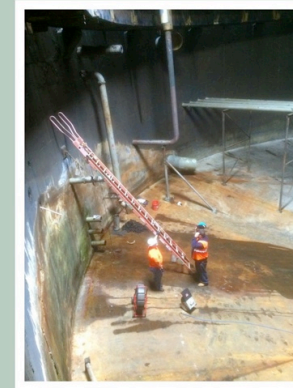
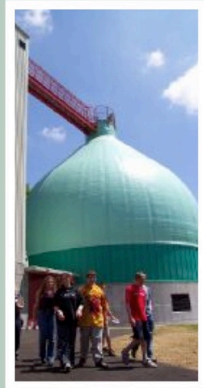


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# NEBRA Presentation

Lou Torres

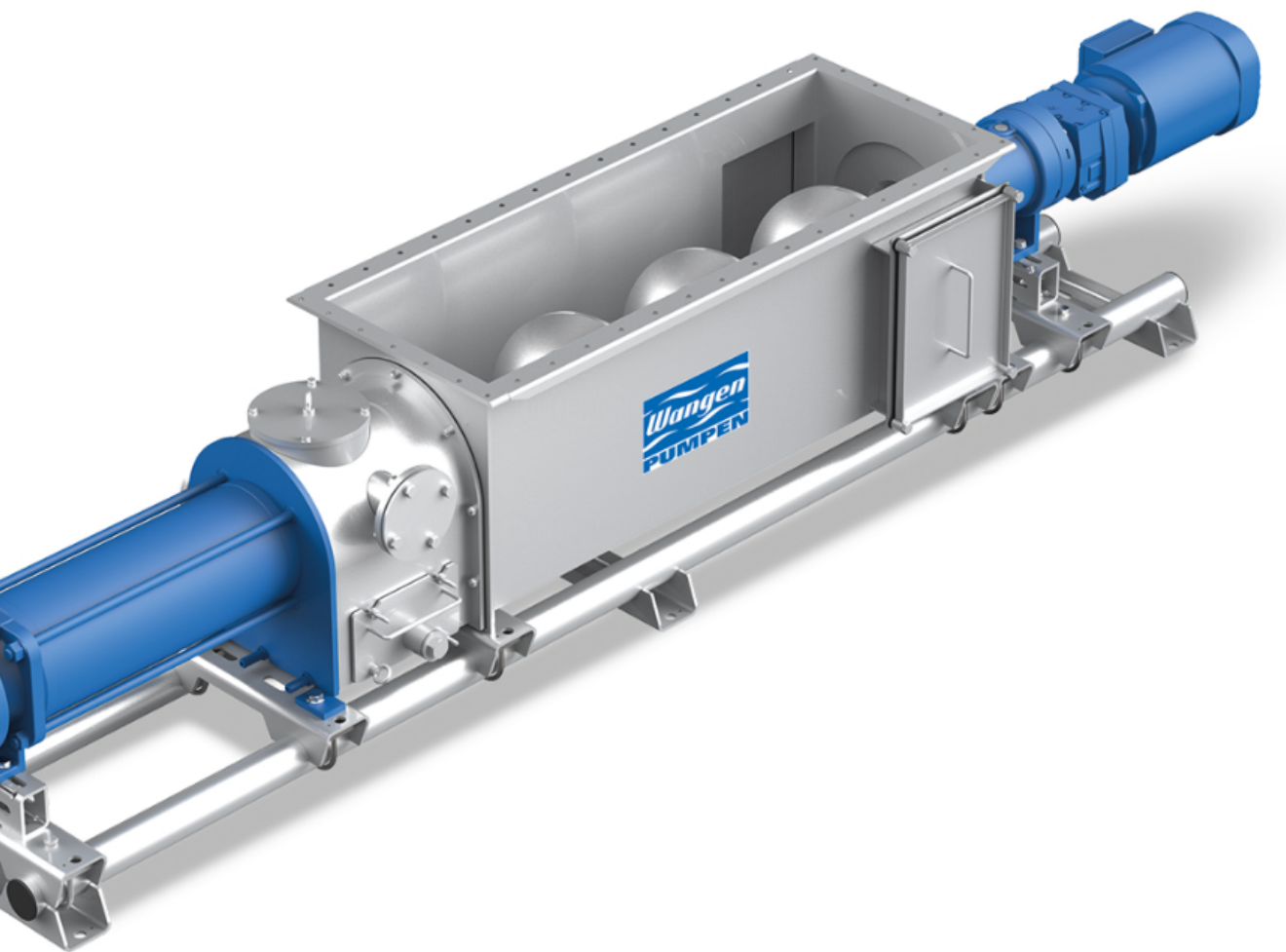
National Sales Manager

Wangen America



Cell: 678-372-8350

L.Torres@wangen.com



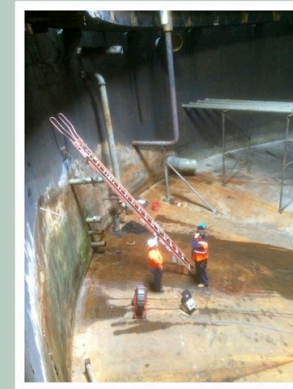
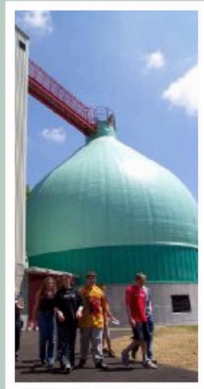
- Have been integrated for many years in the energy production process
- Undergone continuous further development and optimization
- Suitable for conveying maize grass silage, GPS, solid manure, poultry dung, waste and co-ferments, which are mixed with liquid in the pump.

