



# Critical Importance of Composting in Reaching Long-range Resource Recovery Goals

Using Dallas as an Example

# The Role of Composting in Achieving Diversion Goals





# What is the diversion plan?

- **Baseline** 7%
- **Voluntary Measures** 40%
- **Mandatory Measures** 60%
- **Further Processing** 84%



# What is the diversion plan?

- **Baseline** **7%**

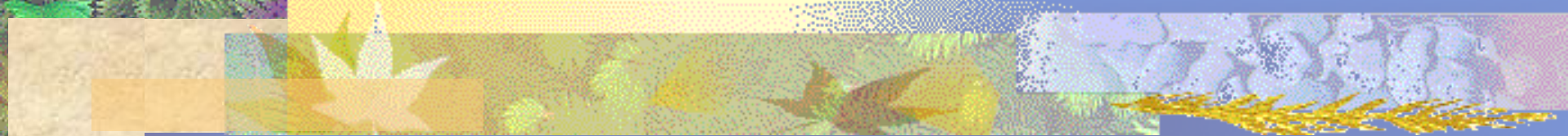
2.2 Million Tons Generated  
2.0 Million Tons Disposed  
0.2 Million Tons Diverted\*

\*Single Family Recycling Only  
(30% of single family residential)



This is just single family  
residential...

...and for every ton of single family  
residential waste generated, there is another  
ton of multi-family residential waste



And for every ton of residential  
waste generated...

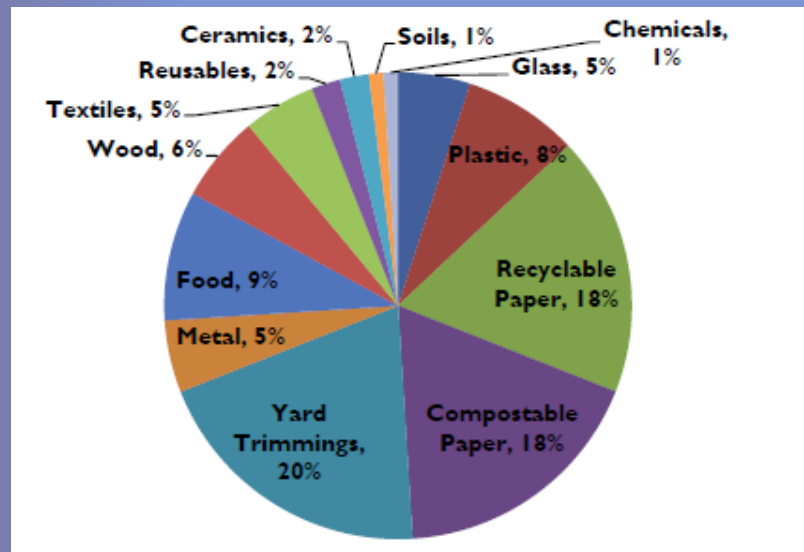
- ...and there is over a ton of commercial  
waste generated.



# What is the diversion plan?

- **Voluntary Measures** **40%**
  - Adding effective collection of single family yard waste will achieve 10% of that goal.
  - This is equivalent to over half of what is currently diverted.

