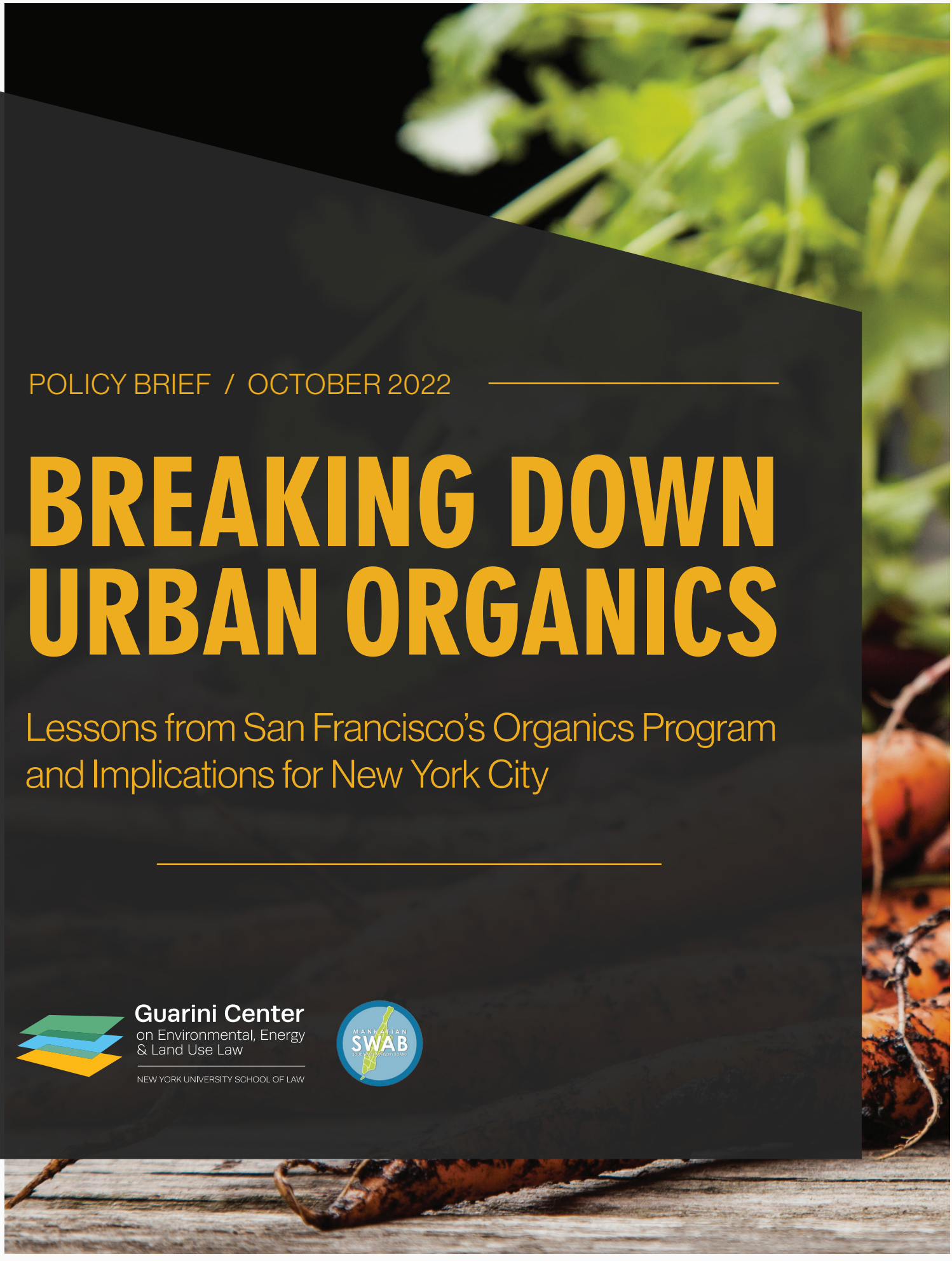

POLICY BRIEF / OCTOBER 2022

BREAKING DOWN URBAN ORGANICS

Lessons from San Francisco's Organics Program and Implications for New York City

Guarini Center
on Environmental, Energy
& Land Use Law
NEW YORK UNIVERSITY SCHOOL OF LAW

MANHATTAN SWAB

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MANHATTAN SWAB SOLID WASTE ADVISORY BOARD

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List of Terms

Organics — Food scraps, food-soiled paper, and yard waste[1]

Organics diversion — The practice of directing organics to facilities other than landfills and incinerators

Organics program — Encompasses the diversion, collection, and composting of organics

Compost — Organic material that has undergone decomposition through aerobic, biological decomposition to convert that material into a soil amendment

Composting program — The practice of generating compost from organics through mixing nitrogen-rich and carbon-rich materials and allowing them to decompose

Curbside Organics Collection — Regularly scheduled pickup of separated residential organics

1 N.Y.C. Dep't of Sanitation, **Frequently Asked Questions, Make Compost, Not Trash** (last visited Sep. 2, 2022).

Executive Summary

The current efforts of the New York City Department of Sanitation (DSNY) to reduce the volume of organics sent to landfills focus on encouraging people to voluntarily separate their organics from recyclables and other waste. Most notably, in August 2022, DSNY announced that it will offer curbside organics collection throughout Queens between October and December 2022, and then again starting in March 2023.

