SEATTLE CITY COUNCIL

Sustainability and Renters' Rights Committee

Agenda

Friday, August 19, 2022

9:30 AM

Council Chamber, City Hall
600 4th Avenue
Seattle, WA 98104

Kshama Sawant, Chair
Sara Nelson, Vice-Chair
Debora Juarez, Member
Andrew J. Lewis, Member
Tammy J. Morales, Member

Chair Info: 206-684-8803; Kshama.Sawant@seattle.gov

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Meeting Location:
Council Chamber, City Hall, 600 4th Avenue, Seattle, WA 98104

Committee Website:
http://www.seattle.gov/council/committees/sustainability-and-renters-rights

This meeting also constitutes a meeting of the City Council, provided that the meeting shall be conducted as a committee meeting under the Council Rules and Procedures, and Council action shall be limited to committee business.

Members of the public may register for remote or in-person Public Comment to address the Council. Details on how to provide Public Comment are listed below:

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In-Person Public Comment - Register to speak on the Public Comment sign-up sheet located inside Council Chambers at least 15 minutes prior to the meeting start time. Registration will end at the conclusion of the Public Comment period during the meeting. Speakers must be registered in order to be recognized by the Chair.

Submit written comments to Councilmember Kshama Sawant at Kshama.Sawant@seattle.gov

Please Note: Times listed are estimated

A. Call To Order

B. Approval of the Agenda

C. Public Comment

D. Items of Business

1. Res 32064 **A RESOLUTION declaring the City Council's intent to phase out gas-powered leaf blowers; establishing goals and identifying actions to meet these goals.**

Supporting Documents:

Summary and Fiscal Note
Central Staff Memo
Amendment 1
Central Staff Presentation
Quiet Clean Seattle Presentation
Resources on Gasoline-Fueled Leaf Blowers

Briefing, Discussion, and Possible Vote (30 minutes)

Presenters: Michael Porcello, Office Councilmember Mary Cheh of the District of Columbia; Yolanda Ho, Council Central Staff

E. Adjournment

File #: Res 32064, **Version:** 1

CITY OF SEATTLE

RESOLUTION _____

A RESOLUTION declaring the City Council's intent to phase out gas-powered leaf blowers; establishing goals and identifying actions to meet these goals.

WHEREAS, The City of Seattle ("City") has the authority to adopt policies to protect and promote public health, safety, and welfare; and

WHEREAS, in 2021, the City Council ("Council") adopted Statement of Legislative Intent OSE-003-B-001 requesting that City departments develop a plan to phase out the use of gas-powered leaf blowers in Seattle within two years and submit this plan to the Council by September 2, 2022; and

WHEREAS, the Council is seeking to reinforce and elevate this request through this resolution by establishing goals and articulating specific actions the City should take to gradually phase out the use of gas-powered leaf blowers; and

WHEREAS, in 2014, the City's Department of Planning and Development (now the Seattle Department of Construction and Inspections) considered strategies to reduce or eliminate the use of gas-powered leaf blowers in their response to Statement of Legislative Intent SLI 70-1-A-1 and recommended no new regulations or changes to City practices due to the lack of equivalent electric alternatives and other considerations at that time; and

WHEREAS, since then, new data have revealed more of the environmental and public health impacts of gas-powered leaf blowers; electric leaf blowers technology has improved; and other jurisdictions have moved to eliminate the use of gas-powered leaf blowers; and

WHEREAS, gas-powered leaf blowers most commonly have two-stroke internal combustion engines that

incompletely combust their fuel, resulting in the emission of toxic and carcinogenic substances, such as carbon monoxide, nitrogen oxides, and volatile organic compounds, which contribute to the formation of ozone, smog, and acid rain; and

WHEREAS, best available data indicate that the use of gas-powered leaf blowers can cause direct harm to people within the vicinity by contributing to localized air pollution, creating excessive noise, and causing other negative health impacts to their operators, who are disproportionately people of color; and

WHEREAS, operating a leaf blower results in particulate matter lifting into the air, which has been shown to degrade localized air quality by increasing coarse and fine particles by more than 60 percent relative to ambient air, and the smallest particles can remain in the air for up to a week; and

WHEREAS, studies from the United States Environmental Protection Agency (EPA) indicate that fugitive dust (i.e., particulate matter) and exhaust emissions from gas-powered leaf blowers can pose significant health risks to operators and the public, including "cardiovascular disease, stroke, respiratory disease, cancer, neurological conditions, premature death, and effects on prenatal development"; and

WHEREAS, gas-powered leaf blowers with two-stroke engines emit particularly low-frequency sound waves, including ultra-low frequency, which cause the sounds to travel longer distances and more easily penetrate walls and other barriers, magnifying the impacts of nuisance noise; and

WHEREAS, the California Air Resources Board determined that operators of gas-powered leaf blowers may be exposed to an average sound of 88-101.3 decibels (dBs), which exceeds acceptable thresholds set by the World Health Organization, the EPA, and Washington State; and

WHEREAS, regular exposure to sound levels higher than 70 dBs can cause hearing damage and loss to operators, and studies have shown that high environmental noise pollution can contribute to the incidence of arterial hypertension, myocardial infarction, tinnitus, and stroke; and

WHEREAS, the City's Race and Social Justice Initiative (RSJI) established a Racial Equity Toolkit (2012) analysis process, wherein the City committed to racial equity and justice principles, including

prioritizing stakeholder engagement throughout policy development, especially stakeholders who are directly affected by a policy's implementation; and

WHEREAS, landscape professionals disproportionately identify as Latinx (46 percent) relative to overall workplace demographics (18 percent), putting them at greater risk of the harms caused by gas-powered leaf blowers; and

