

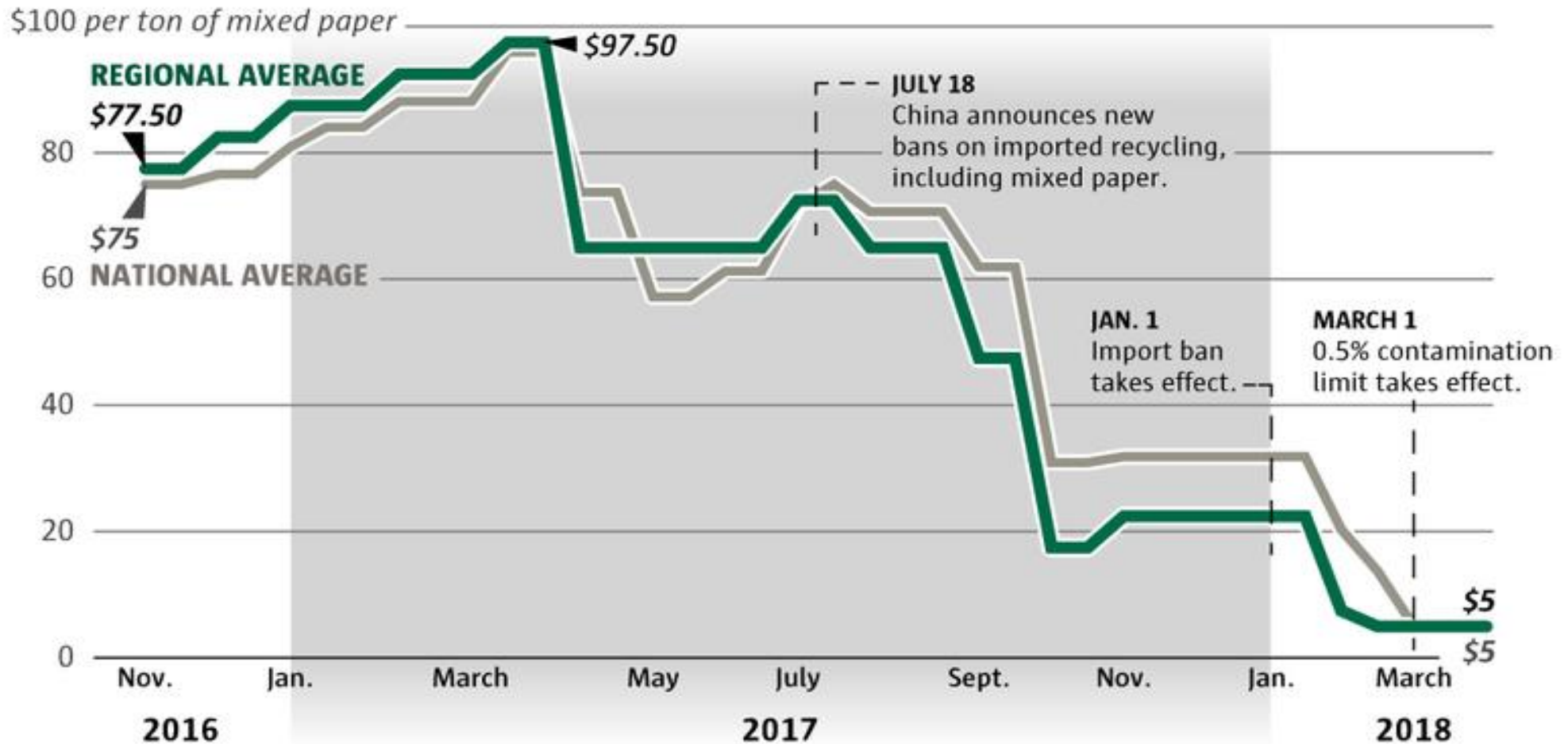


Pathways to Financial Sustainability

SCS ENGINEERS

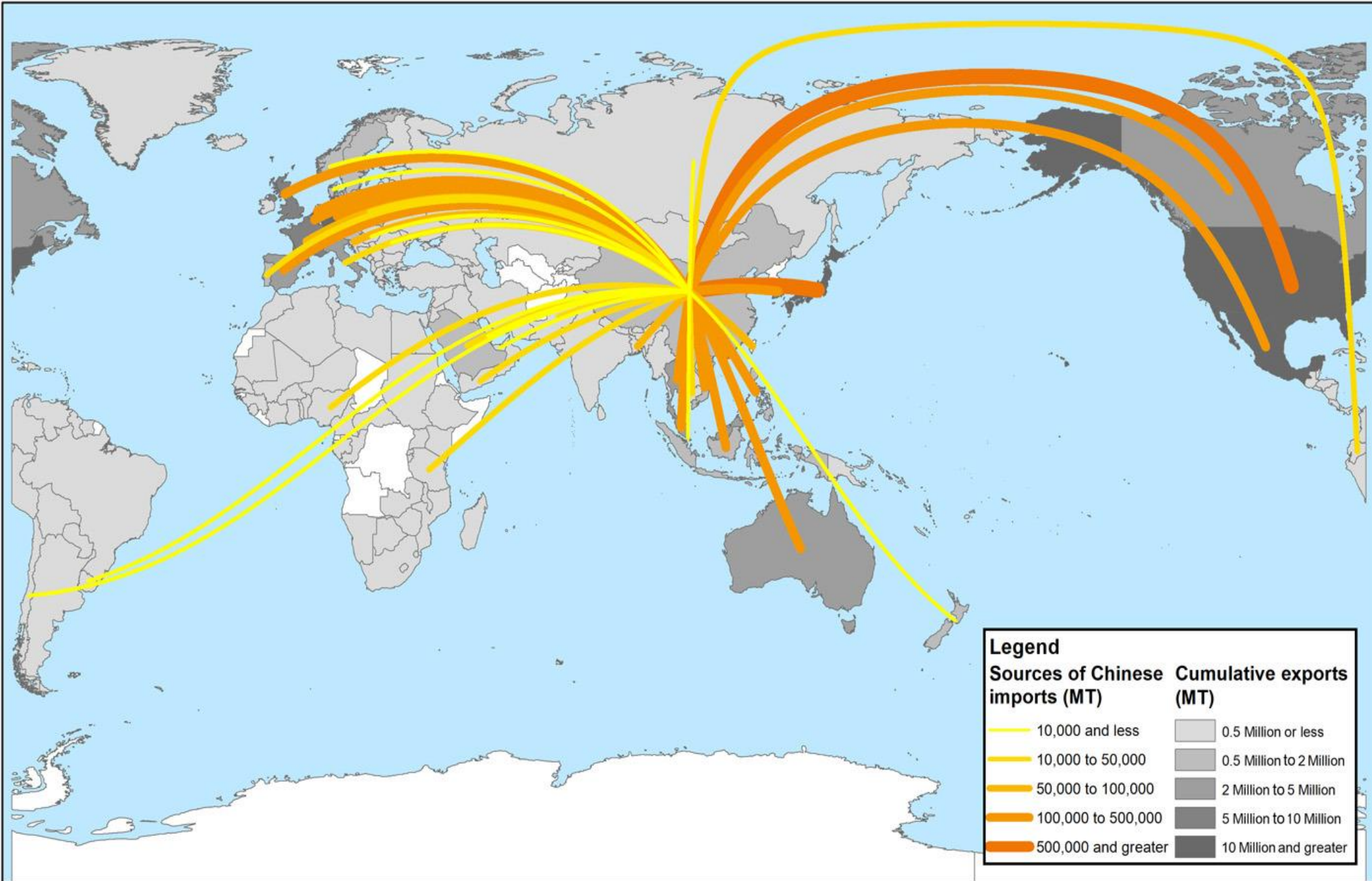
China closes the door, prices crash

The average price paid to recyclers for a ton of mixed paper in the Pacific Northwest and across North America has plummeted in the last year.



Source: RecyclingMarkets.net

EMILY M. ENG / THE SEATTLE TIMES



Chinese Sword Impacts

Commodity values have plummeted.

Mixed paper dropped from \$75 per ton in November 2016 to \$0 per ton in June 2018.

