RECYCLING AND COMPOSTING

Achieve a Municipal Solid Waste (MSW) recycling rate to 70% by 2022 and maintain this rate through 2050.

Seattle is a nationally recognized leader in recycling and composting, and currently diverts 53.7 percent of all MSW generated. This rate, achieved through the City's numerous innovative policies and programs, is among the highest in the country and already generates significant environmental benefits, including avoided GHG emissions.

The City is already on a path toward greater waste diversion through recycling and composting. In its 2011 Solid Waste Management Plan (SWMP) Revision, the City laid out a plan to achieve 70 percent diversion by 2022 through new recycling and composting programs, increased enforcement, additional material disposal bans, and enhanced outreach and education. By implementing the recommendations of the 2011 SWMP and taking additional actions, the City can reduce GHG emissions from its waste management activities, and substantially increase the amount of avoided emissions achieved through recycling and composting.

MUNICIPAL SOLID WASTE RECYCLING AND COMPOSTING

Achieve a MSW recycling rate of 60% by 2015 and 70% by 2022 by implementing new MSW recycling and composting programs and material disposal bans, increasing enforcement, and enhancing outreach and education to residents and businesses.

CONSTRUCTION AND DEMOLITION RECYCLING

Achieve a construction and demolition (C&D) recycling rate of 70% by 2020 by phasing in C&D material disposal bans, and coordinating with local industry to develop a processing facility certification program.

FOOD WASTE LANDFILL DIVERSION

Maximize diversion of food waste from the landfill and promote composting of food scraps by increasing technical assistance to expand and improve the use of compostable food service products, and increasing enforcement of food packaging and food scrap composting requirements.

LOCAL RECYCLING MARKETS AND MARKET DEVELOPMENT

Expand local recycling markets by aligning market development efforts with disposal bans and focusing on potentially recyclable materials with persistently low recycling rates.

MSW RECYCLING AND COMPOSTING

Achieve a Municipal Solid Waste (residential, commercial, and self-haul) recycling rate of 60% by 2015 and 70% by 2022, by implementing recommendations from the 2011 SWMP.

MSW includes all the garbage, recycling, and organics (yard and food waste) collected within Seattle and hauled to the city's recycling and disposal (transfer) stations. It also includes some construction and demolition (C&D) wastes that are disposed at city transfer stations or placed in residential or business garbage containers.

Seattle Public Utilities has already developed a plan for increasing recycling of MSW by twenty percentage points in the next ten years. By strongly supporting and implementing the recommendations of the SWMP, the City can achieve the GHG emissions benefits associated with this high recycling rate.

KEY ACTIONS BY 2020
Implement new MSW recycling and composting programs: • Multi-family universal organics collection service (2012) • Floor sorting of self-haul C&D loads at transfer stations (2013) • Pet waste and diapers composting (2020)
Implement additional MSW material disposal bans: • Asphalt paving, concrete, and bricks (2013) • Asphalt shingles, plastic film, and clean wood (2014) • Food and compostable paper (SF - 2014, MF - 2015, Commercial - 2016) • Commercial C&D (2017)
Increase enforcement of MSW recycling and composting requirements: • Increase enforcement of commercial paper ban (2012) • Increase enforcement of all residential bans (2012)
Enhance outreach and education to residents and businesses: • Restore education funding for all sectors to pre-recession levels (2013) • Enhance outreach in advance of material disposal bans

CONSTRUCTION AND DEMOLITION RECYCLING

Achieve a Construction and Demolition recycling rate of 70% by 2020, by implementing recommendations from the 2011 SWMP.

C&D waste includes wood waste, metals, asphalt roofing, gypsum, and other materials generated by construction activities that is not disposed at city-owned transfer stations or mixed with MSW garbage. It is managed separately from MSW for recycling and disposal.

In the 2011 SWMP Update, the City recommended a recycling rate goal for the C&D waste stream for the first time, and outlined recommended actions for achieving this goal.