WHEREAS, in response to the considerable negative impacts from gas-powered leaf blowers, over 100 cities across the nation have instituted policies limiting or banning them from use, and California has passed Assembly Bill 1346, which requires the California Air Resources Board to create a plan to phase out the sale of gas-powered leaf blowers in California by 2024; and

WHEREAS, electric leaf blowers are quieter than gas-powered versions and do not emit low-frequency sound waves or toxic emissions, reducing harm to operators and other people nearby; and

WHEREAS, several City departments continue to use gas-powered leaf blowers, including Seattle Parks and Recreation, the Seattle Department of Transportation, and Seattle City Light; and

WHEREAS, transitioning away from fossil fuel-powered leaf blowers is consistent with the City's electrification plans to phase out the use of fossil fuels for transportation and buildings; and

WHEREAS, while Seattle Parks and Recreation has already committed to transition ten percent of its gas-powered leaf blowers to electric models each year to reach 50 percent leaf blower electrification by 2026, the harms to workers, residents, and the environment and the wider availability of equivalent electric alternatives warrant a faster and more thorough implementation; NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SEATTLE THAT:

Section 1. The City Council recognizes that the use of gas-powered leaf blowers causes significant adverse environmental and health impacts, including noise and air pollution, and establishes the following goals to support an expeditious transition away from their use:

A. By January 2025, or later if necessary, the City and its contractors will phase out the use of gas-

powered leaf blowers; and

B. By January 2027, or later if necessary, institutions located in Seattle, businesses operating in Seattle, and Seattle residents will phase out the use of gas-powered leaf blowers.

Section 2. To accomplish the goals in Section 1 of this resolution, the Council requests that City departments (as suggested below) pursue the following actions:

A. Seattle Parks and Recreation, the Department of Finance and Administrative Services (FAS), Seattle City Light, the Seattle Department of Transportation, and other departments as appropriate, are requested to:

1. Evaluate their current practices related to the use of leaf blowers and explore options to reduce reliance on leaf blowers, both gas-powered and electric, either by allowing leaves to naturally decompose or clearing them using non-motorized methods; and

2. Develop and implement plans to ensure that City facilities and employees are adequately equipped with infrastructure and equipment to use electric-powered leaf blowers rather than gas-powered leaf blowers.

B. Seattle Public Utilities, the Seattle Department of Construction and Inspections (SDCI), the Office of Labor Standards, and the Department of Neighborhoods are requested to design a culturally-and linguistically-appropriate education and outreach strategy that informs City employees, businesses, and the general public of the negative health and environmental impacts of gas-powered leaf blowers, and encourages residents to adopt alternatives that are safer, quieter, and more environmentally friendly.

C. FAS, SDCI, and other departments, as appropriate, are requested to develop a proposal that would phase out and ban the use of gas-powered leaf blowers within Seattle. The proposal should include, but not be limited to, the following:

1. A Racial Equity Toolkit analysis to identify benefits or burdens of the proposal and gather feedback from key stakeholders, such as landscaping businesses that operate in Seattle;

2. Whether the City should offer incentives, such as a buyback program or rebates, to

landscaping businesses that operate in Seattle and low-income Seattle residents;

3. What regulatory mechanism (e.g., amendment to the Noise Code) is most appropriate to support enforcement of the ban; and

4. The potential benefits and reasonably quantifiable net costs (if any) to the City of implementation and enforcement of the actions requested by this resolution.

Section 3. The Council requests that the Executive provide to the City Council's Sustainability & Renters' Rights Committee or other committee as appropriate by December 2, 2022, a proposed work program, timeline, and budget to achieve the goals of this resolution.

Section 4. Nothing in this resolution should be construed to preclude or impede the City's ability to more quickly phase out gas-powered leaf blowers.

Adopted by the City Council the _____ day of _____, 2022, and signed by me in open session in authentication of its adoption this _____ day of _____, 2022.

_____

President _____ of the City Council

Filed by me this _____ day of _____, 2022.

_____

Elizabeth M. Adkisson, Interim City Clerk

(Seal)

Attachments:

SUMMARY and FISCAL NOTE*

Department:	Dept. Contact/Phone:	CBO Contact/Phone:
LEG	Yolanda Ho / 256-5989	N/A

** Note that the Summary and Fiscal Note describes the version of the bill or resolution as introduced; final legislation including amendments may not be fully described.*

1. BILL SUMMARY

Legislation Title: A RESOLUTION declaring the City Council's intent to phase out gas-powered leaf blowers; establishing goals and identifying actions to meet these goals.

Summary and Background of the Legislation: Gas-powered leaf blowers are noisy and create localized air pollution that can impact the health of both the equipment's operator and people nearby. In the 2014 Adopted Budget, the Council requested that the Department of Planning and Development (DPD, now the Seattle Department of Construction and Inspections) consider strategies to reduce or eliminate noise and emissions caused by gas-powered leaf blowers in Seattle (SLI 70-1-A-1). In response, DPD provided an analysis of relevant regulations, an inventory of the City's gas-powered leaf blowers by departments, and assessed various options to reduce the use of gas-powered leaf blowers in the city. DPD did not recommend any regulatory or substantial programmatic changes at that time due to the limitations of electric leaf blower technology and concerns about racial equity impacts that could result from restricting the use of gas-powered leaf blowers.

Since 2014, electric leaf blowers have become increasingly more powerful, with longer battery life, making them a viable alternative to gas-powered models for City, commercial, and institutional use. Further, recent research has found that prolonged exposure to the noise and emissions produced by gas-powered leaf blowers can cause hearing damage and increase an individual's risk of cardiovascular disease, stroke, respiratory disease, cancer, neurological conditions, premature death, and effects on prenatal development.

To address these issues, this resolution would declare the City Council's commitment to the following goals:

- By January 2025, or later if necessary, the City and its contractors will phase out the use of gas-powered leaf blowers; and
- By January 2027, or later if necessary, institutions located in Seattle, businesses operating in Seattle, and Seattle residents will phase out the use of gas-powered leaf blowers.

