

**To:** Multnomah County Commissioner Jessica Vega Pederson & City of Portland  
Commissioner Carmen Rubio  
**From:** Leaf Blowers Policy Work Group  
**RE:** Process summary and recommendations regarding the regulation of gasoline-powered leaf blowers (GLBs)

## Introduction

Beginning in 2018, advocates began meeting with Multnomah County and City of Portland elected officials asking that these local jurisdictions enact a ban on the use of gasoline-powered leaf blowers (GLBs). Following those discussions, Multnomah County Commissioner Jessica Vega Pederson and City of Portland Commissioner Nick Fish agreed to partner to explore and develop a policy that would result in the phasing-out of GLBs in our community.

In December 2019, Commissioner Fish introduced Resolution No. 37463, which directed all City of Portland bureaus “to transition from gas-powered to electric and/or battery-operated leaf blowers.” It also expressed support for an equitable community-wide transition, and committed the City to convening a work group to explore that goal. That resolution was adopted unanimously by Portland City Council on December 6, 2019.

Sadly, in January 2020 Commissioner Fish passed away, and his office remained vacant until the election of his successor. Several months after the Commissioner’s death, the onset of the COVID-19 pandemic in March 2020 required that all staff efforts to advance this work be paused due to a lack of staff capacity.

In late 2021, city and county staff were able to re-engage in this work, and in December Commissioner Vega Pederson brought forward a resolution to the Multnomah County Board of Commissioners which mirrored that passed by Portland City Council: i.e, it encouraged -the Chair to direct Multnomah County departments to phase out the use of GLBs, and expressed support for the convening of a policy work group to explore a community-wide phase out policy. That Resolution, 2021-094, was adopted unanimously by the Board of County Commissioners on December 16, 2021.

## Negative Impacts of Gas-powered Leaf Blowers (GLBs)

The negative impacts of GLBs are well documented, and primarily fall into three categories: environmental pollution, climate impacts, and noise pollution and nuisance. All three categories

also include significant negative impacts on human health, and these health impacts disproportionately affect landscape workers and other operators of GLBs

### **Environmental Pollution**

The most commonly used GLBs are powered by two-stroke combustion engines, which complete one cycle of internal combustion in two movements of the piston (as opposed to cleaner four-stroke engines). This makes the engine cheaper, lighter, and simpler to operate than a four-stroke engine. However, because two-stroke engines lack independent lubrication systems they require oil to be mixed directly with the fuel. Additionally, about 30% of the fuel used in the engine fails to completely combust, resulting in significant emissions of harmful air pollutants.<sup>1</sup>

The Environmental Protection Agency (EPA) has reported that exhaust emissions from gas leaf blowers and other gas powered lawn and garden equipment pose significant health risks to operators and the public: "Extensive evidence exists on the adverse health effects of exhaust emissions and other fine particulates." These health impacts include: "cardiovascular disease, stroke, respiratory disease, cancer, neurological conditions, premature death, and effects on prenatal development."<sup>2</sup>

Two-stroke combustion engines emit significantly more hydrocarbons and other air pollutants than automobiles per hour of use. According to the California Air Resources Board, "For the best-selling commercial leaf blower, one hour of operation emits smog-forming pollution comparable to driving a 2017 Toyota Camry about 1100 miles, or approximately the distance from Los Angeles to Denver."<sup>3</sup>

Additionally, the maintenance of GLBs produces a substantial amount of toxic waste, e.g., spent oil filters, air filters, spark plugs and other components of the device, plus oil and gas containers. These are often not disposed of properly and end up polluting a community's soil and waterways and its municipal solid waste landfills. Further, the cumulative spillage, leakage, and seepage of gasoline and oil during the transport, fueling and use of these devices significantly exacerbates their environmental impacts.

### **Climate Impacts**

GLBs contribute to our community's emission of greenhouse gasses by consuming and combusting gasoline and oil. In 2017 emissions from gasoline were responsible for 25% of Multnomah County's total greenhouse gas emissions. Eliminating greenhouse gas emissions from gas-powered lawn equipment would support the County's climate goals.<sup>4</sup>

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[https://www.washingtonpost.com/national/health-science/how-bad-for-the-environment-are-gas-powered-l-eaf-blowers/2013/09/16/8eed7b9a-18bb-11e3-a628-7e6dde8f889d\\_story.html](https://www.washingtonpost.com/national/health-science/how-bad-for-the-environment-are-gas-powered-l-eaf-blowers/2013/09/16/8eed7b9a-18bb-11e3-a628-7e6dde8f889d_story.html)

<sup>2</sup> Banks J PhD, McDonnell R. "National Emissions from Lawn and Garden Equipment." 2015.

<sup>3</sup> [Microsoft Word - SORE factsheet.docx \(ca.gov\)](#)

<sup>4</sup> [January 3, 2011 \(multco-web7-psh-files-usw2.s3-us-west-2.amazonaws.com\)](#)

## **Noise and Nuisance**

The noise emitted by GLBs is a significant nuisance within a surrounding area of up to several blocks, and can cause hearing damage to both the operator of the device and nearby individuals. The noise emitted by GLBs can reach 64 to 78 decibels (dBA) at a distance of 50 feet, and up to 95 to 115 dBA at the operator's ear, significantly exceeding the World Health Organization's recommended community noise level of 55 dBA.<sup>5 6</sup>

Baseline decibel figures can be misleading, however. A study in the Journal of Environmental and Toxicological Studies found that GLBs emit particularly low-frequency sound waves that result in the sound being carried much further at much higher decibel levels than machines emitting similar decibel levels with a higher frequency.<sup>7</sup> Damage caused to hearing is cumulative, and often permanent. Tiny, sound-sensing hairlike cells known as stereocilia are found in the inner-ear. When these cells are damaged -- typically due to exposure to sounds above 85 decibels -- they cannot be regenerated or replaced. The eventual loss of significant amounts of stereocilia can lead to permanent, premature deafness.<sup>8</sup>

The evidence of the adverse health impacts of noise pollution is well documented. Numerous studies have demonstrated that exposure to high noise levels can lead to increased incidence of negative health outcomes such as stroke, hypertension, myocardial infarction<sup>9</sup> and tinnitus<sup>10</sup>. Studies have also shown that hearing impairment can be a risk factor for cognitive impairment, depression, dementia and psychosis.<sup>11 12 13</sup>

## **Environmental Justice**

While GLB noise can be severely annoying and disruptive to neighbors, in general users of the machines experience the greatest impact. Even if ear protection is worn, GLB users are at risk of permanent hearing loss from cumulative exposure to high volume. The machine operator is also at ground zero for exposure to emitted pollutants such as those listed above. The people who are most affected are landscape workers. Nationally, 46% of landscape workers identify as Latino, a community that suffers the disproportionate impacts of environmental injustice in other ways such as through proximity to point-source and on-road toxic emissions and a lack of investment in climate resilience and adaptation infrastructure.<sup>14</sup>

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<sup>5</sup> [In the war vs. loud leaf blowers, a strategic retreat - The Boston Globe](#)

<sup>6</sup> [NPC Quietnet: CQS - Leaf Blower Facts \(noise.org\)](#)

<sup>7</sup> <https://sciforschenonline.org/journals/environmental-toxicological-studies/JETS-1-106.php>

<sup>8</sup> <https://www.theatlantic.com/magazine/archive/2019/04/james-fallows-leaf-blower-ban/583210/>

<sup>9</sup> [Cardiovascular effects of environmental noise exposure - PubMed \(nih.gov\)](#)

<sup>10</sup> <https://pubmed.ncbi.nlm.nih.gov/26818136/>

<sup>11</sup> <https://pubmed.ncbi.nlm.nih.gov/26743858/>

<sup>12</sup> [https://www.researchgate.net/publication/326944846\\_Auditory\\_and\\_Cognitive\\_Training\\_for\\_Cognition\\_in\\_Adults\\_With\\_Hearing\\_Loss\\_A\\_Systematic\\_Review\\_and\\_Meta-Analysis](https://www.researchgate.net/publication/326944846_Auditory_and_Cognitive_Training_for_Cognition_in_Adults_With_Hearing_Loss_A_Systematic_Review_and_Meta-Analysis)

<sup>13</sup> <https://www.karger.com/Article/Pdf/485178>

<sup>14</sup> [Seattle City Council moves toward outlawing gas-powered leaf blowers | The Seattle Times](#)

# Work group composition & process

The leaf blowers policy work group was convened in March 2022 by Commissioners Vega Pederson and Rubio to develop policy recommendations that would result in the equitable phasing-out of gas-powered leaf blowers in Multnomah County.

