

WGP Economic Performance KPI

WGP Credit: Economic Assessment of Solid Waste Management (2 points, Reciprocal)

Credit Summary

WGP Credit: Economic Assessment of Solid Waste Management aims to provide transparency around the costs and benefits of solid waste management programs. This includes completing specific calculations and providing documentation on the cost of various waste management programs such as trash, recycling, organics, and more.

Impact Summary

The economic component of waste management is extremely important for waste generation reduction and the creation of more sustainable methods of disposal. This information is useful for both households and businesses who are looking to alter their consumption and disposal habits. Additionally, painting the picture of the impact of the waste management system on employment and economic activity is very important for understanding the implications of any changes.

Submittal Summary

To meet the requirements for this credit, a local government or industry must submit the total solid waste program costs per ton, per capita, or per capita, as well as a number of breakout calculations such as disposal costs per ton for various types of waste.

Case Study and Benefits

Local governments in Boulder, CO and San Dimas, CA have published web pages with clear information on the cost of waste disposal and processing. Additionally, the EPA has made sample waste management calculations publicly available which can be used as a model.

Other Resources

Intent and Requirements

Intent

provide transparency around the costs and benefits of solid waste management programs.

Local Government & Industry Requirements

1. Calculate and publish total (residential and non-residential) solid waste program costs per ton or per household or per capita.

2. Provide breakouts as follows:

- Total solid waste management cost per ton.
- Collection costs per ton:
 - Mixed MSW (Black Bin; residential and non-residential)
 - Single-stream or dual-stream recyclables (Blue Bin)
 - Green Waste/Food Waste (Green/Brown/Yellow Bin)
 - Household Hazardous Waste (including drop off programs)
 - Bulk items
 - C&D Debris
- Disposal costs per ton.
 - Gross
 - Net (post-sale of output, e.g. energy sales)
- Recycling processing costs per ton:
 - Gross
 - Net (post-sale of output, e.g. commodity sales)
- Organic processing costs per ton:
 - Gross
- Net (post-sale of output, e.g. soil amendment sales)

3. Estimate impact from waste management program, including indirect and induced effects, on:

- a. employment and
- b. economic activity

Potential Strategies:

- Track costs for different aspects of the Local Government waste management: collection, processing, disposal, etc.
- Include line items for maintenance, labor and customer service. Figures at this level of detail do not need to be reported.

- Make the top-level cost figures available to Local Government residents and/or to customers of the solid waste Company.
- Provide total costs of each program (recycling, trash, compost) per Household or per capita.

The Big Picture

Why We Care

The economic component of waste management is extremely important on the way to reducing waste generation and creating more sustainable methods of disposal. By making these costs available to the public, they become more conscious of the cost of various methods and have the ability to restructure their own waste disposal methods to be more cost-effective and sustainable. This information is useful for both households and businesses who are looking to alter their consumption and disposal habits. Additionally, painting the picture of the impact of the waste management system on employment and economic activity is very important for understanding the implications of any changes.

How to Meet the Requirements

First, begin by calculating the solid waste program costs per ton for non-residential programs and per capita for households. Then, make these costs available to the public by publishing online or through another medium.

In addition to the total solid waste management cost per ton or per capita, the costs of specific kinds of solid waste must also be disclosed. First, calculate the collection costs per ton of mixed municipal solid waste (traditional garbage), recyclables, green or food waste, household hazardous waste (chemicals, batteries, etc.), large bulk items, and construction, renovation, and demolition debris. Next, Calculate both the gross and net disposal costs per ton. Net disposal costs are the costs after sale of output, such as energy sales. Then, find the gross and net recycling processing costs per ton. Again, net processing costs are those after sale of output, in this case this may include commodity sales. After this, calculate gross and net organic waste processing costs per ton, with net costs accounting for sale of output, such as soil amendment sales. In order to meet the requirements for this credit, this information must be made accessible to the public. Finally, estimate the impact from the entire waste management system, both directly and indirectly, including the effects on employment and economic activity.

To begin this process, it is crucial that there is a record of waste management and disposal costs for trash, recycling, compost, and other forms of waste. It may also be worthwhile to include the additional costs associated with labor, customer service, and maintenance in calculations, though it is not necessary that this information is prioritized in public documentation (only necessary as a line item for total cost). Once calculations are complete, make them available to local government residents and/or customers of the solid waste company. This information can be made available in a number of ways, but some examples include a website page, an app, or a widespread email. However, refer to local government officials and residents for their preferred medium. Lastly, work on collecting data and information on the

effects of waste management on employment and economic activity, eventually making it publicly available through the same channel or a separate report.