A variety of City department are requested to develop and begin implementing actions to achieve these goals, most notably Seattle Parks and Recreation (SPR), which currently owns the largest number of gas-powered leaf blowers in the City (approx. count = 360). SPR is currently planning a gradual transition to electric leaf blowers, with the goal of achieving 50 percent electrification by 2026. The later target date for implementing the phase-out for businesses and institutions is intended to provide the City with additional time for outreach to

residents and businesses and to develop strategies to mitigate financial impacts that will ensure that the policy does not cause disproportionate racial equity impacts.

2. CAPITAL IMPROVEMENT PROGRAM

Does this legislation create, fund, or amend a CIP Project? ___ Yes _X_ No

3. SUMMARY OF FINANCIAL IMPLICATIONS

Does this legislation amend the Adopted Budget? ___ Yes _X_ No

Does the legislation have other financial impacts to The City of Seattle that are not reflected in the above, including direct or indirect, short-term or long-term costs?
The resolution calls for expediting the City's transition from gas-powered leaf blowers to all-electric, which would accelerate the timeline for planned expenditures and require additional resources in the short term. The upfront expenditure will diminish the need to invest in electric leaf blowers and the necessary infrastructure to support their use over the long term. Departments may require additional resources to develop and implement the work as requested and fund any financial incentives the City might offer to reduce the burden of the planned phase-out for landscaping businesses and low-income residents.

Additionally, there could be workforce impacts for the City, such as increased time needed to clear leaves, if available electric leaf blowers prove to be less powerful than gas-powered alternatives. The resolution requests that City departments reevaluate their use of leaf blowers to reduce their reliance on leaf blowers (both gas-powered and electric) generally, which could reduce the impacts of this change. Finally, resources may be needed to support enforcement of the restriction on gas-powered leaf blowers. These costs are currently not quantifiable as City departments would need to more fully develop the proposal as requested in the resolution.

Are there financial costs or other impacts of *not* implementing the legislation?
Failure to implement the work outlined in this resolution would result in the continued use of gas-powered leaf blowers in Seattle and exposure of workers and others in the vicinity to the associated health risks as described previously.

4. OTHER IMPLICATIONS

a. Does this legislation affect any departments besides the originating department?
The resolution would request that work be conducted by SPR, Department of Finance and Administrative Services (FAS), Seattle City Light, and Seattle Department of Transportation to evaluate their practices related to leaf blower use and take the measures necessary for City staff to fully transition to electric leaf blowers by January 2025. Seattle Public Utilities, the Seattle Department of Construction and Inspections (SDCI), the Office of Labor Standards, and the Department of Neighborhoods would develop and implement an outreach and engagement strategy for the proposed phase-out, with a particular focus on landscaping businesses that operate in Seattle. FAS and SDCI would also be engaged in developing a

proposal to phase-out the use of gas-powered leaf blowers by residents, landscaping businesses and institutions in Seattle by January 2027.

b. Is a public hearing required for this legislation?
No.

c. Is publication of notice with *The Daily Journal of Commerce* and/or *The Seattle Times* required for this legislation?
No.

d. Does this legislation affect a piece of property?
No.

e. Please describe any perceived implication for the principles of the Race and Social Justice Initiative. Does this legislation impact vulnerable or historically disadvantaged communities? What is the Language Access plan for any communications to the public?
Workers in the landscaping services industry disproportionately identify as Hispanic/Latino (nationally, 46 percent of workers in the landscaping services industry as compared to 18 percent of all workers). Phasing out the use of gas-powered leaf blowers would reduce these workers' risk of exposure to the noise and emissions produced by the equipment.

While this would benefit the health of workers, landscaping businesses may be financially impacted by the proposed prohibition against the use of gas-powered leaf blowers in Seattle. The businesses would have to purchase electric leaf blowers and adjust their operations to ensure that leaf blowers can be charged (or have sufficient charge) throughout the day as landscaping crews move from one work site to another. Additionally, low-income residents could be financially burdened by the proposed ban, which may require them to purchase an electric leaf blower or could result in them being disproportionately subjected to enforcement action if they are unable to replace their gas-powered leaf blower prior to the ban going into effect. The City could consider mitigating these impacts by creating financial incentives, such as a rebate and/or buy-back program.

f. Climate Change Implications

1. **Emissions: Is this legislation likely to increase or decrease carbon emissions in a material way?**
   No. Gas-powered leaf blowers produce minimal greenhouse gas emissions.

2. **Resiliency: Will the action(s) proposed by this legislation increase or decrease Seattle's resiliency (or ability to adapt) to climate change in a material way? If so, explain. If it is likely to decrease resiliency in a material way, describe what will or could be done to mitigate the effects.**
   No.

g. If this legislation includes a new initiative or a major programmatic expansion: What are the specific long-term and measurable goal(s) of the program? How will this legislation help achieve the program's desired goal(s)?
Not applicable.

Summary Attachments:
None.

August 17, 2022

M E M O R A N D U M

To: Sustainability and Renters' Rights Committee
From: Yolanda Ho, Analyst
Subject: Gas-Powered Leaf Blower Phase Out (Resolution 32064)

On August 19, the Sustainability and Renters' Rights Committee (Committee) will receive a briefing and may vote on Resolution (RES) 32064, declaring the City Council's intent to phase out the use of all gas-powered leaf blowers in Seattle.

This memorandum provides: (1) an overview of the environmental and health impacts of leaf blowers; (2) additional background information on leaf blowers, including previous policy efforts, regulations, and an inventory of City-owned leaf blowers; (3) a brief summary of other jurisdictions that regulate the use of gas leaf blowers; (4) a description of RES 32064 and related considerations; and (5) next steps.

