


Converting Waste to Energy


presented at:
Association of Vancouver Island & Coastal
Communities
AGM and Convention

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Courtenay, BC



Waste to Energy


- **Thermal Systems:**
 - Thermal Treatment or Conditioning
 - Conversion Technologies
 - Mass Burn Combustion
 - Gasification, Pyrolysis,
 - Or just plain – Incineration
- **Biological Systems**
 - Anaerobic digestion
 - Landfill gas recovery



What we will talk about today

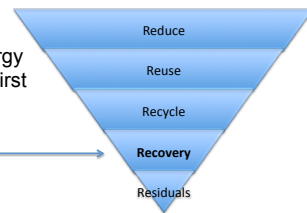
- The role of waste to energy (WTE)
- How WTE works
- What does it cost?
- Environmental and health impacts
- Common myths
- Questions and discussion

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Where does WTE fit in?

- 4th R - Recovery of energy and materials after the first 3Rs, prior to disposal

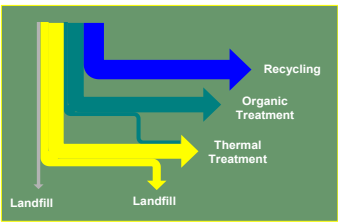


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The role of WTE in an Integrated System

- With recycling and organics treatment:




