

- 1) Use a spreadsheet and the waste composition table provided to answer the following questions:

Assume the following items are collected for recycling:

- 1) Newspapers (ONP)
  - 2) Office paper
  - 3) Telephone books
  - 4) Junk mail
  - 5) Glass
  - 6) Steel
  - 7) Aluminum cans
  - 8) Corrugated boxes (OCC)
  - 9) Plastic milk (HDPE) and drink bottles (PET)
- a) (7 pts) Calculate the percent by mass of material that could be diverted from the landfill if 100% capture could be achieved for these recyclable materials.
  - b) (7 pts) Repeat your analysis assuming you get only 50% capture per household with 100% participation (assume all households contribute the same amount).
  - c) (7 pts) Repeat your analysis assuming 50% capture and 60% of the households participate.
  - d) (7 pts) What scenario would be needed for this region to capture 40% of materials headed for the landfill?
- 2) (20 pts) Use the internet or another source to complete the recycling materials data sheet provided to you on the class web page.
  - 3) (15 pts) (a) Find examples of three unusual products made from recycled material. Describe them and cite the sources. (b) (10 pts) Explain what is meant by a value-added product.
  - 4) Use the web to find some (recent, i.e. 2005-2008?) discussions about whether or not it “pays” to recycle.
    - a. (10 pts) What do people see as the benefits of recycling, the avoided costs, or reasons not to recycle? Cite your sources.
    - b. (10 pts) What kinds of costs would be associated with NOT recycling?
    - c. (10 pts) Find a report on a recycling program that is financially successful and write a brief summary of it. Cite your source.