Environmental and health impacts

Gas-powered leaf blowers have long been recognized primarily as a noise nuisance. More recently, studies have found that this equipment may also cause adverse health impacts, primarily for landscape workers who operate leaf blowers on a regular basis. At the national level, landscape workers are disproportionately Latino or Hispanic (46 percent in landscape services versus 18 percent in the total workforce).[1]

Noise

A 2018 study for Washington, D.C., compared noise levels and frequency of sound produced by two-stroke gas and electric blowers. Results showed that while gas and electric leaf blowers may be similarly loud (decibels, dB), they produce very different frequencies (hertz, Hz) of sound, with gas blowers producing higher levels of sound at lower frequencies. Lower frequency sound travels through building walls and longer distances, causing gas blowers to be perceived by the human ear as noisier and more disturbing than electric blowers. While the general public is unlikely to experience long-term health impacts caused by gas-powered leaf blower noise, landscape workers could be impacted by permanent hearing damage.

Emissions

Greenhouse gas (GHG) emissions associated with nonroad, mobile sources of emissions, which include equipment used for lawn maintenance, construction, agriculture, etc., are tracked at the county level. These emissions are a relatively minor source in King County, accounting for less than one percent of all transportation-related emissions in the most recent Puget Sound Clear Air Agency GHG inventory from 2018. As such, gas leaf blowers are not a significant source of GHG emissions in Seattle as compared to vehicles or buildings.

[1] U.S. Bureau of Labor Statistics, 2022.

Emissions from two-stroke gas leaf blowers and similar landscape maintenance equipment consist of hydrocarbons from both burned and unburned fuel that can combine with other gases in the atmosphere to form ozone; carbon monoxide; particulate matter; and other toxic air contaminants in the unburned fuel, including benzene, 1,3-butadiene, acetaldehyde, and formaldehyde. The California Air Resources Board reports that one hour of gas-powered leaf blower use produces roughly the same amount of smog-forming emissions as driving a 2017 Toyota Camry 1,100 miles.[2] Exposure to high levels of these emissions over time can cause a variety of health issues, including cancer, respiratory problems, and shorter-term symptoms, such as headaches, dizziness, and nausea.

Operating any type of leaf blower lifts particulate matter into the air, which can impact people's health, particularly those who are exposed to it regularly.[3] Fine particulate matter ($PM_{2.5}$) has been found to cause negative cardiovascular and respiratory health effects that can lead to increased mortality. Long-term exposure to $PM_{2.5}$ has also been linked to adverse birth outcomes and cancer.[4]

Previous policy efforts

In 2014, via Statement of Legislative Intent (SLI) 70-1-A-1, the Council requested that the Department of Planning and Development (DPD, now the Seattle Department of Construction and Inspections (SDCI)) develop policy recommendations to reduce emissions and noise from gas-powered leaf blowers. DPD provided a SLI response in September 2014 that recognized the problems associated with gas leaf blowers and offered ideas to modify the City's procurement policies and improve communication between departments and the public. It did not recommend any regulatory changes because electric leaf blowers available at that time were relatively ineffective, and thus could not replace gas-powered models for commercial and institutional use. Further, DPD noted that restricting the use of gas leaf blowers would create potential enforcement and racial equity issues.

The Council followed up on the 2014 SLI response in the 2018 Adopted Budget with Green Sheet 139-1-A-1, which added funding for an ongoing position in SDCI's Code Development team to support a variety of projects, including "completing one of the recommendations from the 2014 response to SLI 70-1-A-1: Leaf Blowers, to convene an inter-departmental team, which would identify and prepare materials to provide best practice information to the public, private landscape companies, manufacturers, and retailers." SDCI ultimately produced a leaf blower best practices guide to encourage more responsible, courteous use of leaf blowers in Seattle.

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[2] California Air Resources Board, Small Off-Road Engine Fact Sheet, retrieved from https://ww3.arb.ca.gov/msprog/offroad/sm_en_fs.pdf?_ga=2.250847430.1529378403.1617897063-1852722426.1612224140

[3] There have been no studies to date on the impacts of emissions from lawn maintenance equipment on workers or the general public, though the National Institute for Occupational Safety and Health (within the Centers for Disease Control) is conducting a pilot study on workplace hazards experienced by landscapers, groundskeepers, hardscapers, and arborists that may reveal to what extent these emissions impact worker health.

[4] U.S. Environmental Protection Agency, December 2009, Integrated Science Assessment for Particulate Matter, retrieved from https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=216546

As part of 2022 Adopted Budget, the Council included SLI OSE-003-B-001, sponsored by Councilmember Pedersen, requesting that the Office of Sustainability and Environment and Seattle Parks and Recreation (SPR) develop a plan to phase out the use of all gas-powered leaf blowers within the next two years. The SLI response is due on September 2, 2022.

Current Regulations and Enforcement Practices

The City regulates the use of leaf blowers through the Noise Code, which is administered by SDCI. The regulations limit the hours during which noise caused by construction, landscape maintenance, and similar activities can occur.[5] Currently, normal use of a leaf blower during allowed hours complies with the City's regulations; someone operating a leaf blower outside of these hours is likely to be in violation. Staff may investigate complaints against commercial landscaping companies, but do not engage in complaints between neighbors.

In the 2014 SLI response, DPD reported that they had received on average fewer than four leaf blower noise complaints per year since 2005. SDCI no longer tracks complaints it receives regarding the use of leaf blowers, though they have noted an increase in all types of noise complaints over the past two years, likely due to the fact that more people are at home because of the pandemic and are hearing more noises as a result.

Inventory of City-owned Leaf Blowers

The City currently owns about 418 gas-powered leaf blowers, an increase of 207 since 2014, and 70 electric leaf blowers, an increase of 49 since 2014 (see Table 1). SPR has the most leaf blowers, both gas and electric, which are used to maintain 485 parks and over 6,423 acres of land in SPR's ownership. City departments continue to rely on gas-powered leaf blowers primarily because available electric alternatives continue to be less powerful than gas blowers and have limited battery life (for cordless models).