Work group membership included: representatives from Quiet Clean PDX (a local advocacy organization), Micro Enterprise Services of Oregon, Portland Clean Energy Community Benefits Fund, Oregon Landscape Contractors Association, and Oregon League of Conservation Voters, plus two landscape contractors, and staff from the Portland Parks Bureau, Portland Bureau of Development Services, Portland Bureau of Planning & Sustainability, and the Multnomah County Office of Sustainability. The work group was supported by staff from Commissioners Vega Pederson's and Rubio's offices.

Prior to the work group's first convening, staff conducted outreach to Multnomah County's East County cities (Gresham, Fairview, Troutdale, Wood Village, and the Corbett community) informing them of the work group process and offering to provide updates as the work progressed.

The policy work group held three meetings in March, April, and October 2022. At those meetings, participants reviewed briefing memos prepared by staff prior to the meeting and held discussions on leaf blowers, potential policy actions, the actions of other jurisdictions, and other matters relating to the overall goal of providing a policy recommendation to the commissioners. Following the meetings, staff provided meeting summaries to the work group members.

## Work group discussions

At the first work group meeting, which was attended by Commissioners Vega Pederson and Rubio, participants discussed the perspectives needed in future discussions, questions that they would like answered to inform policy discussions, and themes they felt were important to be aired. Multiple participants requested additional representation from individuals who work with GLBs. Recommendations were also provided on who to consult for more information about the market status and outlook for these devices. Participants also raised additional considerations that were not noted in the briefing materials, including:

- That GLBs produce significant toxic waste in the forms of spilled and vaporized gasoline and spent oil filters, air filters, spark plugs and oil cans;
- That there are examples of government accepting potential losses in productivity in order to address health and environmental concerns, as in the cases of bans on DDT, asbestos and lead-based paint;

- That switching to electric devices will result in greater manufacturing and use of batteries, which may also have negative environmental impacts, although potentially less severe than those of GLBs and expected to lessen with improvements in technology; and
- That commercial landscapers may have to transport or carry batteries instead of gasoline to meet the needs of their electric devices, that there may be increased costs for charging infrastructure, that the burden of materials a worker must carry with them may or may not be greater, and that there's some risk associated with transporting lithium batteries.

Participants in the work group uplifted two key themes:

- Consideration should be given to the concept of changing our landscape performance expectations. In order to address the health and environmental impacts of GLBs, organizations, institutions and homeowners may need to consider modifying their expectations of when and whether leaf blowers (and certain jobs they perform) are necessary; and
- Discussion should be held on the merits of phasing in the policy in order to provide operators with time to cycle devices they already operate out of use, although this must be balanced with the additional harms caused by prolonged GLB use during that time.

Finally, at this first work group meeting Commissioner Rubio provided an update on the Portland Parks Bureau's efforts to transition to electric devices. At the time, the Parks Bureau was struggling to complete the transition because a limited number of heavier-duty models used by the Bureau did not have electric models of equivalent capacity available on the market. At that time, the Parks Bureau had increased its electric leaf blower inventory from eight to 24 devices. Currently (October 2022), Portland Parks Bureau has 28 electric leaf blowers, which represents 25% of its total inventory. The remaining 75% are GLB (114 of 142 blowers).

Following the first work group meeting, staff were asked to conduct research on the following topics:

- Additional information regarding proposed legislation considered by Rhode Island and an ordinance enacted by Oakland, California;
- Details on the current product range, price points, efficiency & power, resource consumption and life-cycle emissions of gas-powered leaf blowers (GLBs); and
- Details on the production and disposal process for lithium batteries.

Before the second work group meeting, staff conducted research into the questions identified at the first meeting. Staff researched the legislation considered by Rhode Island and passed by Oakland, CA, which instituted prohibitions on the use of gas powered leaf blowers. Staff also conducted an informational interview with the Vice President and General Manager of Outdoor Power Equipment for Makita Tools, a major manufacturer of lawn equipment, including GLBs. In that discussion, staff learned that Makita Tools ended the production of all non-electric lawn equipment in March 2022 and expect that shift to take 1-2 years to be fully absorbed into all

sales channels. Staff were provided with a slideshow deck illustrating that electric hand-held leaf blowers sold by Makita already exceed the force output of non-electric models.<sup>15</sup>

Results from industry tool testing studies show that electric battery powered leaf blowers supply equal power and force as gas powered leaf blowers that meet the Portland noise ordinance requirements. However, currently available technology does not allow for electric devices with the power output desired for heavier-duty models (although these models often exceed Portland noise ordinance limits). During discussions, Makita staff speculated that electric models will likely be able to match desired power output levels of heavier-duty models in the near future as battery technology improves, though it may be several years until that point is reached. Staff also conducted research into the manufacturing and disposal process of lithium batteries.<sup>16</sup>

Work group participants noted that organizations with large green spaces such as the Portland Parks Bureau report that during the rainy season when high volumes of leaves are an issue, GLBs are more effective than electric models in terms of taking less time to move those heavy wet leaves. But other solutions may be employed such as leaf vacuums, mulching mowers, or other equipment that is not gas-powered.

Finally, ahead of the second work group meeting, staff provided a framework of policy considerations and staff recommendations, for the work group to consider and utilize as it discussed a potential policy recommendation. Those considerations included:

- **Jurisdiction:** Which jurisdiction(s) enact the policy?
- **Scope:** Does the policy apply to the entire county or just to unincorporated areas? Does it take effect in all areas of the county at the same time?
- **Capacity:** Does the jurisdiction have capacity to implement this policy?
- **Timing:** When does the policy take effect?
- **Basis:** What is the legal basis for this policy?
- **Enforcement:** Who enforces the policy and how? Is the responsible party the property owner or manager, the hired contractor, or the actual operator of the equipment?
- **Type of prohibition:** Does the policy ban the sale of devices, their use, or both?
- **Financial support:** Does the policy provide financial support for change-outs? If so, where does the funding come from?
- **Impacts:** How does this impact small businesses and historically marginalized communities?

Additional participants joined the work group at the second meeting, including a representative from the Oregon Landscape Contractors Association who had missed the first meeting due to a scheduling conflict, and two landscapers. Staff from the City of Portland's Noise Control and Livability programs also joined, as well as a representative from the Oregon League of Conservation Voters.

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<sup>15</sup> See Appendix B, Briefing Memo 2

<sup>16</sup> See Appendix B, Memo 2

The meeting began with a review of the briefing memo prepared by staff and sent to work group members prior to the meeting.

During discussion, participants noted that the only gasoline-powered devices indicated by Makita to be able to meet the force levels typically desired for heavier-duty GLB models would be prohibited in the City of Portland under its existing, (albeit, unenforced) noise curtailment policies.

