



Sustainable Solid Waste Management Study

Metropolitan Solid Waste Management Advisory Committee
June 13, 2014



King County

Department of
Natural Resources and Parks
Solid Waste Division

Serving
Community

Protecting
Environment

Operating
Excellence

Sustainable Solid Waste Management Study

Study Goal:

Identify and evaluate best practices in five areas – resource recovery at division facilities, construction and demolition debris management, organics processing, disposal alternatives and technologies, and sustainable system financing – and make recommendations to help guide the division's operational and strategic planning.

Supports overall goals:

- Zero Waste of Resources
- 70 percent recycling
- Extend the life of Cedar Hills
- Stable rates



Identifying Best Practices

- Five focus areas
 1. Resource recovery at division facilities
 2. Construction and demolition debris management
 3. Organics processing
 4. Disposal alternatives and technologies
 5. Sustainable system financing
- Initial list of practices identified: 56
- Practices evaluated: 20

Evaluation Criteria

Fiscal

1. Impact on rates
2. Economic risk

Environmental

3. Impact on waste prevention, recycling, and diversion
4. Impact on resource consumption
5. Impact on environmental resources
6. Consistency with Climate Action Plan

Operational

7. Complexity of implementing
8. Complexity of system and facility operation
9. Level of service to customers
10. Operational risks
11. Flexibility and adaptability

Policy and Equity & Social Justice

12. Compatibility with Equity and Social Justice Ordinance
13. Public and political understanding and acceptance
14. Impact on employees

Study Recommendations

- Pilot
 - Resource recovery at transfer stations
- Evaluate
 - Anaerobic digestion at division facilities
 - Divert a portion of the waste stream to alternative technologies
 - Rate redesign
- Support
 - On-site organics processing
 - Require jobsite construction & demolition debris recycling

Resource Recovery at Transfer Stations

- Remove metal, wood, and cardboard from self-haul and commercial loads
- Potential to remove high quality, high value materials from waste stream
- Began at Shoreline in April; add to Bow Lake and Enumclaw later this year
- 2-year pilot to gather information about resources recovered, operational methods and equipment, costs and revenue
- Information gathered during the pilot will help inform whether additional, related practices could/should be implemented

Anaerobic Digestion at Division Facilities

- Organic material processed in fully enclosed digester produces commercial products
 - Biogas/methane – electricity or fuel
 - Ammonium sulfate – fertilizer
 - Compost
- Potential to increase diversion from landfill, particularly of food waste, and provide additional revenue
- Feasibility assessment to evaluate available technologies, appropriate facility size and location, feedstock potential, product markets
- Proposed budget of \$150,000 for consultant study in 2015

Divert a Portion of the Waste Stream

- Explore the private industry's interest and ideas for managing a portion of the waste stream using alternative technologies
- Understand options – first step in evaluating a wide-range of technologies
- Allow for demonstration of various alternative technologies from small-scale pilot to full commercial operation
- Issue solicitation in 2 steps:
 - 2015 issue request for expressions of interest
 - 2016 issue request for proposals
- Proposed budget of \$150,000 for consultant assistance in 2015/16

Rate Redesign

- Shift costs not related to tonnage – e.g., waste prevention programs, city grants, illegal dumping programs, debt service – away from the tip fee by assessing a fee on the curbside garbage/recycling bill
- Begins to address how to fund the system as we actively pursue our zero waste goals and decrease revenue from garbage
- Decreases vulnerability to tonnage decreases and increases fee equity and financial stability
- Feasibility assessment to consider what services would be funded by the new fee, how the fee would be structured, how the fee would be collected, how tip fees would be affected
- Proposed budget of \$150,000 for consultant study in 2015

On-site Organics Processing

- Support and facilitate on-site organics processing (at businesses and institutions such as groceries, restaurants, and schools) to reduce the need for collection, while increasing potential for energy production or other products
- Possible on-site processing technologies include in-vessel composting, anaerobic digestion, and systems like the WISerg Harvester
- 2015/16 track technologies, provide information, support grant applications, and assess if additional resources should be allocated in future budget

Require Jobsite C&D Recycling

- Increase diversion from disposal of C&D generated at jobsites through a variety of land use and/or permit processes that require or incentivize builders to recycle
- Recommended in draft Comp Plan and specifically requested by some cities as a practice to evaluate
- Develop options for implementation in unincorporated area and assist cities with information/resources
- Cities implement according to city priorities

What's Next?

- Aug. 8 – Discussion at MSWMAC, possible motion for action
- Sept. 12 – Possible action
- Incorporate into Comp Plan update – schedule tbd
- 4th Qtr. 2014 scope 3 projects