



Picking Up the Pace Toward Zero Waste



Zero Waste



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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June 25, 2013

Mr. Timothy Croll
City of Seattle
Seattle Public Utilities
700 5th Avenue, Suite 4900
Seattle, WA 98124

RE: Ecology Approval of Seattle's Comprehensive Solid Waste Management Plan, Final Draft 2011

Dear Mr. Croll:

Ecology is pleased to approve Seattle's Comprehensive Solid Waste Management Plan, submitted for final review and consideration on May 24th, 2013. Ecology commends you for addressing all of the solid waste planning elements in the Plan update.

This Plan demonstrates Seattle's continued leadership in state solid waste management, prevention and policy development. Your extensive public involvement process and user-friendly graphics have enhanced the Plan's accessibility and use by Seattle's diverse stakeholders.

Lastly, your program goals and recommendations are thorough, forward thinking and strategic. The accompanying economic models which forecasted both financial and environmental benefits of your waste prevention and recycling recommendations are cutting edge and reflect Seattle's commitment to sustainability.

Sincerely,

Peter D. Christiansen
W2R Section Manager

Cc: Vicky Beaumont, Seattle Public Utilities
Taisa Welhasch, WA Department of Ecology



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The Honorable Michael McGinn

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Kate Hunt
Flathead Grid No. 1, 2007
Newspaper, steel, encaustic, twine
12 x 12 x 4.5 inches



Deborah Faye Lawrence
Tend & Befriend Utopia Tray, 2007
Acrylic, recycled paper collage and varnish on recycled tin TV tray
21.75 x 15.75 inches



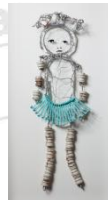
Ross Palmer Beecher
Candy Cobweb Quilt, 2003
Wire-stitched metal, paint wood, costume jewelry and found objects
35 x 35.5 x 3 inches



Julia Haack
Tracks 2, 2009
Latex paint on salvaged wood
54 x 44 x 3 inches



Evan Blackwell
The Disposable Heroes series, 2005
Various plastics
22 x 10 x 17 inches



Marita Dingus
Outdoor Baby (hanging), 2010
Pull tabs, champagne wire muselet, electric ceramic tubes, plastic curler attachments, glass
26 x 9 x 3 inches



Evan Blackwell
Untitled Eusapia, 2010
Wood window frames
36 x 38 x 2.5 inches



Marita Dingus
Fence with Rubber, Yellow and Green Plastic and Spools, 2011
Rubber strips, plastic objects, wood beads, buttons, thread spools, plastic dental trays
25 x 23 x 2 inches

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List of Acronyms

ADC	alternative daily cover
BIA	business improvement area
BPA	bisphenol A
C&D	construction and demolition
CESQG	conditionally exempt small quantity generator waste
CFC	chlorofluorocarbons
CFP	capital facilities plan
CIP	capital improvement program
COOP	Continuity of Operations Plan
DOC	Department of Corrections
DPD	Department of Planning and Development
DRRP	Disaster Readiness and Response Plan
EJNA	Environmental Justice Network in Action
EJSE	Environmental Justice and Services Equity
EOW	every other week
EPR	Extended Producer Responsibility
EPS	expanded polystyrene (Styrofoam)
FEMA	Federal Emergency Management Agency
FORC	Friends of Recycling and Composting
G&A	General and Administrative
G&E	General Expense
HHW	household hazardous waste
HMA	hot mix asphalt
IPM	integrated pest management
IWS	industrial waste stabilization
LEED	Leadership in Energy and Environmental Design
LFG	landfill gas
LHWMP	Local Hazardous Waste Management Program
MID	Metropolitan Improvement District
MOAs	memoranda of agreement
MRF	materials recovery facility
MRW	moderate risk waste
MSW	municipal solid waste
MTBE	methyl tert-butyl ether
NNYD	Northwest Natural Yard Days
NRDS	North Recycling Disposal Station
NTS	North Transfer Station
NWPSC	Northwest Product Stewardship Council
O&M	operations and maintenance
OCA	Office of City Auditor
OCC	old corrugated cardboard
PH:ARM	Pharmaceuticals from Households: A Return Mechanism
PSI	Product Stewardship Institute
PVC	polyvinyl chloride
RAS	recycled asphalt shingles
RCW	Revised Code of Washington
RPA	Recycling Potential Assessment
RTO	Recovery Time Objectives
SEPA	State Environmental Policy Act
SMC	Seattle Municipal Code

SPU	Seattle Public Utilities
SRDS	South Recycling Disposal Station
STS	South Transfer Station
SWP	Solid Waste Plan
WMI	Waste Management Incorporated

Executive Summary

This Plan revises Seattle's 1998 Solid Waste Management Plan, *On the Path to Sustainability*, as amended in 2004. The overall direction in the Plan remains the same. However, this update presents an opportunity to step back and take a deep look at our system and the possibilities for the future.

Properly managed solid waste protects public health and the environment. This Plan describes how Seattle will manage the city's solid waste over the next 20 years. It projects Seattle's needs for solid waste services and facilities. And the plan describes how those needs will be met and paid for. It also serves as a way to communicate planned solid waste strategies to the public and decision-makers. Washington State law requires the Plan.

Organization of this Plan

Readers of the 1998 Plan and 2004 Amendment will notice this Plan is organized somewhat differently. This Plan also goes into more depth on some topics. Seattle Public Utilities (SPU) saw this revision as a chance to create an extended resource document. Not only will it guide the work of the city's solid waste managers, the Plan will be a place to refer questions about Seattle's solid waste system. Seattle is an internationally recognized leader in solid waste management. As such, SPU frequently fields questions from across the nation and other countries.

The Plan is organized into 6 chapters as follows:

- Chapter 1 — Revising the Plan
- Chapter 2 — Seattle Solid Waste Trends
- Chapter 3 — Waste Prevention
- Chapter 4 — Seattle's MSW System: Managing Discards
- Chapter 5 — Other Seattle Solid Waste Programs
- Chapter 6 — Administration and Financing

These chapters describe in some detail major areas of solid waste management for the City of Seattle and list program recommendations. Chapter 1 briefly explains how this version of the solid waste management plan fits in with the previous plans. Chapter 2 lays out various trends as they have emerged from SPU research into what is new in solid waste generation in Seattle. Chapter 3 discusses waste prevention and its transitioning role in managing discards. Chapter 4 talks about what SPU does with the typical household and business waste that is produced in the

Executive Summary

city. Chapter 5 takes on other wastes the SPU system needs to manage. And finally, Chapter 6 discusses the Plan's future and financing.

New in this Plan is a summary matrix for the Plan's many recommendations. The Plan's chapters contain several strategies for reducing waste, for increasing recycling, and for managing the solid waste system. The recommendations matrix should help reviewers more quickly identify and better comment on their areas of concern. Full explanations of recommendations are contained in the relevant chapters. Key recommendations are highlighted throughout the Executive Summary.

The Plan features eight appendices:

- Glossary
- Zero Waste Resolution
- Public Involvement
- Recycling Potential Assessment (RPA) Model and Environmental Benefits Analysis
- Recycling Businesses Reporting
- State Environmental Policy Act (SEPA) Documents
- Seattle Solid Waste Advisory Committee (SWAC) Participation
- Resolution of Adoption

The information in these documents supports the Plan and its wide audience. The Plan has many purposes beyond its need to meet regulatory requirements. It must explain to the public how current and future programs work. The Plan aids City of Seattle staff in preparing and running solid waste programs. And it helps decision-makers in the City Council and SPU leadership select among the many options that will pick up the pace toward zero waste.

Revising the Plan

SPU started updating this Plan by reviewing past goals and plans, and taking stock of changes in the rules and regulations that bear on Seattle solid waste planning. To gather a range of public perspectives, we built early stakeholder involvement into our update process.

Various state and local regulations and guidelines influence Seattle's solid waste planning. Chief among the regulations is the State of Washington's 1969 legislation Revised Code of Washington (RCW) 70.95 requiring local solid waste plans. Local plans provide strategies for future solid waste management needs.

