

Office of City Auditor

City of Seattle Anti-Litter Efforts

April 19, 2011



City of Seattle Office of City Auditor

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To help the City of Seattle achieve honest, efficient management and full accountability throughout City government. We serve the public interest by providing the Mayor, the City Council, and City department heads with accurate information, unbiased analysis, and objective recommendations on how best to use public resources in support of the well-being of the citizens of Seattle.

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City of Seattle
Office of City Auditor



April 19, 2011

The Honorable Michael McGinn
Seattle City Councilmembers
City of Seattle
Seattle, Washington 98104

Dear Mayor McGinn and City Councilmembers:

Attached is our report "City of Seattle Anti-Litter Efforts." This audit examined what the City of Seattle does to reduce and prevent ground/street litter in public spaces such as sidewalks, streets, and parks and contains recommendations for improving the City's current efforts. We also examined the City's litter laws and enforcement rates and researched other jurisdictions' successful litter laws and innovative efforts to abate litter.

Eleven City departments reviewed and provided comments on drafts of this report. We appreciate the cooperation of officials from Seattle Public Utilities, Seattle Department of Transportation, Seattle Parks and Recreation, the Department of Planning and Development, Seattle Municipal Court, the Seattle Police Department, the Seattle City Attorney's Office, the Department of Neighborhoods, the Department of Finance and Administrative Services, the Seattle Police Department, and the City Budget Office during the audit process. We would also like to thank the Metropolitan Improvement District Business Improvement Area and King County Metro Transit for working with us during the audit process.

If you have any questions regarding this audit, please contact the Auditor-in-Charge, Megumi Sumitani at 206-233-1096, megumi.sumitani@seattle.gov, or me at 233-1095, davidg.jones@seattle.gov.

Sincerely,

A handwritten signature in black ink that reads "David Jones".

David Jones
City Auditor

Attachment

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Introduction

Introduction

This performance audit of the City of Seattle's (City) anti-litter efforts is an adjunct to our July 28, 2010 audit of the City's anti-graffiti efforts¹. In February 2010, Seattle City Councilmembers Tim Burgess and Tom Rasmussen asked the City Auditor to assess the sufficiency of the City's graffiti and litter laws, examine best practices, and develop recommendations for reducing and preventing graffiti and litter. We initiated our work on litter, together with graffiti, in February 2010, but decided to separate the issues into two audits. We published our report on the City's anti-graffiti efforts in July 2010 and resumed our work on litter at that time. We considered and applied what we learned from our work on the graffiti audit in this review of street/ground litter in an urban environment.

The Councilmembers requested this audit based on feedback from community members who expressed concern about not feeling safe in their neighborhoods, and on councilmembers' concerns about "street disorder" in Seattle. In their request letter to the City Auditor (see Appendix A) Councilmembers Burgess and Rasmussen provided examples of recent academic studies that establish a connection between street disorder² and higher rates of crime³.

Report Organization

This report consists of three parts. Part I responds to the questions posed by City Councilmembers Burgess and Rasmussen in their February 4, 2010 letter that asked our office to audit the City's anti-graffiti and litter clean-up efforts. In Part II, we offer operational recommendations for improving the City's litter clean-up efforts. And in Part III, we discuss how the City's approach to reducing physical disorder, such as graffiti and litter, can be part of a larger, comprehensive approach designed to reduce crime and revitalize neighborhoods in areas identified as crime hot spots.

Purpose

The purpose of this audit was to:

- 1) Examine the City of Seattle's litter laws, enforcement rates, and what the City of Seattle does to reduce and prevent litter in public spaces such as sidewalks, streets, and parks;
- 2) Report on innovative efforts to abate litter which other jurisdictions are successfully implementing that Seattle might consider replicating;
- 3) Offer operational recommendations for building on and improving what we do; and
- 4) Research effective approaches and best practices that the City of Seattle can consider for reducing and preventing physical disorder such as graffiti and litter using the best available knowledge from recent academic studies. Our work in this area is being addressed in greater detail in a separate report.

¹ *City of Seattle Anti-Graffiti Efforts: Best Practices and Recommendations*, published July 28, 2010

² In this report, we use the term "physical disorder" to refer to "street disorder" in Councilmembers Burgess and Rasmussen's February 4, 2010 letter.

³ 1) 2008 Scienceexpress Report: *The Spreading of Disorder* by Kees Keizer, Siegwart Lindenberg, and Linda Steg, Faculty of Behavioral and Social Sciences, University of Groningen, Netherlands and 2) *Criminology*, Volume 46, Number 3, August 2008: *Policing Crime and Disorder Hot Spots: A Randomized Controlled Trial* by Anthony A. Braga and Brenda J. Bond

Scope

Parts I and II: In these two sections of the report, we focused on how the City of Seattle deals with street/ground litter, which is solid waste that is misplaced or improperly discarded that accumulates at ground level such as on sidewalks, streets, and open spaces.⁴ Our scope excluded the act of illegal dumping and junk storage.

Part III: In this section of our report, we discuss how the City's approach to reducing physical disorder, such as graffiti and litter, can be part of a larger, comprehensive approach designed to reduce crime and revitalize neighborhoods in areas identified as crime hot spots. The section includes a brief discussion of our research on reducing physical disorder in crime hot spots and refers to our report, ["Addressing Crime and Disorder in Seattle 'Hot Spots': What Works?"](#).

Methodology

We reviewed City ordinances and laws; interviewed officials from multiple City departments⁵; reviewed relevant City policies, procedures, and studies; met with an official from the Metropolitan Improvement District (MID) which is Seattle's Downtown Business Improvement Area; performed a "walk-through" with MID representatives to obtain first-hand observations about their work and challenges regarding litter issues; interviewed MID members about their efforts to clean up their property and adjacent rights-of-way; and researched best practices from other jurisdictions, non-profit organizations, and academic research. Eleven City departments reviewed and provided comments on drafts of this report. We also shared information on research evidence and best practices on a hot spot-based approach to addressing neighborhood crime and physical disorder with officials from the Law Department, the Seattle Police Department, Seattle Public Utilities, the Department of Parks and Recreation, the Department of Neighborhoods, and the Mayor's Office.

Our work was conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives, except we did not test the reliability of the computer-generated data that we received from City departments.

⁴ See Appendix T: *Litter Background (What is street/ground litter? Types of street/ground litter and where is it found? Who litters?)*

⁵ We worked with City officials from Seattle Public Utilities, Seattle Department of Transportation, Department of Parks and Recreation, Department of Planning and Development, Department of Neighborhoods, Seattle Municipal Court, Law Department, Seattle Police Department, Department of Finance and Administrative Services, and the Mayor's Office.

Part I: Responses to Seattle City Council Questions about Litter

In this section, we first provide a summary of our answers to the questions posed by City Councilmembers Burgess and Rasmussen in their February 4, 2010 letter that asked our office to audit the City's anti-graffiti and litter clean-up efforts. (See Appendix A for the Councilmembers' letter to the City Auditor.) The summary is then followed by a longer, more detailed set of answers to the City Councilmembers' questions.

Summary of Our Responses to City Council Questions: Short Version

What are the current City ordinances regarding street/ground litter?

According to the Seattle Municipal Code, "litter" means solid waste such as, but not limited to, disposable packages and containers dropped, discarded or otherwise disposed of upon any property (Seattle Municipal Code 21.36.014).

The Seattle Municipal Code (SMC 21.36.400 through 21.36.450) spells out three types of litter regulation:

1. Litter in the amount equal to or less than one cubic foot that doesn't contain hazardous substances;
2. Litter in an amount greater than one cubic foot that doesn't contain hazardous substances; litter of this type and quantity is usually referred to as solid waste;
3. Potentially dangerous litter in any amount.

Litter offenses are civil infractions. The penalty⁶ for littering non-hazardous material (one cubic foot or less) is \$50 and littering of non-hazardous material in an amount greater than one cubic foot has a maximum penalty of \$250. Discarding potentially hazardous litter in any amount has a maximum penalty of \$500.

Should business owners be required to clean-up and remove litter that is adjacent to their properties?

Property owners or occupants in the City of Seattle are responsible for removing accumulated litter in the rights-of-way abutting their property, whether the owner deposited the litter there or not, **if the litter volume is greater than one cubic foot**. Except for hazardous substances or litter that is an immediate threat to the health or safety of the public, City law is silent on responsibility for litter removal in an amount equal to one cubic foot or less.

Are these laws sufficient?

Current City of Seattle laws do not address litter from a visual-disorder or cleanliness standpoint, and there is nothing to require property owners to clean and remove litter in amounts equal to or less than one cubic foot from their sidewalks and other adjacent rights-of-way.

⁶ In this report, the penalties cited are base penalties. Statutory assessments may be added to the base penalties in some cases.

If the City Council wishes to provide the City with the means to require property owners to clean-up and remove all litter that accumulates on their own property and adjacent rights-of-way, not only from a public safety standpoint but also from a visual disorder or cleanliness standpoint, it should consider:

Working with the Law Department to:

- Replace the reference in the Seattle Municipal Code to one cubic foot (a volume standard) with a qualitative standard such as “unsightly” or “unsanitary,” and
- Provide some kind of notice to the owner that a violation exists, along with time to correct the violation.

Before doing so, the City Council should explore whether these laws should be enforced proactively (regular inspections and citations for violations) or reactively (complaint-based). The level of enforcement effort given to these offenses will undoubtedly affect the resulting efficacy of the laws

How frequently are Notices of Infraction written for violations of the litter laws?

Littering infractions represented 1.8 percent (114 out of 6,437 cases) of the total non-traffic infractions filed in 2008 in the Seattle Municipal Court and 2.2 percent (136 out of 6,111 cases) of total non-traffic infractions filed in 2009.

How are the different City departments responsible for dealing with street litter coordinating with one another? Should these efforts be centralized in one department or office?

We list the City departments and programs that deal with street/ground litter in Appendix D. The City spends approximately \$ 8.2 million for these programs⁷.

Most City departments and programs that address litter are essentially stand-alone, and are able to operate effectively with little interdepartmental coordination. Exceptions to this are:

1. SPU and Parks, who have a memorandum of agreement under which SPU provides General Fund Solid Waste Tax revenues to fund Parks’ solid waste collection and disposal activities⁸, and
2. The Clean and Green Seattle program, an interdepartmental volunteer program for which the City sponsors monthly neighborhood cleanup events in different neighborhoods across the city.

In Part II of this report, we offer operational recommendations for improving the City’s litter clean-up efforts within the current, decentralized structure.

⁷ This estimate is based on 2009 costs provided by City departments.

⁸ Maintenance activities within park boundaries, including litter receptacle servicing and ground litter collection have been and continue to be the responsibility of the Department of Parks and Recreation. These maintenance activities were funded directly by the General Fund through 1991. The collaboration between Parks and SPU began in 1992 after it was proposed to discontinue direct funding from the General Fund and initiate funding via the solid waste tax revenues to ensure consistent service levels for these activities. While funding for these activities changed in 1992 to the General Fund’s solid waste tax revenues, the responsibility to perform these maintenance activities remains with Parks.

What is the City doing to educate local residents and business owners about:

- their responsibilities according to the law;
- the negative effects of litter; and
- the positive benefits of clean neighborhoods?

Public education and volunteer efforts directed toward litter prevention and clean up in Seattle are found in the Adopt-A-Street, Spring Clean, and Clean and Green Seattle programs – all City-sponsored volunteer programs.

We did not find any public education efforts by the City on the negative effects of litter and only one example of public education on the responsibilities of private owners to clean up their adjacent rights-of-way.⁹

What is the City doing to encourage community organizations to involve themselves in the effort to achieve cleaner, safer streets?

The City's efforts directed toward litter prevention and clean up in Seattle are found in the Adopt-A-Street, Spring Clean, and Clean and Green Seattle programs – all City-sponsored volunteer programs (see *Appendix P: City Operate Four Distinct Volunteer Programs to Address Litter* for an overview of these programs).

The City could strengthen its efforts to encourage community organizations to work for cleaner, safer streets by using a “hot spot” approach. This includes efforts to persuade community organizations to work with law enforcement in a comprehensive approach designed to reduce crime and revitalize neighborhoods in areas identified as crime hot spots. Such an approach includes policing, code enforcement, and community engagement strategies, as well as City-sponsored efforts to reduce graffiti and litter. For more information about the hot spot approach, please see our report, “Addressing Crime and Disorder in Seattle ‘Hot Spots’: What Works?”

How do these approaches compare to best practices?

We found that best practices in anti-litter public education and community involvement have been established by Keep America Beautiful, and require a comprehensive approach, which includes:

- 1) creating a collaborative coalition framework,
- 2) engaging community volunteers,
- 3) using data-driven evaluation, and
- 4) leveraging funding opportunities.

Our best practices research on addressing physical disorder, such as litter and graffiti, indicates that the best way to affect positive change is to take a comprehensive approach and focus resources on strategically selected and manageable areas - hot spots. Our report, “Addressing Crime and Disorder in Seattle ‘Hot Spots’: What Works?” discusses efforts by the Clean and Green Seattle program and the

⁹ http://www.cityofseattle.net/economicDevelopment/biz_district_guide/Sidewalk_Cleaning.htm

Seattle Police Department on hot spot type efforts. The paper also identifies what the City of Seattle needs to do to implement a coordinated hot spot approach for addressing physical disorder.

How effective are the private sector programs that target litter removal, such as the program run by the Metropolitan Improvement District?

The City of Seattle has not conducted a litter study. As a result, we have no baseline statistics or trends to measure how City or private sector programs are performing.

Two limited litter surveys done by a private citizen (one in 2003 and one in 2009) concluded that the MID is “much cleaner” than Belltown, an adjacent section of Seattle that does not have a cleaning ambassador program like the one that the MID runs. The MID has 34 full time Cleaning Ambassadors who spend about 75 percent of their work day sweeping sidewalks and curbs, and collecting trash daily. They also pressure-wash sidewalks and clean alleys.

Are there innovative efforts other cities have successfully implemented that Seattle might replicate?

Given the current budget constraints facing the City of Seattle, we focused our analysis of potential litter innovations on strategies that might result in cost sharing, cost recovery, or additional revenue for the City, and identified the following efforts for future consideration:

- Litter Tax on Cigarettes. San Francisco’s Cigarette Litter Abatement Fee Ordinance imposes \$0.20 fee per pack of cigarettes sold within the city limits. The fee is used to pay for the costs to collect and remove cigarette litter and for public outreach and education to curb improper cigarette litter disposal. The constitutionality of the fee has been challenged by several convenience store operators and Phillip Morris USA (a cigarette manufacturer) and the case is expected to go to trial.
- Advertisements on Litter Receptacles. Several vendors of litter receptacles are offering free receptacles and free litter pick-up in exchange for advertising space on those receptacles. Examples of such partnerships are found in Boston, Chicago, and in the United Kingdom. For Seattle, this or similar arrangements would require an ordinance change.
- Potential Revenue Generation from No Parking Fines for Street Sweeping. A number of cities charge fines for parking on streets during posted street cleaning times. Imposing such fines allows the street sweepers to operate efficiently and generates some revenue for the city.

Our Responses to City Council Questions: Long Version

The following are the longer, more detailed answers to the questions posed by City Councilmembers Burgess and Rasmussen in their February 4, 2010 letter.

Question 1: What are the current City ordinances regarding street/ground litter?

How litter is legally defined in the City of Seattle

According to the Seattle Municipal Code, “litter” means solid waste such as, but not limited to, disposable packages and containers dropped, discarded or otherwise disposed of upon any property (SMC 21.36.014).

The City of Seattle’s laws related to litter are contained in the Litter Control Code, a subchapter of the City’s Solid Waste Code (see Seattle Municipal Code 21.36.400 through 21.36.450). Littering¹⁰ applies to: throwing, discarding, or depositing litter in the amount of one cubic foot or less which does not contain hazardous substances¹¹ on any street, sidewalk, or other public property within the City, on any private property within the City and not owned by the person, or in or upon any body of water within the jurisdiction of the City, whether from a vehicle or otherwise, except:

1. When the property is designated by the State or City for the disposal of litter or other solid waste and the person is authorized to use the property in such manner; or
2. When litter is deposited into a litter receptacle, garbage container or other solid waste container in a manner in which the litter will be prevented from being carried or deposited by the elements or otherwise on any street, sidewalk, or other public or private property.

Features of Three Types of Solid Waste: Litter, Solid Waste, Potentially Dangerous Litter

The following chart lists the features for the three types of solid waste addressed in the City’s Solid Waste Code, one of which is litter.

Chart 1: Types of Solid Waste and Their Definitions

Type of Solid Waste	Definition
Litter	Solid waste such as, but not limited to, disposable packages and containers dropped, discarded or otherwise disposed of upon any property (SMC 21.36.014).
Solid Waste	All putrescible ¹² and nonputrescible solid, semisolid and liquid wastes, including but not limited to garbage, rubbish, yardwaste, ashes, industrial wastes, infectious wastes, swill, construction, demolition and land clearing wastes, abandoned vehicles or parts thereof, and recyclable materials. This includes all liquid, solid and semisolid materials which are not the primary products of public, private, industrial, commercial, mining and agricultural

¹⁰ SMC 21.36.410 Littering

¹¹ “Hazardous substances” means any liquid, solid, gas or sludge, including any material, substance, product, commodity or waste, regardless of quantity, that exhibits any of the physical, chemical or biological properties described in WAC 173-303-090, 173-303-101, 173-303-102 or 173-303-103. (SMC 21.36.014).

¹² “Putrescible” waste means solid waste that contains organic matter capable of being decomposed by microorganisms and of such a character and proportion as to cause obnoxious odors and to be capable of attracting or providing food for birds or animals.

	operations. Solid waste includes, but is not limited to, sludge from wastewater treatment plants, seepage from septic tanks, wood waste, dangerous waste, hazardous substances and problem wastes. (SMC 21.36.016)
Potentially Dangerous Litter	Litter that is likely to injure a person or cause damage to a vehicle or other property and includes: <ol style="list-style-type: none"> 1. Cigarettes, cigars or other tobacco products that are capable of starting a fire; 2. Glass; 3. A container or other product made predominantly or entirely of glass; 4. A hypodermic needle or other medical instrument designed to cut or pierce; 5. Raw human waste, including soiled baby diapers, regardless of whether the waste is in a container of any sort; and 6. Nails or tacks. (SMC 21.36.415B)

Charges and Penalties for City Litter Offenses

Property owners or occupants in the City of Seattle are responsible for removing accumulated litter in the rights-of-way abutting their property, whether the owner deposited the litter in the right-of way or not, **if the litter volume is greater than one cubic foot**. Unless it contains any hazardous substances or is an immediate threat to the health or safety of the public, City law is silent on responsibility for litter removal in an amount equal to or less than one cubic foot.

Litter offenses are civil infractions whereas property destruction or graffiti offenses, with property damage of less than \$750¹³, are criminal gross misdemeanor offenses. Thus, litter charges are not considered to be as serious offenses as graffiti. The penalty for littering is \$50 per incident, unless the litter contains dangerous substances, in which case the penalty rises to \$500 per incident.

The following chart shows charges for litter offenses, by type of offense, along with their associated penalties.¹⁴

Chart 2: Litter Offenses/Infractions and Associated Penalties

Litter Offense and Charge		Penalty per Seattle Municipal Code ¹⁵ and State Law ¹⁶
Littering/dumping ¹⁷ equal to or less than 1 cubic foot (Seattle Municipal Code [SMC] 21.36.410)	Class 3 Civil Infraction	\$ 50
Littering/dumping ¹⁸ greater than one cubic foot (SMC 21.36.420)	Class 1 Civil Infraction	Maximum \$ 250
Accumulation of solid waste ¹⁹ greater than one cubic foot (SMC 21.36.425)	Class 3 Civil Infraction	\$ 50
Discarding potentially dangerous litter, any amount (SMC 21.36.415)	Class 1 Civil Infraction	Maximum \$500

¹³ Property destruction where the damage to the property is more than \$750 is a felony crime under RCW 9A.48.080.

¹⁴ In this report, the penalties cited are base penalties. Statutory assessments may be added to the base penalties in some cases.

¹⁵ Base/default penalty not including statutory assessments

¹⁶ RCW 7.80.120

¹⁷ Non-hazardous waste

¹⁸ Non-hazardous waste

¹⁹ Non-hazardous waste

Who Can Enforce the Litter Laws?

Both Seattle Public Utilities and the Seattle Police Department can issue Notices of Infraction (citations) to enforce provisions of the City's Solid Waste Code.²⁰ Although SPU has the authority to issue citations for littering violations, SPU officials told us they do not have the staffing capacity to perform this function.

Seattle Park Rangers²¹ also have the authority to issue Seattle Police Department Notices of Infraction (NOIs) for littering in City parks, under SMC 18.12.260. Although the Park Rangers started issuing NOIs for Parks code²² violations in August 2009, as of August 2010, they reported that they had not issued any for littering.

See Question 2 for data on Seattle Police Department littering citations.

The Street Use Code Requires Property Owners to Clean Sidewalks Only If They Are Unsafe for Public Travel

The City of Seattle Street Use Code (SCM Title 15), specifically, SMC 15.72.010 (Notice to clear or clean sidewalk) states that:

Whenever, in the judgment of the Director of Transportation, the condition of any sidewalk, or any portion thereof, in the City is such as to render the same unfit or unsafe for purposes of public travel, or require clearing, cleaning, repair or renewal, said official is authorized, empowered and directed to serve upon the owner of the property immediately abutting upon the sidewalk, a notice advising such owner of the condition thereof and instructing him/her to clear, clean, repair or renew the same.

According to one of the managers in the SDOT division which enforces this code, its provisions are very narrowly defined as *transportation related*. Specifically, adjacent property owners need to maintain their sidewalks for the sole purpose of keeping these sidewalks open for pedestrian travel. SDOT stated that under the code, they can require property owners to clear or clean sidewalks only when a sidewalk is "unfit or unsafe for purposes of public travel." To this end, SDOT frequently directs its efforts to enforcing requirements such as fixing broken sidewalks, and less frequently to tasks such as clearing sidewalks of slippery leaves. This manager also told us that it is hard to imagine an instance in which litter, although a nuisance, would rise to the level of causing the sidewalk to be unsafe.

Should business owners be required to clean-up and remove litter that is adjacent to their properties?

In Seattle, business owners are already required to remove solid waste, that is, litter that accumulates adjacent to their properties in a volume greater than one cubic foot (SMC 21.36.425). We found that

²⁰ SMC 21.36.922D: ..."the "enforcement officers" authorized to enforce the provisions of the Solid Waste Code are: (1) the Director of Seattle Public Utilities; (2) authorized representatives, assistants or designees of the Director of Seattle Public Utilities; and (3) commissioned officers of the Seattle Police Department and persons issued non-uniformed special police officer commissions by the Chief of Police with authority to enforce such provisions."

²¹ The Seattle Park Rangers are delegated authority to issue Seattle Police Department Notices of Infraction from the Superintendent of the Department of Parks and Recreation. The Park Rangers have a presence in the following parks: Waterfront, Pier 62/63, City Hall, Occidental, Regrade, Pioneer Square, Victor Steinbrueck, Westlake, South Lake Union, Hing Hay, McGraw Square, Tilikum Place, Westlake Square, Myrtle Edwards, Freeway, Plymouth Pillars, Kobe Terrace, Belltown P-patch, Children's International, Cascade Playground, Denny, and Counter Balance.

²² Seattle Municipal Code Title 18, Parks Code

citations are rarely issued for violations of this ordinance. (See Chart 3 under Question 2 below). There were only 2 infractions filed in Seattle Municipal Court in 2008 and only 1 in 2009 for violations of this code section. We were unable to determine whether these infractions were for illegal accumulations of solid waste on the owner's property or on adjacent rights-of-way. And, as mentioned previously, City law is silent on responsibility for litter removal in an amount equal to one cubic foot or less.

Vacant Buildings and Litter

Seattle Municipal Code (SMC) 22.206.200 states that vacant buildings and their premises must be maintained free from litter.²³ A Department of Planning and Development official stated that they typically receive approximately 200 complaints annually about vacant buildings. The department's primary focus in the enforcement of minimum standards for vacant buildings²⁴ is the maintenance of the vacant building itself. The maintenance of the surrounding premises is a secondary focus. The conditions of the premises, e.g., litter, are addressed in the context of the condition of the vacant building itself.

How Do City of Seattle Laws Compare with Those of Other Jurisdictions?

Five out of six of the other jurisdictions we surveyed require property owners to clean up and remove litter that is adjacent to their properties regardless of the volume of litter accumulated. Of these, four cities (Austin, New York City, San Francisco, and Washington D.C.) have codified this requirement in their public health, water and sanitation codes. One city, Denver, has this requirement in its street use code. Please see Appendix B for information on how Seattle's laws requiring private property owners to clean adjacent public property compare with those of other jurisdictions.