This policy brief examines key features and outcomes of San Francisco's mandatory organics diversion program, and draws lessons from this experience for the introduction of citywide residential organics collection in New York City.

Findings about San Francisco's Organics Program

San Francisco has required residential and commercial properties to separate their organics since 2009. Although San Francisco's organics program is widely regarded as a model for other cities, since 2014, the diversion rate for residential and commercial properties has declined by over 10% to just under 50% in 2021. The diversion rate is the weight of the organics and recyclables, divided by the total amount of waste.

Recology is the monopoly provider of waste collection services in San Francisco, including organics. Residential and commercial properties rent bins from Recology for organics, recyclables, and general trash, paying a monthly charge per bin that does not vary depending on how full the bin is. It is unclear whether Recology's collection fees (which are regulated by San Francisco) are actually encouraging people to separate organics, although the fees are designed with this goal in mind.

San Francisco has the legal authority to fine people for not diverting organics. However, it does not use fines to spur single family residential property owners to separate organics. Under a law that took effect in 2019, properties (including apartment buildings) that generate large amounts of refuse are required to undergo audits of their collection bins at least once every three years and to hire a "Zero Waste Facilitator" if they fail these audits because organics, recyclables and trash are in the incorrect bins.

Implications for New York City

- New York City should design a mandatory citywide organics collection program that is transparent, publicly accountable, and increases the diversion of organics over time. Key data about San Francisco's program are not readily available to the public, such as the amount spent on educating people about the organics program.

- DSNY should collect organics in a citywide program. Recology's monopoly provision of waste collection services in San Francisco has been controversial.

- New York City's program should effectively and equitably encourage the diversion of organics. For example, New York City might consider focusing on increasing the separation of organics at large multifamily buildings that meet a certain size threshold.

- In designing a mandatory organics program, New York City should consider the risk that in-sink disposal units might undermine the efficiency of a curbside collection program.

I. Introduction

The New York City Department of Sanitation (DSNY) has a goal of "sending zero waste to landfills by 2030."[1] Although "organic waste makes up about one-third of what New Yorkers throw away every day,"[2] New York City does not currently mandate that residents separate their organics for beneficial use. Instead, the City's efforts to expand organics separation focus on encouraging people to voluntarily separate their organics. In August 2022, DSNY announced that it will offer curbside organics collection throughout Queens between October and December 2022, and then again starting in March 2023.[3] Currently, DSNY has a voluntary organics program that provides curbside organics collection in only seven out of 59 districts,[4] and sites throughout the five boroughs where people can drop off organics.[5]

The New York City Council's Committee on Sanitation and Solid Waste Management held a public hearing on June 15, 2022, about multiple bills intended to reduce solid waste directed to landfills.[6] If enacted, these bills would establish a universal citywide collection program for organics from residential buildings by 2023,[7] with a goal of either recycling or composting all waste by the year 2030.[8]

San Francisco has had a mandatory organics program since 2009 which has been widely touted as a success.[9] According to a 2012 press release from the office of the city's mayor, San Francisco had achieved 80 percent diversion of its waste.[10] However, unfortunately, San Francisco was unable to meet its target of achieving zero waste by 2020, and the proportion of waste sent to landfills has increased since the 2012 press release.[11] In 2021, the citywide diversion rate for commercial and residential waste was just under 50%.[12] Also, since 2018, the diversion rate for residential and small commercial properties in particular has often been below 55% on a monthly basis.[13] As of 2018, San Francisco's current waste reduction goals are: "[r]educe municipal solid waste generation by 15% by 2030 (reducing what goes to recycling, composting, and trash)"; and "[r]educe disposal to landfill and incineration 50% by 2030."[14]

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1 N.Y.C. Dep't of Sanitation, **2016 Strategic Plan** (2006).

2 *Id.*, at 4.

3 **Queens Composting**, N.Y.C. Dep't of Sanitation (last visited Sep. 7, 2022); Serena Tara, **A Major Curbside Compost Pickup Program Is Coming to One NYC Borough**, Thrillist (Aug. 8, 2022).

4 **Curbside Composting Overview**, N.Y.C. Dep't of Sanitation (last visited Aug. 2, 2022).

5 *Id.*

6 Committee on Sanitation and Solid Waste Management, **Meeting Minutes**, N.Y.C. Council (June 15, 2022) 1.

7 N.Y.C. Council, Int No.244 (Jun. 15, 2022) (unpublished draft bill).

8 *Id.*

9 See e.g., **Zero Waste Case Study: San Francisco**, United States Environmental Protection Agency (last visited Aug. 2, 2022).

10 Press release, San Francisco Mayor's Office, **Mayor Lee Announces San Francisco Reaches 80 Percent Landfill Waste Diversion, Leads All Cities in North America** (2012).

