

Réduire  
pour mieux  
**grandir**

**Establishment of organic  
waste treatment facilities**

Selection of sites



## **Establishment of organic waste treatment facilities**

Selection of sites

# SECTION 1

# Context



## Establishment of organic waste treatment facilities

### Selection of sites

#### 1.1 Québec Waste Management Policy 2011-2015 Action plan

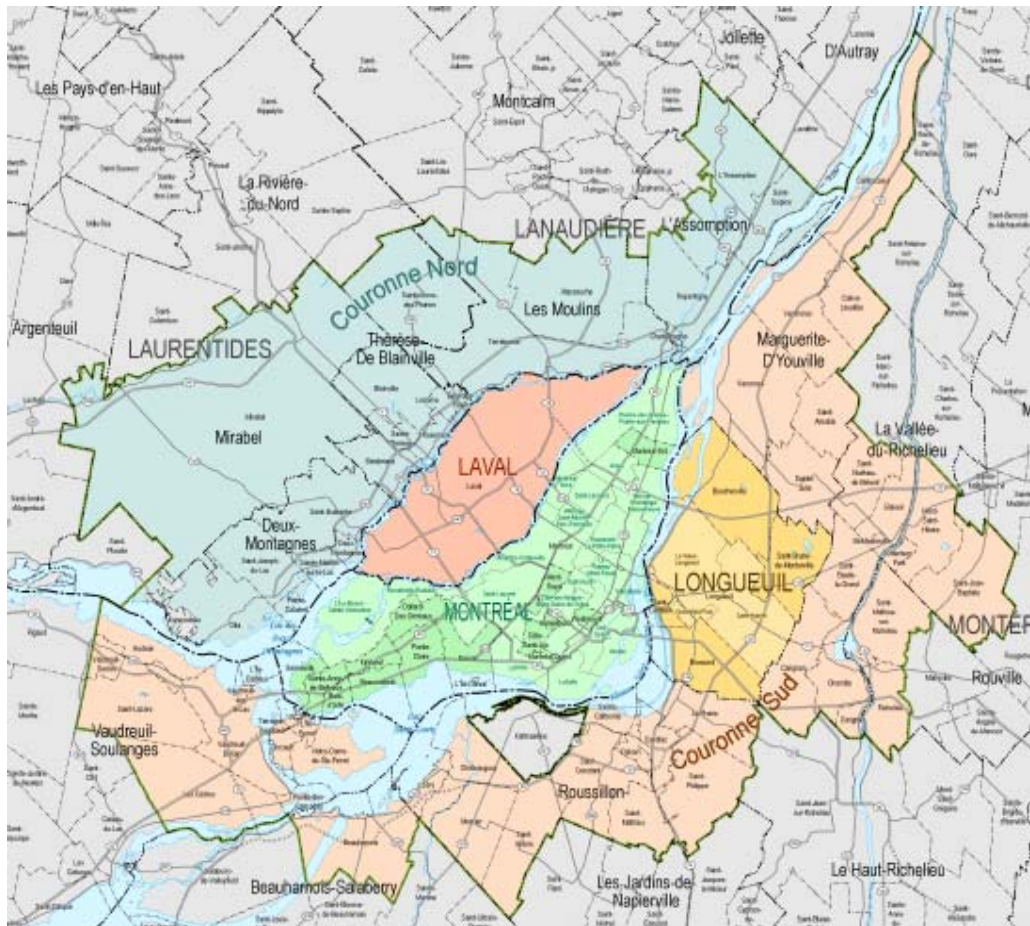
(an update of the Québec 1998-2008 Waste Management Policy)

- Calls on one and all to follow **the 3 RV-E hierarchy**
  - Reduction at the source
  - Reuse
  - Recycling
  - Valorization (enhancing the value of waste)**
  - Elimination (disposal)
- **Sets a target of 60% for the proportion of putrescible organic materials** that Québec MRCs and metropolitan communities will have to revalorize by 2015.
- **Prohibits** the landfilling of organic materials after 2020.
- **Determines** the technologies through the implementation of an infrastructure program to reclaim organic materials through **biomethanation and composting**.

