



Climate and Environmental Policy Advisory Committee (CEPAC) Meeting Agenda

ASHLAND CLIMATE AND ENVIRONMENTAL POLICY ADVISORY COMMITTEE (CEPAC)

REGULAR MEETING AGENDA

Thursday, October 9, 2025

Siskiyou Blvd., 51 Winburn Way

Zoom: <https://zoom.us/j/96108041920?pwd=Yc8TGGseiuZc30Ez9h77iTvixohRcW.1>

Public testimony will be accepted for both public forum items and agenda items. Please complete the [CEPAC contact form](#) no later than 10:00 a.m. the day of the meeting to request electronic testimony or submit electronic comments only. In person testimony can be done by filling out the Speaker Request Form at the meeting prior to the agenda item.

I. CALL TO ORDER

II. CONSENT AGENDA

III. Presentation - SOU Sustainability Director - Becs Walker

IV. PUBLIC FORUM

15 minutes – Public input or comment on City business not included on the agenda.

V. ANNOUNCEMENTS

- a. Staff Liaison
- b. Council Liaison
- c. CEPAC Chair
- d. Other CEPAC Members

VI. UNFINISHED BUSINESS

- a. Logistics - elections, meeting times, study sessions
- b. Urban Land Use and Transportation - Updates, TSP
- c. Gas Powered Lawn and Garden Equipment
- d. City Facilities Tour

VII. NEW BUSINESS

- a. Electrification of Existing Buildings

VIII. ADJOURNMENT

If you need special assistance to participate in this meeting, please contact Chad Woodard at chad.woodward@ashlandoregon.gov or 541.488.5357 (TTY phone number 1.800.735.2900). Notification at least three business days before the meeting will enable the City to make reasonable arrangements to ensure accessibility to the meeting in compliance with the Americans with Disabilities Act.



Executive Summary

Ashland Climate Energy Action Plan

Urban, Land Use + Transportation (ULUT) Implementation Plan

**Accelerating Ashland's Net-Zero Future Through Sustainable Land
Use and Transportation**

June 7, 2025

Gary Shaff

Ashland is committed to achieving net-zero greenhouse gas (GHG) emissions by 2050, an ambitious target that necessitates fundamental and dramatic changes in the city's land use and transportation system. Transportation choices currently represent a substantial 27 percent of Ashland's total GHG emissions, with 17 percent attributable to on-road travel and an additional 10 percent from vehicle manufacturing. This makes the transportation sector a critical area for focused climate action.

The path to emission reduction is impeded by four fundamental, interconnected barriers. First, Ashland's land use pattern is largely homogeneous and auto-centric, a characteristic that began with early non-native American settlers in 1852 and solidified with the advent of the automobile. This historical alignment with car use has created a deeply ingrained dependence on personal vehicles.

Second, public transit services face limited effectiveness due to the predominance of low-density residential development, which makes efficient service delivery challenging. Third, an estimated 70 percent of Ashland residents rely almost exclusively on fossil fuel-powered vehicles for their transportation needs.

Finally, the design of streets and highways is overwhelmingly auto-centered, or mono-modal, prioritizing motor vehicles over other forms of transport.

These barriers represent fixed, capital investments that will require considerable time and financial commitment to alter. While land use patterns evolve slowly, the transportation system itself offers a unique opportunity for short-term modification, as it is exclusively owned and controlled by State and local governments. The interconnected nature of these challenges means that addressing one in isolation will yield limited results; a comprehensive approach is essential to break the cycle of auto-dependence.

A Multi-Faceted Strategy for Transformation

The ULUT Implementation Plan proposes an integrated approach spanning land use, public transit, vehicle electrification, and street design to achieve its climate goals. This comprehensive strategy recognizes the systemic interdependence of these elements, where changes in one area can reinforce positive outcomes in others.

Reimagining Land Use for Walkability and Density

The existing land use pattern, rooted in the city's history, presents a significant challenge. Ashland's slow population growth rate, at less than one percent annually, suggests that citywide land use changes alone may have a limited appreciable impact on existing GHG emissions by 2050. However, strategic land use planning is crucial to ensure that future growth does not exacerbate current emissions and instead promotes sustainable transportation choices.

Key strategies for land use transformation include the city's recent adoption of Climate Friendly Areas (CFA) and liberalized zoning for downtown allowing for mixed-use development, similar to that permitted in designated CFAs. The city has also complied with HB2001 which require cities of Ashland's size to allow duplexes in single-family zoning districts, aim to diversify land use patterns and potentially boost housing affordability.

The ULUT Implementation Plan suggests that broader requirements, such as those for cities with populations over 25,000 (mandating duplexes, triplexes, fourplexes, cottage clusters, and townhouses), would be even more effective in fostering diverse and efficient land use.

A critical objective is to foster a transportation-efficient development pattern, characterized by high-density residential housing located adjacent to or within convenient walking distance of commercial development. These areas must be well-served by frequent fixed-route public transit services, high-quality and safe bicycle facilities, and sidewalks. The emphasis on density and mixed-use development, particularly near transit, is a deliberate policy choice designed to fundamentally alter future travel behavior. By making non-auto modes more convenient and necessary for new residents and developments, these land use policies aim to prevent an increase in auto-dependence and lay the groundwork for long-term emission reductions.

Specific, highly-ranked implementation actions from the CEPAC ULUT Subgroup include:

- Incentivizing high-density workforce housing within a half-mile of RVTD's high-capacity transit route.
- Doubling the minimum secure, covered bicycle parking, including 120-volt charging outlets, for all uses except single-family dwellings.
- Redesigning the downtown Plaza into a tree-covered pedestrian plaza, suitable for various community gatherings and outdoor dining.
- Modifying the development code to allow diverse housing types, such as duplexes, triplexes, and townhouses, in single-family zones.
- Requiring the unbundling of parking for new and existing multi-family and commercial developments. This policy, which separates parking costs from rental payments, aims to rationalize expenses and explicitly account for the cost of car ownership; making car-free living more financially attractive.

Strengthening Public Transit Networks

The Rogue Valley Transit District's (RVTD) 2040 Transit Plan offers significant potential for reducing transportation GHG emissions. The preferred system forecasts a substantial tripling of transit mode share, from 0.5 percent in 2018 to 1.5 percent by 2042 across the entire system. A cornerstone of this transformation is the proposed "high-capacity transit" (HCT) route along Highway 99 between Medford and Ashland.

This route is envisioned with 10-minute headways and half-mile stop frequencies every day of the week, a significant improvement in service quality compared to today. Such high-frequency service is projected to capture a notable 12.8 percent transit mode share in the corridor by 2040, a substantial increase from the 5 percent on existing routes in 2018. Implementing this HCT route would require an estimated \$9.4 million in capital for bus purchases and \$4.9 million annually for operations and maintenance, in addition to unspecified but "significant capital and infrastructure improvements" along Highway 99. The long-term plan would discontinue existing express and standard intercity routes, replacing them with this HCT service.

The plan also includes a proposed community circulator route connecting the YMCA area to downtown and highlights the existing Ashland Connector, an on-demand micro-transit service, as a model for future integration with autonomous vehicles. The dramatic increase in projected

ridership and rides per capita under the "Preferred System" is largely attributed to the planned 10-minute headways for the HCT route.

Research indicates that increasing transit frequencies from 30-minute to 10-minute headways can lead to a 700 percent ridership increase. This underscores that the quality and convenience of transit service—specifically frequency, reliability, and integration with land use—are far more critical drivers of mode shift than simply having a transit system. Investing in high-frequency, well-connected transit, especially in conjunction with denser, mixed-use development, creates a powerful feedback loop that dramatically increases transit utility and ridership, making it a truly viable alternative to private vehicles. High-frequency, high-capacity transit services are explicitly stated to complement the city's transportation-efficient land use plans, serving major destinations and potentially being fed by autonomous electric shuttles for city-wide coverage.

Table 1: RVTD System Performance Characteristics (Preferred System)

Criteria	Current System		Preferred System		
	2018	2042	2027 (Short-term projects)	2037 (Mid-term projects)	2042 (Long-term projects)
Ridership for System ¹	1,240,876 ⁴	1,519,603	1,922,567	4,586,512	6,268,443
MPO Population ¹	175,493	230,429	192,865	216,511	230,429
Rides per Capita ¹	7.1	6.6	10.0	21.2	27.2
Transit Mode Share ²	0.5%	-	0.9%	-	1.5%

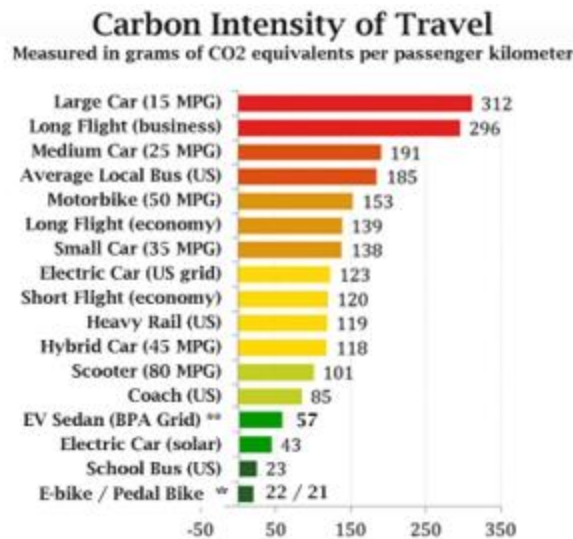
Source: , Table 2, p4

Beyond Electrification: Fostering Active Transportation

While the adoption of electric vehicles (EVs) is growing in Ashland—with 380 Plug-in Hybrid Electric Vehicles (PHEVs) and 667 Battery Electric Vehicles (BEVs) as of January 2025, representing approximately 3.4 percent of all registered vehicles—relying solely on EV adoption will not be sufficient to achieve net-zero emissions by 2050. National forecasts suggest EVs may account for 11-26 percent of on-road light-duty vehicle stocks by 2050. However, studies indicate that 90 percent of U.S. cars would need to be electric by 2050 to meet Paris Agreement climate targets, which would place immense strain on the electricity grid and demand excessive amounts of critical minerals like lithium and cobalt. This highlights that simply improving vehicle technology is not enough; the overall volume of vehicles and vehicle miles traveled must also decrease.

Shifting dependence from automobiles to human-powered modes, such as walking and bicycling, is integral to significantly reducing emissions from the transportation sector. The carbon intensity of travel clearly demonstrates the environmental superiority of active transportation.

Figure 1: Carbon Intensity of Travel (g CO₂e per passenger kilometer)



Source: , Figure 4, p8

As Figure 1 illustrates, walking and bicycling have dramatically lower carbon intensities (21-22 g CO₂e/passenger km) compared to any car, including electric vehicles (57-123 g CO₂e/passenger km). This powerfully argues that active transportation is the most environmentally benign option, reinforcing the need to avoid and shift away from car dependence.

Furthermore, vehicle manufacturing contributes significantly to lifecycle emissions, accounting for 23 to 46 percent depending on the vehicle powertrain. Electric vehicles, due to battery production, have higher embedded emissions (8.8 tonnes CO₂e for a Battery Electric Vehicle compared to 5.6 tonnes CO₂e for a standard gasoline vehicle). Therefore, reducing the number of vehicles per household or facilitating the choice to own no vehicles is crucial for overall carbon footprint reduction.

Auto ownership is costly. Ashland households spent approximately \$10,305 annually on transportation in 2020, representing 20 percent of the median household income. Auto ownership increased between 2013 and 2018. This is compounded by a concerning rise in larger trucks and SUVs which pose higher risks of serious injury and death to people outside of the vehicle as compared to historically sized vehicles.

A truly sustainable transportation future for Ashland requires a fundamental reduction in car dependence, not just a change in vehicle propulsion. Policies must actively encourage fewer car trips and fewer cars per household, making active and public transport the default choice.

Designing Streets for All Users

Ashland's current transportation system is largely designed to serve motor vehicles, leading to significant safety challenges for pedestrians and people riding bicycles. Many streets lack sidewalks, forcing pedestrians to share roadways with traffic, and existing bicycle facilities often do not provide adequate protection due to high traffic volumes and speeds. The likelihood of death in a pedestrian crash roughly doubles for every five miles per hour over 20 MPH.

The design of the transportation system in Ashland transforms mode choice from a genuine option into a forced decision between a perceived safe mode (driving) and an unsafe one (bicycling). Surveys confirm this, with 51 percent of urban residents identifying as "interested but concerned" about bicycling but unwilling to do so due to safety fears - indicating a large untapped potential for mode shift if safety concerns are addressed.

Increasing bicycle and walking mode share can lead to a substantial reduction in vehicle miles traveled (VMT) and, consequently, a corresponding reduction in GHG emissions. International examples, such as Seville, Spain, which increased cycling mode share from 0.5 percent to nearly 7 percent in six years through dedicated protected cycling infrastructure and traffic calming, demonstrate the feasibility of significant mode shifts.

While Ashland is often perceived as bicycle and pedestrian friendly compared to some peers, the reality is that current infrastructure is fundamentally inadequate for achieving widespread mode shift, as it primarily serves only the "strong and fearless" cyclists. Policy must prioritize investments in infrastructure that addresses the perceived and actual safety concerns of the majority, moving beyond basic bike lanes to truly protected facilities and pedestrian-first environments. This requires a shift in design philosophy from merely accommodating pedestrians and people riding bicycles to actively prioritizing vulnerable road users safety.

Highly-ranked implementation actions for street design from the CEPAC subgroup include:

- Converting existing traditional or buffered bike lanes on major streets to protected bike lanes, including on Highway 99 between Ashland and Talent.
- Modifying signalized intersections to prioritize pedestrian safety.
- Implementing traffic calming measures in residential neighborhoods and reducing speeds on all streets by five MPH (but no lower than 20 MPH) through a combination of design, education, legislation, and enforcement.
- Utilizing the National Association of City Transportation Officials (NACTO) "Designing for All Ages and Abilities" standards for bicycle facility design to ensure high safety and usability.
- Extending and widening the Central Biking and Walking Path and constructing multi-use paths within the city's urban growth boundary.
- Establishing ambitious mode share targets for walking and bicycling: 15 percent by 2030, 30 percent by 2040, and 45 percent by 2050.
- Dramatically increasing secure, covered bicycle parking in commercial areas.
- Redesigning the Plaza to serve people rather than cars.
- Establishing a maximum 10-foot travel-lane width for most streets.

Summary of Land Use and Transportation Implementation Actions

The Urban, Land Use and Transportation Implementation Plan provides a granular roadmap. These actions center on aggressive land use changes to promote density and mixed-use near transit, comprehensive redesign of streets to prioritize active transportation, transformative changes to parking management to discourage auto-dependence, and ambitious mode share targets for walking and bicycling.

Financing the Vision: Sustainable Funding Solutions

Achieving these ambitious goals requires substantial investment. An estimated \$20 million is needed for on-street bicycle infrastructure improvements alone, necessitating approximately \$1.5 million in new annual revenue.

Current transportation funding streams are inadequate to meet Ashland's ongoing pavement management and operational needs, as well as the required system improvements for active transportation. Less than one percent of locally funded capital projects in the FY26/27 Capital Improvement Program (excluding federal sources) are dedicated to bicycle and pedestrian improvements.

It is crucial to front-load the completion of a safe and functional active transportation network in the short-term, even if financing extends over 20-30 years, potentially via revenue bonds or the Oregon Infrastructure Bank.

Below are numerous potential local funding sources, though their political feasibility has not yet been vetted.

Table 3: Summary of Potential Local Funding Options for \$1.5M Annual Revenue

Revenue Option	Rate	Measure	Multiplier	Estimated Revenue
Local Option Gas Tax	\$0.14	gallons	10,685,372 *	\$1,500,000
Paid Parking				
Business District	\$1	hours	627,000	\$627,000
Citywide	\$100	Annual parking fee per vehicle space	8,000	\$800,000
Total				\$1,427,000
Utility Fee	\$12	households	10,416	\$1,499,904
Food and Beverage Tax	5%	Food & beverage	NA	\$2 - \$3 million
Bond Measure	\$0.4615	\$1,000 assessed value	\$3,248,157,858	\$1,500,000
Jurisdictional Exchange	NA	ODOT one-time payment	NA	
North Main/Lithia				\$12,000,000 **
Siskiyou (Walker to S. City Limits)				\$ 8,000,000 **
Total				\$20,000,000

Each option presents different considerations. A \$0.14/gallon local option gas tax would be higher than any current municipal or county government's local option tax. Paid parking, combining downtown hourly fees and citywide residential permits, could generate approximately \$1.4 million annually, also supporting the unbundling of parking costs from rent to rationalize expenses. A \$12/month per household utility fee could generate nearly \$1.5 million annually. Reallocating roughly half to two-thirds of the existing 5 percent Food and Beverage Tax could meet the need, but would significantly impact current street maintenance and Parks & Recreation funding. A local bond measure, at a property tax rate of \$0.4615 per \$1,000 assessed value, would generate \$1.5 million annually but require three successive 10-year ballot measures. Finally, a one-time payment from ODOT (up to \$20 million) for the city taking over maintenance of North Main/Lithia and Siskiyou Boulevard could fully fund the active transportation network, though it would likely necessitate an increase in the transportation utility fee for ongoing street maintenance.

The political economy of sustainable transportation is complex. The fact that approximately 70 percent of residents are currently served well by the auto-centric system suggests that a significant portion of the population may not immediately perceive the direct benefit of these investments or may resist new taxes/fees if they primarily benefit non-car users. Successful implementation requires not only identifying viable revenue sources but also building broad public and political consensus for these investments, potentially through public education on the long-term economic, health, and environmental benefits for all residents.

A More Livable and Prosperous Ashland: Anticipated Outcomes

The combined implementation of these strategies promises transformative benefits for Ashland, extending far beyond climate action. The strategies are projected to yield an estimated 95 percent (76.9 metric tons) reduction in GHG emissions from residents' transportation choices, dramatically reducing reliance on automobiles for intra-city travel.

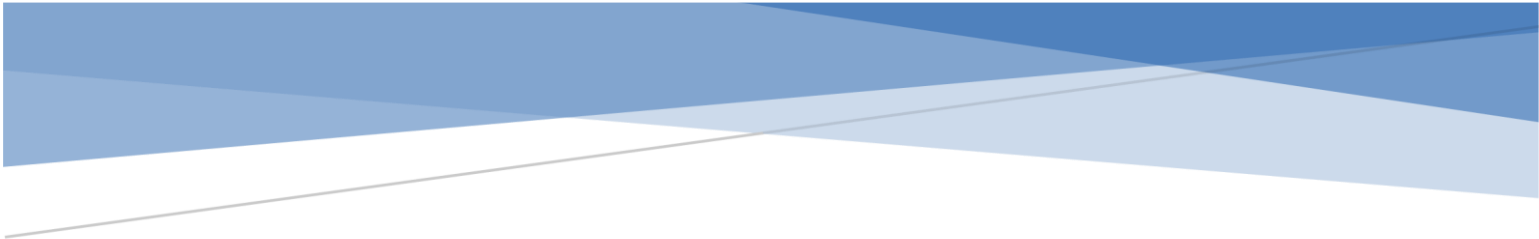
Reducing the city's auto-centric character will profoundly enhance livability, making Ashland more enjoyable for residents and visitors. Residents are projected to experience significant savings on transportation costs, which currently consume approximately 20 percent of the median household income, thereby freeing up disposable income for other household expenditures and improving overall economic well-being.

The unique qualities of the city's modern transportation system, with its emphasis on non-auto travel, are expected to attract outdoor recreation enthusiasts, including mountain bikers and road cyclists. This will leverage the region's existing hiking and mountain biking trails and natural beauty, boosting Ashland's appeal as a tranquil and interesting destination for regional, national, and international visitors. Furthermore, coupled with the Ashland Fiber Network's high-speed internet, the city's enhanced livability and sustainable transport system will position it as a prime location for remote workers, estimated to comprise 29 to 39 percent of the future workforce. This influx of educated, well-paid residents can establish a new economic base for Ashland, supporting local businesses, contributing to state and local taxes, and enriching the community's cultural fabric. These extensive co-benefits, which include improved public health, reduced household expenses, enhanced urban environment, and a diversified economy, are

tangible and often more broadly appealing than abstract climate goals alone. Framing the plan's implementation around these benefits can significantly strengthen public support and political will.

Conclusion

Achieving Ashland's net-zero 2050 goal requires a bold, integrated, and sustained commitment to transforming urban planning and transportation. By strategically reimagining land use to promote density and walkability, strengthening public transit networks with high-frequency services, prioritizing active transportation through comprehensive street design modifications, and securing dedicated, long-term funding, Ashland can dramatically reduce its carbon footprint. This path will simultaneously foster a more livable, equitable, and economically resilient community, where sustainable choices are the most convenient, safe, and affordable. The success of this vision hinges on a collective commitment to innovative policy and a fundamental shift in how the city moves and grows.



Ashland Climate Energy Action Plan

Urban, Land Use + Transportation (ULUT) Implementation Plan

**Accelerating Ashland's Net-Zero Future Through Sustainable Land
Use and Transportation**

[Abstract](#)

Improving land use patterns and the transportation system are fundamental to sustainability. The Ashland City Council is empowered to make these changes and this document details what is needed.

Prepared for the Ashland Climate and Environment Policy
Advisory Committee

By Gary Shaff, CEPAC member
June 7, 2025



TABLE OF CONTENTS

Introduction	1
Section 1. Land Use	1
Section 2. Public Transit	4
Section 3 Fossil-Fueled Fleet	6
Section 4. Street Design	10
Section 5. Implementing the CEAP - Urban, Land Use and Transportation	17
Section 6. LOCAL FUNDING STRATEGIES FOR BICYCLE / PEDESTRIAN NETWORK IMPROVEMENTS	25
Section 7. Conclusion	32
Appendix A. National Association of City Transportation Officials – Contextual Guidance for Selecting All Ages and Abilities Bikeways	33
Appendix B. Conceptual Pedestrian Plaza Design	34
Appendix C. Transportation System Changes (making bicycling a viable and Safe Alternative	35
Appendix D. General Characteristics of Enhanced Bus Service	36
Appendix E. Commonly Asked Questions	37
Appendix F. Benefits of Bicycling and Walking	44

Introduction

Ashland residents' transportation choices account for 27 percent of Ashland's 300 metric tons per year of greenhouse gas emissions (GHG) emissions (17% in on-road travel and another 10 percent attributable to vehicle manufacturing). It will be impossible for the city to achieve the Climate and Energy Action Plan's (CEAP) net-zero 2050 target without dramatic changes in the transportation system and residents' use thereof.