11 Erick Trickey, **San Francisco's Quest to Make Landfills Obsolete**, Politico (Nov. 21, 2019).

12 See Figure 3.

13 City and Cnty. of San Francisco, **Residential and Small Business Recovery Rate**, City Performance Scorecards (last visited Sep. 7, 2022). The "Residential and small business recovery rate represents the percentage of total refuse that is recovered through recycling and composting, and therefore not sent to a landfill." *Id.* The data on the recovery rate for this subset of customers is based on "a limited sample of residential curbside, apartment, and small commercial refuse generation." *Id.*

14 Press Release, San Francisco Mayor's Office, **Mayor London Breed Challenges Cities, States and Regions Around The World to Join San Francisco in Setting Aggressive Sustainability Goals** (Aug. 28, 2018).

This policy paper examines key elements and outcomes of San Francisco's organics program, and analyzes their implications for the introduction of a successful citywide residential organics program in New York City, as summarized by the diagram below.

Figure 1. A summary of the findings from San Francisco's mandatory organics program and the implications for New York City.

II. San Francisco's Mandatory Organics Diversion Program

This part provides information on the history and key components of San Francisco's organics program, and trends in the diversion rate over time in San Francisco.

1. History of San Francisco's organics diversion mandate

San Francisco introduced a pilot organics diversion program in 1996 in the Richmond district, with voluntary organics collection made available citywide in 2001.[15] The current organics diversion mandate for residential and commercial properties was introduced in 2009 when the board of supervisors passed Ordinance 100-09[16] to address the "over 2 million tons of solid [residential and commercial] waste"[17] annually generated in the city. This measure requires source separation for owners[18] of both residential and commercial properties[19] and subscription to a waste collection service.[20] As of 2023, California state law requires local governments "to provide organic waste collection services to all residents and businesses."[21]

15 Press Release, San Francisco Mayor's Office, **San Francisco Celebrates Major Climate Success with 25 Years of Composting** (Oct. 20, 2021).

16 San Francisco, CA, Ordinance No. 100-09 (Jun. 9, 2009).

17 *Id.*, at 2.

18 San Francisco, CA, San Francisco Health Code, § 291 (2009).

19 San Francisco, CA, San Francisco Env't Code, §§ 1903-1904 (2009).

20 *Id.*, § 1907.

21 CalRecycle, **New Statewide Mandatory Organic Waste Collection**. *See also* 14 Cal. Code Regs. 18997.3(b)(1)(3) (penalties for jurisdictions for lack of compliance).

Recology is the sole provider of waste collection services in San Francisco.[22] It collects residential and commercial waste, and commercial waste accounts for a significant share of the waste that Recology collects by volume; by contrast, in New York City, DSNY collects residential waste while private haulers collect commercial waste.[23] Recology's municipally granted monopoly,[24] along with bribery[25] and overcharges,[26] have been criticized, yet a ballot measure for competitive bidding was defeated in 2012.[27] In 2022, San Francisco voters approved a ballot measure for changes to the rate-setting process, but did not challenge Recology's monopoly.[28]

2. Fee structures for waste collection in San Francisco

Recology collects fees for collecting waste, recyclables and organics. Its fees must be approved by the Director of San Francisco

22 J.D. Morris, **San Francisco has questions about Recology's $200 million deal with Amazon**, San Francisco Chronicle (Feb. 18, 2022).

23 **Guidelines for Hiring a Private Carter**, N.Y.C. Dep't of Sanitation (last visited Sep. 7, 2022).

24 Elizabeth Lesly Stevens, **Picking Up the City's Garbage Is a Sweet Deal, and a Monopoly**, N.Y. Times (Jun. 9, 2011).

25 **Three San Francisco Garbage Companies Admit Bribery And Pay $36 Million To Resolve Federal Investigation**, U.S. Attorney's Office, Northern District of California (Sep. 9, 2021).

26 Mallory Moench & J.D. Morris, **S.F. waste giant Recology made millions more in profits than allowed, according to new report**, San Fransico Chronicle (May 17, 2022).

27 Bay City News, **SF Voters Reject Garbage Measure, Approve Coit Tower Initiative**, The San Francisco Appeal (Jun. 5, 2012).

28 Cole Rosengren, **San Francisco voters approve reform measure in wake of Recology corruption scandal**, Wastedive (Jun. 8, 2022).

Public Works.[29] Public hearings are initiated via application by Recology to adjust collection rates.[30] Since the adoption of the composting mandate, public hearings have been held in 2013 and 2017 according to Recology's applications to increase fees.[31]

Broadly speaking, San Francisco currently maintains two different fee structures: one for residential properties of less than six units, and another for apartment buildings (which have six units or more) and commercial properties.[32]

2.1 Residential fee structure

The residential fee structure applies to buildings with one to five "dwelling units."[33] The monthly fees for residential service are based on a number of components.