Required Documentation

UPLOAD	1) Total solid waste program costs per ton, per household, or per capita. a) Include the breakouts described above
CALCULATE	1) Total solid waste management cost per ton 2) Collection costs per ton: a) Mixed MSW (Black Bin; residential and non-residential) b) Single-stream or dual-stream recyclables (Blue Bin) c) Green Waste/Food Waste (Green/Brown/Yellow Bin) d) Household Hazardous Waste (including drop off programs) e) Bulk items f) C&D Debris 3) Disposal costs per ton a) Gross b) Net (post-sale of output, e.g. energy sales) 4) Recycling processing costs per ton: a) Gross b) Net (post-sale of output, e.g. commodity sales) 5) Organic processing costs per ton: a) Gross 6) Net (post-sale of output, e.g. soil amendment sales)

Case Studies & In-Depth Information

Below are some examples of websites that have published waste management costs, as well as reference calculations.

[Boulder County, CO](#) This site shows the hazardous waste disposal costs in the county. Boulder adds a handling fee for disposal, and shows costs for various materials per pound with and without surcharges. The format is that of an easy to read list with entries of 49 hazardous materials including acids, pesticides, carbon filters, and more.

[EPA](#) This document provides information on how organizations can calculate the costs of their waste disposal. It can be helpful for baseline calculations, particularly to determine annual waste disposal costs.

[Waste Management](#) This site shows waste disposal rates for San Dimas, CA through the Waste Management company. Rates are broken down by monthly cost for a variety of types of waste disposal. This format is easy to read and a good reference for creating a publicly available site or portal.

Referenced Standards

N/A

Definitions

Bulk Items

[EPA Definition](#): Refers to those items that are large enough to warrant special collection services separate from regular residential curbside collection. Examples include major appliances and furniture.

[John's Refuse Definition](#): The term "bulk waste" is used to describe waste that is too large to be collected by a regular waste collection. However, bulk waste can often be picked up from streets and pavement areas. A fee is usually associated with this kind of collection. Bulky waste items include household furniture, tires, appliances, metal, and scrap wood.

C&D Debris

Relevant ReTrac definitions:

Construction, Renovation and Demolition (CR&D) Waste - Construction, renovation and demolition (CR&D) waste, also referred to as demolition, land-clearing and construction waste (DLC), refers to waste generated by construction, renovation and demolition activities. It generally includes materials such as brick, painted wood, drywall, metal, cardboard, doors, windows, wiring, etc. It excludes materials from land clearing on areas not previously developed. It excludes materials from land clearing on areas not previously developed. CR&D waste can come from residential sources such as house renovations or from non-residential sources for example the construction or demolition of office buildings.

[EPA Definition](#)- debris generated during the construction, renovation and demolition of buildings, roads, and bridges. Construction and demolition (C&D) materials are generated when new building and civil-engineering structures are built and when existing buildings and civil-engineering structures are renovated or demolished (including deconstruction activities). C&D materials often contain bulky, heavy materials such as: Concrete, Wood (from buildings), Asphalt (from roads and roofing shingles), Gypsum (the main component of drywall), Metals, Bricks, Glass, Plastics, Salvaged building components (doors, windows, and plumbing fixtures), Trees, stumps, earth, and rock from clearing sites

[CORR Definition of C&D materials](#) - Building materials from the construction, renovation or demolition of building structures (excluding land clearing, grubbing, and excavation materials).

Dual-Stream Recyclables

[CRI Definition](#): Under the dual stream system, residents usually combine all their food and beverage containers (aluminum and steel cans, glass jars and bottles, and some or all plastic bottles) in one bin, and they put their newspapers and/or mixed paper (such as junk mail, cereal boxes, and home office paper) in another bin, or in a brown paper grocery bag. The two material streams are picked up and placed in separate compartments on the recycling truck, and taken to a processing center (a materials recovery facility, or MRF).

Food Waste

[CalRecycle Definition](#): Refers to all surplus food scraps. The term has fallen out of favor with some composters, who prefer to view this material as a resource rather than as waste material. However, this term is interchangeable with food scraps.

[CalRecycle 'Food Scraps' Definition](#): All excess food, including surplus, spoiled, or unsold food such as vegetables and culls (lower quality vegetables or trimmings such as onion peels or carrot tops), as well as plate scrapings. Food scraps also are commonly called food remnants, food residuals, or food waste.

Green Waste

[SWANA Definition](#): Solid waste comprising grass clippings, shrub and tree cuttings and other organic wastes resulting from lawn care and gardening.

[CalRecycle Definition](#): A term used to refer to urban landscape waste generally consisting of leaves, grass clippings, weeds, yard trimmings, wood waste, branches and stumps, home garden residues, and other miscellaneous organic materials.

Household Hazardous Waste

[EPA Definition](#): leftover household products that can catch fire, react, or explode under certain circumstances, or that are corrosive or toxic. Products, such as paints, cleaners, oils, batteries, and pesticides can contain hazardous ingredients and require special care when you dispose of them.

Mixed MSW

[EPA Definition](#): Municipal Solid Waste (MSW)—more commonly known as trash or garbage—consists of everyday items we use and then throw away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries. This comes from our homes, schools, hospitals, and businesses.

Single-Stream Recyclables

[CRI Definition](#): Under the single stream system, residents combine paper and containers in a single bin or bag. The bins or bags are collected and placed in a truck. When the bins or bags arrive at the MRF, the recyclables are sorted.