SPR conducted a pilot project in 2019 to test the use of battery-powered electric blowers. Through this pilot, SPR learned that due to the improvement in technology over the years, these blowers are now powerful enough to work well in dry conditions on hard surfaces. However, the heavy, wet leaf litter in the fall continues to be beyond the capabilities of this equipment, necessitating the use of the more effective gas leaf blowers. SPR has committed to transition to more electric leaf blowers, with a goal of reaching 50 percent leaf blower electrification by 2026.

[5] Generally, leaf blowers and other landscape maintenance equipment may be used between 7 AM and 7 PM on weekdays, and between 9 AM and 7 PM on weekends and legal holidays. Seattle Municipal Code (SMC) Chapter 25.08 establishes limits on exterior noise levels by zoning category (i.e., residential, commercial, and industrial).

Table 1. Inventory of gas and electric leaf blowers by City department (2014[6] & 2022[7])

Seattle City Department	Type	2014	2022	Change
Parks and Recreation	Gas	125	270	145
	Electric	0	30	30
Transportation	Gas	29	76	47
	Electric	0	1	1
City Light	Gas	13	34	21
	Electric	9	13	4
Seattle Center	Gas	12	12	0
	Electric	0	6	6
Fire Department	Gas	9	21	12
	Electric	7	10	3
Public Utilities	Gas	19	5	(14)
	Electric	0	3	3
Finance and Administrative Services	Gas	4	0	(4)
	Electric	5	7	2
Totals	**Gas**	**211**	**418**	**207**
	Electric	**21**	**70**	**49**

Jurisdictions that Regulate Leaf Blowers

A 2018 committee report to the Council of the District of Columbia stated that over 170 jurisdictions in 31 states have enacted some type of restriction on the use of gas leaf blowers.[8] The majority of these jurisdictions have imposed other restrictions on time of use during the day/week (similar to Seattle) or seasonal uses of blowers. Over 40 have banned the use of gas leaf blowers as of December 2021.[9] Most of the jurisdictions that have completely banned the use of gas leaf blowers have relatively dry conditions during the fall when leaf litter is prevalent that allows for the more successful use of the less powerful electric blowers as compared to Seattle's wet weather during this same time.

The following are a few recent examples of jurisdictions that have taken action to prohibit the use of gas-powered leaf blowers. Washington, D.C.'s Leaf Blower Regulation Amendment Act of 2018 went into effect on January 1, 2022. It bans the sale and use of gas-powered leaf blowers within the District of Columbia; violation of this law would result in a fine up to $500 per occurrence. The Council of the District of Columbia passed the legislation in 2018 and set the later effective date to provide time for City departments, residents, and businesses to phase out use of gas leaf blowers.

[6] Information included in 2014 Statement of Legislative Intent response.
[7] Information provided by City Departments.
[8] Chairman Phil Mendelson, 2018, October 16, Report on Bill 22-234, "Leaf Blower Regulation Amendment Act of 2018," retrieved from http://chairmanmendelson.com/wp-content/uploads/2018/10/B22-234-Leaf-Blower-Regulation-Amendment-Act-of-2018-CIRCULATION-PACKET.pdf
[9] Multnomah County Resolution 2021-094.

The Multnomah County Commission, in partnership with the City of Portland, adopted Resolution 2021-094 in December 2021 stating the County's intent to transition all County-owned leaf blowers to electric models by December 2024. It also commits the County to collaborating with the City of Portland to establish a workgroup that would develop a strategy to equitably phase out the use of all gas leaf blowers in the county. The California State Assembly passed (and the Governor signed into law) Assembly Bill 1346 that will ban the sale of new gas-powered lawn and garden equipment beginning in 2024 and portable generators in 2028. However, it does not ban the use of existing gas-powered lawn and garden equipment. California has set aside $30 million to support the transition to electric alternatives for landscaping businesses.

It should be noted that enforcement of prohibitions against the use of gas-powered leaf blowers can be difficult and resource-intensive due to the transient nature of leaf blower use. By the time enforcement staff responds to a complaint, the illegal activity may no longer be happening, making it difficult to ascertain if a violation has occurred. This could be addressed by allowing for the submittal of time-stamped photographic or video evidence, as is SDCI's current practice, but this approach would still require staff resources to verify that a violation has taken place. It is not clear to what extent jurisdictions that have leaf blower bans in place actively enforce these provisions.

Resolution 32064 and Related Considerations

RES 32064 is intended to elevate and reinforce the work requested by SLI OSE-003-B-001 by specifying actions departments should take to phase out the use of all gas-powered leaf blowers in Seattle and establishing the following goals:

- By January 2025, or later, if necessary, the City and its contractors will phase out the use of gas-powered leaf blowers; and
- By January 2027, or later, if necessary, institutions located in Seattle, businesses operating in Seattle, and Seattle residents will phase out the use of gas-powered leaf blowers.

To achieve these goals, the resolution requests that various departments take the following actions:

- Departments that use gas-powered leaf blowers are requested to:
    - Evaluate current practices related to the use of leaf blowers and explore options to reduce reliance on leaf blowers generally (e.g., allowing leaves to naturally decompose or using non-motorized methods to remove leaves); and
    - Develop and implement plans to ensure that City facilities and employees are adequately equipped to use electric leaf blowers (i.e., battery charging is available, and staff are properly trained).

- Other requested actions are for:
    - Seattle Public Utilities, SDCI, the Office of Labor Standards, and the Department of Neighborhoods to develop and implement a culturally- and linguistically-appropriate education and outreach strategy to inform City employees, businesses, and the general public about the negative health and environmental impacts of gas-powered leaf blowers and encourages residents to use less polluting and quieter alternatives; and
    - The Department of Finance and Administrative Services and SDCI to develop a proposal to phase out and eventually ban the use of gas-powered leaf blowers in Seattle, which should include consideration of a Racial Equity Toolkit analysis, financial incentives, regulatory changes, and a cost-benefit analysis.