We were unable to determine whether these five jurisdictions' laws are effective because either:

1. The jurisdiction does not conduct annual litter inventories; therefore, there was no way to determine if there was any improvement as a result of these laws, or
2. The jurisdiction also uses community clean-ups, business partnership programs, public education, and other mechanisms to address litter prevention and abatement and therefore we could not attribute the positive outcomes solely, or even primarily, to these laws.

Please see Appendix C for information we obtained from New York City officials on their city's regulations requiring property owners to keep areas adjacent to their property clean.

Are Seattle's laws sufficient?

Current City of Seattle laws do not address litter from a visual-disorder or cleanliness standpoint, and there is nothing to require property owners to clean and remove non-hazardous litter in an amount of one cubic foot or less from their sidewalks and other adjacent rights-of-way.

If the City Council wishes to provide the City with means to require property owners to clean-up and remove all litter that accumulates on their own property and adjacent rights-of-way, not only from a public safety standpoint but also from a visual-disorder or cleanliness standpoint, it should consider:

²³ SMC 22.206.200A.4.d. "All debris, combustible materials, litter and garbage shall be removed from vacant buildings, their accessory structures and adjoining yard areas. The building and premises shall be maintained free from such items."

²⁴ Housing and Building Maintenance Code (SMC Title 22)

Modifying Seattle Municipal Code sections 21.36.425A and B to replace the reference to one cubic foot (a volume standard) with a qualitative standard such as “unsightly” or “unsanitary,” and provide some kind of notice to the owner that a violation exists, along with time to correct the violation.

Before doing so, the City Council should consider lessons-learned from other jurisdictions and explore whether these laws would be enforced proactively (regular inspections and citations for violations²⁵) or reactively (complaint-based²⁶). The level of enforcement effort given to these offenses will undoubtedly impact the resulting efficacy of the laws.

Question 2: How frequently are Notices of Infraction written for violations of the litter laws?

Compliance with Litter Laws Is a Low Enforcement Priority

City officials in the Law Department, Seattle Police Department (SPD), and SPU stated that litter laws are a low enforcement priority. According to one SPD official, if littering was considered a signal crime²⁷, for example, as graffiti is, then there might be greater interest in a higher level of enforcement. Making litter enforcement a higher enforcement priority would require SPD to make trade-offs in the level of effort they direct toward other enforcement and crime prevention activities.

The Seattle Municipal Court was able to provide us with the following data on infractions related to littering for 2008, 2009, and the first half of 2010.

Chart 3: Litter Infractions 2008-mid 2010

Year	# of All Litter-Related Cases ²⁸	# Cases: Littering of one cubic foot or less (SMC 21.36.410) ²⁹	# Cases: Littering/Unlawful Dumping of Solid Waste greater than one cubic foot (SMC 21.36.420 ³⁰)	# Cases: Accumulation of Solid Waste greater than one cubic foot (SMC 21.36.425)	# Cases: Discarding Potentially Dangerous Litter (SMC 21.36.415)
2008	114	111	1	2	0
2009	136	135	0	1	0
2010 (Jan 1-Jun 30)	83	80	2	0	1

²⁵ This approach is used by San Francisco, New York, and Washington D.C.

²⁶ This approach is used by Austin and Denver.

²⁷ A concept that certain crimes or incidents of anti-social behavior may act as a “signal” to a community that the community is at risk for more serious crimes.

²⁸ We requested that the Seattle Municipal Court provide cases for violations of the following ordinances: SMC 21.36.410 Littering (one cubic foot or less); SMC 21.36.415 Discarding potentially dangerous litter; SMC 21.36.420 Unlawful Dumping of Solid Waste; SMC 21.36.425 Accumulation of Solid Waste; SMC 21.36.430 Unlawful use of City litter receptacles; SMC 21.36.044 Containers Required - Non-residential

²⁹ Typically, these are cases where an individual was cited in the act of littering. According to the Seattle Municipal Courts, there is no reliable data available as to whether the citation was made as the primary offense or ancillary offense because that level of detail is not consistently available in the infraction write-up.

³⁰ It is unlawful for anyone to dump, throw, or place solid waste on any unauthorized property, public or private, or in any public place. This section does not apply to dumping, throwing or placing litter in the amount of one (1) cubic foot or less that does not contain hazardous substances.

In 2008, there were 6,437 non-traffic infractions filed with the Seattle Municipal Court and in 2009, there were 6,111. Littering infractions represented only 1.8 percent (114) of the total non-traffic infractions filed in 2008 in the Seattle Municipal Court and only 2.2 percent (136) of total non-traffic infractions filed in 2009.

In addition to SPD, as mentioned previously, SPU and the Park Rangers have litter enforcement authority. As of August 2010, these two entities had not issued any citations for littering. SPU officials told us that although SPU has litter enforcement authority, department officials decided many years ago that they did not want to allocate resources for this activity. This decision was based on an informal internal assessment that determined that it could cost the department well over \$500 to gather and build the evidence necessary to successfully prosecute a \$50 citation. They concluded that the benefit was not worth the cost.

SPD issued only 3 infractions in 2008 and only 1 in 2009 for violations of accumulation of solid waste on properties (private or in adjacent rights-of-ways).

Question 3: How are the different City departments responsible for dealing with street litter coordinating with one another? Should these efforts be centralized in one department or office?

We list the City departments and programs that deal with street/ground litter in Appendix D. The City spends approximately \$ 8.2 million³¹ for these programs.

Most City programs that address litter are handled by a single department and operate effectively with little interdepartmental coordination. Unlike the City's anti-graffiti programs, there is no interdepartmental entity that meets regularly to discuss operational coordination between City departments on anti-litter efforts. Exceptions to this are:

1. SPU and Parks, who have a memorandum of agreement under which SPU provides General Fund Solid Waste Tax revenues to fund Parks' solid waste collection and disposal activities³², and
2. The Clean and Green Seattle program, an interdepartmental volunteer program for which the City sponsors monthly neighborhood cleanup events in different neighborhoods across the city.

In Part II of this report, we offer operational recommendations for improving the City's litter clean-up efforts within the current, decentralized structure.

³¹ This estimate is based on 2009 costs provided by City departments.

³² Maintenance activities within park boundaries, including litter receptacle servicing and ground litter collection, have been and continue to be the responsibility of the Department of Parks and Recreation. These maintenance activities were funded directly by the General Fund through 1991. The collaboration between Parks and SPU began in 1992 after it was proposed to discontinue direct funding from the General Fund and initiate funding via solid waste tax revenues to ensure consistent service levels for these activities.

Examples of Close Interdepartmental Coordination on Litter Abatement

SPU/Parks Memorandum of Agreement

SPU and Parks coordinate closely with each other to deliver litter and trash/recycling services in City parks. There is a memorandum of agreement³³ (MOA) between the two departments under which SPU provides General Fund Solid Waste Tax revenues to fund Parks' solid waste collection and disposal activities in City parks including: 1) servicing public litter receptacles in the City parks, 2) providing and servicing outdoor open space recycling cans in City parks, and 3) performing ground litter collection in 20 downtown retail core parks³⁴. In 2004, SPU looked at alternatives to Parks providing the litter services (e.g., using a contractor). For the study, SPU compared the use of Parks staff with outside contractors using a variety of efficiency measures. Based on this study, SPU determined that the best option was to maintain the status quo because Parks' staff and equipment were already in place and Parks' staff was familiar with the patterns of Parks users. The MOA is re-negotiated every two years³⁵. SPU paid \$842,555 to Parks for reimbursement of litter-related services in 2009. All of SPU's litter programs including funds paid to Parks through the MOA are supported by the City's General Fund through the collection of solid waste taxes (tonnage taxes).

Clean and Green Seattle is an Interdepartmental Volunteer Program

The Mayor's Office initiated the Clean and Green Seattle (C&GS) program in 2002 to facilitate City sponsorship of monthly neighborhood cleanup events in different neighborhoods across the City. C&GS works closely with the Department of Neighborhoods (DON) and is run by an interdepartmental core team that meets bi-monthly and includes SPU, SDOT, and Parks (with Seattle City Light and SPD participating when needed). At these meetings, they review a list of possible clean-up sites and choose one, based on input from DON Neighborhood District Coordinators. The City's Neighborhood District Coordinators are each assigned one month a year ahead of time so they can: 1) work with their communities to identify high-priority clean-up needs, and 2) conduct a site visit 6-8 weeks before the event to determine what needs to be done and who needs to be involved (e.g., SDOT to clean/replace signs, etc.). All Clean and Green Seattle events include litter pick-up. In addition, program participants have removed abandoned vehicles and shopping carts, trimmed bushes, etc.

Additional Information on City Litter Programs

See the following appendices:

- Appendix E for discussion of Parks and SPU's innovative approaches and technologies for dealing with litter;
- Appendix F for discussion of SDOT's litter programs;
- Appendix G for discussion of SPU's Street Side Litter and Street Side Recycling Program;
- Appendix H for discussion of SPU's Clear Alleys Program;
- Appendix I for discussion of SPU's grants from the State of Washington Department of Ecology Community Litter Cleanup Program (CLCP);

³³ The MOA defines the terms of the scope of services, reimbursement levels, reporting requirements, billing and payment terms. Generally, the MOA does not include labor costs for pick-up of litter cans that are not on packer truck routes. These include locations such as some ballfields, picnic shelters, beaches and trails and ground litter outside of downtown parks.

³⁴ Plymouth Pillars, City Hall Park, Freeway, Hing Hay, International Children's, Kobe Terrace, McGraw Square, Occidental, Pier 62/63, Piggott Corridor, Pioneer Square, Prefontaine Place, Regrade, South Washington Street Dock, Steinbrueck, Tillikum Place, Union Station Square, Waterfront, Westlake Park, Westlake Square

³⁵ As of September 2010, the SPU-Parks MOA is being negotiated for 2011-2012.

Appendix J for discussion of City funding for Seattle Municipal Court defendants to perform litter pick up and other cleanup activities in Southeast Seattle through the State Department of Corrections as part of their sentencing;
Appendix K for discussion of the Seattle Municipal Court's Community Court and Diversion Programs;
Appendix L for discussion of the City's homeless encampment clean ups;
Appendix M for discussion of the City's litter clean up around City Hall;
Appendix N for discussion of the City's Customer Service Bureau's forwarding of litter complaints from constituents;
Appendix O for discussion of coordination with Metro Transit on litter cans at canopy bus zones;
Appendix P for discussion of the City's volunteer programs that address litter.

Questions 4 and 5:

What is the City doing to educate local residents and business owners about:

- **Their responsibilities according to the law;**
- **The negative effects of litter; and**
- **The positive benefits of clean neighborhoods?**

What is the City doing to encourage community organizations to involve themselves in the effort to achieve cleaner, safer streets?

How do these approaches compare to best practices?

Litter Best Practices

Our research identified four strategies with the greatest impact on discouraging litter (see Appendix U: Litter Best Practices: Strategies for Preventing/Reducing Litter):

- Maintaining a litter-free environment;
- Visible efforts to reduce litter;
- Providing conveniently placed, clearly visible litter cans in public areas; and
- Supporting community involvement in clean-up efforts.

We found that best practice in anti-litter public education and community involvement has been established by Keep America Beautiful (KAB), and requires a comprehensive approach, which includes:

1. Creating a collaborative coalition framework,
2. Engaging community volunteers,
3. Using data-driven evaluation, and
4. Leveraging funding opportunities.

See [Appendix Q: Potential Benefits from an Affiliation with KAB](#) for a detailed description of this model.

Public education and volunteer efforts directed toward litter prevention and clean up in Seattle are found in the Adopt-A-Street, Spring Clean, and Clean and Green Seattle programs – all City-sponsored volunteer programs (see [Appendix P: City Operate Four Distinct Volunteer Programs to Address Litter](#) for

an overview of these programs). These education efforts focus on a general message of promoting civic pride and enhancing Seattle's quality of life through clean streets and beautiful neighborhoods.

No Targeted Public Awareness Efforts to Educate Private Citizens of their Responsibilities

We learned from interviews with City officials that when citizens call the City to complain about litter and solid waste on sidewalks and other rights-of-way adjacent to private property, they are often surprised to be told that it is the property owner's responsibility to remove the litter or solid waste. We learned that there is essentially no targeted effort to educate private citizens of their responsibilities under the law.

We did not find any public education efforts by the City on the negative effects of litter and only one example (on the City's Department of Economic Development web site) of public education on the responsibilities of private owners to clean up their adjacent rights-of-way.³⁶ For one example of another jurisdiction's outreach to non-English speaking citizens specific to private property owner's responsibilities, please see *Appendix V: San Francisco Examples of Public Education Materials on Litter*.

The City could strengthen its efforts to encourage community organizations to work for cleaner, safer streets by using a hot spot approach. This includes efforts to persuade community organizations to work with law enforcement in a comprehensive approach designed to reduce crime and revitalize neighborhoods in areas identified as crime hotspots. Such an approach includes policing, code enforcement, and community engagement strategies, as well as City-sponsored efforts to reduce graffiti and litter. For more information about the hot spot approach, please see our report, "Addressing Crime and Disorder in Seattle 'Hot Spots' What Works?"

Question 6: How effective are the private sector programs³⁷ that target litter removal, such as the program run by the Metropolitan Improvement District?

MID Program Description

In 2009, the Metropolitan Improvement District (MID) spent about \$800,000, approximately 15% of their annual total operating budget, on litter abatement. To address litter in their area, the MID has 34 full time Cleaning Ambassadors who spend about 75 percent of their workday addressing street and ground litter. They sweep sidewalks and curbs and collect trash on a daily basis. They also periodically pressure-wash sidewalks and clean alleys³⁸. In addition, there are 23 Big Belly³⁹ Solar Compactor trash cans in the MID along Third Avenue between Stewart and University Streets.⁴⁰ The installation of the

³⁶ http://www.cityofseattle.net/economicDevelopment/biz_district_guide/Sidewalk_Cleaning.htm

³⁷ The Department of Neighborhoods pointed out that the University District Business Improvement Area utilizes CleanScapes for their litter program. We did not examine this program in this audit.

³⁸ The MID reports that they clean some alleys 7 days per week.

³⁹ Big Belly is a brand name for high capacity solar compacting litter receptacles manufactured by Big Belly Solar Inc.

⁴⁰ There is a total of 23 Big Belly solar compactor litter cans in the MID. In 2007, SPU became the single entity responsible for providing and servicing litter cans between Stewart and University Streets. As a result, SPU sited 20 City fluted litter cans and 2 Big Belly compacting litter cans along Third Avenue with the agreement that the City would provide and service the 20 fluted litter cans through its Street Side Litter Program and the MID would service the Big Belly litter cans. SPU purchased the 2 Big Belly litter cans in 2007 at the request of the Mayor's Office. The MID also owns a Big Belly litter can which was purchased in 2007. In April 2009, the MID entered into an agreement with SPU to replace the 20 City litter cans with 20 Big Belly litter cans leased through a Big Belly vendor. While SPU no longer owned the litter collection cans, SPU agreed to continue to pay for servicing the 20

Big Belly trash cans is a component of the MID's litter program with the expectation that these cans provide additional capacity for waste, decrease service frequency, and help to prevent litter receptacles from overflowing.

We attempted to assess the effectiveness of the Big Belly cans' performance since July 2009, compared to what the City litter cans would have collected in the same locations if the City litter cans were full. We were unable to make a definitive conclusion because of the lack of baseline data on the amount of garbage collected from this area of the City before July 2009.

MID Program Effectiveness

Given the magnitude of the MID's efforts, it seems safe to say that there would be a lot more litter in the MID without its program. Further, two limited litter surveys done by a private citizen (one in 2003 and one in 2009) concluded that the MID is "much cleaner" than Belltown, an adjacent section of the city that does not have a cleaning ambassador program.⁴¹

Litter Statistics: There is Little Measurable Data Available on Effectiveness of Public and Private Litter Programs

To accurately assess the effectiveness of the MID's litter program, we believe it would be necessary to perform a litter study or physical inventory that included a control group. This would establish a baseline from which to compare subsequent efforts and also allow comparison with a control group. Any litter study or inventory the City conducts should use proven and recognized methods for identifying survey sites and for counting litter. Physical inventories could be conducted by a consultant or by using a primarily volunteer-based model, such as the one developed by Keep America Beautiful.

Other jurisdictions, such as San Francisco (2007, 2008), Toronto (2005, 2006), and Edmonton (2007) have performed street litter studies to aid their efforts to reduce litter. Street litter studies help by: 1) establishing baseline statistics, and 2) measuring the effectiveness of subsequent collection, enforcement, and other programs implemented after the baseline data is collected. The City of San Francisco also used the study data to see how litter occurrence in their city compared to other jurisdictions where comparable data had been gathered.

The City of Seattle has not conducted a litter study. As a result, we have no baseline statistics or trends to measure how City or private sector programs are performing either over time or in comparison to other jurisdictions.

Please see [Appendix R: Private Sector Programs](#) for further discussion of private sector litter programs.

leased Big Belly units at the same funding level as SPU would have paid to service its fluted cans. The MID services all of the 23 Big Belly litter cans and assumes all liability for maintenance, repairs, and replacement of the twenty leased cans.

⁴¹ In 2003, a private citizen, Charles M. Bagley, Jr., conducted a litter survey in downtown Seattle and then conducted a follow-up survey in 2009. During our research, we did not find any other studies or physical inventories that documented or measured the occurrence of litter in Seattle.

Question 7: Are there innovative efforts other cities have successfully implemented that Seattle might replicate?

See *Appendix S: How Does Seattle Compare with Other Cities?* where we compare data obtained from other cities on the following:

- Street sweeping metrics,
- Whether vehicles are prohibited from parking on the street during certain times to allow street sweeping,
- Metrics on public litter can collection,
- Whether hand sweepers are utilized in the city,
- Community involvement,
- Funding sources for the city's litter programs,
- Whether a litter inventory had been performed,
- Private sector involvement, and
- Noteworthy challenges and innovations.

Given the current budget constraints facing the City of Seattle, we focused our analysis of potential litter innovations on strategies that might result in cost sharing, cost recovery, or additional revenue for the City.

Potential Cost Recovery: Cigarette Fee

Our research found that at least one U.S. city (San Francisco) has instituted a fee to try to recover the costs of litter prevention and clean up from the consumers of the products that create the litter. This fee was based on data from a physical inventory of street litter that allowed the city to identify the composition of the litter on their streets.

2007 and 2008 San Francisco Streets Litter Audits revealed that tobacco product litter was the second most prevalent type of litter found in the city, constituting 24.6% of the reported street litter⁴². Based on this information, in July 2009, the City of San Francisco passed a Cigarette Litter Abatement Fee Ordinance that imposes \$0.20 fee per pack of cigarette on all cigarettes sold within the city limits. This fee went into effect October 1, 2009.

All monies collected pursuant to this fee are placed in a special Environment Cigarette Litter Abatement Fund, and can only be used for the following purposes:

- Refunds of fee overpayments,
- Costs of administration, collection and enforcement of the fee,
- Costs of public outreach and education to curb improper cigarette litter disposal; and
- Costs to collect and remove cigarette litter from city sidewalks, gutters and public spaces.

The amount of the fee can be adjusted every year by the Director of the Department of Environment, based on the prior year's costs for the activities described above and projected cigarette fee revenues.

⁴² The only litter type more prevalent was glass, at 37.5%.

In December, 2009, just two months after the fee went into effect, several convenience store operators and Phillip Morris USA challenged the constitutionality of the fee on the basis that it violates the California Constitution because it 1) is a local special tax (not a fee), and 2) has not been approved by a two-thirds vote of qualified electors. The case is scheduled to go to trial.

The City of San Francisco is currently considering expanding this fee to other items, such as chewing gum. We recommend that Seattle City policymakers monitor the impact of San Francisco's Cigarette Litter Abatement Fee, and based on the results, decide whether to consider imposing a similar fee in Seattle.

Potential Cost and Revenue Sharing: Litter Receptacles

Studies have shown the importance of proximity to litter receptacles for reducing litter. Research by the Policy Exchange, a think tank located in the United Kingdom, revealed that 37% of the public believes that a lack of bins (receptacles) justifies littering, and 91% of the public believe increasing the number of available bins (receptacles) is the most effective way to reduce litter.⁴³ A 2009 study on littering behavior in America noted that, "Littering rates decrease as the convenience of using a proper receptacle increases"(Cope, Huffman, Alred, & Grossnickle, 1993; Geller, Brasted, & Mann, 1980; Geller, Winnett, & Everett, 1982). As a general rule, more trash receptacles reduce litter, including cigarette butts. Furthermore, research indicates that a brightly colored, themed, or decorated receptacle attracts considerably more trash than does a plain or ordinary appearing receptacle.⁴⁴

Vendors seeking advertising revenue and municipalities strapped for cash have recently partnered to place more receptacles on city streets. Several vendors of litter receptacles are offering corporate sponsorship of receptacles, free receptacles, and even free litter pick-up in exchange for advertising space on those receptacles.

For Seattle, this or similar arrangements would require an ordinance change. Advertising on litter receptacles would constitute "off-premise advertising-sign." Section 23.55.014 of the Seattle Municipal Code does not allow off-premise advertising signs, whether on private property or in the right of way. The Department of Planning and Development is responsible for developing, administering, and enforcing the Sign Code, and is currently in discussions with the Mayor's Office on Sign Code Issues. The Planning and Development Department Director informed us that the department will include litter cans on their list of Sign Code issues to address in the future.

Below are examples of from Boston, Massachusetts, the United Kingdom, and Chicago, Illinois that illustrate these emerging partnerships. Again, these approaches would require an ordinance change before they could be implemented in Seattle.

- **Boston – Corporate Sponsorship of Big Belly Solar Compactors.**
Several years ago, the City of Boston began a pilot program using 50 Big Belly⁴⁵ compactors. To add additional units, the City has recently solicited corporate and community sponsors to pay the purchase price. They include: Berkley College of Music, Ellis Street Neighborhood

⁴³ Policy Exchange (2009) *Litterbugs – How to Deal with the Problem of Littering*, Policy Exchange, London

⁴⁴ *Littering Behavior in America*, Take Action Research for Keep America Beautiful, January 2009

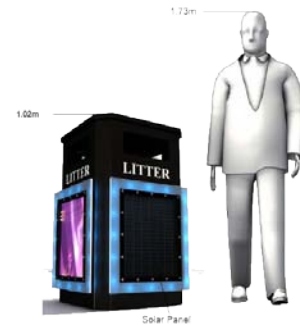
⁴⁵ Big Belly is a brand name for high capacity solar compacting litter receptacles manufactured by Big Belly Solar Inc.

Association, the Cleveland Circle Neighborhood Association, Massachusetts Transit Authority, Leather District Neighborhood Association, Boston Red Sox, and Bank North Garden. The sponsor receives a sponsorship plaque on the compacting receptacle. Such a plaque would currently be prohibited under Section 23.55.014 of the Seattle Municipal Code.

Seattle’s Metropolitan Improvement District already uses 23 Big Belly compactors (see *Appendix R: Private Sector Programs*). The purchase price for high capacity solar compacting trash receptacles (including Big Belly) can range from approximately \$3,500 to \$4,000 per receptacle.

- **United Kingdom – Clever Bins.**

Clever Bins is a UK company that supplies solar powered street litter bins at no cost to the local authority. Keep Britain Tidy has compiled research⁴⁶ indicating that the presence of attractive colorful receptacles can reduce litter by as much as 15%.



These receptacles are illuminated and have electronic advertising. Advertising standards are set by the local governments, and there are opportunities for revenue-sharing from advertising proceeds.

This type of illuminated advertising would currently be prohibited under Section 23.55.014 of the Seattle Municipal Code.

- **Chicago – Free Green Cans.**

The City of Chicago is among several municipalities currently working with a vendor who provides receptacles for high-traffic locations at no charge. These receptacles offer separate compartments for trash and recycling. Each dual-purpose receptacle has four large changeable ad panels. The vendor also offers revenue sharing for the municipalities. Based on the municipality, this can include advertising and/or recycling proceeds.

The photograph below shows an example of a litter receptacle with advertisement panels for which vendors offer advertising revenue.



⁴⁶ Delivering Improved Local Environmental Quality, Evidence Paper 3, Keep Britain Tidy, March 2010.

Potential Revenue Generation: No Parking Fines for Street Sweeping

Our research found a number of cities that charge fines for parking on streets during posted street cleaning times. Imposing such fines allows the street sweepers to operate efficiently (for example, Washington D.C. has calculated that for every illegally parked vehicle, three spaces cannot be swept), and generates some revenue for the city.