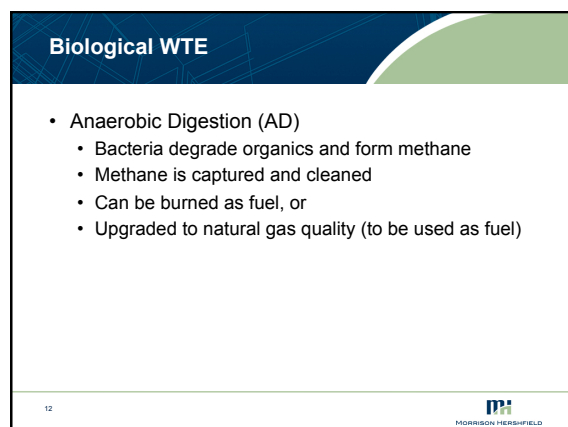
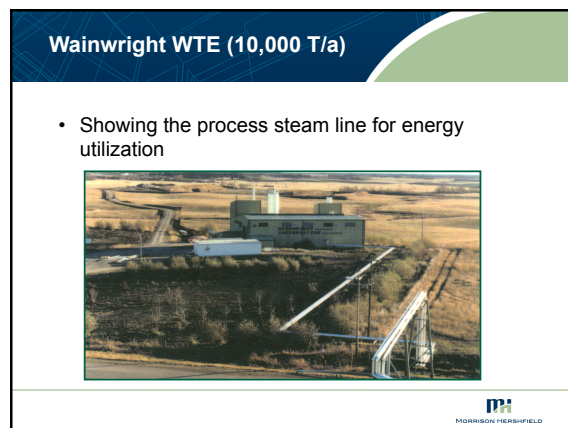
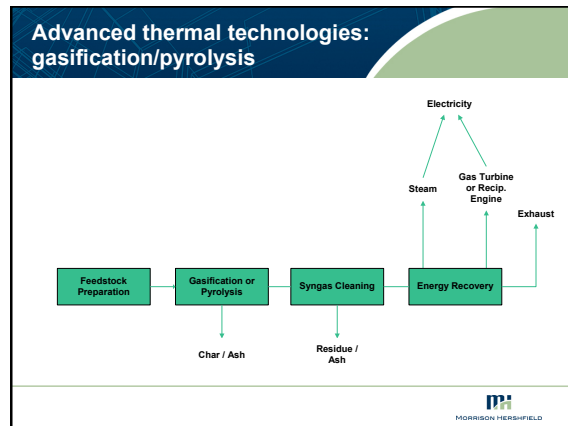
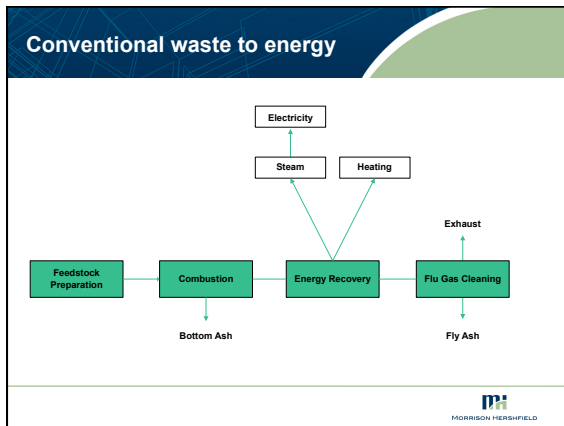
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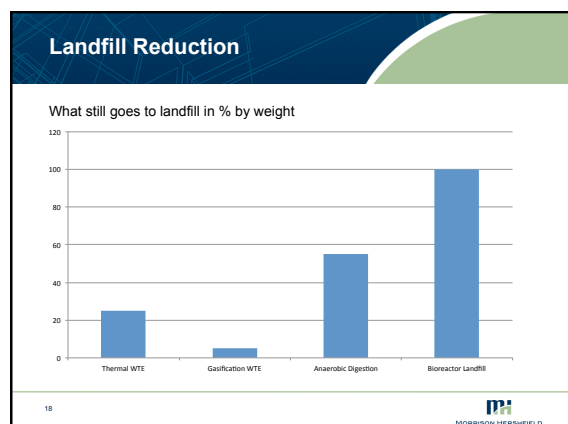
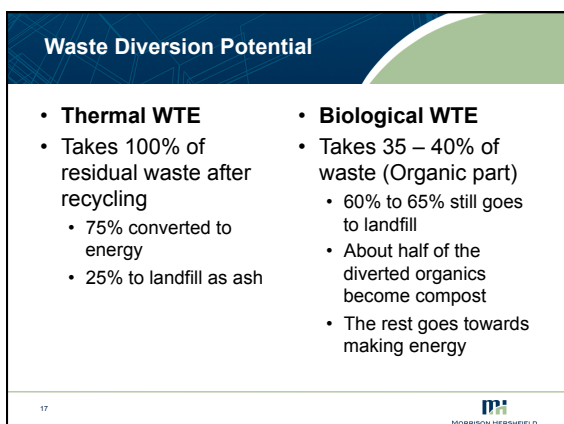
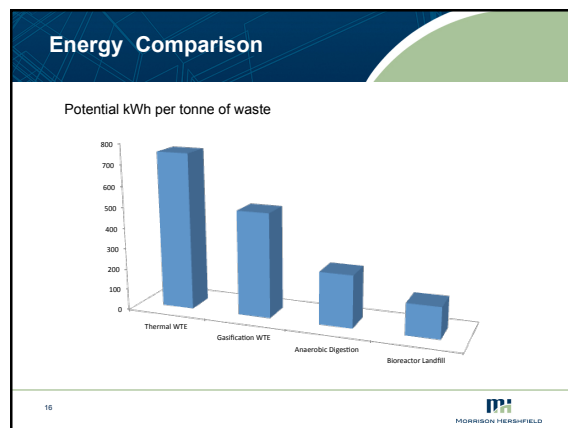
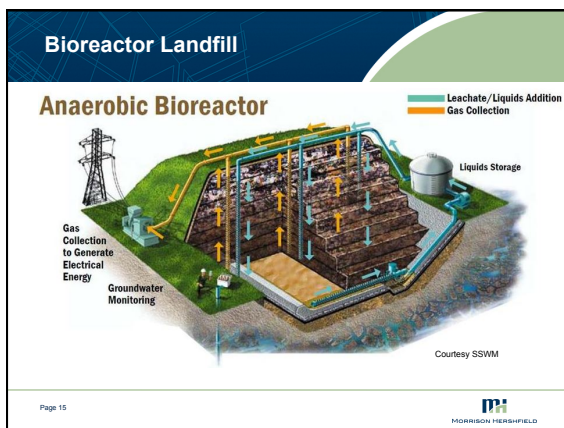
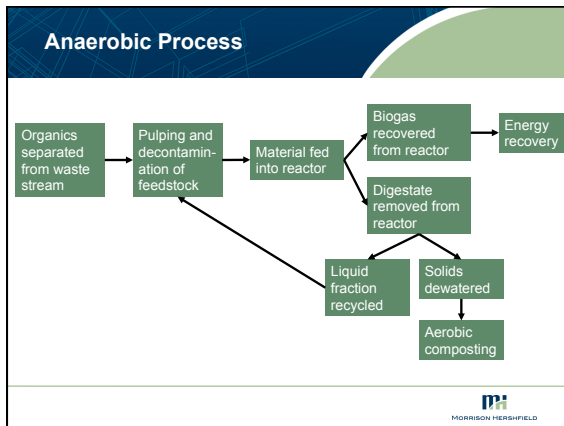


