SYRACUSE UNIVERSITY
MAXWELL SCHOOL OF CITIZENSHIP AND PUBLIC AFFAIRS

PPA 723
Managerial Economics for Public Administrators

Case #3
BENEFIT-COST ANALYSIS

You are a consultant to Onondaga County, helping to formulate the county's solid waste policy for the next two decades. One of the critical issues the county faces is whether to build municipal composters or continue using landfills. Municipal composting is a technology whereby paper, food, yard waste, and plastics are mechanically separated from household trash bags and converted (with the help of special bacteria and several months spent at just the right temperature) into a nice, clean mulch. In this assignment, your objective is to determine whether the county should build a composting facility or continue landfilling.

Below are some "facts" (some real, some imaginary -- but plausible). Some of the information may be irrelevant to your analysis. Your job is to advise the city on which option is best (composting or landfilling). Be sure to show how you came to your conclusions.

- Onondaga population served by Solid Waste Disposal Agency (SWDA): 450,000
- Onondaga annual income per capita: $15,000
- Nominal interest rate: 6%
- Rate of inflation: 3%
- Refuse per collection day: 700 to 900 tons per day
- Collection days per year: 260
- Landfill disposal cost per ton (not including collection costs): $100
- Refuse collection cost per ton: $20
- Cost of sorting compostable from non-compostable waste: $10 per ton
  (100% of garbage must be sorted if composting is chosen)
- One ton of mulch results from every 2 tons of composted waste
- The mulch can be sold for $10 per ton.
- The cost of setting up a municipal composting facility that would handle all compostable Onondaga waste is $45 million.
- The useful life of this facility is 20 years.
- The variable costs of municipal composting are between $50 and $80 per ton (includes operating costs of compost facility, but excludes collection and sorting costs).
- Refuse composition by weight: Paper = 36%, Food = 13%, Plastic = 10%, Glass = 9%, Yard waste = 4%, Other (wood, rubble, metals, textiles, etc.) = 28%