There are four basic barriers to achieving significant GHG emission reductions from the transportation sector. These include:

- Ashland's largely homogeneous, auto-centric land use pattern (Section 1)
- Limited effectiveness of public transit services due to the preponderance of low-density residential development (Section 2)
- Residents' almost exclusive reliance on fossil fuel powered vehicles (Section 3)
- Auto-centered (mono-modal) transportation system design of streets and highways (Section 4)

Each of these are fixed, capital investments that will require time and considerable investment to change. Only the transportation system can be modified in the short-term and, in contrast to the others, is owned and controlled exclusively by State and local governments.

Redesigning the transportation system to make streets safe for people walking and bicycling (as safe as they currently are for motor vehicle drivers) can dramatically reduce dependence upon motor vehicles. Shifts in mode choice among Ashland residents--choosing to walk or bicycle rather than drive--can reduce transportation emissions by up to 40 percent.

Each of the challenges are addressed in greater detail in the first four sections of this report. This is followed by a fifth section that details possible transportation and land use changes to implement the CEAP. Section 6 includes a discussion of transportation funding and, more particularly, dedicated funding for bicycle and pedestrian improvements.

Section 1.

Land Use

The existing land use pattern had its start when the first non-native American settlers arrived in 1852. With the invention of the automobile more than a century ago, land use patterns in Ashland (and throughout the west) have been aligned with auto use. That outcome can be slowly changed given enough time and adherence to the City's Comprehensive Land Use Plan.

The city's recent adoption of Climate Friendly Areas (CFA) in response to State land use planning regulation ([OAR 660-012-0315](#)) should serve to shift the historic land use pattern to one that is both more diverse, and land use and transportation efficient. That coupled with the [2019 Oregon legislature's passage of HB2001](#), requiring cities Ashland's size to allow duplexes in single family zoning districts will help to diversify and, hopefully, boost affordability of housing within Ashland (and throughout the State). However, the requirements for cities with a population greater than 25,000 (requiring duplexes, triplexes, fourplexes, cottage clusters and townhouse) would be even more effective.

Figure 1 Railroad Climate Friendly Area



Figure 2 Transit Triangle Climate Friendly Area



Source: [City Council 5/06 Business Meeting – CFA Staff Report](#)

Additionally the Council adopted liberalized zoning for the downtown that allows for development, much like that allowed in the designated CFA's and as shown in the figure below with some limitations.

Figure 3 CFA Uses and Dimensions

USES

- Allow attached single-family dwellings, maintain access standards
- Allow multifamily dwellings as mixed-use (except affordable housing, commercial-ready)
- Allow retail, restaurants, office
- Maintain drive-ups, auto-oriented uses w/existing limitations
- Maintain employment uses, address off-site impacts as needed
- Allow schools, parks, child care, government offices
- Limit storage uses

DIMENSIONS

- New minimum density:
 - 15 du/ac in R-2
 - 20 du/ac in E-1
 - 25 du/ac in C-1
- No maximum density
- Minimum 0.5 FAR
- No setbacks, apply solar setbacks to buildings within 100 ft of residential zone
- 10-ft step-backs for upper stories abutting residential
- Increase max height to 50 ft, 60 ft for affordable housing
- Max block length of 350 ft

Conclusion:

It's critical to create a transportation-efficient development pattern with high-density residential housing adjacent to or within convenient walking distance of commercial development. These areas must also be served by frequent fixed-route public transit services, high quality/safe bicycle facilities, and sidewalks.

It is important to note that Ashland's slow population growth rate, at less than one percent per year, will limit changes in the city's existing pattern (see Table 1). Consequently, it is unlikely that the changes described earlier, taken in the context of the City as whole, will have an appreciable impact on existing citywide GHG emissions between now and 2050.

Table 1

Population Allocation and Projected Growth Rates for Ashland, 2005 - 2040									
	2005 Pop.	2026 Pop.	2040 Pop.	Change 2005 to 2026			Change 2005 to 2040		
				Difference	Percent change	AAGR	Difference	Percent change	AAGR
Ashland	20,880	22,319	23,056	1,439	7%	0.32%	2,176	10%	0.28%

Source: [Jackson County Comprehensive Plan, Population Element](#), p. 18-14

However, such designs and land use patterns can ensure that Ashland GHG emissions are not made worse by future growth.

Section 2. Public Transit

Rogue Valley Transit District's (RVTD) [2040 Transit Plan](#) provides many insights into the potential for public transit services to help reduce the transportation sector's GHG emissions in the future. Table 2 provides an overview of the current system and as it forecast to be in 2042, as well as the preferred system of services in 2027, 2037, and 2042.

Table 2 RVTD System Performance Characteristics

Criteria	Current System		Preferred System		
	2018	2042	2027 (Short-term projects)	2037 (Mid-term projects)	2042 (Long-term projects)
Ridership for System ¹	1,240,876 ⁴	1,519,603	1,922,567	4,586,512	6,268,443
MPO Population ¹	175,493	230,429	192,865	216,511	230,429
Rides per Capita ¹	7.1	6.6	10.0	21.2	27.2
Transit Mode Share ²	0.5%	-	0.9%	-	1.5%
Operating Revenue	\$14,263,734 ⁵	-	16,949,214 ⁶	25,765,192 ⁷	29,256,579 ⁸

1 Data from TBEST

2 Data from JEMnR. No model output available for the 2037 mid-term preferred system.

4 Reported ridership data for 2018

5 2019 – 2020 budget year

6 2026 – 2027 budget year

7 2034 – 2035 budget year

8 2039 – 2040 budget year



On a system-wide basis, RVTD's transit mode share is estimated at 0.5% and would logically change little from the current one-half of one-percent mode share in 2042 (although that is not shown in the above table). In contrast, the preferred system's transit mode share would triple between now and 2042 and account for 1.5% of all travel.

The Transit Plan reveals the potential for more significant impacts within the Highway 99 corridor. The Plan forecasts that ridership in 2040 on Highway 99, north of Jackson Road could capture 12.8% transit mode share at that location, compared to just five percent on the existing routes in 2018. Underlying the forecast is the assumption that the preferred "high-capacity transit" route will include 10-minute headways with ¼ mile stop frequencies every day of the week along the 31.5-mile route between Medford and Ashland while maintaining 126-minute round trip travel time (RVTD Transit Plan, p. 109). Actualizing the route would require capital (bus) purchases of about \$9.4 million with annual operation/maintenance totaling \$4.9 million. The Plan also notes that the "high-capacity transit" route, in order to achieve the round-trip travel time, would require "significant capital and infrastructure improvements" on Highway 99. The Plan doesn't identify these improvements or estimate their cost. It should be noted that current travel times between RVTD's Front Street Station and Bi-mart, in Ashland, on RVTD's route 10, which also uses Highway 99 and Interstate 5, is 58 minutes with the return trip running 51 minutes.

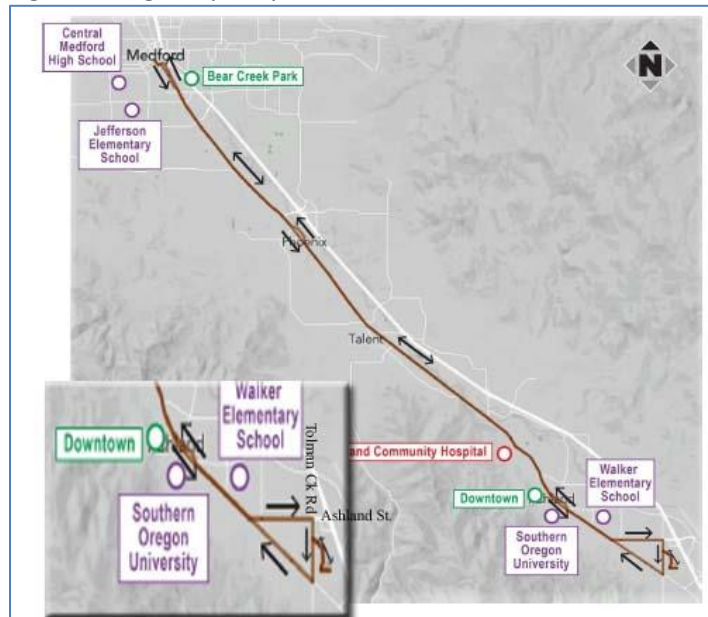
The 2040 Plan summarizes changes to routes serving Ashland:

- The long-term plan would discontinue the existing express and standard routes in (to) Ashland (Route 10X and Route 10) from Medford with a "high-capacity transit" route along Highway 99 (as described earlier).
- The Plan proposes to add a community circulator route connecting the YMCA area to downtown using E. Main and Hershey with 20- to 40-minute headways.

In 2019 RVTD initiated the Ashland Connector, an on-demand, micro-transit, ride-sharing service that operates within the city limits. Vehicle routing is dynamic and reflects each passenger's unique travel needs. Rides are booked through the Rogue Valley Connector app.

Figure 3 illustrates how the proposed RVTD High-Capacity Transit (HCT) route is aligned to serve Ashland's transit-oriented developments. The 2040 Plan identifies the HCT route in the preferred long-term plan but does not establish a start date.

Figure 3. High-Capacity Transit Route



Conclusion:

High frequency, high-capacity transit services compliment the city's planned transportation efficient land use plans. RVTD's HCT route would serve almost all the major destinations in the city. Serving the balance of the city could be achieved by a complimentary small fleet of autonomous, electric vehicles which would shuttle passengers between their homes and destinations within the City, as well as serving as feeder service for the "high-capacity transit" route (similar to the what the Ashland Connector does now).

Section 3.

Fossil-Fueled Fleet

An estimated 70 percent of Ashland residents drive a car/truck and largely rely upon fossil-fueled cars for all their transportation needs. [Note: the other 30 percent can't or don't drive; people too young to secure a driver's license, people with a disability that prevents them from driving, people who can't afford the approximate \$1,025 monthly cost to own, operate, insure, maintain and fuel a motor vehicle, and those who choose not to drive].

A motor vehicle has an average useful life of 200,000 miles or 20 years if driven 10,000 miles per year. It is likely internal combustion engines (ICE) powered automobiles will account for a significant portion ([perhaps 30 to 40 percent](#)) of the vehicles on the roads in 2050. Looked at from a more positive perspective, 60 to 70 percent of all light duty motor vehicles may be powered by electricity, compared to [roughly one and one-half percent today](#). The proportion of EV's in Ashland may be higher.

The [U.S. Energy Information Administration](#) forecasts that "electric vehicles (EVs), including both battery-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), will account for between 13% and 29% of new light-duty vehicle sales in the United States in 2050 and between 11% and 26% of on-road light-duty vehicle stocks."

There are numerous challenges to electrifying the existing ICE fleet owned by the city's residents. Some of the major barriers include:

- Lack of confidence in EV's technology

- 
- Range anxiety and the limited extent of the EV charging network
 - High cost of EV's
 - Consumer anxiety about the training and knowledge of EV repair personnel
 - Limitations of existing EV model choices

These among many others are outlined in Pacific Power and Light's [Transportation Electrification Plan](#).

As of January 2025, Ashland residents owned 380 PHEV's and 667 BEV up from 700 total in at the end of 2020 - which represented approximately 3.4 percent of all vehicles registered in Ashland.

A "study by engineers at the University of Toronto concludes that 90% of light-duty cars on American roads would need to be electric by 2050 to keep the transportation sector in line with Paris Agreement climate mitigation targets. If California's 2035 prohibition on the sale of ICE vehicles were "adopted and implemented nationally, 350 million electric cars would ply the roads in 2050. Those would fuel up using the equivalent of 41% of the nation's total power demand in 2018, creating challenges for the grid, in addition to requiring 'excessive amounts' of critical minerals like lithium and cobalt." Source: <https://www.scientificamerican.com/article/ninety-percent-of-u-s-cars-must-be-electric-by-2050-to-meet-climate-goals/>

"We need to deploy electric vehicles. But we also need to be realistic that they're probably not sufficient on their own," said lead author Alexandre Milovanoff, an energy and sustainability researcher at the University of Toronto.

"Instead of focusing exclusively on switching from gas cars to battery-electrics or fuel-cell vehicles, he said, policymakers should simultaneously aim to reduce the public's dependence on personal cars." (Ibid).

Shifting Ashland residents' dependence from autos to human powered modes of travel is integral to reducing emissions from the transportation sector. It is clear from a review of the emissions by kilometer for various vehicles, as illustrated in Figure 4, by choosing to walk or bicycle, residents can dramatically reduce CO₂ emissions.

Figure 4.

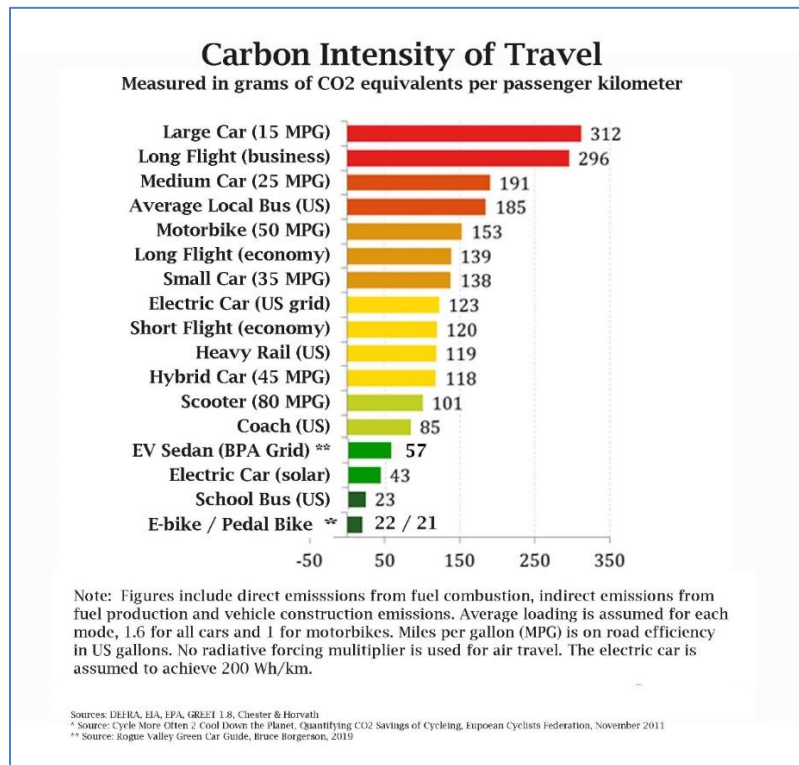


Figure 4 accounts for both direct and indirect emissions. The chart takes that to the extreme by including the hypothetical additional calories that are consumed by people riding bicycles.

Embedded CO₂e emissions, (associated emissions with manufacturing vehicles), accounts for between 23 and 46 percent of lifecycle emissions depending upon the vehicle power train. The embedded emissions in the manufacture of one electric vehicle is equivalent to driving an EV Sedan 92,000 miles. Table 3 illustrates the significance of the indirect CO₂ emissions associated with the production of motor vehicles.

Table 3
Indirect Transportation Emissions (vehicle production only)

	Est. Lifecycle emissions (tonnes CO ₂ e)	Proportion of emissions in production	Estimated emissions in production (tonnes CO ₂ e)
Standard gasoline vehicle	24	23%	5.6
Hybrid vehicle	21	31%	6.5
Plug-in hybrid vehicle	19	35%	6.7
Battery Electric Vehicle	19	46%	8.8

Source: Lifetime Emissions from Cars - <https://www.zemo.org.uk/assets/workingdocuments/MC-P-11-15a%20Lifecycle%20emissions%20report.pdf>

Using data from Table 4 allows an estimate of embedded emissions from the manufacture of the existing fleet of vehicles in Ashland. Table 5 shows these estimated emissions. It should be noted that the distribution of vehicles by type is not known at the city level. Table 4 relies upon estimates of the number of gasoline, hybrid, and plug-in hybrid vehicles in the City.

Table 4
Production Emissions from Ashland Fleet (estimated)

	Registered (2020)	Est. Lifecycle emissions (tonnes CO2e)	Estimated emissions in production (tonnes CO2e)
All vehicles	20,602		
Gasoline	Estimated 14,902	357,648	83,451
Hybrids	Estimated 3,000	63,000	19,500
Plug-in hybrid	Estimated 2,000	38,000	13,400
Battery Electric	700	13,300	6,160
TOTAL		471,948	122,511

Roughly 25 percent of lifecycle emissions from Ashland motor vehicles are associated with their production. Reducing the number of vehicles per household or facilitating the choice to own no vehicles could significantly reduce residents' carbon footprint. Regrettably, the number of households with no car, or just one car, fell at a compound annual rate of almost 15 percent per year between 2013 and 2018, illustrating the increasing dependence of Ashland households on the automobile. Table 5 shows the change in auto ownership between 2013 and 2018. More recent data is not available.

Table 5
Household Auto Ownership

Number of Vehicles Owned	Percentage of Households 2013	Percentage of Households 2018	Annual Compound Rate of Change
0	3.15	2.06	-8.1
1	36.4	26.3	-6.3
2	33.9	44.4	5.5
3	18.9	16.3	-2.9
4	4.79	7.19	8.5
5 plus	2.87	3.76	5.6

Source: <https://datausa.io/profile/geo/ashland-or#housing> (car ownership)

It was estimated, in 2020, that Ashland's single person households spent approximately \$10,305 a year, or 20 percent of the median household income on transportation. This expenditure, as a percent of household income, is second only to the cost of housing. Source: Economic Policy Institute, <https://247wallst.com/city/cost-of-living-in-ashland-oregon/>

Compounding this trend of higher auto ownership, is the increasing share of large trucks and SUV's in the local fleet. Again, while there isn't local data, it is probable that trucks are increasingly



purchased as a family “sedan” as opposed to their historic function as a farm or work vehicle. “In May 2020, Americans bought more pickup trucks than cars for the first time. Five of the 10 top-selling vehicles in the U.S. last year were pickup trucks.” ([What Happened to Pickup Trucks](#), A. Smith, May 2021)

From a safety standpoint, the size of these vehicles is disconcerting. Take for example the [Ford 150](#), “among the increasingly popular heavy-duty models, the height of the truck’s front end may reach a grown man’s shoulders or neck. When you involve children...it starts to become really disturbing.” (Ibid) As the bumper height increases, potential injuries suffered by a pedestrian are more likely to be fatal. As the point of contact moves higher on the body instead of being thrown up and over the vehicle, a pedestrian is struck and then runover.

Additionally, SUV’s and pickup trucks “have a voracious appetite for space, one that’s increasingly irreconcilable with the way cities (and garages, and parking lots) are built.” (Ibid)

Conclusion:

Owning an automobile is almost a pre-requisite to living in Ashland. It shouldn’t be but helps to explain why many people find it difficult to afford to live here. Reducing residents’ dependence on automobiles is key to achieving the CEAP net-zero 2050 goal. The city must, in the near future provide safe, reliable, affordable and environmentally benign alternatives.

Section 4.

Street Design

(Make walking and bicycling viable modes of transportation)

“We can and must do more to reduce the number of people [nationally] who die while walking every day on our roadways. For too long we have disregarded this problem by prioritizing moving cars at high speeds over safety for everyone. It’s past time for that to change. Protecting the safety of all people who use the street—especially the people most vulnerable to being struck and killed—needs to be a higher priority for policymakers, and this priority must be reflected in the decisions we make about how to fund, design, operate, maintain, and measure the success of our roads.”

<https://smartgrowthamerica.org/dangerous-by-design/>

Increasing bicycle and walking mode share will have a substantial reduction in vehicle miles of travel (VMT). This has the effect of reducing GHG emissions from the transportation sector. Given that information, it is unfortunate that the City’s transportation system has been designed, to a large degree, to serve only motor vehicles.

Many streets in Ashland do not include sidewalks. That is especially true on streets above the Boulevard and N. Main. Pedestrians must share the roadway with motor vehicles that are traveling at speeds which can result in death or serious injury if a pedestrian were struck by an inattentive, careless, or impaired auto driver. Streets with higher volumes and speeds usually have sidewalks but that is not universally the case (see

<https://ashlandgis.maps.arcgis.com/apps/instant/minimalist/index.html?appid=e783f5980abb4e74a9d771c868a29b4a>)

The adage ‘speed kills’ is particularly pertinent when discussing pedestrian and bicycle deaths. The likelihood of death roughly doubles for every five miles per hour over 20 MPH. Table 6 details the seriousness of pedestrian injuries by travel speed. These same statistics are probably relevant to other vulnerable road users (i.e., people riding bicycles).

Table 6

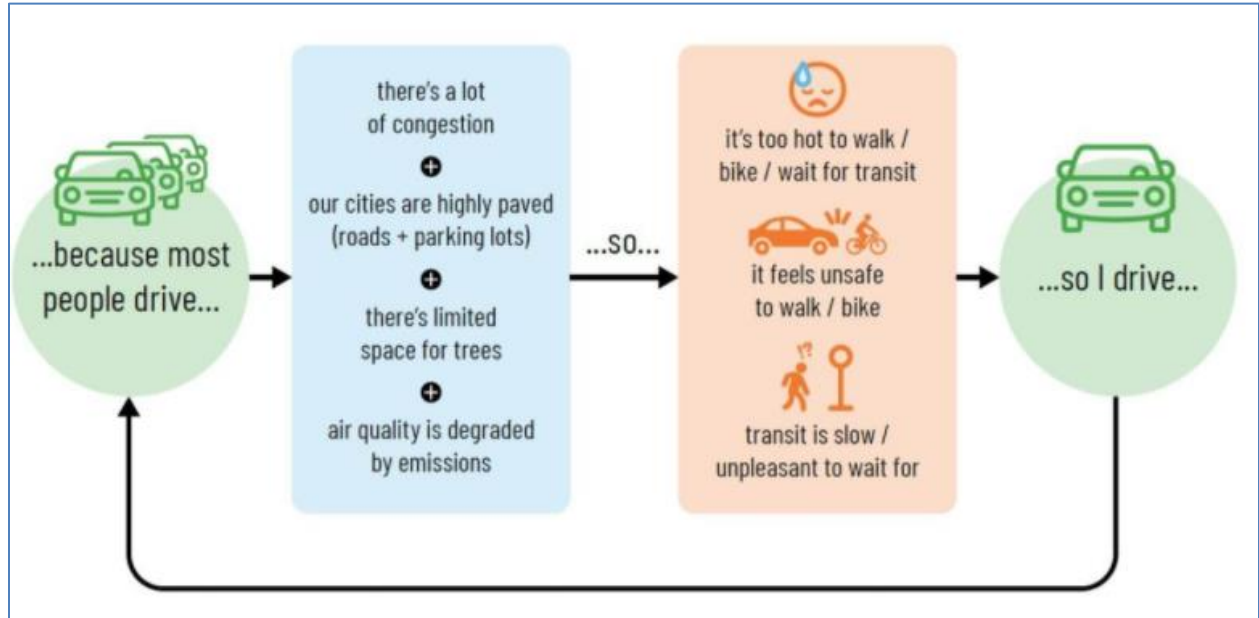
Vehicle travel speed and pedestrian injury severity.
(Florida, 1993-1996; pedestrians in single-vehicle crashes)

Injury Severity	Travel Speed (Officer Estimates)						Total
	1-20 mph	21-25 mph	26-30 mph	31-35 mph	36-45 mph	46+ mph	
Fatal (K) injury	1.1%	3.7%	6.1%	12.5%	22.4%	36.1%	6.5%
Incapacitating (A)	19.4%	32.0%	35.9%	39.3%	40.2%	33.7%	27.0%
Nonincapacitating (B)	43.8%	41.2%	36.8%	31.6%	24.7%	20.5%	38.8%
Possible ini (C) or none	35.6%	23.0%	21.2%	16.6%	12.7%	9.7%	27.7%
Total frequency	13,368	1,925	2,873	2,188	2,493	906	23,753

There isn't a street in Ashland that is suitable for people of all ages and abilities to ride a bicycle (with the possible exception of Ashland Street where it is under the city's jurisdiction). Traffic speeds on minor streets are too fast (see above regarding the risks associated with vehicle speed). Most critically, the bicycle facility design on major streets (i.e., bike lanes) do not provide adequate protection for people riding bicycles due to both the high speed of the adjacent traffic and high traffic volumes. (see [Contextual Guidance for the Selection of Bicycle Facilities, National Association of City Transportation Officials, 2017](#) and [Appendix A](#)).