Finally, the resolution includes a request that the Executive provide a proposed work program, timeline, and budget to the Council by December 2, 2022. The resolution also states that City departments could phase out the use of gas-powered leaf blowers at an earlier target date if desired.

Department staff have indicated that they have limited capacity to conduct the work requested by the resolution. Without additional resources, departments would either need to adjust their work plans to accommodate this additional workload, delaying progress on the development and implementation of other City priorities, or forgo working on the proposed phase out plan. The Council could consider adding funding to support this effort during its forthcoming budget deliberations. In the longer term, if the City develops a buyback program or other financial incentives to expedite the transition to electric leaf blowers, more resources will be required.

Next steps

If the Committee votes to recommend adoption of RES 32064, the City Council could consider it as early as September 6.

cc: Esther Handy, Central Staff Director
Aly Pennucci, Deputy Director

Yolanda Ho
Sustainability and Renters' Rights Committee
August 19, 2022
D1b

Amendment 1 Version 1 to RES 32064 - Leaf Blower Phase Out

Author: Councilmember Pedersen

Technical Corrections

Effect: This amendment would correct errors in two of the resolution's recitals and remove a recital that would be redundant as a result. Specifically, landscape professionals are disproportionately Latinx or Hispanic, and the U.S. Department of Labor's Occupational Health and Safety Administration is responsible for promulgating rules related to acceptable sound thresholds, not the EPA.

Amend recitals in RES 32064 as follows:

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WHEREAS, gas-powered leaf blowers most commonly have two-stroke internal combustion engines that incompletely combust their fuel, resulting in the emission of toxic and carcinogenic substances, such as carbon monoxide, nitrogen oxides, and volatile organic compounds, which contribute to the formation of ozone, smog, and acid rain; and

WHEREAS, best available data indicate that the use of gas-powered leaf blowers can cause direct harm to people within the vicinity by contributing to localized air pollution, creating excessive noise, and causing other negative health impacts to their operators, who ((~~are~~)) disproportionately ((~~people of color~~)) identify as Latinx or Hispanic (46 percent) relative to overall workplace demographics (18 percent); and

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WHEREAS, gas-powered leaf blowers with two-stroke engines emit particularly low-frequency sound waves, including ultra-low frequency, which cause the sounds to travel longer distances and more easily penetrate walls and other barriers, magnifying the impacts of nuisance noise; and

WHEREAS, the California Air Resources Board determined that operators of gas-powered leaf blowers may be exposed to an average sound of 88–101.3 decibels (dBs), which exceeds acceptable thresholds set by the World Health Organization, the ((~~EPA~~)) United States Department of Labor's Occupational Safety and Health Administration, and Washington State; and

WHEREAS, regular exposure to sound levels higher than 70 dBs can cause hearing damage and loss to operators, and studies have shown that high environmental noise pollution can contribute to the incidence of arterial hypertension, myocardial infarction, tinnitus, and stroke; and

WHEREAS, the City's Race and Social Justice Initiative (RSJI) established a Racial Equity Toolkit (2012) analysis process, wherein the City committed to racial equity and justice principles, including prioritizing stakeholder engagement throughout policy development, especially stakeholders who are directly affected by a policy's implementation; and

((~~WHEREAS, landscape professionals disproportionately identify as Latinx (46 percent) relative to overall workplace demographics (18 percent), putting them at greater risk of the harms caused by gas-powered leaf blowers; and~~))

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SEATTLE CITY COUNCIL
CENTRAL STAFF

Gas-Powered Leaf Blower Phase Out (Resolution 32064)

YOLANDA HO, ANALYST

SUSTAINABILITY AND RENTERS' RIGHTS COMMITTEE
AUGUST 19, 2022

Presentation Overview

- Environmental & Health Impacts
- Additional Background
- Jurisdictions with Leaf Blower Use Restrictions
- Overview of Resolution 32064
- Considerations

Environmental & Health Impacts

- Workers in the landscape services industry are most likely to experience negative health impacts from the use of leaf blowers
- Noise: human ear is sensitive to low frequency sounds produced by gas blowers; potential for permanent hearing damage
- Emissions
  - Minor source of greenhouse gas emissions
  - Produce hydrocarbons and other toxins that form ozone that can cause various health problems
  - Regular exposure to fine particulate matter can cause negative cardiovascular and respiratory effects and is linked to other adverse health outcomes

Background: Previous Policy Efforts

- Statement of Legislative Intent (SLI) 70-1-A-1 (2014) requested recommendations to reduce emissions and noise from gas-powered leaf blowers; department response recommended changes to procurement policies, increased inter-departmental communication, and outreach
- Green Sheet 139-1-A-1 (2018) added funding for an ongoing position in the Seattle Department of Construction and Inspections (SDCI) to support various projects, resulting in the publication of a leaf blower use best practices guide for the public and those in the landscaping industry
- SLI OSE-003-B-001 (2022) requested development of a plan to phase out the use of all gas-powered leaf blowers within the next two years

Background: Current Regulations & Enforcement

- Leaf blower use is regulated via the Noise Code, administered by SDCI
- Noise caused by construction, landscape maintenance, and similar activities is limited to certain hours, depending on the zoning category
- Normal operation of a leaf blower during allowed hours complies with the code; operating a leaf blower outside of these hours is a likely violation
- SDCI will investigate complaints against commercial landscaping companies, but not those between neighbors