There is a base fee (currently $16.12 a month for a "dwelling unit").[34] Customers are also billed a fixed charge for each bin that they rent from Recology.[35] Recology rents various sizes of bins to residential properties, including 16

Pricing Component	Monthly Fee
Base fee for a dwelling unit	$16.12
16 gallon bin for landfill	$6.73 ($0.42 per gallon)
32 gallon bin for organics	$6.73 ($0.21 per gallon)
32 gallon bin for recycling	$6.73 ($0.21 per gallon)
Surcharge for each additional landfill bin above one 32 gallon bin	$10.75

Figure 2. Pricing Structure for Residential Service for a Single-Unit Dwelling. This figure is based on the information on Recology's website about pricing for 2021, including the table with information on rate components and monthly fees. **2021 Refuse Rates,** Recology (Jul. 1, 2021)

29 **Refuse Collection and Disposal Rates**, San Francisco Pub. Works (last accessed Jul. 22, 2022).

30 San Francisco, CA, Refuse Collection and Disposal Ordinance (Nov. 8, 1932).

31 San Francisco Pub. Works, *supra* note 28.

32 *Id.*

33 **Explanation of Possible Charges on Your Residential (1-5 Units) Bill**, Recology (Jun. 21, 2021).

34 *Id.*

35 San Francisco Pub. Works, *supra* note 28. See *in particular* Recology, **Schedule A: Residential and Apartment Refuse Rates** (Jul. 1, 2021); Recology, **Apartment Rates** (Jul. 1, 2021); Recology, **Commercial Rates** (Jul. 1, 2021).

gallon bins for landfill, and 32-gallon bins for compostables and recyclables.[36] Customers pay the same fee per bin regardless of whether a bin is full or empty.

To incentivize diversion of recyclables and organics, customers pay a higher fee per gallon for a landfill bin than for recyclable and organics bins (see figure 2 below).[37] Additionally, a surcharge is applied to any additional landfill bins when the total volume of landfill bins rented by the property owner exceeds 32 gallons.[38]

Since San Francisco mandated the separation of organics, it has reduced the per bin financial incentives to recycle and separate organics. Before 2013, residential customers only paid collection fees for bins for landfill waste; there were no charges for bins for recyclables and organics.[39] After the 2013 rate hearing, Recology introduced a collection fee of $2 for each 32-gallon bin of recyclables and organics collected from residential properties, stating that a "growing portion of the overall system costs" were "related to the costs of the recycling and compost streams".[40] In 2017, this collection fee for recyclables and organics was further increased to $6.26, and Recology discontinued new 20-gallon landfill bins and began to distribute 16-gallon landfill bins, charging $6.26 for both bins.[41] This change resulted in reduced per-gallon charges for landfill waste and increased charges for recycling and composting.[42]

In addition to the fees paid for bins, the frequency of collection from the property is also a factor in the fees paid by residential customers, with customers paying more for more frequent service. There is also a 75% surcharge for Saturday collection and 175% for Sunday collection.[43] Properties with elevation pay more, so that the geography of the property influences the fees paid. [44]

2.2 Apartment buildings and commercial properties

The monthly charges for apartment buildings and commercial properties also have several components.[45]

Apartment buildings pay a "per dwelling unit" fee (currently $5.36 a unit)). For example, a six unit apartment building would pay a dwelling unit fee of $32.16 according to Recolo-

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36 *Id. See in particular* Recology, **Schedule A: Residential and Apartment Refuse Rates** (Jul. 1, 2021).

37 Reminiscent of approaches in San Francisco, the Citizens Budget Commission proposes that New York City charge residents "a volume-based fee" for refuse bags, and offer "free or substantially lower fees for collecting recyclables." Ana Champeny, Vice President for Research, Citizens Budget Commission, **Testimony on the State of New York City Recycling**, Submitted to the New York City Council Committee on Sanitation and Solid Waste Management (Sept. 20, 2022).

38 *Id.* As of 2021, the charge for one 16- or 20-gallon bin is $6.75, while the charge for an additional bin above 32 gallons is $10.75.

39 Recology, 2013 Rate Application Narrative Summary, 9 (Dec. 11, 2012).

40 *Id.*

41 Recology, **Schedule A: Residential and Apartment Refuse Rates** (July 1, 2018).

42 *Id.* For a household that replaced 20-gallon bins with 16-gallon bins, the per-gallon charge was reduced to 0.39$/gallon in 2018 from 0.81$/gallon in 2017. For a household that did not replace their 20-gallon bins, the per-gallon charge in 2018 is 0.31$/gallon.

43 **Refuse Collection and Disposal Rates (Garbage Rates)**, San Francisco Public Works, (last visited Aug. 31, 2022). See in particular Recology, **Schedule A: Residential and Apartment Refuse Rates** (Jul. 1, 2021).

44 *Id.*

45 **Refuse Collection and Disposal Rates (Garbage Rates)**, San Francisco Public Works, (last visited Aug. 31, 2022). *See in particular* Recology, **Schedule A: Residential and Apartment Refuse Rates** (July 1, 2021); Recology, **Commercial Rates** (July 1, 2021).

gy's website.[46] There is no comparable fee for commercial buildings.