## Establishment of organic waste treatment facilities

### Selection of sites

#### 1.2 Metropolitan Waste Management Master Plan for the Communauté métropolitaine de Montréal (CMM)



- Approved by the Ministère du Développement durable, de l'Environnement et des Parcs on August 22, 2006
- Complies with the Québec Policy and its Action Plan
- Objective: regional autonomy of the 5 CMM territories (the residual waste of each territory must be treated within its territory):
  - Agglomeration of Montréal
  - Agglomeration of Longueuil
  - Laval
  - North Shore
  - South Shore



## Establishment of organic waste treatment facilities

### Selection of sites

#### 1.3 Waste Management Master Plan for the Agglomeration of Montréal 2010-2014

- Adopted unanimously by the Agglomeration Council in August 2009.
- The organic material treatment facilities are to be implemented according to a principle of **territorial equity**.
  - A fair and just distribution of the infrastructures on the territory of the island
  - Treatment of materials near their production locations
    - Reduction in transportation and GHG
- Considering the quantities of organic materials produced by each sector on the island, the City has opted for the following infrastructures:
  - **2 composting facilities**
  - **2 biomethanation facilities**
- On the basis of the residual household waste left after its sorting at the source, we intend to assess the potential for the valorization of the organic, recyclable and combustible materials contained in this household waste. This assessment will be conducted through the implementation of a **pre-treatment PILOT centre**.





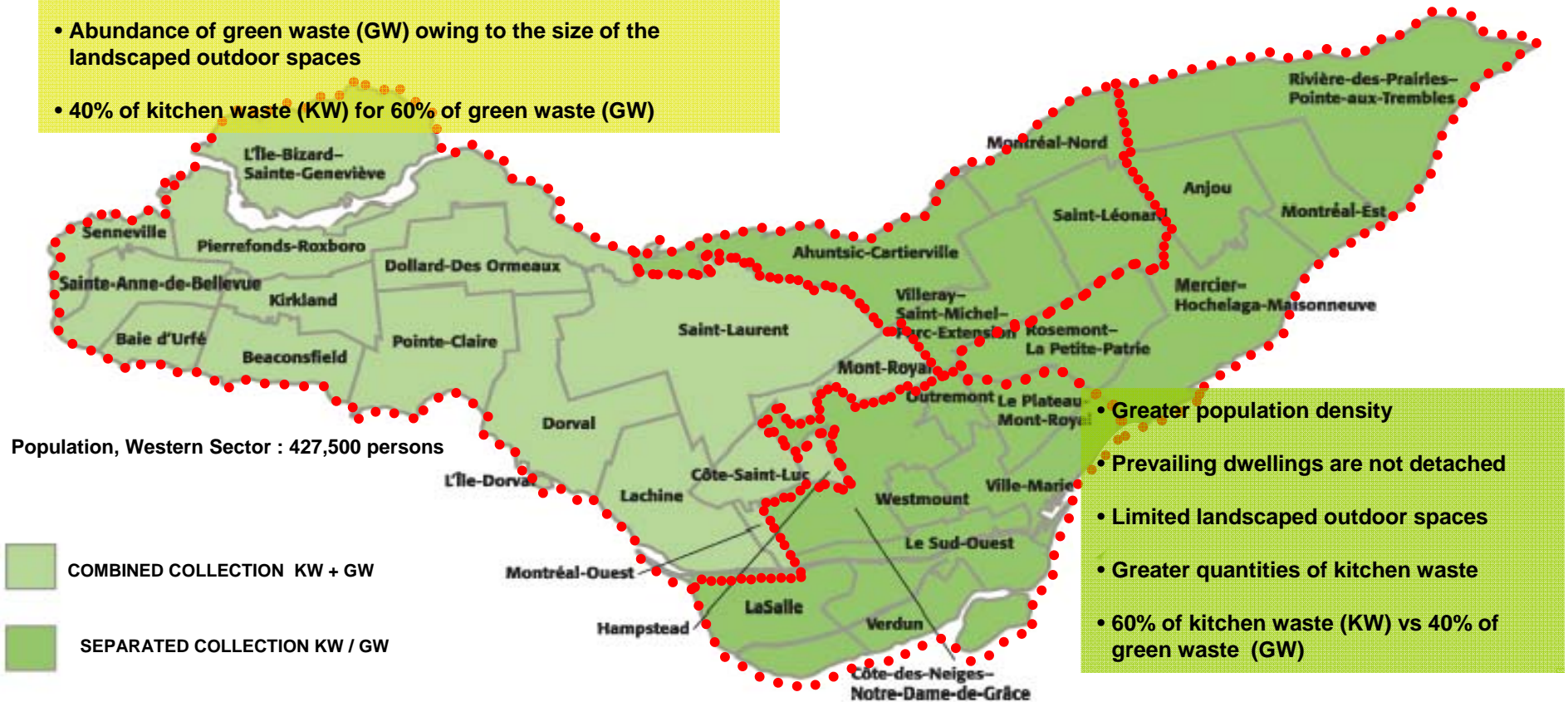
## Establishment of organic waste treatment facilities