Since 2009, Washington D.C. has equipped twelve of its street sweepers with License Plate Recognition System (LPRS) technology known as Sweepercam. Between March and November, these sweepers operate along residential streets where signs are posted restricting parking during street sweeping hours. Photographs are taken of each vehicle parked during street sweeping hours and motorists are mailed a \$30 ticket.⁴⁷

⁴⁷ The steps in the Sweepercam process are as follows (See <http://dpw.dc.gov/DC/DPW/Education+and+Outreach/Brochures+and+Fact+Sheets/Sweepercam+Frequently+Asked+Questions>)

Part II: Operational Recommendations to Improve the City's Litter Abatement Efforts

In this section of our report, we offer several operational recommendations for improving the City's litter efforts.

Recommendation #1

If the City Council wishes to require property owners to clean-up and remove all litter that accumulates on their own property and adjacent rights-of-way, not only from a public safety standpoint but also from a visual disorder or cleanliness standpoint, they should consider:

Working with the Law Department to modify SMC 21.36.425A and B to:

1. Replace the reference to one cubic foot (a volume standard) with a qualitative standard such as "unsightly" or "unsanitary," and
2. Provide some kind of notice to the owner that a violation exists, along with time to correct the violation.

Background: Current City of Seattle laws do not require property owners to clean and remove litter in an amount of one cubic foot or less that accumulates on their own property and adjacent rights-of-way.

Recommendation #2

Recommendation: The City should work with Metro Transit to develop a plan for ensuring the continued availability of litter receptacles at bus stops when bus shelters are removed and replaced with canopy bus zones⁴⁸. This could be achieved through negotiations with all interested parties, including the Department of Planning and Development (DPD), the Seattle Department of Transportation (SDOT),

⁴⁸ "Canopy Bus Zones" are bus stops where bus shelters are removed in favor of placing bus stops under the canopies of adjacent buildings. The intention of this concept is that Metro's stand-alone bus shelters can impede sidewalk flow and provide convenient hiding places for illegal activity, and by removing the structures, pedestrian access and public safety in areas with the highest levels of pedestrian and transit activity are improved. The background of "Canopy Bus Zones" is that as part of former Mayor Nickels' administration's Center City Strategy, Seattle's Department of Planning and Development's (DPD's) planning program included studying different areas of town to recommend design solutions from an urban design perspective. These included the development and approval of "Street Design Concept Plans" for areas of Ballard, Terry Avenue North, Pike/Pine, and Queen Anne Avenue North. Concept Plans delineate streetscape features such as streetlights, trees and landscaping, and street furniture that enhance the special character of a block or the entire neighborhood and are intended to be implemented over time by multiple property owners as parcels on the block re-develop. Concept Plans are approved by DPD and SDOT. Although the provisions in a Concept Plan are voluntary, property owners are encouraged to follow them. Concept Plans are formalized and adopted through DPD Director's Rules and incorporated into the Seattle Department of Transportation Right-of-Way Improvements Manual.

Canopy Bus Zones can also be approved outside an approved Concept Plan. If a property owner wishes to have a Metro bus shelter removed and decides to build a canopy at the bus stop, DPD would review and permit for the proposed canopy structure and SDOT would review and permit any new streetscape features in the right-of-way (i.e., a new bench, planters, etc.) and Metro would enter into an Awning Agreement with the property owner. If the building canopy at the proposed canopy bus zone already exists with no added streetscape features, the only action required would be for Metro to enter into an Awning Agreement with the property owner.

Seattle Public Utilities (SPU), the Metropolitan Improvement District, Metro Transit, and private property owners, to develop a solution that is formalized in a memorandum of agreement.

Background: DPD’s recent urban design policy encouraging “canopy bus zones” could have an impact on the number of litter receptacles available near Metro bus stops. The City is losing litter cans at high-use Metro bus stops when Metro bus shelters are removed. King County Metro Transit’s current policy is to provide custodial maintenance, shelter cleaning, and litter pickup only at stops where a bus shelter is provided by Metro. However, the City and Metro are promoting the removal of bus shelters and encouraging the integration of bus stops under the canopies of adjacent buildings (referred to as “canopy bus zones”) as a desired urban design solution in high pedestrian areas. The canopy bus zone solution is recommended to improve sight lines, increase safety, and facilitate pedestrian movement. The City has no formal agreement with King County Metro Transit to replace trash disposal and collection for Metro customers at canopy bus zones thus resulting in fewer public trash disposal sites.

See [Appendix O: Coordination with Metro Transit Needed on Litter Cans at Canopy Bus Zones](#).

Recommendation #3

Recommendation: To help offset the cost of litter and garbage collection and disposal in parks, the City should consider whether it would make sense to establish fees for specific parks users who are directly responsible for generating the waste.

Background: Dog waste collection and disposal have major impacts on the Parks Department’s maintenance costs. In 2009, Parks studied their costs of serving dog owners and dog walkers, and whether to increase the annual dog license fee by \$8. Revenues from this increased fee would help offset the cost of maintenance of off-leash areas. In addition, it could shift funding for this service out of the City’s general fund to dog license fee revenues. The department estimated the overall cost for dogs’ presence in the parks at \$289,000 annually, of which \$157,000 was for dog waste collection and disposal. The Parks study listed a number of additional options used by other jurisdictions to recover costs for dog areas in parks that could be explored for use in Seattle. For example: 1) selling advertising on mutt mitts⁴⁹, 2) dedicating fines from enforcement citations for violations of the off-leash or pet waste clean-up laws to support maintenance of off-leash areas, 3) charging commercial dog walkers permit fees for bringing groups of dogs to off-leash areas. In the past, the Parks Department has proposed increasing dog license fees to support maintenance for off-leash areas, but these proposals were rejected by the Mayor’s Office.

Recommendation #4

Recommendation: To potentially offset the City’s costs for street sweeping, we recommend that the Seattle Department of Transportation determine the magnitude of the costs for providing post-special

⁴⁹ Mutt mitts are degradable plastic mitts used to pick up pet waste.

event street sweeping services for free, and consider whether it makes sense to charge event organizers for the costs of this service.

Background: SDOT street sweepers have traditionally provided “courtesy sweeps” before and after a number of special events (e.g., parades) that take place in Seattle.⁵⁰

Recommendation #5

Recommendation: As part of implementing the recommendations contained in the 2010 Clear Alleys Program (CAP) program evaluation report and to minimize alley litter, the City should continue to work with its two contract solid waste haulers, CleanScapes and Waste Management, to ensure that : 1) CAP collections are not missed, and 2) thicker bags are used. Furthermore, we recommend that SPU explore solutions with their CAP recycling contractors (e.g., Allied, Sedrunar, Cedar Grove, etc.) for the storing and pick-up of stacked, loose cardboard which can result in alley litter.

Background: CAP was established in March 2009 to reduce uncivil behaviors and illegal activities in alleys by removing dumpsters that provided visual cover for these activities. CAP requires commercial and residential buildings in designated neighborhoods (Belltown, Pioneer Square, and Downtown) to replace dumpsters in the alley rights-of-way with special pre-paid garbage bags; these bags are to be set out in the alleys for the City’s two contracted haulers to pick up. Customers can also apply for an exemption to use wheeled toters⁵¹ for glass, compostables, and pet waste only.

SPU and Metropolitan Improvement District representatives told us, (and our site observations indicated) the CAP bags left in the alleys for collection are often ripped open by birds and rats, which can result in litter in the alley; these bags are also attractive to scavengers. Recycled materials left out for collection, such as loose cardboard sheets, are problematic because they are scattered in the alleys as well. An SPU official told us that before implementing the CAP, they also experienced significant problems from scavengers in the dumpsters and noted that this problem is not unique to CAP. Due to the persistence of this problem, our recommendation for addressing it is in the context of the current CAP program.

A 2010 SPU evaluation of the CAP program⁵² included recommendations that the program’s managers work with haulers to resolve the problem of inconsistent service and missed pick-ups; improve the scheduling of garbage pick-up to avoid garbage sitting in alleys for long periods; increase the thickness of the bags or use other reinforcement to reduce breakage from birds (and bag overstuffing); and provide better customer service, outreach, and education to alleviate confusion and ensure customer satisfaction. SPU has a draft plan to address and implement the recommendations contained in this evaluation. When implemented, we believe the recommendations would help to address litter caused

⁵⁰ Events include but are not limited to the following: Torchlight Parade, Wallingford Kiddie Parade, West Seattle Parade and Street Fair, Chinatown Festival and Parade, Bon Odori Festival, Greenwood Parade and Car Show, University District Parade, Lake City Parade, Capitol Hill Block Party, Fremont Solstice Parade, and Pride Parade.

⁵¹ 96 gallon plastic toters predominantly for food waste and some 64 gallon plastic toters for glass recycling

⁵² Seattle’s Clear Alleys Program (CAP): Evaluation, Findings, and Recommendations. Skumatz Economic Research Associates, Inc. April 21, 2010

by the use of garbage bags in the alleys. However, the problems identified with loose cardboard, although discussed a number of times in the body of the 2010 SPU evaluation report, were not identified in the consultant's list of program recommendations except for a mention of including the handling of cardboard in "providing businesses two sided laminated handouts that clearly and simply explain the CAP program for customer reference and training." SPU stated that their focus has been on food waste and various container and plastic bag issues and that cardboard will be a part of future efforts.

SPU's contracts with the City's two solid waste haulers, CleanScapes and Waste Management, include provisions to collect garbage for the CAP program. Recyclable and compostable materials collection within the CAP area, including the collection of cardboard, is also provided by a number of private companies, e.g., Allied, Cedar Grove, Seadrunar, etc.

See Appendix H: SPU's Clear Alley Program and Litter in the Alleys.

Recommendation #6

Recommendation: Consider curb-to-curb street sweeping to increase street sweeping efficiency and ticketing of illegally parked cars, which could both ensure that streets are clear and help offset the costs of this service. Seattle street sweepers could be equipped with cameras that take pictures of illegally parked cars and their license plates (called "Sweeper Cams" in Washington D.C.). The full cost of implementing this policy includes the cost of the cameras (approximately \$37,000 each) and license plate recognition software, which is already owned and used by the Seattle Police Department's Parking Enforcement Division. Revenue from tickets could help offset these costs.

Background: We found that a number of jurisdictions, such as Washington D.C., Chicago, and Minneapolis, require certain streets to be cleared of vehicles for specified periods so that street sweeping can occur curb-to-curb. To ensure curb-to-curb cleaning, these cities post temporary parking restrictions the day before the work is scheduled to begin on any street. Some arterial streets have permanently posted signs that specify a once-per-week period when parking is prohibited to permit street sweeping. According to information provided to us by the City of Minneapolis, one parked car equals nearly three car lengths of space that can't be swept because the street sweeper must leave room to avoid it. In all three cities, vehicles are ticketed and can be towed if the vehicle is parked in the street when street sweeping is scheduled.

In order for the SDOT street sweepers to perform their work more effectively and efficiently, we encourage the City of Seattle to consider the pros and cons of requiring that streets be cleared of vehicles according to the street sweeping schedule. SDOT is already providing curb-to-curb street sweeping on a small scale in South Seattle.⁵³ SPU has contracted with SDOT through a Memorandum of Agreement⁵⁴ (MOA) to provide curb-to-curb street sweeping along a portion of South Cloverdale Street

⁵³ Currently, there is one street in the South Park neighborhood where vehicles are cleared for curb-to-curb street sweeping. SDOT performs curb-to-curb vacuum street sweeping services from 14th S. along S. Cloverdale to 5th Avenue S.

⁵⁴ Memorandum of Agreement No. DA2010-19 between SPU and SDOT for SDOT Street Sweeping during Construction of and around the new SPU South Transfer Station.

in the South Park Neighborhood. SPU is providing this service as a permanent community benefit in exchange for a street vacation in conjunction with the redevelopment of the South Recycling and Disposal Station (SRDS).⁵⁵ The MOA specifies that the curb-to-curb street sweeping be performed on a monthly basis for a period of 30 months, through December 2012. Although neighborhood compliance with street clearance of cars is voluntary (SPU has asked SDOT not to ticket or tow cars for non-compliance), SDOT stated that the removal of vehicles enables the sweepers to be more efficient as there are no vehicles that the sweepers have to maneuver around.

⁵⁵ Clerk File Number 310784

Part III: Recommendations to Reduce Physical Disorder in Crime Hot Spots⁵⁶

In this section of our report, we discuss how the City's approach to reducing physical disorder⁵⁷, such as graffiti and litter, can be part of a larger, comprehensive approach designed to reduce crime and revitalize neighborhoods in areas identified as crime "hot spots". There is a growing body of research evidence in the field of criminology that suggests that disorder and violence are correlated in hot spots, and that coordinated public-private efforts focused on very small (e.g., one city block) discrete "hot spots" of crime and disorder can be effective in reducing crime and disorder in those areas. Further, this research shows that, rather than displacing the crime and disorder to adjacent areas, nearby areas often also benefit from the hot spots enforcement efforts. We provide detailed examples of these efforts in our report, "Addressing Crime and Disorder in Seattle 'Hot Spots': What Works?".

In our paper, we:

1. Summarize the latest criminology research regarding hot spots of crime and disorder in Seattle;
2. Describe efforts in other jurisdictions that have evidence of success as demonstrated through evaluation of outcome data. Examples include Cincinnati's Neighborhood Enhancement Program, Oakland's Beat Health Program, and Sacramento's Auburn Boulevard Redevelopment Program ; and
3. Recommend steps, based on research evidence, for how Seattle could bring about positive community change in its hot spots of crime and disorder.

We found research specific to Seattle that shows that:

- Approximately 50% of reported crime in Seattle occurs on just 4.5% of its block faces;
- These block faces remained relatively unchanged during the 14-year study period;
- There was a consistently high concentration of juvenile crime in a small number of street segments (i.e., block faces); that is, just 86 street segments, or 0.29% of the nearly 30,000 total street segments in Seattle accounted for over one third of all of the juvenile crimes committed over 14 years;
- Social disorder⁵⁸ in Seattle is also concentrated in hot spots, and

⁵⁶ "Hot Spots" are much smaller units of geography than neighborhoods, police precincts, or what is generally thought of as a community. "Hot spots" occur when crime and/or disorder is concentrated in an area such as a single address, a block face, or a small concentration of blocks. Researchers refer to these small geographic areas as "micro-places."

⁵⁷ Yang, Sue-Ming, Assessing the Spatial-Temporal Relationship between Disorder and Violence, *Journal of Quantitative Criminology* (2010) 26:146. The study examined Seattle hot spots for violent crimes, social disorder, and physical disorder. The author defines physical disorder: "Physical disorder usually refers to the deterioration of the urban landscapes (Sampson and Raudenbush 1999). The physical disorder measure in this study includes: illegal dumping, litter, graffiti, weeds, vacant buildings, inoperable cars on the street, junk storage, weeds, zoning violations, exterior abatement, substandard housing and minor property damage."

⁵⁸ Yang, Sue-Ming, Assessing the Spatial-Temporal Relationship between Disorder and Violence, *Journal of Quantitative Criminology*(2010) 26:146. The study examined Seattle hot spots for violent crimes, social disorder, and physical disorder. The author defines physical disorder as:"Social disorder generally refers to behaviors that

- Disorder and violence in Seattle are correlated at the same locations; places with zero physical and social disorder have zero violent crime, while places with high disorder have approximately a 30% chance of having high rates of violent crime.

Common elements of successful efforts in other jurisdictions included:

- A focused approach that uses data to define problems and determine outcomes;
- Collaboration with the community;
- Institutional structures that facilitate multi-agency coordination; and
- Problem-oriented policing.

Based on our analysis of the research on Seattle and other jurisdictions, we recommend that the City consider developing a coordinated approach to addressing hot spots of crime and disorder. We identified three practices that help ensure the successful implementation of a hot spot approach:

- Select target areas based on need and neighborhood capacity for addressing complex community problems;
- Use a framework with proven success; and
- Focus existing city resources strategically.

are considered threatening by other people or defined as public moral offenses which tend to result in police reactions such as prostitution, gambling, indecency, public drunkenness, narcotics arrests and disturbing the peace (Sampson and Raudenbush 1999; Skogan 1990; Weisburd and Mazerolle 2000). Summarizing from past research, the social disorder measure includes the following items: disorderly conduct, noise, alcohol and public drinking, gambling, drug-related offenses (not including large scale drug trafficking), and prostitution. Thus, the social disorder measure represents events that were perceived as bothersome by citizens and also substantiated by police.”



Seattle City Council

February 4, 2010

David Jones
Office of the City Auditor
P.O. Box 94729
Seattle WA 98124-4729

Re: Assessment of City Graffiti and Litter Laws, Best Practices and Recommendations

Dear Mr. Jones,

As Council members, we hear from many citizens who do not feel safe in their own neighborhoods. These citizen concerns are expressed in e-mails and telephone calls to Council members and regularly at community meetings.

We are concerned about “street disorder” in Seattle. Recent academic studies confirm and quantify the connection between visible environmental disorder and higher rates of crime. Two of these studies are enclosed for your information. The study from the Netherlands focuses on the negative impacts of litter and graffiti, including documentation of the increase in crime that occurs when these environmental disorders are not cleaned up.

As a result of citizen concerns and the studies linking environmental disorder to increased rates of crime, we request that your office conduct a performance review of the way the City handles graffiti and litter removal, prosecution of offenders and public education efforts to discourage graffiti and litter.

We acknowledge these problems do not have simple answers. The City already has many dedicated staff painting over graffiti and picking up litter every day, yet the problem remains. To achieve cleaner, safer streets the City may need better education efforts, a more coordinated response among different city departments, stronger laws and enforcement – or all of the above. And the way to reduce graffiti may differ from the way to reduce litter.

To help us find workable solutions, we would like your office to explore the following areas, comparing Seattle’s efforts to recognized best practices around the country:

1. Current city ordinances regarding graffiti and litter and whether these laws are sufficient, including an assessment of whether business owners should be required to clean-up and remove graffiti and litter that is adjacent to their properties;

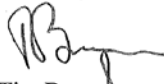
City Hall, Floor 2, 600 Fourth Avenue, Seattle, WA 98104-1860
(206) 684-8888, Fax: (206) 684-8587, TTY: (206) 233-0025
E-Mail Address: council@seattle.gov Internet Address: <http://www.cityofseattle.net/council>
An EEO employer. Accommodations for people with disabilities provided upon request.

2. The frequency of arrest and prosecution of offenders and rates of re-offending;
3. The coordination of clean-up between different city departments and, specifically, whether or not these efforts should be centralized in one department or office;
4. Education of local residents and business owners about their responsibilities according to the law, the negative effects of graffiti and litter and the positive benefits of clean neighborhoods;
5. City programs for encouraging community organizations to involve themselves in this effort;
6. The effectiveness of private sector programs that target graffiti and litter removal, including those of the Metropolitan Improvement District; and
7. Innovative efforts other cities have successfully implemented that Seattle might replicate.

Please include in your assessment specific recommendations or actions the City should take to reduce street disorder by eliminating graffiti and litter.

If possible, we would like to receive your assessment and recommendations no later than June 1, 2010 so this issue can be part of our fall budget process. Please feel free to contact us if you have questions about this request. Councilmember Burgess' office has done a preliminary study of these issues and would be happy to work with your staff as they start this review.

Sincerely,



Tim Burgess
Chair, Public Safety and Education



Tom Rasmussen
Chair, Transportation

Cc: Councilmember Sally Bagshaw
Councilmember Sally Clark
Councilmember Jean Godden

Enclosures

Appendix B: How Do City of Seattle Laws Compare with Those of Other Jurisdictions?

How Do City of Seattle Laws Compare with Those of Other Jurisdictions?

As part of this audit, the Seattle City Council asked us to assess whether business owners should be required to clean-up and remove litter that is on public property adjacent to their property (i.e., generally sidewalks and curbs). Seattle Municipal Code (21.35.425) prohibits property owners or occupants from allowing solid waste *in excess of one cubic foot* to accumulate on public or private property, including sidewalks or planting strips. Solid waste that is prohibited from accumulating includes, but is not limited to litter, cigarette butts, burning or smoldering materials, garbage, or rubbish. As discussed in our response to City Council question 2 in Appendix A, enforcement of this law is not currently a priority for the City.

We gathered information from six jurisdictions about whether they require property owners to clean up litter on the adjacent public property, and if so, how they enforce this requirement.⁵⁹ Chart 4 below summarizes the results of our work.

We found that five of the six jurisdictions we surveyed had laws requiring private property owners to keep the rights-of-way adjacent to their properties clean. Of these five jurisdictions, three (San Francisco, New York City, Washington DC) proactively enforce the laws by conducting regular inspections and issuing citations for violations. The other two jurisdictions' (Austin, Denver) enforcement efforts consist of either: a) responding to complaints and/or b) noting violations during the course of other routine street inspections.

We were unable to determine whether the laws and enforcement mechanisms used by the five jurisdictions are effective because of the lack of comparable outcome data (the two jurisdictions who do not have such laws also do not conduct annual physical inventories of litter) and our inability to isolate the impact of these laws from other litter prevention and clean-up strategies (community clean-ups, business partnership programs, public education, etc.).

Chart 4: Comparison of Seattle against six jurisdictions' laws requiring private property owners to clean adjacent public property

Jurisdiction	Requires private property owners to clean adjacent Right-of-Way	Enforcement
Seattle, WA Population: 617,334 Square miles: 142.5 Population per sq mile: 4,332	Yes SMC 21.36.425B Accumulation of solid waste. It shall be unlawful for any owner or occupant of abutting private property, residential or nonresidential, to allow the accumulation of any solid waste on sidewalks or planting strips, whether the solid waste is deposited by such owner or occupant or not. Solid waste that is prohibited to accumulate includes but is not limited to litter, cigarette butts, burning or smoldering materials, garbage,	Complaint-based The City of Seattle has no routine inspection program directed toward enforcing compliance with SMC 21.36.425B. SPD officers issue citations based on observations that occur during the regular course of their work. Littering infractions represented only 1.8 percent (116 out of 6,437) of the total non-traffic infractions filed in 2008 in the Seattle Municipal Court and only 2.4 percent (139 out of 5,808) of total non-traffic infractions

⁵⁹ We selected the same five jurisdictions used in Appendix Q to compare benchmark data, and added one additional city (New York) because City Councilmembers expressed interest in knowing about its policies.

