MUNICIPAL WASTE INTEGRATION NETWORK
mwin
The voice and resource for municipal waste minimization and management

Recycling Council of Alberta

MSW Options Workshop: Integrating Organics and Residual Treatment/Disposal

Introduction and Background

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Importance of 3Rs

- Suite of options available to manage waste
- 3Rs hierarchy should be followed
  - Reduce, Reuse, Recycle (incl. composting)
  - Important to maximize 3Rs before looking to residuals options

Recycling maximized ✔ Composting maximized ✔ Residuals ?

3Rs Program tools

- Comprehensive programming
  - Recycling, composting
  - Accessible, convenient
- Economic instruments
  - user-pay systems, financial incentives
- Bag limits
- Disposal bans
- Social marketing approaches

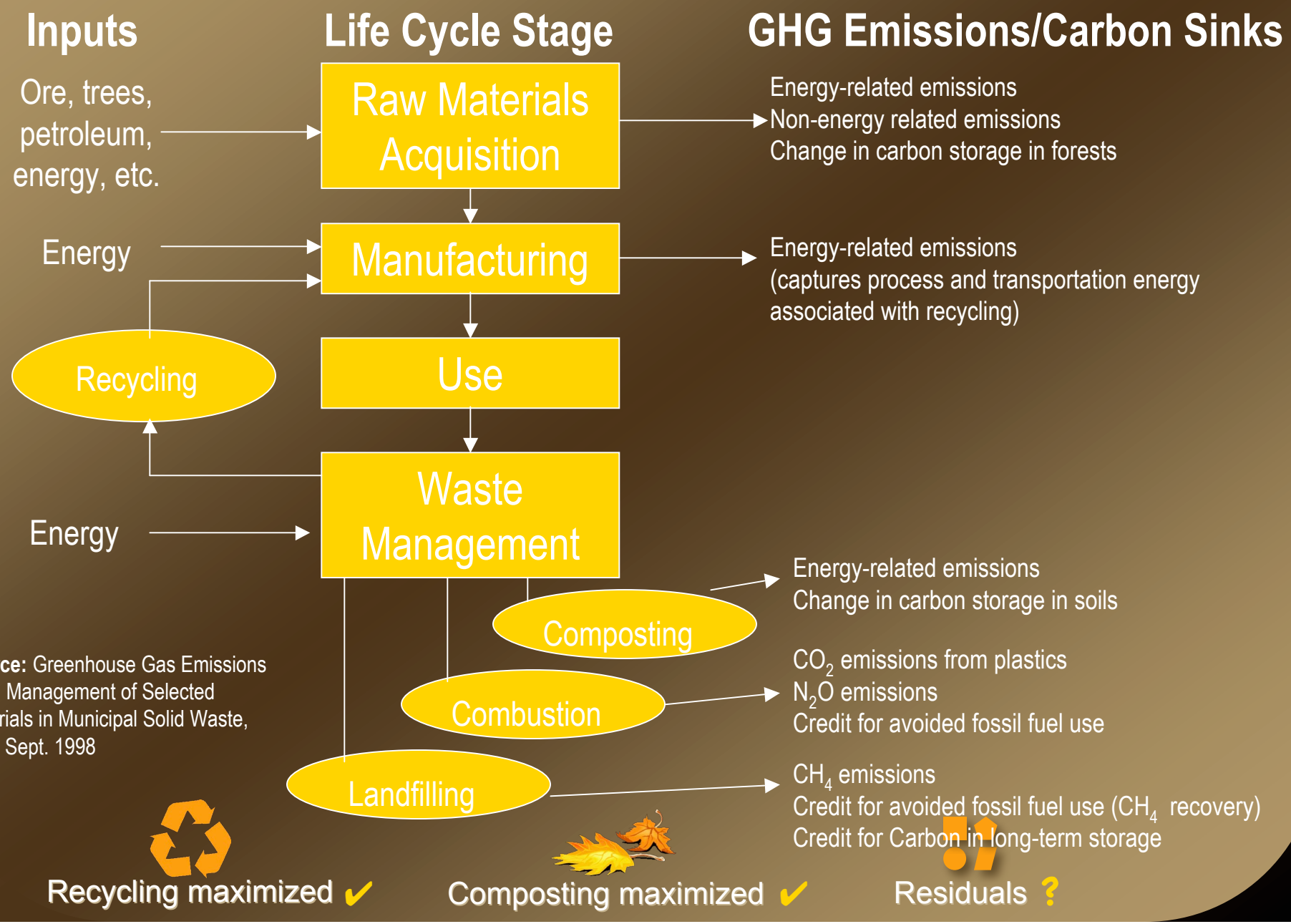
Recycling maximized ✔ Composting maximized ✔ Residuals ?

Benefits of 3Rs

- Environmental
- Social
- Economic
- Bring together in full-cost accounting

Recycling maximized ✔ Composting maximized ✔ Residuals ?

