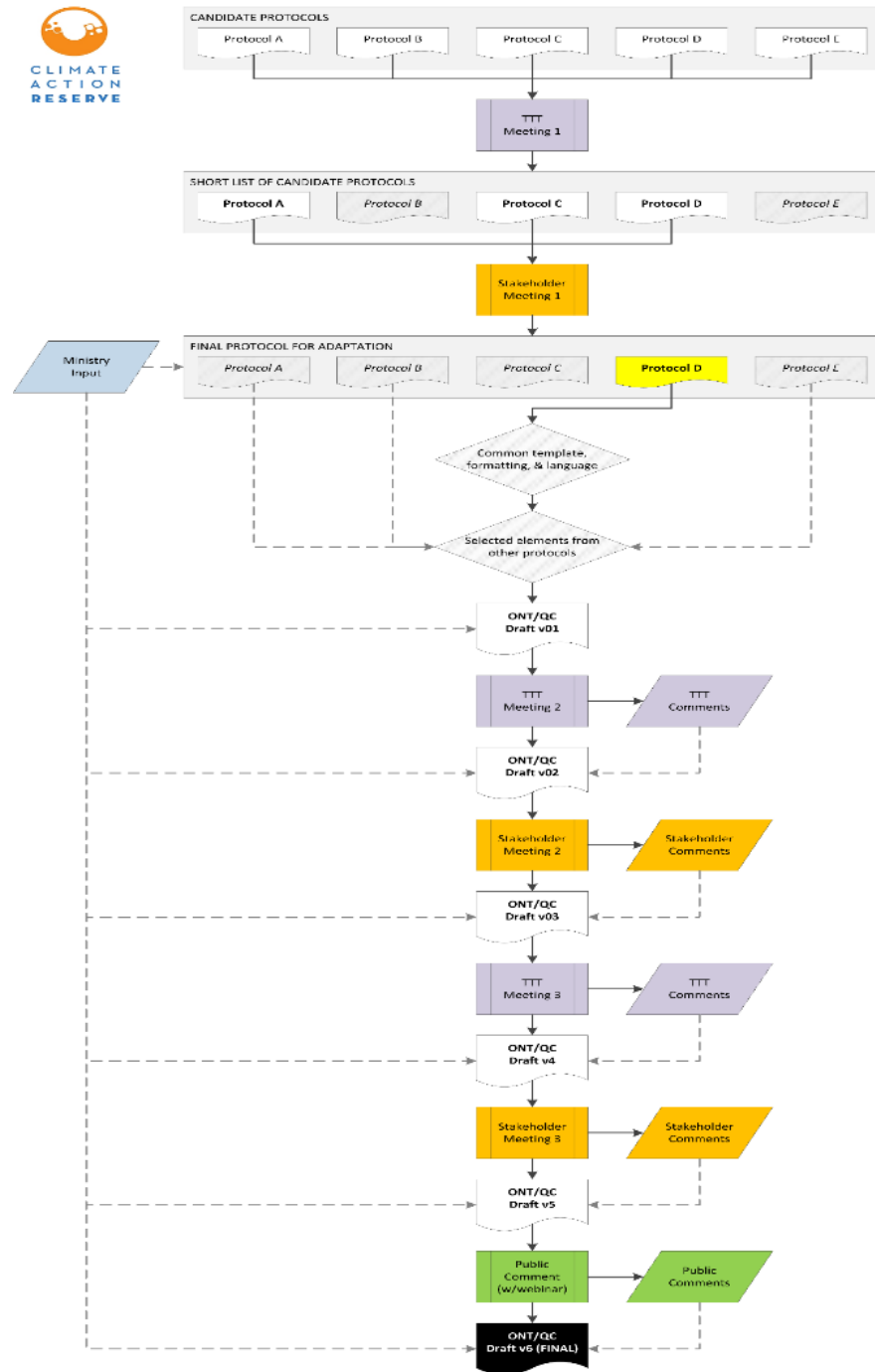
# Tentative Work Plan



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Timeline (expected)	Task
February	Protocol Adaptation Team (PAT) worked with Ministries to develop task teams and coordinate outreach
March – July	Initial meetings (webinars) held with TTTs. PAT outlined process, presented protocol candidate lists, outlined key issues and next steps
	Short lists of candidate protocols & initial screening sent to TTT
	TTT reviewed screened protocols and provided feedback
August 10	Initial meeting (webinar) with the broader group of interested stakeholders. TTT members encouraged to attend
August 18 <sup>th</sup>	Stakeholder feedback on candidate list due
August TBD	Protocol candidate list finalized and posted
August – September	PAT to begin drafting protocol

