

Halifax Soil Amendment

Committee of Whole
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Biosolids: Friend or Foe?



Halifax Soil Amendment

- Safe
- Environmentally Responsible
- Economically Sustainable



What is Halifax Soil Amendment?

- Background
- Product
- Process



Product



The N-Viro Soil™ Amendment (NVSA) Comparison of NVSA Pathogen Content Against Other Natural Soil Amendments

Soil Amendment	Fecal Coliform (MPN/g)
Class "B" Digested	104,000
Class "A" Composted Biosolids	76
Diary Manure	13,000,000
Poultry Manure	5,000,000
N-Viro Soil™ Amendment	<3

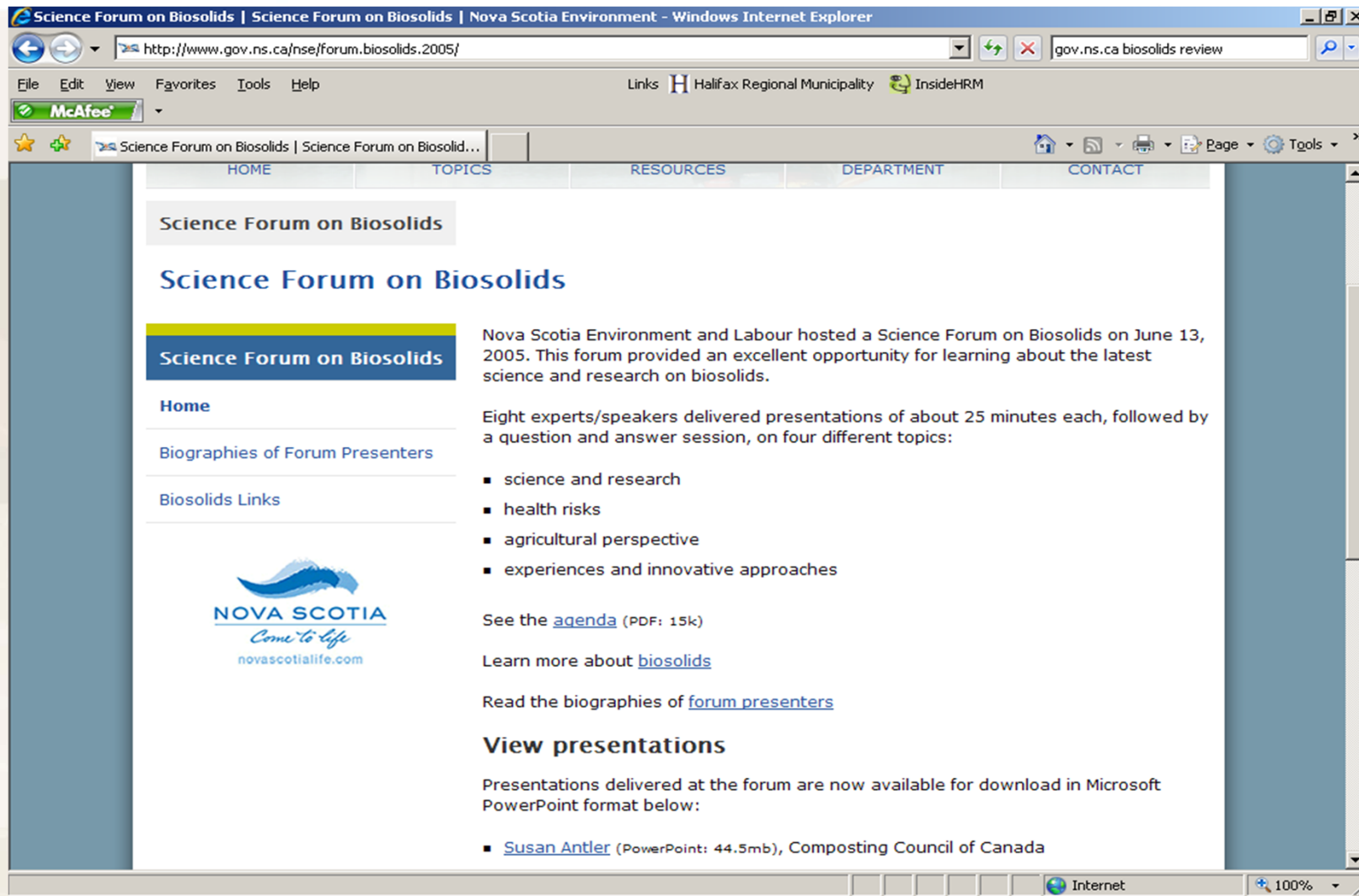
Biosolids data from Lue-Hing et al. 1998