For both apartment buildings and commercial properties, customers pay a charge per bin rented from Recology. Unlike in apartment buildings, a larger bin in commercial buildings costs less to rent compared to multiple smaller bins with identical capacity.[47] Additionally, commercial properties have the option of using compactors.[48]

Apartment buildings and commercial buildings are eligible for a "diversion discount" based on the volume of organics and recycling that they separate compared to their total volume of organics, recycling, and landfill. If the pricing structure influences behavior, the diversion discount should incentivize customers to divert organics and recyclables to reduce their bills. The discount is up to 75% of the cost of the collection bins.[49] The diversion discount is calculated as follows:

([volume of organics + recyclables] / [total volume of organics + recyclables + landfill]) - 25%[50]

Suppose, for example, that a building has 32 gallons each of organics, recyclables and landfill; the diversion rate would be 66.7% (64 gallons of organics + recyclables / 96 gallons of organics + recyclables + landfill); the diversion discount would be 41.7% (66.7% - 25%).

The diversion discount has been reduced over time by increasing the modifier (which, as mentioned above, is currently 25%). Before 2013, the discount in collection fees was obtained by subtracting 5% from the proportion of recyclable and compostable waste bins, instead of the current 25%.[51] After the 2013 rate hearing, the modifier that reduces the diversion discount became 10%, instead of 5%.[52] The current 25% modifier was introduced after the 2017 rate hearing.[53] Assuming again that the pricing structure affects behavior, the increase in the modifier (which reduces the diversion discount) may have blunted the financial incentive to divert organics and recyclables. The frequency of collection, elevation, and distance from the entrance also factor into the charges paid by apartment buildings and commercial properties.[54]

2.3 The impact of the pricing fee structures

As described above, the fee structures for residential, apartment and commercial buildings include a number of components that should in theory incentivize people to divert organics and recyclables. Most notably there is a lower price per gallon per bin for organics and recyclables than landfill (for residential buildings) and a diversion discount (for apartment buildings and commercial properties). However, as mentioned above, these financial incentives to divert appear to have declined over time since San Francisco mandated organics collection. The financial incentives may have failed to address some of the costs of administering the diversion programs.

While San Francisco's fee structures might in theory encourage the separation of organ-

46 **2021 Refuse Rates**, Recology (last visited Sep. 7, 2022).

47 Recology, **Commercial Rates** (Jul. 1, 2021).

48 *Id.*

49 Recology, Apartment Rates (July 1, 2021); Recology, supra note 45. This discount applies only to the collection charges for waste bins, and not to elevation, distance, or "key" charges.

50 *Id.*

51 **Refuse Collection and Disposal Rates (Garbage Rates)**, San Francisco Dep't of Public Works (last visited Sep. 2, 2022).

52 Id.

53 Recology, **2017 Refuse Rate Application Narrative Summary**, 15-16.

54 Recology, Apartment Rates (July 1, 2021); Recology, **Commercial Rates** (Jul. 1, 2021).

ics and recyclables, there is a fundamental question about whether the pricing structures actually are affecting behavior in San Francisco. As discussed further below, the diversion rate in San Francisco has fallen over time, notwithstanding the fee structures. It is possible that for many property owners, the charges for waste collection – and the components intended to encourage separation – are too small to induce much separation of organics and recyclables. Notwithstanding the fee structures, the incentives to separate organics and recyclables may be more ethical in San Francisco than financial, at least for small residential customers. Large refuse generators in the city might have a greater financial incentive to separate recyclables and organics, perhaps in part due to the Refuse Separation Law discussed below that mandates audits of their waste and for which they must hire additional staff if they fail these audits.

3. Enforcement of the organics diversion mandate and the refuse separation law

San Francisco Ordinance 100-09 authorizes the Director of the Department of the Environment to inspect "any collection container, collection vehicle load, or receiving facility for collected trash, recyclables or compostables"[55] and to impose "administrative fines" for violation of those "provisions . . . or of any rule or regulation," but does not require that such fines be imposed.[56] Currently, San Francisco indicates that there is a fine for property owners failing "to provide tenants" collection bins or information on composting and recycling.[57]

San Francisco does not rely on fines to spur single family residential property owners to separate their organics and recyclables from trash. According to a 2019 news article, San Francisco has opted not to fine single family residences that do not follow its composting and recycling mandates, preferring instead to issue "tags" and "letters" to encourage individuals to comply.[58] The same 2019 article indicates that, in the case of noncompliance by apartment buildings and commercial properties, San Francisco begins "with tags and letters" and will consider escalating to imposing fines.[59] Fines can be imposed for contamination, and the diversion discount can be removed in the case of apartment and commercial properties.[60] The research for this policy brief did not locate any public records concerning enforcement.

3.1 Refuse separation law for large refuse generators

In 2018, the San Francisco Board of Supervisors passed the Refuse Separation Law, which is intended to increase the separation of organics and recyclables by buildings generating large amounts of refuse. Under the law, which took effect in 2019, "large refuse generators" are required to undergo audits of their collection bins at least once every three years to determine the extent to which trash, organics, and recyclables are in the incorrect bins.[61]

A "large refuse generator" is defined as "a property refuse account holder, or a City-

55 San Francisco, CA, San Francisco Env't Code, § 1908 (2009).

56 *Id.*

57 **Recycling & Composting in San Francisco - FAQs**, San Francisco Dep't of Env't (last visited Jul. 22, 2022).