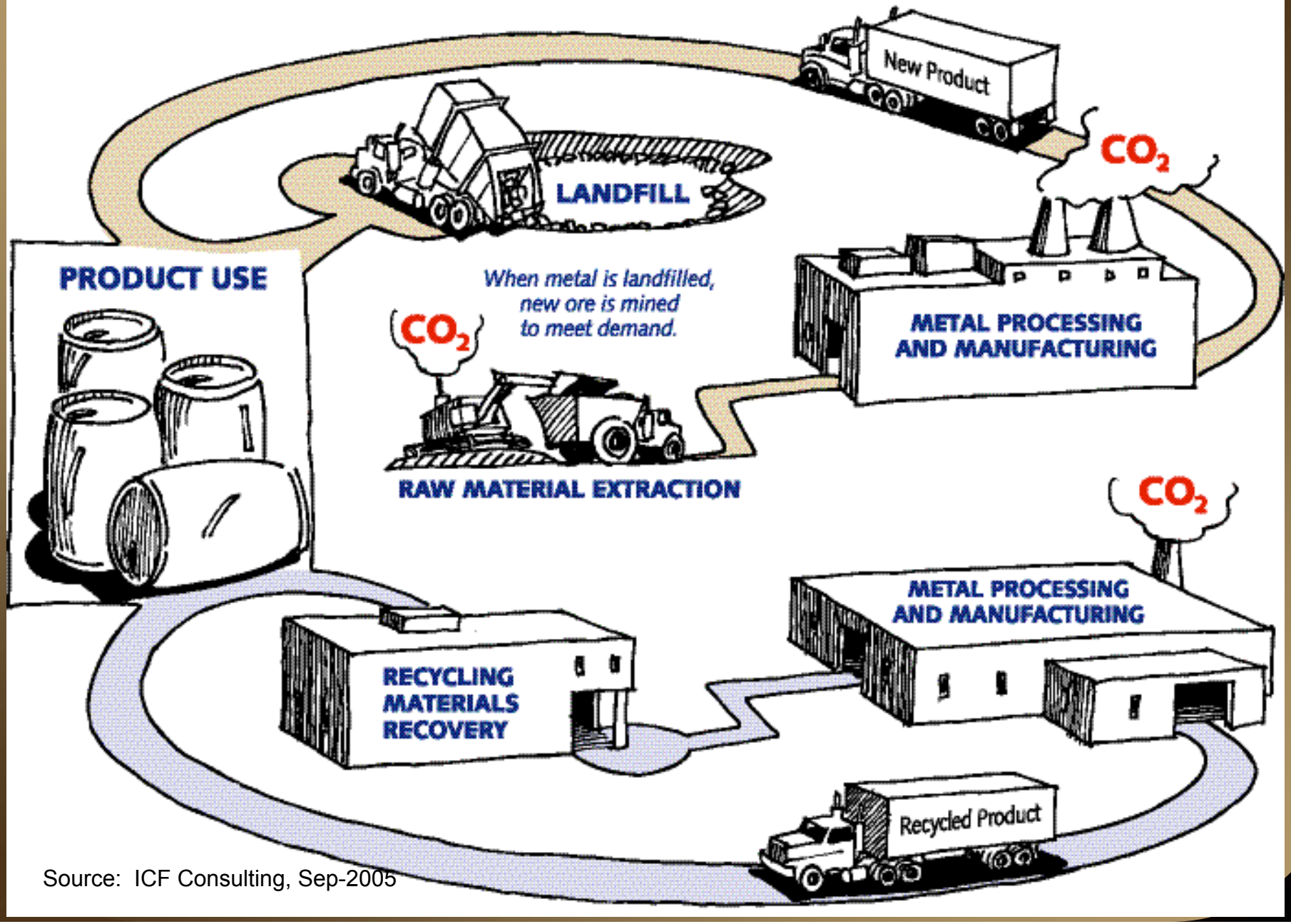
GHG Sources and Sinks Associated with Materials in the MSW Stream



Source: Greenhouse Gas Emissions From Management of Selected Materials in Municipal Solid Waste, EPA, Sept. 1998

GHG Emissions for Metals

Life Cycles for Landfilling vs. Recycling



Source: ICF Consulting, Sep-2005

Net GHG Emissions from Source Reduction and MSW Management Options (tonnes eCO_2/tonne)

Material	Source Reduction	Recycling/ Composting	Anaerobic Digestion	Thermal Treatment	Landfill
Newspaper	(3.81)	(2.81)	(0.49)	(0.05)	(1.22)
Fine Paper	(5.93)	(3.33)	(0.34)	(0.04)	1.18
Cardboard	(5.22)	(3.34)	(0.32)	(0.04)	0.29
Aluminum Cans	(4.55)	(6.49)	0.01	0.01	0.01
Steel	(1.95)	(1.15)	0.01	(0.99)	0.01
Glass	(0.40)	(0.10)	0.01	0.01	0.01
HDPE	(2.74)	(2.27)	0.01	2.85	0.01
PET	(3.50)	(3.63)	0.01	2.13	0.01
Computers	NA	(1.59)	0.01	0.41	0.01
Food Waste	NA	(0.24)	(0.10)	0.02	0.80
Yard Waste	NA	(0.24)	(0.15)	0.01	(0.33)

Source: ICF Consulting, Sep-2005

Recycling maximized ✔ Composting maximized ✔ Residuals ?

Conclusion

- 3Rs hierarchy still valid
- Residuals treatment options can provide disposal alternatives
  - after 3Rs maximized

Recycling maximized ✔ Composting maximized ✔ Residuals ?