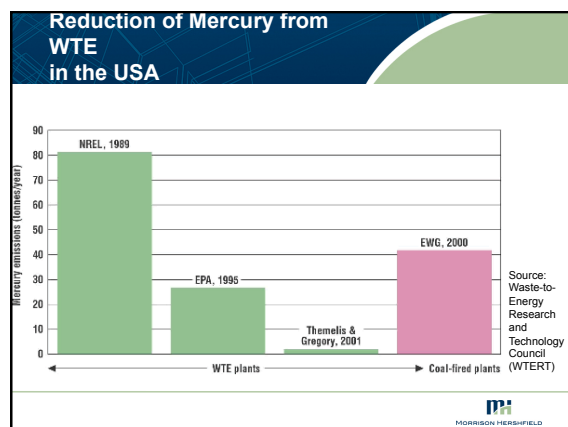
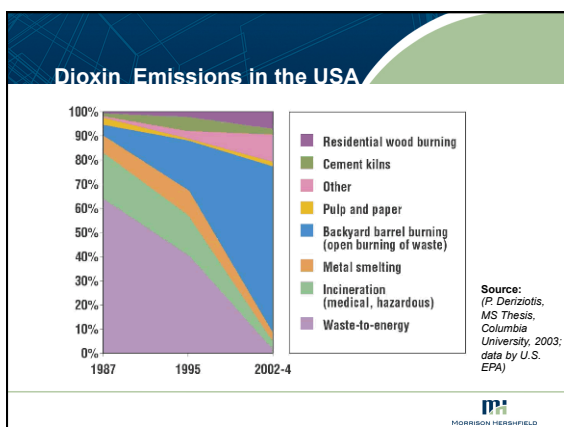
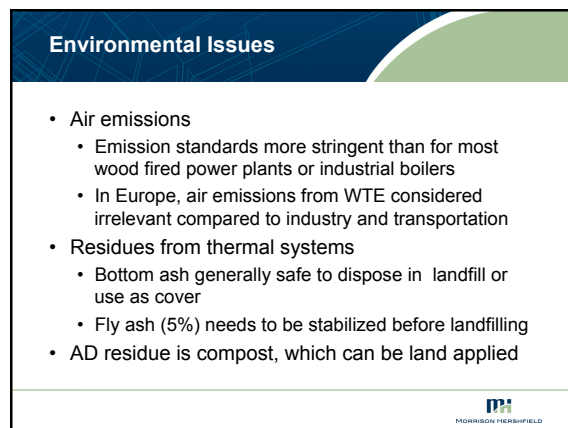
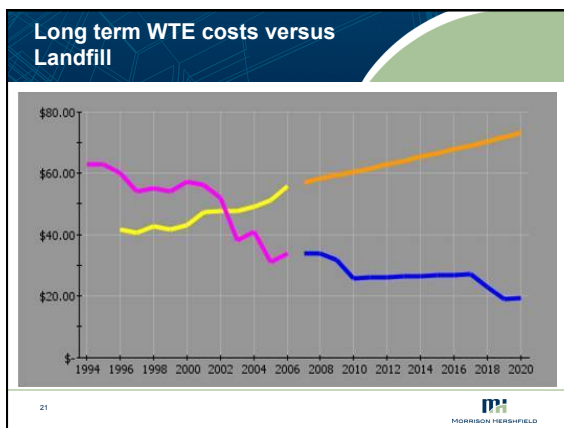
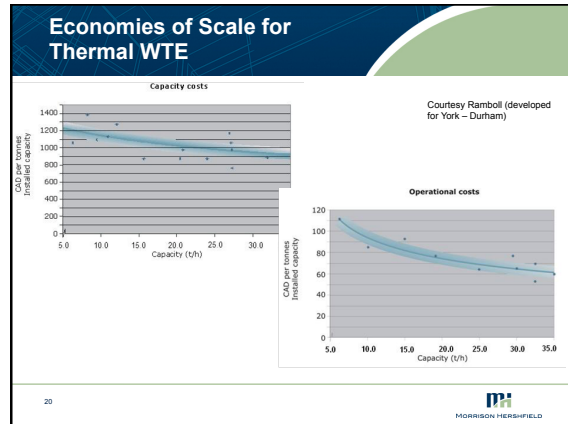
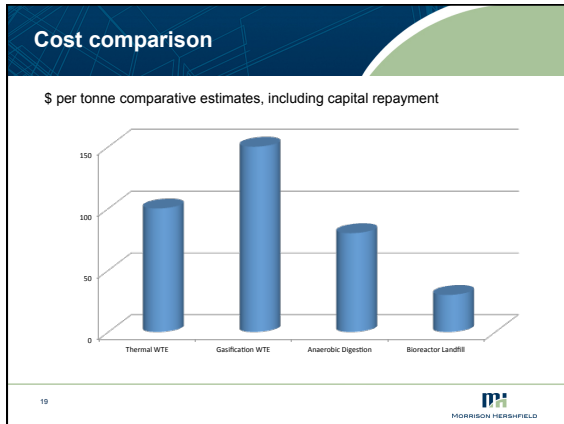
How Thermal WTE works