Jurisdiction	Requires private property owners to clean adjacent Right-of-Way	Enforcement
	<p>and rubbish. This subsection applies to any solid waste accumulation of which the total volume if gathered together is in an amount in excess of one (1) cubic foot or which contains any hazardous substances or which is an immediate threat to the health or safety of the public. This provision shall not apply:</p> <ol style="list-style-type: none"> 1. To the Sheriff when removing the contents of a building to the sidewalk or planting strip pursuant to an eviction ordered by the Superior Court; 2. To firefighters placing debris on the sidewalk or planting strip in the course of extinguishing a fire or explosion; 3. To the use of receptacles placed or authorized by the City for the collection of solid waste on sidewalks or planting strips; or 4. To accumulations temporarily authorized under a street use permit. <p>City law is silent on responsibility for litter removal in an amount equal to or less than 1 cubic foot.</p>	<p>filed in 2009.</p> <p>There were only two infractions issued in 2008 for accumulation of solid waste on properties (private or in adjacent rights-of-ways) and only one in 2009.</p> <p>Reliable data is not available as to whether littering citations were primary or ancillary offenses; reliable data also not available as to motivating factor in accumulation of solid waste citations (e.g., whether citation was a result of a complaint or police-initiated “problem” location being monitored).</p>
<p>Austin, TX</p> <p>Population: 656,562 Square miles: 271.8 Population per square mile: 2,413</p>	<p>Yes</p> <p>Title 10 Public Health Services and Sanitation</p> <p><i>Article 2. Sanitary Condition of Real Property</i></p> <p>(B) A person may not allow the following to accumulate on the person’s property or in the areas from the person’s property to the adjacent curb line:</p> <ol style="list-style-type: none"> (1) weeds or grass more than 12 inches tall; (2) garbage, rubbish, or brush; or (3) filth, carrion, or any other unsightly, objectionable or unwholesome matter. 	<p>Complaint-based, unless a condition is considered dangerous.</p> <p>Residents can report complaints (including photographs) via email.</p> <p>Citations may be issued if high weeds or trash are obstructing the right-of-way, but the property owner is notified first and given a chance to clean it up. The City achieves 93 percent voluntary compliance this way; the remaining percent is cleared using field operations staff. (The Code Compliance Department has a \$600,000 contract with Easter Seals to clean up sites that aren’t cleaned after the first warning.)</p> <p>Penalties: Fines are up to \$500 per incident, unless the incident contains waste that endangers life or safety, in which case fines up to \$5,000 can be assessed.</p> <p>Additional activities:</p> <p>The City of Austin has a proactive volunteer program within the Code Compliance Department. The program includes three</p>

Jurisdiction	Requires private property owners to clean adjacent Right-of-Way	Enforcement
		types of volunteers: field inspectors who follow up on complaints, zone volunteers who monitor assigned areas, and members of the volunteer pool, who work events and neighborhood clean-ups. These volunteers are supported by a .725 FTE city staff person (a retired Code Enforcement officer).
<p>Boston, MA</p> <p>Population: 609,023 Square miles: 48 Population per square mile: 12,687</p>	<p>No</p>	<p>However, citizens can be cited for illegal dumping, not clearing snow and ice, or restricting pedestrian access, but not for litter control.</p>
<p>Denver, CO</p> <p>Population: 610,345 Square miles: 154.9 Population per square mile: 3,940</p>	<p>Yes Denver Municipal Code Chapter 49 Streets, Sidewalks, and other Public Ways Article 15 Sanitary Regulations <i>Section 49-551 – Cleaning sidewalks</i> The owner, occupant or agent or the owner of any building, property, or vacant lot in the city is required to maintain the sidewalks, the parking and curbs, i.e., the area from the property line to the gutter, adjoining the building, property or vacant lot in a clean condition.</p>	<p>Complaint-based inspectors on staff: 14 (all have additional duties) 2009 citations issued: Approximately 240 Penalties: \$150 for the first offense, \$500 for the second, and \$999 each offense after that.</p>
<p>San Francisco, CA</p> <p>Population: 744,041 Square miles: 46.7 Population per square mile: 15,932</p>	<p>Yes Public Works Code <i>Section 174 – Nuisance</i> For the purposes of this Section, the owner and/or the occupant of the premises or unit nearest to the public sidewalk, public stairway or other pedestrian right-of-way shall be held liable for the cleanliness or said public sidewalk, public stairway, or other pedestrian right-of-way that abuts the building.</p>	<p>Both routine and complaint-based inspections are conducted</p> <p>The City is divided into six zones. Each zone has at least one inspector assigned to it. All inspectors are sworn to write citations. The most heavily trafficked areas of the city are inspected five days a week for graffiti, litter, blight, missing street signs, bus stops in need of repair, etc. All streets are inspected at least once a week. Supervisory inspectors are on duty 24/7 to conduct inspections and respond to complaints.</p> <p>Since October 2007, the City of San Francisco has also operated the Community Corridors Program (CCP) as a pilot program to educate property and business owners on their responsibilities and focus clean-up efforts on approximately 220 blocks of the most heavily frequented streets in the city. Under this program, City employees work as “block sweepers” or “cleaning ambassadors” to assist property owners in keeping their</p>

Jurisdiction	Requires private property owners to clean adjacent Right-of-Way	Enforcement
		<p>sidewalks clean and removing graffiti. CCP has recently changed its focus to emphasize education and enforcement and the City is asking property owners to do more to achieve and maintain the target cleanliness levels set by the City Controller's office. The City of San Francisco is currently seeking additional funding for CCP from private sources and intends to engage the community in planning the property owners' assistance part of the program.</p> <p>Inspectors on staff: Approximately 12-15. 2009 citations issued: 374 Penalties: Fines range from \$150-\$300 per citation. Violators are given a first warning and then seven days to clean up the site. If not cleaned after seven days, a citation is issued. Once warned, violators can be cited repeatedly until the site is cleaned.</p>
<p>New York City, NY</p> <p>Population: 19,541,453 Square miles: 301 Population per square mile: 64,921</p>	<p>Yes</p> <p>Title 16 Sanitation <i>Section 16-118 2(a) Littering Prohibited</i> Every owner, lessee, tenant, occupant, or person in charge of any building or premises shall keep and cause to be kept the sidewalk, flagging and curbstone abutting said building or premises free from obstruction and nuisances of every kind, and <u>shall keep said sidewalks, flagging, curbstones, and airshafts, areaways, backyards, courts and alleys free from garbage, refuse, rubbish, litter, debris and other offensive material</u> (underlined for emphasis). Such persons shall also remove garbage, refuse, rubbish, litter, debris and other offensive material between the curbstone abutting the building or premises and the loading area extending one and one-half feet from the curbstone into the street on which the building or premises front.</p>	<p>Proactive enforcement. City enforcement agents patrol all areas at two specified times each day, focusing on violations for dirty sidewalks, dirty areas, and failure to clean 18 inches into the street. This program has been in place since the 1960s. The Department of Sanitation New York (DSNY) began actively issuing Notices of Violation to property owners and litterers in 1961.</p> <p>Revenues from enforcement agents, sanitation police, and sanitation recycling cover over 90 percent of the cost of the enforcement program.</p> <p>Inspectors on staff: Minimum of 1 agent assigned to each of the 59 community boards that make up NYC's five boroughs. In addition, 236 Cleaning and Collection Supervisors are assigned throughout the City. Sanitation inspectors can enforce for any sanitation code violations, which include, but are not limited to, litter related offenses.</p> <p>2009 citations issued: 48,371 for dirty sidewalks Penalties: Fine of \$50 - \$250 or 10 days in jail or both.</p>

Jurisdiction	Requires private property owners to clean adjacent Right-of-Way	Enforcement
<p>Washington, DC</p> <p>Population: 599,657 Square miles: 68.3 Population per square mile: 8,779</p>	<p>Yes</p> <p>Title 21 Water and Sanitation <i>Rule #21-702 Removal of Refuse from Public Space Adjacent to Private Property</i> Each owner, tenant, or lessee (or the agent of that person) who has control of or occupies any building, lot, or land within the District shall maintain in clean condition the public space from the property line of that building, lot or land and extending 18 inches from the curb line into the abutting roadway.</p>	<p>Complaint-based and routine inspections. Inspectors on staff: 53 inspectors City is divided into eight sections (called wards). There are generally four inspectors assigned to each ward. Each inspector is, in turn, assigned a specific area within the ward (called a footprint) that they must cover at least twice a week.</p> <p>2009 citations issued: Data not available Penalties: There are two categories of penalties (residential and commercial), and four tiers of penalties (Tiers 1-4). Initial citations are given at the Tier 1 level. Subsequent violations can be given every 72 hours if the violation has not been abated, and proceed up the tier.</p> <ul style="list-style-type: none"> • Penalties for residential violations range from \$75 or 8 hours of community service (Tier 1) to \$1,000 or 100 hours of community service (Tier 4). • Penalties for commercial violations are twice the amount of fines or community service time as those for residential violations. <p>The city puts a lien against the property until all the fines are either dismissed as a result of an administrative hearing or the fine is paid.</p>

Appendix C: New York City Questions and Responses⁶⁰

1. **How long has New York City had regulations requiring property owners to keep areas adjacent to their property clean?**

Response: It has been the property owner's responsibility to keep their areas clean since the 1960s.

2. **How long has the city been actively enforcing these laws?**

Response: The Sanitation Police were started in 1936 with 100 people taken from the New York City police patrolmen's civil service list. In 1955 the department began taking people from the Sanitation Supervisor ranks and appointing them as Sanitation patrolmen. In 1961 The Department began actively issuing Notices of Violation to property owners and litterers. Today all Sanitation police, Enforcement agents, and Cleaning and Collection supervisors are authorized to issue Notices for violations of the Health and Administrative Code as it relates to street cleanliness.

3. **In general, how well do you think they work? Please describe the program's major challenges and successes.**

Response: Enforcement works in concert with education. People do not want to receive a fine and want to know how to avoid them. The real challenge to enforcing any law is to get the community representatives and elected officials involved in supporting the issuing officers. They have to see that cleaner streets and sidewalks benefit everybody. The success is measured by the high percentage of clean streets and sidewalks as well as the willingness of residents and businesses to work with the Department to maintain clean streets. One such way is with the Department's Adopt-A-Basket program. Under this program any person, group, store operator, or building manager may volunteer to monitor a basket. They are given plastic bags for the basket and a certificate of recognition. Once the bag is almost full, they remove it, tie it and leave it next to the basket for department collection. This helps reduce litter conditions caused by overflowing baskets.

4. **How large a geographic area (square miles or lane miles) does the enforcement team cover? What's the average population density within this area?**

Response: The Enforcement division assigns a minimum of one agent to each of the 59 community boards that make up New York City's five Boroughs. Additionally, there are approximately 236 Cleaning and Collection Supervisors assigned throughout the City.

5. **Please provide revenue and expenditure data for the DSNY (City of New York Department of Sanitation) Enforcement Division for 2009**

Response: The Enforcement Division's total expenditure is \$14,580,036. (Personnel Salaries budget expenditure \$13,636,255 and Other Than Personnel Salaries budget expenditure \$943,781). Total realized revenue for DOS (Department of Sanitation) Enforcement agents, Sanitation Police, and Sanitation Recycling are \$13,727,880.36. Please note Revenue excludes: summonses for parking and summonses from non – Enforcement units and personnel.

⁶⁰ The responses provided in this appendix are unedited responses provided by the New York Department of Sanitation.

6. What are the major sources of revenue for the Enforcement Division?

Response: The major sources of revenue are from Infraction Groups:

- a. Sanitation and Asbestos violations,
- b. Recycling violations.

7. Have expenditures gone up over the past 5-10 years? If so, what is driving this increase?

Response: Yes, labor costs.

8. Performance measures:

- a. **Who rates streets as “acceptably clean?” Is it the Scorecard program?**
- b. **If so, please provide a description of this program, including: purpose, scope, organizational location (i.e., is it housed within the Department of Sanitation or does it serve other city departments), staff and annual budget.**

Response: The Scorecard Program is an independently-run program, operated by the Mayor’s Office of Operations. You should contact them regarding data at (212) 788-1400.

9. What push-back, if any, does the City get from property owners or tenants, both residential and commercial?

Response: Before 1990, a commercial establishment could receive a violation at any time of day. Many commercial business operators were complaining that they were getting a lot of summonses and couldn’t conduct business while worrying about keeping the sidewalk clean all day. The City listened to their concerns and in 1990, §16-118 of the Administrative Code was amended creating what is commonly referred to as the commercial routing times. Under the commercial routing times, enforcement personnel may only issue a violation to commercial properties for a dirty sidewalk or a failure to clean 18” into the street during two designated 1 hour periods. The periods are one hour in the morning and one hour in the afternoon. The city is broken down into 236 sections. All commercial properties within a section were assigned identical routing times. Now the commercial business operators know that they have to clean their sidewalks during those two hours and most comply because they know that’s when we inspect.

The routing law was extended to residential properties in 2004. Enforcement personnel may only issue violations for dirty sidewalks, areas, and 18 inches into the street 8am-9am and 6pm-7pm.

10. Please provide a list of other cities you are aware of, who:

- a. **Have similar laws and active enforcement programs**
- b. **Are known for their best practices**

Response: Cannot provide.

11. Please provide the names of industry or national organizations you are aware of which track sanitation efforts related to keeping sidewalks and adjacent areas clean.

Response: Cannot provide.

12. Street Sweeping

- **How many street sweepers does the DSNY own and operate?**
450.
- **How many lane miles are swept on a weekly basis?**
The DSNY sweeps 47,400 scheduled routes per year, covering more than 6,000 miles of roads on a daily basis.
- **How frequently are streets swept?**
It varies.

Appendix D: Summary Chart of Seattle City Departments and Programs That Deal with Street/Ground Litter

Chart 5: Summary of City Departments and Programs That Deal with Street/Ground Litter⁶¹

City Department/ Division	Programs	Anti-Street/Ground Litter Activities	Some 2009 Accomplishments	FTE's for Anti- Litter Activities	Estimated Labor Costs	Estimated Non- Labor Costs	Estimated Total Cost
SDOT/ Maintenance Operations Unit (housed in Street Maintenance Division)	1. Street Sweeping ⁶²	SDOT operates 8 street sweepers (4 mechanical and 4 regenerative air street sweepers) to pick up general litter that accumulates in the streets on a regular basis. According to SDOT, the street-sweeping routes were developed to provide sweeping of key highly traveled streets throughout the city. Street sweepers also respond to service requests to provide before and after street sweeping for large special events and sweep up after emergencies. This unit is also the first responders for snow, ice, urban flooding, and cleaning up night emergencies.	20,546 curb miles ⁶³ swept	20 FTEs (approximate breakdown is 5 FTEs for street sweeping, 6 FTEs for alley flushing and cleaning, 5 FTEs for roadway emergency debris, and 8 FTEs between April through October for Stairways Cleaning)	\$ 2,160,761	\$ 1,422,668	\$ 3,583,429
	2. Alley Flushing	Alleys are swept and disinfected 5-7 days/week in Clear Alley Program areas (Pioneer Square, Central Business District, and Belltown) and alleys in the University District are swept approximately every 6 weeks. Alley flushing is suspended when temperatures drop to 40 degrees or lower and during times the crews are allocated to	5,811 alley blocks cleaned				

⁶¹ Source: 2009 costs provided by City departments.

⁶² 2010 mid-year budget reduction cut the number of street sweepers from 5 to 4 FTEs. The 2011 budget will restore the 5th FTE.

⁶³ Curb miles is what shows on the sweeper's odometer as the actual distance swept along a width of 12 feet. Curb miles is a record of total miles the curb brooms are turning so curb miles do not show if a street was swept multiple times or if a new area was covered.

		emergency response activities.					
	3. Roadway Emergency Debris Removal and Spill Response	Emergency debris and spill removal in the City's rights-of- way when debris and spills pose an obstruction in the right-of- way or a road hazard.					
	4. Stairways Cleaning	SDOT's goal is to clean, power wash as needed, and clear adjacent foliage from the City's 800 stairways once to twice a year.					
SDOT/Urban Forestry Operations	Landscape Maintenance	Litter pick-up integrated with landscape maintenance management. SDOT Urban Forestry manages over 205 different landscape complexes throughout the city totaling an area of over 120 acres.		0.5 FTE	\$36,000	Not available	\$36,000

City Department/ Division	Programs	Anti-Street/Ground Litter Activities	Some 2009 Accomplishments	FTE's for Anti- Litter Activities	Estimated Labor Costs	Estimated Non- Labor Costs	Estimated Total Cost
SPU/Solid Waste Management/Clean Cities Program	1. Street Side Litter and Public Recycling	Approximately 683 litter cans and 350 recycle cans throughout City serviced by solid waste collection contractors; picked up 3 to 7 times per week depending on location.		0.45 FTE and part-time intern ⁶⁴ (20 hours/week)	\$ 51,880	\$ 133,833 (Equipment and Maintenance) \$ 916,336 (Collection Only) ⁶⁵	\$1,102,049
	2. Community Litter Clean Up Program (CLCP which is a Washington State Ecology Grant Program)	Grant funds used in 2009 (\$51,512) provided payment for a Department of Corrections (DOC) Crew Supervisor's salary and benefits and for supplies and equipment for litter and illegal dumping pickup on City right of-ways (ROWS) during weekends and on freeway interchanges along I-90, and Highways 99 and 509.	<ul style="list-style-type: none"> • 5,280 DOC litter crew hours • 90 City road miles cleaned • 121 City acres cleaned • 56,910 lbs. litter collected • 368 local illegal dumps cleaned 	0.01 FTE in Grants and Contracts reviewing; 0.01FTE for program management= 0.02 FTE	\$1,142 + 717=1,859	\$ 39,000 ⁶⁶	\$ 40,859
	3. Adopt-A-Street	Volunteer program to clean-up City streets	274 clean ups; 3,734 bags of litter collected; 8,093 volunteer hours	0.33 FTE and part-time intern (20 hours/week)	\$46,124	\$ 54,532	\$ 100,656
	4. Spring Clean	Volunteer program held each April and May for litter pick-ups, invasive plant removal, storm drain stenciling, graffiti removal, and general area beautification.	118 clean ups; 1,555 bags of litter collected; 16,900 volunteer hours				
	5. Clean and Green Seattle (Program is housed in Parks but funds for coordinating staff are from SPU.)	Clean and Green Seattle is a city-wide initiative that was developed and implemented by former Mayor Nickels. It is an interdepartmental volunteer program which coordinates monthly anti-litter, illegal dumping, graffiti, and other community clean-up events with	<p>From program inception in 2002 to February 2010:</p> <ul style="list-style-type: none"> • Collected 551,150 pounds of litter and debris • Pressure washed 127,800 square feet of hard surfaces • Painted out more than 6,305 graffiti sites 	Not available (per SPU, FTEs are not tracked separately for Clean and Green Seattle support)	Data not available ⁶⁷	\$5,000	\$5,000 (plus labor of all City staff involved in coordination and clean-up activities)

⁶⁴ After 2009, intern position has been eliminated.

⁶⁵ SPU officials stated that program disposal costs cannot be separated out from total disposal costs.

⁶⁶ The State-provided grant funding is based on a 2-year, mid-year to mid-year calendar. For the period July 1, 2007 through June 30, 2009, the State granted SPU \$107,999. However, for the period July 1, 2009 - through June 30, 2011, SPU was initially awarded \$100,000, but this amount was reduced to \$50,000 due to State budget constraints. Calculation: period of January-June 2009 was \$4,500/mo; period of June – December 2009 was \$2,000/mo; \$4,500X6+\$2,000X6=\$39,000. Grant funds include costs for crew and non-labor costs such as equipment and administrative overhead.

⁶⁷ SPU does not track Clean and Green Seattle costs separately.

		neighborhood groups. SPU staff has supported the initiative by: 1) facilitating interdepartmental planning meetings, 2) providing staff to perform clean up within designated neighborhoods, and 3) supporting volunteer coordination.	In 2008, there were 2,810 volunteers participating in 15 events. State Department of Corrections crews also assist at Clean and Green Seattle events.				
	6. Litter program coordination, e.g., a. SPU/Parks MOA; b. SPU/MID MOA , and c. BIA grant program	<ul style="list-style-type: none"> • SPU/Parks Memorandum of Agreement (MOA): SPU provides funding to Parks to defray costs of 1) servicing public litter receptacles in City parks, 2) outdoor open space recycling program, 3) ground litter collection in Downtown retail core parks • SPU/MID MOA: SPU provides funding to the Metropolitan Improvement District (MID) for the cost of public trash can collection applied to 22⁶⁸ Big Belly solar trash compactors in the MID. • BIA grant program – Funds supplement cleaning contracts to support additional litter pick-up and graffiti removal within BIA areas. 	Negotiation and contracting process for 2 year agreement (MOA), and administration of existing contract	0.09 FTE	\$8,850	<p>SPU/Parks MOA: Not to exceed \$902,800; actual = \$842,555 (This amount is included in Parks' programs in this chart.)</p> <p>MID Big Belly MOA August - December 2009: \$11,935⁶⁹</p> <p>2009 Business Improvement Area (BIA) grants⁷⁰ = \$63,000: (MID \$20,000 University District \$10,000 International District \$10,000)</p>	\$86,850 ⁷¹

⁶⁸ The SPU/MID MOA includes the City's 2 Big Belly litter can units and the 20 leased units which the MID leases from Big Belly; the MOA does not include the Big Belly litter can unit owned by the MID. The MOA also does not include the Big Belly recycle unit owned by the Big Belly supplier.

⁶⁹ SPU paid the MID rate of \$2,500 per month for Big Belly MOA (August 20-December 31, 2009) which totaled \$11,935.00.

⁷⁰ For 2010: MID \$15,000; University District \$10,000; Broadway \$7,000; International District \$10,000; Pioneer Square \$5,000; West Seattle \$7,000; Columbia City \$3,000; total = \$57,000

⁷¹ This amount does not include the \$842,555 which SPU paid to Parks in 2009 for services provided in SPU/Parks MOA; the amount is included in Parks' costs in this chart.

						Pioneer Square \$8,000 West Seattle \$8,000 Broadway \$7,000)	
	7. Clear Alleys Program (CAP)	An "alternative" solid waste SPU pilot program started March 2009 where in lieu of dumpsters in the alley rights-of-way, customers use pre-paid bag system which are collected at least twice daily by the City's solid waste contractors. Spillover effect of the system is torn bags by birds and scavengers resulting in litter being scattered in the alleys. The solid waste contractors are responsible to clean any litter or garbage that is scattered within 3 feet of the locations where bags are left out. According to SPU, the practice of the solid waste contractors is to clean all the spillover litter in the alleys.	About 550 CAP customers; current program area is limited to primarily downtown and neighborhood business districts.	Less than 1% of 1 FTE	\$1,069	\$0	\$1,069

City Department/ Division	Programs	Anti-Street/Ground Litter Activities	Some 2009 Accomplishments	FTE's for Anti- Litter Activities	Estimated Labor Costs	Estimated Non- Labor Costs	Estimated Total Cost
Department of Parks and Recreation ⁷² *SPU/Parks MOA program	1. Ground Litter Collection in Downtown Retail Core Parks*	Parks Resources Crews collect ground litter generated in specified parks ⁷³ located in the downtown retail core. Collection is conducted on an as needed basis primarily by laborers, utility laborers, and maintenance laborers. In addition to ground litter collection, the crews also		6.58 FTEs	\$395,000	\$405,000 (includes the litter Downtown Parks program and all other parks; vehicles, supplies, etc.)	\$1.64million (Ground Litter Pick-Up Program) (SPU reimbursed Parks \$244,518 of

⁷² Parks reported that 2010 mid-year workforce budget reductions resulted in elimination of dedicated litter pick-up in parks in the peak season (May-October). According to Parks, the budget cut has forced a change of business practice to integrate litter within other tasks rather than dedicating time separately to litter (i.e., multi-tasking).

⁷³ Plymouth Pillars, City Hall Park, Freeway, Hing Hay, International Children's, Kobe Terrace, McGraw Square, Occidental, Pier 62/63, Pigott Corridor, Pioneer Square, Prefontaine Place, Regrade, South Washington Street Dock, Steinbrueck, Tilikum Place, Union Station Square, Waterfront, Westlake Parks, and Westlake Square.

		assess and resolve or report safety issues, pressure wash, power blow, mow, and clean comfort stations and fountains. Ground litter is collected by hand or by raking, sweeping, or power blowing ground litter into piles and disposing of the ground litter properly.					this amount via MOA)
	2. Citywide Ground litter Collection	Collection of litter and garbage in all City parks outside those in the Downtown Retail Core		17 FTEs	\$835,000		
	3. Outdoor Public Litter Receptacle Servicing*	Parks provides all labor, equipment, and supplies required to collect and dispose of solid waste placed in public litter receptacles (includes 36-40 gallon cans, in-ground cans, and a limited number of dumpsters) within all City parks and the Salmon Bay Natural Area that are used by the public to dispose of trash generated during the public's park visit		14 FTEs	\$844,000	\$666,000 (includes garbage disposal fees, grounds maintenance vehicle lease and gas, small equipment, etc.)	\$1.5 million (Garbage Program) (SPU reimbursed Parks \$576,678 for the packer portion of litter receptacle servicing via MOA ⁷⁴)
	4. Outdoor Open Space Recycling*	Parks provides all labor, equipment, and supplies required to collect and manage recyclable materials placed in outdoor open space recycling cans within City parks. Collections are performed so that outdoor open space recycling cans are not regularly overflowing before collection occurs.					(SPU reimbursed Parks \$21,358 for recycling can servicing.)
	5. Pack It In/Pack It Out	No longer an active program but there are some parks ⁷⁵ that continue to implement the approach through signage.					
	6. In-ground Litter Cans	In-ground litter cans is a part of the Outdoor Public Litter Receptacle Servicing Program (#2 above).					

⁷⁴ MOA does not include labor costs for pick-up of litter cans that are not on packer truck routes (these include locations such as some ball fields, picnic shelters, beaches and trails and ground litter outside of downtown parks).

⁷⁵ 14th Avenue Boat Ramp (Oct–April only), Golden Gardens Peninsula, Upper Coleman, and Cormorant Cove Park.

	7. Dog Waste	Parks has 11 approved dog off-leash areas (totaling 25.35 acres) where garbage cans and dumpsters fill almost entirely with dog waste.					
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City Department/Division	Programs	Anti-Street/Ground Litter Activities	Some 2009 Accomplishments	FTE's for Anti-Litter Activities	Estimated Labor Costs	Estimated Non-Labor Costs	Estimated Total Cost
Department of Finance and Administration Services (FAS)	1. Customer Service Bureau (CSB)	Receives and forwards litter complaints and service requests to appropriate City departments.	Not applicable per CSB. Litter complaints comprised only 0.02 percent of all contacts CSB received from 2008 through mid-2010.	Negligible	Negligible	Negligible	\$56,627 ⁷⁶
	2. Seattle Government buildings ⁷⁷	<ul style="list-style-type: none"> FAS employees perform daily litter sweeps (7 days/week) and on as-needed basis. Seattle Municipal Tower janitorial contract includes litter sweeps. 		1.0 FTE	\$ 56,077	\$ 550 ⁷⁸	
Department of Neighborhoods (DON)	Alcohol Impact Area (AIA) Litter Program	DON ⁷⁹ coordinates volunteers who gather litter statistics in the City's Alcohol Impact Areas of evidence of the use of banned alcohol products to report to the Washington State Liquor Control Board. As part of this effort, litter pick-up is performed.	Data not available	Data not available	Data not available	Data not available	Data not available

⁷⁶ Does not include percentage of janitorial contract for Seattle Municipal Tower that includes litter sweeps around the building. Data not available.

