
QC/PDX
Quiet Clean PDX
Information for hearing on HB3023


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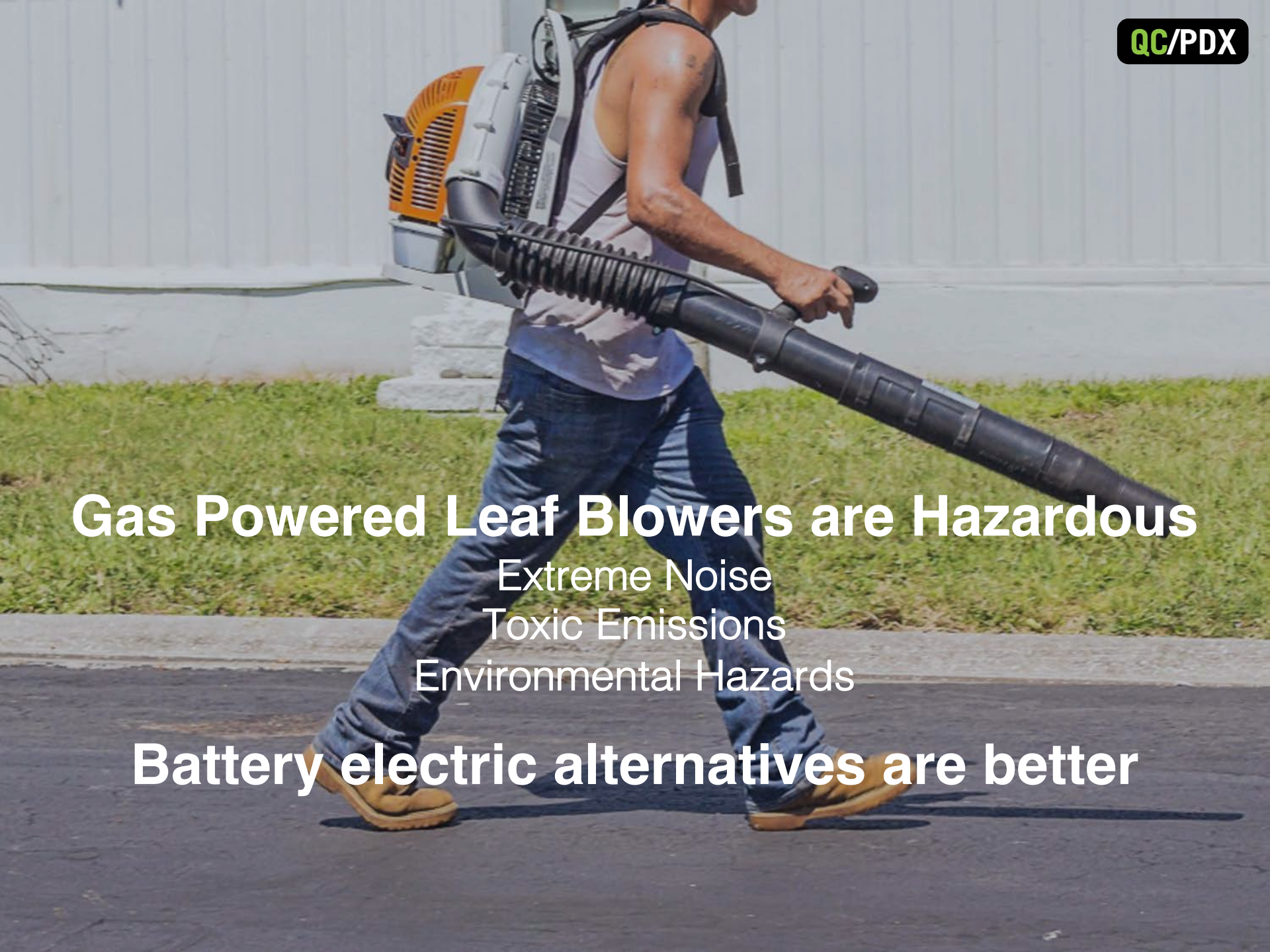
We all want clean, safe outdoor spaces but….


QC/PDX
Gas Powered Leaf Blowers are Hazardous
Extreme Noise
Toxic Emissions
Environmental Hazards
Battery electric alternatives are better

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EXTREME NOISE

"Being around too much loud noise—like using a leaf blower or going to loud concerts—can cause permanent hearing loss."

Centers for Disease Control and Prevention

"environmental noise is associated with an increased incidence of arterial hypertension, myocardial infarction, and stroke."