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# CLEAN ENERGY RESULTS

## Clean Energy Results Program MassDEP

**NE Digestion Roundtable  
October 6, 2017**

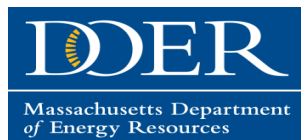
Presented By: James Doucett

Innovative Partnership:

Massachusetts Department of Environmental Protection

Massachusetts Department of Energy Resources

Massachusetts Clean Energy Center



# Anaerobic Digestion



## Farm AD Capacity Operating

- Jordan Farm, Rutland
- Pine Island Farm, Sheffield
- Barstow Farm, Hadley
- Barway Farm, Deerfield\*\*

\*\* Not interconnected yet to the grid



# Anaerobic Digestion

Commercial and Food Manufacturing AD Capacity Operating:

- Commonwealth Resource Management pilot, Crapo Hill LF
- Stop & Shop Product Recovery Operation, Freetown Distribution Warehouse
- Ken's Foods
- Garelick Farms, Lynn and Franklin

# Anaerobic Digestion

## Wastewater Treatment Facilities:

- Massachusetts Water Resources Authority (MWRA) Deer Island WWTP
- Greater Lawrence Sanitary District (GLSD)
- MWRA Clinton WWTP
- Pittsfield WWTP
- Fairhaven WWTP
- Rockland WWTP



# Anaerobic Digestion

New capacity permitted, under construction:

- Jordan Farm – 2<sup>nd</sup> engine
- Jordan Heifer Farm, Spencer
- Crescent Farm, Haverhill
- Pine Island Farm – 2<sup>nd</sup> engine
- Rockwood Farm, Granville
- Belden Farm, Hatfield
- Greater Lawrence Sanitary District (GLSD)

# Anaerobic Digestion

## Projects in the Pipeline

- Several projects have held pre-permit meetings with MassDEP
- How many, if any, will move forward?
  - CRMC Crapo Hill LF Expansion
  - Quantum Biopower, Holyoke
  - Yarmouth
  - Others?

# Organics Management Capacity

## Depackaging capacity - Operating:

- WMI Boston CORe
- EL Harvey
- Parallel Products (liquids only)
- RecycleWorks Inc.
- Save That Stuff, Inc.
- Troiano Trucking

# Organics Management Capacity

Depackaging capacity – Not yet operating:

- Casella
- Feed Resource Recovery
- Harvest Power
- Pine Island Farm
- Vanguard Renewables

2017 Recycling Business Development Grants include some organics processing projects – under review



# Clean Energy Results Program Contact

DEP:

Doucett, [James.Doucett@state.ma.us](mailto:James.Doucett@state.ma.us), 617.292.5868

Energy Results Program Website:

[www.mass.gov/eea/agencies/massdep/climate-energy/energy/](http://www.mass.gov/eea/agencies/massdep/climate-energy/energy/)

Advancing renewable energy & energy efficiency in the Commonwealth  
**CLEANENERGYRESULTS**  
[www.mass.gov/dep/cerp](http://www.mass.gov/dep/cerp)



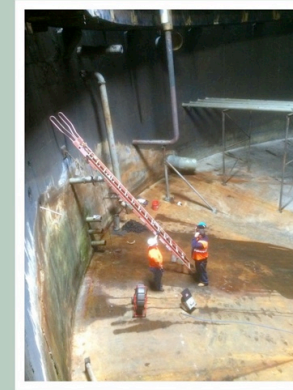
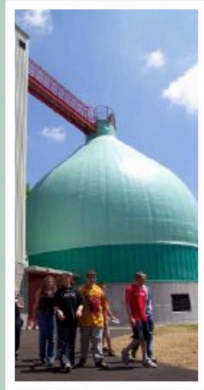
40 Years Clean  
40 Years Green  
Celebrating Four Decades  
of Environmental Protection

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# BlueSphere Digester, Johnston, RI

September 26, 2017 tour • photos courtesy Lissa Ham





Hopper





# Centrifuge



# Hopper conveyor





Overs  
conveyor



# Tornado conveyor





# Slurry tank



# Digesters



# Digesters





# Gas storage






# Generators

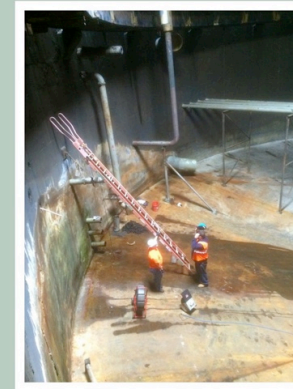
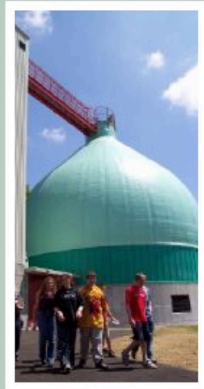


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**Thank you for joining in.**

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[L.Torres@wangen.com](mailto:L.Torres@wangen.com)



An additional update:  
...the new digester at Agri-Energy, Exeter, Maine (photo courtesy John Forcier)