The policy discussion was guided by the “key considerations” framework highlighted above. Multiple participants voiced a desire that the policy focus on education and incentives more than punitive measures. Various participants shared ideas relating to a phased-in approach to the policy, beginning with a period of public education and targeted outreach to contractors and sellers, and only later resorting to enforcement actions for noncompliance. It was noted that additional resources will likely be needed in order to conduct a public education campaign.

Multiple participants also expressed a belief that addressing the equity components of this policy requires that the policy include a list of resources regarding financial rebates to help companies impacted by the policy transition their fleet of devices to electric models. Discussion was held on the possibility of government funds being used for that purpose, as well as the possibility of establishing partnerships with nongovernmental organizations such as local electric utility companies to provide rebates. Also discussed was the possibility of a nonprofit organization applying for funds through PCEF to provide rebates.

Following the second work group meeting, staff were asked to conduct informational interviews with Portland General Electric, PCEF staff, the Multnomah County Health Department, and City and County Attorneys ahead of the third meeting. Staff were also tasked with developing a more fleshed-out policy draft for discussion at the next meeting.

A third work group meeting was initially scheduled in May, however, after the conclusion of the City and County’s budget processes, a decision was made to postpone that meeting to later in the summer. Further staffing changes during the summer necessitated that the meeting be postponed one again, resulting in the third work group meeting taking place in October. Staff agreed during the summer that the third meeting would be focused on reviewing and providing feedback on the current draft of this report.

During that time, staff met with representatives from PCEF, the Multnomah County Health Department, and the Multnomah County Attorney’s Office. PCEF staff said that program funds could potentially be utilized for rebates if an eligible grantee submitted an application and if the focus of the program would be on addressing equity and barriers to electrification faced by historically marginalized communities.

Conversations with the Multnomah County Health Department revealed their concerns regarding the use of a reporting mechanism for enforcement. Communities with a history of positive engagement with government may feel more willing to utilize a reporting mechanism,

and may be used to disproportionately report members of historically marginalized communities. Health Department staff also reiterated that even with additional funds, the Health Department would not have the staff capacity necessary to implement and enforce the policy for at least a year. Finally, staff met with the County Attorney's Office and discussed the feasibility of utilizing the County's public health authority to enact this policy.

During this time staff and work group members also met with Washington, DC Commissioner Chuck Elkins, who spearheaded the development of Washington, DC's leaf blowers ban. That conversation reiterated the importance of building in a phase-in period to the policy to provide time for outreach to workers and distributors, and staff learned that Washington, DC has utilized citizen affidavits to streamline the process reporting and enforcement process.

Staff were unable to meet with representatives of Portland General Electric.

The third work group meeting was held in October 2022. The focus of the meeting was reviewing a draft of this report that had been sent to participants prior to the meeting and soliciting additional feedback for inclusion in the final draft of this report. Staff were also asked to meet with representatives from the City of Lake Oswego to learn more about their efforts to transition away from GLBs. Lake Oswego City Council had voted on February 2, 2021 to approve a \$377,040 contract with STORM Landscape Services for the use of electric equipment for landscape work at more than 200 city sites. The City Council also awarded a smaller \$51,480 stormwater contract to Seagraves Landscape Inc., directing them to move forward with electric equipment only.

Staff met with Megan Big John, Parks Manager for the City of Lake Oswego's Parks & Recreation Department, to discuss the Department's transition to electric leaf blowers. The Department has been asked to begin transitioning to electric models, and has focused on working with its staff to understand what is needed to accomplish that transition and to acclimate staff to the concept of working with electric devices. They are seeing more and more staff request electric equipment, but staff still require backpack-sized GLBs to maintain larger parks, and expect to be very reliant on GLBs during the winter, when wet leaves are more difficult to move. Challenges also exist relating to the number of batteries that must be carried with staff when they are maintaining parks using electric devices, and while staff have experimented with heavier-duty electric equipment, they have found them to be less ergonomic and heavier, creating additional challenges. The Parks & Recreation Department has shifted the maintenance of its smaller neighborhood parks, which are maintained by a subcontractor (see above), to electric lawn equipment.

## Policy recommendations

This work group strongly believes that the recognized health impacts of GLBs justify a ban on the use and sale of GLBs, particularly because the adverse health impacts - from both



dangerous emissions and damagingly loud noise - fall disproportionately on hired landscape maintenance workers from communities of color, low-income communities, and other historically marginalized populations. Should that prove infeasible, the work group believes Multnomah County should ban their use and sale of GLBs in unincorporated areas, if and only if that policy is crafted in tandem with a City of Portland policy banning the use and sale of GLBs within the City. Ideally, other incorporated jurisdictions in the county would be encouraged to do the same.

Therefore, the work group urges Commissioners Vega Pederson and Rubio to closely consult with County and City attorneys, the County Health Department, and other relevant stakeholders to make a fully-informed decision about the appropriate authority to be used to enact a ban on the use and sale of gas powered leaf blowers.

Should it be necessary to enact a policy addressing the nuisance impacts of GLBs, the work group urges the City and County to work in tandem to enact policies regulating the use and sale of GLBs uniformly in both unincorporated Multnomah County and the City of Portland.

The following recommendations are applicable to both a County action using the local public health authority and joint action by the City and County.

## **1. Enact a ban on the sale and use of gasoline powered leaf blowers, beginning as early as January, 2024**

This policy should prohibit both the sale and use of the devices, ensuring that future sales of this equipment within Multnomah County are restricted to electric models, and that existing GLBs in the community are phased out as quickly as possible. Having the policy take effect as early as January 2024 rather than immediately upon passing allows for (a) additional time for more electric devices to become available on the market; (b) an outreach and education effort by the County and City; and (c) adequate time for the enforcing jurisdiction to build up the necessary capacity to implement and enforce the policy.

## **2. Ensure the policy applies to as much of Multnomah County as possible, including its incorporated cities**

This could be accomplished by enacting a county-wide policy using the public health authority that would cover the entire county, both incorporated and unincorporated areas.

In the view of the work group, the next best option is joint action by the City of Portland and Multnomah County encompassing all of the City plus unincorporated areas of Multnomah

County. In this case, additional outreach should be done to the other cities in Multnomah County to urge them to enact similar policies covering their jurisdictions.

### **3. Establish a grace period between when the policy takes effect and when enforcement begins**

The work group believes that a grace period of six months between the policy taking effect and the beginning of enforcement should be granted in order to conduct education and outreach to businesses that use or sell leaf blowers, and to the public.

### **4. Seek opportunities to provide financial support to businesses affected by this policy, particularly small businesses**

Landscape contractors, the primary type of small business that utilizes these devices, may be adversely impacted by this policy because many still use GLBs and expect to use them for several more years until they need to be replaced. The work group strongly believes that in order to address the perceived inequities inherent in this policy (i.e., small businesses are perceived to be impacted more heavily) financial support should be made available to such businesses, and potentially residents, who are adversely affected. These resources could be provided using government funds, targeted funds from the PCEF program, rebates provided by a local electric utility company, a combination of these sources, or a source not identified in this report.

### **5. Ensure that the appropriate jurisdiction has the necessary capacity and resources**

Regardless of which jurisdiction implements and enforces this policy, additional resources will be necessary to conduct education and outreach to ensure compliance. Those resources will likely include funds for public communications and additional staff capacity for monitoring, outreach and enforcement.

### **6. Utilize an education-first implementation approach and use punitive enforcement only as a last resort**

With the shift to electric models already underway, the work group hopes that punitive measures such as fines will only be necessary as a last resort. Initial violations of the policy should result in proactive engagement and education in addition to a warning or citation, with fees being levied only as a last resort after multiple infractions. The fine could be levied on the property owner or property manager, the contractor, the contractor's hired employee, or some combination of these. Each has a different impact on ease of enforcement and required resources, which should be considered by policymakers. The policy could potentially allow citizen reports (complete with photo, address and time of violation) to be sufficient to issue a warning or citation.