Background: City Inventory of Leaf Blowers

Seattle City Department	Type	2014	2022	Change
Parks and Recreation	Gas	125	270	145
	Electric	0	30	30
Transportation	Gas	29	76	47
	Electric	0	1	1
City Light	Gas	13	34	21
	Electric	9	13	4
Seattle Center	Gas	12	12	0
	Electric	0	6	6
Fire Department	Gas	9	21	12
	Electric	7	10	3
Public Utilities	Gas	19	5	(14)
	Electric	0	3	3
Finance and Administrative Services	Gas	4	0	(4)
	Electric	5	7	2
Totals	Gas	**211**	**418**	**207**
	Electric	**21**	**70**	**49**

Jurisdictions with Leaf Blower Use Restrictions

- Over 170 jurisdictions in 31 states have some type of restriction on the use of leaf blowers
  - Most limit the hours or season in which leaf blowers may be used
  - Over 40 have banned the use of gas-powered leaf blowers
- Washington, D.C. – ban on sale and use of gas-powered leaf blowers
- Multnomah County – expediting transition of County-owned leaf blowers to electric and partnering with City of Portland to form a workgroup to propose a future countywide ban
- California – will ban the sale of gas-powered lawn and garden equipment beginning in 2024

Overview of Resolution 32064

The resolution would establish the following goals:

- By January 2025, or later if necessary, the City and its contractors will phase out the use of gas-powered leaf blowers; and
- By January 2027, or later if necessary, institutions located in Seattle, businesses operating in Seattle, and Seattle residents will phase out the use of gas-powered leaf blowers.

Overview of Resolution 32064 (cont.)

- Departments that use gas-powered leaf blowers are requested to:
  - Evaluate current practices and explore options to reduce reliance on leaf blowers generally; and
  - Develop and implement plans to ensure that City facilities and employees are equipped to use electric blowers.

Overview of Resolution 32064 (cont.)

- Other requested actions:
  - Seattle Public Utilities, SDCI, Office of Labor Standards, and Department of Neighborhoods to develop and implement a culturally- and linguistically-appropriate education and outreach strategy to communicate the negative health and environmental impacts of gas leaf blowers and encourage residents to use less polluting and quieter alternatives; and
  - Department of Finance and Administrative Services and SDCI to develop a proposal to phase out and ban the use of all gas leaf blowers in Seattle
- Executive is requested to provide a proposed work program, timeline, and budget to the Council by December 2, 2022

Considerations

- Department staff have indicated that they do not have sufficient resources to conduct the requested actions, which could result in departments shifting staff away from work on other City priorities, or forgoing work on the proposed phase out
- Council may want to consider adding resources to support development of this effort during its forthcoming budget deliberations

Questions?

Towards banning gas powered leaf blowers in Seattle

Text of Presentation by Quiet Clean Seattle

Regarding Resolution 32064

by Peri Hartman, founder

August 2022

Introduction

The mission of Quiet Clean Seattle is to find an acceptable way to reduce or eliminate leaf blower impacts. In this talk I plan to thoroughly scare you about the detrimental effects of leaf blowers. Scare you so much that you'll be convinced to enthusiastically vote "yes" on CM Pedersen's resolution. Frankly, I'd prefer to see leaf blowers banned for almost all uses. But today I'll focus on the resolution at hand.

Are we numb to the hazards created by leaf blowers? I've heard people say they are part of the cost of living in a modern society. Well, up through the 80s the "cost" of eating in a restaurant was to inhale second hand cigarette smoke. It took a lot of civic and government action to change that.

Some people say they are disgusted with leaf blowers but what would happen to the landscape workers' jobs without them? First off, no one is proposing to eliminate or restrict yard service companies. Even if we were to completely ban leaf blowers, the demand for lawn mowing, trimming, pruning, and edging would continue. The difference might be slightly less scoured earth and tarmac, since rakes and brooms leave some dust behind.

What about the workers themselves? If we really want to protect the workers, shouldn't we be making their jobs safer? Breathing the exhaust from 2 stroke engines is significantly harmful to their health. Some of the most harmful particles are so small that they directly flow through an N95 mask and immediately into the bloodstream. These workers subject themselves, perhaps without complaint, because they need to work. They could be working much more safely with electric equipment.

Noise and Mental Health

Some people seem to be able to focus and tune-out distractions. My wife is one of them and doesn't really notice leaf blowers so much. On the other hand, when a leaf blower is blaring somewhere nearby, I tend to reread the same sentence about five times. I just can't concentrate. Beyond distraction, there are more serious effects of excessive noise.

While I haven't found any scientific studies directly measuring correlation between leaf blower noise and ability to concentrate, there are plenty of studies about noise in general. Here are some noteworthy results:

- Excessive noise causes cognitive impairment and oxidative stress in the brain. This contributes to depression and neurodegenerative disorders, according to the National Institute of Healthe (NIH). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6901841/

- Some individuals enjoy the ambiance of a noisy office. Others have an extreme aversion, known as misophonia disorder, where certain sounds can trigger extreme anxiety, rage, or panic, as reported on BBC: https://www.bbc.com/worklife/article/20191115-office-noise-acceptable-levels-personality-type

- For someone with ADHD, tapping a pencil or a cough can feel like torture, from testimony in the ADDitude magazine. How do leaf blowers affect their concentration? See: https://www.additudemag.com/adhd-noise-distractions/

- During the pandemic, a SWNS (South West News Service) survey asked 2003 US respondents about noise. 25% have become more sensitive to loud music, 43% to loud conversations. 52% said loud noises give them headaches. https://swnsdigital.com/us/2022/02/over-half-of-americans-have-become-more-sensitive-to-noise-since-the-beginning-of-the-pandemic/

- Scientists from Northwestern University found that creative people can't cope with noise. They have a reduced ability to filter extraneous external sensory information. I think this applies to a large sector of people. Maybe you are one of them! https://spinalresearch.com.au/creative-geniuses-cant-concentrate-background-noise/ (Study Link)

- NIOSH (National Institute for Occupational Safety and Health) says ambient noise affects health by increasing general stress levels and aggravating high blood pressure, coronary disease, peptic ulcers, migraine headaches, and other stress related conditions. Further, continued exposure does not lead to habituation; in fact the effects worsen. https://www.scientificamerican.com/article/ask-the-brains-background-noise/

- In 2011, scientists studying people living near seven major European airports found that a 10dB increase in aircraft noise related to a 28% increase in usage of anxiety medication. Another study showed that people living in areas of higher traffic noise than quiet areas were 25% more likely to have symptoms of depression.