### Selection of sites

#### 1.3.1 Two zones with distinct profiles

- Lesser population density
- Prevailing type of dwelling is single-family or detached (95%)
- Abundance of green waste (GW) owing to the size of the landscaped outdoor spaces
- 40% of kitchen waste (KW) for 60% of green waste (GW)

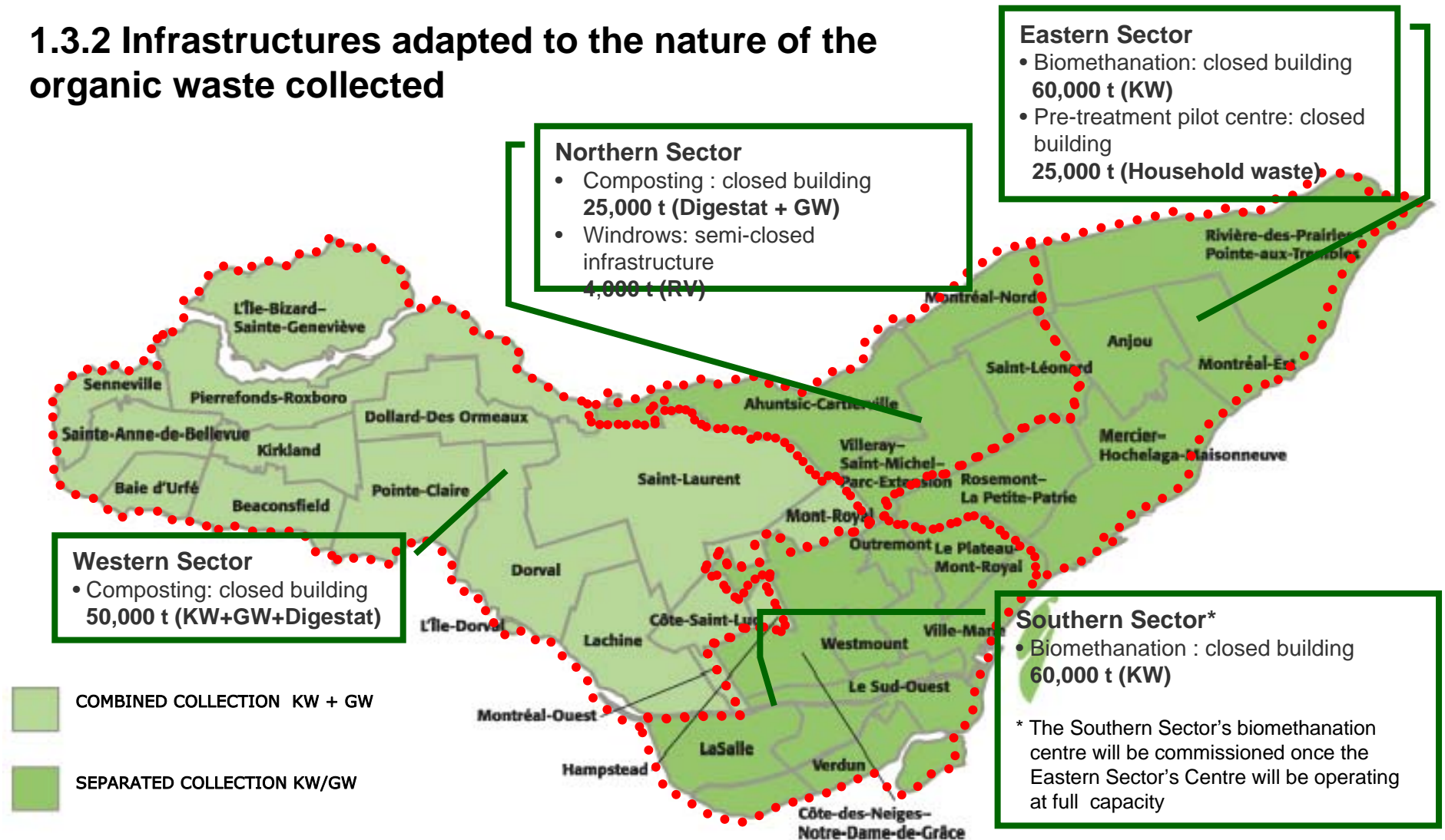
Population, Northern, Eastern and Southern Sectors: 1,473,000 persons