Until 1988, the City of Seattle prepared its solid waste plan as part of King County's local plan. In 1989, Seattle began its independent planning for solid waste management with the *Integrated Solid Waste Management Plan*. Ten



years later the city prepared the 1998 Solid Waste Management Plan, *On the Path to Sustainability*, which was updated by the 2004 Plan Amendment.

This 2011 Plan revises the 1998 Plan, capturing the trends in and influences on solid waste management since 2004. Washington State updated its solid waste plan *Beyond Waste* in 2009, and in 2010 published its new *Guidelines for Development of Local Comprehensive Solid Waste Management Plans and Plan Revisions*.

Locally, the Seattle City Council adopted Resolution 30990 (the *Zero Waste* resolution) in 2007. The resolution moved the City of Seattle's 60% recycling goal to 2012 (previously 1998, then 2008 and 2010). It also added actions and strategies for reaching the goal and set a new goal of 70% recycling by 2025.

Even though the planning backdrop has evolved, the basic concepts in Seattle's 1998 Plan prevail. This Plan upholds the 1998 Plan's key concepts of zero waste, waste prevention, sustainability, and product stewardship. The 2004 Amendment updated the 1998 Plan by accenting a streamlined municipal solid waste (MSW) system, food and yard waste (organics) diversion, and product stewardship.

The process to produce this Plan followed the steps of past plans. It involved a wide range of stakeholders, including the Seattle Solid Waste Advisory Committee, citizens, the solid waste industry, other interest groups, and staff from city departments. The Seattle City Council adopts the Plan before the Washington State Department of Ecology (Ecology) reviews and approves it.

The process to maintain the Plan will comply with state regulations. SPU will review the Plan at least as often as required by RCW 90.95, which is currently every 5 years. SPU and Ecology will confer as to whether the 5-year review calls for a Plan amendment or revision.

Further, SPU reviews progress yearly via an Annual Recycling Report. If programs do not perform as expected, we will figure out what the problems are and seek solutions. The desired solutions could potentially lead SPU to pursue a policy change that is significantly different from, or not contemplated in, this Plan. In that case, or because of other update triggers, we will confer with Ecology as to whether the change calls for a Plan amendment or revision.

Seattle Solid Waste Trends

Several major trends have emerged from the analysis for solid waste program planning. Over the next 20 years, Seattle's population will increase, with more growth in multi-family housing than in single-family housing.

And employment will shift away from manufacturing to more office-type business, health care, and services.

Seattle's waste generation tends to go up and down with the economy, as it did through the recent recession. Waste volumes will climb back up slowly from pre-recession levels.

Where does SPU get Data?

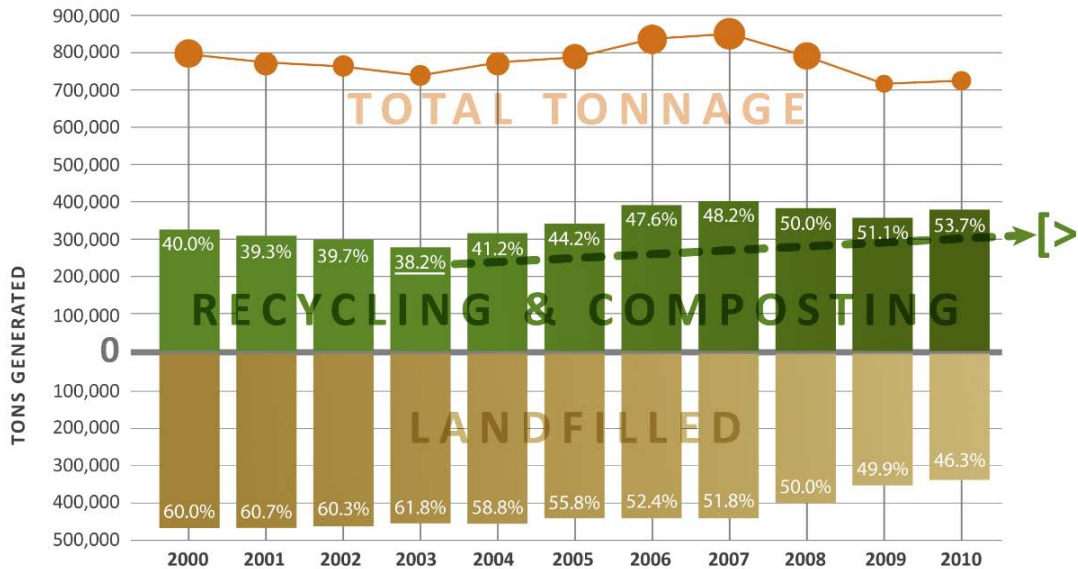
SPU uses a robust array of data and modeling tools to track recycling progress and analyze future programs. Data sources include routine detailed reports from SPU's contracted collectors and processors, and yearly reports from recycling businesses.

To see what people are putting in the garbage, SPU conducts waste composition studies on 4-year cycles by sector.

SPU's Seattle Discards model analyzes recycling program performance. The Recycling Potential Assessment model analyzes future programs. And we gather waste prevention data on a program-by-program basis.

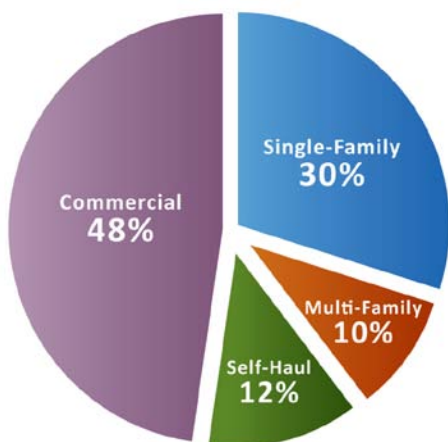
Even with the most recent economic fluctuations, recycling has steadily increased since 2003, reaching 53.7% in 2010, Seattle’s highest recycling rate yet.

Seattle’s Recycling Rate Continues to Climb



Four municipal solid waste (MSW) sectors contribute to the total waste generated in Seattle. They are the single- and multi-family residential, self-haul, and commercial sectors. In terms of total generated tons, the commercial sector is the largest, followed by the single-family sector.

Seattle’s MSW Generation by Sector 2010



As of 2010, the single-family sector recycled 70.3% of its waste. The multi-family sector recycled 29.6%, and the self-haul sector recycled 13.7%. The commercial sector recycled 58.9%.

Waste Prevention

SPU's waste prevention programs work to reduce waste volumes from households and businesses. These programs are sometimes referred to as waste reduction or *precycling*. Waste prevention programs also seek to reduce toxics in goods purchased by people, institutions and businesses. SPU's waste prevention programs include product stewardship activities, which seek increased producer responsibility for wastes.

SPU continues to organize waste prevention activities into programs for reuse, onsite organics management, sustainable building, and product stewardship. The 2007 *Zero Waste Resolution* drove several new waste prevention activities, with special focus on product stewardship. Waste prevention initiatives for the future build on existing programs to stretch for more results.

Reuse

Reuse includes programs to increase the amount of reusable goods that stay out of the garbage and go to places that can resell or use them. Reuse also includes developing end-markets for salvaged materials. Recommendations to increase reuse mainly focus on bolstering current programs.

Reuse recommendations include:

- Continuing and enhancing programs at the city's transfer stations to divert more materials before they enter the station, and to direct construction and demolition (C&D) loads to C&D recycling processors
- Continuing involvement and support for industrial commodities exchange
- Continuing and enhancing programs to divert reusables to charities
- Increasing electronics diversion by adding more products to Washington State's electronic product recycling law, and by promoting private donation of electronic products to places that refurbish them

Sustainable Building

Sustainable building programs largely address wastes from C&D. Supporting Green Building and LEED (Leadership in Energy and Environmental Design) helps building design meet goals for longevity, reuse, and recycling. Meeting such standards also requires more effort to reduce, reuse, and recycle building materials. SPU collaborates with the City of Seattle Department of Planning and Development (DPD) on sustainable building programs. One program includes changes to building permitting that removes disincentives to deconstruction and salvage and promotes reuse and recycling.

Sustainable building recommendations include:

- Continuing to expand C&D prevention and recycling programs. This includes developing grading standards for dimensional lumber and promoting house moving.
- Supporting the initiatives listed under C&D in this Plan

Onsite Organics

Two long-standing SPU programs—backyard composting and grasscycling—have been mainstays in helping customers to manage food and yard waste at home.