Mode choice is not a choice when the choice is between a safe mode of travel (driving a car) and an unsafe one (riding a bicycle). (see Figure 5)

Figure 5 – Why people drive



Source: Alta Planning <https://altago.com/urbancooling/>

As the graphic above demonstrates, the majority of people living in Ashland choose to drive. That is, in part, a function of unsafe street design. One factor is the City's hilly terrain. The hills do discourage some but without safe streets, Ashland could be as flat as a pancake and people still wouldn't bicycle in significant numbers.

According to the City's 2020 collisions statistics, 18 percent of all reported accidents involved a person walking or riding a bicycle. Bicycling and walking, given the real and predictable risk of injury or death, isn't considered for many residents despite its environmental, health, and economic benefits. Ashland needs to prevent deaths and serious injuries for children and adults riding bicycles or walking. The streets must be made safe for everyone, to everywhere, for all modes.

More recent Ashland collision data shows that 80 percent of all collisions are with a fixed object (sign, tree, another car, etc). That figure matches data from the National Traffic Safety Administration and the Virginia Tech Transportation Institute that found that 80 percent of collisions and 65 percent of near collisions involve some form of distracted driving.

Collisions, whether property damage or bodily injury or death, are costly. The table below, from a report entitled [Evidence Demonstrating the Efficiency, Safety and Economic Benefits of Reduced Maximum Speed Limits - In Ashland, Oregon](#), suggests that the collisions represent an annual cost of more than \$350,000 per year (total column "D" divided by 5 years – measured in 2020 dollars).

Table 1.
Ashland Estimated Collision Savings with 20 MPH Speed Limits

	Baseline 1 (A) ²⁷	20 MPH Estimate (2) (B)	Reduction (C) (A - B)	\$ Loss per Collision (D)	Estimated Annual Savings (C) X (D) / 5
Fatal Injury Collisions	2	1.1	0.9	\$1,659,000	\$298,620
Class A Injury Collisions	11	7.7	3.5	\$96,000	\$63,492
Class B Injury Collisions	95	74.1	20.9	\$27,800	\$105,640
Minor Injury Collisions	255	204.0	51.0	\$22,800	\$232,560
Property Damage	355	284.0	71.0	\$4,500	\$63,900
TOTAL	718	570.9			\$764,212

Notes:

- (1) Baseline values reflect 5-year totals 2015 through 2019
- (2) Column (B) calculated as (Column (A) x (1 – 0.45)) for Fatal Injury Collisions; (Column (A) X (1 – 0.3) for level A injury Collisions; and (Column (A) X (1 – 0.2) for all other injury types

3. Reduced Traffic Generation

Given the design of the transportation network, it is not surprising that travel by bicycle and walking is low relative to motorized travel. Table 7 summarizes mode share, by age of traveler in the Rogue Valley. (Note: Ashland specific data is not available and the 2023/24 travel mode data is not yet available).

Table 7.
Mode Share by Age Group in the Rogue Valley – 2009 - 2011

Age	Travel Mode					Total
	Auto	Walk	Bike	Transit	School Bus	
0-17	76%	9%	3%	1%	12%	100%
18-34	90%	5%	3%	1%	0%	100%
35-54	88%	7%	3%	1%	0%	100%
55-64	94%	4%	1%	1%	0%	100%
65-74	92%	6%	0%	1%	0%	100%
All Ages	88%	7%	2%	1%	3%	100%

Source: Oregon Household Survey, August 2009 – 2011

An updated report in 2018 found the mode share had changed but had shifted to even more auto-centric travel.

Table 8.
Mode Share 2018

Percent of total travel by mode			
Auto	Transit	Walk	Bike
92.2%	0.5%	5.7%	1.6%

Source: Rogue Valley Metropolitan Organization, unpublished data 2018

Rogue Valley bicycle mode share significantly lags behind other cities in the State that have made a commitment to **safe** active transportation. Table 9, center column, includes current bicycle mode share by the cities listed. Note the “current date” varies by reporting city. Ultimately, the focus should not be on the current low rate of bicycle mode share but rather on establishing and achieving a much higher rate in the future. Table 8, right column, includes adopted or defined bicycle mode share for selected cities.

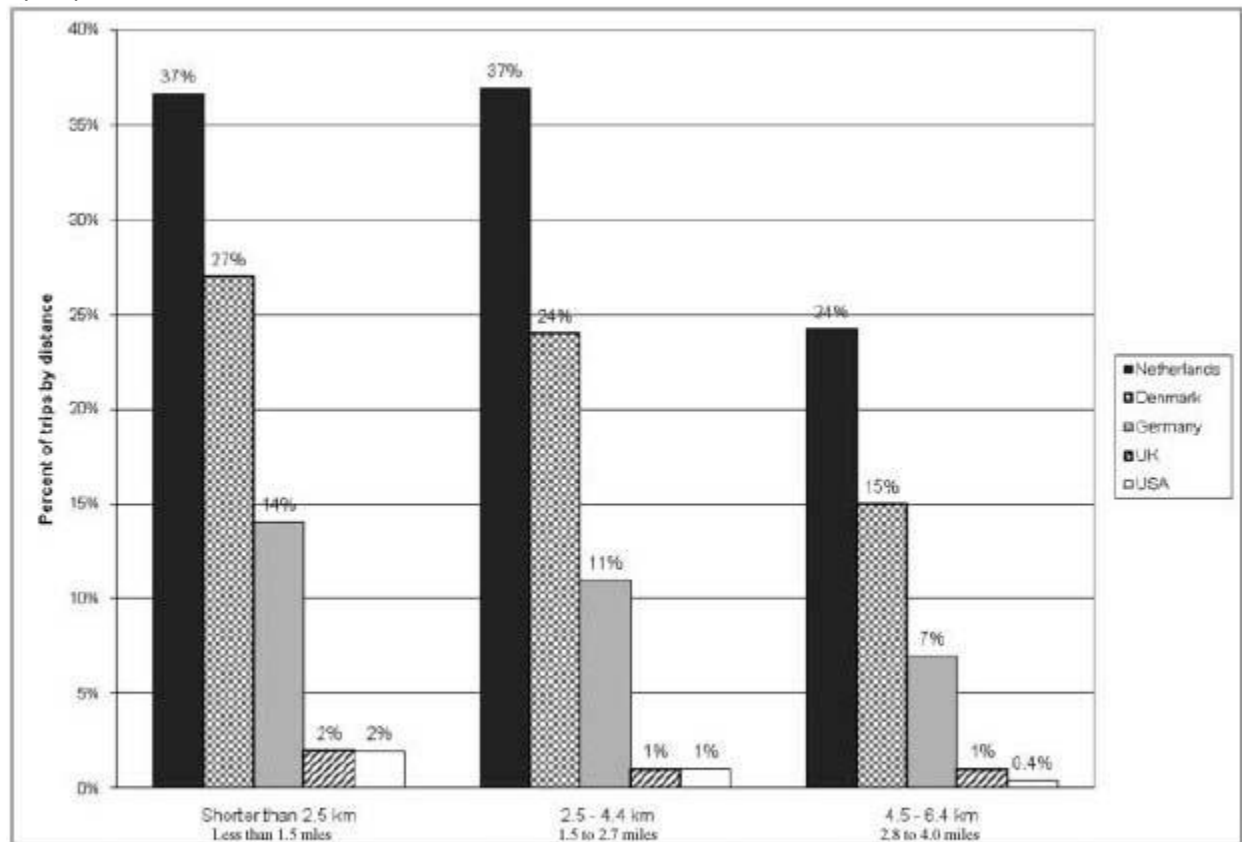
Table 8.
Bicycle Mode Share and Future Year Target

City or region	Current bike mode share	Adopted or defined bike mode share target
Portland, OR	6% (2009 ACS) 7% (2010 Auditor report work trips)	30% of work trips (Draft Portland Plan) 2035
Corvallis, OR	9.4% (2000 Census)	None
Davis, CA	14% (2000 census)	25% of all trips by 2012 (adopted in 2009 bike plan)
Boulder, CO	12.3% (2009 ACS) 7% (2000 census) 15.9% (2009 travel diary survey - includes all trips, not just commute)	Increasing bicycle mode share (all trips) at least 4% between 1994 (11.3%) and 2020 (1996 bicycle system plan). (Goal has been met according to travel diary survey results.) Other related targets are: 75% non-SOV mode share by 2020 (2008 Transportation plan) zero growth in VMT from 1994 levels.
Eugene, OR	10.8% (2009 ACS)	Approximately 22% (Draft bike/ped plan has defined a target of doubling bike mode share by 2020)

Source: RVMPO Strategic Assessment Final Report, February 2016

The future bicycle mode share goals set by these cities are comparable to those in some European cities where a safe, efficient, and equitable network of bicycle facilities exist. Figure 6 illustrates this fact.

Figure 6. Bicycling Share Trips in Netherlands, Denmark, Germany, the UK and the USA (2000 - 2005) by Trip Distance



Sources: German Federal Ministry of Transport (2003); U.S. Department of Transportation (2003); Department for Transport (2005); Netherlands Ministry of Transport (2006); Danish Ministry of Transport (2007)

“Some readers might assume that bicycling levels in Europe have been consistently high. In fact, cycling fell sharply during the 1950’s and 1960’s, when car ownership surged and cities started spreading out. From 1950 to 1975, the bike share of trips fell by roughly two-thirds in a sample of Dutch, Danish and German cities, from 50%-85% of trips in 1950 to only 14-35% of trips in 1975 (Dutch Bicycling Council, 2006). Similarly, a study by the City of Berlin (2003) found that the number of bike trips there fell by 78% from 1950 to 1975. During that 25-year period, cities throughout the Netherlands, Denmark and Germany focused on accommodating and facilitating increased car by vastly expanding roadway capacity and parking supply, while largely ignoring the needs of pedestrians and cyclists (Hass-Klau, 1990)

“In the mid-1970’s, transport and land-use policies in all three countries shifted dramatically to favor walking, cycling and public transport over the private car. The policy reform was a reaction to the increasingly harmful environmental, energy and safety impacts of rising car use (Hass-Klau, 1990; Pucher, 1997; European Conference of the Ministers of Transport, 2004; Dutch Bicycling Council, 2006).

Most cities improved their bicycling infrastructure while imposing restrictions on car use and making it more expensive. That policy reversal led to turnarounds in the previous decline of bike use. From 1975 to 1995, the bicycling share of trips in the same, previously cited sample of Dutch, Danish and



German cities rose by roughly one-fourth resulting in 1995 bike share of 20 to 43%.” [Making Cycling Irresistible J. Pucher, 2008](#)

Anyone who is skeptical about the potential for dramatically increasing bicycle use in Ashland is encouraged to read [Making Cycling Irresistible](#) in its entirety. People are people regardless of which continent they live on and largely respond to their environment in a similar way. Consider the safety and extent of the bicycle network in the Netherlands, Denmark and Germany (if you’ve visited there) compared to that in Ashland or the Rogue Valley. There is no comparison.

A publication by University of Berkley entitled [A Global High Shift Scenario](#) states that “a country [and cities] committed to major shifts [in GHG emissions] can achieve ten percentage point or higher [bicycle] mode share increases in a ten-year period.” (A Global High Shift Scenario, p. 21).

“Political leaders have strong incentives to choose this path, as it leads to a dramatic reduction in societal investments and operating and energy costs, and it provides improved economic well-being, enhanced social equity and stability, and strong reductions in environmental damage over the current trajectory. (ibid, p. 34)

“Over the long term, it may be possible for many cities to replicate the success of cycling in cities such as Groningen, Assen, and Amsterdam in the Netherlands, where cycling exceeds 40 percent of all trips, and in Copenhagen in Denmark, which grew from low levels of cycling after World War II to more than 45 percent of trips today. Such cities have succeeded by providing seamless infrastructure and a host of supportive policies to make cycling a safe, comfortable, and efficient option for a large number of trips. But in the short term, most efforts should be modeled after cities that have succeeded in rapidly growing cycling from very low levels, in some cases from near zero to more than 5 percent mode share in just a few years. Seville, Spain, is particularly relevant, as it grew cycling mode share from 0.5 percent to nearly 7 percent of trips in six years (2006–2012), with the number of cycling trips increasing from five thousand to seventy-two thousand per day. Seville achieved this by installing a backbone network of nearly 130 kilometers of protected cycle lanes (cycle tracks) throughout the city and implementing a bike share program with 2,500 bicycles and 258 stations in a dense bike share network across the city. Paris, Buenos Aires, and Montreal have also experienced similarly rapid increases in cycling through investments in low-stress networks of cycling infrastructure and large-scale bike sharing schemes. (IBID, p 34)

“Substantial restraint on motor vehicle speed and volumes is the other widespread policy implementation that complements cycling infrastructure. (ibid, p 34)

“Prioritizing cycling, walking, and public transport while restricting motor vehicle use, can achieve a 50 percent reduction in urban transport CO₂. To do so, cycling targets for things such as cycling mode share, cycling infrastructure investment, and the introduction of e-bikes as part of national [Ashland] mobility strategies could be set at the country [city] level to define goals and measure progress toward them. Countries [Ashland] can make commitments to these targets as well as toward other supportive investment in walking and public transportation necessary to achieve a future based on more sustainable transportation.” (ibid p. 38)



Conclusion:

Making the city safe, convenient, and efficient for walking and bicycling will lead to an increase in their use; and, at the same time, help to achieve the CEAP net-zero 2050 goal. Building modern cycling infrastructure is a sound and cost-effective investment in the city's future, especially relative to the cost of building more streets and widening existing roadways to accommodate an ever-growing number of motor vehicles. Without this change, the transportation system will be a large and continuing source of CO₂ emissions and traffic congestion will become unbearable.

Section 5. Implementing the CEAP - Urban, Land Use and Transportation

Attaining net zero emissions from the transportation sector by 2050 will be challenging. That's true even if the State or Federal government were to prohibit the sale or registration of fossil fueled vehicles after 2035 [which the Senate just revoked California's authority to do so]. Beyond climate change, imagine living in Ashland 30 years from now with 90 percent of all travel within the City relying upon an automobile; as we do now (see Table 7). Traffic congestion would be unbearable even if all the cars were self-driving.

The CEAP included goals for "Urban, Land Use + Transportation Goals. They are:

- **Reduce community and City employee vehicle miles traveled and greenhouse gas emissions.**
- **Improve vehicle efficiency and expand low-carbon transport, including within the City's fleet.**
- **Support local and regional sustainable growth.**
- **Protect transportation infrastructure from climate impacts.**

Table 9 includes a listing related CEAP strategies.

Table 9.

URBAN FORM, LAND USE + TRANSPORTATION		
Strategy ULT-1. Support better public transit and ridesharing.		
ULT-1-1. Coordinate with neighboring local governments to promote use of transit, carpooling, and car-sharing.	C	Mi
ULT-1-2. Work with RVTD to implement climate-friendly transit.	C	Mi
ULT-1-3. Establish policies to support development near transit hubs without displacing disadvantaged populations.	C	Mi
ULT-1-4. Evaluate feasibility of expanded local transit options.	C	Mi
Strategy ULT-2. Make Ashland more bike- and pedestrian-friendly.		
ULT-2-1. Implement bicycle- and pedestrian-friendly actions in the Transportation System Plan and Downtown Parking Management Plan.	C	Mi
ULT-2-2. Explore opportunities to convert to shared streets where appropriate to provide multimodal connectivity.	C	Mi
Strategy ULT-3. Support more-efficient vehicles.		
ULT-3-1. Implement a local fuel-related tax.	C	Mi
ULT-3-2. Revise land use codes to require EV charging infrastructure at multifamily and commercial developments.	C	Mi
ULT-3-3. Develop and provide information about electric and hybrid vehicles on the City website.	C	Mi
Strategy ULT-4. Support more climate-ready development and land use.		
ULT-4-1. Regulate new development in the Wildfire Lands Overlay part of the urban growth boundary.	C	Ad
ULT-4-2. Revise community development plans to favor walkable neighborhoods and infill density.	C	Mi
ULT-4-3. Modify the WUI code to include construction techniques appropriate for wildfire-prone areas.	C	Ad
Strategy ULT-5. Increase the efficiency of City fleet vehicles and employee commuting.		
ULT-5-1. Provide carpool and vanpool parking, charging stations, and parking for EVs for City employees.	M	Mi
ULT-5-2. Conduct a city fleet audit and use it to set policy and targets.	M	Mi
ULT-5-3. Purchase verified carbon offsets to offset City staff travel.	M	Mi

Regrettably, most of the CEAP's strategies lack the detail needed to bring about the degree of change that is needed to achieve the CEAP goals. In some cases they are vague and, in others, lack specifics – i.e. what are "bicycle and pedestrian friendly actions." In an effort to "fill in the blanks" the CEPAC, Urban, Land Use and Transportation Subgroup reviewed and ranked the following actions which serve as a detailed CEAP implementation guide.

Members' ranking, from zero to five, is summarized and includes the range and mode (the most common ranking) for each strategy. These strategies can be utilized by the CEPAC to help inform other planning processes and the city's land use and transportation investments, and policies. The update of the city's Transportation System Plan is a prime example of how CEPAC can utilize these strategies to achieve the goals established in the CEAP.

Table 10 lists land use strategies and Table 11 includes transportation related strategies.

Table 10. CEAP - Urban, Land Use and Transportation Implementation Plan: Land Use

CEAP - Urban, Land Use and Transportation Implementation Plan - Land Use	Range		Mode
	Minimum	Maximum	
-			
Include incentives in the City's Development Code for redevelopment/development on lands within ¼ mile of RVTD's high-capacity transit route with an emphasis on providing high-density workforce housing.	1	5	4
Double the minimum bicycle parking, as specified in the City's Development Code, for all uses except single family dwellings. Require all such parking to be covered, secure, and include 120 volt outlet(s) for charging.	4	5	5
Review and reduce the City's free parking supply for lands within ¼ mile of RVTD's high-capacity transit route.	0	5	5
Double the walking mode share in the areas bordering RVTD's high-capacity transit route.	2	5	5
Convert existing City public parking lots to high-density housing with provision for commercial use on the lower floor.	0	5	0
Establish a business license surcharge for businesses within ¼ mile of RVTD's high-capacity transit route to be dedicated to offering transit, bicycle and walking incentives to employees within the corridor.	0	5	1
Redesign the downtown Plaza to create a tree covered pedestrian plaza (see Appendix A) suitable for outdoor dining, Saturday Market, small and large community gatherings, etc.	4	5	5
Change Ashland's zoning code to prohibit single-family detached housing in the High Density Residential Plan Designation (R-3 zone). *	0	5	5
Increase the maximum allowed densities in the MultiFamily Residential (R-2), High Density Residential (R-3). *	3	5	5
Increase allowed height in the R-2 and R-3 multifamily residential zones.*	2	5	5

Table 10 (continued) CEAP - Urban, Land Use and Transportation Implementation Plan - Land Use		Range		Mode
		Minimum	Maximum	
-				
Increase allowances for residential uses on the ground floor of buildings within commercial and employment zones.*		0	5	5
Increase lot coverage allowances slightly in the R-2 and R-3 zones. *		3	5	5
Modify the development code, to allow duplexes, triplexes, fourplexes, cottage clusters and townhouses in the city's single family zoning district (per the requirement of HB2001 for cities larger than 25,000 population).		2	5	5
Increase residential development in the area between Lithia Way and A Street using high density residential development incentives.		3	5	5
Provide development flexibility within the city's Historic District (Figure 18.4.2.050 of the Ashland Municipal Code) between Lithia Way and A Street by allowing both residential and commercial uses and establishing a maximum building height of no less than 60 feet (subject to the city's Municipal Code 18.4.2.050, Historic District Development Standards).		4	5	5
Require unbundling of parking for new multi-family dwellings (see unbundled parking as defined by OAR 660-12-0005(62))		2	5	5
Require unbundling of parking for existing multi-family dwellings		0	5	5
Require unbundling of parking for existing and new commercial developments.		0	5	5
* Housing Production Strategy - as edited				

Table 11. CEAP - Urban, Land Use and Transportation Implementation Plan: Transportation

CEAP - Urban, Land Use and Transportation Implementation Plan - Transportation	Range		Mode
	Minimum	Maximum	
<u>Make bicycling and walking practical, safe and convenient for people of all ages and abilities from anywhere to everywhere in the city.</u>			
Convert existing traditional or buffered bike lanes on major streets to protected bike lanes including on Highway 99 between Ashland and Talent	3	5	5
Modify streets with sharrows to include protected bike lanes (excluding Orange Street, a low speed/traffic volume street and designated bicycle boulevard).	2	5	5
Eliminate free right-turn lanes	0	5	5
Modify signalized intersection design and timing to prioritize and ensure the safety of pedestrians	4	5	5
Create bike boxes at signal controlled intersections	2	5	3
Construct sidewalk access ramps where absent within the areas currently serviced with sidewalks	3	5	5
Construct sidewalks where missing within the existing pedestrian network	1	5	3
Implement traffic calming on streets within residential neighborhoods	4	5	5
Reduce speeds on all streets by five MPH, but no lower than 20 MPH, through a combination of street design modification, education, passage of enabling legislation through the Oregon legislature, and enforcement.	1	5	5
Utilize the National Association of City Transportation Officials (NACTO) Designing for All Ages and Abilities to establish bicycle facility design standards	4	5	5
Accelerate the installation of bicycle and pedestrian way-finding signage	3	5	3
Extend and widen the Central Biking and Walking Path to run between Talent Avenue and Crowson Road.	2	5	5
Construct multi-use paths within the city's urban growth boundary where identified in Ashland Trails Master Plan	3	5	5
Establish stop sign control for motor vehicles where the street system intersects with the Central Biking & Walking Path and at future multi-use paths.	4	5	5