# What is the potential?

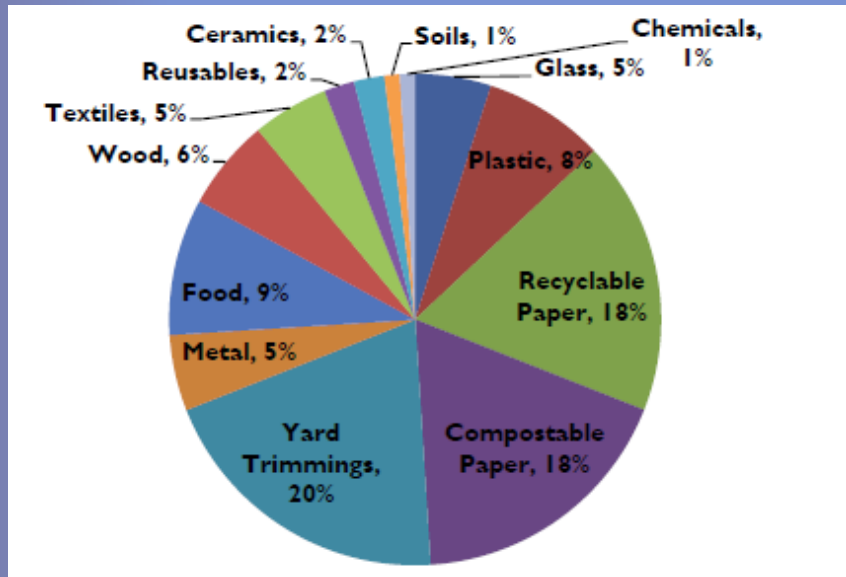


## 2002 NCTCOG Estimate:

- 71% of all discarded material is compostable
- 53% without recyclable paper



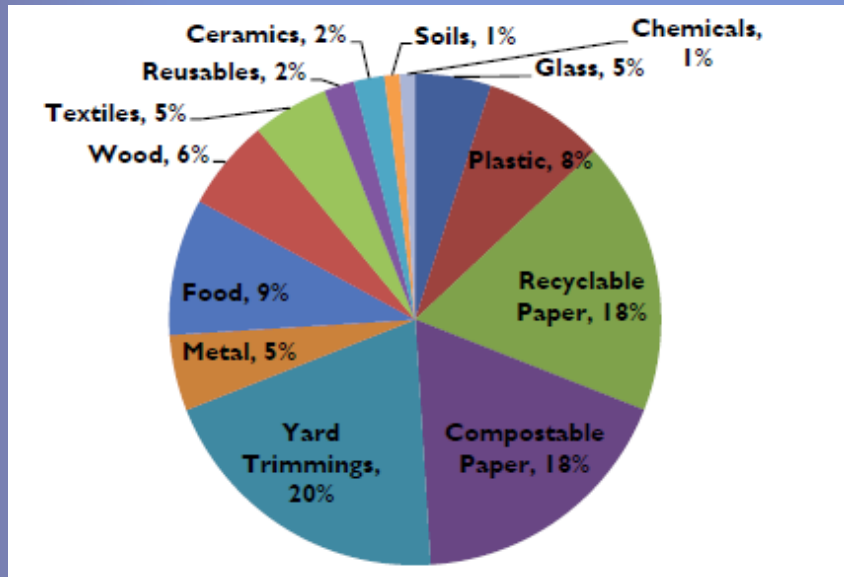
# What can traditional recycling accomplish?



100% of all paper, metal, plastic, and glass currently disposed from all sources:

36%

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How do we get to 40% → 60% → 84% ?