In recent years, SPU expanded onsite organics management by working with commercial food vendors. A 2008 law (Ordinance 122751) that requires quick-serve restaurants to use compostable or recyclable packaging reduces food-packaging waste. The law has also led more businesses to request organics pick-up service.

Another short-term SPU program helped large commercial kitchens to reduce food orders by tracking what was really needed.

Also, several commercial food businesses now donate surplus food to hunger-relief agencies. Recommendations to increase organics management carry forward mature programs and support the ramp up of new ones.



Onsite organics recommendations include:

- Continuing to promote backyard composting and grasscycling
- Continuing programs for commercial food businesses to donate edible food to feeding programs. Supporting feeding programs that keep food fresh and that compost leftovers. Helping commercial kitchens find efficiencies
- Focusing community grants on schools to increase food and yard waste collection
- Supporting schools and business to comply with food packaging regulations so that all food serve-ware is either recyclable or compostable

Product Stewardship

The City of Seattle supports a product stewardship approach to product end-of-life management through the Northwest Product Stewardship Council (NWPSC). The NWPSC is a coalition of governmental organizations that conducts studies and promotes product stewardship programs and policies. Product stewardship places responsibility and costs on producers and users of various products rather than on solid waste ratepayers.

SPU product stewardship activity ranges from supporting recycling laws (e.g. electronics, mercury-containing lighting), to education and take-back programs. SPU has also pursued action on disposable bags and food service ware as well as yellow pages phone book and junk mail opt-out registries. Based on a recent study, SPU has a list of other problem products to pursue for product stewardship as funding allows. Product stewardship recommendations support current approaches and build a framework for future actions.

Product stewardship recommendations emphasize:

- Developing a strategic framework for product stewardship actions
- Continuing to work with the NWPSC to promote product stewardship, and increase the range and effectiveness of product stewardship at the state level
- Continuing to support national dialogues through the Product Stewardship Institute
- Pursuing local regulation for select products when state and regional action is not forthcoming
- Tracking efforts toward product stewardship solutions, for example, producer fees for products commonly found in the city's curbside collection programs

Other Waste Prevention Programs

Other waste prevention programs focus on market development, support for the community, and the City of Seattle's own practices. Market development increases demand for targeted recycled materials such as carpet, plastic film wrap and asphalt shingles. Community matching grants support community-based waste prevention and recycling projects. SPU's Resource Venture, a contracted service, promotes conservation and provides technical assistance to businesses. SPU's new opt-out program, which consists of two registries—one for junk mail and the other for yellow pages out-out—helps residents and businesses reduce paper waste.

The City of Seattle Green Purchasing program helps city departments buy products that contain recycled content, are less toxic, are recyclable, and come with minimal packaging. The city's own program to reduce paper use, Paper Cuts, is now ingrained and no longer needs to continue. The recommendations for these other waste prevention programs mainly build on and expand existing programs.

Other waste prevention recommendations include:

- Expanding city green purchasing efforts to city facilities construction and standard specifications for work in the public right-of-way
- Continuing to seek packaging waste reduction and aggressive controls on chemicals
- Continuing the online junk mail and yellow pages phone books opt-out service, and working with phone book businesses to change Washington State regulations that require white pages phone book delivery

Additional recommendations for waste prevention are in the next section under [recycling](#).

Seattle's MSW System: Managing Discards

A network of public and private service providers and facilities collect, transfer, process, and landfill the city's discards. At each stage in the municipal solid waste (MSW) system, SPU makes choices about how to handle the materials. Our programs reflect our decisions. Many of this Plan's recycling recommendations will affect collection programs. Transfer will improve with the rebuilt stations. SPU will continue to use contracting as its strategy for processing and landfill disposal.

What is MSW?

Municipal Solid Waste, abbreviated as MSW, is solid waste that includes garbage, recycling, and organic material discarded from residential and commercial sources.

Collection

Collection is the stage in Seattle's MSW system at which SPU can most influence customer decisions and behaviors. New contracts begun in 2009 are the biggest change in collection since the 2004 Plan amendment. SPU contracted with a new collector and added to the list of accepted recyclables. The single-family sector added weekly organics pick-up, and meat and dairy were added to accepted organics for all customers. And most customers' collection day changed.



Single-Family Sector Collection. Single-family collection programs pick up garbage, recycling, and food and yard waste (organics). Households must sign up for garbage and organics service.

Customers automatically sign up for recycling with their garbage service. They may choose from several sizes of cans or carts. Price goes up with can size to encourage waste reduction and recycling. SPU's collection contractors pick up garbage and organics every week, and recycling every other week. SPU also supplies other pick-up services for extra large volumes, and for used motor oil and electronics.



Multi-Family Sector Collection. Multi-family collection services vary

according to a building's needs and space constraints. The City of Seattle requires multi-family buildings to subscribe to garbage service. Recycling service is available at no charge to multi-family buildings. Organics service was optional in this sector until September 2011, when it became a requirement. A building's needs determine container size and collection frequency, which determine the monthly fee. Price goes up with container size and collection frequency to encourage recycling.



Self-Haul Sector Collection. Self-haul customers include businesses who haul their own discards, and residential customers who have quantities of materials or materials unsuitable for curb service. The largest portion of self-hauled materials comes from commercial businesses and large institutions. Self-haulers collect their own materials and bring them to the city's two transfer stations.



Commercial Sector Collection. In the commercial sector, garbage is handled much as it is for residences. City collection contractors pick up from dumpsters of various sizes at least weekly and transfer the garbage at the two Seattle transfer stations. The monthly fee depends on container size and how often the container is picked up. Commercial businesses do not have to subscribe to garbage collection service. They can self-haul to a city or private transfer station.

Commercial recycling service is not required. Paper and cardboard, however, are not allowed in the garbage. For businesses, most recyclables are collected by a wide range of collectors using a variety of container types and sizes. The collectors take the materials to many types of transfer and processing facilities, and brokers.

A small part of this waste stream uses the same cart-based, city-contracted, bi-weekly collection service provided for the city's residential curbside recycling service. The city offers this service at no additional charge. Commercial customers with organics may choose city or private collection service.

Collection recommendations for this Plan aim either to increase recycling or to address the collection system structure.

Collection-related recycling strategies target a range of actions in different sectors:

- Enhancing and increasing education. Increasing awareness of customer options such as free extra set-outs for recycling and larger recycling carts
- Increasing enforcement
- Banning certain materials from disposal in garbage
- Introducing pet waste and diaper composting

Collection system structure recommendations include:

- Continuing to contract for collection services
- Continuing to monitor collection performance
- Considering changing single-family garbage collection from weekly to every other week after evaluating 2012 pilot project

Many recycling recommendations span the residential, commercial, and self-haul sectors. To avoid repetition, all recycling recommendations are in one list in the following section on [recycling](#).

Recycling

Recycling keeps precious resources out of the landfill by turning them into usable or marketable materials. While Seattle’s recycling rates are among the highest in the nation, there’s still more that we can do. The assertive recommendations in this Plan will take Seattle to new levels in city recycling.

Recycling isn’t a program in itself. Instead, it is a strategy carried out in waste prevention, market development, collection, processing, education, and other programs. Seattle is still working toward the 60% recycling goal set in the prior Plan and in the *Zero Waste Resolution*.





Each sector differs in what remains to be recycled from the garbage, and different factors shape recycling program design.

SPU analyzed several potential new recycling programs. The recommendations that resulted include keeping existing programs, implementing new ones in a phased manner, and

adjusting recycling goal years to align with projected achievement of 60% by 2015 and 70% by 2022. Each recommendation targets certain materials in the different sectors. Implementation is phased. Note: For some recommendations, SPU has chosen to move up the start year from that assumed in the analysis.