Table 11 - continued CEAP - Urban, Land Use and Transportation Implementation Plan - Transportation		Range		Mode
Request the transfer of roadway jurisdiction to the city of Ashland if the Oregon Department of Transportation or Jackson County are unwilling to construct protected bicycle lanes, prior to 2030, conforming to NACTO's All Ages and Abilities, on major streets/highways under their jurisdiction (within Ashland).		4	5	4
Convert Pioneer Street to a "pedestrian-first" street with limited auto/truck traffic access and speeds less than 10 MPH. Bicycle traffic would continue to be two-way.		1	5	5
Convert Water Street to a "pedestrian-first" street.		1	5	5
Convert Glenview Drive and Granite Street, above Winburn Way to a "pedestrian-first" street.		1	4	3
<u>Reduce the impact of the transportation system on the environment and increasing community resilience to climate change</u>		Minimum	Maximum	
Increase bike/walk mode share to 15% of all travel within the city by 2030, 30% by 2040, and 45% by 2050.		3	5	5
Complete improvements to the bicycle and pedestrian system, as specified in Section 1, by 2030. This will require that the identified bicycle and pedestrian improvements occur coincident with pavement management/rehabilitation projects (i.e. maintenance) and as stand-alone projects		3	5	5
Reallocate the existing roadway network's paved and unpaved space to meet the needs of all road users while reducing the impact of the transportation system on the environment.		2	5	3
Provide incentives for residents to purchase a traditional pedal bicycle or an e-bike (class I or II) from local bike shops.		3	5	5
Advocate for the substitution of electric powered vehicles for gasoline/diesel powered ones by Ashland residents who can afford to do so.		1	5	3
Construct 7.5 foot-wide protected bike lanes on a) North Main Street north of Helman, and b) Siskiyou Boulevard south of Walker. In that way, these facilities can serve as a second travel lane for people driving automobiles during an evacuation.		2	5	5
Minimize traffic noise in downtown and limit the noise impact of Interstate 5 on the city.		0	5	0

Table 11 - continued			
	Range		Mode
<u>Create more equitable parking management</u>	Minimum	Maximum	
Convert existing public parking lots into workforce housing.	0	5	5
Designate truck loading / unloading parking spaces in downtown with a maximum length of 40 feet and be limited in duration and time of day.	2	5	5
Dramatically increase secure, covered bicycle parking in commercial areas.	4	5	4
Establish on-street parking fees in downtown and in city-owned lots and use the revenue to finance bike/ped improvements	3	5	5
Decouple the cost of rental housing from parking space rent in new and existing multi-unit residential developments.	2	5	5
Decouple the lease/rent of commercial/industrial properties from the rental/lease of parking spaces in new commercial/industrial developments.	2	5	2
Require secure, covered, e-bike charging for future residential and business developments at rates equal to those for electric car/truck charging.	3	5	3
Require secure and covered bike parking at rates equal to those provided for cars/trucks in new developments excluding those for single family dwellings.	4	5	4
Redesign the Plaza to serve people not cars.	3	5	5
Convert B Street to oneway (east bound) between 1st and 5th Street with diagonal back-in parking on the south side of the street.	3	5	3
	Range		Mode
<u>Reduce excessive speeds and running of red lights</u>	Minimum	Maximum	
Implement electronic speed enforcement on an ongoing basis on all streets where speeding occurs,	0	5	3
Implement red light traffic cameras coupled with “speed on green” enforcement at signalized intersections.	2	5	3
Establish a maximum 10-foot travel-lane width for both major and minor streets except where truck traffic accounts for more than 15 percent of total volume.	4	5	5

Table 11 - continued CEAP - Urban, Land Use and Transportation Implementation Plan - Transportation		Range		Mode
Eliminate auto/truck lane separation pavement markings (i.e striping) on all streets except N. Main, Siskiyou, and Ashland Street (between Siskiyou and Tolman Creek Road) except at intersections with left-turn lanes.		0	4	4
Create roundabouts/traffic circles at signalized intersections, at unsignalized intersections at key entry points into residential areas, and along key roads within residential neighborhoods.		3	5	3
		Range		Mode
<u>Support RVTD in their efforts to increase transit frequencies and to provide citywide demand-responsive services.</u>		Minimum	Maximum	
Support implementation of the “long-term preferred system alternative” as described in RVTD’s 2040 Plan. The preferred alternative would, among many other things, replace the existing Route 10 (Medford to Ashland) with an Express Route serving roughly the same corridor at an estimated annual cost of \$4,870,300 (in 2019 dollars), excluding capital costs. Ten minute headways are planned for the route.		3	5	3
Recreate the Ashland Connector (a demand-responsive service and fixed-route feeder) using an autonomous vehicle by 2035.		0	5	4
Electrify all transit, ride hailing, taxis, and shuttle vehicles operated within the city by 2035.		0	5	5
		Range		Mode
<u>Additional Items for Followup</u>		Minimum	Maximum	
Prohibit the placement of solid waste containers in bike lanes.		4	5	5



Section 6.

LOCAL FUNDING STRATEGIES FOR BICYCLE / PEDESTRIAN NETWORK IMPROVEMENTS

The existing stream of transportation funding is inadequate to address the current pavement management and operational needs of the transportation system, AND improve the system to make bicycling and walking practical, efficient and safe ways for people of all ages and abilities

Approximately 70 percent of residents are served well by the current approach; they use a car. But for an estimated 30 percent of the city's residents, driving is not an option:

- they are too young to drive,
- elders may have aged out of driving,
- disabilities prevent some from driving,
- others can't afford to own a car (now estimated to be \$1,025 per month), and
- some, prefer not to drive.

Meeting the transportation needs of everyone in Ashland is complicated by a bias, for the past 100 or so years, toward auto-centric roadway investments and [Euclidian zoning](#). Combined they serve to make auto travel convenient, often necessary, and make alternatives difficult and dangerous.

While some may say that Ashland is bicycle and pedestrian friendly (which it is compared to our city peers), the reality is that only people who are “strong and fearless” bicycle (accounting for roughly 10 percent of the population). They are willing to risk life-altering injury of death by riding in proximity to autos and trucks. In contrast, upwards of [60 percent of the population](#) would use a bicycle for some of their in-town trips if Ashland improved the network and had a complete, all ages and all abilities bicycle network,

Oregon's land use planning laws require cities in Oregon to improve the extent, function, and design of bicycle facilities to reflect the needs of “all ages and abilities” ([OAR 660-12-0610](#)). That includes everyone, not just those brave enough to share the streets with cars. Similarly, the Rule requires cities to plan for a complete pedestrian network ([OAR 660-12-0510](#)).

But a great plan is worthless if not implemented. That's where the challenge lies. Virtually all the city's transportation funding is dedicated to maintaining and operating the existing streets: filling pot holes, sealing cracks, adding chip seals, replacing or reconstructing the asphalt, painting crosswalks, replacing signs, sweeping and plowing snow. There is too little money left over to create the bicycle and pedestrian networks that are needed to make these modes of travel practical, safe and efficient.

Local Transportation Revenue Sources and Expenditures

Ongoing maintenance and repair of the city's transportation system is expensive. Based upon Ashland's draft FY 2025 - 2027 Budget it costs approximately \$13,500,000 per year.

Transportation

Street Fund	\$26,309,648
Transportation System Development Charge -	\$730,261
TOTAL	\$27,039,709

The budget includes a brief description of these revenue streams.

"The **Street Fund** is a special revenue fund that accounts for the resources and operating expenditures related to the maintenance, operation and construction of the City's streets and storm water collection infrastructure. While a substantial portion of revenues come from user fees, the primary source is state-shared highway funds."

"The **SDC Street Fund** receives funding from one-time System Development Charges (SDC) imposed on new development. These charges are restricted in use for transportation capital projects that expand infrastructure capacity for new residents or customers." Source: [City of Ashland, Draft 2025 - 2027 Budget](#)

"Infrastructure capacity" includes improvements to the motor vehicle, bicycle and pedestrian networks provided they are listed in the city's system development system methodology document.

The table below, from the FY24-FY26 Capital Improvement Program ([CIP](#)) serves to illustrate how these funds are allocated.

Table 12 – FY26/27 Capital Improvement Program

Project/Activity/Mode	FY26	FY27	Source	Status
Roadway				
Hardestry Site Development	\$1,007,052	\$1,007,052	Local	secured
Clay Street	\$1,711,211	\$1,205,000	Federal	secured
Street Overlay/Reconstruction				
N. Mountain Ave.	\$1,500,000	\$3,500,000	Local	secured
Oak St.	\$1,000,000	\$3,500,000	Local	secured
Sidewalk/Pedestrian				
Beaver Slide		\$ 350,000	Local	secured
Bicycle				
B Street	\$ 75,000	\$	Local	secured
8 th St.		\$ 44,000	Local	secured
Hersey Street unsecured		\$1,000,000	State	

Excluding Clay Street, which is largely funded through federal sources, the CIP includes \$11,983,104 of locally funded projects, of which less than one percent (\$119,000) is dedicated to bicycle and pedestrian improvements. However, the generalized accounting, in the table above, does not detail the cost associated with improving North Mountain Avenue to include bollard protected bike lanes. The same may also be said about Oak Street although the cross-section design and, whether to add protected bike lanes, has not been determined, as of the date of this report, but will be decided later in 2025 year.

The integration of needed bicycle and pedestrian improvements into the city's overlay/reconstruction projects is a recent change. Historically, pavement management (i.e. street overlay/reconstruction/chip seal) projects were focused exclusively on pavement life and no consideration was given to whether other improvements could be made simultaneously, at low marginal costs, to meet the needs of pedestrians and people riding bicycles. The 2024 improvement to Ashland Street was the first to reflect a multi-modal approach and added bollard-protected bike lanes, whereas previously it only included striped (i.e. painted) bike lanes (which were rarely used).

It bears noting that the cost to improve Hersey Street to include protected bike lanes is not included in the \$11,983,104 total. This project is highly speculative because it relies upon grant funding. It also bears noting that bicycle improvements on Hersey were included in the FY24/25 CIP and, during that time, grants for its construction were not developed nor submitted.

Bicycle and Pedestrian Funding Needs

The updated Transportation System Plan will provide planning level cost estimates for all "needed" improvements. An order of magnitude cost estimate for bicycle infrastructure improvements is in the neighborhood of \$20 million for on-street improvements (roughly 19 lane miles of protected bike lanes at \$1 million per mile). At the current rate of approximately one mile of improvements per year, it will take approximately 20 years to have a complete on-street network. There isn't an estimated cost for the off-street multi-use trails as identified in Ashland Trails Master Plan nor are their current estimates for pedestrian improvements (i.e. sidewalks). In that light, the author has



utilized a baseline revenue need of \$20 million in new revenue in the following sections of this report.

It is crucial to recognize that the improvement and financing of bicycle and pedestrian networks must be front loaded. That is, the completion of a safe and functional network must be done in the short-term whereas the financing the improvements can be extended over a much longer term (20 to 30 years). Given this fact, the city will need to either secure a revenue bond or utilize the [Oregon Infrastructure Bank](#) in order to provide near-term construction, while allowing subsequent repayment over the course of 20 or 30 years. In the following sections, it is assumed that the city will finance a \$20 million loan with a 30-year term, which at current interest rates, would require revenues of roughly \$130,000 month or about \$1.5 million per year.

Revenue Options

Below is a list of possible local funding sources. The listing may not be complete and, clearly, hasn't been vetted for political feasibility.

- 1) Local option gas tax ¹
- 2) Paid parking ²
- 3) Local bond measure ³
- 4) Food and Beverage Tax ⁴
- 5) [Utility fees](#) ⁵
- 6) Sales tax / meals tax
- 7) Jurisdictional exchange (N. Main/Lithia & Siskiyou south of Walker to the south city limits)

Included in the table below are estimates of the potential revenue generation of the various funding methods. The table is followed by a description of the methodology used to develop the estimate.

Table 13. Summary of Rates/Fees sufficient to finance \$20 million loan

Revenue Option	Rate	Measure	Multiplier	Estimated Revenue
Local Option Gas Tax	\$0.14	gallons	10,685,372 *	\$1,500,000
Paid Parking				
Business District	\$1	hours	627,000	\$627,000
Citywide	\$100	Annual parking fee per vehicle space	8,000	\$800,000
Total				\$1,427,000
Utility Fee	\$12	households	10,416	\$1,499,904
Food and Beverage Tax	5%	Food & beverage	NA	\$2 - \$3 million
Bond Measure	\$0.4615	\$1,000 assessed value	\$3,248,157,858	\$1,500,000
Jurisdictional Exchange	NA	ODOT one-time payment	NA	
North Main/Lithia				\$12,000,000 **
Siskiyou (Walker to S. City Limits)				\$ 8,000,000 **
Total				\$20,000,000

* 2024 – ODOT Fuels Tax Group

** Order of magnitude estimates

Methodology

Parking Fees

Parking fees are assumed to apply to all on-street parking throughout the city and city owned parking lots. Below is a discussion of assumptions that were made to produce the numbers shown in Table 2.

- 1) It is assumed that downtown parking revenue will be proportional to that of Bend which has an approximate one square mile parking district compared to Ashland's one-third acre Downtown Historic District. On that basis, parking fees in downtown relying upon the same \$1 per hour fee in Bend, would total approximately \$627,000 per year.
- 2) Residential parking permits are even more difficult to estimate because residents often use a curbside space as a convenience even though they have off-street parking available (i.e. in a garage, driveway or parking lot). Ashland has somewhere around 100 miles of roads (excluding state highways and county roads). [source:

https://www.oregon.gov/odot/Data/Documents/OMR_2023.pdf] For example, a nearby residential street with only single family dwellings, near where I live, is about 475 feet long and typically has eight cars parked along its length. This would imply that cars are parked on city streets, on average, every 60 feet. If the same rate existed throughout town, it might mean that more 8,800 vehicles are parked on city streets. If the city required an on-street residential parking permit and charged \$100 per year for the privilege, it would produce revenues around \$875,000 annually.

- 3) The combined total parking fees would be approximately \$1.5 million per year.

It bears noting that the city has discussed requiring [unbundling of parking](#) for multi-family and commercial parking lots (i.e. requiring the parking fees be distinct and separate from payments for rental space). This idea is based upon the concept of fairness and an attempt to mitigate the high cost of housing. It is not economically justified, nor fair, to charge a person that does not own a car for parking as a part of their housing rent. Unbundling would rationalize the cost of vehicle parking (i.e. storage). Yet, without city residential parking permit fees, it would be likely that many cars that had historically been parked in off-street lots would simply be parked on-street location and avoid the off-street parking fee.

It is notable that Portland's transportation revenues are split 60% gas tax (including both State and local gas tax revenues) and 40% parking fees. See also Bend's approach <https://parkingtoday.com/segments/municipal/bends-blueprint/>

Local Option Gas Tax

Thirty-three communities in Oregon have a [local option gas tax](#).

ODOT Fuels Tax Group reported that Ashland fuel stations pumped a total of 10,685,372 gallons of fuel in 2024 (includes E10, unblended gasoline and all biodiesel and diesel fuels). That compares to an October 1, 2007 City Council study session estimate that estimated Ashland gas stations pumped 1.2 million gallons each month (or 14,400,000 gallons per year). Based upon ODOT's reported gallons, a \$0.14 cents per gallon gas tax would be needed to yield \$1.5 million per year. That's higher than Portland's \$0.10 per gallon tax which is the highest in the state. It is notable that Senate Bill 687, currently under consideration in the Oregon Senate, would allow cities and counties to raise gas taxes without asking voters for permission.

Utility Fee

Based upon recent Ashland budget discussions, a \$5.00 per month bicycle/pedestrian utility fee would generate \$625,000 annually. To generate revenues at \$1.5 million per year would require the fee be set at \$12 per month or \$144 per year.

Food and Beverage Tax

The city of Ashland's Food and Beverage Tax generates between \$2-3 million annually. This tax, a 5% fee on prepared food and beverages served in restaurants and delis (excluding alcohol), was originally approved in 1993 and will expire, unless extended, in 2030. To generate the required \$1.5 million per year would require that approximately half to two-thirds of the revenue be allocated to bicycle and pedestrian improvements, which would severely constrain the city's ability to maintain existing street pavements, in so far as 75% of these funds are currently dedicated to this function. The other 25% of the revenues are allocated to the Parks and Recreation Department.

Local Option Taxes / Local Bonds - ORS 280.060 - Levy of local option taxes outside constitutional limitation

[Ashland's 2023/24 assessed value totaled \\$3,248,157,858](#). A rate of \$0.4615 per \$1,000 would generate \$1.5 million per year. Under ORS 280.969 the maximum tenure of the local option tax (i.e. bond) cannot exceed ten years and the bonds must match the same duration. To construct the needed improvements would require three successive 10-year ballot measures. These measures are not subject to the limits of sections 11 and 11b, Article XI of the Oregon Constitution (i.e. Ballot measure 5 and 50).

[Bend](#) (47 cents per \$1,000 of assessed value) and [Eugene](#) (63 cents per \$1000 of assessed value) utilize a local property tax measures (for both pavement management and ped/bike improvements).

Jurisdictional Exchange

ODOT payments to the city to accept responsibility for the maintenance and operation of North Main and Lithia, and Siskiyou Boulevard from Walker Avenue to the south city limits could total as much as \$20 million. ODOT's payments are meant to off-set the cost of the pavement management over the course of the next 20 years. These funds could, none the less, be utilized to complete the needed improvements to the pedestrian and bicycle network, which coincidentally, are estimated to cost approximately \$20 million.

Dedication of these funds for pedestrian and bicycle improvements would mean that other sources of revenue to maintain these streets would, in all likelihood, require an increase in the transportation utility fee.

Section 7.

Conclusion

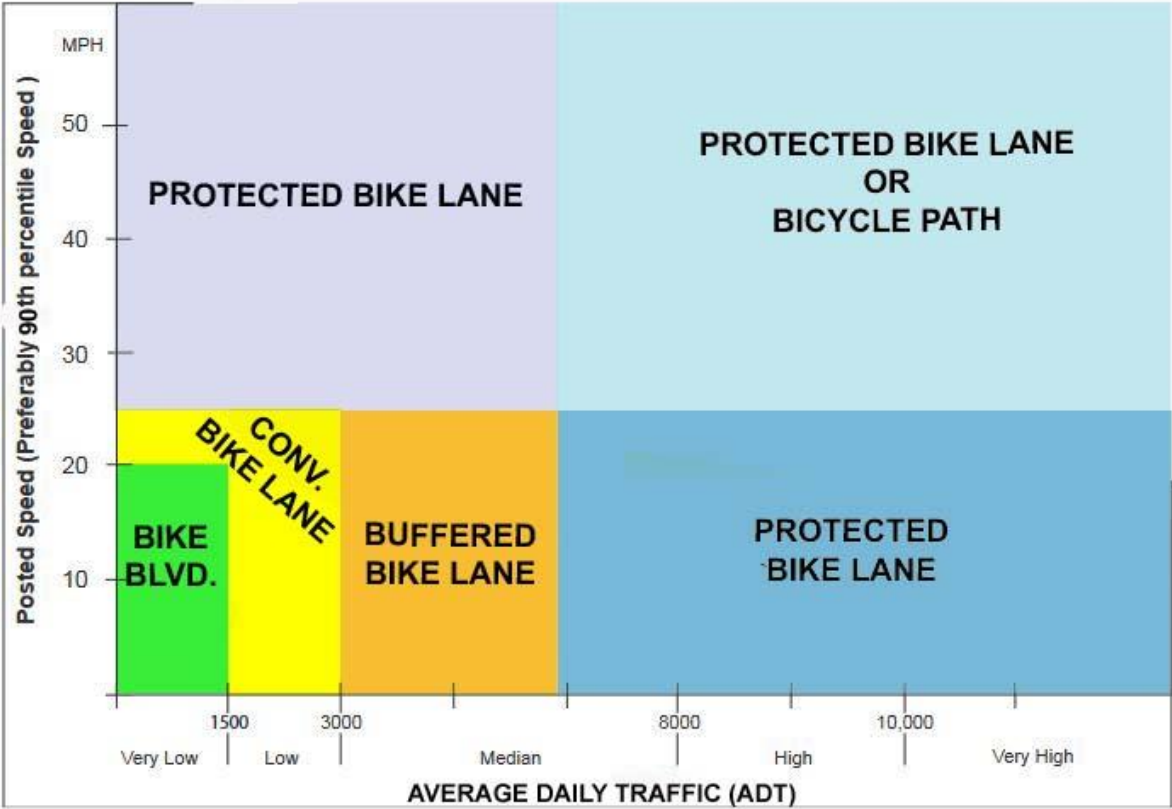
These strategies, when combined, will substantially reduce CO₂ emissions arising from residents' transportation choices. Ashland residents' and out-of-town visitors' will be less reliant upon automobiles for travel within the City leading to an estimated 95 percent (76.9 metric tons) reduction in GHG emissions compared to existing levels.

Reducing the auto-centric character of the City will have a profound effect upon the livability and enjoyment of living in or visiting Ashland. Residents will spend significantly less on transportation and thus be able to spend an increasing share of disposable income on other household expenditures.