# Organics are 53%\*

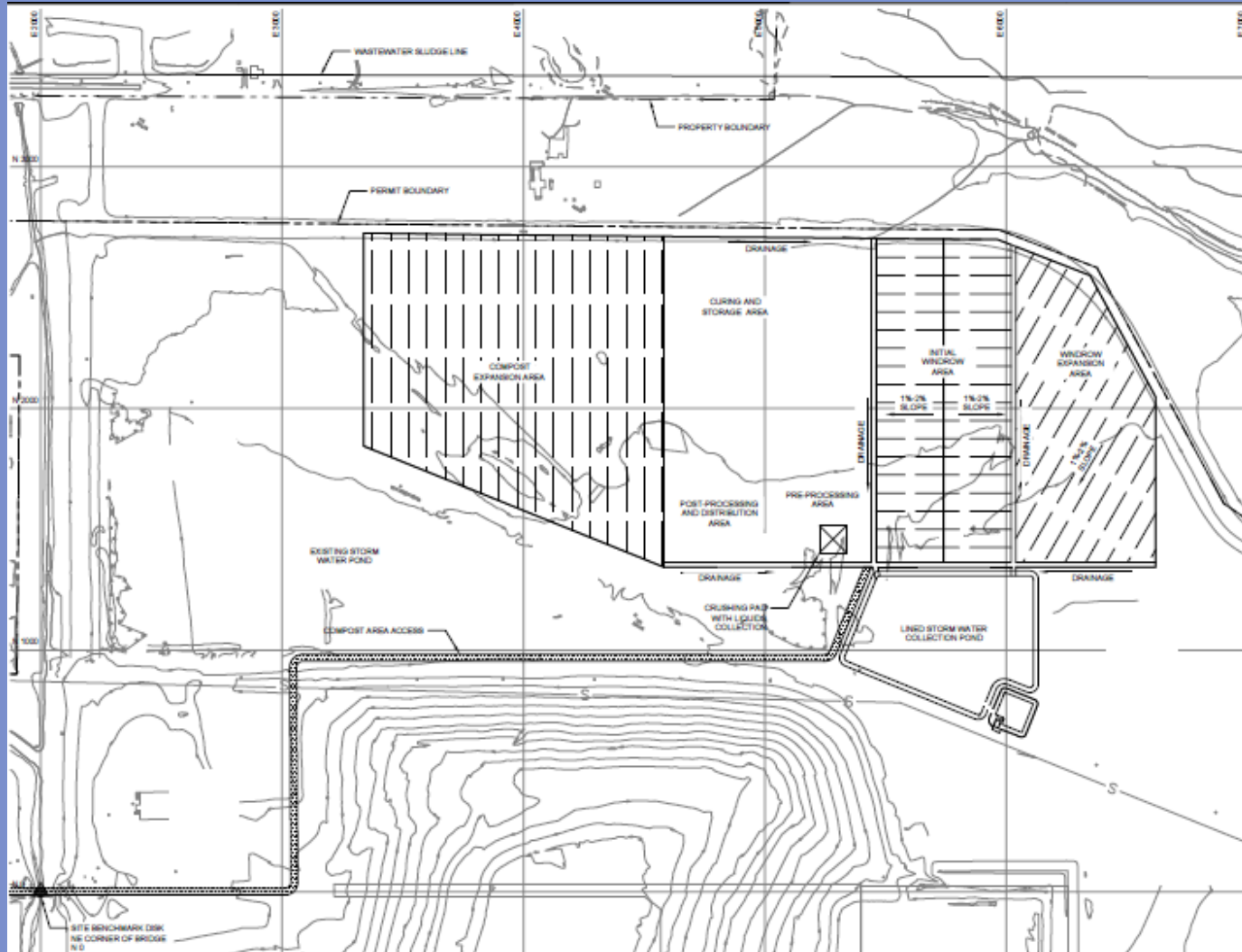
\*Not including recyclable paper

- We must capture more than single family residential yard trimmings and brush!
- *Front-end marketing is the KEY!*



What role does composting play  
in reaching diversion goals?

# Dallas has 58 acres for windrows.





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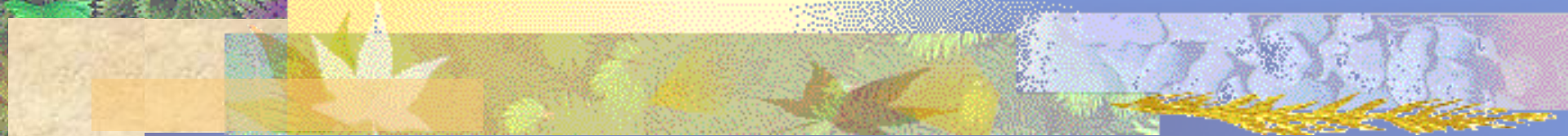
83,000 T single family residential brush and  
yard trimmings

+

33,000 T of other compostable organics

=

**116,000 T or 8.5% diversion**



What if you add sludge or food waste to the brush and yard trimmings?

83,000 T single family residential brush and yard trimmings

+

74,000 T of other compostable organics

=

**157,000 T or 10.4% diversion**

Why not just go for the entire  
71% organics?



*Figure 1 - Anaerobic Digestion Facility, Spain*





Here are the commercially  
proven options for that.

Technology	State of Development	Environmental Considerations	Risk	Applicability to the waste stream	Relative Cost (High, Medium & Low)
Anaerobic digestion	Proven for select Waste Stream	Odor is primary concern. Can be addressed.	Limited based on composition of the waste received; needs to be purely organic materials	At this time can only address sources separated organic materials	High
Aerobic Composting	Proven for select Waste Stream	Odor is primary concern. Can be addressed.	Limited based on feedstock and can be sited appropriately to avoid odors to nearby residents	Needs source separated organic feedstock	Low
RDF processing and combustion	Commercially proven	Emissions primary concern. APC equipment can meet standards.	Limited if combustion is located with processing.	Can take entire waste stream if prepared properly	High
Mass burn combustion	Commercially proven	Emissions are primary concern. APC equipment can meet standards.	Limited	Can take entire waste stream if prepared properly	High
Mixed Waste MRF	Commercially proven	Minor emissions from mobile equipment	Very limited	Can take entire waste stream	Medium



## Let's look at them.

- **Only composting is low cost.**
- **Only MRF is medium cost. It *requires* further organics processing.**
- **AD is high cost and *requires composting*.**
- **RDF is high cost and *requires* a MRF and combustion.**
- **Mass Burn combustion is high cost.**



# What about composting again?

- Net revenue generator!  
(\$1.5 – 4 Million/year estimated in Dallas)
- Several other organics options require it.
- Low cost compared to other options.
- Technology proven over millennia.
- GREEN! (Numerous environmental benefits)



# Conclusions

- We MUST address organics aggressively!
- Composting is the low hanging fruit.
- Marketing is key to pushing past single family residential capability.
- Adding sludge or food waste helps the diversion and the economics significantly!



# Acknowledgements

“City of Dallas Local Solid Waste Management Plan 2011-2060”

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- Risa Weinberger & Associates, Inc.



# **Risa Weinberger & Associates, Inc.**

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