European Heart Journal

"enduring exposure to noise in early childhood affects the development of basic language functions"

Center for Cognitive Science

"Loud noise can create physical and psychological stress, reduce productivity, interfere with communication and concentration"

Occupational Safety and Health Administration

NOISE LEVELS AND SAFETY

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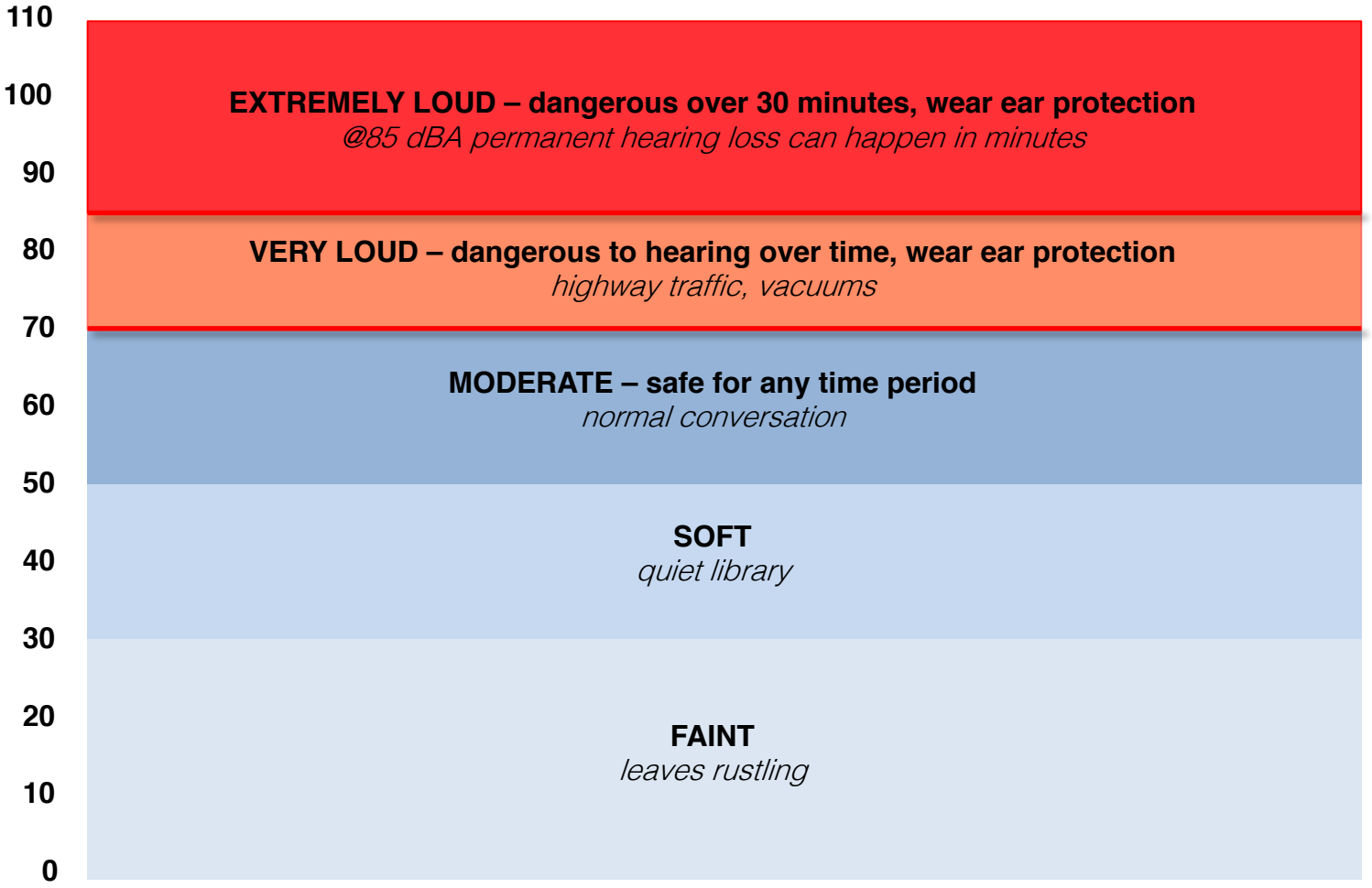
NOISE LEVEL dBA – Percieved as a doubling of “loudness” every 10DBA



From: American Academy of Audiology and American Speach-Language-Hearing Association (ASHA)