Recommended New Recycling Programs

		Single-Family	Multi-Family	Self-Haul	Commercial
					
Start	Program				
2010	Recyclable or Compostable Container Food Program (actual 2011)				✓
2012	Multi-Family Universal Organics Service*		✓		
	Increase Enforcement Residential Bans	✓	✓		
	Carpet Take-Back			✓	✓
	Increase Enforcement Commercial Paper Ban				✓
	Junk Mail, Yellow Pages Opt-Out*	✓	✓		
2013	Ban of Asphalt Paving, Concrete, Bricks*			✓	✓
	Floor Sorting of C&D Loads (>50%)			✓	
	Enhanced Commercial Organics Outreach				✓
	New Education - Small Business Free Recycle Carts, Audit Top Self-Haulers			✓	✓
	Restore Education to All Sectors	✓	✓	✓	✓
2014	Single-Family Organics Ban	✓			
	Reusable Bag Campaign*	✓	✓		
	Asphalt Roofing Shingles Ban			✓	
	Extend Commercial Ban to Additional Material				✓
	Clean Wood Ban			✓	✓
	Plastic Film Ban			✓	✓
2015	Multi-family Organic Waste Ban		✓		
	Plastic Bag Ban (from stores)*	✓	✓		
	Paint Product Stewardship Solution	✓	✓	✓	✓
	Divert Reusables From Self-Haul			✓	
2016	Market Development for Textiles	✓	✓		
	Commercial Organics Ban				✓
	Pre-scale Recycling			✓	
2017	C&D in Commercial Ban				✓
2020	Pet Waste & Diapers Composting	✓	✓		

✓ Projected implementation

* Actual earlier start year:

Multi-family Universal Organics Service 4Q2011

Junk Mail, Yellow Pages Opt-out 2011

Asphalt, bricks, concrete paving ban legislation already passed, effective 2012

Reusable Bag Campaign 2012

Plastic Bag Ban 2012

Transfer Facilities

Transfer stations compile collected garbage and other materials into larger loads for hauling to their next stop. SPU's transfer stations have outlived their useful lives. We are looking forward to finishing the projects to rebuild them.

The city owns and operates two transfer facilities. The North Recycling and Disposal Station (NRDS) is in the Wallingford neighborhood. The South Recycling and Disposal Station (SRDS) is next to the South Park neighborhood. The two stations receive collector trucks and material self-hauled by businesses and residents. Two private transfer stations supplement the capacity of the city stations.

SPU also runs two moderate risk waste (MRW) collection facilities. Seattle provides this service on behalf of the Local Hazardous Waste Management Program (LHWMP). The MRW facility at SRDS serves the city's south end. The other serves the north end at a location near Aurora Avenue and 125th NE.

SPU does not expect to see self-haul recycling rate increases until the city's two transfer stations are rebuilt. We expect to complete the first phase of the south rebuild in 2012. The north facility is scheduled to open in 2014. SPU postponed planning for the former SRDS. However, goals for the property include a separate recycling drop-off area, a reuse area, and a new drop-off facility for moderate risk waste.

Meanwhile, smaller projects keep the existing stations safe and reliable.

Transfer facility recycling recommendations, as seen in the recycling recommendations shown in the preceding chart, include strategies for self-haul that focus on:

- Banning certain materials from disposal in the garbage
- Making reuse and recycling drop-off more convenient
- Educating self-haulers about recycling opportunities

Other transfer facility recommendations keep current stations running as well as possible, and plan for running and taking advantage of the rebuilt city stations.

Processing and Disposal

Processing and disposal are the end stages of managing the materials in Seattle's MSW system. Seattle contracts with different companies for recycling processing, organics composting, and landfill disposal. This Plan proposes to stay with the contracting approach to end-stage MSW management. Processing and disposal innovations would come through the contracts with private service providers.

Recycling Processing. Rabanco, Ltd, currently holds the contract for recycling processing at their Rabanco Recycling Center and Transfer Station. It is through negotiating the contract that Seattle defines (or "designates") what materials can be collected for recycling. Rabanco facility improvements now allow more types of materials, such as specific plastics, in addition to traditionally recycled materials like paper, bottles, and cans. The last time Seattle added materials to the recyclables list was in 2009, when the new collection contracts started. All recycling collected from the city's residential sector goes to the Rabanco facility.

Recycling from the commercial sector can go to the Rabanco facility. Or if private sector haulers collect it, recycling can go to open market recyclers and traders. Seattle requires private sector recyclers to turn in reports once a year. The reports provide SPU with data on what materials recyclers have handled and in what amounts.

Recycling processing recommendations center on contracting, and propose:

- Continuing with contracting out city collected recycling processing
- Continuing to allow open-market processing services for material privately collected from commercial sector
- Evaluating the best contracting approach to prepare for 2013 to 2019 contract end

Organics Processing. Organics processing (composting) now includes yard waste, all food waste, compostable (food-soiled) paper, and other compostable food packaging. The city has had a contract for processing yard trimmings at Cedar Grove since the facility opened in 1989. Seattle's organics go to the Cedar Grove Maple Valley facility, and organics from north Seattle go to their facility near Everett. As regional demand for composting increases, Cedar Grove and others are developing options to increase capacity.



Organics processing recommendations center on contracting, increasing capacity, and compostable materials, including:

- Continuing with contracting out city-collected organics processing
- Continuing to allow open-market processing services for commercial sector organics
- Supporting composting capacity development—including possible anaerobic digestion. Pursuing competitive contract process after current contract ends
- Continuing to encourage backyard organics composting
- Supporting changes to food packaging and labeling in ways that promote composting and reduce contamination, and enhance contamination outreach and enforcement

Executive Summary

Landfill Disposal. The city manages landfill disposal through its contract with Waste Management of Washington (Waste Management) for rail haul and disposal of all non-recyclable waste (garbage). The waste goes to their Columbia Ridge Landfill in Gilliam County, Oregon. This contractual arrangement has been in place since 1990. The current contract expires in 2028.

Projections for Columbia Ridge and other regional landfills indicate ample capacity for decades. Any significant changes to processing and disposal would be built into contracts for those services.



Landfill disposal recommendations center on the contracting approach:

- Continue with contracting for landfill disposal
- Do not pursue or authorize direct combustion of mixed MSW. Do not authorize such facilities
- Monitor and consider emerging conversion technologies
- Evaluate contracting approach and disposal alternatives as 2028 nears

Emergency Management

Seattle's geography and built environment put it at risk for catastrophic events such as earthquakes, pandemics, and terrorism. Two specific emergency response plans apply to the city's solid waste system.

Disaster Debris Management Plan. The city's Disaster Debris Management Plan sets guidelines for removing and processing debris after a disaster that creates large volumes of waste.

Continuity of Operations Plan. SPU's Continuity of Operations Plan (COOP) describes how critical functions, including solid waste, will be maintained in case of a serious emergency. It also sets timeframes for restoring solid waste services. SPU will finish drafting the COOP in 2015.

Other Wastes

In addition to the municipal solid waste (MSW) system, Seattle manages other programs for wastes outside the MSW system. For the first time, Seattle's Plan includes program proposals for construction and demolition (C&D) debris. The historic landfills, Clean City, and special waste programs continue their vital services and do not propose major changes. Moderate risk waste management will continue to operate under the Local Hazardous Waste Management Program.

Construction and Demolition (C&D) Debris

The largest waste stream outside the MSW system is C&D. The city's prior solid waste plans included neither specific goals nor objectives for C&D. Work over the past few years now positions SPU to propose C&D programs and the first-ever C&D recycling goal.

SPU currently contracts with Waste Management for C&D collection. C&D generators may use this service or they may self-haul. C&D goes to a mix of private and public transfer and processing facilities both inside and outside of Seattle. C&D waste generation is considerably more variable compared with MSW because it is highly sensitive to economic upswings and downturns.

In the years since the 2004 Amendment, SPU conducted studies and developed ways to measure C&D. At this point, we can now propose programs and set goals for this waste stream. The *Zero Waste Resolution* directed these and other actions.

Planning for C&D overlaps somewhat with MSW. This is because some debris from construction and demolition enters the MSW system, mostly at the city's transfer stations from self-haulers. This Plan's MSW recycling recommendations address this small portion of material that enters the MSW stream. In addition, sustainable building programs encourage waste prevention in both the C&D and MSW sectors.

SPU worked with industry stakeholders to develop C&D recycling options for this Plan update. Our analysis showed that current programs would maintain the current C&D recycling rate, which was 61.4% in 2010. If all recommendations are implemented, Seattle's C&D recycling rate should reach 70% by 2020.