# Work Plan for Ontario/Quebec Non-Priority Protocol Adaptation



# Process Flow Diagram



Item 3

# CANDIDATE PROTOCOLS



# Task Ahead of Us



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- Task: aim for protocol to apply to all of Canada
- Follow Western Climate Initiative Offset Criteria (2010)
- Need to assess regulatory requirements in each province (additionality)
- May need additional definitions – terms consistent
- Update language based on ON / QC offsets regulations
- Refresh equations, tables, and diagrams – Canadian science and alignment with National Emissions Inventory
- Standardize emission factors
- Align with industry standards (4R framework)

# Terminology



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Protocol Term	Ontario	Quebec
“Project”	Offset Initiative	Project
“Ministry”	MOECC	MDDELCC
“Regulation”	Regulation concerning The Cap and Trade Program, made under the Climate Change Mitigation and Low-Carbon Economy Act	Regulation respecting a cap-and-trade system for greenhouse gas emission allowances, made under the Environment Quality Act
“Project Developer”	Offset Initiative Operator and/or Offset Initiative Sponsor, as appropriate	Project Promoter

*Each Ministry may make their own final edits when the adapted protocols are prepared for formal regulatory adoption*

# Candidate Protocols for Organic Waste Management



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Protocol/ Methodology	Voluntary or Compliance	Program	Jurisdiction	Link
Quantification Protocol for Aerobic Composting (v2.0 2017)	Compliance	Specified Gas Emitters Regulation	Alberta / Canada	<a href="http://aep.alberta.ca/climate-change/guidelines-legislation/specified-gas-emitters-regulation/documents/AerobicComposting-Jan18-2017.pdf">http://aep.alberta.ca/climate-change/guidelines-legislation/specified-gas-emitters-regulation/documents/AerobicComposting-Jan18-2017.pdf</a>
Quantification Protocol for Energy Generation from the Combustion of Biomass	Compliance	Specified Gas Emitters Regulation	Alberta / Canada	<a href="http://aep.alberta.ca/climate-change/guidelines-legislation/specified-gas-emitters-regulation/documents/ProtocolBiomassWaste-Apr2014A.pdf">http://aep.alberta.ca/climate-change/guidelines-legislation/specified-gas-emitters-regulation/documents/ProtocolBiomassWaste-Apr2014A.pdf</a>
Organic Waste Composting Project Protocol	Voluntary	Climate Action Reserve	United States	<a href="http://www.climateactionreserve.org/wp-content/uploads/2014/08/Organic_Waste_Composting_Project_Protocol_V1.1_Package_082714.pdf">http://www.climateactionreserve.org/wp-content/uploads/2014/08/Organic_Waste_Composting_Project_Protocol_V1.1_Package_082714.pdf</a>
ACM0022: Alternative waste treatment processes --- Version 2.0	Compliance	CDM	Kyoto Protocol	<a href="https://cdm.unfccc.int/methodologies/DB/YINQ0W7SUYOO2S6GU8E5DYVP2ZC2N3">https://cdm.unfccc.int/methodologies/DB/YINQ0W7SUYOO2S6GU8E5DYVP2ZC2N3</a>
AMS-III.F Avoidance of methane emissions through composting v12.0	Compliance	CDM	Kyoto Protocol	<a href="http://cdm.unfccc.int/methodologies/DB/NZ83KB7YHBIA7HL2U1PCNAOCHPUQYX">http://cdm.unfccc.int/methodologies/DB/NZ83KB7YHBIA7HL2U1PCNAOCHPUQYX</a>
AMS-III.E Avoidance of methane production from decay of biomass through combustion, gasification or mechanical / thermal treatment v17.0	Compliance	CDM	Kyoto Protocol	<a href="https://cdm.unfccc.int/methodologies/DB/AZB89EQ3FIRUIN1Q80MS80RXCLA2TS">https://cdm.unfccc.int/methodologies/DB/AZB89EQ3FIRUIN1Q80MS80RXCLA2TS</a>

# Protocol Evaluation Framework



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- Quantitative assessment against WCI criteria
- Qualitative assessment, including any modifications necessary to fully meet WCI criteria
- Results of full assessment retained, noting elements useful for adaptation (notwithstanding protocol not short-listed)
- Final recommendation made for 1-3 protocols to form basis of adaptation