## Establishment of organic waste treatment facilities

### Selection of sites

### 1.3.2 Infrastructures adapted to the nature of the organic waste collected





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## SECTION 2

# Site selection process





# Establishment of organic waste treatment facilities

## Selection of sites

### 2.1 Site assessment criteria

#### 2.1.1 Guidelines of the Ministère du développement durable, de l'environnement et des parcs (MMDEP)

- Minimum of 500 metres between the infrastructure and any residential or commercial zone, dwellings and public areas
- Odor dispersion study to confirm compliance of level of odors between the infrastructure and neighboring homes
- Minimum distance of 60 metres from a waterway, 30 metres of any catchworks (subterranean waters) and 300 metres from a lake
- Noise levels compatible with the host zone
- Limited traffic in the neighborhood

#### 2.1.2 The agglomeration's criteria

- Ideally a municipal property
- Land should be vacant, of low grade or little value, of a minimum area of 2.5 ha for a biomethanation centre, of 4.5 ha for a composting centre and 5 ha for a biomethanation centre and a pre-treatment centre
- No buildings
- Proximity to major thoroughfares and highways
- Available in the short term
- Favorable topography
- Presence of a buffer zone between the land and its neighbors
- Level of soil contamination
- Appropriate zoning and surrounding activities
- Possibility of connection to the Gaz Métropolitain network (biomethanation)



## Establishment of organic waste treatment facilities

### Selection of sites

#### 2.2 Site selection process

- All of the agglomeration's elected officials (concerned cities and boroughs) were invited to participate in the process and make proposals.
  - March 2010, letter from the Mayor to elected officials.
  - Spring 2010, meetings with the elected officials and certain representatives of the cities' and borough's administration of the four zones with Mr. Alan DeSousa, the member of the Executive Committee responsible for the environment and sustainable development.
  - The Ville de Montréal's Service des immeubles also contributed to the identification of potential sites
- In April-May 2010, following the identification of potential sites, 11 were further investigated including an odor dispersion study.
- Everything considered, 4 sites presented the optimal conditions for these establishments.