BACK PACK LEAF BLOWERS – NOISE vs FORCE

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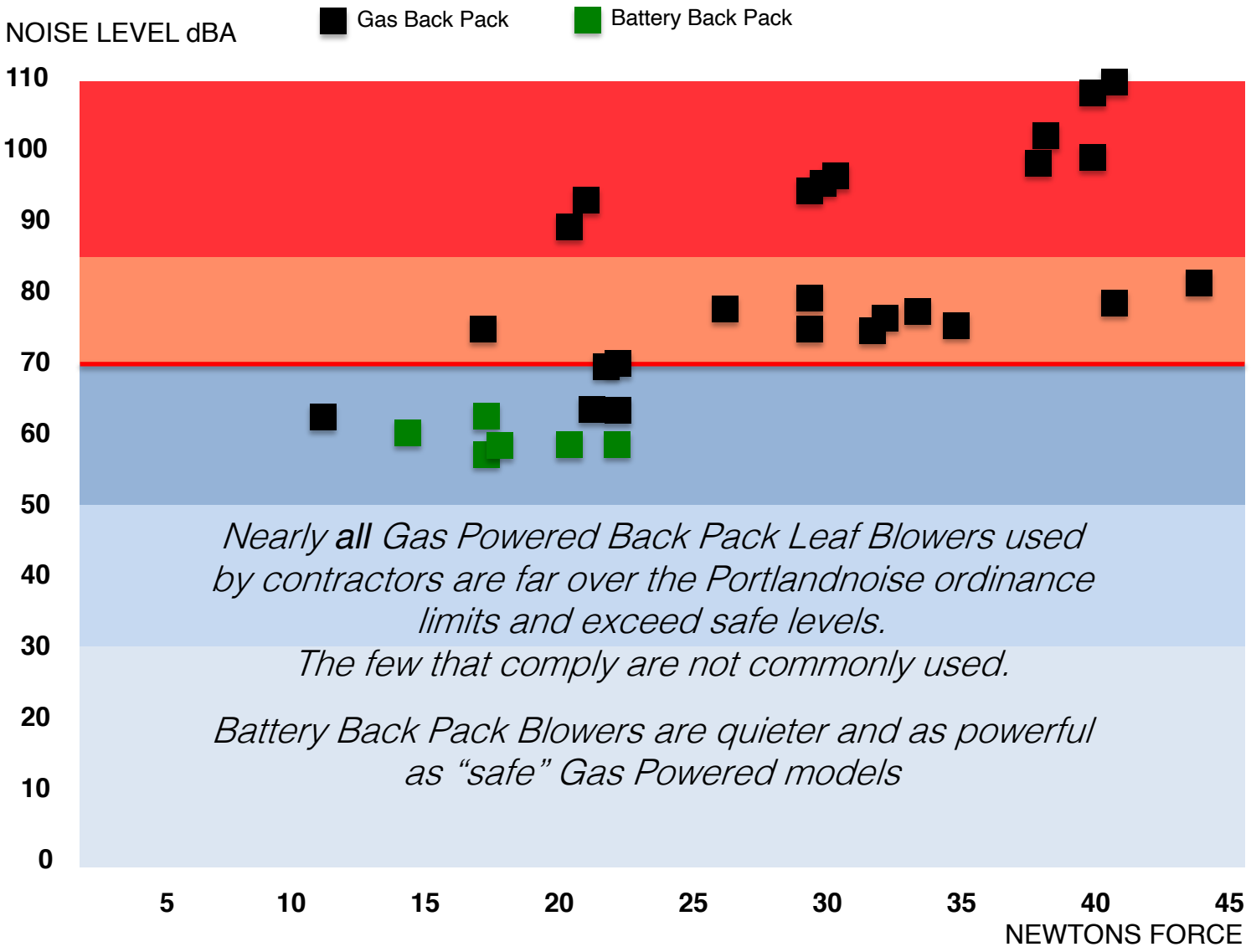

From: Manufacturers website data on force and certified noise ratings as per ANSI B175.2-2000
Echo, Stihl, Husqvarna, Makita, EGO, Oregon

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TOXIC EMISSIONS

1 HOUR
Blowing

=

1,100
Car Miles

Gas powered blowers are hundreds of times more polluting than automobiles

From: California Air Resources Board – Small Engine Fact Sheet, 2017

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TOXIC EMISSIONS

A typical ½ hour job by a landscape contractor creates more air pollution than a car idling in your driveway for 10 hours

From: California Air Resources Board – Small Engine Fact Sheet, 2017

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TOXIC EMISSIONS

"Lawn and garden equipment like mowers and leaf blowers produces over 80,000 pounds of smog-forming pollutants on a summer day in the Portland-Vancouver region"

Oregon Department of Environmental Quality

From: Oregon DEQ – What You Can Do for Cleaner Air

EMISSIONS – MORE AIR POLLUTION THAN CARS

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	Gas Powered Leaf Blower	Ford F-150 Raptor	
Non Methane Hydrocarbons	**1.495 g/min**	**0.005 g/min**	*300X more*
Oxides of Nitrogen	**0.010 g/min**	**0.005 g/min**	*2X more*
Carbon Monoxide	**6.445 g/min**	**0.276 g/min**	*23X more*