⁷⁷ Includes City Hall, Justice Center, Police Headquarters, monitoring the construction site across City Hall, and the Seattle Municipal Tower.

⁷⁸ Does not include percentage of janitorial contract for Seattle Municipal Tower that includes litter sweeps around the building. Data not available.

⁷⁹ Five Neighborhood District Coordinators service Districts with designated Alcohol Impact Areas inside Seattle city limits. Providing support to the community groups, facilitating tools and resources for litter patrols and collecting litter data are the main functions for the Coordinators. This work is one component of their jobs. DON estimates that they spend 2-3 percent of their time on these activities.

City Department/ Division	Programs	Anti-Street/Ground Litter Activities	Some 2009 Accomplishments	FTE's for Anti-Litter Activities	Estimated Labor Costs	Estimated Non- Labor Costs	Estimated Total Cost
City Budget Office Criminal Justice Contracted Services (CJCS) Budget	A Seattle Municipal Court "alternative- to-jail program" for defendants to be on a State of Washington Department of Corrections Work Crew.	The Criminal Justice Contracted Services Department (CJCS) pays for a City contract with the State Department of Corrections Work Crew which includes performing litter pick up and graffiti abatement in public open spaces in Southeast Seattle, Beacon Hill, Georgetown, and South Park.	For the 4 th Quarter 2009, the Southeast Seattle Work Crew provided 2,720 hours of service and picked up 2,405 bags of litter (50,080 pounds).	Zero FTE's on direct litter activities; Approx. 0.01% FTE by CBO which reviews and approves contract invoices only	Data not available	Contract amount paid in 2009 = \$21,249	\$21,249 ⁸⁰
Seattle Municipal Court, Law Department	Community Court and Diversion Programs	The Community Court and Diversion programs are a collaborative effort of the Seattle Municipal Court, Seattle City Attorney, and the Associated Counsel for the Accused in which eligible defendants that "opt in" to the programs are assigned community service hours at neighborhood-based sites. In addition to graffiti abatement, these defendants also do neighborhood litter clean up where they work directly with and are monitored by volunteers in various neighborhoods. Community Court participants are repeat offenders; Diversion Program participants are first- time offenders.	In 2009, the Community Court sites located in Belltown, the Metropolitan Improvement District, and Lake City, totaled 5,380 community service hours, where litter removal is either the only or primary service activity. Community Court had 672 participants and picked up 696 bags of litter. The Diversion Program had 175 participants in 2009, completed 1,060 hours and picked up 225 bags of litter. 2009 totals for both programs: 847 participants 6,440 hours 921 bags of litter picked up	0.66 FTE	\$ 14,978	\$ 7,716	\$ 22,694

⁸⁰ In 2009, King County was only able to fund the work crew for the first three quarters of the year. As a result, the City of Seattle agreed to take over funding for this program from the County and the City's Criminal Justice Contracted Services (CJCS) budget started paying for the work crew in October 2009 using existing appropriation authority and funding. The City paid the Department of Corrections (DOC) \$21,249 (\$7,083 per month) for the last 3 months of 2009 and in 2010, the City paid \$85,000. The 2011 Mayor's Proposed Budget eliminated the CJCS funding and the City Council restored it in the City's Adopted 2011-12 Budget (\$ 87,000 in 2011 and \$ 90,000 in 2012). In 2011, the DOC agreed to allow the Seattle Municipal Court to place up to 10 offenders per day on a DOC work crew free of charge.

Appendix E: Parks and SPU Have Instituted Innovative Approaches and Technologies to Dealing with Litter

Some City Departments Have Instituted Innovative Approaches and Technologies to Dealing with Litter: Parks and SPU

Parks' Approaches and Technologies in Dealing with Litter and Garbage

The total 2009 budget for the Parks and Recreation Department was \$131 million. The department's Park Resources Unit⁸¹ consists of parks maintenance crews that service all City parks. The Park Resources Unit estimated that it spent about 8 percent of its \$20 million 2009 budget for direct litter activities, approximately \$1.64 million. Litter activities, defined by Parks, consists of dealing with "litter outside the garbage can", namely, picking up ground litter. Litter activity costs were distributed in these two programs, both of which involve a unique approach or innovative technology to address litter:

1. Downtown Parks Ground Litter Program, and
2. Citywide Parks Ground Litter Program

The following five programs, all of which except number one involve a unique approach or innovative technology, deal with garbage activities, approximately \$1.5 million, that is, removal or servicing of garbage cans by packer truck or maintenance laborers:

1. Outdoor Public Litter Receptacle Servicing Program,
2. Outdoor Open Space Recycling Program,
3. In-ground Litter Can Program (included in Outdoor Public Litter Receptacle Servicing program, packer program above),
4. Pack-It-In/Pack-It-Out Program (Included in Outdoor public litter receptacle servicing program, packer program above), and
5. Dog Waste (Included in Outdoor public litter receptacle servicing program, packer program above).

Parks spent approximately \$3.14 million on its litter and garbage programs in 2009.

Parks uses multi-tasking approach to enhance litter collection in downtown parks

For the Downtown Parks Ground Litter Program, on an as needed basis, Park crews collect ground litter generated in twenty parks located in the downtown retail core. In addition to ground litter collection, the crews also assess and resolve or report safety issues, pressure wash, power blow, mow, and clean comfort stations and fountains. Ground litter is collected by hand or by raking, sweeping, or power blowing ground litter into piles and disposing of the ground litter property. SPU provides funding to defray the labor costs of collecting ground litter in the downtown retail core parks. The same park crews collect leaves over a 6 week period in the fall. During these 6 weeks, leaves and litter are gathered at the same time by power blowing leaves and ground litter into a commingled pile for collection.⁸²

⁸¹ Parks Resources Unit is within Parks Division which is comprised of Facilities and Maintenance Unit, Parks Resources Unit, and Natural Resources Unit.

⁸² During the 6 week leaf collection period, SPU pays a portion of the labor associated with this commingled collection.

As of 2010, to respond to recent budget cuts, the Parks Resources Division has discontinued dedicated litter collection by their maintenance crews who previously spent about an hour each day during peak season to focus on picking up litter in the parks. Instead, the department has now integrated litter collection with other Parks maintenance activities, such as mowing, and the department provides poker sticks to pick up litter as the crew is mowing; essentially, multi-tasking litter pick-up with other activities.

Parks Implements Lessons-learned from Pilot Study to Optimize Outdoor Recycle Can Placement

Seattle's parks recycling program started in 1992 with the Parks Department's placement of 51, 55-gallon drums for recyclables in 11 parks. According to Parks Department officials, the program was plagued by major contamination and service issues. However, Parks made changes to the program to mitigate these issues.

In 2008, to further improve the program, Parks and SPU conducted a pilot study, the Outdoor Open Space Recycling Pilot Program, to assess program and cost effectiveness. The purpose of this study was to identify optimum recycle can placement to increase recycling and reduce labor costs. The department used the data they collected in the pilot study (on optimum can placement, labor costs, program months, tonnage, costs/ton) to institute programmatic changes in 2009. They identified the following lessons-learned from the 2008 pilot study to improve the program's cost-effectiveness:

Ways to increase tonnage:

- Increase the number of recycling cans placed at high yielding locations, which increases encounters between park users and recycling infrastructure,
- Keep recycling bins well marked and serviced, and
- Place recycling cans where there are high garbage yields, typically where people go to eat or drink or enter/dock.

Ways to keep costs low:

- Integrate servicing into general duties and avoid redundant servicing,
- Maintain lower staff and fuel costs by placing recycling cans near collection dumpsters,
- Survey Crew Chiefs frequently to continually identify ideas for improving the program, and
- Place recycling bins only during the peak season.

In 2009, there were about 2,500 garbage cans in approximately 400 parks and 123 recycle cans in 67 parks. Parks estimated that 23 percent by volume, of all outdoor garbage produced in the parks, falls into Parks Recycling Program materials collected (aluminum cans, glass and plastic bottles). Parks does not collect paper or food products as part of the recycling program. According to Parks, the recycling program has shown promising results with contamination rates of less than five percent. It costs Parks about \$135/ton to dump packer truck waste at the transfer station. Parks has recently begun piloting limited packer servicing of recycling cans and dumpsters in addition to leasing recycling dumpsters from Waste Management. It costs \$277/month to lease a dumpster from Waste Management and Parks can, depending on the market for recycled materials, deposit the recyclables at no cost at the Lander processing facility.⁸³

⁸³ The stated \$0 option assumes the Lander processing facility is agreeable to receiving Parks' materials; facility staff has expressed concern related to the quality of material from similar outdoor open space programs.

Parks Reduces Costs through Pilot Program Fostering Personal Responsibility

In 2001, Parks piloted a program called Pack-it-in/Pack-It-Out. The program began as a one year pilot project at 18 selected parks⁸⁴ where garbage cans were removed as a way to help stem the increasing costs of trash collection and litter control and to involve park users in the stewardship of City parks. “Pack it in, Pack it Out” signs were installed at some sites, others were provided with signs and bag dispensers and other sites were not provided any signage or bags. The program was mostly at smaller parks and viewpoints in neighborhoods. Through the pilot program, Parks learned that implementing a textbook model of the program, such as removing every garbage can, doesn’t work in Seattle’s urban park system. Instead, the department concluded that a modified version could be successful as a garbage can reduction program and would help to meet its goals on environmental stewardship, maximize the efficiency in Parks’ trash collection system, and the needs of park users. To date, a decision hasn’t been made to reinstitute the program at these parks. Currently, the Pack It In/Pack It Out program continues in eleven City parks.⁸⁵



Parks Compares Effect of Two Different High Capacity Trash Receptacles on Litter Reduction and Collection and Concludes That In-Ground Cans Are A Better Investment

To increase their capacity for trash and litter collection, Parks piloted two programs to look at two trash collection technologies, the Big Belly solar compactor cans⁸⁶ and In-ground litter cans. After comparing the two, Parks concluded that the high-volume In-ground cans are a better investment because they hold more garbage than a Big Belly container and are about 80 percent less expensive to purchase. Also, as Parks wants more of its trash to be recycled and composted, the in-ground cans can be converted for such purposes at a small capital cost (whereas the Big Belly cans are only to be used for garbage).

Parks is looking to expand the in-ground cans as the infrastructure for servicing these cans is already in place via cranes on some of their packer trucks. The advantages of litter containment (resistance to wind, animals, and illegal dumping) in addition to the large capacity make these containers desirable.⁸⁷ High liner costs (\$9/liner) used to be a deterrent, but in 2010, the department changed the liner supplier. Liners now cost \$2/liner making them affordable. Parks now has 24 In-ground litter cans located in 9 parks⁸⁸.

Parks has explored with SPU about the potential placement of a Big Belly can in one of its downtown parks but no decision has been made about this. The SPU/Parks MOA does not specify can type and if Parks decides to pursue this, Parks indicated that it would be required to pay the difference between actual program costs and the not-to-exceed amounts listed in the interdepartmental agreement.

⁸⁴ Froula Park Playground, Howell Park, Marshall Park, Day Street park, North Seattle Park, Seola Park Viewpoint, 12 Avenue Viewpoint, Martin Luther King Jr. Park, 14th Avenue Boat Ramp, Belvoir Park, Matthews Beach Wetlands, Golden Gardens Peninsula, Kiwanis Ravine, Louisa Boren Greenbelt, Cormorant Cove Park, Colman Park, Lakeview Park, and Bagley Viewpoint.

⁸⁵ Belvoir Park, Matthews Beach Wetlands, Golden Gardens Peninsula, Kiwanis Ravine, Louisa Boren Greenbelt, Cormorant Cove Park, Colman Park, Lakeview Park, Bagley Viewpoint, Fauntleroy Place, and Herron’s House Park

⁸⁶ Alki Park in 2006/2007.

⁸⁷ 2009 Waste Diversion and Reduction Programs with Seattle Parks and Recreation (Parks), p. 12

⁸⁸ Lower Woodland Park Parking Lot, Green Lake Park Playground, Green Lake Wading Pool, Matthews Beach, Burke Gilman Trail & NE 40th St., Northacres Park, Alki Beach Park, Don Armeni Boat Launch, Lincoln Park.

Chart 6: Parks Department Comparison of Big Belly Solar Compactor Cans with In-ground Litter Cans

Factor	Regular Litter Can	In-Ground Can	Big Belly Can
Volume capacity/can	30 gallons	575 gallons	63 gallons ⁸⁹
Weight capacity/can	21 lbs	414 lbs	40 lbs
Time required to service (empty)/can	2 minutes	5 minutes	3 minutes
Liner cost	\$0.33 ⁹⁰	\$2.00	\$0.80 ⁹¹
Relative service frequency (Based on volume. For every in-ground can serviced, 9 Big Belly cans or 19 regular litter cans would be serviced)	1	19	9
Contacts (regional park, highly used, e.g., Alki) Contact = number of times maintenance laborer has to either check or service the can	204 times/year ⁹²	10.74 times/year ⁹³	102 times/year ⁹⁴ 204/2=102

Source: Parks Department, Strategic Advisor to the Director of the Parks Division

Parks Considers Options for Passing on Costs of Litter/Waste Collection and Disposal to Users

In addition to litter produced by human users of parks, a Parks study indicates the impact of dealing with dog poop in the parks is significant. In 2009, Parks estimated the overall cost for dogs' presence in the parks at \$289,000 annually, and costs directly related to waste collection and disposal of dog poop alone as \$157,000.⁹⁵ This does not include the cost of maintenance activities and staff support and administration.⁹⁶ In May 2009, to recover some of the costs of dealing with dog poop litter, the department submitted a Budget Issue Paper⁹⁷ (BIP) proposal to increase the annual dog license fees by \$8 to support maintenance of off-leash areas. This would shift funding of the off-leash area maintenance from the general fund to dog license fee revenues. The Mayor's Office rejected this BIP and therefore it was not submitted in Parks' 2010 final budget submittal. Parks Department officials indicated a similar BIP was submitted in the 2005-2006 budget process and this proposal was also rejected.

⁸⁹ Parks' Big Belly trials resulted in a compaction rate of 1.5-2.2. (Source: Page 13 of Parks' study entitled: "Parks' Waste Diversion and Reduction Program within Seattle Parks and Recreation").

⁹⁰ Parks used \$50/150 lines = \$0.33/liner.

⁹¹ MID said they pay about \$0.80 each; according to this web site where you can order Big Belly liners, it is \$0.86 each where box of 50 is \$42.95.

(http://demo.thecomcompactorguy.com/index.cfm?fuseaction=display_large_image&product_id=43)

⁹² Parks' calculation: Assuming 5X per week in peak season and 3X per week in non-peak season that a maintenance laborer has to out to check or service the can. There are 24 weeks in peak season and 28 weeks in non-peak season. To get 204, Parks took 24X5+28X3=204 contacts per year for that one litter can.

⁹³ Parks' calculation: 204/19=10.74; used 19 because in ground can volume is 19X more than regular litter can.

⁹⁴ Parks' calculation: 204/2=102; used 2 because Big Belly can volume is 2X more than regular litter can.

⁹⁵ July 29, 2009 Memorandum: Estimate of Actual Costs Related to Dogs in Parks.

⁹⁶ Another \$31,000 for cost of maintenance activities, staff support, and administration for dog related costs in the parks.

⁹⁷ Budget Issue Papers (BIPs) are proposals for new programs or initiatives or reductions to existing programs and services which identify issues that the Mayor may want to pursue during the fall budget review process.

SPU Has Memorandum of Agreement with the Metropolitan Improvement District to Use High Capacity Solar Compacting Trash Receptacles (Big Belly Cans)

SPU has a memorandum of agreement (MOA) with the Metropolitan Improvement District (MID) for the MID's Big Belly Program. In 2009, the MID asked SPU if the MID could replace 20 existing City's fluted litter cans with 20 Big Belly cans along Third Avenue between Stewart and University Streets and have SPU pay for the servicing of the Big Belly cans. SPU and the MID developed an MOA whereby the MID would service the 20 Big Belly cans plus 2 existing City-owned Big Belly cans and SPU would pay the MID up to \$30,000⁹⁸ per year for servicing the 22 Big Belly cans based on what SPU pays its private contractors for regular litter can service.⁹⁹ This brought the total number of Big Belly cans on Third Avenue up to 23 as there were already 2 Big Belly cans owned by SPU and one Big Belly can owned by the MID on Third Avenue. The MOA does not include servicing of the MID-owned Big Belly can, nor does it include servicing of a Big Belly recycle can owned by the Big Belly supplier.

It should be noted that there are no cost savings for the City from the Big Belly cans. SPU pays the MID the same amount to service the Big Belly litter cans as they would have paid for servicing the City's standard fluted litter cans.

MID statistics for July 2009 through June 2010 show that there was an average of 114 bags¹⁰⁰ collected per Big Belly can, which equals 0.31 bag/can/day. According to the MID, if regular litter cans were used in lieu of the Big Belly cans, City contractors would have picked up 2 bags per day per regular litter can over 365 days.¹⁰¹ The advantage to the use of Big Belly cans is that they do not have to be emptied as often as regular litter cans. The MID said they empty the Big Belly cans when the signal indicates that they are full, usually twice per week. However, the three units located at Third Avenue and Pine are emptied seven days per week, which means that the needed trash capacity at that location is roughly three times more than other locations.

SPU however, has reservations about the Big Belly cans. SPU staff assembled a list of the following 10 reasons why the department does not support expanding the Big Belly program:

1. High cost – Big Belly cans cost about 10 times more to purchase than the City's standard street side litter cans; SPU stated their analysis indicated that the extra capital costs for the Big Belly cans are not offset or reduced by fewer trips to empty the can.
2. Current inefficiency of scale – the purchase of many more Big Belly cans would be needed to obtain potential labor savings and reduce greenhouse gas emissions.
3. The reality of enjoying collection savings and reduced greenhouse gas levels is questionable. The cans still need to be checked to see if they require servicing, which requires a trip by an employee. Further, street side can servicing is not part of a separate route – it is integrated into

⁹⁸ Actual = \$29,760 per year.

⁹⁹ Payment was based on regular collection rates and frequencies that would apply to open top litter cans that would normally be scheduled for twice per day collection at \$2.00 per collection. 20 cans collected twice per day = 40 collections per day for a daily cost of \$80. The daily cost times 365 days = \$29,200/year. The monthly cost to service 22 Big Belly units was set at \$2,500 per month for a total annual cost of \$30,000. Source: MOA

¹⁰⁰ MID statistics showed that between July 1, 2009 and June 30, 2010, there were 2,421 bags (55 gallon sized trash bags) disposed from Big Belly cans. During July 2009, the MID serviced 3 Big Belly cans and in August 2009, twenty (20) additional Big Belly cans were installed through a lease arrangement with a vendor. We calculated an average of 21.3 Big Belly cans serviced between July 2009 and June 2010. 2,421 bags/21.3 cans = 113.5 bags per can over 12 months; 113.5 bags/365 days = 0.31 bags/day/can.

¹⁰¹ Does not take compaction rates into consideration.

other collection activities. Therefore, even if Big Belly cans do not require servicing, a collections truck will still pass by it during its normal route.

4. Big Belly cans depart from street side can specifications. In order to improve aesthetics and ensure all of SPU's street side cans match, SPU developed and employs street side litter and public place recycling can specifications. According to SPU, after several years and significant investment, the litter and recycling cans are the same design city-wide; litter cans are green and recycling cans are blue and introducing the new design would undermine this initiative and result in pairing dissimilar cans, which is unsightly and often confusing for the can user.
5. Attractive for graffiti tagging. On Third Avenue, Big Belly cans are more likely to be tagged by graffiti and/or have posters/stickers applied to their surface than SPU's standard fluted design litter cans.
6. Big Belly cans require a key for access¹⁰² and special plastic bags.
7. Big Belly cans require more maintenance than fluted cans.
8. At the end of a Big Belly can's service life, its solar panel is hazardous waste.
9. A user needs to touch the Big Belly cans to use them, which discourages some persons from using them due to concerns about the cans' cleanliness.
10. Contamination in recycling cans has increased since installation of the Big Belly litter cans. While the reasons are not definitively known, causes may include the following: an unwillingness to touch the Big Belly litter cans' handle due to fears of uncleanness/germs; unwillingness to slow down or stop altogether to use the Big Belly can; or the lack of public place recycling cans adjacent to Big Belly litter cans.

SPU also noted that an audit¹⁰³ of the City of Philadelphia's purchase and deployment of 500 Big Belly cans in 2009 identified deployment issues such as: no training for collection crews assigned to Big Belly routes on the system, its operation, care, use, or maintenance; sensors for full or not full status not reliable; total projected reduction in number of trips (for collection) may not have been realized; routine cleaning and maintenance not factored into projected operating cost savings; additional time needed to empty compactor and replace bag not factored into savings, additional manpower needed to remove graffiti not factored into savings; and that the design may not be compatible with some modern concerns, i.e., citizens' concerns about having to grasp and touch the unit's possibly germ infested unsanitary handle in order to dispose of trash, which might not encourage the use of these trash receptacles.

We asked MID officials about whether the MID has had any training or service issues with the Big Belly cans and they responded that they received training and that the units are basically maintenance free. They reported that they have had no issues with the sensors and that the total repairs in the first year, due to vandalism, were under \$500. As for problems with graffiti, the MID reported that the Big Belly units are "tagged very infrequently – far less than other public or private structures such as the parking pay stations."

¹⁰² Big Belly boxes are locked and require keys to open the boxes to access bags of trash.

¹⁰³ City of Philadelphia, Office of the Controller, Purchase and Deployment of Big Belly Solar Compactors, July 2010

Appendix F: Litter Programs in the Seattle Department of Transportation

Seattle Department of Transportation's Street Maintenance Division is Responsible for Keeping City Streets Clean

SDOT's street cleaning function is housed within the Maintenance Operations Unit¹⁰⁴ of the Street Maintenance Division¹⁰⁵. There are four programs in street cleaning that deal with street/ground litter in Seattle: 1) Street Sweeping, 2) Alley Flushing, 3) Roadway Emergency Debris Removal and Spill Response, and 4) Stairways Cleaning. In 2009, SDOT had 20 FTEs in Street Cleaning dedicated to anti-litter activities; their total estimated cost in 2009 was \$3.6 million.

SDOT's Street Sweeping Program

SDOT operates a total of 8 street sweepers (4 mechanical and 4 regenerative air street sweepers) to pick up general litter that accumulates in the street. It is a \$1.4 million program under which major arterials throughout the city are mechanically swept on a regular basis, ranging from daily to every two weeks, depending on the need. Most minor arterials are swept once a month and some are swept only when requested.¹⁰⁶ SDOT does not routinely sweep non-arterial streets, but does limited leaf cleaning on them in the fall. According to SDOT, the street-sweeping routes were developed to provide sweeping of key highly traveled streets throughout the city. Specific geographic areas within in Seattle's city limits are swept along specific routes according to which day of the week it is. Street sweepers work 7 nights per week. Street Sweeping staff also responds to service requests, especially in July and August, to sweep streets for parades and other special events.

Street sweeping personnel have other responsibilities besides routine sweeping and responding to service requests. For example, they are called in to help clean up after all kinds of emergencies, from concrete truck spills to water main breaks. And although regular street sweeping occurs at night, street sweepers also help, during the day, on large repaving projects. They are also the primary responders for snow, ice, urban flooding, frost, and night emergencies.¹⁰⁷

We obtained comparable data on street sweeping from Portland, Oregon, a city which is similar to Seattle in population, weather, and terrain (see Chart 7 below).

¹⁰⁴ The Maintenance Operations Unit's responsibilities include potholes, street sweeping, and street cleaning.

¹⁰⁵ The Street Maintenance Division includes the Maintenance Operations Unit and the Street Surfaces Repair Unit.

¹⁰⁶ Requests can come from various sources: 1) SPU's drainage and water units to keep storm drains clean – responding to these are a high priority; 2) the City's Customer Service Bureau – where constituents call or write in requests; in response, SDOT's Maintenance Operations visits a site and response decision is made on a case-by-case basis depending on feasibility, urgency, and impact; 3) other departments, e.g., Seattle City Light.

¹⁰⁷ An example of a night emergency response by the street sweeping personnel is when the Seattle Police Department calls to request that a dislocated median be replaced due to a traffic accident at night.

Chart 7: Comparative Data on Street Sweeping between Portland, Oregon and Seattle

	2009 Population	Total lane miles in city	Sweeping Route				Number of Sweepers			2009 FTEs on Days	2009 FTEs on Nights	2009 Total FTEs	Curb miles swept/FTE
			Total lane miles	Residential lane miles	Arterial lane miles	Curb miles swept in 2009	mechanical sweepers	regenerative air sweepers	total sweepers				
Portland OR	566,143	3,970	3,414	2,354	1,050	35,385	5	5	10	4	6	10	3,539
Seattle	616,627	3,943	755	0	755	20,546	4	4	8	0	5	5	4,109

Lane miles is the measure of 12' width lanes; so if a street that is 1 mile long in lineal distance has 4 lanes that are each 12' wide, then the 1 mile long lineal distance of street is 4 lane miles.