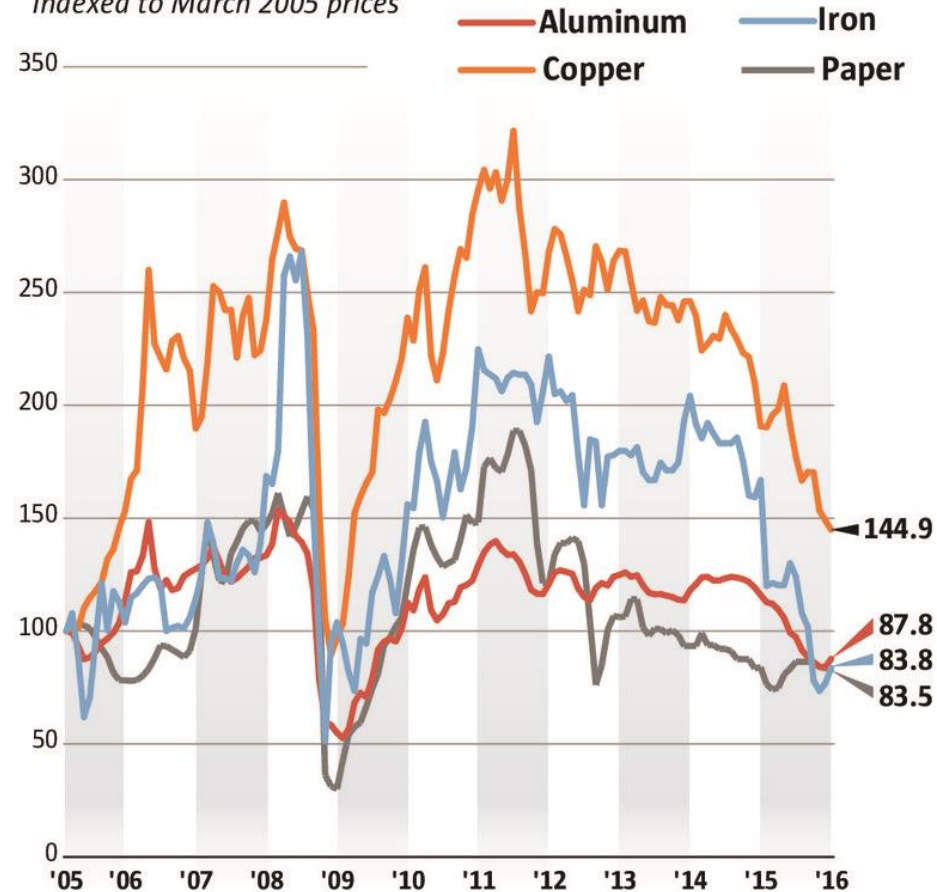
Processors paid municipalities for recyclables, now municipalities pay processors.

Recycled-material prices drop

Prices fluctuate for recycled materials, and some are hitting severe lows compared to four or five years ago.

PRICES FOR FOUR DIFFERENT RECYCLED MATERIALS

Indexed to March 2005 prices

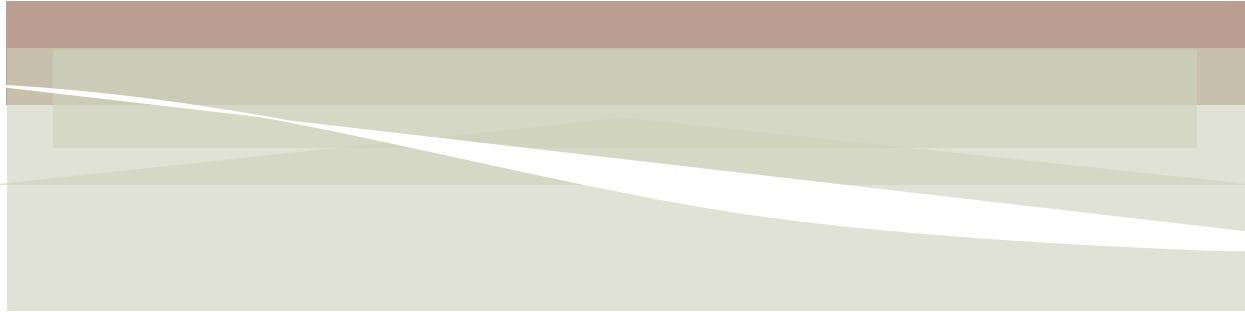


Source: Institute of Scrap Recycling Industries

MARK NOWLIN / THE SEATTLE TIMES

Brighter Days Are on the Horizon





Catalyzing Action

DOMESTIC MARKETS

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Understanding Market Value

2016 AVERAGE PLASTIC \$/TON

- \$1,000

2016 US PLASTICS EXPORTED TO CHINA

- 700,000 tons

2016 VALUE OF US EXPORTED PLASTICS

- **\$700 Trillion**

Investment Opportunities



Investment Opportunities

Encouraging domestic markets for recyclable

Promoting public-private-partnerships

Fostering Innovation

- “Upcycling”