## 7. Advocate for state-level action from the Oregon Legislature to phase out the use of GLBs in Oregon and/or the metro region

Advocates and work group members have had several discussions with state legislators regarding the possibility of enacting a ban on the use and/or sale of GLBs at the state level, applied either to the entire state or to the metro region. The work group urges the commissioners to continue to work with state legislators to develop a legislative proposal.

## 8. Consider the inclusion of additional gasoline-powered lawn equipment in this policy

Other forms of gasoline-powered lawn equipment, such as weed whackers and hedge trimmers, have similar adverse community impacts as GLBs, and some jurisdictions have included those devices in policies regulating GLBs. The work group recommends the consideration of including those devices in this policy to accelerate the transition to electric lawn equipment.

## 9. To accelerate the transition to electric leaf blowers within government, institutions and the landscaping industry, consider modifying expectations of when and at what level leaf blowers are necessary

Throughout the work group's discussions, the theme of modifying expectations around landscaping goals arose repeatedly. Organizations with large green spaces, such as the Portland Parks Bureau, often struggle to complete the transition to all-electric devices due to the

lack of available electric devices with the high levels of power deemed necessary to perform the toughest jobs. But with modified expectations, such work may be done differently or may not be needed at all. Modifying landscaping expectations and better aligning them with sustainable grounds maintenance practices would allow those organizations and institutions to more quickly complete the transition to electric devices.

## 10. Consider establishing or promoting existing recycling programs for old GLBs in order to mitigate the environmental impacts of devices being transitioned out for electric alternatives

Recognizing that transitioning GLBs currently in circulation to electric devices will require the disposal or recycling of GLBs, the work group recommends establishing partnerships with private, public or nonprofit entities when crafting this policy to facilitate the sustainable recycling of GLBs to the maximum extent possible.

## Appendix A: Work Group Composition

<b>Name</b>	<b>Organization</b>
Bill Beamer	Micro Enterprise Services of Oregon
Brian Stewart	Quiet Clean PDX and Electrify Now
Earl Straley	Portland Parks Bureau
Jaimes Valdez	Portland Clean Energy Community Benefits Fund
Michael Hall	Quiet Clean PDX
Doug Crimin	Oregon Landscape Contractors Association
Julia DeGraw	Oregon League of Conservation Voters
Randy Mihalko	Storm Landscape
Tyrone Foster	Precision Landscape
Paul Van Orden	City of Portland Livability Team/Noise Control Officer
Neil Dytham	Trail Technician, Portland Parks & Recreation
John Wasiutynski	Multnomah County Office of Sustainability

**Staff support provided by:**

Hayden Miller	Policy Advisor, Multnomah County Commissioner Vega Pederson
Mona Schwartz	Policy Advisor, City of Portland Commissioner Rubio
Ricardo Lujan Valerio	Policy Director, City of Portland Commissioner Rubio
Megan Beyer	Senior Policy Advisor, City of Portland Commissioner Rubio
Katherine Thomas	Assistant County Attorney
Robert Sinnott	Senior Assistant County Attorney
Andrea Hamberg	Interim Environmental Health Services Director

# Appendix B: Briefing and meeting summary memos

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## Briefing Memo #1

**From:** Offices of Commissioner Jessica Vega Pederson & Commissioner Carmen Rubio

**To:** Members of the Leaf Blowers Policy Work Group

**Title:** Briefing memo: leaf blowers work group

**Date:** March 3, 2022

### Work group background

This work group is being convened by Multnomah County Commissioner Jessica Vega Pederson and City of Portland Commissioner Carmen Rubio to develop a policy proposal that results in the equitable phase-out of gas powered leaf blowers in Multnomah County.

In 2019 and 2021, Portland and Multnomah County passed resolutions phasing out the use of gas-powered leaf blowers within our organizations. Those resolutions included a commitment to convene a community work group to discuss and draft a policy which would result in the phasing out the use of gas powered leaf blowers for all Multnomah County residents.

### Work group process

We hope to develop a policy proposal that can be considered by the Multnomah County Commission and/or the Portland City Council for adoption. This work group will discuss and guide the development of that proposal, with staff assistance.

### Meeting goals and objectives

- **Meeting 1:** *level setting, introductions, and idea generation*
- **Meeting 2:** *Review information gathered from feedback at meeting #1, identify ideal policy and potential barriers or challenges, discuss implementation steps and outstanding questions*
- **Meetings 3-4:** *Review information gathered, continue discussion about draft policy and ways to overcome potential barriers or challenges, review feedback of policy from legal counsel and other stakeholders, finalize policy recommendation and discuss next steps*

### Policy considerations

- **Jurisdiction:** Which jurisdiction(s) enact the policy?

- **Scope:** does the policy apply to the entire county or just to unincorporated areas? Does it take effect in all areas of the county at the same time?
- **Capacity:** Does the jurisdiction have capacity to implement this policy?
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- **Impacts:** How does this impact small businesses and historically marginalized communities?

### **Existing policies regulating GLBs in Oregon**

#### ***Federal***

There are no existing federal regulations of gas powered leaf blowers.

#### ***State***

There are no existing state regulations of gas powered leaf blowers. During the 2019 legislative session Rep. Keny-Guyer introduced HB 3350, which would have banned the sale and use of two-cycle gas powered leaf blowers in Oregon beginning January 1, 2023. The bill received a public hearing in the House Energy & Environment Committee, where 34 people submitted written public comment. A majority of those who submitted comments supported the bill, however landscaping advocates also weighed in. They raised concerns regarding the financial cost of replacing GLBs. The bill died in committee.

#### ***Local***

**The City of Portland currently regulates leaf blower use through general operating restrictions and noise restrictions:**

##### ***General Operating Restrictions***

- **Residential Zones** - City code limits daytime use of leaf blowers to 7 am to 7 pm in all Residential Land Use Zones. Use at night in residential zones is prohibited.
- **Other Zones** - In all other zones, the operation of leaf blowers is permitted from 7 am to 9 pm. After 9 pm and up to 7 am, blower operators must meet the permitted sound levels established in the noise code and based on the specific zoning. Please note that it is very difficult to comply with the permitted sound levels after 9 pm, even using equipment on the certified list below.
- **Noise Restrictions** –Effective September 1, 2009

***The following noise restrictions apply to all leaf blowers operated within the time limits allowed under the general operating restrictions:***

- From March 1 through October 31st of each year, leaf blowers which are on the City's certified list of 65 dBA, or quieter, may be operated within the City of Portland.

- From November 1 through February 28th of each year, leaf blowers which are on the City's certified list of 70 dBA, or quieter, may be operated within the City of Portland.
- Leaf blowers that are on the certified list of 65 dBA, or quieter, may be operated within the City of Portland year round.

***In 2019 the City of Portland enacted a resolution which took the following steps:***

- Directed City bureaus to transition away from using gas-powered leaf blowers by January 2021;
- Updated City's Sustainable Procurement Policy to consider electric or battery-operated leaf blowers the baseline best practice;
- Directed that the use of backpack-model blowers be transitioned to battery-operated equipment as soon as technologically feasible; and
- Expressed support for efforts to regulate gas-powered leaf blowers in urban environments and commits to convening a working group to consider an equitable city-wide transition to electric and battery-operated leaf blowers

***In 2021, Multnomah County passed a similar resolution, which took the following steps:***

- Expressed support for the Multnomah County Chair's action to transition away from the use of handheld, backpack, push, and other gas powered leaf blowers at county facilities to electric models no later than December 31, 2024;
- Expressed support for action by County Departments and the Multnomah County Chair to ensure that County facilities are adequately equipped with charging stations and other necessary infrastructure to support the electrification of county-operated or contracted leaf blowers;
- Supported education and communication that informs the public of the health and environmental impacts of gas powered leaf blowers and to encourage County residents to consider electric alternatives; and
- Supported efforts by Multnomah County and the City of Portland to convene a working group to examine an equitable pathway to a county-wide transition to electric and battery powered leaf blowers.