KEY ACTIONS BY 2020
Phase in C&D material disposal bans at jobsites and private transfer stations: • Asphalt, bricks, and concrete paving (2012) • Recyclable metal, cardboard, plastic film, carpet, clean gypsum (2013) • Clean wood, asphalt shingles (2014)
Develop and promote a C&D processing facility certification program, in coordination with the local industry and other solid waste planning jurisdictions.

FOOD WASTE LANDFILL DIVERSION

Maximize diversion of food waste from the landfill and promote composting of food scraps.

Food scraps make up the single largest source of GHG emissions related to waste management activities in Seattle, primarily due to the release of landfill methane. To avoid these emissions, the City should prioritize diverting as much food waste as possible from disposal. In addition to reducing food waste disposal through planned actions such as disposal bans, increased education, and expansion of organics service to the multifamily sector, the City can promote composting of food scraps by providing technical assistance to business customers, and by continuing to encourage the use of compostable single-use food service products, which help prevent contained food scraps from being disposed when separation is not feasible or convenient.

Actions designed to prevent food waste at the source are discussed in the "Source Reduction and Product Stewardship" section.

KEY ACTIONS BY 2020
Increase technical assistance and enforcement related to food packaging requirements so that all single-use food service products are recyclable or compostable (with a preference for compostable in cases where products are likely to be soiled with food).
Support coordination between organics processors, food service product suppliers, and food service retailers to expand the availability of compostable food service products.
Focus grants on schools to establish system-wide collection approaches for food and yard waste.

LOCAL RECYCLING MARKETS AND MARKET DEVELOPMENT

Expand local recycling markets and support market development for potentially recyclable materials.

Seattle's robust recycling programs have supported a growing number of recycling businesses in the region, demonstrating both the environmental and economic benefits of recycling and composting. The City can expand the positive effects of recycling by continuing to support existing local recycling markets and by helping to develop local markets for additional materials as they are added to recycling programs.

By 2020, most of the MSW stream will be recycled or composted, but a few recoverable material categories are forecast to have persistently low (i.e. less than 50 percent) recycling rates. Where appropriate, these materials should become the focus of market development efforts.

KEY ACTIONS BY 2020
Launch market development for textiles (2016)
ADDITIONAL ACTIONS BY 2020 (NOT PART OF SWMP)
Focus on materials expected to have persistently low recycling rates as of 2020, including: • Non-container glass • Mixed plastics • Wood

SOURCE REDUCTION AND PRODUCT STEWARDSHIP

Reduce total waste generation through source reduction, and encourage product stewardship and producer responsibility programs.

The City can reduce GHG emissions within its geographic boundaries and globally by reducing total generation of waste through source reduction, also known as waste prevention. Source reduction is achieved through actions that encourage extension of product life, such as repair, refurbishment, and reuse; product design and manufacturing practices that reduce the amount of material used; more efficient use of consumable products; and less consumption of materials overall.

Source reduction reduces GHG emissions from collection, processing, and disposal, and also results in avoided emissions from manufacturing. Avoided emissions due to source reduction are often larger than any other waste management option, including recycling and composting.

Source reduction can be challenging to implement, as the City has less direct control over the quantity of waste generated than over how it is managed once it is generated. Nonetheless, there are many ways the City can influence waste generation and encourage source reduction through setting policies, implementing programs, influencing pricing, supporting product stewardship, and educating and engaging residents and businesses.

MSW SOURCE REDUCTION

Reduce total MSW generation by expanding investment in existing waste prevention programs and establish new programs that facilitate source reduction by households and businesses.

C&D SOURCE REDUCTION

Facilitate source reduction of C&D waste through support of new and expanded programs promoting salvage, deconstruction, and reuse.

PRODUCT STEWARDSHIP AND PRODUCER RESPONSIBILITY

Collaborate with local, state, and regional partners to encourage and support product stewardship and producer responsibility programs, and pursue local regulation for select products, where appropriate, when state and regional action is not forthcoming.