Plastic-To-Fuel



Brightmark Energy

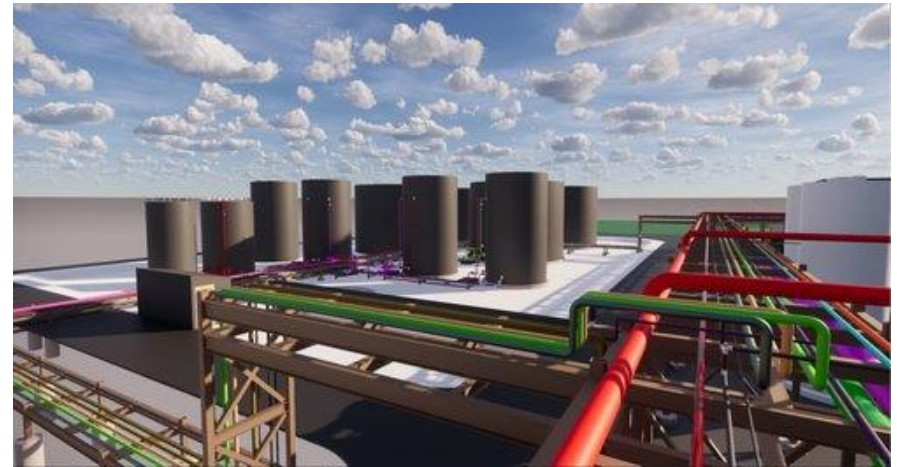
Northwest Indiana

Annually convert 100,000 tons of plastic into 18 million gallons of fuel and six million gallons of commercial wax

Partnered with the State of Indiana

\$260,000 Development

Under Construction-2020
Commission



Key Considerations

Do they have a commercially-operating facility?

- R&D, Pilot, Commercial

Do they understand the supply chain for targeted recyclables?

Are their specifications realistic?

Do they have long-term, off-take agreements?

How are they financed?