Curb miles is what shows on a street sweeper's odometer as the actual distance swept along a width of 12 feet. It is a record of total miles the curb brooms are turning so curb miles do not distinguish between whether a street was swept multiple times or if a new area was covered.

This above data indicates the following about 2009 street sweeping activities IN Seattle compared to Portland, OR:

- Portland swept 72 percent more curb miles than Seattle;
- Portland's street sweeping route includes 2,354 lane miles of residential streets whereas Seattle's street sweeping route does not include any residential streets;
- Portland has twice as many FTE's assigned to street sweeping compared to Seattle;
- Seattle swept 16 percent more curb miles¹⁰⁸ per FTE than Portland. We did not analyze the reasons for this difference.

We also learned that jurisdictions such as Chicago and Washington D.C. require streets to be cleared of vehicles when the mechanical street sweepers come through. According to SDOT, it does not require street clearances for any of its routine street sweeping routes because all regularly scheduled street sweeping occurs between 10 p.m. and 6 a.m. (the "graveyard shift") when there aren't many cars parked on the arterials. Its mechanical street sweepers will go around parked vehicles.

In August 2010, SDOT started curb-to-curb street sweeping in a small area of South Park around SPU'S new South Recycling and Disposal Station (SRDS), which is being redeveloped. The curb-to-curb street sweeping is contracted by SPU¹⁰⁹ to mitigate the impacts of customers hauling loads to the current facility and will continue when the new SRDS opens. Residents have been asked to refrain from parking on the street during sweeping days and times (first Monday of each month between 9 a.m-1 p.m.) so that the street sweepers can clean curb-to-curb.¹¹⁰ According to an SDOT official, this has made it easier

¹⁰⁸ Curb miles is what shows on the sweeper's odometer as the actual distance swept along a width of 12 feet. Curb miles do not show if a street was swept multiple times or if a new area was covered.

¹⁰⁹ SPU committed to providing street sweeping as one of the conditions of receiving approval for a street vacation petition in conjunction with the redevelopment of the South Recycling and Disposal Station (SRDS), Clerk File Number 310784; SPU chose to contract with SDOT to provide the service (Memorandum of Agreement No. DA2010-19).

¹¹⁰ While there are "No Parking for Street Sweeping" signs posted, SPU states that they are financing the sweeping as a community benefit and has asked SDOT not to ticket or tow cars for non-compliance, which would defeat the purpose of providing a community benefit, and this is the only area in the city where street-to-street sweeping occurs.

for the street sweepers to perform more efficiently and faster because there are no vehicles to maneuver around.

Starting in 2011, SDOT will be able to add 1 FTE street sweeper through a contract with SPU in which SPU will be paying for street sweeping for water quality purposes.¹¹¹

Street Sweeping Is Provided on a Courtesy Basis for Special Events

SDOT's Street Maintenance Division provides free post event street sweeping services for many special events that occur within the city limits.¹¹² SDOT was not able to provide data on the events they service or the curb miles swept. Given the current budget constraints facing the City of Seattle, we recommend that SDOT determine the magnitude of street sweeping provided to special events without cost and consider recovering these costs by charging event organizers for these services.

SDOT Also Responsible for Cleaning Alleys

Under SDOT's Alley Flushing Program, alleys in SPU's Clear Alley Program (CAP) boundaries¹¹³ are cleaned by SDOT Street Maintenance crews seven days a week following these procedures: 1) laborers go through the alley and rake and collect litter and debris and either pick it up or place it in the middle of the alley, 2) a mechanical street sweeper goes through the alley at least once a week and sweeps the trash, and 3) a heavy equipment truck flushes the alley with a soap peroxide solution to disinfect the alley (only if the outside temperature is above 40 degrees Fahrenheit). SPU's CAP program was designed to work with SDOT's existing Alley Flushing Program. In addition to the daily alley flushing within the current CAP boundaries, SDOT also sweeps alleys in the University District on a semi-regular basis, that is, about once every 6 weeks. SDOT officials indicated that should SPU want to expand the boundaries of the CAP program, SDOT does not currently have funding to expand the program beyond its current scope.¹¹⁴

SDOT Crews Remove Debris and Clean Spills When They Obstruct Roadways

SDOT Street Maintenance crews respond to emergency debris and spill removal in the City's rights-of-way when debris and/or spills pose an obstruction or a road hazard. Examples of typical obstructions are tires and furniture items. SDOT does not remove the debris if it does not pose an obstruction in the road, in which case it is considered illegal dumping, and SPU's illegal dumping team is called to pick up the item. If the debris consists primarily of litter, SDOT sends a mechanical street sweeper to clean it up.

SDOT Crews Clean City Stairways Twice a Year

Annually, SDOT's Street Maintenance crews clean and maintain about 800 public stairways in the city. The crews follow a cleaning schedule with the goal of cleaning each stairway once to twice a year. Cleaning includes trimming the adjacent foliage, removing litter, sweeping, and power washing the stairway when needed to maintain a clear area of 18 inches to 3 feet from the outside edges of the stairway.

¹¹¹ The funding source for street sweeping for water quality purposes will come from a 1.2% rate increase in 2011 and an increase of 0.6% in 2012 to the City's drainage rates.

¹¹² Events include but are not limited to the following: Torchlight Parade, Wallingford Kiddie Parade, West Seattle Parade and Street Fair, Chinatown Festival and Parade, Bon Odori Festival, Greenwood Parade and Car Show, University District Parade, Lake City Parade, Capitol Hill Block Party, Fremont Solstice Parade, and Pride Parade.

¹¹³ 1) Downtown (including Belltown, the Denny Triangle and the Commercial Core), and 2) Pioneer Square.

¹¹⁴ SPU indicated that while other areas in the city have expressed interest in the CAP program, SPU does not currently plan to expand the boundaries of the program due to funding constraints.

Litter Clean-Up of Planting Strips, Street Tree Pits, Traffic Circles¹¹⁵, Chicanes¹¹⁶, Landscape Complexes¹¹⁷, and Non-landscaped Traffic Islands/Medians

According to the City Arborist, generally the abutting property owner is responsible for litter clean-up of planting strips and street tree pits, even when the street tree was planted by SDOT¹¹⁸. For landscaped traffic circles and chicanes, volunteers perform litter clean-up. If a traffic circle does not have an assigned volunteer, no clean-up occurs unless it gets to the point of affecting public safety, in which case SDOT will visit the location to see if a clean-up is warranted.

For SDOT Urban Forestry, landscape complexes make up the majority of their responsibilities for landscape maintenance and litter pickup. Urban Forestry gardeners perform litter pick-up as part of their landscape duties. According to SDOT, it has the resources to schedule regular visits to approximately one third of the landscape complexes in the City where litter pick-up is a major component of the landscape maintenance regimen, followed closely by weed management. The other two-thirds of SDOT's landscape complexes are managed for safety and accessibility. That is, SDOT does not routinely inspect two-thirds of their landscape complexes but responds only when they are made aware that safety or accessibility are compromised in which case SDOT will respond to perform litter pick-up or pruning.

According to SDOT Urban Forestry officials, the majority of landscape complexes are not suitable for relying on volunteers for maintenance because they are located along arterials and safety is a concern. A street use permit that includes an approved traffic control plan is needed when maintenance occurs within three feet of moving vehicles.

Examples of SDOT landscape complexes include: landscaping along Spokane Street over Harbor Island, Lake City Way medians and tree pits, the Burke Gilman Trail from NW 60th to Golden Gardens Park, and a triangle located at 9th Avenue NW and NW Leary. Landscaped medians such as Ravenna Boulevard, Hunter Boulevard, and the areas immediately south of the Montlake Bridge are maintained by the Parks Department.

For non-landscaped traffic islands and medians, SDOT's Street Maintenance has maintenance responsibility and primarily responds to litter on a complaint basis.¹¹⁹ Areas with large accumulations of

¹¹⁵ Traffic circles are a traffic calming device with raised islands at the intersections of residential streets. Motorists must reduce speed to maneuver around the circle, which helps reduce accidents. (Source: <http://www.cityofseattle.net/transportation/ntcpprogram.htm>)

¹¹⁶ Chicanes are a set of two or three curb bulbs that alternate from one side of the street to the other creating a one-lane segment of roadway. They are a traffic calming device that is most effective at reducing mid-block speeds and may reduce volumes. (Source: <http://www.cityofseattle.net/transportation/ntcpprogram.htm>)

¹¹⁷ "Landscape Complex" is the name given to the individual management areas with landscaping in transportation rights-of-way found throughout the city. They are considered assets of the Seattle Department of Transportation and contain one or more landscaped areas that each contains any combination of soil, mulch, annuals, perennials, shrubs, trees, and irrigation systems. Some landscape complexes may be referred to as "triangles" or "medians" but there is no standard shape or size. SDOT Urban Forestry manages over 205 different landscape complexes throughout the city totaling an area of over 120 acres.

¹¹⁸ An example is the Sound Transit corridor where SDOT is responsible for the trees and the adjacent property owner is responsible for the groundcover/grass on the planting strip and any litter that accumulates on the planting strip and in the tree pits.

¹¹⁹ Street Maintenance Operations night shift laborers clean a number of non-landscaped traffic islands and medians considered problem spots on a regular basis and the rest on a complaint basis.

litter are typically referred to SPU for clean-up by Department of Corrections crews. Litter pick-up however, is a lower response priority than conditions such as weed removal or brush cutting, which directly affect transportation safety.

Appendix G: SPU's Street Side Litter and Recycling Cans Programs

SPU Responsible for Maintenance of and Collection from Street Side Litter and Recycling Cans

The City, through SPU's Street Side Litter and Street Side Recycling Can Collection Program, provides 683 litter cans and 350 recycling cans sited on public right-of-ways (i.e., sidewalks) throughout Seattle. The cans are often located in business areas to make it convenient for pedestrians to deposit litter and recyclables. SPU contracts with CleanScapes and Waste Management to service street side litter and recycling cans and provide residential and commercial solid waste services. The contracts started in March 2009.¹²⁰ SPU paid their contractors \$916,336 in 2009 for collection services¹²¹ for the Street Side Litter and Public Recycling Can Collection Program.

The contactors are contractually required, when collecting the contents of the litter and recycle cans, to open the can, empty and replace the liner, replace the lid, and clean up any litter that is located around or under the can, or that is caught between the can and the liner. The contractors are also responsible for removing graffiti, stickers, posters, or other unauthorized material from the cans. SPU reported that they have not had any performance issues regarding these requirements since the start of the current contracts in 2009. SPU also reported that they have received "very few complaints" about overflowing public litter cans through its Call Center. When complaints are received through the SPU Call Center about overflowing cans, SPU sends a service order to the contractor.

In our discussions with an SPU official about the condition of City-supplied cans, the official noted that SPU recognizes that many of the cans are missing labeling that identifies where to call to report a problem with them. The SPU official stated that the department had to recently forgo addressing this issue because of budget constraints.

¹²⁰ The contract with CleanScapes terminates on March 31, 2017 and the contract with Waste Management terminates March 31, 2019.

¹²¹ Disposal costs for the Street Side Program cannot be separated out from the total disposal costs.

Appendix H: SPU's Clear Alleys Program and Litter in the Alleys

SPU's Clear Alleys Program¹²² and Litter in the Alleys

The Clear Alleys Program (CAP) was started as a SPU pilot program in March 2009¹²³ because many public alleys in Downtown and Neighborhood Business Districts contain permanent solid waste dumpsters that provided cover for uncivil and illegal behaviors, impeded pedestrian and vehicular traffic use and attracted illegal dumping. CAP operates only in certain designated business districts.¹²⁴ The program seeks to obtain cleaner and safer public alleys by removing dumpsters from alley rights-of-way and replacing them¹²⁵ with a “frequently-collected pre-paid bag system”¹²⁶. Residential customers must use the pre-paid bag system¹²⁷ unless they have storage space for trash containers on private property. Commercial customers can choose between using the prepaid bag system or self-haul garbage to the City's transfer stations. According to SPU, there are very few self-haul customers.

SPU and Metropolitan Improvement District (MID) representatives noted that CAP bags left in the alleys for collection are often ripped open by birds and rats, resulting in their contents littering the alleys. The bags and carts are also rummaged through by human scavengers. During our walking tour with a MID official, we observed evidence of these occurrences. According to MID representatives, these occur because the bags and carts are left out too long or because of missed collections by the solid waste contractors.

The SPU official who manages CAP indicated that these challenges with solid waste in City alleys existed before CAP was implemented. For example, the SPU official pointed out that Seattle's dirtiest alleys are in the International District, which is outside the CAP boundary, and Belltown, which is within the CAP

¹²² The Clear Alleys Program is a garbage collection method that includes goals related to public safety. The discussion of this program in this audit is limited to the reported litter that results in alleys because of bags that are torn open by birds and rats and carts that are rummaged through by scavengers.

¹²³ Effective March 30, 2009, customers located in the downtown core who permanently store solid waste containers in the right-of-way are required to participate in the Clear Alley Program. All customers in the target area must use pre-paid bags and place their bags in specified areas of the alley for collection on a daily basis. Customers with dumpsters/carts not permanently stored in the alley are not required to participate. The program also includes the collection of recyclables in bags and does allow for exceptions in certain cases. Food scraps may be collected from bags or wheeled carts/toters. Containers for cooking oil may still be stored in the alleys. The contracted haulers collect bags daily, and in some areas up to four times a day. Customers are charged a base monthly service rate and must order bags on top of that monthly rate for the disposal of trash, recyclables, and food waste. Cardboard may be flattened and placed in another cardboard box and is not required to be placed in a bag. (Source: Seattle Public Utilities Clear Alleys Program (CAP) Evaluation, p. 11)

¹²⁴ As of 2009, the designated business districts include: 1) Downtown (including Belltown, the Denny Triangle and the Commercial Core), and 2) Pioneer Square.

¹²⁵ Commercial customers must use the pre-paid bag system unless they have storage space for containers on private property or choose to self-haul garbage to the City's transfer stations.

¹²⁶ The City's contract with CAP contractors does not specify garbage pick-up frequency. The contractor adjusts the frequency based on the customers' needs (generally two or three times per day depending on the customer). According to SPU, if the customer requires more garbage pick-ups, the contractor responds to the needed level. Overall, when the CAP customer needs more frequent garbage pick-up, the contractor works with the customer to work out the best pick up times for the customer and/or increase pick up frequency.

¹²⁷ The City's contractors and private recycling companies offer prepaid bags for garbage, recyclables and compostable materials (such as food scraps, food soiled paper, yard trimmings). With approval from SPU, customers that lack on-site storage on private property may obtain an exemption to use carts for compostables, glass, and pet waste (only) which can be stored long-term in the alleys.

boundaries, and suffers more from the impacts of open bags and overflowing containers than the adjacent MID.

We asked this same SPU official what solid waste contractors are required to do when they encounter spillover litter from torn bags and overflowing carts. He told us that contractually, the customers are responsible for the bags and carts within the 3 foot area where they can set them out. However, in practice, the contractors “are taking it upon themselves to keep the alleys clean (and) the CleanScapes’¹²⁸ collection crew will clean the litter and spills in the course of their collection work (even if it’s within the area that customers are responsible for), and CleanScapes will also send a crew with brooms to clean the alley when they get a complaint. However, if the contractors encounter anything toxic or unidentifiable, then they handle it as an illegal dumping incident and call the SPU Hotline.”

CAP operations are closely monitored by SPU management through daily reports from the contractors, which include information on the businesses which set out non-CAP bags and problem alleys. These reports are tracked to identify patterns where there are problems, so outreach efforts can be targeted to businesses and areas that need them. In addition, SPU fields calls from businesses in the CAP program about missed pick-ups and perform regular weekly on-site inspections of CAP alleys.¹²⁹ According to the SPU official we interviewed, these reports do not indicate problems beyond what would be expected of a new program. According to the official, “by and large, contractor performance is adequate, and in some cases, they go beyond their duty.”

Better Coordination and Communication of Pickup Schedules Are Needed

According to the SPU’s Director’s Rule on CAP, customers must set out their bags, bundles, and carts no more than 3 hours before the scheduled pickup time. However, customers do not know their exact scheduled pickup times. They only know that there will be pickups in the early morning and afternoon.

Customer Service and Program Outreach Are Handled by the Contractor

CAP customer service and program outreach are the responsibility of the contractor. CleanScapes, for example, has a dedicated employee, their “alley czar” who is responsible for its day to day operations and customer service.

Proposed Surcharges to Non-CAP Bags Closes Program Loophole

According to SPU, customers who put out non-CAP bags for collection are a recurring problem. Usually, the contractor can identify the violator through the contents in the trash and send them an invoice. The City pays the collection charge when the violator cannot be identified. Currently, the collection charge for non-CAP bags is the same as purchasing a CAP bag (\$5.00). According to SPU, violators will be charged \$8.00 for the collection of a non-CAP bag (CAP bags will remain at \$5.00 each) under the 2011 rate schedule.

¹²⁸ The SPU official referred to CleanScapes during our interview because we were discussing CAP spillover effects in downtown. CleanScapes is the City’s solid waste contractor who services CAP downtown. Waste Management is the contractor in Pioneer Square, which is also part of the CAP area.

¹²⁹ The SPU official stated that when CAP started last April he used to perform alley visits 2-3 times per week but now performs on-site visits on a weekly basis.

Appendix I: SPU's Grants from State of Washington Department of Ecology Community Litter Cleanup Program (CLCP)

Grants from Washington State Department of Ecology Provide Big Bang for the City Buck

The funds provided by the Washington State Department of Ecology Community Litter Cleanup Program (CLCP) which SPU uses to contract with State Department of Corrections (DOC) provides the City with great benefits at very little cost. The State-provided grant funding is based on a 2-year, mid-year to mid-year calendar. For the period, July 1, 2007 through June 30, 2009, the State granted SPU \$107,999. However, for the period, July 1, 2009 through June 30, 2011, SPU was initially awarded \$100,000, but this amount was reduced to \$50,000 due to State budget constraints. The grant money is used to pay a Department of Corrections (DOC) Crew Supervisor's salary and benefits and for supplies and equipment for DOC crews to perform litter pickup and illegal dumping removal on City right-of-ways and freeway interchanges. Each DOC crew consists of a Correctional Supervisor and 2 to 10 DOC work release crew members. To cope with the reduction in State funds, SPU's Utility Service Team, which manages the contract, said that they scaled back on DOC's operation by focusing on litter pickup on the weekends. SPU also said that the State Department of Ecology has informed them that there is currently no funding available from the State beyond June 30, 2011.

Despite discontinuance of CLCP funding, SPU reported that it will continue to contract with DOC crews and provide some limited litter sweeps within other available resources. However, the number of litter sweeps will be directly tied to needs in other priority work areas, which include, in priority order, clean up for 1) illegal dumping, 2) encampments, 3) volunteer events such as Adopt-a-Street, Spring Clean and Clean & Green Seattle, and 4) patrols around the transfer station in South Park (per street vacation requirements¹³⁰).

¹³⁰ SPU is in the process of redeveloping the South Recycling and Disposal Station. Part of the project has included a petition by SPU to vacate a portion of Second Avenue South and South Chicago Street in the South Park neighborhood. SPU is providing street sweeping in designated areas of the South Park neighborhood as one condition of approval for the street vacation petition (Clerk File 310784).

Appendix J: City Funds a State of Washington Department of Corrections Work Crew in Southeast Seattle through Its Criminal Justice Contracted Services (CJCS) Program and the Seattle Municipal Courts

Since October 2009, the City of Seattle has, from its Criminal Justice Contracted Services (CJCS) budget, funded a Seattle Municipal Court “alternative-to-jail program” for defendants to be on a State Department of Corrections (DOC) work crew to perform litter pick-up, remove graffiti, clean up illegal dumping, and trim brush in public open spaces in Southeast Seattle, Beacon Hill, Georgetown, and South Park.¹³¹ No City FTE’s are needed to manage the contract and the City Budget Office reviews and approves the monthly invoices from the DOC. According to the CJCS contract with DOC, DOC must provide a work crew five days per week to perform litter clean-up, illegal dumping removal, community clean-up assistance, and other similar services in the public rights of way in Southeast Seattle.

¹³¹ In 2009, King County was only able to fund the work crew for the first three quarters of the year. As a result, the City of Seattle agreed to take over funding for this program from the County and the City’s Criminal Justice Contracted Services (CJCS) budget started paying for the work crew in October 2009 using existing appropriation authority and funding. The City paid the DOC \$21,249 (\$7,083 per month) for the last 3 months of 2009 and in 2010, the City paid \$85,000. The 2011 Mayor’s Proposed Budget eliminated the CJCS funding and the City Council restored it in the City’s Adopted 2011-12 Budget (\$ 87,000 in 2011 and \$ 90,000 in 2012). In 2011, the DOC agreed to allow the Seattle Municipal Court to place up to 10 offenders per day on a DOC work crew free of charge.

Appendix K: Seattle Municipal Court's Community Court and Diversion Programs Perform Neighborhood Litter Clean Up

As discussed in our Graffiti Audit¹³², Seattle Public Utilities (SPU) uses the Community Court program twice per month to abate graffiti on private property. The Community Court and Diversion programs are collaborative efforts of the Seattle Municipal Court, Seattle City Attorney, and the Associated Counsel for the Accused in which eligible defendants who “opt in” to the programs are assigned community service hours at neighborhood-based sites. Community Court participants are repeat offenders and Diversion Program participants are first-time offenders. In addition to graffiti abatement, these defendants also do neighborhood litter clean up where they work directly with and are monitored by volunteers in various neighborhoods. According to the Community Court, about 60 percent of the total community service activities performed by Community Court defendants is neighborhood and downtown core litter clean-up.

In 2009, the Community Court sites located in Belltown, the Metropolitan Improvement District, and Lake City, had a total of 5,126 community service hours. Litter removal is either the only or primary service activity at these sites.

¹³² City of Seattle Anti-Graffiti Efforts: Best Practices and Recommendations, published July 28, 2010; see Appendix I, Additional Potential Graffiti Abatement Resources.

Appendix L: Homeless Encampment Clean Ups

Homeless Encampment Clean Ups Require Coordinated City Response

Typically, either SDOT or SPU are the first points of contact for complaints about litter at homeless encampments. Clean up also involves the Seattle Police Department, so a coordinated City response is necessary. SPU cleans up homeless encampments using Department of Corrections crews. SDOT collects and stores personal items (from encampments in the SDOT right-of-way) found during the clean up, which may be reclaimed by the owner.¹³³

¹³³ Collected belongings can be picked up at the SDOT Traffic Shop located at 4200 Airport Way South on Tuesdays, Wednesdays, and Thursday between 10 a.m. - 2 p.m.

Appendix M: City's Litter Clean Up in Public Spaces around City Hall

City's Litter Clean-Up around City Hall Sets Good Example

The Department of Finance and Administrative Services (FAS) is responsible for dealing with litter around City Hall, the Justice Center, Police Headquarters, Seattle Municipal Tower, and the vacant lot west of City Hall. In these locations, FAS has custodial staff who perform routine daily litter sweeps and respond as needed to requests for their services. They pick up litter that collects on the sidewalks (out to the curb), sides of buildings, and exterior public spaces, such as the large areas at City Hall Plaza and in front of the Justice Center. The staff is also instructed to pick up any litter they come across at any time while they are performing other duties as well (i.e., it doesn't have to be during the daily walk-around period; they are told not to ignore it and to pick it up). An FAS custodial manager also performs a daily walk-around in addition to the daily litter sweeps done by the custodial staff. The City has a custodial contract for the Seattle Municipal Tower. As part of the contract, the vendor has a staff of five day staff who pick up litter around the building grounds and sidewalks as needed during the day.