Manure data from ASAE 2000

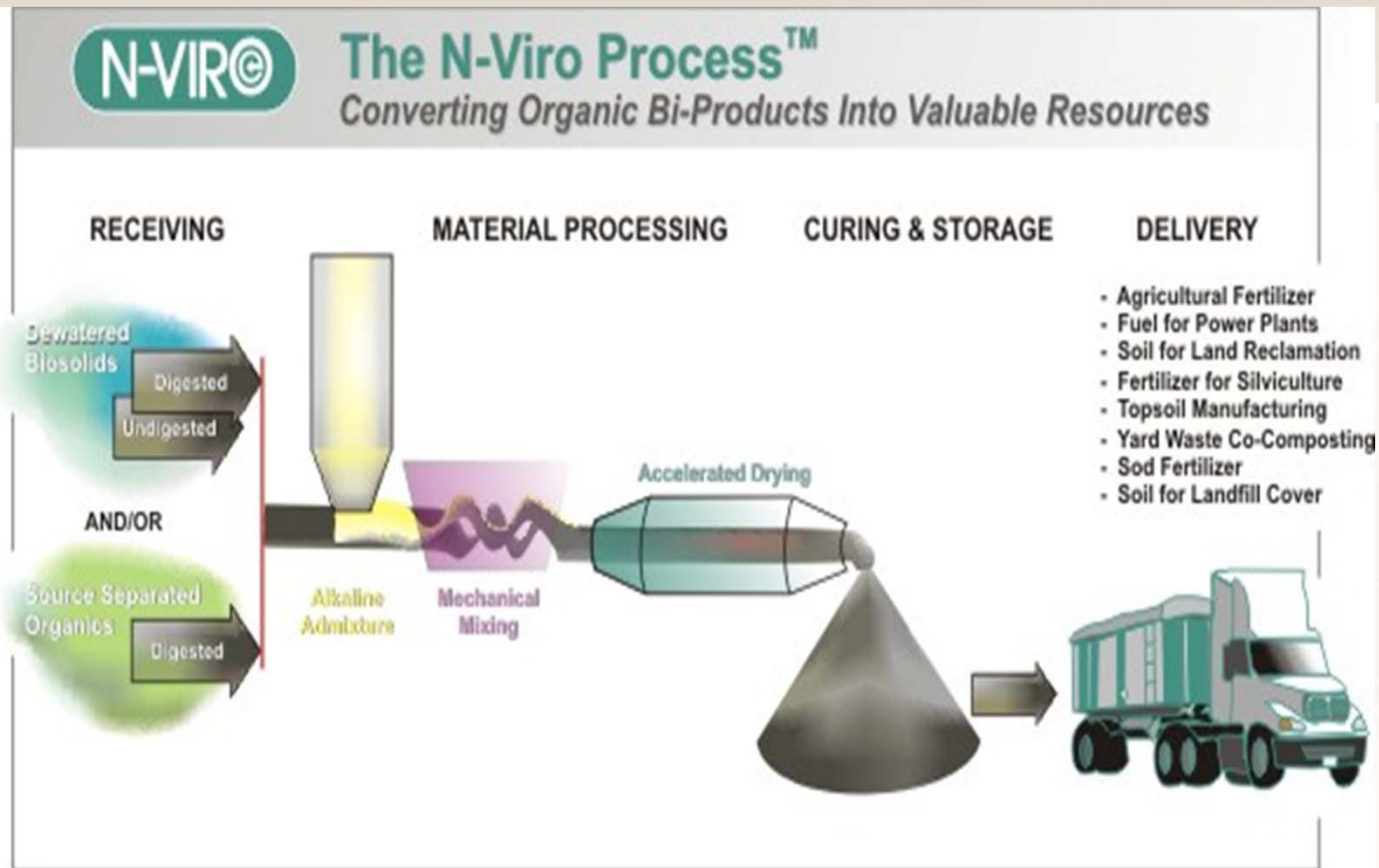
NVSA data represents the maximum value obtained in 2009 testing (over 6 composite samples). Testing conducted by A&L Laboratories.



Province of Nova Scotia Biosolids Review Process



Process



What is the Controversy?

- Smell
- Nova Scotia Environmental Network:
Biosolids Caucus
Against using on Food Crops
Pushing for Energy Solution



Why the Smell?



Energy Potential: Halifax Soil Amendment



Product Safety

- Pathogens
- Heavy Metals
- Pharmaceuticals



<http://www.n-viro.ca/nviro/results-nova-scotia>

<http://www.n-viro.ca/nviro/results-nova-scotia>



Environmentally Responsible Usage

- Not introducing new Heavy Metals to Environment
- Recycling 2 waste products
- Best Climate Change / GHG usage of Biosolids



Economically Beneficial

- Agricultural alternative to Fertilizer
- Urban Forest Values
- Minor Revenue



Staff usage of Material



Why do biosolids benefit our Urban Forestry Project?

Trees need help in Urban setting

Years of environmental pollution creating poor soil conditions



Analysis: Sustainability Filter



Sustainability Principle (SP) #1

and eventually eliminate our contribution to the ongoing build-up in nature of resources extracted from the Earth's crust (e.g. fossil fuels, heavy metals)



Sustainability Principle (SP) #2

and eventually eliminate our contribution to the ongoing build-up in nature of man-made substances (e.g. persistent compound/chemicals)



Sustainability Principle (SP) #3

and eventually eliminate our contribution to physically damaging natural systems that serve us (e.g. water pollution)



Sustainability Principle (SP) #4

contribution to the creation of societies in which many people cannot meet their basic needs

Is it a stepping stone (flexible platform) toward success and sustainability?

Does it provide a good return on investment?



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Recommendation

It is recommended that Halifax Regional Council support the ongoing municipal usage of Halifax N Viro Soil® Amendment (NVSA) in landscaping programs that reflect Best Management Practices, to manage odor issues and produce maximum growth results.