C&D recommendations set goals, target certain materials, set facility standards, and modify permit requirements, including:

- Creating citywide C&D recycling goal of 70% by 2020
- Developing, with private processors, an advanced level facility certification process
- Banning metal, cardboard, plastic film wrap, carpet, and scrap gypsum (new construction) by 2013. Banning clean wood and tear-off asphalt shingles by 2014
- Requiring recycling reports from contractors as a term of their final permit
- Continuing and building on existing programs for LEED and Built Green, salvage, hybrid deconstruction, and coordinating with waste prevention activities

The materials bans will be phased in. All bans will begin with a period of education.

Historic Landfills

The historic landfills program tends to the old in-city and city-owned landfills that took Seattle's garbage before 1987. Until the 1960s, Seattle disposed of its garbage in landfills within the city limits. Between 1966 and 1986, the City of Seattle operated two major landfills south of Seattle: Midway Landfill and Kent Highlands Landfill.

No major new initiatives are being considered for Seattle's historic landfills. Instead, it's more a matter of staying the course on the decisions and investments that we have already made.

Historic Landfills for the planning period will be managed to:

- Continue to monitor and maintain Kent Highlands and Midway in accordance with regulatory requirements and to the satisfaction of adjacent communities
- Reduce monitoring requirements as appropriate, with regulatory concurrence
- Continue to monitor and control landfill gas at Interbay and Genessee sites
- Respond to problems at historic in-city landfills on a case-by-case basis
- Pursue possible site de-listing and future beneficial use of the Kent Highlands and Midway landfill sites

Clean City Programs

Clean City programs are an extension of traditional City of Seattle solid waste services that help keep streets and neighborhoods clean and healthy. Clean City programs abate graffiti, illegal dumping, and litter. The city funds Clean City separately from solid waste programs.

Anti-Graffiti Program. The anti-graffiti program removes or paints out graffiti on public property. SPU, other city departments, other agencies, and the public are all vital for making this program successful.

SPU runs a reporting hotline, abates graffiti on certain structures, performs enforcement, and engages the public's support. Anti-graffiti recommendations will make program operations more effective and respond to evolving needs.



Anti-graffiti recommendations include plans to:

- Implement the 2009 to 2010 private property task force's recommendations
- Encourage reporting, translation of outreach materials, and development of strategic partnerships to leverage resources
- Amend the Seattle Municipal Code (SMC 12.A-08-020) to include stickers in the list of prohibited materials
- Redeploy abatement resources across city departments to better address graffiti abatement on parking pay stations
- Enhance community involvement and public education. Develop a customer satisfaction measurement tool
- In the long-term, increase program emphasis on prevention, apprehension and prosecution, and interdepartmental and inter-agency collaboration

Illegal Dumping Program. The illegal dumping program addresses illegally dumped materials on public property. SPU program staff inspect the dumping sites. Washington State Department of Corrections crews clean up the materials as needed. Illegal dumping recommendations will improve abatement.

Illegal dumping recommendations include plans to:

- Improve enforcement protocol
- Provide additional staff training
- Expand use of existing database

Litter Programs. SPU provides several programs designed to reduce litter. **Adopt-a-Street** offers tools for volunteers to collect litter. **Street Side Litter** places collection cans along city streets in business areas. **Public Place Recycling** pairs recycling with litter cans. **Litter Collection in Parks** places collection cans in city parks. Washington State’s secured load requirement reduces litter and road debris.

Litter program recommendations include a key item to address Metro bus zones. Many bus shelters are shifting to canopies attached to privately-owned buildings. Clear roles, responsibilities, and design standards will ensure these shelters receive proper litter services.

Moderate Risk Waste

The Local Hazardous Waste Management Program (LHWMP) manages moderate risk waste in Seattle and other areas of King County. Moderate risk waste (MRW) is hazardous waste generated by residents and in small quantities by businesses and institutions. This includes two categories of waste:

1. *Household hazardous waste (HHW)*, which is generated by residents, and
2. *Conditionally exempt small quantity generator waste (CESQG)*, which is generated in small quantities by businesses, schools, and other institutions.

Four local government bodies jointly manage the LHWMP: SPU, King County, Public Health - Seattle & King County, and the county's suburban cities. To address changes that have occurred within King County, the LHWMP has committed to:

- Providing the maximum possible number of service hours at Seattle's MRW collection facilities
- Collecting CESQG on an on-going basis
- Expanding outreach for hazardous materials collection services, and providing outreach to the elderly, homebound, non-English speaking population, and historically underserved communities
- Working to secure state product stewardship legislation for unwanted medicines, mercury-containing lighting, and paint

Special Wastes

Like moderate risk waste, special wastes can't go into the regular municipal solid waste (MSW) system. But they aren't hazardous enough to qualify as "dangerous" as defined by state and federal law. These wastes require special handling and disposal because of regulatory requirements or other reasons. Toxicity, volumes, or particular handling issues are some of those reasons. In some cases, special wastes can be landfilled if properly managed. In order to ensure proper management, SPU will:

- Continue to maintain up-to-date referral information for special wastes
- Continue programs to create better end-of-life solutions for problem materials, such as state-level product stewardship laws for fluorescent lighting and consumer electronics

Administration and Financing

SPU fully expects to maintain the ability to carry out the Plan: SPU’s organization and financial health are stable. Carrying out the plan will also require robust education efforts. Since monthly solid waste rates will rise with or without the new programs, education will be vital. Customers will need to know how to work with the new programs to keep their personal costs as low as possible.

Organization and Mission of Seattle Public Utilities

Solid waste functions are spread throughout SPU. As a department within the City of Seattle, SPU houses three direct-service utilities. They are the Water, Drainage and Wastewater, and Solid Waste utilities. Our organizational structure consists of seven branches. The Utility Systems Management branch is the main planning arm for SPU. The other branches either implement solid waste programs or provide indirect support such as finance and human resources. SPU strives to deliver reliable, efficient, and environmentally responsible services.

Education

SPU places a high priority on educating customers about recycling and waste reduction. Educating our customers about the impacts of their behavior—and highlighting the programs available to them—has helped develop the city’s identity as one of the greenest in the nation.

SPU’s many solid waste education efforts are built into customer service and overall communications. We use newsletters and calendars, the web, our inspection team, transfer station staff, and other means to inform customers. Commercial customers receive billing and service information through their private collection services. The Resource Venture and SPU’s key accounts team also help educate commercial customers.



SPU’s educational programs have been highly effective. The Washington State Recycling Association recognized the City of Seattle with a Recycler of the Year Award for the Better Recycling Starts March 30 Campaign. This campaign eased the 2009 transition to new collection contracts. Recycling recommendations in this Plan include plans to enhance education.

Financing

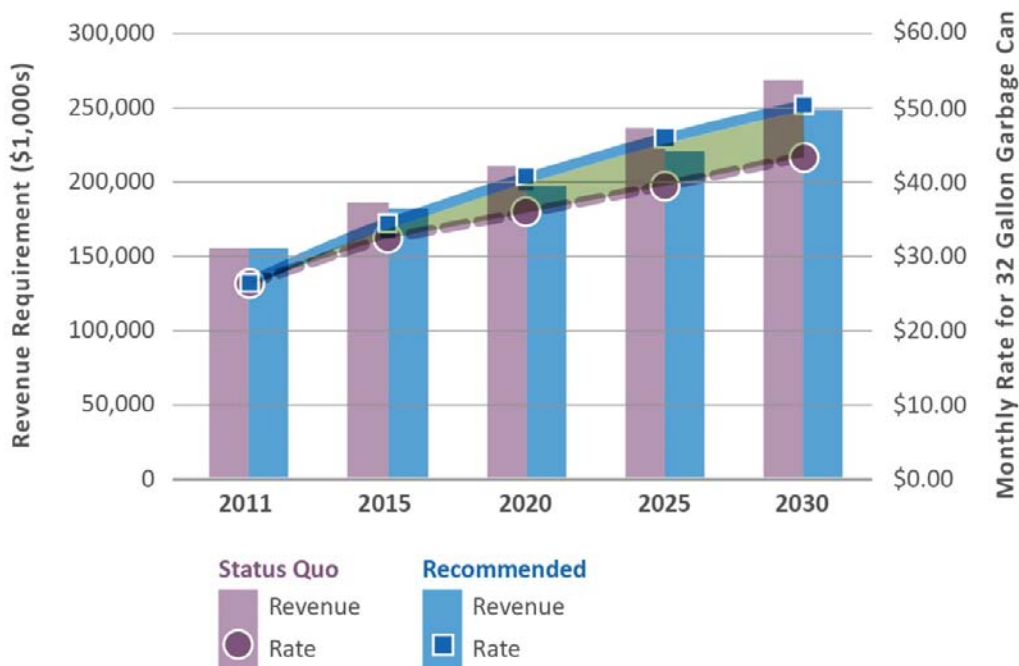
SPU’s financial analysis on the package of recommendations in this Plan revealed three important effects.