# Scoring Guide

## Quantitative Assessment



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Protocols were scored based on individual criteria and then weighted by overall category

1 = this protocol is useful for this item

0 = this protocol is somewhat useful for this item, but needs further work

-1 = this protocol either does not address this item, or addresses it very poorly

# Summary: (Alberta) Quantification Protocol for Aerobic Composting (v2.0 2017)



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## **NOT SHORTLISTED**

### **PROS:**

- Applies project specific assessment with local EFs, mechanism which could be replicated for other jurisdictions – Uses standardized decay model – Uses project specific baseline assessment

### **CONS:**

- Potentially allows waste streams with high BAU diversion rates to be eligible, provided they demonstrate historical BAU landfill for particular waste stream – No mention of Env/Social impacts or Regulatory Compliance – No mention of uncertainty/accuracy deductions/principles, though likely these are implicitly handled during development

# Summary: (Alberta) Quantification Protocol for Energy Generation from the Combustion of Biomass



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## **SHORTLISTED**

### **PROS:**

- Should provide valuable mechanisms for accounting for combustion of wide variety of feedstocks via incineration

### **CONS:**

- Includes minimal requirements for env considerations in BL when including some waste streams – No direct mention of offset ownership – Does not appear to include any explicit deductions for uncertainty – Central ER opportunity is displaced grid emissions

# Summary: (Reserve) Organic Waste Composting Protocol



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## **SHORTLISTED**

### **PROS:**

- Covers WCI requirements well – Protocol applies a combination of standardized assumptions based on common practice assessments, complimented by waste stream specific assessments of historical treatment, both concepts which can be applied in Canada

### **CONS:**

- Need Canadian emission factors – Need adapt baseline and common practice assumptions for local conditions – Consider additional SSRs from other protocols



# Summary: (CDM) ACM0022: Alternative waste treatment processes --- Version 2.0



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## **NOT SHORTLISTED**

### **PROS:**

- Diverse range of project activities – Quantification methods well developed

### **CONS:**

- Several aspects of protocol handled in external documents – Allows for crediting where activity mandated but poorly enforced (additionality concern) – All organic waste aspects of this protocol covered in Reserve OWC protocol

# Summary: (CDM) AMS-III.F Avoidance of methane emissions through composting v12.0



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## **NOT SHORTLISTED**

### **PROS:**

- Diverse range of project activities – Quantification methods well developed – Very good coverage of relevant SSRs – Does employ project specific baseline, ensuring project is beyond “business as usual”

### **CONS:**

- Includes several SSRs not included in Reserve protocol, including onsite storage, transport offsite, offsite storage and final application of finished compost, most of which are arguably outside of control of PD and/or likely negligible – Requirement to scale back ERs proportional to increase on total volumes produced at project facility is arguably overly conservative

## NOT SHORTLISTED

### PROS:

- Quantification methods well developed – Very good coverage of relevant SSRs – Includes useful quant method for accounting for use of partially decayed material, not seen elsewhere

### CONS:

- Several aspects of protocol handled in external documents – Accounting for venting uses very simple deduction, which would not conservatively account for large scale releases of biogas – Most mechanisms adequately covered in Alberta combustion protocol

# Organic Waste Management Shortlisted Protocols



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## **PROTOCOL SHORTLIST:**

- 1) (Reserve) Organic Waste Composting Project Protocol
- 2) (Alberta) Quantification Protocol for Energy Generation from the Combustion of Biomass

## **RATIONALE:**

- The Reserve OWC protocol comprehensively covers WCI criteria & deals comprehensively with OW elements for composting.
- The Alberta Quantification Protocol for Energy Generation from the Combustion of Biomass provides useful mechanisms to deal with incineration
- Can refer to key issues in remaining protocols as needed



Item 4

# STAKEHOLDER QUESTIONS & DISCUSSION



Item 5

# NEXT STEPS

# Submit Comments



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Stakeholder Team to review candidate protocols and submit comments to the Reserve no later than:

**Friday, August 18 (end of day)**

[sosman@climateactionreserve.org](mailto:sosman@climateactionreserve.org)

# Next Meeting



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- Next Stakeholder Team Meeting (to review draft protocol):
  - **September**
  - Watch for email announcement with registration link
- Sharing documents and drafts with stakeholders on Reserve website



# Contact Information



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Action Reserve, Organic Waste  
Management Team Lead*

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## Policy Team

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