The unique qualities of the city's modern transportation system will serve to attract out-door recreation enthusiasts including mountain bikers and people who ride bicycles on the road for pleasure. The region's system of hiking and mountain bikes trails and the beauty of nearby rural landscapes will serve as magnets to out-of-town visitors. Additionally, the predominance of non-auto travel will have the effect of making Ashland more interesting (and tranquil) as a destination, boosting its potential to attract west coast, national, and international visitors

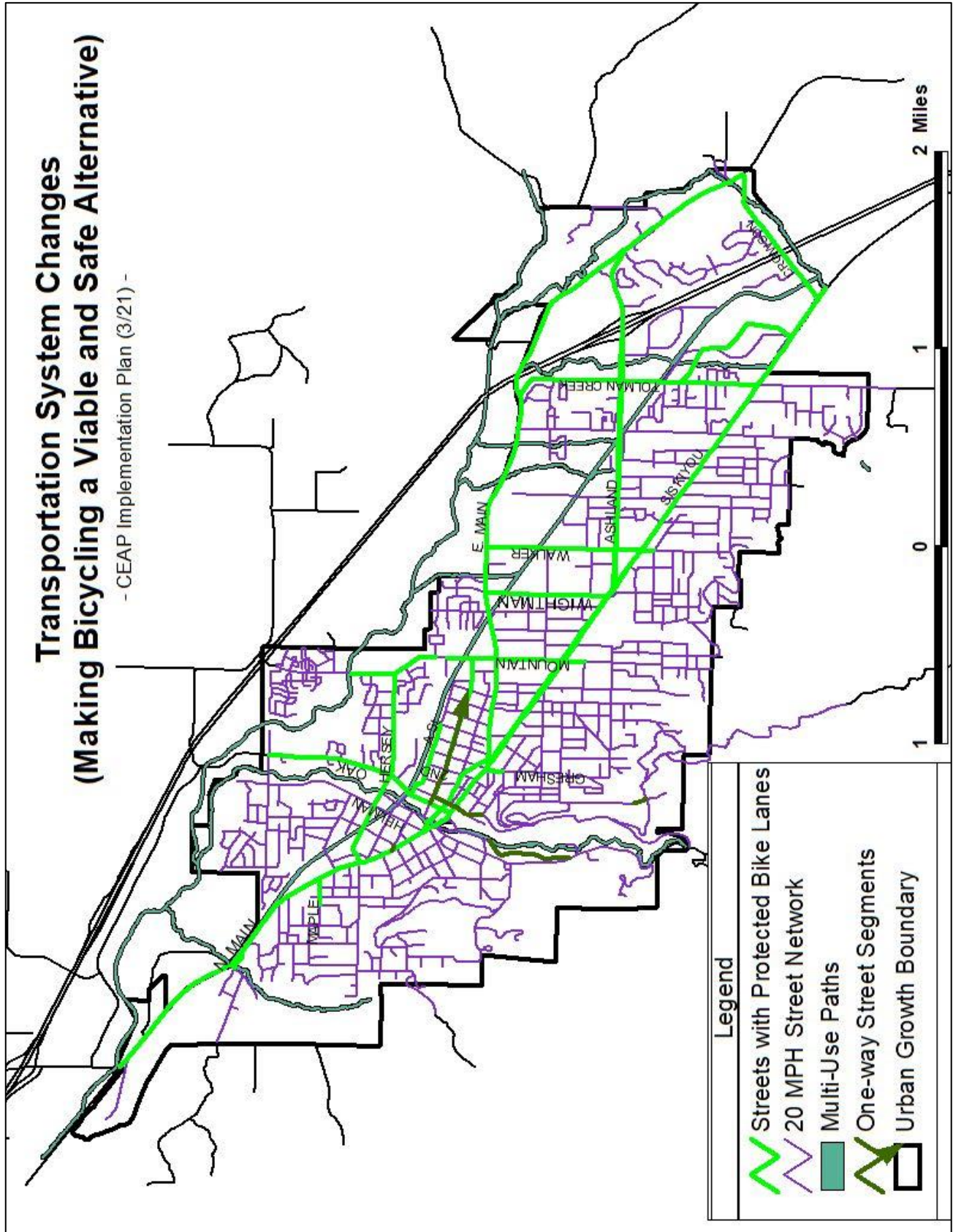
These changes will have a profound impact on the City's overall livability. Coupled with our small-town character and Ashland Fiber Network's high speeds and reliability, the City will become the "spot" for remote workers. It is estimated that 29 to 39 percent of the workforce will work remotely in the future. Attracting these workers to Ashland can serve as a "new" [economic base](https://www.mckinsey.com/featured-insights/future-of-work/whats-next-for-remote-work-an-analysis-of-2000-tasks-800-jobs-and-nine-countries#). This population is likely to be a highly educated and well-paid. (source: McKinsey, November 2020; <https://www.mckinsey.com/featured-insights/future-of-work/whats-next-for-remote-work-an-analysis-of-2000-tasks-800-jobs-and-nine-countries#>) These new residents will help to support local businesses, pay state and local taxes, and contribute to the cultural fabric of the community.

NACTO
Contextual Guidance for Selecting All Ages & Abilities Bikeways



Conceptual Pedestrian Oriented Plaza Design





Appendix D

General Characteristics of Enhanced Bus Services

Transit Technology	Residential & Employment Density Ranges*						Station Characteristics		
	Core		Centers		Corridors		Typical Spacing Range	Ideal Spacing	Sphere of Influence
	Res.	Emp.	Res.	Emp.	Res.	Emp.			
Enhanced Bus	20+	200	10-20	2-5	5-10	2-5	500 feet - ¼ mi	¼ mi	Adjacent parcel

Corridor Form**	Operational Characteristics						Example Cities
	ROW/ Guideway	Peak Service Headways (mins)	Route Length (mi)	Capacity (persons per car)	Operating Speed (mph)		
					Max.	Typical	
Various urban centers and industrial corridors	Mixed-traffic or dedicated ROW	10–15	5–10	44 (40 foot bus); 62 (articulated bus)	65	8–60	Albuquerque, Baltimore, Boulder (CO), Los Angeles, Montreal, Reno, Salt Lake City, San Diego

* Residential densities expressed in dwelling units per acre (du/ac); employment densities expressed in number of employees per acre (em/ac), presented as minimum suggested densities. Actual densities around transit stations vary based on CBD size, distance from CBD to other centers, and metro area size. Densities based on FDOT TOD Guidelines (www.floridatod.com), from Dittmar and Ohland (New Transit Towns, 2004) and Zupan (Where Transit Works in 2006, December 2005) and from the Charlotte multi-corridor planning effort.

**Cores pertain to high-intensity urban cores, i.e., CBDs. Centers are urban neighborhoods, historic urban centers, and suburban centers, and corridors are links between Core and Centers that include industrial corridors and new suburban corridors.

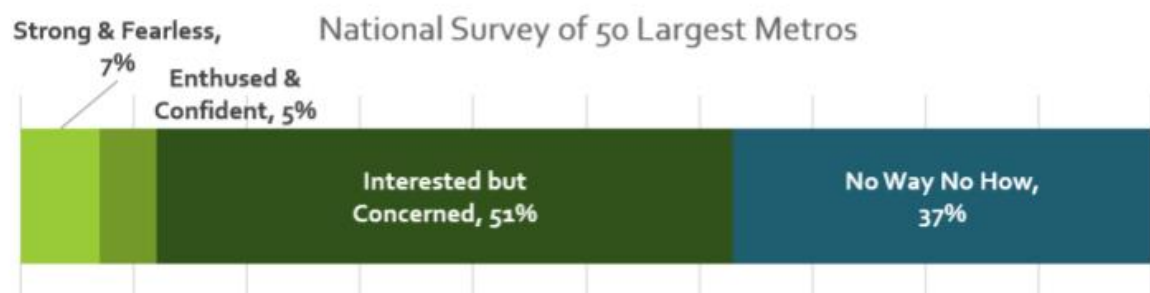
Source: https://www.transit.dot.gov/sites/fta.dot.gov/files/FTA_Report_No._0056.pdf

Commonly Asked Questions

1. How can we be sure that Ashland residents will actually bicycle if the roads are made safe for cycling?

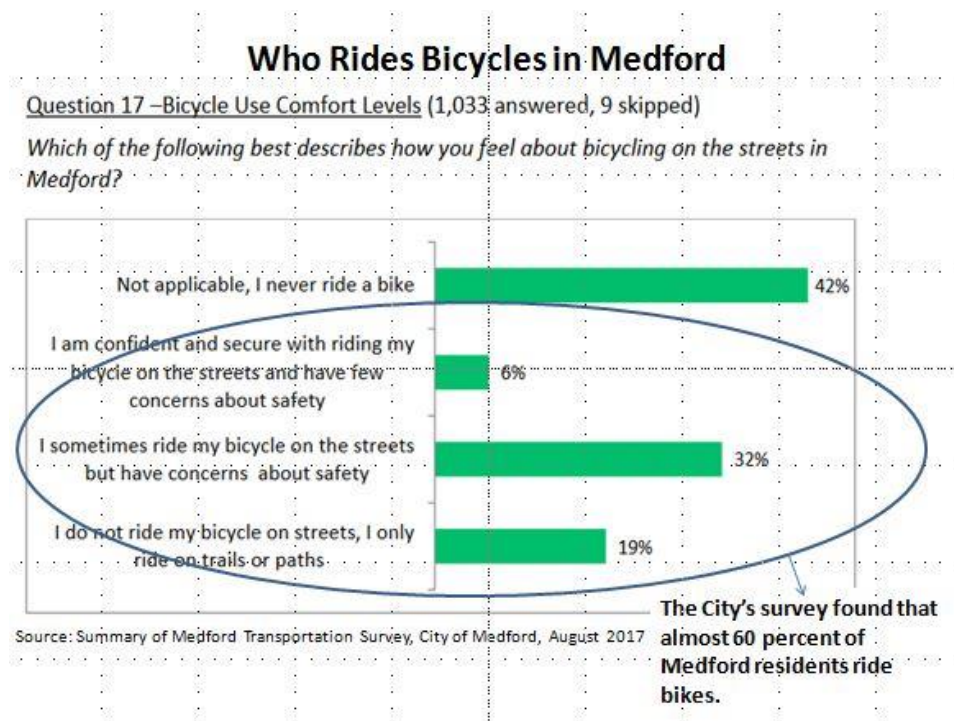
Survey, after survey, after survey has shown that the majority of residents in an urban area (51%) are interested in bicycling but concerned for their safety. The majority of residents are afraid to share the road with motor vehicles. The distribution of residents by interest in cycling, as shown below, is probably applicable to every urban area in the nation including Ashland.

Figure 1.



A community survey in Medford, echoing the national survey, found that residents there had similar attitudes toward cycling.

Figure 2.



As with the national survey of metropolitan areas (Figure 1), 51 percent of Medford residents have safety concerns when riding a bicycle on a street or only ride on trails (Figure 2).

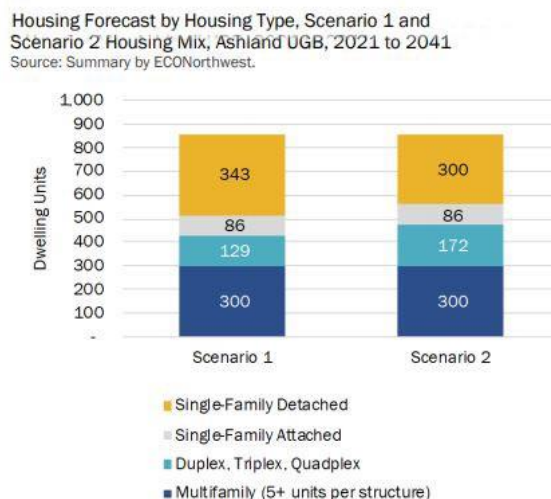
Presumably, those who ride only on trails or paths do so to avoid safety concerns associated with bicycling on streets.

It is likely that residents in Ashland hold similar views. Two key findings of the national survey illustrate the critical importance of creating bicycle infrastructure that is suitable for all ages and abilities. These include:

- “The Interested but Concerned adults do represent the largest potential market for increasing cycling for transportation. Bicycle infrastructure that increases their physical separation from motor vehicles, such as cycle tracks, increases their reported level of comfort significantly. This would seem a necessary condition to increasing their levels of cycling for transportation.
- “There is a correlation between cycling to school as a child and levels of comfort cycling as an adult. The Enthused and Confident adults were most likely to have cycled frequently to school as a child, while the majority of No Way No How adults said that they never rode to school as a child. Cycling to school does not appear to affect whether an adult within one of the categories is currently cycling for transportation or recreation, however. Because cycling frequency does vary by category, these findings do lend support to the hypothesis that increasing cycling to school could have longer lasting effects on overall rates of cycling.”
[Four Types of Cyclists? Examining a Typology to Better Understand Bicycling Behavior and Potential](#), Jennifer Dill, page 18.

2. With Ashland's population increase at only 2-3k in the next 30 years is that the amount of high-density housing you think we need to add?

[Ashland's Preliminary Residential Land Needs Analysis](#), includes a housing needs analysis and found the following:



The analysis estimates that between 429 to 472 duplex, triplex, quadraplex, and multifamily (5+ units) dwelling units will be needed between 2021 and 2040. Assuming these needs continue through 2050, they would suggest that between 650 to 700 duplex, triplex, quadraplex, and multifamily (5+ units) dwelling will be needed between now and 2050.

“The housing strategy primarily addresses the needs of households with middle, low, very low, or extremely low income. It distinguishes between two types of affordable housing: (1) housing affordable to very low-income and extremely low-income households and (2) housing affordable to low-income and middle-income households. The following describes these households, based on information from the Ashland Housing Capacity Analysis.

“Very low-income and extremely low-income households are those who have an income of 50% or less of Jackson County Median Family Income (MFI) which is an annual household income of \$32,600. About 34% of Ashland’s households fit into this category. They can afford a monthly housing cost of \$820 or less. Development of housing affordable to households at this income level is generally accomplished through development of government-subsidized income-restricted housing.

“Low-income and middle-income households are those who have income of 50% to 120% of Jackson County’s MFI or income between \$32,600 to \$78,100. About 31% of Ashland’s households fit into this category. They can afford a monthly housing cost of \$820 to \$1,630. The private housing market may develop housing affordable to households in this group, especially for the higher income households in the group.” ([Draft Ashland Housing Strategy](#), page 2)

From the above, it is probable that more than half of Ashland households currently need or would benefit from some form of subsidized, public or affordable housing. It is logical to project that the housing needs projected from now to 2050 should include a similar mix of market rate and affordable housing.

3. Looking at your numbers on transit mode share, I have a hard time envisioning RVTD participation increasing in Ashland up to and beyond the 1.5% goal.

RVTD’s 2040 Plan’s 1.5 percent mode share estimate is based upon the ridership of its entire system. Route 10, based upon 2018 ridership figures, carried 45 percent of RVTD’s approximate 1 million passengers in that year. It is also important to note that not all RVTD routes, as a part of the “preferred system” will operate at 10-minute headways. Those that do, will enjoy a higher overall share of RVTD’s passengers.

The increasing transit frequencies (from 30-minute headways to 10-minute headways) have been shown to have a profound impact on ridership. Ridership can grow 700 percent. (<https://nacto.org/publication/transit-street-design-guide/introduction/service-context/transit-frequency-volume/>). Achieving 1.5 percent mode share on Ashland’s Route 10 (with 10-minute headways with its historically high productivity) should be easily achieved.

4. I seem to think reduction in vehicle ownership may be more driven by autonomous self-driving vehicles with a service like the Ashland Connector. Along with increased private EV purchases this will reduce GHG emissions and increase safety for pedestrians and bicyclists by reducing collisions.

All those things may turn out to be true. But ultimately, those changes alone will not achieve net zero by 2050 from the transportation sector. Without significant mode shift, around 50 percent of vehicle miles of travel in 2050 will be by vehicles with internal combustion engines. Not to

mention the traffic congestion. An article in the New York Times entitled [There is One Big Problem with Electric Cars](#) provides some additional context for understanding the bigger issue.

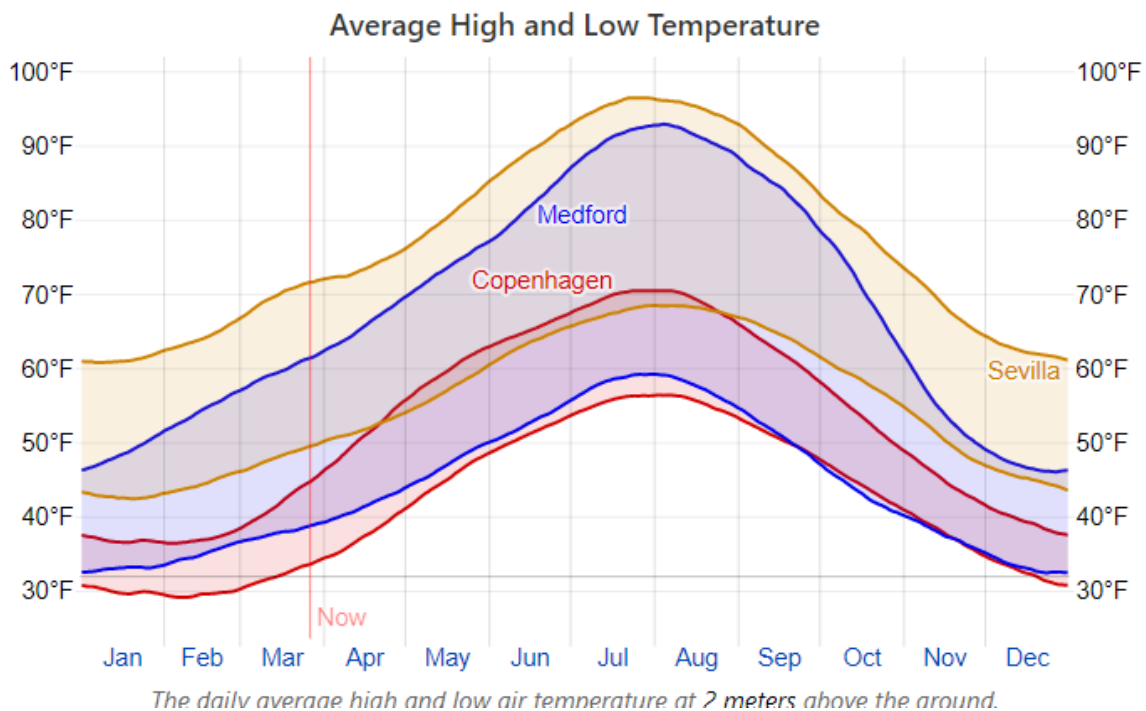
Providing viable and safe bicycling and walking infrastructure is critical to achieving a more equitable transportation system. Not everyone can afford to own their own EV or summon an Uber like vehicle when they want to visit a friend across town.

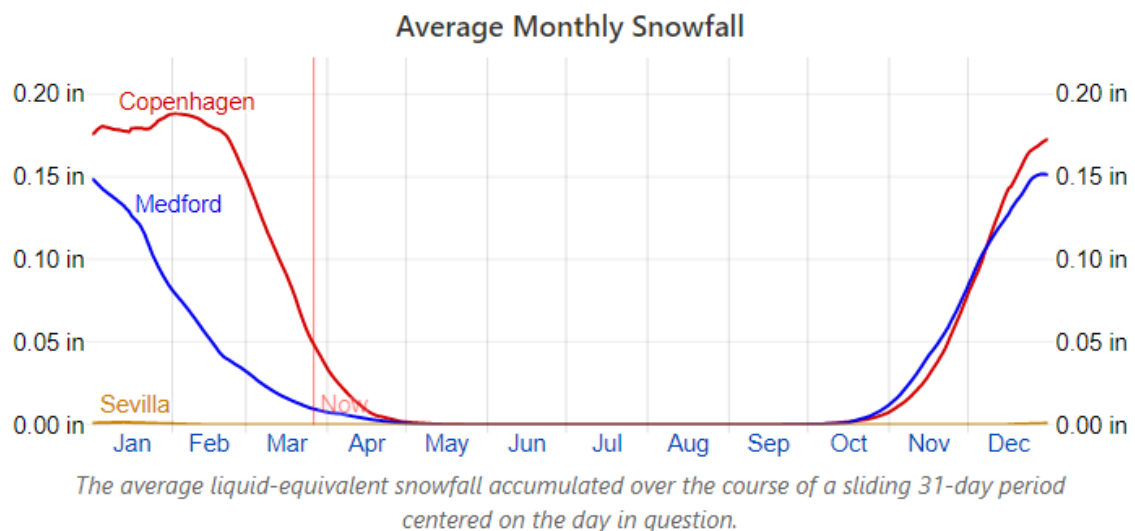
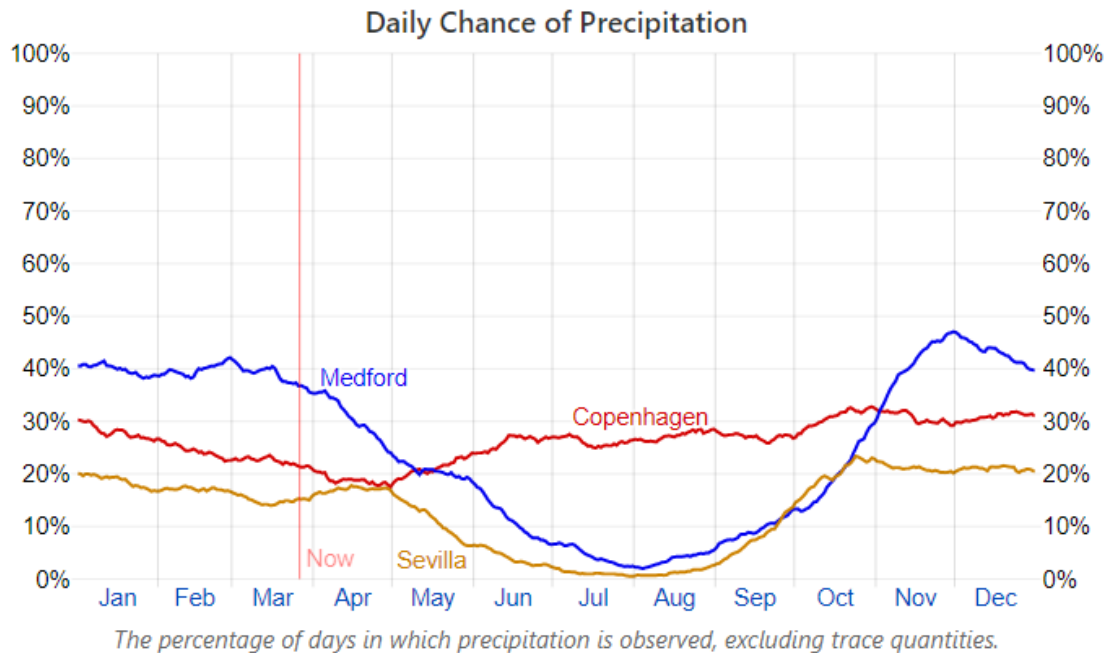
5. I like your policies that encourage EV charging.

EV charging is an integral infrastructure for a transportation system powered by electricity. Conditioning public parking for the use of EV's is a simple but effective way to communicate that "EV's" are the norm and ICE's are a part of the problem.

6. For bicycling I would love to see participation increase from 2% to 42%, but given our climate and cost to increase bicycle corridors not sure that can happen.