SOURCE REDUCTION IN CITY OPERATIONS AND PURCHASING

Use the City's purchasing power to support source reduction, product stewardship, reuse, cradle-to-cradle manufacturing, and recycled-content production; and employ source reduction strategies in City operations.

MSW SOURCE REDUCTION

Reduce total MSW generation from households and businesses.

The U.S. EPA has ranked source reduction (i.e. reducing total waste generation) as the most preferred method of management for MSW. The City already promotes source reduction through existing programs for reuse, onsite organics management, and sustainable building, and can enhance its impact on waste generation by strengthening and expanding policies, programs, and other activities that encourage source reduction.

KEY ACTIONS BY 2020
Expand investment in existing programs for reuse and onsite organics management.
Support edible food donation: • Strengthen and expand programs for commercial food businesses to donate edible food to feeding programs. • Support feeding programs in keeping food fresh and composting leftovers.
Provide technical assistance and consulting services to help commercial kitchens find efficiencies and reduce waste.
Engage in or support efforts to reduce product packaging.
Continue to support and promote yellow pages and junk mail opt-out service, and work to change regulations related to white pages delivery.
ADDITIONAL ACTIONS BY 2020 (NOT PART OF SWMP)
Consider launching a campaign to help households reduce food and drink waste through better planning, purchasing, storage or preparation.
Engage in efforts or establish new waste prevention policies, programs, and other activities that encourage extension of product life, such as repair, refurbishment, and reuse; product design and manufacturing practices that reduce the amount of material used; more efficient use of consumable products that result in less residual material; and less consumption of materials overall.

C&D SOURCE REDUCTION

Facilitate source reduction of C&D waste through salvage, deconstruction, and reuse.

In addition to increasing the recycling rate of C&D waste, the City can encourage source reduction through existing programs for sustainable building, and by implementing the new C&D-related programs recommended in the SWMP Revision.

KEY ACTIONS BY 2020
Expand investment in existing programs for sustainable building.
Support new and expanded C&D source reduction programs, including grading standards for salvaged structural lumber to expand the market, and house moving promotion.
Develop training programs for hybrid deconstruction techniques as an alternative to traditional demolition of residential and small commercial structures.
Continue to support and expand material exchanges, and promote building with salvaged and reclaimed materials, through LEED, Built Green, and other partners.

PRODUCT STEWARDSHIP AND PRODUCER RESPONSIBILITY

Encourage and support product stewardship and producer responsibility programs.

The principles of product stewardship include minimizing the environmental impacts of products and packaging throughout all lifecycle stages. The City has already played leading roles in successful efforts to advance product stewardship for specific materials at the local, state, and regional levels. By continuing to work with others to support the implementation of producer responsibility programs that embody the principles of product stewardship, the City can contribute to reductions in the life cycle impacts of products and packaging.

KEY ACTIONS BY 2020
Support ongoing efforts to add more products to Washington State's electronics product stewardship law, and to establish other statewide product stewardship programs for additional materials.
In collaboration with local, state, and regional partners, develop a strategic framework for product stewardship actions, including life cycle GHG emissions as one product selection criterion.
Pursue local regulation for select products, which may include take-back, where appropriate when state and regional action is not forthcoming.
Contribute to standards setting for "eco-labels" and environmental certifications for product and packaging suppliers.

SOURCE REDUCTION IN CITY OPERATIONS

Use the City's purchasing power to support source reduction, product stewardship, reuse, cradle-to-cradle manufacturing, and recycled-content production; and employ source reduction strategies in City operations.

City of Seattle purchasing guidelines call for the use of green products and practices, which include the purchase of recycled content products. The City can build on these existing guidelines and practices to further direct its purchasing power toward materials that achieve GHG emissions reductions.

In addition, the City can apply source reduction strategies to reduce the climate impacts of waste associated with its own operations.