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First, overall system costs will be less with the recommendations in this Plan than they would be by continuing the current programs (status quo). Thus, the revenue needed to operate the solid waste program will be less than if we did not change the status quo.

With the recommended programs, revenue needed in 2030 drops from about 270 million to 249 million. Solid waste system costs decrease because the recommended programs reduce garbage tons moving through the system. And waste reduction and recycling cost less than putting garbage in the landfill. Although the new programs have implementation costs, savings from reducing garbage more than offset the costs of the new programs.

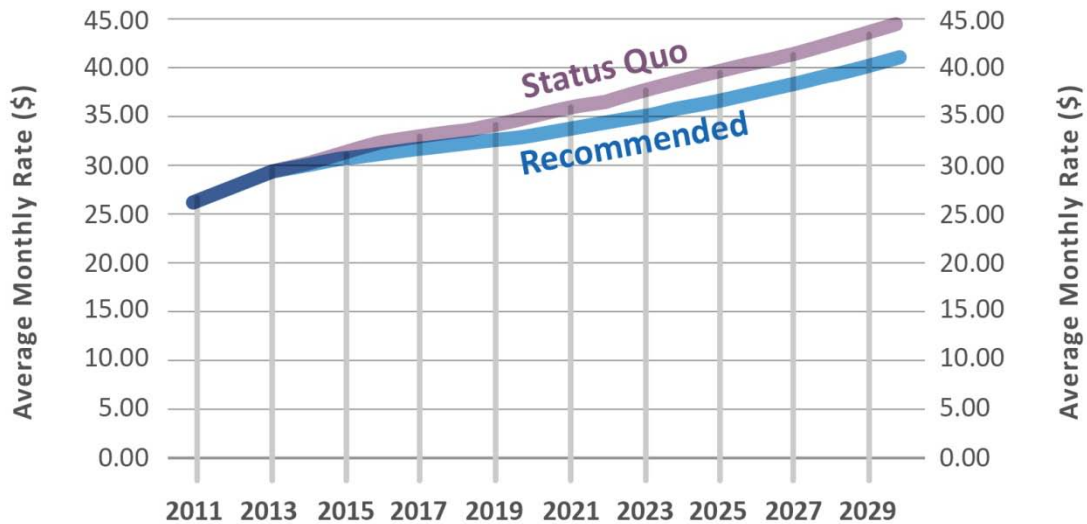
Revenue Needs will Rise More Slowly and Monthly Rates will Rise More Steeply with Recommended Programs



Secondly, the monthly rate (fee) per can will rise higher than if SPU does not change programs as shown by the green shaded area in the chart above. For example, by the year 2030 with the recommended programs the monthly can rate will be about \$50 as compared with \$44 under the status quo. As customers decrease their amount of garbage, they reduce the size, number or frequency of containers they need. In turn, this reduces the number of service units from which SPU can collect rates. Thus, the rate per unit rises. Under the status quo, rates will rise to cover inflation and any new capital investments.

The third effect is the most important to the customer. Most customers will pay less for their monthly service than if SPU does not change programs, even though the per-can rate will rise. Customers tend to switch to a smaller garbage can size and less frequent pick-up as they reduce waste and recycle more. The following figure illustrates this effect. In the year 2030, average customer monthly payments will be almost \$8 a month lower than if programs didn't change. However, rates will be sensitive to actual customer demand.

Average Customer Costs will Rise More Slowly



System costs are comprised of operations and maintenance (O&M) and capital costs. About 60% of annual O&M costs come from SPU contracts for collection, processing, and disposal. The remainder comes from running the city's two transfer stations and other SPU solid waste functions. Annual ratepayer revenue pays for most O&M costs. This revenue comes from monthly rates, or fees, that our customers pay for their collection service.

Solid waste financing also needs to cover capital investments. SPU will rely heavily on borrowing over the next few years. We are in a period of large capital improvements. Projects are underway to upgrade both of the city's recycling and disposal stations. SPU is also a party to the cleanup of the old landfill in the South Park Development project. To finance capital spending, SPU relies primarily on borrowing and to a lesser extent on rate revenues.

All SPU's spending and rate decisions go through an exacting decision process and comply with well-developed financial policies. The Mayor and City Council approve all program and financial decisions.

For in-depth information on any topic in the Executive Summary, refer to the relevant chapter in the Plan. A summary of the recommendations from this Plan begins on the next page.

Executive Summary

Seattle Solid Waste Management Plan Recommendations Summary

These are summaries of the recommendations from City of Seattle’s 2011 Solid Waste Plan. They are organized by strategy and then by program. The reference number is for feedback to SPU.

**Indicates where to find additional information about the recommendations in the Plan*

Strategy	Program	Ref No	Recommendation	2011 Plan Section*
Recycling	MSW	R1	Continue to operate current programs as a base for future new recycling programs	MSW Recycling Recommendations 4.3 Collection 4.2* Transfer 4.4*
	MSW	R2	Continue to require quick-serve restaurants, food courts and institutional food services to use recyclable or compostable single-use food service products	MSW Recycling Recommendations 4.3
	MSW	R3	Implement universal multi-family organics service in 2012 (Actual start Sep 2011)	MSW Recycling Recommendations 4.3 Collection 4.2*
	MSW	R4	Increase enforcement of residential bans in 2012	MSW Recycling Recommendations 4.3 Collection 4.2*
	MSW	R5	Implement carpet take-back program in 2012	MSW Recycling Recommendations 4.3 Waste Prevention 3.0*
	MSW	R6	Increase enforcement of commercial paper ban in 2012	MSW Recycling Recommendations 4.3 Collection 4.2*
	MSW	R7	Implement junk mail and yellow pages phone books opt-out (Implementation accelerated to 2011)	MSW Recycling Recommendations 4.3 Waste Prevention 3.4*
	MSW	R8	Implement ban on landfill disposal of asphalt paving, concrete and bricks in 2013 at city transfer stations and in commercial garbage containers. (Legislation adopted 2011)	MSW Recycling Recommendations 4.3 Collection 4.2* Transfer 4.3*
	MSW	R9	Implement transfer station floor sorting program for C&D loads that appear at least 50% C&D material in 2013	MSW Recycling Recommendations 4.3 Transfer 4.3*
	MSW	R10	Enhance commercial organics outreach in 2013	MSW Recycling Recommendations 4.3 Collection 4.2*
	MSW	R11	Launch new education programs in 2013 to small business about free recycle carts and audits of top self-haulers.	MSW Recycling Recommendations 4.3 Collection 4.2* Transfer 4.3*
	MSW	R12	Restore education funding for all sectors to pre-recession levels in 2013	MSW Recycling Recommendations 4.3 Collection 4.2* Transfer 4.4*
	MSW	R13	Add food waste and compostable paper to single-family organics disposal ban in 2014	MSW Recycling Recommendations 4.3 Collection 4.2*
	MSW	R14	Launch a reusable bag campaign in 2014 (Implementation accelerated to 2012)	MSW Recycling Recommendations 4.3 Waste Prevention 3.0*
	MSW	R15	Implement asphalt roofing shingles landfill disposal ban 2014 at city transfer stations	MSW Recycling Recommendations 4.3 Transfer 4.4* C&D 5.1*
	MSW	R16	Extend commercial landfill disposal ban to include additional materials 2014	MSW Recycling Recommendations 4.3 Collection 4.2*
	MSW	R17	Implement clean wood landfill disposal ban 2014 at city transfer stations and in commercial garbage containers	MSW Recycling Recommendations 4.3 Collection 4.2* Transfer 4.4* C&D 5.1*

