

Cost Analysis

Composting (Windrow)	
Land (15 Acres, 24mo)	\$1,731,201.95
VI Land Cost (18mo)	\$1,298,401.46
Land Cost/ CY	\$12.15
Labor Cost 120 hrs/ month (Maintaining piles, watering, Treating Leachate)	\$64,800.00
Labor Cost/ CY	\$0.45
Mulching Cost	\$5,324,726.38
Mulching Cost/ CY	\$9.34
Cost/ CY	\$21.95
Total Cost	\$7,120,728.32
FEMA Cost (75% @ 6+)	\$1,022,401.10
Territory Cost (25% @ 6+ months)	\$340,800.37

ACI	
Processing Cost/CY	\$9.10
*Actual Rate	
Total Cost	\$5,187,000.00
Territory Cost (25% @ 6+ months)	\$0.00

Mulching only	
Land (0.5Acres, 24mo)	\$41,219.09
Land Cost (18mo)	\$30,914.32
Land Cost/ CY (150,000CY)	\$0.29
Labor/ Equipment cost; 4hr/ day (194 total days, across STT, STJ, STX)	\$23,280.00
Processing rate CY/hr	250
Fuel Cost/ CY	\$0.83
Maint Cost/ CY	\$0.06
Haul Cost/ CY (approximate current price haul only)	\$8.00
Cost/ CY	\$9.34
Total Cost	\$5,324,726.38
FEMA Cost (75% @6+ mo)	\$23,185.74
Territory Cost (25% @ 6+ months)	\$7,728.58

Volume of Vegetative Debris	
STT	
Total Volume	150,000 CY
Reduced Volume	37500 CY
STJ	
Total Volume	20,000 CY
Reduced Volume	5000 CY
STX	
Total Volume	400,000 CY
Reduced Volume	100000 CY

Assumptions	
Land cost	\$3,500.00 per acre/month
Labor cost	\$30.00 per hour
Fuel cost	\$3.75 per gallon
Fuel Cons. (Grinder)	55.00 gal/hr
Maint. Cost (Grinder)	\$16.00 per hour
Maint. Cost (ACI)	\$1.00 per hour
Haul Cost (0-15miles)	\$8.00 per CY
Debris weight	0.25 ton/CY
Avg Load Size	20.00 CY
All Vehicles meet EPA Emission Regulations	

Land Requirements	
Mulch Pile limited to	60'x300'x500'
*NFPA 230	333333.33 CY
	5555.56 YD ²
	1.15 Acres
STT Mulch Pile Size	0.13 Acres
STJ Mulch Pile Size	0.02 Acres
STX Mulch Pile Size	0.34 Acres
Mulch Area Required	0.49 Acres
Windrow Size	20'Wx 12'Hx L
*Based on pasive composting	10 YD ² /YD
Windrow Width	7 YD
	0.000206612 Acres/ YD ²
STT Windrow Area	5.42 Acres
STJ Windrow Area	0.72 Acres
STX Windrow Area	14.46 Acres
Compost Area Required	20.61 Acres

Sources
Diesel Engine Emissions Calculations: US EPA AP42, Section 3.3 "Gasoline and Diesel Engines"
USDA-Forest Service: Reducing PM2.5 Emissions Through Technology, Results from ... Air Curtain Incinerator. Louisiana Air Curtain Burner Test
Grinder PM Emissions Calculations: State of California BAAQMD Regulation 6-301 and BAAQMD Condition #6385 part 4...
FEMA Public Assistance, Air Curtain Incinerator White Paper, Tracey Philips Critical Infrastructure Advisor