

# INNOVATION IN SOLID WASTE

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Sustane Technologies at Kaizer  
Meadows Landfill



THE MUNICIPALITY OF  
**CHESTER**

# KAIZER MEADOW- ENVIRONMENTAL MANAGEMENT CENTRE

- Situated on 800 + acres of land.
- Comprehensive solid waste management program
  - Landfill
  - Transfer Station for Recyclables and Organics
  - Construction and Demolition Site
  - Septage Waste
  - Household Hazardous Waste
- Kaizer Meadow Eco Industrial Park (one tenant- Rainbow Netting)
- 2.5 MW Wind Turbine, operational – COMFIT
- Biomass COMFIT approval – anaerobic digestion for SSO
- Campsite adjacent to Turbine Site



# KAIZER MEADOW - LANDFILL

- Second Generation Landfill; One of seven in the Province.
- Three cells have been constructed since 2005; Each full cell costs approximately \$5.5 M to construct
- Each year \$500,000 is set aside for closure
- Business Model – Based on Volume.
- Annual Tonnage 37,000 Tonnes
  - 5,600 Tonnes from (MODC)
  - 31,400 Tonnes from Valley Waste and Lunenburg C.
  - 8,000 Tonnes from HRM Commercial
- Host Fee- approximately \$147,000 /yr

# OUR CHALLENGE

- Landfill Industry- Evolving; New Technologies changing landscape.
- Kaizer Meadows- Business Model based upon volume; Down approx. 10,000 tonnes in land fill material from original business model projections.
- Competition is forcing us to reexamine how we do things.
- Environmental Risk that extend beyond the life of a landfill
- Need to be adaptable and open to new technologies.

# OPPORTUNITY- Advanced Recycling

- Sustane Technologies –
  - Turns landfill waste into a value added commodity – biomass pellet
  - Diversion of 90% of traditional landfill waste from a landfill; 10% of landfill volume gets landfilled
  - Will extract pyrolysis fuel from plastics to generate energy.
  - Kaizer Meadows will be a show case for Sustane
- Host fee opportunity with increased volumes

# A BIGGER PICTURE FOR MODC - SUSTANE

- ✓ Lower long term costs to handle landfill waste:
  - MODC pays fee to Sustane to process solid waste, which is lower than present average tipping fee;
  - Only 5-10% landfilled equals a longer life for landfill cells and increased diversion
  - Will reduce landfill volume;
  - Will extend the life of existing cells;
  - Will reduce future need for new landfill cells (capital costs); and
  - Reduces long term environmental risk associated with landfills
  
- ✓ MODC has host fee for all volumes coming into Kaizer Meadow
  - Increase in volume means increased host fees
  
- ✓ Sustane pays fee to landfill residual waste left over from process



# MODC and Sustane- Partnership

- Partnership – Private Sector and Municipal
  - Sustane took time to understand our needs : financial and operational
- Think outside the Box; Try new things
- Engaged Public early and kept them informed;
- Pilot's are risky: Structure Agreements to lessen risk.
  - MODC is not putting up any capital
  - Performance Clauses in Supply and Hosting Agreement
  - MODC constructed a half a cell to mitigate risk in transition
- Next Steps – continue to develop synergies between MODC and Sustane

