

# Waste Forum

Town of Greenfield

# What is sludge?

- Waste water is primarily water and solids
- Waste water is 95% +/- water
- 5% is solids (Sludge)
- Waste water treatment is the separation of water and solids.
- The liquid goes through a process to remove BOD
- The solids remain behind to get disposed of

# Options for Disposal

- Composting
- Anaerobic Digestion
- Incineration
- Landfill

# Sludge Disposal History

- Historical-1974 Decommissioned Anaerobic Digester
- Landfill disposal ended 1996
- Cost of Disposal 2015- \$180,000
- Cost of Disposal 2016-- \$220,000 (18%)
- Cost of Disposal 2017 -- \$320,000 (31%)
- Projected Costs 2018 -- \$400,000 (20%)

# What is Happening

- W. Warwick RI 2010 Floods wipe out Compost Operation, closed permanently
- Dover NH closed composting site
- 2012 Fitchburg closed it incinerators
- 2013 Moretown Vt. closed it landfill
- Plymouth Maine reduced it volume due to odors and NON
- April 2016 Montague closed it's process

# What is Happening

- Barre MA Landfill closed
- Glenn Falls NY Closing
- Many More are closed or closing
- There are limited facilities that can handle sludge disposal and they have been closing or reducing the volume that they treat. Currently we hauling our waste to Cranston R.I; Lowell MA; and Blackstone MA. Too far and costly

# Regional Economics

- We are spending \$400,000/year in Greenfield
- Estimated cost for a Digester \$6,000,000 or \$286,680/yr 30yrs @2.5%
- USDA grant 35 % grant 2.5% loan \$3,900,000 or \$182,282/yr
- Shared costs 60% reduces it to \$109,369/yr
- \$109,369 less than \$400,000/year

# Regional Anaerobic Digester

- Regional Facility - lower operating costs better chance for state and federal grants
- Digestion will reduce solids 80 to 85%
- Digestate is an inert by-product that can be composted in Montague.
- Inter-municipal agreement based on solids
- Very limited trucking
- Minor operating costs and some energy conversion



# Participating Communities

- Montague, Hadley, Sunderland, Deerfield and Greenfield
- Possible other communities- Hatfield, Northfield, Shelburne Falls and Erving
- Multiple other communities dispose septage in both Greenfield and Montague

# Impacts to Greenfield

- Lowers and stabilizes cost for sludge disposal
- Will require some land
- May need to add one employee not sure yet
- Will get some energy to help run the WWTP
- Will eliminate hauling
- Control our own destiny

# Projected Schedule

- Use the white paper to promote the project
- Get all of the local and state politicians to support this project
- Hopefully get an approved CEC grant
- Apply for several grants, target USDA
- Apply for SRF funding
- Design this fall
- Construct next year

# Questions Related to Sludge

# Solid Waste and Recycling

- Myths
- Cost
- Vehicles
- Facilities
- Future outlook

# Myths

- If we close the landfill eight men will lose their jobs. False everyone would be reassigned and the positions would be eliminated through retirement or voluntary attrition
- We are a good recycling city. False at 40% +/-, we are actually mediocre to poor. At one time this community recycled 55%. What happened?
- Dual Stream recycling is better. Single stream will produce a residual waste of 15% +/- . This is mostly unrecyclable material. The actual loss is 2-4% but the saving on collection and bump in recyclables may justify the minor loss.

# Actual Costs and Revenue

- Total budget \$612,045
- Total Revenue \$734,509
- Taxes -\$122,464
  
- We do not service Schools, Businesses, housing authorities, and multi- unit apartments or condominiums

# Equipment

- #199 2013 International 7500 Workstar Rubbish Truck New cost \$300,000 hr 6200 or mile equivalent 217,000 Miles
- #198 2004 Sterling Condor Rubbish Truck hrs 16700 or equivalent 584,500 miles Cost \$300k
- #197 2005 Sterling Condor Rubbish Truck 14700 hrs equivalent 514,500 miles Cost \$300k



# Equipment

- #195 2005 Sterling Condor Recycling Truck 15500 hrs, equivalent 542,500 miles- Cost \$300k
- #83 2016 Freightliner M2 Recycle Truck 2000 hrs, equivalent 70,000 miles- Cost \$300k
- #80 2008 International 7400 Workstar 11400 hrs, equivalent 399000 miles Cost \$300k
- #121 2000 Kenworth W900 Tractor 635,000 Miles \$250,000

# Equipment

- #121 1999 Kenworth W900 Tractor 1,244,000 Miles- Cost \$250,000
- #101 2007 Volvo L90 10800 hrs or 378,000 miles Cost \$170,000
- #181 2008 New Holland L175 Skid Steer 1800 hours or 63,000 Miles

# Equipment

- #258-2014 MAC 45' long by 102" wide  
Aluminum walking floor semi trailer (Recycle)
- #257-2011 MAC 45' long by 102" wide  
Aluminum walking floor semi trailer (Paper)
- #256-2000 MAC 30' long dump trailer scrap  
metal (Recycle)
- #255-2010 MAC 45' long by 102" wide  
Aluminum walking floor semi trailer (MSW)

# Odd Equipment

- #58-1992 Lodal Rubbish Truck **Dead Lined.**  
29,000 hrs 101,5000 mile equivalents
- #82-1997 International Recycle Truck **Dead Lined.** 22,000 hrs 770,000 mile equivalents
- #650 1993 International baler (24 years old)

# Equipment Cost

- Total Cost = \$2,765,000
- Replace on a 10 year cycle = \$276,500/ year
- Replace on a 15 year cycle = \$184,333/ year
- Replace on a 20 year cycle = \$138,250/ year

# Facilities

- Building – Out of date, will not meet OSHA, no scale, very energy inefficient.
- Expected Cost \$1,500,000
- Borrowing cost  $1,500,000 \times .06415 =$   
\$96,225/ year

# Total Costs

- Operating Cost= \$612,045
- Equipment Cost/Yr = \$184,333
- Facility's Cost/Yr = \$96,225
- Total Cost /year = \$892,603
- At \$892,603/yr and with 4000 pick up customers this will equal \$223/yr

# General Comments

- Expect tipping fees to increase and regulatory costs
- How do you justify today to close this facility
- Minor adjustments to your fee structure will generate the \$892,603 needed to operate this facility properly
- Make a commitment and decide what the future will be.



# Initiatives

- Equipment upgrades/vehicle reductions
- Routes reduced to 4 days
- One sided pick-up
- Increase fees to cover capital costs
- Reduce Transfer Station days

# Closing/Questions

- The cost vs. the revenue basically shows that the taxpayers are getting a very good deal. The question that remains is what does the town want to do. If you continue to not invest ultimately the transfer station will fail.
- Questions