Appendix N: Customer Service Bureau Forwards Litter Complaints from Constituents

City's Customer Service Bureau Receives Few Complaints about Litter

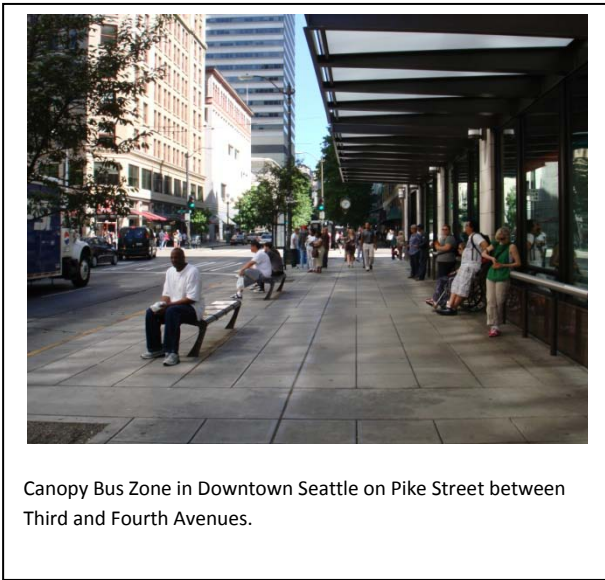
The Customer Service Bureau (CSB) is a service for constituents to access City services and information. Constituents can access the CSB via an online web form, by telephone, fax, in-person, and mail. Complaints and service requests concerning litter come in to the CSB as well as directly to various City departments such as SPU, SDOT, Parks, and the Mayor's Office. From 2008 through mid-2010, CSB received only 32 contacts (comprised of complaints/requests for service, suggestions, and requests for information) related to litter. Out of a total of 134,626 contacts that CSB received in the approximate same period, litter contacts comprised only 0.02 percent (that is, 0.0002). CSB protocol is to forward a request to the appropriate City department and follow-up, if necessary, with the constituent to obtain sufficient information to permit the appropriate City department or outside agency to respond. We noted that 3 of the 32 litter-related contacts (10%) received by CSB were related to litter cans at Metro bus stops (2 inquiries were requests for litter cans at bus stops and 1 inquiry was a report of an overflowing litter can at a bus stop).

Appendix O: Coordination with Metro Transit on Litter Cans at Canopy Bus Zones

Coordination with Metro Transit Needed on Litter Cans at Canopy Bus Zones

The Department of Planning and Development's (DPD) and Department of Transportation's (SDOT) effort, referred to as "the canopy bus zone program"¹³⁴ encourages the removal of bus shelters in some downtown locations in favor of placing bus stops under the canopies of adjacent buildings. This improves pedestrian access and public safety in areas with the highest levels of pedestrians and Transit activity. Metro's stand alone bus shelters can impede sidewalk flow and provide convenient hiding places for illegal activity. Canopy bus zones are proposed for only high use areas in downtown Seattle, specifically targeting 3rd Avenue and other urban centers throughout the city.

Metro Transit's policy historically, however, is to provide litter receptacles, custodial maintenance, shelter cleaning, and litter pickup only at stops where there is a bus shelter. This means that when a bus shelter is removed and replaced by a canopy/awning, Metro litter cans are removed.¹³⁵ This results in fewer public litter cans throughout the City. This occurred at the bus stop in front of Columbia Sportswear at Third and Pine where Metro removed litter cans when the bus shelter was replaced with an awning. In this instance, although Metro cans were removed, City-provided litter receptacles remain. SPU contracts with the MID to provide and service these receptacles. In 2009, the MID replaced City



Canopy Bus Zone in Downtown Seattle on Pike Street between Third and Fourth Avenues.

litter cans at this location with Big Belly solar compactor cans. This situation is not typical of other sites in the city, which lose litter cans when canopies are added at the bus stop and without a replacement can.

The Canopy Bus Zone Program is not a formal program. According to DPD, there is no standard set of documents or procedures between Metro and the City and the adjacent property owner regarding the replacement canopy or awning at the bus stop. There are two ways that Metro interfaces with property owners when canopies are planned at transit stops adjoining their properties: new construction and redevelopment of existing buildings. Metro does enter into a written Awning Agreement with the interested property owners on

¹³⁴ "Canopy Bus Zones" were created as part of former Mayor Nickels administration's Center City Strategy, Seattle's Department of Planning and Development's (DPD) planning program included studying different areas of town to recommend design solutions from an urban design perspective. These included the development and approval "Street Design Concept Plans" for areas of Ballard, Terry Avenue North, Pike/Pine, and Queen Anne Avenue North. Concept Plans delineate streetscape features such as street, lights, trees and landscaping, and street furniture that enhance the special character of a block or the entire neighborhood and are intended to be implemented over time by multiple property owners as parcels on the block re-develop. Concept Plans are approved by DPD and SDOT. Although the provisions in a Concept Plan are voluntary, property owners are encouraged to follow them. Concept Plans are formalized and adopted through DPD Director's Rules and incorporated into the Seattle Department of Transportation Right-of-Way Improvements Manual.

¹³⁵ According to DPD, the number of bus shelters at any Metro bus zones varies widely depending on rider volume, available curb space and other factors. There is typically no more than one trash receptacle at any given Metro bus zone, even when there are multiple bus shelters.

a case by case basis and only when an existing building redevelops and decides to install a canopy in lieu of a standard Metro bus shelter. These redevelopment design solutions are voluntary and approved through DPD and SDOT's permit approval process. With new construction and redevelopment projects, Metro is one of the routed agencies in DPD's approval process. Each project is reviewed on a case-by-case basis. No overall process or protocol exists to guide the negotiations with Metro, the City and the property owner, and thus ensure that all site requirements, including litter, have been addressed. According to DPD officials, they have talked about formalizing this aspect of the canopy program, but have neither the resources nor a clear directive to carry it out.

As of December 2010, there are multiple "Canopy Bus Zones" in Downtown Seattle.¹³⁶ The photo above shows one on Pike Street between Third and Fourth Avenues. Here a glass and steel awning and lean rails were installed and three stand-alone Metro bus shelters were removed. City litter and recycle cans (one each) are still located at the corner nearest Fourth Avenue. This upgrade and several like it are regarded as having dramatically improved the area for pedestrians, transit riders, and public safety. At this time, DPD is aware of two potential development projects in downtown that may be considering canopy bus zone conversions.

¹³⁶ Canopy Bus Zones as of December 2010: 1) in front of Columbia Sportswear on Third Avenue between Stewart and Pine, 2) Pike Street between Third and Fourth Avenues, 3) in front of the Four Seasons Hotel near First Avenue and Union Street. Other examples are in the fronts of Century Square, Macy's, Benaroya Hall and the IDX Tower, all along Third Avenue; the design solutions for these two examples were approved through a process outside the Street Design Concept Plan process but illustrate the same canopy bus zone concept.

Appendix P: City Operates Four Distinct Volunteer Programs to Address Litter

City Operates Four Distinct Volunteer Programs to Address Litter

We identified four City volunteer programs for engaging citizens in litter abatement activities. Three of these programs are SPU programs and include Adopt-a-Street, Spring Clean, and Clean and Green Seattle.¹³⁷ The Department of Neighborhoods' (DON) Alcohol Impact Area (AIA) Litter Program also has litter abatement activities in Seattle, although this is not the program's primary purpose.

SPU's Adopt-a-Street program dates back to the 1980s and is a totally volunteer-based litter clean-up program for non-Downtown¹³⁸ City streets. There are two levels of participation. The "Traditional Adopter Option" is one in which volunteers adopt at least one mile of a City street for two years and pledge to complete four clean-ups annually. In the "Special Adopter Option", no time commitment is specified so activities can include one-time events or participation, and target less than a one mile area for clean-up. For both levels, adopters receive Adopt-a-Street supplies and free pick-up of two or more bags of debris. Adopters can be individuals, groups, and businesses.

Spring Clean is a spin-off of the Adopt-A-Street program during which in April and May, SPU partners with DON, SDOT, and Parks to sponsor community clean-ups of the public rights-of-way, such as sidewalks, traffic circles, and other public spaces.

Clean and Green Seattle is the only current City program that takes a strong, interdepartmental approach to planning and implementing community clean-up events, which include litter and graffiti.

DON's AIA Litter Program is a component of the City's Alcohol Impact Area Program.¹³⁹ DON provides progress reports to the Washington State Liquor Control Board (WSLCB) twice per year on the effectiveness of the City's efforts to decrease the impacts of chronic public inebriation in the AIAs.¹⁴⁰ For this reporting, DON gathers and analyzes data on statistics related to crime, public safety activities and data that confirms the purchase and public consumption of alcoholic products in the AIAs. The collection of data on litter in the AIA's is gathered by photographing and removing evidence of banned alcohol products. This provides quantitative community-based evidence supporting the retention of the AIAs. Volunteers from neighborhood groups within the AIA schedule and organize litter pick-ups with the support of DON. The schedule for these litter pick-ups varies and is based on volunteer availability; some are quarterly and some on an as-needed basis. DON District Coordinators provide support by providing resources such as gloves and grabbers for the community members to use during the litter

¹³⁷ Clean and Green Seattle is a City-wide initiative that was developed and implemented by former Mayor Nickels. It is an interdepartmental volunteer program which coordinates monthly anti-litter, illegal dumping, graffiti, and other community clean up events with neighborhood groups. The program is now housed in the Parks Department but funds for coordinating staff are from SPU.

¹³⁸ There is no Adopt-A-Street in the Central Business District because the Metropolitan Improvement District BIA provides regular service for litter pick-up. The Adopt-A-Street program encourages volunteers to adopt streets in other locations.

¹³⁹ By Resolution, the Washington State Liquor Control Board (WSLCB) approved two Alcohol Impact Areas (AIAs) in the City of Seattle, effective November 2006. The two AIAs restricted off-premises sales of a specific list of beer and wine products. The made plans to evaluate the effects of the AIA restrictions on chronic public inebriation 12 and 18 months after the AIAs were imposed. The first report was submitted March 2008 and the second report was submitted June 2008. Updates relating to the AIAs are the responsibility of the Department of Neighborhoods. (Source: <http://www.cityofseattle.net/neighborhoods/aia/>)

¹⁴⁰ According to DON, the WSLCB has recently put a hold on requesting reports from DON.

pick-up. Community members take photos and collect other types of evidence to account for the types of alcoholic beverage containers picked-up during each litter pick-up.

The Department of Parks and Recreation (Parks) does not have a volunteer litter program. The Parks Resources Crews that perform parks maintenance incorporates litter pick-up into their regular work. We asked Parks about whether they had considered the use of volunteers, for example, having Boy Scout Troops help with litter pick-up in City parks. Parks said that in developed parks, volunteers can expand and support the work of the Parks Resources Crews, but volunteers cannot do the same work that the unionized crews perform, which includes litter pick-up. However, forest restoration volunteers can remove litter from forested areas in undeveloped parks if they come across it in the normal course of their volunteer activities. Parks officials told us that volunteers for the Adopt-A-Park program¹⁴¹ (now called the “Friends of “Program) do not pick up litter; rather their focus is to raise money for their adopted park with Parks Department approval.

The Parks Department Volunteer Coordinator Supervisor emphasized that “volunteers are not free.” She explained that it takes one staff hour to support every four to five volunteer hours. In addition, the Parks Department usually needs to provide trucks and drivers for hauling equipment and materials for the volunteers. For example, the Parks Resources Crews support Green Seattle Partnership volunteer projects by providing supplies and picking up green compostable materials and hauling them away.

¹⁴¹ Now called “Friends of (Name of Park)”, e.g., Friends of Kubota Gardens

Appendix Q: Potential Benefits from an Affiliation with Keep America Beautiful

Background:

Keep America Beautiful (KAB) is a nonprofit organization founded in 1953, and its publicity materials indicate that it is the largest volunteer-based community action and education organization in the country): <http://www.kab.org>.

Focus Areas - KAB has three areas of focus: 1) litter prevention, 2) waste reduction and recycling, and 3) beautification and improvement of public spaces. KAB has also developed a program called “Graffiti Hurts” that provides educational materials, event information, and mini-grant opportunities to jurisdictions around the country: <http://www.graffitihurts.org/>.

Affiliate Organizations - KAB has over 1,000 affiliate organizations¹⁴² throughout the country, and the organization provides on-line interaction and conference opportunities for the affiliates to learn from one another. In addition, KAB affiliates are required to conduct annual physical inventories to capture quantitative data on their progress with their anti-litter efforts through use of KAB’s Litter Index. KAB has recently developed the Community Appearance Index, a similar data-gathering tool, to measure progress with eliminating graffiti, abandoned vehicles, and derelict properties.

Most of the larger jurisdictions in the country as well as those considered to be “best practice” organizations for their anti-graffiti programs are KAB affiliates. These include, but are not limited to:

- | | |
|---------------------------|----------------------------|
| Albuquerque, New Mexico | Milwaukee, Wisconsin |
| Atlanta, Georgia | Nashville, Tennessee |
| Austin, Texas | New York, New York |
| Charlotte, North Carolina | Oakland, California |
| Chicago, Illinois | Philadelphia, Pennsylvania |
| Columbus, Ohio | Phoenix, Arizona |
| Dallas, Texas | Raleigh, North Carolina |
| Denver, Colorado | San Diego, California |
| Houston, Texas | San Jose, California |
| Indianapolis, Indiana | Washington, D.C. |
| Las Vegas, Nevada | West Palm Beach, Florida |
| Los Angeles, California | |

Potential Benefits:

As explained below, the City of Seattle could realize a number of important benefits through an affiliation with Keep America Beautiful including: collaborative coalition framework, community volunteers, data-driven evaluation, and funding opportunities.

“From the onset (the coalition) should involve a broad scope of citizens involving business, government, and civic sectors.”
- Keep America Beautiful Application for Certification

¹⁴² For a city the size of Seattle, Keep America Beautiful requires a one-time-only affiliate initiation fee of \$8,000 to provide technical assistance and training for establishing the affiliate structure.

Collaborative Coalition Framework - KAB affiliates are required to gather a coalition of key City and community stakeholders.

KAB provides training to help launch the coalition including the development of governance materials, mission statements, guidelines, and procedures. Additional training is available through conferences and on-line collaboration tools. Through this training and technical assistance, the coalition can build its capacity to work together to identify local concerns and to apply the KAB five-step approach:

1. Getting the facts
2. Involving the people
3. Planning systematically
4. Focusing on the results, and
5. Providing positive reinforcement.

Community Volunteers - Several KAB affiliates reported to us that they maintain databases with between 2,000 and 4,000 active community volunteers (Albuquerque: 2,946; Milwaukee: 3,000-4,000; San Jose: 3,752) for anti-graffiti efforts. They indicated that the affiliation with KAB helps with promoting events and providing give-aways for volunteers (e.g., visors, key chains, etc). They also indicated that national KAB events, like the Great American Clean-up, help provide and sustain momentum for ongoing local efforts.

To further leverage its ability to recruit and retain community volunteers, KAB has formed partnerships with other volunteer-network organizations including the Hands-On Network <http://www.handsonnetwork.org/> (Seattle Works and United Way of King County are local members of the Hands-On Network) and Service Nation <http://www.servicenation.org/>.

Data-Driven Evaluation - KAB provides proprietary data-gathering tools for its affiliates including the Litter Index and the Community Appearance Index. We used a modified version of the Community Appearance Index when we conducted the four-area physical inventory as part of this audit work. In addition, KAB has a proprietary cost-benefit model that affiliates may use to help calculate their return on investment from their efforts. Outcome measures and cost-benefit results must be reported in an annual report to KAB. Finally, KAB affiliates are required to use the data that they have collected to make recommendations for changes in four areas: education, technology (resources and tools), ordinances, and enforcement.

Funding Opportunities – KAB offers grants to its affiliates that can be used to create or expand local programs. KAB indicated that, in 2009, affiliates received grants and in-kind services valued at over \$6 million.

Appendix R: Private Sector Programs

The City of Seattle currently has seven Business Improvement Areas (BIAs) in the following neighborhoods: Capitol Hill/Broadway, Chinatown/International District, Downtown (Metropolitan Improvement District or MID), University District, West Seattle Junction, Pioneer Square and Columbia City¹⁴³. Seattle Public Utilities provides annual grants, which totaled \$63,000 in 2009¹⁴⁴, to the BIAs to assist their litter and graffiti abatement efforts. For this audit, we focused on the efforts of the Downtown MID to deal with street/ground litter.

Downtown Metropolitan Improvement District

The Metropolitan Improvement District (MID) is a private non-profit business improvement district that provides maintenance and hospitality services, marketing, research and market analysis for its 850+ member ratepayers within certain geographic boundaries, over a 225 square block area, in downtown Seattle's core¹⁴⁵, including the Retail Core, Denny Triangle, the Waterfront, West Edge, and Pioneer Square. Belltown is not included in the MID. The MID was founded by the Downtown Seattle Association in 1999 and is financed through tax assessments.

How the MID Deals with Street/Ground Litter

MID officials told us that it is the abutting property owners' responsibility to clean up litter on their property, and that's why the property owners hire the MID to provide litter abatement services. The MID has 34 full-time cleaning ambassadors¹⁴⁶ who spend about 75% of their day involved in dealing with street/ground litter by performing daily sidewalk and curb sweeping, sidewalk pressure washing, alley cleaning, and trash collection. They also perform graffiti removal and leaf removal. The MID spends about \$800,000 on litter removal¹⁴⁷, approximately 15% of its operating budget¹⁴⁸. The MID receives about \$66,000 in annual funding from the City for litter.¹⁴⁹

MID officials told us that they pay special attention to the 3rd Avenue transportation corridor because of the high number of people who use it. According to these officials, over 85,000 people used the transit corridor in 2007 and they consider it a litter "hot-spot."

¹⁴³ BIAs are special assessment districts that are established to revitalize and enhance neighborhood business districts. They are a self-help mechanism whereby business and/or property owners choose to assess themselves a regular membership fee. BIAs fund improvements and services that are aimed at maintaining and improving the overall viability of business districts.

¹⁴⁴ MID \$20,000; University District \$10,000; International District \$10,000; Pioneer Square \$8,000; West Seattle \$8,000; Broadway \$7,000. In 2010, the BIA grants totaled \$57,000.

¹⁴⁵ Geographic boundary: <http://www.downtownseattle.com/content/programs/MIDBoundary.cfm>

¹⁴⁶ In 2009, the MID had budget for 31 full-time cleaning ambassadors.

¹⁴⁷ \$700,000 on labor, \$25,000 3 trucks, \$9,000 parking, \$50,000 dumpster and BB related fees, \$15,000 supplies = \$799,000. The amount of \$40,000 to remove litter from under piers 48-70¹⁴⁷ was not included in this total because it is not street/ground litter.

¹⁴⁸ \$800,000/\$5,200,000=15%

¹⁴⁹ \$30,000 for its contract with SPU for the Big Belly cans and \$36,000 from SPU for Clear Alleys Program bag purchase; the MID receives another \$20,000/year for its graffiti program from SPU and \$4,400 for its Leaf Removal Program from the Office of Economic Development. (In 2009, actual City funding to the MID: \$12,500 for Big Belly program, 5 months; \$27,000 CAP bags; \$20,000 graffiti; and \$4,400 for Leaf Removal Program=\$63,900).

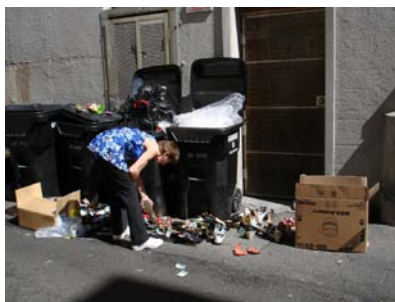
Big Belly Solar-Powered Compactor Program: MOA between SPU and the MID

In 2007, SPU became the single entity with responsibility for providing and servicing publicly provided litter cans between Stewart and University Streets (i.e., all Metro cans were replaced at the bus stops with SPU cans to ensure a common service level in the transit corridor). As a result, SPU sited 20 fluted litter cans and 2 Big Belly¹⁵⁰ compacting litter cans in Downtown Seattle with the agreement that the City would provide and service the 20 litter cans through its Street Side Litter Program¹⁵¹ and the MID would service the Big Belly litter cans. In May 2009, the MID partnered with the City to replace the City's fluted litter cans and install 20 additional Big Belly litter cans along Third Avenue between Stewart and University Streets. The locations for the Big Belly cans were determined by consultations between Metro, the MID, and SPU. The 20 Big Belly litter cans are leased by the MID from a vendor on a month to month basis through June 2014 and SPU reimburses the MID \$29,760 per year for the lease (\$150,000 over the lease period of 5 years) of the 20 new Big Belly cans and servicing for the 22 total Big Belly cans¹⁵².

MID officials said they empty the Big Belly litter cans units when the signal indicates they are full, usually two times per week. However, 3 of the units located at 3rd and Pine are emptied 7 days per week, which means that the trash generated is roughly 3 times more at 3rd and Pine than at other locations. We attempted to assess the effectiveness of the Big Belly litter cans' performance since July 2009, compared to what the City litter cans would have collected in the same locations if the City litter cans were full. We were unable to make a definitive conclusion because of the lack of baseline data on the amount of garbage collected by the City before July 2009.

Two Observations from MID Walk-About

As part of our fieldwork, we requested a "walk-about" with MID representatives so that we could observe, first-hand, the challenges the MID Ambassadors regularly encounter. Two MID representatives guided us through Sector 13, which is the area between Stewart and Pike Streets and Third and Fifth Avenues.



We observed two major challenges. The first is the unintended spillover effect of litter in alleys from ripped garbage bags. As mentioned earlier, the Clear Alleys Program (CAP), established in 2009, requires commercial and residential buildings in designated neighborhoods, which includes Downtown, to use special bags or totes when putting out their garbage and recyclables in the alleys and public rights-of-ways for the City's solid waste contractors (in this case, CleanScapes) to collect from the alleys twice daily. The MID representatives told us that when there's a time lag between

garbage set-out and garbage collection time, the special bags or totes are frequently torn by birds, animals, and scavengers. During our walk-about, we observed shoes that had been scattered about the alley being rummaged through by a scavenger. We observed cardboard scattered in the alley; MID representatives said the cardboard is loosely stacked for recycle pick up in designated locations in the alley and can get scattered by scavengers. We also saw evidence of fast food businesses not using the

¹⁵⁰ Owned by SPU.

¹⁵¹ Through its solid waste contractors.

¹⁵² The MID will monitor and service the 22 Big Belly litter cans at the level required to ensure that any day of the week the cans are not overflowing and/or locking closed because the cans have reached maximum capacity. The MOA does not include payment from SPU for servicing of a Big Belly litter can purchased by the MID in 2007.

required bags but instead, according to the MID representatives, opting to throw their food waste into the alley. MID representatives said that although there are some benefits to the CAP program, such as having the alleys cleared of dumpsters, litter from torn bags, lack of hygiene facilities, and illegal activity continue to be persistent problems in the City's downtown alleys.

The second challenge relates to the observation that hot spots for litter coincide with hot spots for illegal activity. MID representatives noted that the intersection of Third Avenue and Pike is a hot spot for illegal activity, specifically drug dealing and illegal selling of merchandise; it's also a litter hot spot. MID representatives pointed out that they have never seen anyone in this area ticketed for littering. They also said that the illegal activity at this location only stops for brief periods when police officers are making their rounds. That is, the people involved in the illegal activity know the routine of when the bicycle police make their rounds.

Street Sweeping Is Not Curb to Curb

A MID official stated that because vehicles are allowed to park on the streets overnight, even though SDOT comes through downtown every night to sweep the streets, they cannot sweep all the way to the curb in some locations because of parked cars. As a result, the MID performs curb sweeping daily.

Private Property Owners in the MID Spend Additional Resources on Litter Clean Up

In addition to services provided by the MID, many MID property owners spend additional resources on litter cleanup around their properties. Some private property managers hire day porters who sweep the adjacent sidewalks, curbs, and alleys at regular intervals throughout the day. For example, Pacific Place, a shopping complex at 600 Pine Street, has a janitorial contract that includes sweeping the sidewalk around the block and servicing their garbage cans around the exterior of the building. The General Manager of Pacific Place told us that keeping sidewalk expansion joints and tree grates free of cigarette butts and other litter are particular challenges. The Facility Director of the Angeline Center, a women's shelter on Third Avenue between Virginia and Lenora Streets, told us that five days a week, they have a janitor and an intern who spend about one to two hours a day each cleaning the area around the building. A particular challenge for the Angeline Center is trying to keep their adjacent alley clean from human waste as well as litter. They spend 4-5 hours a day dealing with garbage and keeping the alley clean. The Angeline Center's Facility Director stated they would be willing to pay \$100 per month for a Sanican in the alley that they would clean once a week.

Appendix S: How Does Seattle Compare with Other Cities?

The following chart compares data we obtained from other cities on the following:

- Street sweeping metrics,
- Whether vehicles are prohibited from parking on the street during certain times to allow street sweeping,
- Metrics on public litter can collection,
- Whether hand sweepers are utilized in the city,
- Community involvement,
- Funding sources for the city's litter programs,
- Whether a litter inventory had been performed,
- Private sector involvement, and
- Noteworthy challenges and innovations.