Recommendations Summary

Strategy	Program	Ref No	Recommendation	2011 Plan Section*
Recycling	MSW	R18	Implement a plastic film landfill disposal ban 2014 at city transfer stations and in commercial garbage containers	MSW Recycling Recommendations 4.3 Collection 4.2* C&D 5.1*
	MSW	R19	Implement multi-family organics (food and compostable paper) landfill disposal ban 2015	MSW Recycling Recommendations 4.3 Collection 4.2*
	MSW	R20	Implement a plastic bag ban (from stores) in 2015 (accelerated to 2012)	MSW Recycling Recommendations 4.3 Collection 4.2*
	MSW	R21	Implement a product stewardship program for architectural paint in 2015	MSW Recycling Recommendations 4.3 Waste Prevention 3.0*
	MSW	R22	Enhance diversion of reusables from self-haul loads in 2015	MSW Recycling Recommendations 4.3 Transfer 4.4* Waste Prevention 3.4*
	MSW	R23	Launch market development for textiles in 2016	MSW Recycling Recommendations 4.3 Waste Prevention 3.0*
	MSW	R24	Implement commercial organics (food and compostable paper) landfill disposal ban in 2016	MSW Recycling Recommendations 4.3
	MSW	R25	Implement pre-scale recycling at the rebuilt transfer stations in 2016	MSW Recycling Recommendations 4.3 Transfer 4.4*
	MSW	R26	Implement a commercial landfill disposal ban on C&D materials 2017 in commercial garbage containers	MSW Recycling Recommendations 4.3 Collection 4.2* CC&D 5.1*
	MSW	R27	Implement pet waste and diaper composting program in 2020	MSW Recycling Recommendations 4.3 Collection 4.2*
	MSW	R28	Revise city's recycling goals to 60% by 2015 and 70% by 2022	MSW Recycling Recommendations 4.3
	MSW	R29	Consider changing single-family garbage collection to every other week after evaluating 2012 pilot project	Collection 4.2 MSW Recycling 4.3*
	C&D	CD1	Set the C&D recycling rate goal to 70% by 2020	C&D 5.1
C&D	CD2	Continue current programs linked to Waste Prevention: LEED and Built Green, voluntary salvation assessment promotion, change definitions for waste diversion credits	C&D 5.1 Waste Prevention 3.0*	
C&D	CD3	Develop training programs for hybrid deconstruction techniques for residential and small commercial structures	C&D 5.1 Waste Prevention 3.0*	
C&D	CD4	Develop and widely promote a certification program for C&D processing facilities in coordination with the local industry and other solid waste planning jurisdictions	C&D 5.1	
C&D	CD5	Implement a disposal ban for asphalt, bricks and concrete paving 2012 at construction jobsites and private transfer stations	C&D 5.1 MSW Recycling Recommendations 4.3*	
C&D	CD6	Implement landfill disposal bans for certain materials by 2013 at construction jobsites and private transfer stations: metal, and cardboard, plastic film wrap, carpet, scrap gypsum from new construction	C&D 5.1	
C&D	CD7	Implement landfill disposal ban for certain materials in 2014 at construction jobsites and private transfer stations: clean wood, tear-off asphalt shingles	C&D R5.1 MSW Recycling Recommendations 4.3*	

Strategy	Program	Ref No	Recommendation	2011 Plan Section*
System & Facilities	Collection	C1	Continue the current practice of contracting for collection services to encourage competition and achieve best prices for SPU ratepayers	Collection 4.2
	Collection	C2	Continue monitoring contractor performance to ensure contractors meet obligations and customers receive promised service	Collection 4.2
	Transfer Facilities	TF1	Continue to maintain all structures, systems and equipment to keep existing transfer stations safe and functional as long as they are being used	Transfer 4.4
	Transfer Facilities	TF2	Ensure interim major equipment purchases compatible with new transfer facilities	Transfer 4.4
	Transfer Facilities	TF3	Seek opportunities to make services equitable for all Seattle populations, particularly the historically under-served	Transfer 4.4
	Transfer Facilities	TF4	Continue trip reduction strategies	Transfer 4.4
	Transfer Facilities	TF5	Implement Alaskan Way Viaduct Contingency Plan for managing materials from city's north transfer facility during viaduct closure	Transfer 4.4
	Transfer Facilities	TF6	Rebuild the north and south transfer stations	Transfer 4.4
	Transfer Facilities	TF7	Continue planning for staffing and equipment transition to new transfer facilities	Transfer 4.4
	Transfer Facilities	TF8	Renew redevelopment planning of existing SRDS when resources are available and decisions on the north site are made	Transfer 4.4
	Processing and Disposal	PD1	Continue to contract for processing of recyclable materials collected by SPU contracts	Recycling Processing 4.5
	Processing and Disposal	PD2	Continue to allow open market processing for recyclable materials privately collected from the commercial sector	Recycling Processing 4.5
	Processing and Disposal	PD3	Evaluate optimal contracting approach in anticipation of 2013/2016/2019 contract end dates	Recycling Processing 4.5
	Processing and Disposal	PD4	If recycling gains lag, consider testing "dirty" materials recycling facility (MRF)	Recycling Processing 4.5
	Processing and Disposal	PD5	Continue to contract for processing of organic materials collected by SPU contracts	Yard and Food Waste Composting 4.5
	Processing and Disposal	PD6	Continue to allow open market processing services for organic materials collected from the commercial sector	Yard and Food Waste Composting 4.5
	Processing and Disposal	PD7	Support composting capacity development. Pursue competitive process after current contract end dates 2013/2014/2015	Yard and Food Waste Composting 4.5
	Processing and Disposal	PD8	Support changes to food packaging and labeling in ways that promote composting and reduce contamination	Yard and Food Waste Composting 4.5 Waste Prevention 3.0*
	Processing and Disposal	PD9	Continue to contract for landfill disposal	Disposal 4.5

Recommendations Summary

Strategy	Program	Ref No	Recommendation	2011 Plan Section*
System & Facilities	Processing and Disposal	PD10	Do not pursue or authorize direct combustion of mixed solid waste. Do not authorize such facilities	Disposal 4.5
	Processing and Disposal	PD11	Monitor and consider emerging technologies	Disposal 4.5
	Processing and Disposal	PD12	Evaluate contracting approach and disposal alternatives as the long-term disposal contract comes to an end in 2028	Disposal 4.5
	Historic Landfills	HL1	Continue to monitor and maintain Kent Highlands and Midway in accordance with regulatory requirements and to the satisfaction of adjacent communities	Historic Landfills 5.2
	Historic Landfills	HL2	Reduce monitoring requirements as appropriate, with regulatory concurrence	Historic Landfills 5.2
	Historic Landfills	HL3	Continue to monitor and control landfill gas at Interbay and Genessee	Historic Landfills 5.2
	Historic Landfills	HL4	Respond to problems at historic in-city landfills on a case-by-case basis	Historic Landfills 5.2
	Historic Landfills	HL5	Pursue possible site de-listing and future beneficial use of the Kent Highlands and Midway landfill sites	Historic Landfills 5.2
Clean City	Graffiti	CC1	Implement the 2009 – 2010 private property anti-graffiti task force's recommendations	Anti-Graffiti 5.3
	Graffiti	CC2	Anti-graffiti: amend the Seattle Municipal Code (SMC 12.A.08.020) to include stickers in the list of prohibited materials	Anti-Graffiti 5.3
	Graffiti	CC3	Redeploy abatement resources across City departments to better address graffiti abatement on multi-space parking pay stations	Anti-Graffiti 5.3
	Graffiti	CC4	Enhance community involvement and public education activities: develop community outreach and engagement plan; convene anti-graffiti outreach coalition	Anti-Graffiti 5.3
	Graffiti	CC5	Develop and launch a tool to determine customer satisfaction with SPU's anti-graffiti services	Anti-Graffiti 5.3
	Graffiti	CC6	Long-term, increase emphasis on prevention, apprehension and prosecution and interdepartmental/interagency collaboration	Anti-Graffiti 5.3
	Illegal Dumping	CC7	Further develop enforcement protocol and enhance staff training for safe and effective enforcement	Illegal Dumping 5.3
	Illegal Dumping	CC8	Long-term, increase emphasis on enforcement	Illegal Dumping 5.3
	Litter	CC9	Develop formalized roles, responsibilities and design standards for bus zone transition projects	Litter 5.3
Moderate Risk Waste	Moderate Risk Waste	MRW1	Maximize service hours at Seattle's collection facilities as much as possible	Moderate Risk Waste 5.4
	Moderate Risk Waste	MRW2	Continue collecting CESQG collection	Moderate Risk Waste 5.4
	Moderate Risk Waste	MRW3	Expand outreach for hazardous materials collection services, target outreach to elderly, homebound, non-English speaking population and historically underserved communities	Moderate Risk Waste 5.4