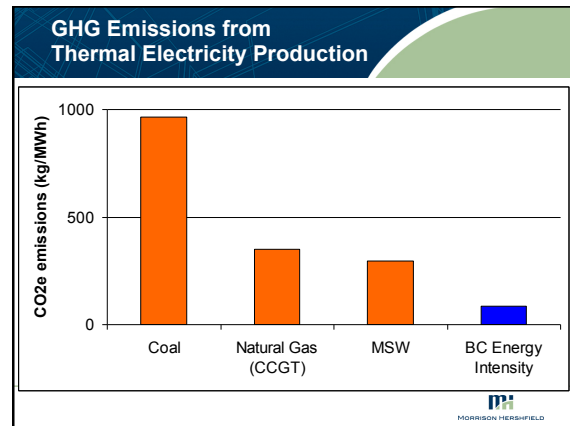
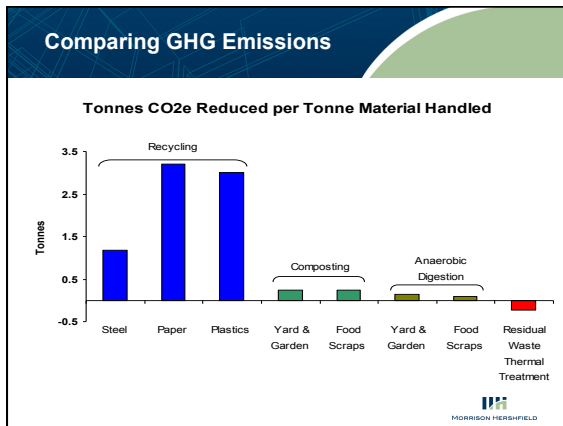
- Technologies offer different ways of releasing the energy in the waste
- Conventional WTE systems are essentially power plants using waste as fuel instead of natural gas or wood
- Advanced WTE systems use heat to convert the energy in the waste into a gas that can be burned for power, or converted to fuel (for burning)











Myths – true or false

- Thermal WTE has no future
 - False: there are 800 plants worldwide and over 400 in Europe, with many new ones on the way
- Thermal WTE will reduce recycling
 - False; those countries with the highest WTE also have the highest recycling
- WTE will eliminate the need for landfills
 - False: landfills will be needed for ash, for downtime and to handle growth

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Myths (continued 2)

- Revenues from WTE can pay for everything and put money back into the community
 - False: Capital and operating costs are too high to be fully offset by energy revenues
- Emerging technologies carry a high risk
 - True: Many promises are made, but most cannot deliver. See Plasco example
- Thermal systems can cause health issues
 - False: Modern systems have not been linked to health issues

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Myths (continued 3)

- WTE is too expensive for smaller communities:
 - True: In most cases, maximized recycling and landfill will be less costly (if landfill capacity is available)
- AD is growing worldwide and pays for itself:
 - False: AD plant construction in Europe has slowed to a crawl because subsidies have been reduced.
- Current energy prices are hurting WTE projects
 - True: Even large scale plants need good energy revenues to keep tipping fees reasonable

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Myths (continued 4)

- WTE facilities will never be sited anywhere close to anyone
 - False: see location of WTE plant in downtown Paris

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