Catalyzing Action

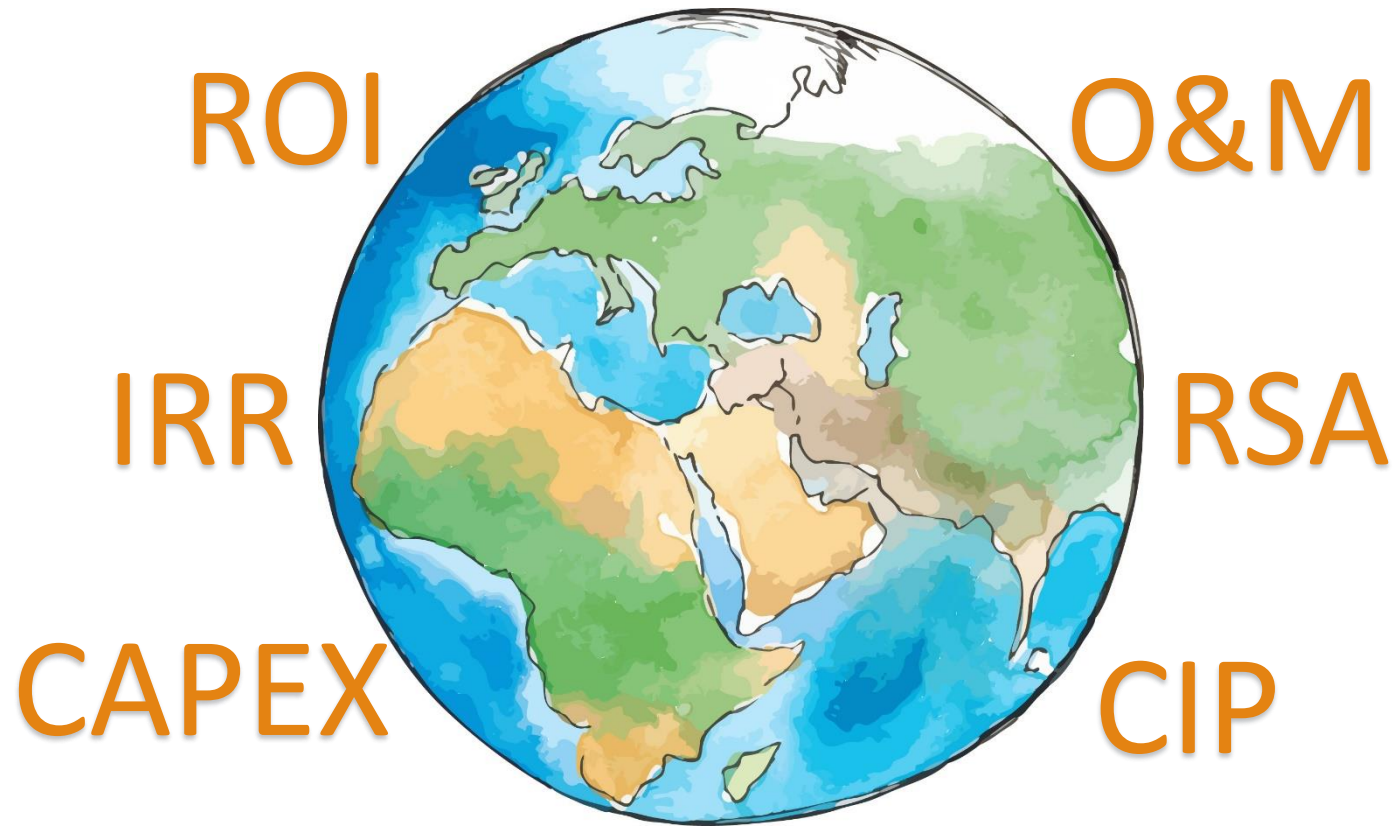
ESTABLISHING FINANCIALLY-VIABLE ORGANICS
RECOVERY SYSTEMS

SCS ENGINEERS

Need



It's A New Word World





Lorain Class II Compost Facility

BUSINESS CASE ANALYSIS

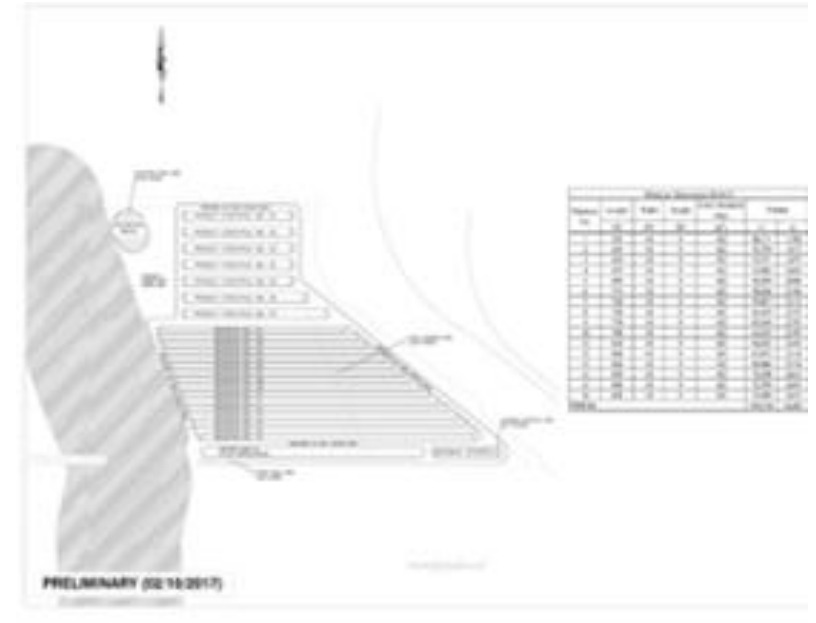
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Preliminary Site Capacity