58 Arlene Karidis, **Enforcing Recycling: Does It Work?**, Waste360 (Aug. 15, 2019).

59 *Id.*

60 **Explanation of Possible Charges on Your Commercial Bill**, Recology (June 20, 2020); **Explanation of Possible Charges on Your Apartment (6+ Units) Bill**, Recology (Jun. 21, 2021). *See also* Trickey, *supra* note 11 ("About 500 large customers have received contamination charges, and about 100 have lost discounts for recycling and composting").

61 San Francisco, CA, San Francisco Env't Code, § 1906 (c) & (d).

owned and operated facility in the City, that has roll-off compactor service or generates 40 cubic yards or more of uncompacted refuse per week."[62] Large generators include multi-family apartment buildings (including affordable housing buildings) as well as commercial properties.

Buildings that are out of compliance are required to hire a "Zero Waste Facilitator" to improve the separation of organics and recyclables.[63] In 2018, 419 properties met the definition of "large refuse generator" based on generating at least 40 cubic yards of waste weekly;[64] the large generators reportedly contributed "an estimated 20% of the city's landfill waste."[65]

4. Waste processing budget and costs

The San Francisco Department of Environment and Recology spend money to educate the public about the organics program. San Francisco Department of the Environment, however, does not disclose on its website its budget for each program associated with recycling or waste processing. The Edwin Lee administration's budget documents included an item, "recycling," in the budget.[66] However, this item was not separated into specific programs.

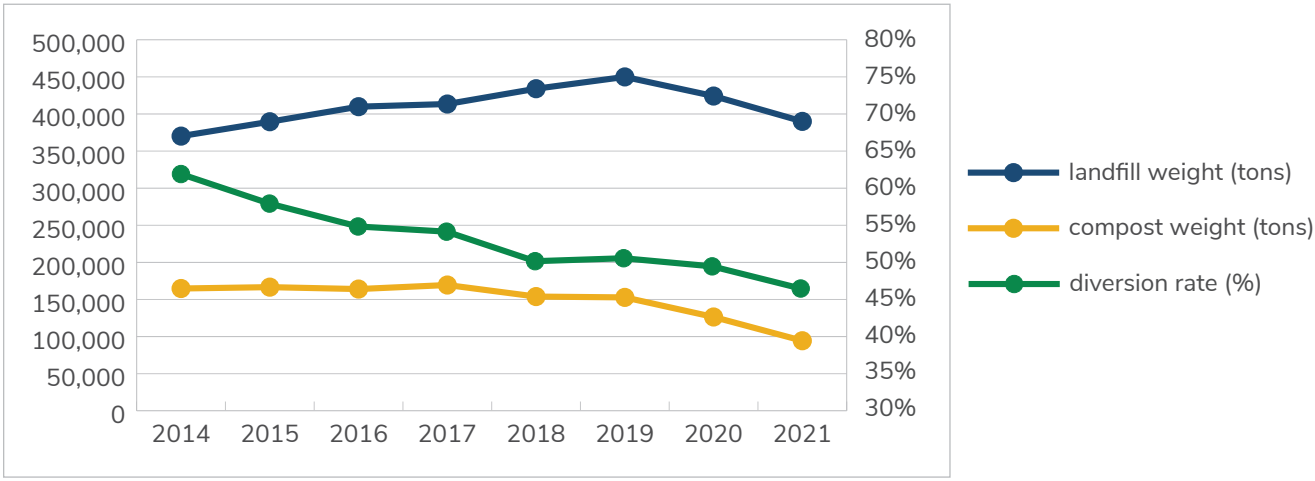

Figure 3. Annual weight of residential and commercial waste collected by Recology from San Francisco, and diversion rate for residential and commercial waste. The weights are shown on the left axis, while the diversion rates are shown on the right axis. San Francisco Pub. Works, **Refuse Collection and Disposal Rates (Garbage Rates)** (last visited Aug. 31, 2022). The diversion rate is obtained by dividing the weight of diverted materials (compostables and recyclables added together) by the total amount of waste collected. Tables including the information for each year can be found in the pages titled "Annual Report".

62 *Id.*, § 1902 (Large Refuse Generator).

63 *Id.*, § 1906 (c).

64 Cole Rosengren, **San Francisco passes ordinance requiring waste audits for large generators**, Wastedive (Dec. 3, 2018).

65 *Id.*

66 See e.g., Mayor's Off. of Pub. Pol'y & Fin., **Mayor's 2017-2018 & 2018-2019 Proposed Budget** 216 (2017).

The current London Breed administration's budget documents do not include this item. While Recology's application for rate increases in 2017 included descriptions for several education and outreach programs,[67] the costs for each program are not described in detail. Recology's annual report for expenses does not separate the costs associated with landfill, recycling, and composting into separate items.[68]

5. Waste diversion over time

Figure 3 shows the change in the weight of compostable waste and landfill waste collected between 2014 and 2022, and the diversion rate as reported by Recology for residential and commercial properties. The diversion rate is obtained through dividing the weight of diverted materials (compostables and recyclables added together) by the total amount of waste collected.[69] Since 2014, Recology has disclosed the weight of waste directed to landfills and the weight of composted waste in its annual reports.[70]