The climate in the Rogue Valley is unique. But to characterize it as inhospitable to bicycle use fails to consider other cities where bicycling is the mode of choice for families, workers, students, shoppers, and everyone else. Below are comparisons of temperature, rainfall, and snowfall in Medford, Copenhagen and Seville. In Copenhagen, [62% of all citizens commute to work, school or university by bicycle](#). While [Seville, Spain cut car use 27% in ten years as bike modal share hit 9%](#),

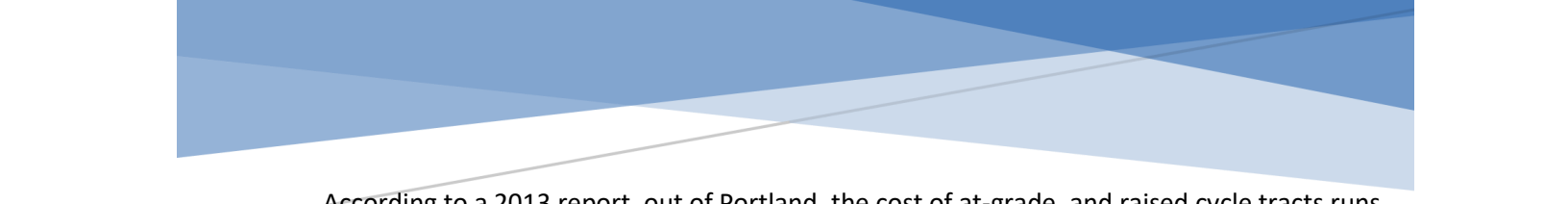




Copenhagen’s winter temperatures are colder and snowier than here in the Rogue Valley. Yet, “Copenhageners continue to cycle throughout the winter; the volume of bicycle traffic in the winter is roughly 2/3rds that of the summer.” (source: [City of Cyclists Reduces Approximately 90,000 tons of CO₂ per Year and has Over 50 percent of the City’s Population Cycling to Work Everyday](#)).

An eleven-minute long video entitled [Cycling in Copenhagen through North American Eyes](#) is, in fact, an eye opener. Please take a moment to view it. It’ll open your eyes.

Funding public improvements is never easy. The FY 2020 to FY 2025 Ashland Transportation Capital Improvement Program (CIP) totals \$40.6 million with \$1.6 million slated for pedestrian improvements and \$0.25 million for bicycles.



According to a 2013 report, out of Portland, the cost of at-grade, and raised cycle tracts runs around [\\$25 and \\$68 per foot](#), respectively. In order to add cycle tracts to Main, Siskiyou, Lithia, Mountain, Oak, Ashland, Tolman Creek and Hersey over the course of 10 years would cost approximately \$5.25 million to \$14.3 million, depending upon design and using the 2013 cost estimates. Adjusting these figures to account for cost inflation, using the [Federal Highway Administration's highway construction index](#), yields an estimated range of \$6.25 to \$17.0 million in today's dollars. This estimate does not include the cost of right-of-way, if required.

When it comes time to design and build bicycle infrastructure, the city should do it once and do it right, and [build raised cycle tracts](#). The improvements can be funded through the city's share of state gas taxes, system development charge fees (once the bicycle improvements are included in the CIP), state and federal grants, and a local gas tax (if one were to be approved).

Federal funding may be infinitely more readily available under [HR2, Moving Forward Act](#), the pending reauthorization of the federal transportation act. The Act:

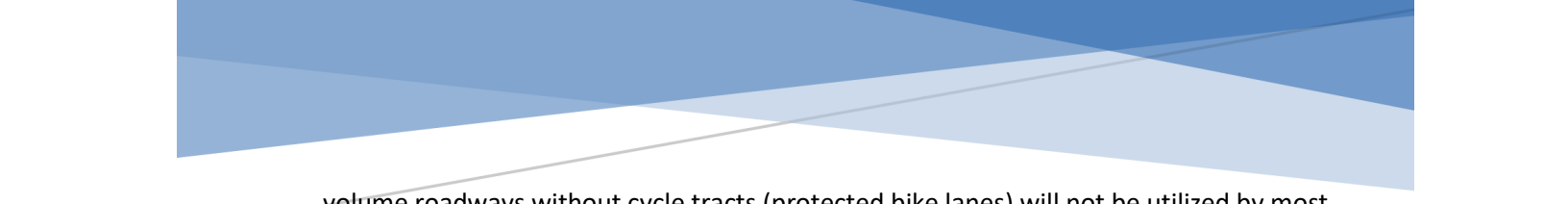
- Adds shared micromobility, including bikeshare and shared scooters, as an eligible expense in the Congestion Mitigation and Air Quality (CMAQ) program.
- Defines bikeshare as an "associated transit improvement" in US Code 5302 of Title 49.
- Provides for a 60% increase for the Transportation Alternatives Program (TAP), the largest federal funding source for bike infrastructure. TAP will allow for more streamlined, expedited construction of bike lanes.
- \$250 million for the Active Transportation Connectivity Grant, which would fund regionally connected mobility networks.
- \$250 million for the Community Climate Innovation Grant, which can be used for shared micromobility projects that contribute to reducing greenhouse gas emissions.
- Places a focus on Vision Zero.

7. Do we have any data on how much bicycling safety can be improved with EVs with collision avoidance using existing roadways?

A quick review of Google search results suggests that collision avoidance technologies work best for avoiding crashes with other motor vehicles.

"Autonomous emergency braking (AEB) is an advanced technology designed for collision prevention and crash severity reduction and is a promising intervention to improve cyclist safety. AEB technology uses optical sensors, cameras, and radar, or a combination of these, to detect obstacles. This technology was designed to prevent crashes between vehicles, but vehicle manufacturers are beginning to add the capability for vehicles to recognize cyclists as well. The addition of cyclist detection systems is anticipated to prevent crashes, injuries and fatal crashes. The limitations of AEB systems include the variability of effectiveness due to daylight and weather conditions, the difficulties in optimizing these systems for relatively low speeds, and the inability to predict dangerous or distracted human behavior." [Cyclist Safety, An Information Source for Decision-Makers and Practitioners](#).

The real and ever-current risk of severe injury to a bicyclist when struck by an automobile will not substantially change in the foreseeable future. Consequently, high-speed, high



volume roadways without cycle tracts (protected bike lanes) will not be utilized by most prospective bicyclists (the 51 percent of Ashland residents – as noted in question 1). It just isn't worth the risk.

8. I really like the idea of converting the Plaza to a pedestrian only area.

A pedestrian oriented plaza is a logical step in reducing the auto-centric design of Ashland. If only one space in the city were to be changed, the Plaza should top the list. The Plaza as a “pedestrian space” is the way many residents like to conceive of the area but the reality is that it largely serves as a place to park automobiles (providing more than 65 spaces roughly equal to the city’s off-street lot at Pioneer and Lithia). The ring of parking at the Plaza creates a relatively small pedestrian only island. Additionally, the current configuration squanders the opportunity of nearby shop-keepers and restaurants to “spill-out” of their doors to create a more engaging and lively public space for both residents and visitors.

9. Why is electronic speed enforcement listed among the strategies to reduce the transportation system’s auto-centric design?

Traffic speed enforcement is one among few police department tasks that can be automated. Using radar enforcement provides an opportunity for traffic enforcement officers to be reassigned to other high priority issues.

Table 6 clearly demonstrates the fallacy of the widely held belief that driving 5 MPH over the speed limit poses little risk of harm.

Yet, driving faster than the speed limit by 5 MPH rarely results in a ticket even though in a 25 MPH speed zone, 5 MPH is 20 percent faster than the legal limit. [ORS 810.434](#) establishes an official upper limit for excessive speed. The statute specifies that only drivers who violate the speed limit by 11 miles per hour or greater can be cited when evidence of violation is documented using an electronic means. That statute, also, explicitly limits which Oregon cities can even employ electronic speed enforcement.

The official permissiveness illustrates just how completely the automobile, as the dominate, if not the exclusive mode of transportation in most communities, has undermined the law and subverted basic engineering and safety standards.

Finally, data suggests that a traffic stop or “‘catch and release’ program in which certain members of the community are stopped pretextually, investigated disproportionately for potential criminality, and then, should no evidence of wrongdoing appear, allowed to go free without any formal sanction” are disproportionately experienced by minorities.” (source: [Traffic Enforcement Through the Lens of Race: A Sequential Analysis of Post-Stop Outcomes in San Diego, California](#)) While there is no evidence to suggest it happens locally using electronic speed enforcement will ensure that it never does.

Amending the ORS 810.434 to allow Ashland to use electronic speed and red-light enforcement, and changing the law to authorize citations when drivers exceed (by any amount) the posted speed limit are essential to wresting away the preeminent position that motor vehicles have over our community and protecting the lives of people who chose to walk or ride a bicycle. It is a part of Vision Zero.

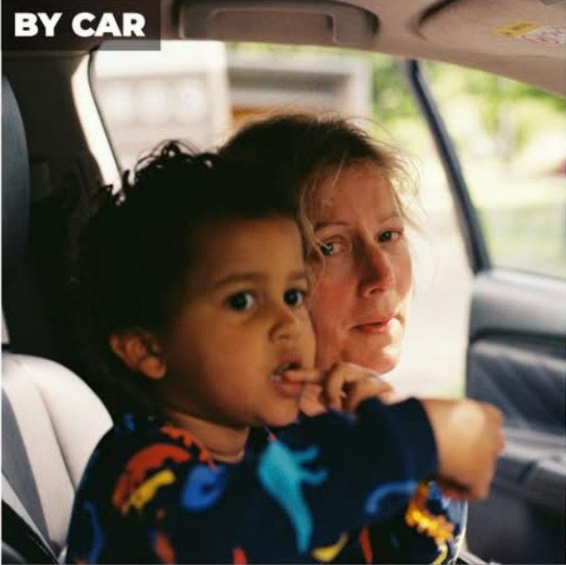
Appendix F

Benefits of Bicycling and Walking

PARENTING ON THE MOVE

Your mode matters



BY CAR	BY FOOT/BIKE
	
More comfort	Healthier BMI Higher WELLBEING Reduced stress levels Improved mood Higher life and travel satisfaction Higher ACADEMIC SCORES of kids

Source: <https://www.sciencedirect.com/science/article/pii/S2666558125000375>

Separated Bike Lanes Means Safer Streets – for all road users

[Separated Bike Lanes Means Safer Streets, Study Says — Streetsblog USA](#)

To: CEPAC

From: Gary Shaff, CEPAC member

Date: June 7, 2025

RE: Local Funding Strategies for Bicycle/Pedestrian Network Improvements

At the April CEPAC meeting, the Committee asked that I formulate a recommendation for CEPAC's consideration regarding dedicated bicycle and pedestrian funding. This memo and the accompanying documents are in response to that request.

Dedicated funding for bicycle and pedestrian improvements must be considered in the broader context of the CEAP and, more particularly the Urban, Land Use + Transportation chapter of the CEAP. In an effort to inform the CEPAC (and potentially the Council) of the broader context, I've prepared a CEAP, Urban, Land Use + Transportation Implementation Plan (and associated executive summary) – attached.

The ULUT Implementation Plan and its recommendations will be considered at upcoming CEPAC meetings on:

June 12th – dedicated bicycle and pedestrian funding (Section 6)

July 10th – Transportation System Plan (Table 11) – CEPAC recommendations

October 9th – Land Use (Table 10) – CEPAC Recommendations

I would encourage members to read, in advance of the June 12th meeting, the first five pages of the Executive Summary (or alternatively pages 1 through 24 of the ULUT Implementation Plan) and then Section 6 (pages 25 – 31). In this way members will have an understanding of both the needed changes in land use and transportation as well as transportation funding. The funding section describes possible funding sources, the estimated cost per unit (household, gallon, assessed value, etc.) and the expected annual or total revenue.

Securing a dedicated source of bicycle and pedestrian funding will require multiple steps and, by necessity, include the community. It is for that reason, that my recommendation does not include selecting a specific funding source or multiple funding sources. Instead, I recommend that the CEPAC recommend to the City Council that the Council initiate a planning process by appointing a Transportation Financing Task Force; made up of members of the city's standing committees and citizens at large. It is anticipated that the Task Force would review and analyze the funding alternatives based upon myriad criteria (including ease of administration, equity, etc.), and formulate a recommendation to the City Council regarding dedicated funding for bicycle and pedestrian improvements.

Recommended Motion: I move that CEPAC recommend to the City Council the appointment of a Transportation Financing Task Force to:

- 1) investigate and analyze dedicated bicycling and pedestrian improvement funding sources, and,**

2) to task such committee with finalizing their recommendation to the Council no later than July 2026.

This timing would allow consideration of the new funding as a part of the city's development of an updated Transportation System Plan (TSP). The twenty-year plan will include a financially constrained, prioritized list of transportation improvements consistent with the outcomes specified in [OAR 660-012-0155](#) of the Climate Friendly and Equitable Communities Rule. It will also compliment the timeline for development of Ashland's 2027/29 biennial budget.

Background

Ashland's existing transportation funding stream is inadequate to address the current pavement management and operational needs of the transportation system, AND improve the system to make bicycling and walking practical, efficient and safe ways for people of all ages and abilities to get around Ashland.

Approximately 70 percent of residents are served well by the city's current transportation system; they use a car. But for an estimated 30 percent of the city's residents, driving is not an option:

- they are too young to drive,
- elders may have aged out of driving,
- disabilities prevent some from driving,
- others can't afford to own a car (now estimated to be \$1,025 per month), and
- some, prefer not to drive.

Meeting the transportation needs of everyone in Ashland is complicated by a bias, for the past 100 or so years, toward auto-centric roadway investments and [Euclidian zoning](#). Combined they serve to make auto travel convenient, often necessary, and make alternatives difficult and dangerous.

While some may say that Ashland is bicycle and pedestrian friendly (which it is compared to our city peers), the reality is that most people who bicycle in Ashland are "strong and fearless" bicycle (accounting for roughly seven percent of the population). They are willing to risk life-altering injury of death by riding in proximity to autos and trucks. In contrast, upwards of [50 percent of the population](#) would use a bicycle for some of their in-town trips if we had a complete, all ages and all abilities bicycle network. They are afraid to share the street with cars/trucks.

Oregon's land use planning laws require cities in Oregon to improve the extent, function, and design of bicycle facilities to reflect the needs of "all ages and abilities" ([OAR 660-12-0610](#)). That includes everyone, not just those brave enough to share the streets with cars. Similarly, the Rule requires cities to plan for a complete pedestrian network ([OAR 660-12-0510](#)). Clearly, the city's existing bicycle and pedestrian networks fail to meet the state standard.

But a great plan is worthless if not implemented. That's where the challenge lies. Virtually all the city's existing transportation funding is dedicated to maintaining and operating the existing streets: filling pot

holes, sealing cracks, adding chip seals, replacing or reconstructing the asphalt, overlays, painting crosswalks, replacing signs, sweeping and plowing snow. There is too little money left over to create the bicycle and pedestrian networks that are needed to make these modes of travel practical, safe and efficient.

Following a Historic Precedent

History has an odd way of repeating itself. Below is an excerpt from an October 1, 2007 City Council Study Session – Transportation Financing Task Force Recommendations. It should be noted that many of the Task Force’s recommendation have been implemented.

The Transportation Financing Task Force recommends implementing all or some portion of each of the following funding options:

1. Adjust SDCs with revised TSP and CIP; include both reimbursement and improvement rates
2. Implement other charges / fees as acceptable to Council
 - a. Partial food and beverage allocation to Street Fund (existing or with the increased base)
 - b. Regional gas tax (with Jackson County)
 - c. Local or regional vehicle registration
 - d. Increase business license fees for those with heavy vehicle/truck activities
 - e. Bicycle registration
3. Look at the option to use Transient Occupancy Tax fees to supplement tourism impacts for boulevard and downtown landscape maintenance costs
4. Increase transportation utility fee to meet all or a portion of the debt service gaps
5. Challenge staff and citizens to identify behavior changes or incentives that will reduce the use of automobiles and provide financial incentives to broaden alternative transportation strategies.
6. Explore offsets or the sale of “carbon credits.”

In addition to looking strictly at funding objectives, the Task Force felt strongly in the importance of the overall transportation system and helping to reduce the reliability in the traditional automobile use. Some of the funding mechanisms that were recommended above allow focus and exploration on the behavior changes and re-emphasize the Transportation Element: “...*The focus must be on people being able to move easily through the city in all modes of travel. Modal equity then is more than just a phase. It is a planning concept that does not necessarily imply equal financial commitment or equal percentage use of each mode, but rather ensures that we will have the opportunity to conveniently and safely use the transportation mode of our choice, and allow us to move toward a less auto-dependent community.*”

source: [2007-1001 Study Session Packet](#)

WHY CHANGE URBAN, LAND USE AND TRANSPORTATION?

It is not just about climate

- Increase the supply of housing.
- Make Ashland more affordable.
- Increase diversity.
- Give people a choice as to how they travel around town.
- Make the transportation system safer for everyone (including auto drivers).
- Improve public health.
- Make Ashland more attractive to families.
- Give kids transportation independence.
- Improve academic performance (i.e. test scores).
- Boost the attractiveness of SOU and boost enrollment.
- Improve business success.
- Boost economic development.
- Reduce the cost of living for people choosing to reduce their auto dependence.
- Reduce climate damaging emissions.
- Reduce pollution from transportation (VOC's, particulate matter and noise).
- Conform to the Oregon Climate Friendly and Equitable Communities Rule.
- Reduce traffic congestion.
- Free-up parking downtown.
- Match Ashland's housing supply with employment demand and employee characteristics.
- Help to improve the quality of life for Ashlanders.
- Boost tourism.
- Achieve "vision zero" and eliminate serious injuries and death caused by motor vehicles.
- Others??

Phase-out of Gas-powered Lawn and Garden Equipment

Request from the Climate and Environment Policy Advisory Committee for Staff Time in 2025

Based on the work done to date, detailed below, CEPAC requests Ashland City Council authorization for staff time to support the Phase-Out of Gas-powered Lawn and Garden Equipment. Staff time will be required to support Phases 1 and 2 (outlined in more detail below) in 2025/2026; the time required for Phase 3 will depend on the effectiveness of these initial efforts.

The Committee's work-to-date on the phase-out of gas-powered lawn and garden equipment (GPLG) is reported below:

- 1) CEPAC's recommendation regarding the phase-out GPLG
- 2) Pertinent Climate and Energy Action Plan (CEAP) strategies and goals.
- 3) Relevant sections of the Climate and Environment Policy Advisory Committee Charter
- 4) Approach and community engagement related to the GPLG phase-out
- 5) Air Quality Impact of GPLG
- 6) Health Impacts of GPLG
- 7) Climate Change Impact of GPLG
- 8) Noise Impact of GPLG
- 9) Appendix A – Public Outreach results
- 10) Appendix B – City of Bainbridge Island Sample Ordinance
- 11) Appendix C – Report from University of Arkansas Office of Sustainability
- 12) Appendix D – Electric Leaf Blower Sample Incentive Program (Rhode Island)

Recommendation - the phase-out of gas-powered lawn and garden equipment (GPLG)

The following phasing plan is anticipated to begin in fiscal year 2026 and be completed by the end of calendar year 2030.

Phase 1 - initiate an education and information campaign focused on:

- a) adverse human health impacts of GPLG;
- b) adverse environmental impact of GPLG; and
- c) adverse climate impact of GPLG.

Specific Phase 1 educational outreach efforts could include:

- a) city newsletter articles*
- b) a link to this CEPAC report on the city's webpage
- c) information about the GPL&G equipment incentives on the city's incentive page.

*The Ashland Climate Collaborative (ACC) recently began publishing [articles on GPLG](#); the ACC effort will supplement the city's outreach.

Phase 2 – roll out incentive plan that includes:

- a) incentives for 2025 through 2027 for the purchase of battery or electric powered lawn and garden equipment; the city will offer incentives with a significant differential between residential and commercial equipment. Current incentives are listed as:

Residential Gas Lawn & Garden Equipment	\$58.76 per machine
Commercial Gas Lawn & Garden Equipment	\$361.61 per machine

- b) CEPAC recommends that the incentive for residential households (i.e. for any one residential electric account) be limited to one tool during any one calendar year and be restricted to only those tools specified and subject to phase-out in Phase 3, i.e. GPLG blowers, string trimmers, **walk behind** lawn mowers, non-commercial use of chainsaws, and hedge trimmers.
- c) CEPAC also recommends that the commercial incentives be limited to no more than two tools and four batteries per year, limited to the tools specified in Phase 3, and focused exclusively on those commercial landscape maintenance businesses that are licensed to do business in the city.
- d) assess effectiveness of current incentives; review examples of other incentive programs in other cities of comparable size; and
- e) determine whether incentives should be increased over the next biennium.

Phase 3 – CEPAC will need to establish criteria to measure the results of Phases 1 and 2; based on the outcome of this review, CEPAC will determine whether there is a need for an ordinance leading to the mandatory phase-out of GPLG blowers, string trimmers, **walk behind** lawn mowers, non-commercial use of chainsaws, and hedge trimmers. (The scope of any regulation, in recognition of equity and fairness, would apply to all GPLG equipment users but would be limited in scope to those types of equipment specifically cited in the CEPAC's recommendation.)

CEPAC anticipates that it will need to provide the same type of listening/outreach effort described below.

Staff time will also be required to:

- a) assess difficulties that city might have coming into compliance with any ordinance;
- b) assess status of phase out for institutions and progress toward a phase out by 2030; and
- c) assess improvements in electric powered equipment and battery life.

This Recommendation Supports the Climate and Energy Action Plan (CEAP)**Public Health, Safety + Well-being**

PHSW-3-1: Work with vulnerable populations to create specific adaptation strategies that address public health.

Goals and Indicators

Goals: Protect public health from air pollution and climate impacts.

Consumption + Materials Management

CM-1-1. Implement an education campaign for waste and consumption reduction strategies.

CM-1-3. Determine and implement effective ways to reduce and track consumption-based emissions.

Goals and Indicators

Goals: Reduce consumption of climate intensive food, products and services.

Cross-cutting Strategies

CC-1-1. Create a formal public outreach and education plan to inform the community about climate actions.

Goals and Indicators

Goals: Increase awareness of city climate goals and needs.

Recommendation Within the Scope of the Climate and Environment Policy Advisory Committee's Charter

The CEPAC shall be responsible for assisting the City in the following:

1. Making recommendations on strategies, actions and programs related to the implementation and updating of the Climate and Energy Action Plan (CEAP) in furtherance of its climate mitigation and adaptation goals and strategies per AMC 9.40.
4. Providing recommendations to ensure the City of Ashland's climate and environmental planning incorporates long-term social, economic and environmental goals, including social equity fo

Approach and Community Engagement

The phase-out of gas-powered lawn and garden equipment is identified as a priority on CEPAC's 2024 and 2025 work program. A subgroup of the CEPAC was formed to focus on the topic with CEPAC members Sidney Brown, Mark Morrison, and Gary Shaff who attended subgroup meetings regularly, while Bryan Sohl attended when he could. Many subgroup meetings were also attended by members of the general public who were invited to participate in the subgroup's discussions.

The subgroup met five times. One meeting included a conversation with Steve Geis, Parks Supervisor, Ashland Parks and Recreation Department. It should also be noted that Mark Morrison serves on CEPAC as the representative of the Ashland School District.