From: Edmunds sponsored testing at AAA Automotive Research Center, Diamond Bar, CA 2011
California Air Resources Board – Small Engine Fact Sheet, 2017

TOXIC EMISSIONS AND HEALTH HAZARDS

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Gas Powered Leaf Blower

Battery Powered

Non Methane Hydrocarbons	**Yes**	*Health risk and smog forming pollutants. CA estimates small gas engines will be #1 producer of these emissions by early 2020's*	**No**
Oxides of Nitrogen	**Yes**		**No**
Carbon Monoxide	**Yes**		**No**
Benzene	**Yes**	*Known by EPA and Health organizations to increase risk of cancer, respiratory, cardiovascular and neurological disease*	**No**
Butadyene	**Yes**		**No**
Formaldehyde	**Yes**		**No**
Fine Particulates	**Yes**		**No**

From: Edmunds sponsored testing at AAA Automotive Research Center, Diamon Bar, CA 2011
EPA - National Emissions from Lawn and Garden Equipment, 2015
California Air Resources Board – Small Engine Fact Sheet, 2017

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HEALTH HAZARDS

"high levels of VOCs and fine particulate matter from Gasoline Powered Lawn and Garden Equipment are health risks for workers and the public" US Environmental Protection Agency

"elevated risk for cardiovascular events associated with exposure to fine particulate matter " American Heart Association

"Benzene is known to cause cancer" American Cancer Society

"ozone at those lower levels was associated with deaths from cardiovascular disease, strokes, and respiratory causes."
American Lung Association

"A small increase in long-term exposure to PM2.5 leads to a large increase in the COVID-19 death rate."
Harvard School of Public Health

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ENVIRONMENTAL HAZARDS

Lawn and Garden Equipment in the US:

1.2 Billion Gallons of Gasoline per year

Millions of pounds of toxic waste to landfill:

Air Filters

Fuel Filters

Oil Cans

Oil and Gas Spills

From: US Department of Energy – Alternative Fuel and Advanced Technology Commercial Lawn Equipment
AGZA – Solid Waste from Lawn and Garden Equiipment

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CARBON EMISSIONS

A Gas Powered Leaf Blower used for a few hours each day produces as much CO2e as an automobile

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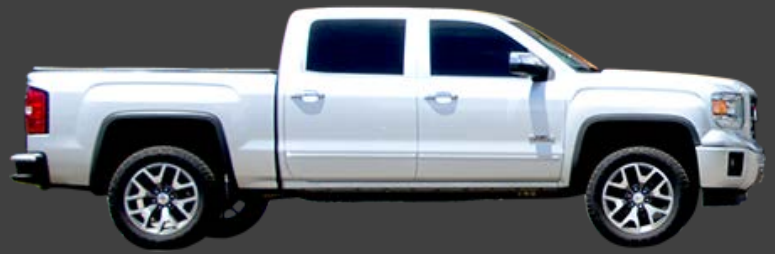

From: Stihl and Pro Tool Review – 0.46 gallons of gas per hour of operating Gas Backpack Leaf Blower
4 hours per day x 245 days per year = 6 Tons CO2e/yr vs 5 – 7 for an average automobile


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ALTERNATIVE SOLUTIONS
Excellent alternatives to gas powered leaf blowers are readily available to all of us

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Battery Powered Leaf Blowers

Zero Air Pollution, Zero Toxic Solid Waste, Zero Fuel Spills

*Zero Carbon Emissions**

Zero maintenance

Plenty powerful to do the job

Far quieter than gas blowers

Far cheaper to operate

Available at any garden equipment retailer

* When charged with Renewable Energy which is available to everyone in Portland through PGE and Pacific Power Green Energy Plans

BATTERY POWERED BLOWERS ARE CHEAPER TO OPERATE

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	Gas Powered	Battery Powered	
Fuel / hr*	**.46 gal gas + 1.2 oz oil**	**0.550 kWh**	
Fuel Cost $ / Hour:	**$2.26**	**$0.07**	*30X less*
2 Yr Fuel Cost @ 4 Hr / Day:	**$4,450**	**$140**	*30X less*
2 Yr Maintenance Cost*	**$100**	**$0**	
Total Battery Costs**	**$0**	**$2,000**	
Total 2yr Cost	**$4,550**	**$2,140**	*Less than ½ the cost*

Battery Back Pack Blowers are far cheaper to operate than Gas Blowers

From: Manufacturers website data and Online Tool Reviews - Echo, Stihl, Husqvarna, Makita, EGO, Oregon
Leaf Blower equipment costs are similar for battery and gas blowers excluding batteries
** Approximately $500 for a battery with 1 hour run time plus charger. 2 Year Warranties are standard for all equipment and batteries

Gas Powered Leaf Blowers are Dangerous

Please support HB 3023

Thank You!
quietcleanpdx.org