

# It's Time to Change How We "Clean up" Outside



# **Health & Environmental Impacts of Gas Lawn & Maintenance Equipment**

# Small Engines, Big Pollution

- 1 hour mow & blow produces as much smog-forming pollution as driving 1,400 miles in a Toyota Camry<sup>1</sup>
- Engines emit high concentrations of **ultrafine particles** - 40 times the levels found at rush hour intersection<sup>2</sup>
- Exhaust contains air toxics including **benzene** and **ethylbenzene**



- 1: "Small Engine Fact Sheet," California Air Resources Board, 2017
2. "Noisy But That's Not All," FairWarning, 2017

## **Instruction Manual Warning:**

As soon as the engine is running, this product generates toxic exhaust fumes containing chemicals, such as unburned hydrocarbons (including benzene) and carbon monoxide, that are known to cause respiratory problems, cancer, birth defects, or other reproductive harm.

Source: Stihl Instruction Manual BR 500,550,600

*“A very strong gas smell was coming into our 5<sup>th</sup> grade classroom. It was from the workers mowing, blowing, and edging outside. We had to close the windows.”*

*-Geoff S., PPS Teacher*

*“[Ozone and particle pollution] threaten the health of millions of Americans.”*

*-American Lung Association, 2018*

# Dangerous Dust Clouds

Gas and electric blowers generate **wind speeds up to 250 mph, blasting up:**

- demolition debris (lead, asbestos, etc.)
- asphalt
- fecal matter
- pollens
- fertilizers, pesticides
- dirt and debris
- diesel soot
- industrial pollutants



## **Instruction Manual Warning:**

wear eye protection...keep all bystanders, children and pets at least 50 feet away... wear a face filter mask in dusty conditions to reduce the risk of injury associated with the inhalation of dust.

Source: <http://www.manualslib.com/manual/143084/Ryobi-Ry08576.html?page=3#manual>

*“As an asthma sufferer, I have to walk out of my way to avoid leaf blowers”*

*-Becky K., SW Portland*

*“A man using a leaf blower had his back to me, and, as I pedaled by him, debris blew up in my face. Despite wearing glasses, it went into my eyes. Being blinded I had to stop immediately.”*

*-Kathy S., SE Portland*

# Deafening Noise

- 1 gas blower creates noise above 100 dba and its low frequency range can impact up to 91 homes<sup>1</sup>
- Multiple machines often used simultaneously
- Urban structures intensify sounds
- Noise penetrates homes, schools, hospitals, work sites, parks
- City's noise ordinance in constant violation



<sup>1</sup> J Banks, Statement in Support of Bill 22-234, DC COW, 7/16/18

## Instruction Manual Warning:

“Blower noise may damage your hearing. Wear sound barriers (ear plugs or ear mufflers) to protect your hearing. Continual and regular users should have their hearing checked regularly.”

Source: [http://www.stihlusa.com/WebContent/CMSFileLibrary/instructionmanuals/BGE60\\_Manual.pdf](http://www.stihlusa.com/WebContent/CMSFileLibrary/instructionmanuals/BGE60_Manual.pdf)

*“The workers had two blowers and mowers going at the same time. The noise was so unbearable, I had to leave my home.”*

*-Kate K., NE Portland*

*According to the [Centers for Disease Control](#), noise of a leaf blower can cause hearing loss in 2 hours.*

# Health Impacts

- Dizziness, headaches, nausea, asthma, respiratory diseases, cancer, birth defects, hearing loss, hypertension, stress, sleep loss, and cognitive problems
- Workers are the most exposed to toxic air, deafening noise and vibration
- Children, the elderly and ill, and people exercising are especially vulnerable --and **do not have protective gear**