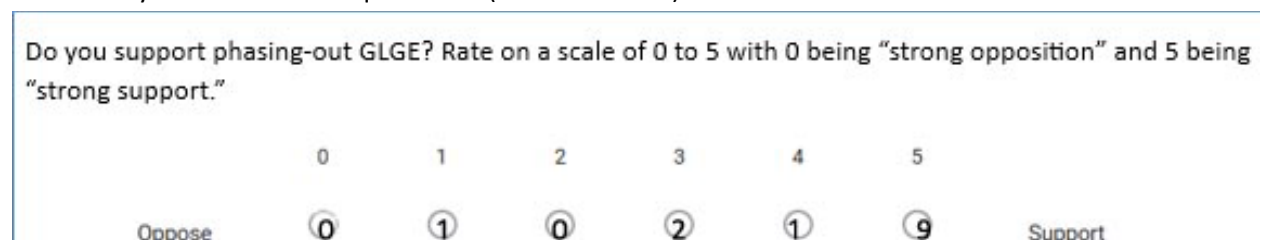
Public Outreach

On September 25, 2024 the subgroup held a public information session to elicit the general public's views on a draft GPLG phase-out recommendation. The meeting was advertised on the city's webpage and in Ashland News. First class mailed notice was also provided to Ashland landscape businesses possessing an Ashland city business. The subgroup's draft recommendation, at the time and as described in the Ashland News article, included:

- Establishing city sponsored incentives for the purchase of electric or battery powered equipment,
- Phasing-out of the following equipment on lots one-half acre or less as of 2026.
 - gas-powered blowers
 - gas-powered weed whackers/string trimmers
- Phasing-out of the following equipment on lots one-half acre or less as of 2027
 - gas-powered lawn mowers
 - non-commercial use of gas-powered chainsaws
 - gas-powered hedge trimmers
- Phase-out of the above city-wide by 2030.

The public expressed strong support for the draft recommendation. In fact, 63 percent of all respondents to the subgroup's questionnaire reported strong support for phasing-out the use of GPLG, (i.e. indicating their support at 5 on a scale of 0 to 5, with 0 being "strong opposition" and 5 being "strong support").

Community Questionnaire – question 2 (residents et. al)



Additionally, almost 70 percent of residents (et. al.) who answered the question believed the timeline for phasing-out the equipment, as listed above, "provide[d] enough time for residents, businesses and governments to transition from gas-powered to electric or battery powered equipment."

Community Questionnaire – question 3

The above listed GLGE equipment could be “phased out” by 2030 and possibly as early as 2026 or 2027 on lots of a half-acre or smaller. Do these timelines provide enough time for residents, businesses and governments to transition from gas-powered to electric or battery powered equipment?					
YES	9	NO	4	NA	2

The complete report is included in Appendix A.

Additional background on hazards of gas powered garden and lawn equipment:

Air Pollution

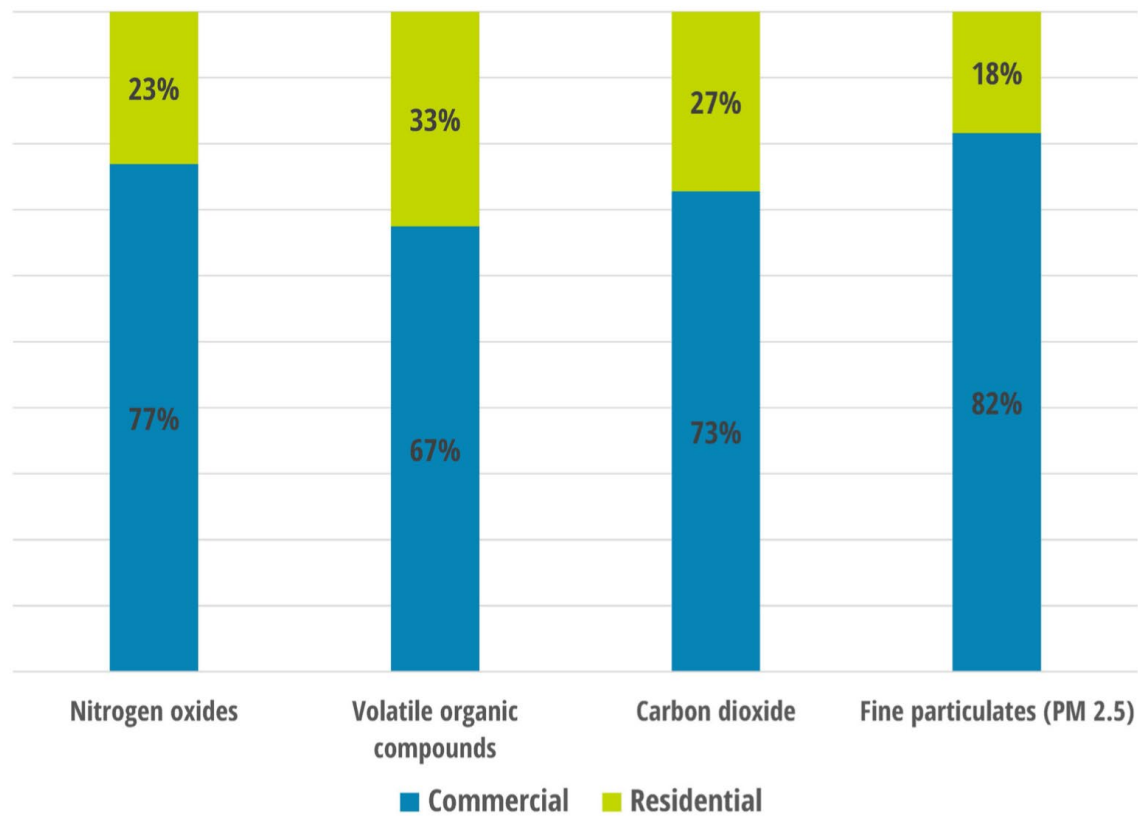
Lawn care equipment is a major source of U.S. air pollution.

“Pollution from ...millions of lawn and garden machines adds up. According to data for 2020 from the [U.S. Environmental Protection Agency](#), fossil fuel-powered lawn equipment emitted ...

- Nearly 22,000 tons of **fine particulates** – pollutants that have been linked to [respiratory ailments, reproductive and mental health issues, and even premature death](#). That’s as much pollution as would be produced annually by **234 million typical cars**.
- More than 68,000 tons of nitrogen oxides and 350,000 tons of volatile organic compounds – the two chemical components of **ground-level ozone**, which triggers [asthma attacks and contributes to premature death](#). Nitrogen oxide emissions from lawn equipment are equal to annual emissions from **30 million typical cars**.
- More than 30 million tons of **carbon dioxide**, the leading cause of global warming. That’s more climate-altering pollution than was produced in the [city of Los Angeles](#) in 2021.
- A wide array of **chemicals that cause cancer**, including benzene and formaldehyde. This pollution takes place in our neighborhoods where children, seniors and other vulnerable people live.”

(Source: <https://environmentamerica.org/center/resources/lawn-care-goes-electric/>)

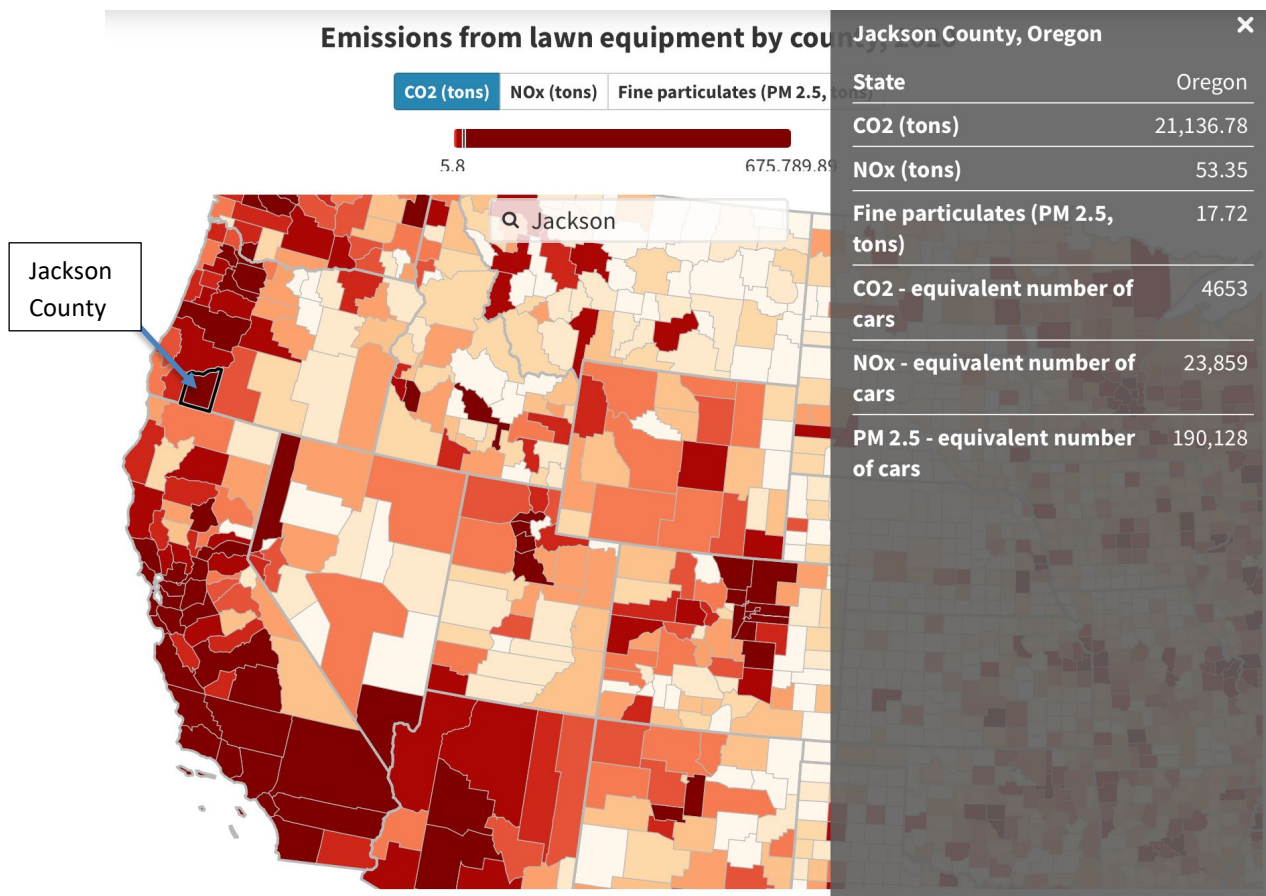
The vast majority of pollution from lawn and garden lawn equipment comes from commercially operated equipment.



Share of pollution from commercial and residential lawn equipment

(Source: https://publicinterestnetwork.org/wp-content/uploads/2023/10/Lawn_Care_Goes_Electric_Oct23.pdf)

Emissions from lawn and garden equipment in Jackson County are shown below. The adjoining map serves to show the relative contribution of each county to nationwide lawn and garden emissions. Lawn and garden emissions in Jackson County are among the highest in the state and nation.



Source: <https://environmentamerica.org/center/resources/lawn-care-goes-electric/>

Health Impacts

“The California Air Resources Board (CARB) staff conducted a study and preliminary findings indicate elevated exposures to criteria and toxic air pollutants for operators of gasoline-powered devices compared to electric devices and background levels. Of the devices tested, gasoline-powered chainsaws emitted the highest amounts of VOCs. The increased exposures to benzene and 1,3-butadiene from gasolinepowered chainsaws were estimated to produce between 41 to 158, with an average of 81, possible additional cancers per million workers exposed. Moving towards zeroemission technologies may help reduce operators’ exposure and their associated health risks.” ([California Resources Board - Exposure study summary 12 OCT 2018](#))

“Carbon monoxide is a colorless, odorless gas produced by incomplete combustion. It is very difficult to separate the potential effects of carbon monoxide from those due to other respiratory irritants. Individuals working with gas-powered engines are also exposed to high concentrations of other combustion components of smoke and exhaust. (*World Health Organization - Effects of Carbon Monoxide on Humans*)

“A large body of health science literature indicates that exposure to NO₂ can induce adverse health effects. The strongest health evidence, and the health basis for the ambient air quality standard for NO₂, is results from controlled human exposure studies that show that NO₂ exposure can intensify responses to allergens in allergic asthmatics. In addition, a number of epidemiological studies have demonstrated associations between NO₂ exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses.” [\[California Air Resources Board\]](#)

Ozone is created when heat and sunlight react with nitrogen oxides and Volatile Organic Compounds. “When inhaled, ozone can damage the lungs. Relatively low amounts of ozone can cause chest pain, coughing, shortness of breath and throat irritation. Other health hazards: premature death, cardiovascular effects, asthma, lower birth weight and decreased lung function in newborns. (US EPA - Ozone and Your Health)

Gasoline exposure is associated with renal and liver cancer, acute myeloid leukemia (AML), myeloma, heart disease and irritant effects (*Potential Health Effects of Gasoline and Its Constituents: A Review of Current Literature (1990-1997) on Toxicological Data*, L. Caprino et.al.)

“Children, seniors, and persons with chronic illnesses are especially vulnerable to the negative health impacts of GLGE emissions. Routine use of GLGE in the vicinity of residential neighborhoods, schools, parks and other public spaces may be exposing the public to unnecessary and preventable health risks.” California Air Resources Board, [Exposure study summary 12 OCT 2018](#)

Climate Change

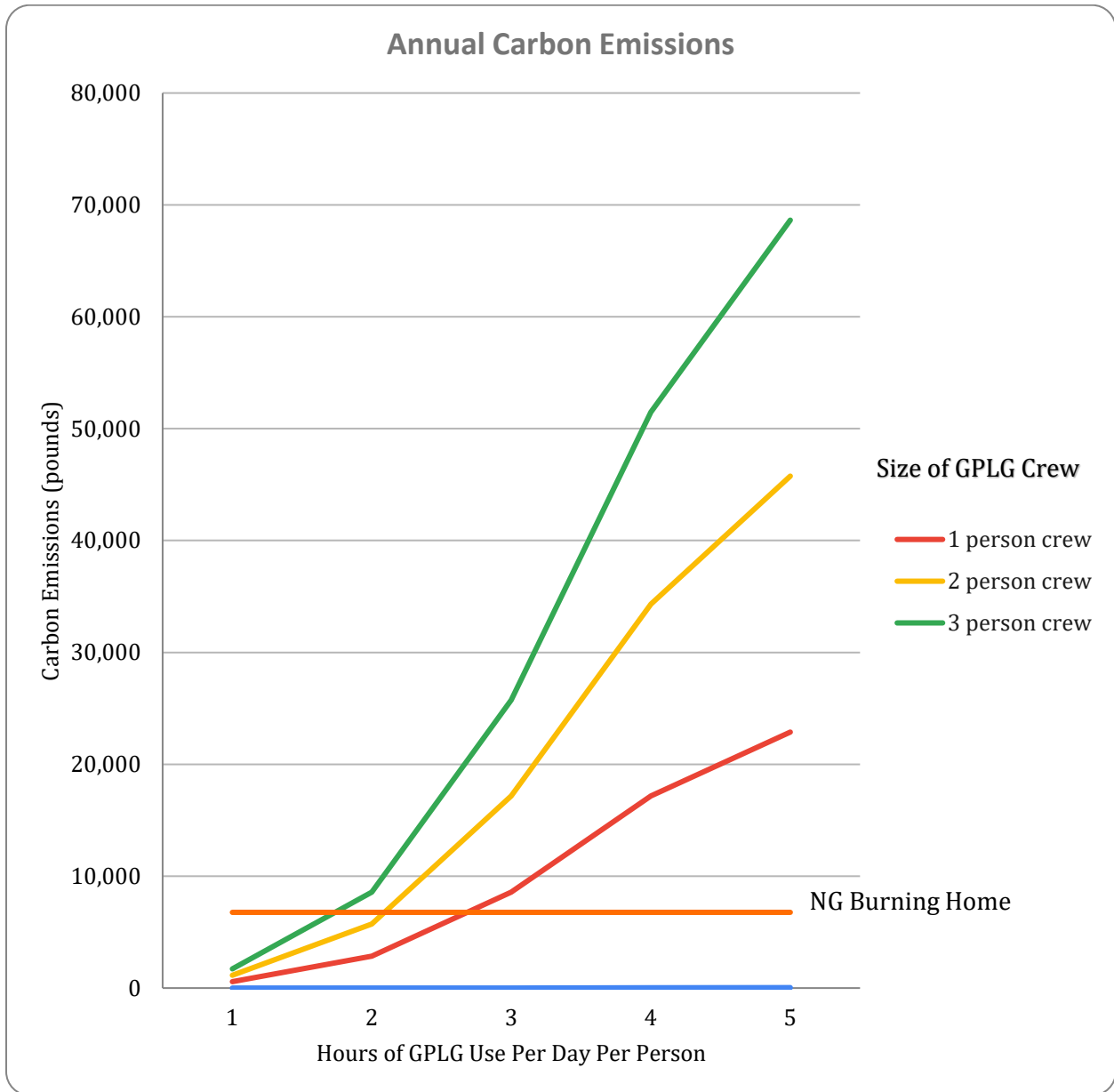
Gas-powered lawn and garden equipment typically consume between 0.5 and 1 gallon of gasoline per hour of operation. At 0.43 gallons per hour, The Stihl USA Backpack Blower consumes 0.43 gallons of fuel per hour of operation <https://www.stihlusa.com/products/technology/backpack-blower-fuel-savings-calculator/>

That translates into emitting 11 pounds of CO₂ per hour of use. This equipment and other gas-powered lawn and garden equipment also emit large quantities of fine particles and black carbon, due to the incomplete combustion of fuel. The particulates have additional global warming effects beyond the CO₂ released during combustion. In fact, “black carbon has recently emerged as a major source of global climate change, possibly only second to CO₂ as the main driver of change.”

<https://www.c2es.org/document/what-is-black-carbon/>

In comparison, the average home served by Avista consumes 47 therms per month which produces 6,813 pounds of CO₂ emissions per year. (Source: Rogue Valley Times, 11/30/2024, Avista notice of rate increase).

The annual emissions associated with a commercial lawn and garden equipment operator, depending upon the number of hours per week they operate gas-powered equipment, can dwarf the emissions from a single natural gas heated home. The following graphic helps to inform the relationship.



By comparison, the hours of use of GPLG by individual households is quite low and emissions would be much, much lower when compared to commercial operators. Assuming one hour of use per week throughout the year, emissions would be less than 10 percent of a natural gas heated home ignoring the emissions associated with spilled fuel. "EPA estimates that over 17 million gallons of gasoline is spilled as garden equipment is refueled each year.(source: <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/ard-22.pdf>).

Noise

Virtually all gas and electric powered lawn and garden equipment is noisy. The table below illustrates that fact.

Noise Comparisons – Gas versus Electric Powered Lawn & Garden Equipment

Equipment Type	Gas Operated ⁴	Electric
Lawn Mower (non-commercial)	88-94 DBA	75 ⁵ DBA
Weed Whacker (non-commercial)	94-96 DBA	88 ⁶ DBA
Leaf Blower (non-commercial)	95-105 DBA	65-70 ⁷ DBA

4. <https://www.nonoise.org/library/household/index.htm>
5. <https://cleanairlawncare.com/electric-lawn-equipment-is-quiet/#:~:text=Electric%20lawn%20mowers%20and%20lawn,drives%20away%20%E2%80%94%20it's%20pretty%20loud.>
6. <https://egopowerplus.co.uk/ego-news/the-results-are-clear-battery-power-tools-are-a-safer-option-than-petrol>
7. <https://www.leafscore.com/eco-friendly-garden-products/why-leaf-blower-bans-on-the-rise/#:~:text=Noise%20levels,range%20between%2065%20and%2070.>

It bears noting that noise is measured with a logarithmic scale. Meaning that an increase in noise by 10 DBA is a doubling of the noise levels. Consequently, it can be said, based upon the above data, that electric powered equipment is significantly quieter than their gas-powered equivalent.

“You can listen to sounds at 70 dBA or lower for as long as you want. Sounds at 85 dBA can lead to hearing loss if you listen to them for more than 8 hours at a time. Sounds over 85 dBA can damage your hearing faster. The safe listening time is cut in half for every 3-dB rise in noise levels over 85 dBA. For example, you can listen to sounds at 85 dBA for up to 8 hours. If the sound goes up to 88 dBA, it is safe to listen to those same sounds for 4 hours. And if the sound goes up to 91 dBA, your safe listening time is down to 2 hours.” American Speech-Language-Hearing Association, [Loud Noise Dangers](#)

It bears noting, as shown in the table, above, that gas operated weed whackers and leaf blowers emit noise at, or above 91 dBA while their electric equivalent are at, or below 88.

Appendix A

**Community Engagement Report
from the Small Engines Working Group
regarding
Phase-out of Gas-powered Lawn and Garden Equipment**

Updated 12/24/2024

On Wednesday September 25, 2024 the GLGE working group invited Ashland residents and Landscaping Business Owners to attend an open working session to discuss a proposed strategy for the phasing out of gas -powered lawn and garden equipment (GLGE). CEPAC members Bryan Sohl, Mark Morrison, Gary Shaff, Sidney Brown and staff member Chad Woodward participated in the meeting.

To publicize the open working session, we sent letters to licensed lawn and garden firms inviting them to the meeting; a notice of the meeting was published in the Ashland News, and a meeting notice was also provided on the city's website. Approximately six members of the public attended the first session and an additional three attended a later shorter recap later the same day.

Gary Shaff presented a brief overview of why the working group believes it's important to phase out the use of gas-powered lawn and garden equipment (GLGE):

To reduce greenhouse gas and other pollutant emissions

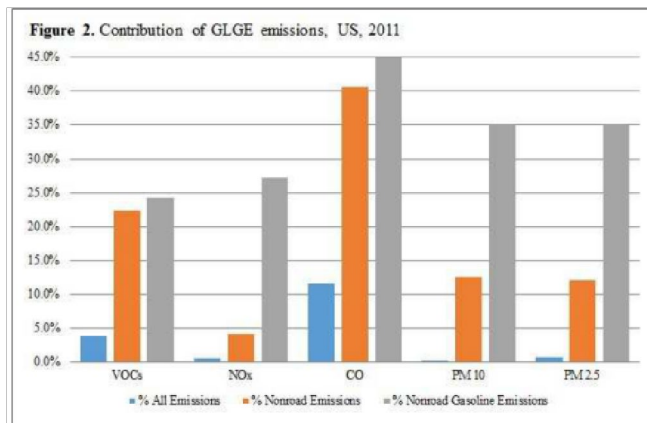
Protect human health

To protect the natural environment

Increase sustainability eQorts

Improve the overall quality of life within the City of Ashland

A graph from 2011 showing pollutants associated with GLGE was also shared.



Statistics on the relative hours of commercial users versus residential users of the most popular lawn equipment were shared, as were the related emissions of each. The noise impact was also discussed.

The working group then presented a possible phase-out strategy for equipment under 25 horsepower and invited the participants to comment. The proposed phase-out would apply to lots 1/2 acres from whenever enacted until 2030. In 2030, the ban on these five pieces of GLGE would apply to all lands, regardless of lot size, including lands owned by SOU, ESD and APRC. A short survey was also available. The results of the survey follow.