Figure 3 shows that the diversion rate has decreased by over 10 percentage points since 2014 to approximately under 50% in 2021.[71] The diversion rate for residential and commercial properties reported by Recology—just under 50% percent in 2021 as just mentioned—is generally lower than the rate for residential property and small businesses reported by San Francisco.[72] Since 2018, the monthly diversion rates for residential and small commercial properties in particular have often been below 55%.[73] It is noteworthy that Ordinance 100-09 was introduced as a measure to address the relatively low diversion rate for residential property and businesses, which was stated to be close to 50% in 2009.[74]

It is unclear how much of the waste currently sent to landfills is compostable. A 2019 report indicates, however, that in 2013, 31% of the waste sent to landfills was organic.[75]

6. Measures for low-income residents and public housing

Housing Authority of San Francisco maintains a limited supply of public housing for low-income residents.[76] While Recology provides a 25% discount for some low-income residents,[77] there are no specific measures for residents of public housing.

7. In-sink disposal units

Instead of separating organics, people may dispose of them through in-sink disposal units. When organics are disposed of using these units, organics are dealt with through the

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67 Recology, 2017 Refuse Rate Application Narrative Summary 3-6 (Feb. 10, 2017).

68 See e.g., **Recology, San Francisco Annual Rate Report: 12 Months Ended June 30, 2021** (Jun. 30, 2021).

69 See e.g., *Id.*

70 *Id., at 4.*

71 See also Trickey, *supra* note 11.

72 City and Cnty. of San Francisco, *supra* note 13. The page reports that the diversion rate for March 2022 was 51.30%. However, because the diversion rate in this page is calculated monthly, the diversion rates are not directly comparable.

73 *Id.* The "Residential and small business recovery rate represents the percentage of total refuse that is recovered through recycling and composting, and therefore not sent to a landfill." *Id.* The data on the recovery rate for this subset of customers is based on "a limited sample of residential curbside, apartment, and small commercial refuse generation." *Id.*

74 San Francisco, CA, Ordinance No. 100-09 (Jun. 9, 2009), at 2.

75 San Francisco Dep't of Env't, **Focus 2030: A Pathway to Net Zero Emissions** 22 (2019).

76 **Public Housing**, Hous. Auth. of the City & Cnty. of San Francisco (last visited Jul. 22, 2022).

77 **Rates**, Recology San Francisco (last visited Jul. 22, 2022).

sewage and wastewater treatment systems. In the 2011 California Single Family Home Water Use Efficiency Study, 62.5% of respondents from San Francisco indicated that they have such units.[78] San Francisco does not limit the use of in-sink disposal units in residential or commercial properties. Research for this brief did not identify any analysis of the impact in San Francisco of mandating organics separation while allowing the use of in-sink disposal units. As a result, it is not possible to know what the effect of in-sink disposal units is on the organics diversion rate in San Francisco, in particular whether the use of such units has increased under mandatory organics separation because people find them more convenient than separating organics for collection.

III. Analysis and Implications for a New York City-wide Organics Program

To design an effective citywide organics collection program, it will be beneficial for New York City to examine the pioneering effort of San Francisco and address its limitations. This part suggests some of the key implications of San Francisco's organics program for New York City's effort to establish a citywide organics program.

1. The program should be transparent and increase diversion over time

Key data about San Francisco's mandatory composting program are not readily available to the public, including the cost of waste processing and outreach programs, the amount of waste incinerated and sent to landfills, and records of violations. The lack of transparency complicates efforts to understand how the program is functioning and reduces the public's ability to hold Recology and the Department of the Environment accountable for program performance.

Important information about waste management in New York City is currently available online. DSNY releases annual reports for curbside collection, which includes the proportion of recyclable waste from geographic areas.[79] New York City Council discloses budget reports for each department for the financial year, including that for waste disposal and recycling.[80] DSNY has made the results of its studies concerning waste characterization, organics collection, and recycling available to the public.[81]

In designing a New York City-wide organics program, it will be important to ensure that information is readily accessible to the public about the cost, functioning, and performance of the program. Additionally, if New York City chooses to monitor all or part of the waste sent to landfills, it will be beneficial to disclose the amount of misclassified compostable and

78 Bob Raucher et al., **California Single Family Water Use Efficiency Study**, Aquacraft Water Engineering & Management (Apr. 20, 2011) (Table 67: Percent of respondents indicating presence of various water using devices).

79 **Annual Reports for DSNY Curbside Collections**, N.Y.C. Dep't of Sanitation (last visited Aug. 3, 2022).

80 Jonathan Seltzer & Crilhien Francisco, **Report of the Finance Division on the Fiscal 2022 Preliminary Plan and the Fiscal 2021 Preliminary Mayor's Management Report for the Department of Sanitation**, 4 (Mar. 4, 2021).

81 **Reports**, N.Y.C. Dep't of Sanitation (last visited Aug. 3, 2022).

recyclable waste. It will also be important to develop educational plans to reduce such contamination

2. DSNY should implement a citywide organics program

As described above, Recology is the monopoly provider of waste collection services in San Francisco, and Recology's monopoly has been controversial.