Strategy	Program	Ref No	Recommendation	2011 Plan Section*
MRW	Moderate Risk Waste	MRW4	Work to secure state product stewardship legislation for unwanted medicines, mercury-containing lighting and paint	Moderate Risk Waste 5.4 Waste Prevention 3.4*
Special Wastes	Special Wastes	SW1	Continue to maintain up-to-date referral information for special wastes	Special Wastes 5.6
Waste Prevention	Reuse	WP1	Continue existing transfer station reuse programs until new facilities done: contractor diversion, charity drop boxes. Reprogram as needed for new facilities	Waste Prevention 3.4 Transfer Facilities 4.4*
	Reuse	WP2	Develop educational materials to direct contractors to source-separated drop-off services or C&D mixed load processors in lieu of SPU's transfer stations	Waste Prevention 3.4 Transfer Facilities 4.4* C&D 5.1*
	Reuse	WP3	Collaborate with charities and others to continue to find ways to divert usable items and materials	Waste Prevention 3.4
	Reuse	WP4	Continue to support city policies requiring donation of usable electronic equipment to schools	Waste Prevention 3.4
	Reuse	WP5	Promote private donation of electronic products to organizations that refurbish them	Waste Prevention 3.4
	Reuse	WP6	Continue involvement and support for industrial commodity exchange programs, focusing on market development for recycled commodities as needed	Waste Prevention 3.4
	Reuse	WP7	Work with the NWPSC to expand Washington State's Electronic Product Recycling Law to include additional types of electronic products	Waste Prevention 3.4
	Reuse	WP8	Continue to ensure electronics disposal meets or exceeds Basel Action Network (BAN) Electronic Recycler's Pledge of True Stewardship, Ecology's Environmentally Sound Management and performance Standards for Direct Processors, and upgraded BAN e-Stewards standards as may be adopted by the Seattle City Council	Waste Prevention 3.4
	Reuse	WP9	When renewing in 2014, upgrade electronics disposal standards in Seattle's surplus electronics contract to the new BAN e-Stewards standards	Waste Prevention 3.4
	Sustainable Building	WP10	Continue support for current C&D prevention and recycling programs: changes in City of Seattle building codes that provide incentives for salvage and deconstruction; U.S. Green Building Council (LEED); collaboration with Department of Planning and Development	Waste Prevention 3.4 C&D 5.1*
	Sustainable Building	WP11	Support new and expanded C&D prevention and recycling initiatives: grading standards for salvaged structural (dimension) lumber to expand the market; house moving promotion	Waste Prevention 3.4 C&D 5.1* Transfer Facilities 4.4*
	Organics Onsite	WP12	Continue to promote home onsite organics management: backyard composting of food scraps and landscape waste; grasscycling	Waste Prevention 3.4
	Organics Onsite	WP13	Continue programs for commercial onsite organics management: promote restaurant and retail donations to food banks and feeding programs; work with food banks to minimize their disposal costs by diverting more food waste to composting; promoting food purchasing and preparation efficiency as a complement to programs designed to increase commercial food waste composting	Waste Prevention 3.4

Recommendations Summary

Strategy	Program	Ref No	Recommendation	2011 Plan Section*
Waste Prevention	Organics Onsite	WP14	Offer consulting services to help restaurants and institutional kitchens buy and serve food with less waste, if funds available	Waste Prevention 3.4
	Organics Other	WP15	For the near term, focus grant monies on schools to establish system wide approaches to school food and yard waste collection	Waste Prevention 3.4
	Organics Other	WP16	Continue to press the quick-serve restaurant industry, food courts and institutional food service businesses to use primarily compostable single-use food service products	Waste Prevention 3.4
	Organics Other	WP17	Move forward with efforts that support food packaging regulation and food waste composting: proper containers are used in public areas of quick-serve restaurants and other food service businesses; food service businesses have collection contracts so materials are sent to proper processing; extensive public education to support food packaging programs	Waste Prevention 3.4
	Product Stewardship	WP18	Develop a strategic framework for product stewardship actions, including assessment of products and materials that can be regulated locally or at the state level	Waste Prevention 3.4
	Product Stewardship	WP19	Continue work with NWPSC, LHWMP and others to increase the range and effectiveness of product stewardship at the state level	Waste Prevention 3.4
	Product Stewardship	WP20	Continue support for proposed state legislation regarding return of unwanted, leftover pharmaceuticals, medical sharps and carpet	Waste Prevention 3.4
	Product Stewardship	WP21	Monitor and support the development of plans for producer-paid end-of-life management for mercury-containing lighting products resulting from 2010 state legislation	Waste Prevention 3.4
	Product Stewardship	WP22	Work with partners to determine the best strategies and timing for new state legislation covering products such as latex and oil-based paint	Waste Prevention 3.4
	Product Stewardship	WP23	Support the NWPSC dialog regarding product stewardship for packaging and printed paper	Waste Prevention 3.4
	Product Stewardship	WP24	Continue support for the Product Stewardship Institute and the national product dialogs the institute supports	Waste Prevention 3.4
	Product Stewardship	WP25	Pursue local legislation for select products, which may include take-back, where state or regional action is not forthcoming	Waste Prevention 3.4
	Product Stewardship	WP26	Track efforts toward product stewardship solutions for products and materials included in city's curbside collection program	Waste Prevention 3.4
	Product Stewardship	WP27	Monitor product stewardship programs' material reuse and recovery rates; evaluate future support compared to curbside, other existing programs	Waste Prevention 3.4
Product Stewardship	WP28	Emphasize job creational potential of product stewardship programs	Waste Prevention 3.4	
Other WP	WP29	Push city departments toward additional green purchasing decisions in facilities construction	Waste Prevention 3.4	

Strategy	Program	Ref No	Recommendation	2011 Plan Section*
Waste Prevention	Other WP	WP30	Work for guidelines requiring more recycling and recycled-content in “standard” specifications for work in public right-of-way	Waste Prevention 3.4
	Other WP	WP31	Seek packaging waste reduction and more controls on chemicals purchasing to reduce toxics exposures for staff and other city facility users	Waste Prevention 3.4
	Other WP	WP32	Contribute to standards setting for “ecolabels” and suppliers – from green office supplies to green fleets	Waste Prevention 3.4
	Other WP	WP33	Incorporate end-of-life management and product stewardship into purchasing	Waste Prevention 3.4
	Other WP	WP34	City continues its role as a resource for businesses that are utility customers and other government agencies	Waste Prevention 3.4
	Other WP	WP35	Continue to include PaperCuts as a part of outreach to businesses whenever possible	Waste Prevention 3.4
	Other WP	WP36	Continue community grants, with near-term focus on schools organics reduction	
	Other WP	WP37	Continue to use and monitor the online junk and catalog opt-out service establish in 2011	Waste Prevention 3.4
	Other WP	WP38	Given a favorable decision in the yellow pages publishers’ lawsuit seeking to block the Phone Books Opt-Out Registry, strongly promote the opt-out service to reduce paper use	Waste Prevention 3.4
	Other WP	WP39	Work with phone book companies and publishers to change Washington Utilities Commission regulations that require delivery of white pages phone books	Waste Prevention 3.4

Key

- C&D construction and demolition
- CESQG conditionally exempt small-quantity generator
- LEED Leadership in Energy and Environmental Design
- LHWMP Local Hazardous Waste Management Program
- MRF materials recovery facility
- MSW municipal solid waste
- NWPSC Northwest Product Stewardship Council
- Ref No reference number
- SMC Seattle Municipal Code
- SPU Seattle Public Utilities
- WP waste prevention