**Health impacts of leaf blowers**

***Noise pollution***

GLBs not only emit harmful air pollutants, they can also cause significant auditory damage to both the operator of the GLB and nearby individuals. In 1980 the World Health Organization sponsored a joint report with the United Nations titled "Environmental Health Criteria 12. Noise." The report recommended the following community noise levels:

- "For good speech intelligibility, noise levels of less than 45 dBA...
- "[To avoid] sleep disturbance...a bedroom noise limit of 35 dBA...
- "General daytime noise levels of less than 55 dBA[to prevent] significant community annoyance...



- "To meet sleep criteria... [an outdoor level of] 45 dBA.<sup>17</sup>

Additionally, the American Speech-Language-Hearing Association states that any sound above 91 dBA is dangerous to hearing, and a sound at or above 120 dBA is dangerous and not safe for exposure for any period of time.<sup>18</sup>

GLBs are known to emit sounds far above the recommended decibel levels for humans. Commonly cited industry statistics claim that a standard leaf blower noise at 50 feet away can range between 64 to 78 decibels, with the noise at 95 to 115 decibels at the operator's ear.<sup>19</sup> These numbers can be misleading, however. A recent study in the Journal of Environmental and Toxicological Studies found that GLBs emit particularly low-frequency sound waves that result in the sound being carried much further at much higher decibel levels than machines emitting similar decibel levels with a higher frequency.<sup>20</sup> Damage caused to hearing is cumulative, and often permanent. Tiny, sound-sensing hairlike cells known as stereocilia are found in the inner-ear. When these cells are damaged -- typically due to exposure to sounds above 85 decibels -- they cannot be regenerated or replaced. The eventual loss of significant amounts of stereocilia can lead to permanent, premature deafness.<sup>21</sup>

### ***Air pollution***

The Environmental Protection Agency (EPA) has reported that exhaust emissions from gas leaf blowers and other gas powered lawn and garden equipment pose significant health risks to operators and the public, saying: "Extensive evidence exists on the adverse health effects of exhaust emissions and other fine particulates which include cardiovascular disease, stroke, respiratory disease, cancer, neurological conditions, premature death, and effects on prenatal development."

### **Environmental impacts of leaf blowers**

The most commonly used GLBs are two-stroke combustion engines, which complete one cycle of internal combustion in two movements of the piston (as opposed to cleaner four-stroke engines). This makes the engine cheaper, more lightweight, and simpler to operate. However, because two-stroke engines lack independent lubrication systems they cause fuel to mix with oil. Additionally, about 30% of the fuel used in the engine fails to be completely combusted, resulting in significant emissions of harmful air pollutants.<sup>22</sup> Two-stroke combustion engines emit significantly more hydrocarbons and other air pollutants than automobiles per hour of use. According to the California Air Resources Board "For the best-selling commercial leaf blower,

<sup>17</sup> <https://www.nonoise.org/quietnet/cqs/leafblow.htm>

<sup>18</sup> <https://www.asha.org/public/hearing/Loud-Noise-Dangers/>

<sup>19</sup>

<https://www.bostonglobe.com/metro/regionals/west/2015/03/28/war-loud-leaf-blowers-strategic-retreat/Gpgr0hxSoCzNprgfDNISAN/story.html>

<sup>20</sup> <https://sciforschenonline.org/journals/environmental-toxicological-studies/JETS-1-106.php>

<sup>21</sup> <https://www.theatlantic.com/magazine/archive/2019/04/james-fallows-leaf-blower-ban/583210/>

<sup>22</sup>

[https://www.washingtonpost.com/national/health-science/how-bad-for-the-environment-are-gas-powered-leaf-blowers/2013/09/16/8eed7b9a-18bb-11e3-a628-7e6dde8f889d\\_story.html](https://www.washingtonpost.com/national/health-science/how-bad-for-the-environment-are-gas-powered-leaf-blowers/2013/09/16/8eed7b9a-18bb-11e3-a628-7e6dde8f889d_story.html)

one hour of operation emits smog-forming pollution comparable to driving a 2017 Toyota Camry about 1100 miles, or approximately the distance from Los Angeles to Denver.”

GLBs also emit greenhouse gasses by consuming gasoline. In 2017 emissions from gasoline were responsible for 25% of Multnomah County’s total greenhouse gas emissions.

## **What other jurisdictions have done**

### ***California:***

Dozens of local jurisdictions in California have banned gas powered leaf blowers based on their emission of air pollutants. California has a unique waiver from the federal preemption on regulations of emissions of air pollutants under the Federal Clean Air Act.

In October, 2021, California passed AB 1346, which will require all small off-road engines, which includes gas-powered leaf blowers, to be zero-emission by 2024. The legislation included \$30 million for commercial rebates to purchase electric equipment.

### ***Washington, DC***

The Leaf Blower Regulation Amendment Act of 2018 was passed in 2018 and contained five components:

- Enacts a ban, effective January 1, 2022, on the sale, offer of sale, or use of gasoline-powered leaf blowers in the District of Columbia.
- Requires that any person who sells at retail a gasoline-powered leaf blower in the District on or after January 1, 2022 must provide conspicuous notice to the customer that the leaf blower shall not be used in the District of Columbia.
- Imposes a civil fine of up to \$500 for violating this policy.
- Specifies that this policy is enforced via public complaints. Complaints must be submitted no later than 1 week following the occurrence of the alleged violation. Complainants may appeal the complaint under the District's standard administrative review process.
- Clarifies that this ban does not apply to the use of GLBs on federal lands and at federal facilities.<sup>23</sup>

The District also established rebates for the purchase of electric leaf blowers, available through March 31, 2022. The rebate for commercial qualified products is \$75, and is \$50 for residential.

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<sup>23</sup> <http://lirms.dccouncil.us/Download/37820/B22-0234-SignedAct.pdf>

## Briefing Memo #2

**From:** Offices of Commissioner Jessica Vega Pederson & Commissioner Carmen Rubio

**To:** Members of the Leaf Blowers Policy Work Group

**Title:** Briefing memo: leaf blowers work group meeting #2

**Date:** April 15, 2022

### **Meeting agenda:**

- **10:00 - 10:10:** Welcome, introductions, review of last meeting
  - Chance for new attendees to say a few words
- **10:10 - 10:15:** Review of prep materials
- **10:15 - 10:50:** Policy discussion
- **10:50 - 11:00:** Wrap up & next steps

### **New Attendees:**

At the next work group meeting we will have several participants who were not at the first meeting:

- Doug Crimin, Oregon Landscape Contractors Association
- Julia DeGraw, Oregon League of Conservation Voters
- Randy Mihalko, Storm Landscape
- Tyrone Foster, Precision Landscape
- Paul Van Orden, City of Portland Noise Control Officer
- Kareen Perkins, Livability Supervisor, City of Portland

### **Research:**

Following the first work group meeting, staff were asked to conduct research into the following topics:

- Legislative action taken in Rhode Island and Oakland, CA
- Details on the current range of products available and future market outlook
- Details on the efficiency and power of products available
- Details on the resource consumption and life-cycle carbon emissions of these devices and their batteries