- How much is too much noise? Toronto Public Health claims health impacts occur at levels between 42 and 60 dBA outdoor, and the WHO (World Health Organization) set guidelines of 55 dBA daytime and 40 dBA evening exposures. Currently Seattle's limit in residential areas is 70 dBA, which is way too high, but even that is rarely enforced. And that says nothing about what the operators are exposed to.

It's an obvious conclusion that leaf blowers are breaking some people's concentration and may be triggering rage in a percentage of people. Does it make sense to continue to ignore these effects, which are chipping away at Seattle's livability? What other effects are caused by gas leaf blowers?

Other Health Effects

While it's clear that a large engine produces far more CO2 than a small engine, CO2 is generally not harmful to health. And while a modern vehicle engine has a catalytic converter and various other pollution control mechanisms, it's easy for people to forget about all the particulate matter that comes out of a small engine. As I explained earlier, most of this particulate is at the molecular scale and passes freely through N95 masks, immediately entering the bloodstream. That means, when you're around a gas powered leaf blower, you are inhaling dangerous particles and there's really not much you can do about it.

- A PNAS (Proceedings of the National Academy of Sciences) publication shows that increased PM2.5 correlates to increased inhaler use for people with asthma. The publication estimates that just a 1 microgram/m3 *decrease* would be a health savings of $350 million annually. https://www.pnas.org/doi/10.1073/pnas.1805647115

- A similar study in PubMed of NIH (National Institutes of Health) shows that asthma increases with increases in PM2.5. https://pubmed.ncbi.nlm.nih.gov/27385358/

- The "Air Quality News" website explains that PM2.5 overdrives the immune system, worsening asthma. The body uses normal inflammation to remove toxins, but over inflammation causes other problems, such as Asthma. https://airqualitynews.com/2019/07/30/pm2-5-sends-immune-system-into-overdrive-worsening-asthma/

- Here's another study by the ACS (American Chemical Society): they found that increases in daily exposure to PM2.5 were significantly associated with increased small, large, and total airway resistance and decreased lung function. What does that say about operator safety? https://pubs.acs.org/doi/10.1021/acs.est.0c06114

- The EPA also reports that ozone is well known to correlate with the development of asthma. Children exposed to even low levels of ozone (one of the gases leaf blowers exhaust) caused a decrease in lung function as well as pulmonary effects. Furthermore, coarser particulates (PM10), which include roadway particles from brakes and tires plus various metals, also increased the onset of asthma and emergency room treatments. https://www.epa.gov/sciencematters/links-between-air-pollution-and-childhood-asthma

The exhaust of 2 stroke engines causes more than decreased lung function and asthma. What other damage do these gases and particles do?

- The WHO says that PM2.5 causes cardiovascular disease, respiratory disease, and cancers resulting in 4.2 million premature deaths worldwide per year. 58% of those deaths are heart disease and stroke, 18% respiratory infections and chronic obstructive pulmonary disease, 6% lung cancer. https://www.who.int/news-room/fact-sheets/detail/ambient-(outdoor)-air-quality-and-health

- The WHO goes on to explain that the major components of PM2.5 from 2 stroke engines are sulfate, nitrates, ammonia, sodium chloride, black carbon, mineral dust, and water. It's a complex mixture of these particles suspended in the air. Because the particles are so small, they pass through the lung tissue directly into the blood system.

- In Canada, the Forest Practices Branch of BC Ministry of Forests writes that 2 stroke engines produce a lot of harmful particles, such as benzene, formaldehyde, naphthalene, benzopyrene, carbon monoxide, nitric oxide, and more. All of these directly impair health and also cause nervous system disorders, such as lower competence. https://www.for.gov.bc.ca/hfp/publications/00012/3-dost-powersawemissions.pdf

- And, like I said, N95 masks won't help. The Massachusetts Nurses Association explains that

  N95 respirators are 95% efficient in stopping particles down to about 0.1 microns. But gas molecules (NO, CO, hydrocarbon molecules) are on the nano scale and pass freely through the fibers in an N95 mask. https://www.massnurses.org/health-and-safety/articles/chemical-exposures/p/openItem/1318

Summary

I don't know how much PM2.5 is in the air due to leaf blowers. I'd love to see a study that compares the levels before, during, and after leaf blower usage. How much higher is the PM2.5 level and how long does it hang in the air? Certainly it's hazardous to the operators. Let's also find out how much of it gets into peoples' houses, especially in summer with windows open.

I've focused on gas leaf blowers, which have nasty exhaust plus make excessive noise. I hope our campaign against these blowers is successful. But in the long run, I hope we can go further. Electric blowers still make a lot of noise. And they still kick up dangerous PM2.5 from dry ground and hard surfaces. And there are a myriad of other small machines powered by 2 cycle engines. Once we get rid of gas blowers, let's continue addressing the remaining problems.

Reducing the awful noise from gas leaf blowers is reason enough to adopt CM Pedersen's resolution. But, as you can see, gas blowers are far worse than just making excessive noise. And that's scary!

I believe Seattle residents will strongly support this resolution. CM Pedersen's recent survey shows that about 83% of respondents support banning gas blowers. The Quiet Clean Seattle's membership is growing. The support is apparent. Please make our city better, cleaner, and quieter by adopting Resolution 32094.

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