

Materials Management Advisory Committee – Measurement Subcommittee  
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### Proposed Scope of Work

Objective: Accumulate, analyze, and condense waste generation, collection, and recovery data in order to provide the full committee with the information necessary to make informed decisions in preparation of the Plan. Identify shortcomings in existing datapoints with respect to generation, collection, recycling, diversion, and final landfill disposition of waste Illinois. Project post-analysis waste generation, collection, and diversion data, as well as data gap information, to the subcommittees upon completion of each task as outlined below.

Measurement Subcommittee's Areas of Responsibility. The Measurement Subcommittee's work will help achieve the following elements of the report that must be submitted to the General Assembly:

- Analysis of the data available for waste materials, generated, collected, transferred, recycled, reused, diverted from landfills, and ultimately disposed within the landfills. Recommended achievable landfill diversion rates. 415 ILCS 15/4.5(j)(1)-(3)
- Identify data deficiencies necessary to make informed decisions in the future.
- Provide necessary data to the other Sub-Committees in a clear and concise manner. Recommended achievable landfill diversion rates. 415 ILCS 15/4.5(j)(4)
- Recommend ways to increase data collection in the future.

The Subcommittee's primary focus area will be evaluating the data available for materials currently considered waste, across residential, industrial, commercial, and institutional sectors and presenting the results in a clear and concise manner. Illustrative examples of divertible materials include standard curbside collectable materials such as food scraps and other organic materials, plastics, paper, glass, plastics and OCC, as well as source separated drop-off materials such as textiles and nonregulated electronics. This analysis will include an evaluation of the existing commodities markets for item reuse and for extracted materials, recent trends in those markets, existing users of end market materials in Illinois, and the existing infrastructure within Illinois to provide feedstock for those markets. Some of this work will be dependent upon work undertaken by and at the request of the other Subcommittees.

This Subcommittee envisions collaboration with other members of the committee as well as with outside entities in order to obtain the best datasets possible prior to analysis. The available viable markets and emerging markets with growth potential will necessarily inform the selection of materials to target for diversion from landfills, the achievable landfill diversion rates over time, and the actions necessary to accomplish those diversion rates. This market analysis described above and a collective evaluation of the recommendations of each of the other subcommittees, likely near the conclusion of the Committee's term.

Proposed Scope of Work. The following is the proposed scope of work for the Measurement Development Subcommittee.

1. Generation Task: Estimated generation quantities by stream of all MSW at the Census Tract by single family, multifamily, and the Industrial, Commercial, and Institutional groups. Objective: To identify the generation of waste quantities based on geography, activity, and demographics will provide the committee actionable data to plan for increased recovery and diversion of waste materials.

Approach: In order to create a generation estimates by stream at the census tract level the subcommittee proposes the following subtasks:

- a. A survey be created and disbursed to county solid waste managers requesting waste generation data for the baseline year at the place level as defined by the U.S. Census Bureau.
- b. A database be created to store and analyze the collected waste generation data by unit of government, by the following collection streams, for landfill disposal, for recycling, for composting, for energy recovery, or for incineration.
- c. Per capita generation estimates be created based on collected and compiled information. Furthermore, based on quality and level of data available statistically viable generation profiles be created for urban, suburban, and rural geographies.

2. Diversion Task: Estimated collection infrastructure by stream for all MSW and divertible materials at the county level.

Objective: Understanding current waste and materials management flows at a county level will provide the committee the current expansion potential and gaps in infrastructure that limit recovery, and diversion of waste materials.

Approach: In order to compile a complete asset map of collection infrastructure within the state of Illinois the subcommittee proposes the following subtasks:

- a. A list of all permanent collection infrastructure for recycling such as transfer stations, yard waste collection locations, material drop off locations, comprised of full address, organization structure (public, private), year established, estimated collected tonnage for baseline year, and a list of acceptable materials to be compiled.
- b. A list of all documented temporary collection infrastructure for recycling such as organized collection drives, temporary drop off locations for the baseline year, comprised of collection location, organization structure, estimated collected tonnage for baseline year and list of acceptable materials to be compiled.
- c. A survey be created and distributed through the trade associations requesting service territories for collection streams by geography, the results of this survey will be anonymized to protect confidential business information.
- d. A survey be created and promoted through county managers, trade associations, and environmental groups to identify all permanent and temporary collection locations for reuse comprised of full address, organization structure (public, private), year established, estimated collected tonnage for baseline year, and a list of acceptable materials.

3. Infrastructure Task: Estimated diversion infrastructure by stream for all MSW at the county level.

Objective: Understanding current waste processing abilities at a county level will provide the committee with current expansion potential and the gaps in infrastructure that limit diversion of waste materials.

Approach: In order to compile a complete asset map of diversion infrastructure within the state of Illinois the subcommittee proposes the following subtasks:

- a. A list of all permanent collection infrastructure for recycling such as transfer stations, yard waste collection locations, material drop off locations, comprised of full address, organization structure (public, private), year established, estimated collected tonnage for baseline year, and a list of acceptable materials to be compiled.

4. Projection Task: Provide projections for generation, collection, and diversion through, 2030, 2040, and 2050.

Objective: Understanding projections of waste generation, collection, and diversion will provide the committee with the scale and rate of change in opportunities for expansions and gaps in diversion of waste materials.

Approach: To project waste generation, collection, and diversion for the State of Illinois the subcommittee proposes the following subtasks:

- a. Using population projections created by the US Census extrapolate per capita generation at a County or MSA level.
- b. Using industrial change projections provided by the US Bureau of Labor Statistics extrapolate the change in the industrial sector.

5. Data Analysis Task: Provide analysis on data gaps and opportunities required to implement the Sustainable Materials Plan Objective: Enumerating the gaps in data availability or inconsistencies in the current system will provide the committee the ability to ideate and recommend data collection processes and methodologies in the Plan.

Approach: A report be prepared and submitted to the committee at the completion of each of the above-mentioned tasks containing the current limitations in data, reasons for that limitations and a list of viable interventions to procure said data.

Estimated collection by stream of all MSW at the Community/County level

Work with the Infrastructure Subcommittee evaluate the scope and scale of existing markets in USEPA Regions V and VII for recyclables and compost.

- a) IEPA to circulate requests for information to Region V and VII colleagues for statewide market development surveys conducted within the last ten years.
  - b) Review recent Illinois Recycling Economic Information Studies to compile list of existing end markets for divertible materials.
  - c) Evaluate the need to conduct a comprehensive recycling markets study and develop the necessary award and funding documents to solicit external expertise for the study.
- 2) Employ the data gleaned from completing deliverable 1 to identify materials for which there are viable instate end markets, viable regional end markets, struggling instate and regional end markets, and for which there are no end markets.
- a) Determine whether the root cause(s) of market struggles are linked to the complete lack of end markets, the lack of localized end markets, or other procedurally internalized costs.
  - b) Examine whether public or private entities in other areas of the country have successfully overcome similar barriers and evaluate whether those solutions could be replicated in Illinois.

- c) Identify the appropriate entity or entities in Illinois to implement any necessary market support.
  - d) Evaluate any necessary legislative or regulatory enhancements necessary to adequately support markets for divertible materials generated in Illinois.
- 3) Utilize the information derived from deliverables 1 and 2 to work with other subcommittees to identify materials to target for landfill diversion, diversion goals, and necessary steps to accomplish those goals. This evaluation should include a cost-benefit analysis that accommodates the recognition that some materials may not have viable end markets and that creating those markets may deplete resources that could support or enhance otherwise workable markets.

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