***Groups warning about the air and/or noise pollution created by gas lawn equipment include:***

*American Lung Association - Environmental Protection Agency*

*Center for Disease Control - World Health Organization*

*Mt. Sinai Children's Environmental Health Center*

*“[L]andscaping workers often are resigned to the fumes as well as to the noise and vibrations from their gas-powered machines. “You know you need to earn money and you have to work,” said Sergio Maldonado, a 35-year-old Guatemalan immigrant...“If you don’t do it, and you’re working for another person, they’ll fire you, and then who is going to bring home food?”*

*- “Noisy But That’s Not all,” FairWarning, 2017*

# Harm to Soil, Water, Wildlife

Refueling spills contaminate soil and water

Blowers especially

- Erode topsoil
- Compact and dry out soil
- Harm young plants
- Remove soil -building leaves and habitat for wildlife

Noise drives away animals



*In addition to causing air and noise pollution, leaf blowers compact and dry out the soil surface, harming soil organisms and plants.*

*-East Multnomah Soil & Water Conservation District,  
"Nature Notes 6," October 2018*

*[B]irds rely on sound to, of course, to find mates, to find prey, to avoid predators. ...They will avoid areas where there are loud noises like leaf blowers.*

*-David Cottingham, Audubon Society, Testimony  
at Washington DC Council Committee 7-2-18*

# Solutions



Rethink

Reduce

Regulate

Restore

# Rethink

- Build awareness about the dangers of gas lawn & maintenance equipment
- Do work that prioritizes human and environmental health over aesthetics
- Shift landscape maintenance to land stewardship work



# Reduce

- Instead of mow-edge-blow, just mow
- Leave the leaves on soil for nutrients and habitat for beneficial bugs.
- Choose manual or battery/electric over gas tools
- Clear walkways and streets with brooms, rakes, and shovels.
- Accept a little mess from trees and plants.



# Regulate

Create restrictions around machine use, particularly blowers:

- to protect workers and bystanders from being exposed to harmful exhaust, dust, and deafening noise
- to protect our environment
- to accelerate and mandate the transition away from gas-powered machines



# Restore

- Healthy, green outdoor jobs for workers
- Healthy outdoor practices for public health
- Healthy outdoor practices that nurture nature
- Hope & opportunities for environmental justice



**Richard Valenzuela, a university grounds worker, is thankful his campus is phasing out gas-powered machines as is switching to electric. The exhaust, he said, “goes straight to your lungs.”<sup>1</sup>**

1: “Noisy But That’s Not All,” FairWarning, 2017 (Photo by J. Emilio Flores, California State University, Los Angeles.)

*“I began Eco-Lawn Care to provide a healthy alternative to conventional yard care techniques. All of my work is done by hand with common yard tools and push mowers, and I travel by bike. I've never been more fit and healthy. It's a win-win-win for me, my clients, and the earth!”*

*-Dusty R., Owner of Eco-Lawn Care, NE Portland*

# How Can Multnomah County Help?



# Multnomah County is Committed to:

- Leading on air quality (smog and particle pollution)
- Protecting public health
- Environmental justice
- The Climate Action Plan
  - Safe places for walking, biking, rolling
  - Shifting to 100% Renewable Energy
  - Need to shift to green jobs
  - Understanding that climate change degrades air quality

# Multnomah County has Authority & Expertise to

- Educate public about pollution and health issues via multilingual media (brochures, alerts)
- Convene wide range of stakeholders, especially frontline communities to create equitable solutions
- Create regulations to protect public health with an environmental justice lens
- Promote and incentivize the transition to green jobs

# Discussion / Next Steps

## Can Multnomah County Help...

- Educate public about pollution and health issues via multilingual media: *Publish, translate, endorse statements on materials?*
- Convene wide range of stakeholders, especially frontline communities to create well-informed, equitable solutions *Verde, Voz, EMSWCD, Metro, Health Department, OCLA, Advisory Committee on Sustainability and Innovation?*
- Create regulations to protect public health with an environmental justice lens *Phase out all 2 stroke engines? Ban all blowers? All gas blowers? Prohibit use where bystanders will be impacted (sidewalks, within 50 feet)?*
- Promote and incentivize the transition to green jobs

# Discussion & Next Steps