### **Legislative**

#### **Rhode Island: [S 2168 \(2022\)](#)**

- Amends state air pollution statute:
  - Prohibits sale or offer of sale of gas powered leaf blowers after 7/1/23
  - Prohibits use of gas powered leaf blowers after 7/1/24
  - Requires “conspicuous notice” on any devices sold that they shall not be used in RI

- Civil fine of up to \$500 plus applicable fees and penalties may be imposed by department upon report
- Introduced 2/8/22, referred to committee, no action since then
- [Bill would ban gas-powered leaf blowers in RI | WPRI.com](#)

**Oakland: [OMC 8.64](#)**

- Cites particulate air pollution, GHG emissions, entrained dust, COVID-19 links, California Air Resources Board (CARB) report on economic impacts of ecological damage, noise pollution, impact on workers, ecological damage, other jurisdictions' actions, viability of available technology
- Policy applies to gas powered leaf blowers & gas powered string trimmers
- Prohibits operation, allowing operation on private property, and commercial use
- Enforcement is managed through existing code enforcement system, more than 3 violations in a 3 year period can be subjected to up to \$1,000/violation
- Allows for appeals, process determined by City Administrator
- Allows for six (GPLB) and 12 month (GP string trimmers) grace periods upon enactment
- Was adopted 10/6/20, went into effect in April 2021

**Current options on market & market outlook**

Staff conducted an informational interview with Dennis Stauch, Vice President and General Manager of Outdoor Power Equipment for Makita Tools, one of the world's largest manufacturers of lawn equipment.

Staff learned that Makita Tools ended the production of all non-electric lawn equipment models in March, 2022, and as of now the full array of equipment they sell is electric. They expect it to take 1-2 years for that change to be fully realized across sales channels.

Dennis provided a slideshow deck (see below) that illustrates how electric hand-held models currently sold by Makita already exceed the force output (measured in Newtons [N]) of nonelectric models, with electric models at 18V having a force output around 8-12N, comparable to the force output of handheld gas models, which are around 10-12N. However, the technology currently available does not allow for the power output typically desired for heavier-duty models, which usually are expected to have an output capacity in excess of 30N.

Dennis speculated that because of how rapidly battery technology is changing, it is feasible that electric models will be able to match the higher force output of heavier-duty gas-powered models, but it will likely be several years until that point. Resources for research and development of these technologies will also increasingly compete with electric vehicles, which due to the scarcity of the materials necessary for manufacturing has the potential to increase costs.

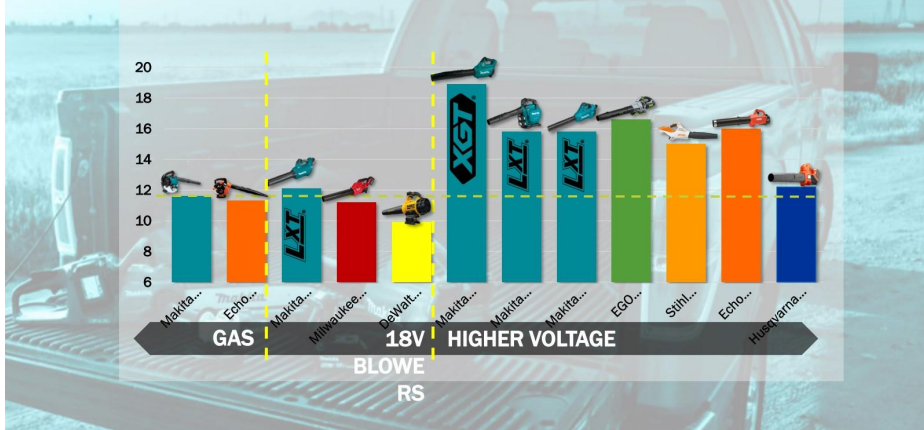
## BLOWING FORCE (N)

Gas Backpack Blowers (50+ cc) VS Cordless Connect Series & Backpack Blowers



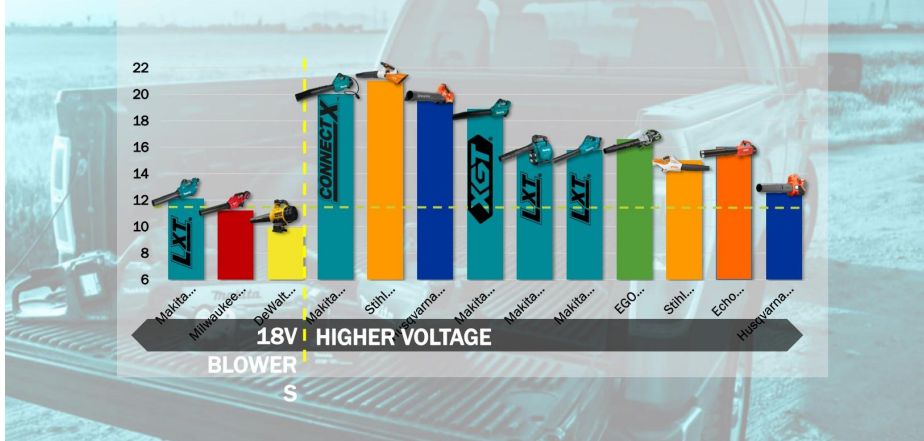
## BLOWING FORCE (N)

Handheld Blower Comparison



## BLOWING FORCE (N)

Cordless Blower Comparison



### **Battery manufacture process:**

Leaf blower batteries are rechargeable/lithium ion

[The manufacturing of a battery can generally be separated into four major steps:](#)

1. Initial quality control and electrode production
2. Cell stack assembly
3. Drying, electrolyte filling, formatting, aging, and sorting
4. Assembling cells into a battery

### **Battery manufacture GHG emissions:**

- According to the Article [“GHG Emissions from the Production of Lithium-Ion Batteries for Electric Vehicles in China”](#):
  - The manufacturing of lithium-ion batteries for vehicles in China increase the GHG emissions from vehicle production by about 30%
  - Approximately 40% of those emissions are associated with electricity use
  - Generally speaking, the emissions from Chinese manufacturing processes are about 3 times greater than those from American manufacturing processes, mainly due to different active materials and wrought aluminum.
- According to the article [“Effects of battery manufacturing on electric vehicle life-cycle greenhouse gas emissions”](#), battery production is associated with 56 to 494 Kg of carbon dioxide per kilowatt-hour (kWh) of battery capacity
  - For example, Makita Tools sells batteries that range from 7.2 volts (V) to 40V, and from 1.3 amp hours (Ah) to 6 Ah.
  - $V * Ah = \text{watt hours (Wh)}$
  - Handheld blowers sold by Makita use batteries with power as low as 18V, and those models range from 2.0Ah to 6.0Ah
  - Therefore, batteries sold by Makita that can be used on electric leaf blowers are at a minimum 36Wh
  - $36Wh = 0.036kWh$
  - Therefore, GHG emissions from battery production for electric leaf blowers can be estimated to be at least 2.016 - 17.784 Kg of CO<sub>2</sub> per device

### **Battery disposal process:**

- Lithium-ion batteries can be found in two forms: single-use, non rechargeable metal batteries, and rechargeable lithium-polymer cells.
- The vast majority of electric lawn equipment use rechargeable lithium-polymer cells.
- Lithium-polymer cells can be more difficult to recycle because of the increased challenge in extracting and recycling the lithium products.
- The raw-materials involved in the manufacture of these batteries are high-value, limited, and considered a strategic resource for the United States. Therefore, battery recycling is encouraged by the [EPA](#).
- Lithium is a highly-reactive substance, and risks catching fire if not properly disposed of.
- According to the [Consumer Technology Association](#), there are over 70 certified battery recycling facilities in the Portland Metro area.