# Establishment of organic waste treatment facilities

## Selection of sites

### 2.3 Summary of site assessments by sector

Site	Sector	Location		Explanations
1	<b>EAST</b> Biomethanation Pre-treatment pilot centre	Demix Quarry, Montréal-Est	A	Municipal property; land available; low contamination potential; gas line able to accommodate the forecast flow rates; compliance with MDDEP guidelines (preliminary MDDEP notice issued November 22, 2010)
2		Marien/Henri-Bourassa North, RDP - PAT	R	Private property requiring an acquisition cost

Legend: A – accepted R – rejected



## Establishment of organic waste treatment facilities

### Selection of sites

### 2.3 Summary of site assessments by sector

Site	Sector	Location		Explanations
3	<b>NORTH</b> <b>Composting</b>	CESM, Villeray-St-Michel-Parc-Extension Borough	A	<p>Only site proposed for this sector.</p> <p>Municipal property; that part of the property that is coveted is already occupied by a GW composting facility with uncovered windrows; has an MDDEP certificate of authorization; property available; compliant with MDDEP guidelines despite the presence of a residential zone within 500 metres; preliminary notice issued by the MDDEP on October 22, 2010, stating that in the case of the CESM, there is no minimum distance prescribed since a duly authorized composting facility already operates there.</p>

Legend: A – accepted R – rejected

## Establishment of organic waste treatment facilities Selection of sites

### 2.3 Summary of site assessments by sector

Site	Sector	Location		Explanations
4	<b>SOUTH</b>  Biomethanation	Corner N-E, Bridge/Wellington,  South-West Borough	R	Private property; a sector that is being revitalized with residential projects; non compliant with MDDEP guidelines in terms of distances (residential area more than 500 m away but commercial and institutional sites within 200 metres). The odor dispersion study concluded that the site did not comply with the odor criteria.
5		Bridge St., west of Des Irlandais,  South-West Borough	R	Private property, built and occupied; gas line unable to accommodate the forecast flow rates; non compliant with MDDEP guidelines in terms of distances (residential area more than 500 m away but commercial sites within 150 metres and institutional sites within 230 metres). The odor dispersion study concluded that the site did not comply with the odor criteria.
6		Solutia Canada inc.  Borough of LaSalle	A	Private property, vacant and available; gas line available and able to accommodate the forecast flow rates; compliant with MDDEP guidelines.

Legend: A – accepted R – rejected



## Establishment of organic waste treatment facilities

### Selection of sites

### 2.3 Summary of site assessments by sector

Site	Sector	Location		Explanations
7	<b>WEST</b>  Composting	9091 Henri-Bourassa West Blvd. Borough of St-Laurent	<b>R</b>	Private property, built; entails rehabilitation and development costs; non optimal in terms of distances for intra-sector transportation.
8		5055 Courval St., Borough of St-Laurent	<b>R</b>	Private property, built, occupied and unavailable.
9		N-E corner of 12th Ave/Normand, Borough of Lachine	<b>R</b>	Private property in an industrial zone, non compliant with MDDEP guidelines (zone 140 metres southward); difficult to meet odor criteria without major investments.
10		Courval/N, A. 13/E, Borough of Lachine	<b>R</b>	Private enclave property; the geometry of the property does not allow for an optimal development; located at the southwestern limit of the sector, thus a non optimal distance for intra-sector transportation.
11		ADM property, de l'Aviation St. City of Dorval	<b>A</b>	Private property (ADM), available; compliant with MDDEP guidelines; central location ensuring optimal distances for intra-sector transportation.

Legend: A – accepted R – rejected

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#### 2.4 Sites retained

Western sector	Northern sector	Southern sector	Eastern sector
ADM property on de l'Aviation St. (Dorval)	CESM * (VStMPE)	Solutia Property (LaSalle)	DEMIX property (Montréal-Est)

\*- the CESM site belongs to the agglomeration which already operates an open area composting facility there, for which it holds a certificate of authorization from the MDDEP. The projected composting centre is designed for its operations to be conducted within a closed plant and for semi-closed windrows. This will result in a substantial improvement over the actual situation, since the potential negative impacts will be circumscribed at the source. This site was the only one proposed for the Northern Sector. The planned composting activity is in line with the CESM's mission and master plan.



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#### **2. 5 Notice of compliance with MDDEP guidelines**

On October 22, 2010, the MDDEP issued a preliminary notice confirming the compliance of the sites located in the Eastern, Northern and Southern locations with respect to its guidelines.