KEY ACTIONS BY 2020
Expand city green purchasing efforts to city facilities construction and standard specifications for work in the public right-of-way.
Incorporate end-of-life management, product stewardship, and lifecycle GHG emissions considerations into City procurement guidelines (in addition to existing considerations, such as toxicity)**.**
ADDITIONAL ACTIONS BY 2020 (NOT PART OF SWMP)
Encourage or pilot "paperless" City operations for select City processes.
Explore opportunities to extend green purchasing standards and specifications to purchases made by City contractors.

COLLECTION, PROCESSING, AND DISPOSAL

Reduce emissions from waste management activities, including collection, processing, and transportation, and from landfill disposal.

GHG emissions from MSW management and disposal arise from three different sources: in-city collection, processing and transfer; long-distance transport; and from methane released from a landfill. Although the City has already made great strides in reducing emissions from these sources, even more can be done in the coming years.

Across all waste management activities, the City can monitor and adapt programs and management practices to incorporate new technologies and markets as they become available.

COLLECTION AND PROCESSING

Identify, test, and adopt practices that maximize efficiency in collection, processing, and transfer operations.

DISPOSAL AND LANDFILL MANAGEMENT

Explore opportunities to reduce methane emissions from landfills, and consider the City's ability to influence methane capture rates through contracting.

TECHNOLOGY AND MARKET INNOVATION

Monitor and adapt programs and management practices to incorporate new technologies and markets as they become available.

COLLECTION AND PROCESSING

Maximize efficiency in collection, and processing, and transfer operations.

Seattle Public Utilities has already taken steps to reduce the GHG emissions from collection operations. Examples of actions already taken include optimizing route efficiency, and requiring clean truck fuels as part of the 2009 collection contracts. The City can continue to look for opportunities to maximize the efficiency of collection and processing operations, and can also increase diversion of materials for recycling at City-operated transfer stations while maintaining efficient and convenient service for users.

KEY ACTIONS BY 2020
Pilot and consider transitioning to every-other week single-family garbage collection.
Make reuse and recycling drop-off more convenient at transfer facilities.
Evaluate opportunities for efficiency gains through alternative contracting approaches.

DISPOSAL AND LANDFILL MANAGEMENT

Explore opportunities to reduce methane emissions from landfills, and consider the City's ability to influence methane capture rates through contracting.

Since 1990, waste collected by the City has been sent by rail to the Columbia Ridge Landfill in Eastern Oregon. Environmental considerations guided the selection of both the landfill location and the method of transportation: arid conditions reduce methane emissions from landfills and rail transport results in fewer GHG emissions than transport by truck, even when transporting materials over longer distances. In addition, a landfill gas-to-electricity system was installed at the Columbia Ridge Landfill in 2008, and is estimated to capture approximately 75 percent of all methane produced. Seattle City Light purchases the electricity generated as part of its clean energy portfolio.

Because the current disposal contract goes to 2028, disposal alternatives are limited. However, the City can learn more about landfill methane capture and emissions reduction practices at other landfills to inform contracting process in advance of 2028, and can include a review of current methane capture and emissions reduction practices at Columbia Ridge in the existing contract review process.

ADDITIONAL ACTIONS BY 2020 (NOT PART OF SWMP)
Learn more about landfill methane capture and emissions reduction practices at other landfills to inform contracting process in advance of 2028.
Include a review of landfill methane capture and emissions reduction practices in the contract review process.

TECHNOLOGY AND MARKET INNOVATION

Monitor and adapt programs and management practices to incorporate new technologies and markets as they become available.

Best practices and technologies for increasing recycling and composting, reducing waste generation, and further reducing methane emissions associated with waste disposal are rapidly evolving, and may lead to additional opportunities to reduce the GHG emissions and other environmental impacts of waste generated in Seattle. The City can continue to monitor developments in the field, and adapt programs and practices as appropriate to achieve its goals for waste diversion, source reduction, and climate action.