18,000 Tons of Yard Waste

10,000 Tons of Food Waste

- 27 Open Windrows
- Twice a Year Product Production
- 60% Reduction Rate



Approach



Securing
Feed Stock



Market
Assessment

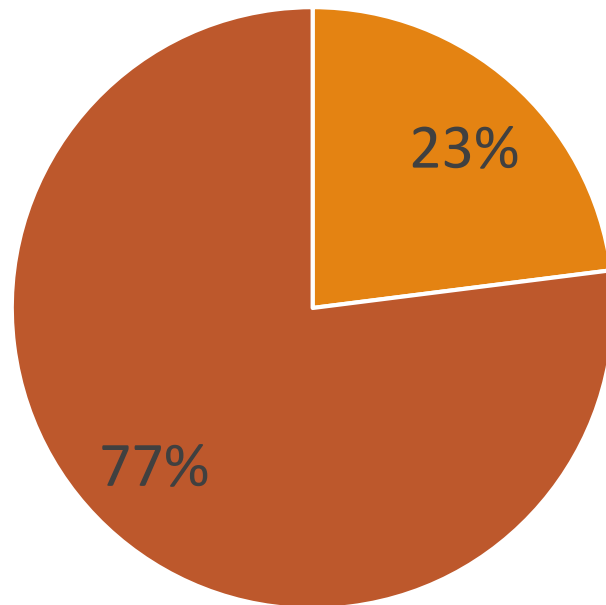
Pro-Forma Balance Sheet

XYZ Corporation
For 2005 to 2009
(all figures in \$ 000)

ASSETS	2005	2007	2008	2009
Current Assets				
Cash	\$24	\$17	\$89	\$84
Trade accounts receivable	\$387	\$138	\$425	\$418
Inventory	\$177	\$191	\$203	\$206
Prepaid expenses	\$12	\$12	\$12	\$12
Total Current Assets	\$600	\$358	\$729	\$720
Fixed Assets				
Long-term investments	\$42	\$43	\$43	\$46
Land	\$600	\$600	\$604	\$727
Buildings (net of depreciation)	\$903	\$925	\$950	\$1,021
Plant & equipment (net)	\$208	\$217	\$216	\$214
Patents & intangible	\$27	\$27	\$28	\$25
Total Fixed Assets	\$2,270	\$2,322	\$2,430	\$2,533
TOTAL ASSETS	\$2,870	\$2,680	\$3,159	\$3,253
LIABILITIES				
Current Liabilities				
Accounts payable	\$184	\$200	\$209	\$217
Short-term notes	\$24	\$25	\$25	\$26

Financial
Pro Forma

Securing Feedstock



■ Organics ■ All Other

229,736 Tons Waste
Disposed

52,839 Tons Organics
Disposed

Organic Feedstock Capture Potential

Facility	Tons
Amherst Township	1,327
Avon Lake	1,802
Carlisle Township	60
City of Lorain	447
Kyle's Landscaping	26
City of Oberlin	115
M&B Trucking	170
TOTAL YARD WASTE	4,181
FOOD WASTE	1,000
TOTAL ORGANICS	5,181

Site Requirements

Site Element	Acres
Compost Pad	2
Receiving Area	1
Screening/Product Storage	1.3
Access Roads	1.1
Storm Water Basin	0.5
Set Back	N/A
TOTAL	5.9



Compost Value

TIPPING FEES (\$/CY)

Material	Range
Leaves	\$0.53 - \$1.40
Brush	\$0.32- \$0.95
Bagged Yard Waste	\$2.24 - \$4.16
Food Scraps	\$5.00 - \$10.00

PRODUCT SALES (\$/CY)

Material	Range
Compost	\$25 - \$55
Mulch	\$15 - \$40

Market Competition



Finance

CAPEX

\$1.300 Million

County Finance

- Project Term
- Site Development Term
- Equipment Term
- Financing Interest Rate

15 Years

15 Years

Two 7-Year Tranches

5%

District Reserves

- 2017
- 2024
- Annual Capital Reserve Fund
- Annual Capital Reserve Fund
- Annual Equipment Inflation

\$1.300 Million

\$1.353 Million

\$214,000 Tranche 1

\$258,500 Tranche 2

3%

O&M

Equipment

- \$262,000

Labor

- \$81,350

Materials &
Services

- \$231,000

Revenues-Expenditures (YR1)

Yard Waste Tip Fees	Food Waste Tip Fees	Financed	Product Sales	EOY Cash Flow
No	No	Yes	Low	(\$334,950)
No	Low	Yes	Low	(\$306,950)
No	No	Yes	Medium	\$103,050
No	Low	Yes	Medium	\$131,050
No	No	No	Low	(\$339,750)
No	Low	No	Low	(\$311,750)
No	No	No	Medium	\$98,250
No	Low	No	Medium	\$126,250

Final Recommendation