On April 6, 2011, the MDDEP issued a similar notice for the Western site.



## Establishment of organic waste treatment facilities Selection of sites

### 3. Previous decisions by the City and agglomeration

Executive summary	CE	MC	AC	SUBJECT
1090704001	25/06/09	24/08/09	27/08/09 unanimous	Adopt the Waste Management Master Plan (WMMP) for the Agglomeration of Montréal.
1100704002	17/02/10	22/02/10	25/02/10	Approve and initiate the process to identify potential sites for the establishment of anaerobic digestion and composting facilities and a pre-treatment pilot centre on the territory of the agglomeration of Montréal (criteria appended).
1100670001	24/03/10	N/A	N/A	Authorize the launch of a by-invitation only call for tenders for professional services in order to conduct a technical odor dispersion study for a maximum of 12 sites having the potential to host the organic material treatment infrastructures on the territory of the agglomeration of Montréal.
SIMON : 502999	SO	N/A	N/A	Award a professional services contract to Odotech Inc. in the amount of \$32,855.93 (all taxes included), to conduct a technical odor dispersion study for a maximum of 12 sites having the potential to host the organic material treatment infrastructures on the territory of the agglomeration of Montréal (according to Action 5.5 and Action 9.2 of the WMMP – Two (2) tenderers.
1104422001	18/06/10	N/A	N/A	Impose the application of a land reserve, for the purpose of establishing the organic material treatment infrastructures planned under the 2010-2014 Waste Material Management Master Plan for the Agglomeration of Montréal, on the following lots of the Québec cadastre, district of Montréal namely : 1) lot 1 250 042, located on the extension of Marien Ave., north of Henri-Bourrassa East Blvd.; 2) lot 3 269 985, fronting Saint-Patrick St. ; 3) lot 1 163 631, fronting Henri-Bourrassa West Blvd.; lot 1 703 830, located on Hickmore St.; 5) lots 1 703 840 and 1 706 673, fronting Courval St. and 6) lot 1 706 103, fronting Norman St.

## Establishment of organic waste treatment facilities Selection of sites

### 3. Previous decisions by the City and agglomeration (cont'd)

1100670007	18/08/10			Repeal resolution CE10 0990 of the Executive Committee concerning the land reserve requested for the organic material treatment infrastructures planned for under the 2010-2014 Waste Material Management Master Plan for the Agglomeration of Montréal, on the following lots of the Québec cadastre, district of Montréal namely: 1) lot 1 250 042, located on the extension of Marien Ave., north of Henri-Bourrassa East Blvd.; 2) lot 1 703 830, fronting Hickmore St. and lots 1 703 840 and 1 706 673, fronting Courval St. 3) lot 1 706 103 fronting Norman St. and 4) lot 1 163 631 fronting Henri-Bourassa West Blvd.
1110549002	13/04/11	N/A	N/A	Authorize the launch of a public call for tenders for the preliminary micro-siting studies required to support the amendments of the zoning by-law applicable to each of the four sites retained for the establishment of organic material treatment centres.
1114439001	08/06/11	N/A	22/06/11	Adopt under section 89 of the Ville de Montréal, 4 draft by-laws authorizing the construction and occupation of the 4 organic material treatment centres and of the pre-treatment pilot centre for household waste, and mandate the OCPM to hold the public consultation that is mandatory under the law.
1114439002	08/06/11	20/06/11	N/A	Adopt a draft by-law to amend Ville de Montréal's Master Plan (04-47) relative to the use of a part of the Complexe environnemental Saint-Michel (CESM) site and mandate the OCPM to hold the mandatory public consultation that is required under the law.
1111185001	22/06/11	N/A	N/A	Award a professional services contract to Génivar Inc. to conduct the preliminary micro-siting studies to support the amendments of the zoning by-law applicable to each of the four sites retained for the establishment of organic material treatment centres for a maximum amount of \$477,252.31, taxes included – Open tendering (11-11622) – (2 tenderers) / Approve a draft contractual agreement toward this end.





## **Establishment of organic waste treatment facilities** Selection of sites

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