## Policy considerations & staff recommendations

- **Jurisdiction:** Which jurisdiction(s) enact the policy?
  - *Multnomah County, Oregon*
- **Scope:** does the policy apply to the entire county or just to unincorporated areas? Does it take effect in all areas of the county at the same time?
  - *Policy applies countywide, taking effect at the same time.*
- **Capacity:** Does the jurisdiction have capacity to implement this policy?
  - *Further discussions are needed with the Multnomah County Health Department to understand their capacity to do this work. Preliminary discussions have indicated it will take 1-2 years for the Health Department to reach adequate staffing and capacity levels.*
- **Timing:** when does the policy take effect?
  - *Staff recommend that the policy take effect after a 1-2 year transition period, to allow companies using gas-powered devices to plan accordingly and provide time for the Health Department to reach adequate staff and capacity levels.*
- **Basis:** what is the legal basis for this policy?
  - *The basis of this action will be the use of Multnomah County's public health authority to regulate these devices due to their noise pollution output. Their emission of air pollutants and greenhouse gasses should also be considered. Further consultations with the County Attorney are necessary.*
- **Enforcement:** who enforces the policy and how?
  - *Staff recommend that enforcement be modeled after the enforcement mechanism for the County's wood smoke curtailment system.*
- **Type of prohibition:** does the policy ban the sale of devices, their use, or both?
  - *Staff recommend a prohibition on the sale and use of these devices.*
- **Financial support:** does the policy provide financial support for change-outs? If so, where does the funding come from?
  - *Determination of the use of County funds for changeouts would be made by the Board of County Commissioners in the annual budget process. Further discussions are needed with private partners such as electric utility companies to understand if they intend to offer future rebates or other forms of financial assistance for lawn equipment electrification.*
- **Impacts:** How does this impact small businesses and historically marginalized communities?
  - *Further consultations are needed to understand the impact this policy would have on small businesses and historically marginalized communities.*



# Meeting Summary #1

**Leaf Blowers Policy Work Group Meeting #1**  
**Tuesday, March 8, 1:30 - 2:30 pm**  
**Via Zoom**

**In attendance:** Commissioner Jessica Vega Pederson, Commissioner Carmen Rubio, Bill Beamer, Brian Stewart, Earl Straley, Jaimes Valdez, John Wasiutynski, Michael Hall, Neil Dytham, Hayden Miller (staff), Mona Schwartz (staff)

<b>Time</b>	<b>Agenda Item</b>
1:30 - 1:45 pm	Welcome, introductions, and remarks by Commissioners  Icebreaker: why are you participating in this work group and what do you hope to get out of this process?
1:45 - 1:50 pm	Overview of work group background & goals
1:50 - 1:55 pm	Review of prep materials
1:55 - 2:15 pm	General discussion about leaf blowers, potential actions, and outstanding questions
2:15 - 2:25 pm	Identification of questions and research for staff to conduct before next meeting
2:25 - 2:30 pm	Next steps & wrap-up

**Welcome, introductions & remarks by commissioners:**

- Each meeting participant introduced themselves and answered the icebreaker question
- Commissioners Vega Pederson & Rubio provided welcome remarks
- Comments of note:
  - Jaimes Valdez: Portland Clean Energy Fund (PCEF) has received applications to fund lawn equipment change-out programs.
  - Comm. Rubio:
    - Portland Parks & Recreation has encountered challenges transitioning its full fleet to electric devices because heavier-duty models do not meet their needs at this time.
    - Parks has increased its electric leaf blower inventory from 8 to 24

**Overview of work group background & goals**

- Commissioner Rubio provided an overview of the work group's background and goals (see briefing memo)

### **Review of prep materials**

- Commissioner Vega Pederson provided an overview of the prep materials that were provided in the briefing memo

### **General discussion about leaf blowers, potential actions, and outstanding questions**

- Brian Stewart:
  - Might be good to include Latino Built in these discussions.
  - We should recognize the toxic solid waste emissions from gas powered leaf blowers like spilled gasoline and spent oil filters.
  - I am eager to learn from the people who work with these devices for a living.
  - We should discuss performance expectations - historically we've accepted losses in relative productivity for health benefits, such as with asbestos and lead paint.
  - Perhaps we can bring people in for specific testimony or sessions.
- Michael Hall
  - DDT is another example of when we accepted a loss in productivity for a health benefit.
  - The return on investment of transitioning to electric devices has been documented, and operation costs are lower.
  - Might be useful to invite Dan Mape from the American Green Zone Alliance and Makita Tools to participate in these discussions.
- Neil Dytham
  - This is hopefully an inevitable change, but there are many factors to consider.
  - Switching to electric models will result in the manufacturing and use of more batteries, which has an environmental impact.
  - Many electric models still have high decibel levels, even if they are lower compared to gas powered models.
  - How do we phase this -- do people purchase new electric devices when the life cycle of previous equipment ends, or do we encourage them to switch immediately?
- Jaimes Valdez
  - Interested in hearing more from people who work with these devices for long periods of time.
  - I've heard that the electric backpack-model leaf blowers do not have the same performance output as gas powered models.
  - What would the actual logistics operations be for electric models? - how many battery swaps per day, what does the charging infrastructure look like, etc.
  - We need to calibrate expectations: we're hoping for behavior changes, and we need to educate people about the alternative positive benefits they'll receive.
- John Wasiutynski
  - I sat on a panel with the Director of the Louisville air district. They had started a lawn care replacement program because they found that when you cut grass a lot of volatile organic compounds (VOC) are released, so they found the electric swap-outs to have a positive benefit.
  - I can help reach out to DEQ to get their assistance and input.

### **Identification of questions and research for staff to conduct before next meeting**

- Michael Hall

- I'd like to forward a new bill from Rhode Island that would institute a statewide prohibition, and Oakland, CA has also eliminated gas powered leaf blowers.
- Jaimes Valdez:
  - More information on product range from manufacturers, price points, etc.
- Neil Dytham:
  - More information about the available models on the market, efficiency, power, etc.
- Earl Straley:
  - A better understanding of the impacts of the battery production, their disposal, etc.
  - We should discuss how broad this policy should be: just leaf blowers, or all lawn equipment?
- John Wasiutynski:
  - We can ask DEQ to weigh in on the life cycle cost analysis.
- Brian Stewart:
  - Information on resource consumption, life-cycle emissions, etc.

**Wrap-up/next steps:**

- Staff will send out a doodle poll to schedule the next meeting
- Research/information to be gathered:
  - Information on Rhode Island and Oakland, CA legislation
  - Details on product range, price points, efficiency & power, resource consumption & life-cycle emissions
  - Details on battery production and disposal

***Please contact Hayden Miller ([hayden.j.miller@multco.us](mailto:hayden.j.miller@multco.us)) and Mona Schwartz ([mona.schwartz@portlandoregon.gov](mailto:mona.schwartz@portlandoregon.gov)) if you have any questions.***

# Meeting Summary #2

**Leaf Blowers Policy Work Group Meeting #2**  
**Thursday, April 21, 10:00 - 11:00 am**  
**Via Zoom**

**In attendance:** Bill Beamer, Brian Stewart, Earl Straley, Jaimes Valdez, Michael Hall, Doug Crimin, Julia Degraw, Randy Mihalko, Tyrone Foster, Paul Van Orden, Hayden Miller (staff), Mona Schwartz (staff)

**Meeting agenda:**

- **10:00 - 10:10:** Welcome, introductions, review of last meeting
  - Chance for new attendees to say a few words
- **10:10 - 10:15:** Review of prep materials
- **10:15 - 10:50:** Policy discussion
- **10:50 - 11:00:** Wrap up & next steps

**Welcome, introductions, review of last meeting**

- Participants introduced themselves and new attendees provided brief background information about themselves.
- Staff reviewed the action items identified after the first work group meeting

**Review of prep materials**

- Staff walked through the briefing memo distributed to work group members prior to this meeting.
- Brian Stewart noted that theoretically, the only backpack-model devices that can reach force levels above 20N are models that are prohibited under Portland's noise curtailment policy.