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Chart 9: Summary Chart of Comparable Jurisdictions

City	Street Sweeping Metrics	Parking for Street Sweeping?	Public litter can collection	Hand Sweepers?	Community Involvement	Funding Source(s)	Regular Litter Inventory?	Private Sector Involvement	Challenges and Innovations
Austin	Residential streets are swept six times a year, while major streets are swept once a month. Most congested areas in downtown are swept daily. In addition, a water truck flushes downtown alleys and streets from 3-6 am on Friday, Saturday, Sunday, and Monday.	Residents are encouraged to avoid parking in designated areas during street sweeping periods. There is no advance notice of the street sweeping; routes are set every other month based on staffing and other conditions.	There are approximately 250 litter cans in the downtown area that are maintained by city staff.	The city does not employ any hand sweepers. They have a crew that uses equipment to blow the litter from the most congested areas of the downtown into the street for street sweepers to clear every morning. However, the Downtown Austin Alliance has contracted with the City of Austin Youth Corps to perform litter removal from sidewalks, curb, and gutters in the Downtown Austin Public Improvement District. Litter is picked up between 7 a.m. and 2:30 p.m., seven days a week. This service is in addition to the city's regular maintenance program. Since December 1995, the Youth Corps have collected an average of over 500 bags of trash a month in downtown Austin.	Keep Austin Beautiful engages over 20,000 volunteers. It is a non-profit organization separate from the City. http://www.keepaustinbeautiful.org/ Also, community groups can organize one neighborhood clean-up per year through Solid Waste Services. http://www.ci.austin.tx.us/sws/outreach_community_cleanups.htm	Funded through solid waste collection fees.	Yes, Keep America Beautiful inventory	Some private buildings maintain their own cans. The Downtown Austin Alliance provides hand sweepers and litter pick-up.	Challenge: Intergovernmental relations with the state regarding the University of Texas campus area.
Boston	Over 100 curbs miles swept nightly, year round in downtown Boston, and an additional 40 arterial streets citywide swept once a week. 9 sweepers handle the arterial streets daily. http://www.cityofboston.gov/publicworks/cleanliness/	The city's Neighborhood Street Cleaning (Daytime) Program currently runs from April 1 through November 30. In winter months, street cleaning and parking restrictions are nighttime only. The daytime program parking restrictions are not in effect from December 1 through March 31; however, mechanical sweepers operate weather permitting.	1500+ cans citywide are maintained by City; of these, 400 are emptied three times/day downtown and over 700 neighborhood litter baskets citywide emptied daily, year round. City has initiated pilot with 40+ Big Belly compactors. http://www.cityofboston.gov/publicworks/cleanliness/litter.asp	50 hand sweepers called "Hokeys" are employed by the city to cover north end and downtown Boston; most of the sweepers are seasonal help	Department of Neighborhoods program organizes community cleanups.	Entirely city-funded from General Fund	No	Downtown organization has just developed a proposal for additional cleaning crews; this is just going out for bid now.	Challenge: trying to empower all the public works employees to address litter problems that they see in the field – not to just drive by. Innovation: Changing shifts so that there is litter can collection on evenings and weekends without overtime.
Denver	Data Not Available	Data Not Available	150 cans around edge of downtown that are maintained by city through historical agreement; all others are maintained by business districts.	No hand sweepers employed by city; business districts employ some.	Keep Denver Beautiful (KAB affiliate) is a program of the Public Works Department, Solid Waste Management division.	All city funded (General Fund) except for business district efforts.	Yes, Keep America Beautiful inventory	Limited involvement on litter other than that provided by business districts. In terms of priority, "Litter has taken a back seat to graffiti."	Data Not Available
San Francisco	Data Not Available	Data Not Available	Data Not Available	Data Not Available	Data Not Available	Data Not Available	Yes, performed by consultant: www.sfenvironment.org/downloads/library/2008_litter_audit.pdf Conducted detailed litter study in 2007, 2008, and 2009. Was baseline for establishment of a litter abatement fee. Captured branded litter and published list of "Dirty Dozen" which is a list of the top product brands most commonly littered.	Community Corridors partnership created 76 Community Benefits districts that receive special services from the Department of Public Works (DPW) including: cleaning sidewalks, painting over graffiti, providing education and outreach; and repairing streets and sidewalks. DPW coordinates work between the city and merchants to provide increased and expedited maintenance. http://38.106.4.205/index.aspx?page=352 http://archive.constantcontact.com/fs002/1102363540785/archive/1103468080683.html	Challenge/Innovation: Cigarette litter abatement fee of 20 cents per pack was immediately challenged in lawsuit by Phillip Morris. Currently in litigation.
Seattle	20,546 curbs miles swept in 2009; SDOT's street sweeping program includes arterials only, no residential streets.	Seattle does not require streets to be cleared of vehicles for street sweeping. SDOT's regularly scheduled street sweeping occurs between 10 p.m. and 6 a.m. (the "graveyard shift"), during which time there aren't many cars parked on the arterials. However, SPU contracts with SDOT to provide curb-to-curb street sweeping to mitigate the impact of customers hauling loads to the existing facility and will continue this service when the new South Recycling and Disposal Station opens in the South Park neighborhood. Starting August 2010, curb-to-curb street sweeping is performed on a monthly basis in a limited area around the transfer station that is affected by incoming and outgoing customers hauling loads to the existing (and soon the new) transfer station. Residents have been asked to refrain from parking on the street during sweeping days and times (first Monday of each month between 9 a.m.-1 p.m.) so that the street sweepers can clean curb-to-curb.	Approximately 683 public street side litter and 350 recycle cans throughout Seattle serviced by solid waste collections contractors; picked up 3 to 7 times per week depending on location. In Seattle's parks: approximately 2,500 garbage cans in about 400 parks and 123 recycle cans in 67 parks.	None by City departments	Adopt-A-Street and Spring Clean programs are run by SPU. The City also has the Clean and Green Seattle program, an interdepartmental clean-up program.	All of SPU's programs are supported via General Fund (solid waste taxes/tonnage tax). Parks' litter programs are supported via General Fund.	No	Business Improvement Districts: MID, International District, University District, International District, Pioneer Square, West Seattle, and Broadway	Innovation: High capacity in-ground cans in City parks
Washington D.C.	The mechanical sweepers clean nearly 4,000 "lane miles" of city streets every month, removing 10 pounds of oil and grease along with other pollutants for each mile that is swept.	Parking is restricted during street sweeping. Violators receive \$30 ticket. http://dc.gov/DC/DPW/About+DPW/News+Room/Press+Releases/DayTime+Residential+Street+Sweeping+Resumes+March+22,+Ticketing+Begins+March+29	4000+ street litter cans along commercial corridors. These are emptied at night by city crews.	Use approximately 60 golf cart-size sweepers, known as "litter vacs", which are used to vacuum litter from gutters and sidewalks in commercial areas. See link for the model used: http://www.tennantco.com/equipment/outdoor-city-cleaning/atlv-4300-riding-litter-vacuum/overview The majority of this work is done during the day. However, in some high traffic areas, the litter vacs are used at night. Tymco trucks are used for alleys and residential cleaning. See link for the model used: http://www.tymco.com/sweepers/model-435/index.htm	"The Office of the Clean City serves as the central point of contact and goal champion within the Mayor's initiative to clean up the District of Columbia and maintain its cleanliness." http://occc.eom.dc.gov/occc/cwp/view.a.3.q.599154.occcNav.%7C33365%7C.a.sp Clean City also coordinates with external organizations such as the Keep America Beautiful affiliate.	City efforts are funded through the General fund plus sweeper-cam revenue. Business Improvement Districts pay for their own services.	The Mayor's Office's Clean City Program compiles quarterly "Citywide Cleanliness" ratings for its 8 geographic wards. The District uses this information to allocate resources: http://occc.eom.dc.gov/occc/cwp/view.asp?a=3&Q=598867&occcNav= 33365 This information is also used for Keep America Beautiful	Innovation: 12 street sweepers (3-wheeled Elgin vehicles) are equipped with license plate recognition software – "Sweepercams" http://dpw.dc.gov/DC/DPW/Education+and+Outreach/Brochures+and+Fact+Sheets/Sweepercam+Frequently+Asked+Questions	

				<p>These drivers also will get out of their trucks, to push sidewalk litter into the curb lane to clear with the truck.</p>	<p>Also, the Department of Public Works offers education, enforcement, and support for neighborhood clean-ups as well as a way for students to get community service credits through its SWEEP program:</p> <p>http://dpw.dc.gov/DC/DPW/Services+on+Your+Block/Street+and+Alley+Cleaning/Solid+Waste+Education+and+Enforcement+Program+(SWEEP)</p>		Inventory.		
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Appendix T: Litter Background

What is street/ground litter?

Street/ground litter is misplaced, improperly disposed of solid waste that accumulates at ground level such as on sidewalks, streets, and open spaces. A 2009 streets litter study by the City of San Francisco¹⁵³ indicated that the five highest prevalence litter categories were: glass, tobacco product litter, paper, hard plastics, and candy wrappers. According to the Broken Windows Theory of crime¹⁵⁴, litter creates visual disorder and is an indicator of the state of the urban environment. For example, if litter is unattended to, the social norm is for more littering behavior to occur; alternatively, if litter, on an urban sidewalk is cleaned up every day, littering behavior is less likely to occur, thus reducing the amount of litter that accumulates over time. Litter also has environmental and physical livability impacts. For example, litter can clog storm drains and affect water quality and cause drainage problems and erosion. Further, litter that enters into local waterways has the potential to endanger human and wild life by introducing harmful pollutants and materials.

Types of street/ground litter and where is it found?

A 2009 National Visible Litter Survey and Litter Cost Study¹⁵⁵ identified and analyzed six types of non-roadway areas that contained the greatest quantities of litter. This analysis also compared the relative number and type of litter items per 1,000 square feet among these 6 areas¹⁵⁶:

1. Transition Points¹⁵⁷;
2. Storm Drains;
3. Loading Docks;
4. Recreation Areas;
5. Construction Sites; and
6. Retail Shopping Areas.

Of these six areas, transition points received the most litter.

¹⁵³ Estimates of the Costs of Tobacco Litter in San Francisco and Calculations of Maximum Permissible Per-Pack Fees, Heath Economics Consultant Group, June 2009. The study was commissioned by the City of San Francisco.

¹⁵⁴ <http://www.cityofseattle.net/police/prevention/Neighborhood/brokenwindow.htm>

¹⁵⁵ 2009 National Visible Litter Survey and Litter Cost Study, Final Report, September 18, 2009, by Mid Atlantic Solid Waste Consultants, for Keep America Beautiful, Inc. Stamford, Connecticut, pp. ES-8

¹⁵⁶ Non-roadway areas

¹⁵⁷ Transition points are places beyond which citizens are not allowed to bring certain products such as lit cigarettes, beverages, and certain food products into a given area. Transition points may include bus stops or entrances to theaters, shopping malls, libraries, and schools. Transition points are of particular interest because they are known to cause the generation of wastes (as people discard their food, beverage or cigarettes), and thus, the opportunity to litter arises. Transition point sampling zones included an area approximately 10 feet in all directions outward from the transition point (e.g., doorway, bus loading zone, etc.). p. 2-15

Chart 10 below, shows the 5 most common litter items at each of the 6 areas above, rank ordered by volume (items/1,000 sq. ft.).

Chart 10: Ranking of Five Most Common Litter Items at Non-Roadway Sites (Items/1,000 sq. ft.)

Ranking	Transition Points	Loading Docks	Storm Drains	Retail Shopping Areas	Recreational Areas	Construction Sites
1	Confection Litter	Cigarette Butts	Cigarette Butts	Cigarette Butts	Cigarette Butts	Cigarette Butts
2	Cigarette Butts	Other Metal and Foil	Confection Litter	Confection Litter	Confection Litter	Other Paper
3	Vehicle Debris	Wooden Pallets	Other Paper	Other Paper	Other Paper	Other Plastic
4	Broken Glass or Ceramic	Other Plastic	Broken Glass or Ceramic	Paper Fast Food Service	Food Waste	Confection Litter
5	Other Paper	Other Paper	Other Plastic	Plastic Bags	Other Plastic	Other Metal and Foil

Source: 2009 National Visible Litter Survey and Litter Cost Study, Final Report, September 18, 2009, by Mid Atlantic Solid Waste Consultants, for Keep America Beautiful, Inc. Stamford, Connecticut, Table ES-3 Top 5 Most Common Litter Items at Non-Roadway Sites (Items/1,000 sq ft), p. ES-9

Who Litters?

According to a national study on littering behavior¹⁵⁸:

Recent studies looking at the types of littering behavior over time (from 1990 to present) have shown that there is a trend away from deliberate littering, with littering as a whole dropping by approximately 2% per year since the 1990s (R W Beck, 2007). Younger people are more likely to litter than older people, with those aged 19 and below more likely to litter than any other age group. (Krauss, Freedman, & Whitcup, 1978; R W Beck, 2007). One study suggested that adults 21-35 are three times more likely to litter than those over the age of 50 and two times more likely to litter than those aged 35-49 (Geller, 1968).

Other demographic predictors of littering include gender, urban living, and household size. While gender effects in littering tend to be small, men are more likely to admit littering than women (Cialdini, Reno, & Kallgran, 1990; Krauss et al., 1978; Meeker, 1997). In addition, there is some evidence that people living in rural areas are more likely to litter than people living in cities. And individuals from small households (1-2) are less likely to litter than those from large households (5+) (Geller, 1968; as cited by R. W. Beck, 2007).

¹⁵⁸ Littering Behavior in America, Results of a National Study. Action Research, January 2009. Prepared for Keep America Beautiful. P. 7

Appendix U: Litter Best Practices: Strategies for Preventing/Reducing Litter

Four Strategies with the Greatest Impact on Discouraging Littering

The following four strategies that have the greatest impact on discouraging litter are from a recent study on preventing/reducing litter, Littering Behavior in America, Results of a National Study by Action Research, January 2009:

1. *Presence of a clean environment*

One of the largest factors affecting a person's decision to litter is the condition of the physical surroundings. Individuals are substantially more likely to litter into already littered environments than into clean ones (Cialdini, Kallgren, & Reno, 1991; Geller, Witmer, & Tuso, 1977; Herberlein, 1971; Reiter & Samual, 1980). The difference is often as much as 2-3 times as much litter in dirty environments.

2. *Presence of visible efforts to reduce litter*

Numerous studies have shown that social norms play a powerful role in an individual's decision to litter. Survey data suggests that personal norms about littering have changed considerably over the last 50 years, from a moderate level of concern for littering in the 1950s, to a strong feeling of personal obligation to not litter by the early 2000s (cf. Grasmick, Bursik, & Kinsey, 1991; Kallgren, Reno, & Cialdini, 2000). As social sanctions against littering grew, studies showed that *activating* norms about litter could substantially increase or decrease one's own littering decisions. For example, seeing a person litter, seeing a pile of swept litter, or seeing a person or group pick up litter, can all activate norms and mobilize behavior. These situations activate a person's normative beliefs, and the resulting feelings of shame (violating a social norm) and guilt (violating a personal norm) have been incorporated into public service announcements with documented success (Cialdini, 2003; Cialdini et al., 2005).

3. *Conveniently placed, clearly visible litter cans*

A third established finding is that littering rates decrease as the convenience of using a proper receptacle increases (Cope, Huffman, Alred, & Grossnickle, 1993; Geller, Brasted, & Mann, 1980; Geller, Winett, & Everett, 1982). As a general rule, more trash receptacles reduce litter, including cigarette butts. Furthermore, the salience of the receptacle can also decrease litter rates. A brightly colored, themed, or decorated receptacle attracts considerably more trash than does a plain or ordinary appearing receptacle.

4. *Community involvement and clean-up efforts*

Programs through organizations such as Keep America Beautiful and Adopt-a-Highway have worked to reduce litter. Studies have shown that sites with Keep America Beautiful and Adopt-a-Highway programs were cleaner and had less litter than sites where these programs were not present (R.W.Beck, 2007).

Impact of Sanctions Against Littering Is Unknown

Recent studies¹⁵⁹ on preventing/reducing litter suggest that the impact of sanctions, such as fines and punishment, on discouraging littering is unknown because there are few research studies that have evaluated whether sanctions do or do not work. Sansone and Harackiewicz research in 2000 indicates

¹⁵⁹ Littering Behavior in America, Results of a National Study. Action Research, January 2009. Prepared for Keep America Beautiful. P. 8

that the effectiveness of threats may be sufficient to motivate desired behavior on a short-term basis but not in the long-term. For example, the threat of punishment may be sufficient for a person not to litter because the action may result in a fine, but in the long term, the person may not be truly motivated to change his or her littering habits. This suggests that self-regulation of behavior over time must include the regulation of both short-term and long-term motivation. In addition, the way a threat of enforcement is worded may also play a part in whether it is effective. For example, just mentioning the undesirable behavior, such as littering, can act as a trigger to increase the undesirable behavior instead of preventing it (Aarts and Dijksterhuis, 2003; Bargh & Chartrand, 1999).

Appendix V: San Francisco Examples of Public Education Materials on Litter

The City of San Francisco has been proactive in addressing street litter in recent years. The following is a link to the San Francisco Department of Public Works web site where many of their programs are described (<http://www.sfdpw.org/index.aspx?page=1324>). One of these programs is “Spruce Up by Sun Up”, an inspection program under the department’s Community Corridor Partnership Program. “Spruce Up by Sun Up”, which started in September 2010, includes early morning visits by city agency officials and San Francisco’s garbage and recycling companies (Recology Golden Gate and Recology Sunset Scavenger) to 300 of San Francisco’s busiest streets. They conduct these visits to ensure that city ordinances that affect the quality of life on the city streets are being met.

Below are two examples of San Francisco’s public education materials on litter. The first example, a brochure called *City Codes to Keep Sidewalks Safe, Clean, and Litter-Free* provides clear information regarding:

- Property owners’ responsibilities;
- Reader-friendly explanations of what the codes say;
- What to report under the program (e.g., graffiti, dirty streets and sidewalks, littering, etc.);
- Who to report it to; and
- What are the fines.

The brochure utilizes three languages and provides photographs showing what conditions are acceptable and not acceptable under the codes.

The second example, *“SPRUCE UP by SUN UP” Inspections*, provides photographs of locations that do and do not meet the city code’s cleanliness standards.

Property owners are responsible for maintaining defect-free sidewalks. Missing sewer vent covers or cracked sidewalks are pedestrian hazards. Property owners are responsible for these repairs, unless the damage is caused by a City-maintained tree (Public Works Code 706). Log on to www.sfdpw.org or call 311 for more information.

物業業主有責任確保行人道上沒有瑕疵。遺失的下水道通氣孔蓋，以及破損的行人道表面，都會危害行人安全。物業業主有責任維修，除非上述問題是由市府負責照顧的樹木引起（工務法規第706條）。有關更多詳情，請利用工務局網站：www.sfdpw.org 或致電 311 查詢。

Dueños de propiedad son responsables de mantener sus aceras sin defectos. La falta de tapas en los respiraderos de las alcantarillas y las aceras quebradas pueden causar tropezos y accidentes a los peatones. Los dueños de propiedad son responsables de estas reparaciones, a menos que el daño sea causado por un árbol que esté bajo el mantenimiento de la ciudad (código de Obras Públicas 706). Para obtener más información consulte el sitio web www.sfdpw.org ó llame al número 311.



Property owners are liable for missing sewer vent covers and uneven sidewalks that cause tripping hazards.

遺失的下水道通氣孔蓋，以及不平的行人道會導致路人跌倒。物業業主必須對此負責。

Los propietarios tienen la obligación de mantener sus aceras bien niveladas, seguras y en buen estado. La falta de tapas en los respiraderos de las alcantarillas puede causar tropezos y accidentes.

GAVIN NEWSOM, Mayor
EDWARD D. REISKIN, Director

Produced by the Office of Communications and Public Affairs

Department of Public Works
City Hall, Room 348
San Francisco, CA 94102

TO REPORT CITY DEFICIENCIES

- Graffiti
- Dirty Streets & Sidewalks
- Littering
- Illegal Dumping
- Potholes
- Trees (Permits, Maintenance)
- Improper Garbage Put Out
- Overflowing Litter Receptacles

Call 311
dpw@sfdpw.org
www.sfgov.org/dpw

Printed on 50% recycled & 10% post-consumer paper

CITY CODES TO KEEP SIDEWALKS SAFE, CLEAN AND LITTER-FREE



SAN FRANCISCO
DEPARTMENT OF
PUBLIC WORKS



City Service Hotline 24/7
Call 311

Lea versión en español en la parte interior
內有中文翻譯

By law, the property owner or the ground-floor tenant of the building immediately adjacent to the sidewalk is responsible for keeping it clean and free of litter. It is everybody's responsibility to keep San Francisco clean.



Municipal Police Code 33

Throwing any litter or debris onto streets or sidewalks is unlawful.
 將任何垃圾丟至馬路或行人道上是違法行為。
 Arrojar cualquier tipo de basura o escombros a la calle o a la acera es ilegal.



also Municipal Police Code 33

Sweeping out any litter or debris onto streets, sidewalks or public places without removing/disposing is prohibited.
 禁止將垃圾掃至街道、行人道、或任何公共場所，必須將其清理和移除。

Barrer cualquier tipo de basura o escombros hacia la calle, la acera o una zona pública sin disponer de ella adecuadamente está prohibido.



Municipal Police Code 34 / Public Works Code 174

Occupant/owner is responsible for the cleanliness of the sidewalk directly in front of their residence or business. Litter/debris, grease, grime, stains and weeds shall not accumulate or remain upon the sidewalk.

住客/業主有責任維持住宅或店舖前行人道的清潔，行人道上不可堆積垃圾，或留有油漬、污垢，以及長雜草。

Inquilinos y dueños de propiedad son responsables por la limpieza de las aceras frente a su residencia o negocio. No se debe dejar acumular basura, escombros, grasa, manchas de mugre, ni maleza sobre la acera.



**Public Works Code 170A / 170B
 Municipal Health Code 283**

Garbage receptacles shall not be put out for collection before 6 P.M. prior to collection day and must be returned to an enclosed area out of view from the public right of way immediately after collection. DPW may require residents or businesses to securely lock their garbage or recycle containers. Cardboard cartons must be flattened and tied or taped together.

垃圾桶必須在收垃圾日前一晚的六點鐘以後才能擺放出來，而且必須在收完垃圾以後，立即放回不會被路人看見的放置處。市工務局也許會要求住家或商戶在垃圾桶上加鎖。所有的紙盒和紙箱必須要折平，而且要綁好或貼膠帶。

Las canecas de basura no se deben sacar antes de las 6 P.M. el día anterior al del servicio de recolección de basuras y se deben regresar a un lugar encerrado fuera de la vista del público inmediatamente después de recolectadas las basuras. DPW puede exigir tanto a residentes como a comerciantes colocar un candado o seguro a sus canecas de basura y de reciclaje. Cajas y papel de cartón se deben aplanar y atar juntos con una cuerda o con una cinta.



Municipal Police Code 35A

Dumping household or commercial garbage in, alongside or on top of City litter receptacles is illegal.

將家中或商業垃圾放置在公共垃圾桶內、旁邊或上面是違法的。
 Arrojar basura de origen residencial o comercial adentro, al lado, o encima de los recipientes para la basura, propiedad de la ciudad, es ilegal.



Public Works Code 173B

Any business that sells food or beverages to go must have a wastebasket outside each exit during hours of operation. The wastebasket must be emptied when full and kept in a clean and sanitary condition.

凡是出售食物和飲料提供給客人帶走的商店，在營業時間內，必須在店內每一個出口放置垃圾桶。垃圾桶必須隨時保持清潔，而且一旦裝滿後必須立刻清空。

Todo negocio que venda comida o bebidas debe colocar una caneca para la basura en cada salida del establecimiento durante las horas de funcionamiento. Cada caneca se debe desocupar completamente cuando esté llena, mantener limpia y en buenas condiciones sanitarias.



Public Works Code 173C

Businesses must place an ashtray outside of all exits for smoking employees or patrons. The ashtray must be emptied and kept in a clean and sanitary condition.

商戶必須在商店內每個出口外放置菸灰缸，提供吸菸的員工和顧客使用。菸灰缸必須時常清理而且保持清潔。

Los negocios deben colocar un cenicero afuera de todas las salidas para que sean usados por empleados o clientes que fuman. Cada cenicero se debe desocupar, mantener limpio y en buenas condiciones sanitarias.

ALL FINES UP TO \$300
 Multas hasta de \$300 / 每項罰款金額最高可達三百元



“SPRUCE UP by SUN UP” INSPECTIONS

San Francisco’s Cleanliness Standards

	INCORRECT	INCORRECT	CORRECT
Tree Basins			
Private Property			
Sidewalk			
Private Garbage Bins			
Awnings			
Street Trees			

Office of City Auditor
City of Seattle
Seattle Municipal Tower
700 5th Avenue
Suite 2410
Seattle, Washington 98104

Mail Address:
PO Box 94729
Seattle, Washington 98124-4729

Mail Stop:
SMT 24-10

If you would like more information on the Office of city Auditor
Or copies of past audit reports,
Please call David Jones, City Auditor, at 206-233-1095.