DSNY should directly collect organics if New York City implements citywide residential organics collection. DSNY provision will make it easier for the public to monitor program performance and provide input into decisions about the structure, functioning, and continual improvement of the organics program. DSNY provision will also make it easier for the City to update the program as necessary and control costs

3. There should be opportunities for public oversight of the organics program

The implementation of a successful citywide organics program will involve the efforts of many people inside and outside city government. The willingness of residents of New York City to separate organics from recyclables and other wastes will be key. Opportunities must be built into the design of a program to enable it to be structured, implemented and revised with public input.

4. The organics program should effectively and equitably encourage the diversion of organics

As mentioned above, San Francisco has focused on ensuring that large refuse generators, including large multifamily buildings, comply with the requirements to separate organics and recyclables. New York City might similarly consider focusing on increasing the separation of organics at multifamily buildings that meet a certain size threshold. These buildings might be required to undergo periodic waste audits to check for improper sorting of organics and recyclables, and to implement measures to improve the separation of organics if they fail to meet certain standards. Such a targeted approach to increasing organics diversion might cost-effectively increase the separation of organics by focusing efforts on the largest generators of refuse and the buildings with the resources to increase diversion. Local Law 97, which caps greenhouse gas emissions in large buildings starting in 2024, offers a precedent for focusing environmental improvements on large buildings in New York City.[82]

5. Program design should consider the risk of in-sink disposal units to mandatory curbside organics collection

Since 1997 New York City has allowed the use of in-sink disposal units in residences throughout the city.[83] In the metropolitan area of the city, 7.5% of households are estimated to have such units, although they are reportedly more

82 Danielle Spiegel-Feld, et al., **Carbon Trading for New York City's Building Sector: Report of the Local Law 97 Carbon Trading Study Group to the New York City Mayor's Office of Climate & Sustainability** (2021).

83 Adrienne Bernhard, **The Case for the Humble Garbage Disposal**, Bloomberg (Aug. 31, 2017).

prevalent in newly built housing.[84] There is a risk that mandating the separation of organics might lead to greater use of in-sink disposal units for organics if people prefer the convenience of disposing of their organics through these units over separating their organics. Even a small increase in in-sink disposal usage might undermine the economic efficiency of truck routes in a mandatory curbside organics collection program. The Independent Budget Office has emphasized the importance of increasing collection rates to the economics of mandatory curbside collection.[85]

Research for this brief did not locate any studies examining the impact of mandatory organics separation on the use of in-sink units. There are existing references to concerns about whether the city would have adequate capacity in its wastewater treatment system to deal with expanded use of in-sink disposal units, and whether greater use might lead to more nitrogen being discharged into waterways.[86]

In designing a mandatory organics collection system, NYC should consider whether the use of in-sink disposal units would undermine the goal of an economically efficient and environmentally responsible mandatory organics curbside collection program.

IV. Conclusion

New York City has an opportunity to introduce a citywide organics program that addresses the City's needs and circumstances and serves as a model for other cities.

There are many design choices that need to be made in implementing a universal organics program. This policy brief highlights several key lessons that New York City can learn from San Francisco's mandatory organics program.

In particular, New York City should be mindful to design a program that is transparent so that the public can obtain key information about the program. New York City should maintain its current approach of residential waste collection by DSNY, and DSNY should be responsible for collecting organics if separating organics is mandated. The program should be designed to effectively and equitably increase the diversion of organics. Also, the City should consider the risk that in-sink disposal units might undermine the efficiency of a mandatory curbside collection program.

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84 Citizens Budget Commission, **Can We Have Our Cake and Compost It Too?** 11 (2016).

85 New York City Independent Budget Office, Fiscal Brief, **Going Green: Can the Organics Collection Program Be Fiscally and Environmentally Sustainable?** (2021).

86 NYC Department of Environmental Protection, Executive Summary, **The Impact of Food Waste Disposers in Combined Sewer Areas of New York City**, ES-2 (1997) (the report's findings "raise a cautionary flag at very high penetration rates" of in-sink disposal units); Jen Carlson, **Have You Ever Seen a Garbage Disposal in NYC?**, The Gothamist (May 7, 2019) (quoting Department of Environmental Protection (DEP) official on DEP concerns with the effects of in-sink disposal units on water pollution and the sewage system). See *generally* New York State Department of Environmental Conservation, **Beyond Waste: A Sustainable Materials Management Strategy for New York State** 162 (2010) (in determining whether in-sink disposal units would "further recycling goals," "[c]riticial considerations include" whether localities have adequate "wastewater treatment capacity" and the use to which plant biosolids are put). Nitrogen discharged into the ocean increases the intensity of harmful algal blooms, which reduces oxygen content of seawater and releases toxins, threatening the marine ecosystem. **Causes and Ecosystem Effects | Harmful Algal Blooms**, Ctr. for Disease Control & Prevention (last visited Sep. 6, 2022). Dealing with waste, whether through wastewater treatment, landfills or other means, also generates greenhouse gas emissions. On the greenhouse gas emissions from waste, including wastewater treatment and landfills, see U.S. Env't Prot. Agency, 7. Waste, in **Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2020** (2022).

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