**Policy discussion**

- The work group discussed the proposed policy, guided by the framework of "key considerations" outlined in the briefing memos
- Michael Hall asked whether we can enact a regulation on the sale of devices paired with an education campaign, and then phase in enforcement at a later date.
- Paul Van Orden noted that education will be the most important component, as enforcement will not catch every violation.
- Bill Beamer commented that we should avoid seeming punitive.
- Doug Crimin suggested that we begin with a regulation on the sale of devices, roll out an education campaign, and then enforce a ban on the use of the devices.
- Michael Hall noted that Washington, DC enacted a ban on the sale and the use of devices at the same time, and flagged that we would likely need additional resources for an education campaign.
- Brian Stewart commented that it felt reasonable to have a grace-period and wondered whether we can coordinate with other partners such as electric utilities to sponsor

tool-swap events, or develop a program to provide 0% interest loans to companies transitioning devices.

- Bill Beamer noted that the issue goes beyond leaf blowers and that the batteries under discussion also work for lawn-mowers, hedge trimmers, etc. Bill also commented that it is incumbent on the elected officials to identify resources for change-outs if we want to address the equity component of this topic.
- Brian Stewart wondered if PCEF could assist with this effort. Jaimes and Mona noted the parameters of PCEF that are important to consider.
- Bill noted that MISO currently has small business assistance programs funded through PCEF.
- Doug Crimin commented that a first violation should result in resources and education aimed at getting people to willingly transition devices.
- Doug Crimin flagged that we need to consider the additional costs beyond replacing devices that this will entail, and recognize that transporting lithium batteries in vehicles can be dangerous in certain situations.

#### **Wrap up & next steps**

- The next work group meeting will take place in June.
- Staff will conduct informational interviews with Portland General Electric, PCEF, the Multnomah County Health Department, and City and County Attorneys
- Staff will develop a more fleshed-out policy draft based on the discussions at this meeting, for further consideration and refinement at the next work group meeting.

# Meeting Summary #3

## Leaf Blowers Policy Work Group Meeting #3

Tuesday, October 4, 1:00 - 2:00 pm

Via Google Meets

**In attendance:** Brian Stewart, Neil Dytham, Earl Straley, Jaimes Valdez, Michael Hall, Doug Crimin, Julia Degraw, Randy Mihalko, Tyrone Foster, Hayden Miller (staff), Megan Beyer (staff), John Wasiutynski (staff), Andrea Hamberg (staff)

### Meeting agenda:

1:00 - 1:05 pm	Welcome & introductions
1:05 - 1:15 pm	Update from staff on process & discussions with key stakeholders
1:15 - 1:20 pm	Walk through draft report
1:20 - 1:50 pm	Discussion of draft report: edits, feedback, input
1:50 - 2:00 pm	Discussion of approval process & next steps

### **Welcome, Introductions**

- Participants introduced themselves.

### **Update from staff on process & discussions with key stakeholders**

- Hayden Miller provided an update on discussions that were held by staff during the summer.
- Andrea Hamberg mentioned that recent court cases regarding the health authority made her more judicious about the use of the health authority.

### **Walk through of draft report**

- Hayden Miller walked the work group through the draft report provided ahead of the meeting.

### **Discussion of draft report: edits, feedback, input**

- Michael Hall asked how the County's existing wood smoke regulations compare to the proposed leaf blower regulations.
  - Andrea Hamberg explained that the wood smoke curtailment policy was enacted using the County's public health authority, but that there were several factors differentiating it from this policy discussion, including:

- That the EPA has a model wood smoke curtailment policy that we based our policy on;
- That the Oregon DEQ had done an analysis on the impacts of wood smoke pollution and found that there were racial disparities in the impacts;
- And that the County had clear jurisdiction, demonstrated local impacts, and a large amount of scientific literature detailing the harms of wood smoke pollution.
- John Wasiutynski added that the scientific literature is clear that the particulate matter from wood smoke has harmful effects on human health, and that during the winter wood smoke is our leading pollutant on poor air quality days.
- John Wasiutynski pointed out that the situation here is similar to the one the County faced with off-road diesel emissions: we know that they are a serious source of pollution, but the federal Clean Air Act preempts Oregon from taking significant regulatory action and that there was not much case law supporting our ability to adopt California's standards. In that case, the County decided to utilize a purchasing mechanism in partnership with other local jurisdictions to address off-road diesel emissions.
- Brian Stewart asked that lead be added as another example in the section mentioning DDT.
- Tyrone Foster flagged that another work group participant had previously flagged the challenges and risks associated with transporting a large amount of batteries as a landscaper using electric equipment.
- Jaimes Valdez voiced concerns about the idea and feasibility of utilizing PCEF resources for an enforcement component of the policy.
- Brian Stewart said that the report seems to cover the recommended policy framework well, but asked for more specificity regarding what the recommendation could be for the legal basis of this policy, and asked for more information about the potential legal basis of this policy.
  - Hayden Miller provided an overview of the County's public health authority and general policing authority, and flagged that the County could utilize its general policing authority to regulate nuisances in unincorporated areas.
- Jaimes Valdez asked what legal basis other jurisdictions had used to enact similar policies.
  - Hayden Miller said that most used a nuisance justification, but that some Californian jurisdictions regulated the devices based on air pollutant emissions.
- John Wasiutynski explained that in Oregon the public health authority allows for the implementation of laws that apply anywhere in the enacting jurisdiction, if they pertain to matters of public health; but that there is not much case law surrounding it.
- Brian Stewart asked if a policy enacted by the County using the public health authority would cover all of Multnomah County.
  - Hayden Miller said it would.

- Tyrone Foster flagged that a report had been presented to the Oregon Landscape Contractors Association showing that a number of electric models are as loud or louder than GLBs.
- Brian Stewart disputed that assertion and stated that electric models are quieter than nearly all GLB models.
- Tyrone Foster noted that the OLCA focuses on commercial-grade models.
- Tyrone Foster flagged the recommendation regarding financial support and stated that it was an important component of the recommendations from his perspective. He requested that the recommendation be moved higher in the list of policy recommendations and that additional language be added about how we could provide funding.
- Brian Stewart stated that this issue affects commercial businesses more than homeowners.
- Tyrone Foster flagged that the costs associated with transitioning from GLBs is more than just the cost of the device, and also includes the batteries and charging infrastructure.
- Michael Hall stated that his group is trying to educate commercial entities about the return on investment of transitioning from GLBs. He noted that the state of California and city of San Diego have allocated funds for rebate programs. He acknowledged that there is an upfront cost to shifting from GLBs to electric devices but that after the initial cost the return on investment increases due to lower overhead costs and higher profits.
- Neil Dytham asked whether it was prudent to ban the sale and use of devices at the same time, and suggested that a phased approach beginning with a ban on sale and then later a ban on use would allow for time to educate the public while the availability of GLBs is reduced.
- Neil also stated a desire to see a recommendation around recycling GLBs as they are transitioned out of circulation.
- Brian Stewart stated that Lake Oswego is already moving forward with a transition from GLBs and asked that Hayden have a conversation with their staff to learn more about the costs and realities of their efforts.

### **Wrap up & next steps:**

The following next steps were identified:

- Staff will make edits to the draft report based on the feedback provided in this meeting.
- Staff will meet with employees of Lake Oswego to conduct an informational interview on their leaf blower transition.
- Staff will send out a revised draft of this report for review and approval by the work group electronically.