Equipment < 25 horsepower

Prohibited as of:

Gas blowers and string trimmers (i.e. weed whackers)

1/2026 (or 1 year after adoption)

Hedge trimmers, non-commercial chainsaws and lawnmowers

1/2027 (or 2 years after adoption)

The feedback from the public was positive overall but there was some concern that the phase-out should not cost the residents any money.

Residential Survey Results: (15 Surveys in hand as of 9/25; 12 residents; 2 former residents; and 1 CA resident)

Do you think climate change has impacted or is impacting Ashland?

Yes – 14

No - 1

Do you support phasing-out GLGE? Rate on a scale of 0 to 5 with 0 being “strong opposition and 5 being “strong support.”

5 – 9

4 – 1

3 – 2

2 – 0

1 – 1

0 – 1

NA - 1

The above listed GLGE equipment could be “phased out” by 2030 and possibly as early as 2026 or 2027 on lots of a half-acre or smaller. Do these timelines provide enough ‘me for residents, businesses and governments to transition from gas-powered to electric or battery powered equipment?

Yes – 9

No – 4

NA - 2

An incentive might be available to ease the transition between gas and electric/battery powered lawn and garden equipment. On a scale of 0 to 5, how important do you think an incentive is to the success of the phase-out? Rate using with 0 being “not at all” and 5 being “extremely important.”

5 – 11

4 – 3

3 – 0

2 – 1

1 – 0

0 – 0

NA - 0

How would you best describe yourself?

Resident - 12
(+ other – climate activist)

Owner – 0

Local Gov’t Rep- 1

Other: Former Resident - 2

Do you own or use GLGE?

No – 10

Yes - 5

If yes, please list the equipment that you use and the estimated hours that you use it each year (use back of page if more space is needed).

Chipper
String Trimmer – 5 hours per year
Chain saw - about 100 hours

Name (optional). If you'd like to receive updates about the phase-out strategy, please include your email address.

If you have other comments/suggestions, please use the space on the back of this page.

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Commercial landscaping company Survey Results: 5 (one via email, three by mail; one in person)

Do you think climate change has impacted or is impacting Ashland?

Yes – 4

No - 1

Do you support phasing-out GLGE? Rate on a scale of 0 to 5 with 0 being “strong opposition” and 5 being “strong support.”

5 – 3

4 – 1

3 – 0

2 – 0

1 – 0

0 – 1

NA - 0

The above listed GLGE equipment could be “phased out” by 2030 and possibly as early as 2026 or 2027 on lots of a half-acre or smaller. Do these timelines provide enough 'me for residents, businesses and governments to transition from gas-powered to electric or battery powered equipment?

Yes – 3

No – 2

NA - 0

An incentive might be available to ease the transition between gas and electric/battery powered lawn and garden equipment. On a scale of 0 to 5, how important do you think an incentive is to the success of the phase-out? Rate using with 0 being “not at all” and 5 being “extremely important.”

5 – 2

4 – 1

3 – 0

2 – 0

1 – 0

0 – 2

NA - 0

How would you best describe yourself?

Resident – (3 identified) Owner/ employee of lawn & garden maintenance firm – 4

Other: Design professional - 1

Do you own or use GLGE?

No – 2 Yes - 3

If yes, please list the equipment that you use and the estimated hours that you use it each year (use back of page if more space is needed).

All electric for 10 years

Not important – stupid question! You need to research how/where raw materials

No idea. This subject should be dropped completely

We went all electric 3-4 years ago. I have a pro mower and weedeater as back up – haven't started them in 2 years

Name (optional). If you'd like to receive updates about the phase-out strategy, please include your email address.

Jeanine Sturm of This Season's Color, Inc.
Kerry KenCairn

You will here [sic] from all of us. You want us to work for you, but not live too close & not pay too much. We will fight your racism. We will go national with this. I did.

Kim Blackwolf, Fine Day Garden Care

If you have other comments/suggestions, please use the space on the back of this page.

For professionals, a grant or such of \$800 or so would be important. To fully switch to electric costs at least \$2000 each crew.

See attached scan.

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Written Public Comment: 20 emails received: 15 for (2 from one resident) and 6 against as of 9/27/24)

For:

1) Ben S. via email: I'm glad to see this on the agenda, though also disappointed that it has taken years to get even this far. I have written letters in the past to city council, the mayor, etc. Some of my letters go back well over ten years! Adam Hanks was city manager back then and this topic has come up fairly often.

The responses I've gotten from Mayor Graham and a couple of city councilors have basically said, "it's important and we'll get to it". Well...is this that time or more of let's study it to death and then maybe make a recommendation!

The focus on this issue should be that it is a **public health issue**! So many studies have now been done showing the harm GLBs (especially) cause; including:

Really bad air pollution - fine particulates, most notably PM 2.5 emissions (the same as wildfire smoke and car emissions). Why are we allowing more of it?

In addition to PM 2.5, other dried matter blown into the air; dust, pollen, animal feces, molds, etc

Noise pollution - very high decibels from these single stroke engines can cause hearing loss. And what about the workers (often Landscapers with little or no ear protection). How much do these workers (or their employers) value their own health?

Contributes to high stress in humans (animals too). Try keeping your windows open on a pleasant day while 1 or 2 GLBs are running next door or even down the street. The noise can easily be heard a quarter of a mile away!

Quality of life! Who doesn't get that?

Messes up gardens and landscapes - destroys pollinator habitat, soil erosion and compaction. Leave some leaves for mulch, for insects and birds!

I know people don't like "bans", but the greater good for all citizens should take priority. NOT the minority (Landscapers, other businesses, some homeowners, etc). Businesses should not be able to dictate what happens with this issue.

The idea of offering incentives would probably help. Voluntary actions only go so far and is usually never enough. A smart and benevolent government can and should make this an issue of health and safety that applies to all!

Oh, and there's one other thing - these fossil fuel machines add to global warming!!!

I could go on Chad but I've done this many times, and I feel to no avail. I was going to attend the meeting on this today but unfortunately can't make it.



Please circulate or even read my comments to the session. I won't mind

And know that I do appreciate all of your efforts!

2) Natalie L. via email: Hello Chad. Thank you for working on this issue. I vote yes! Please ban those noisy, bad for climate change, leaf blowers. Thank you.

3.) Brad R. via email: I am the owner of Abbod's Cottages here in Ashland. We have 8 smallish lawns and lots of plantings to care for. We switched all of our equipment to electric more than 10 years ago and it has worked perfectly. No more gas cans, no more loud noise. I hope that you have great success phasing out gas powered lawn and garden equipment.

4.) Christine D. via email: Please count me in as an Ashland resident in favor of eliminating all gas powered garden equipment ASAP. The noise pollution is unbearable to me, my husband and my dogs and the environmental pollution from the fossil fuels used has got to stop.

5) Erica R. via email: I am so grateful the issue of gas powered garden equipment is finally being addressed. I live in Ashland and have for 40 years. As I'm sure you know, the environmental impact of these tools are bad. But in addition to that, the noise pollution is also a big factor especially with the awful leaf blowers. In addition, there is the fact that many users blow all their debris into the street and leave it there and make huge clouds of dust. I was alarmed to read that these changes, if there are any, might not take place. Ell

2030. REALLY????? Gas powered leaf blowers should be banned first and foremost and soon.

6) Julia S. via email: Please, please, please outlaw the use of polluting gas-powered gardening equipment, especially LEAF BLOWERS!!

They ruin the livability of Ashland, and have been outlawed in other towns and cities for some time. SURELY they exceed permissible noise levels??

7.) Margery W. via email: We have our own battery electric composting lawn mower, but recently it broke and we are aging. We'll get it fixed or replaced soon. But my husband insisted on hiring lawn maintenance people for our large front yard during the many years even when our lawn mower worked, though he would mow our back yard with our electric mower. We have a large front yard with three 50-year-old healthy trees that grew up with a lawn, and letting parts of the lawn grow dry resulted in one of the trees starting to die.

We are all for personal mowers and other equipment being electric. Unfortunately, lawn maintenance people so far have needed gas-powered because they do maintenance all day. Perhaps some day this equipment can run on relatively lightweight batteries that can be easily replaced periodically during the day and then charged in the evening. The availability of such should be researched, and certainly there would be a market for it if someone were to develop it. Cities should advocate for that.

I insisted that our lawn maintenance people mow over our many fall leaves. The fight against noise and air pollution would be greatly helped by banning gas leaf blowers. Educational efforts should be held to inform residents on using composting mowers to mow leaves also. Leaves and clippings help grass retain water, form mulch preventing weeds in other landscapes, and help birds and other animals by providing good habitat for worms and other benign organisms.

Leaf blowers also dry and heat the ground, increasing fire and drought probability. The increase in airborne allergies correlates to the time gas blowers became popular. Such a ban will increase the desirability of Ashland as a home.

Thanks for considering these points, and for your help in bringing up the issue again for Council consideration!

8.) David L. via email: For the record, I attended a meeting of Ashland's Climate and Environmental Advisory Committee when the group discussed the potential of phasing out use of gas-powered leaf blowers/mowers on smaller properties. I SUPPORT such a ban. Thank you.

9.) Udo G. via email: Please support the phasing out of gas-powered lawn and garden engines. We better do it today than tomorrow.

These little stinkers have no catalytic converters and contribute to the carbon monoxides destroying our earth.

Thank you for your consideration and help.

10.) Manual A via email: Just read about the meeting tomorrow in Ashland News. I cannot attend but would like to say that this sounds like a great idea. Reducing carbon emissions, decreasing noise pollution, and decreasing overall demand for fossil fuels are all benefits of this proposal.

Please consider options to making realization of this plan a likely outcome. Whether it is phasing in, step-wise, or whatever compromise, it is worth pursuing.

Thanks for the work.

11.) Leslie W. via email: I'm sure not all Ashlanders will agree with my sentiments on the subject PhaseOut. But, when I heard this item was on the City of Ashland's agenda, my reaction was:

HURRAH HURRAH! HURRAH!

I lived in Alameda, California for 26 years. The island is flat and, at any given time, rather than hearing water lapping the shores of San Francisco Bay (across the street from my house or the lagoon waters gently swirling (right behind my house), all I could hear was one of these hideous gas-powered contraptions as I was starting my day. It wasn't an issue then so much as I was working across the Bay. My former neighbor told me recently that the City of Alameda has now banned gas-powered lawn equipment.

I am now retired and live in the Mountain Meadows area of Ashland (Fair Oaks Avenue) and from Monday through Friday the sound of a leaf blower reverberates throughout the neighborhood. (There are different HOAs and each one employs their own gardening service.) It is maddening. Yes, I'm noise-sensitive, BUT STILL. . . .

In conclusion, I wholeheartedly support this phase-out and hope for its speedy passage.

12.) Jack O. via email: I'm in favor of banning all use of gas powered dust blowers(that's what they really are) immediately. They are a blight on civilization and anything they actually are good for can be accomplished with a rake or broom. Most of the lawn services that use them are extremely inconsiderate about their noise and government workers mostly use them to kill time and make it look like they're busy.

I've seen them used at SOU's Sustainability Ctr(the farm), the Buddhist temple, the food coop and everywhere else that people want immaculate looking cement and asphalt. All other gas powered engines can be justified so don't wait to debate the issue ad nauseum. The idea that yard maintenance can't be done without them is completely absurd as anyone over 50 could tell you as they remember when they didn't exist

13.) Conde C. via email: I write to support the proposal to phase out gas powered lawn equipment. This should also apply to tracts larger than one half acre. Electric powered equipment can be used on larger tracts also. Why exempt them?

14.) Jack R. via email: I live in Ashland at the north end of town and frequently walk to town and around the neighborhoods. Of course through the years the use of lawn maintenance equipment has vastly increased becoming sometimes almost oppressive. And personally I am speaking mostly about leaf blowers. The pollution effects are well known I think but I especially despise the noise. It's horrible and everywhere. Am listening to it now at apartments near my home. And often for what? To blow dust and debris into others' yards or into the street. I see someone using a rake and want to give them some kind of reward. And waiting until 2026 or 7 or (yikes!) especially 2030 seems useless. Other lawn equipment is important for pollution reasons but I don't think it is unreasonable to focus especially on leaf blowers as they are so obnoxious. Thanks for reading. Jack Richard

15.) Jason H. : by mail. See attached scan

Against:

1.) Marty C. via email Please add my comment

Please do not force a phase out, It will backfire and cause people to resist other climate measures.

Any phase out should start with the city parks and other properties to understand the feasibility before imposing this change on your residence.

2) Ken B. via email: I saw a post on Ashland News that discussed consideration of phasing out small engine equipment in Ashland and soliciting feedback.

I understand the appeal of such measures, however, do we have information on how much these machines contribute to pollution? The season for using such tools in Ashland is relatively short and it seems like small potatoes compared to other sources. While I have some electric equipment, the available options are not always sufficient (especially for chain saws and weed trimmers). Having adequate equipment is important to allow residents to do their part maintaining property, esp with regards to fire safety.

I wonder whether these goals could be reached with more directed measures/lower hanging fruit. For example, city departments could phase out gas-powered equipment as I suspect that represents the most year-round usage. In addition, incentive programs without a ban to replace gas-power with electric might serve as more of a carrot vs stick approach.

A total ban seems a bit ahead of its time, especially before our electric supply is produced with clean energy.

Thanks for your time and attention to this issue. Just offering my 2 cents.

3.) Mark B. via email: The city has more important issues at hand than someone using a gas-powered lawn equipment. My first comment would be discrimination against small property

owners. Since my lot is smaller than ½ acre, I don't have any rights to choose what equipment I want to use? Doesn't seem equitable and I will probably lawyer up if it comes down to lot size.

I would ask for actual data that shows that by me using a gas-powered lawn equipment how it is going to damage the atmosphere. If I read my numbers correctly, a passenger car emits 4.6 metric tons of CO₂ whereas a piece of lawn equipment emits 88 pounds. I work from home, drive less than 3,000 miles per year, walk to some areas (not really liking that due to cyclist not caring about pedestrians in crosswalks), not making up for past transgressions (a lot of complainers about GHG are from those who used to commute long distances in the Bay Area), and yet you all want me to change a piece of lawn equipment out that I use about 12 times a year?

Who is going to pay for it? My lawn mower cost almost \$1,600 (actual replacement cost \$1,599). My weed eater cost almost \$600 (actual replacement cost \$679). My leaf blower cost almost \$200 (actual replacement cost \$319). Is the city going to cut me a check for \$2,200+?

How about we start making it so that Amazon and other mail order deliveries can't take place in Ashland as they are huge GHG producers.

I will not comply with city or state governance on small gas-powered lawn and garden engines. Just state a point. If a said ordinance is passed, I will lawyer up, and will spend every penny I have to fight it.

4. Paul M. via email/attachment: What's Wrong with the Ashland Climate and Environment Policy Advisory Committee's - Strategy to Phase-out Gas Powered Lawn and Garden Equipment -?

It is fine to encourage the transition from gas-powered to electric/battery powered lawn, garden, and landscape maintenance equipment, but any attempt to enforce this via some phase-out strategy with fixed deadlines is unacceptable.

The National Emissions from Lawn and Garden Equipment paper, written by Jamie L. Banks and often cited in the proposal, relies on modeled Nonroad data from 2011 and on suspect telephone survey data: "For both data sources, the rates of replacement of older equipment by newer, cleaner equipment that meets the newer Phase 3 standards can only be approximated." So, the emission rates now, for VOC, NO_x, CO, PM 10, and PM 2.5, are probably much lower than those cited in the study. This, in addition to the fact that the results are from computer models, means they should be received with a healthy dose of skepticism. Furthermore, Banks asserts that: "By 2018, the annual tonnage of ozone precursors, VOCs and NO_x, emitted by GLGE is projected to decrease substantially from 2011, as more of the in-use fleet becomes represented by equipment built to meet EPA nonroad emission standards."

Reducing pollutant emissions is a good goal, especially for those who make a living using GLGE, that can be achieved via education and financial incentives. In addition to the recommendations made in the proposal, Ashland could certify commercial landscapers with a "Quiet and Clean" distinction that might give them a marketing

boost. Likewise, residents who convert to electric/battery powered lawn and garden maintenance tools could also get some kind of “Quiet and Clean” sign/symbol to display at their homes.

The graph (from the Banks report) displayed on page one of the proposal is deceptive in that the scales of the three columns (All Emissions, Nonroad Emissions, Nonroad Gasoline Emissions) shown for VOCs, NOx, CO, PM 10 and PM 2.5 are based on different domains. “All Emissions are defined as all emissions from stationary and mobile sources, **excluding biogenic and naturally occurring emissions.**” The percentage of Nonroad Emissions is a percentage of “All Emissions” and the percentage of Nonroad Gasoline Emissions is a percentage of Nonroad Emissions. All three percentages are shown against the same vertical axis as if they all applied to a common reference domain, which they do not. This serves to visually exaggerate the amount of Nonroad Emissions and Nonroad Gasoline Emissions. If they had been shown relevant to the source domain for “All Emissions” they would barely appear above the horizontal axis, if at all. The fact that biogenic and naturally occurring emissions are excluded from “All Emissions” makes it impossible to draw any meaningful conclusions from this data.

The proposal cites a 2023 study that estimates that GLGE produces 441,000 tons of carbon annually in Oregon. This report is based on a modeling exercise performed by a group of climate change activists, and it has not been peer reviewed, thus its conclusions need to be taken with a grain of salt.

The proposal mentions GLGE Health Impacts quoting from the above-mentioned Banks document. Again, we see the proposal relying on an outdated modeling study that confesses that “no studies of grounds maintenance workers were found”. I agree that it is advisable for commercial landscapers, who are exposed to the pollutants from gas-powered equipment every day, to consider using personal air and noise filters, but for the average homeowner with a much more limited exposure, the risks of adverse health impacts are vanishingly small. Has CEPAC or Ashland conducted any measurements of their own that demonstrate the “drit” of GLGE emissions from one residential lot to another, or from the property of a public agency (Ashland School District, City of Ashland, SOU) to the surrounding residential areas?

The proposal asserts that GLGE use by public institutions will have less impact on neighboring properties, but this has not been measured. Never mind though, these institutions are purported to be planning to phase out GLGE by 2030 without the city’s intervention. What evidence is there that the Ashland School District, City of Ashland, SOU, or any other public institution in Ashland has plans to phase out GLGE by 2030? And if they do have plans and have made that decision without threat or coercion from the city, why can’t we draw the same conclusions about the residents? Once they become better informed about the potential risks, they may decide to hire commercial landscapers that run “Quiet and Clean” operations and, especially with the incentives offered by the city in the proposal, they may also decide to phase out their use of GLGE.

The proposal includes a list of equipment that will not be subject to phase-out strategies that includes mostly 4-cycle engines, which according to the outdated Banks report, account for the lion's share of VOCs, NOx CO. So, the proposal does not even address the main contributors of GLME emissions.

It is important to include batteries in the consideration of the environmental costs of gas-powered versus electric/battery powered equipment. The rare earth minerals needed to produce the hundreds of millions of lithium batteries that would be required to replace all gas-powered lawn, garden and landscape maintenance equipment will come at a high environmental cost. And in places like the Democratic Republic of the Congo, from the bare hands of virtual slave laborers including women and children.

In summary, the strategy of enforcing a prohibition on the use of gas-powered lawn, garden, and landscape maintenance equipment is unwarranted. The goals of reducing pollutants and creating a healthier environment for those at high risk (commercial landscapers) can be achieved through education and incentives.

5.) Mike S. via email:

My name is Mike S. and I am a third-generation Ashland resident. I am writing in regards to the notice about the strategy to "phase out" gas-powered lawn equipment in the city of Ashland—as listed in the Ashland News. I understand that a meeting is scheduled for Wednesday, September 25th, at 5 pm. Due to previous commitments, I will be unable to attend. I am writing because I believe that my thirty-five years of experience in small lawn care machinery—which encompasses gas, battery, and electric machinery—allows me to provide a slightly different, yet critical, perspective in this matter. After considering the proposed strategy, I have a few concerns to address. First, I worry about the conflict of interest this proposal brings, as the City of Ashland is the sole provider of electricity, thereby limiting the citizens and forcing them to use one product.

As a long-Eme resident, I can attest that this is not the first Eme that the city has "strong-armed" any potential competition. When Dom Provost wanted to build a second golf course—creating potential new jobs and revenue streams for our citizens—the city provided resistance by making it nearly impossible to obtain street access or permits. It should be noted that the city owned Oak Knoll and had a very tangible conflict of interest.

Gordon Brown was another victim of the city's over-reach. He attempted to provide the city with additional emergency services, and was told that if he did not sell to the city, he would not be allowed access to Ashland's only airport—another city resource.

It is concerning to see that the city has a history of trying to force out merchants and other "perceived competition." It would appear that this new "phase out" of gas-powered lawn equipment is just another instance, however, this Eme it impacts far more individuals. People of Ashland have spent hundreds, if not thousands of dollars on gasoline-powered machinery already. Now, the city is trying to force them to buy new pieces of equipment with a known shorter life span at nearly twice the price. In an already delicate economy, this is unconscionable. Not to mention, this will also undoubtedly result in the loss of local jobs and could even prompt unforeseen lawsuits.

Many people are unaware that for the past several decades, Oregon has set the guidelines for purchasing small gasoline-powered lawn equipment using California's advanced C.A.R.B. (California Air Regulatory Board) standards. These standards are far more advanced over any state standards. These engines are extremely efficient and produce minimal emissions.

Currently, there are numerous problems with operations and repairs of battery or electric lawn equipment. With electric equipment, you must drag a heavy-duty electrical cord around while mowing or cutting. Most home extensions are not suitable or heavy enough to provide the proper power to the electric motor and will result in premature failure. These motors are double-insulated. They require two layers of non-insulation at any one point, so as not to shock the customer. In order to test the shock resistance of these units, they must be tested in a factory that can provide this high-voltage testing. Currently, there is no such facility in the state of Oregon. These units would need to be sent away or thrown out, creating additional costs for customers and higher levels of waste.

Likewise, battery-powered lawn equipment is powered by a battery that is made in China—just like many of the EVs on the market. The unscrupulous mining of Cobalt and Lithium, as well as the strip-mining procedures used by the Chinese government are just a few of the current issues with these machines. Repairs cannot take place locally, and this again, places an unnecessary burden on the everyday citizen.

Another issue to consider is the City of Ashland's Eered charges of electrical use. Not only do you pay more for electrical the more you use, but you also pay more per kilowatt as you use more. The grid was originally set up on a small family format. With a larger family, it would be impossible to get a livable power, water, or sewer bill due to the number of utilities required for just basic needs. This continues to be a hardship on larger families and making our communities less inclusive.

Trying to force citizens of Ashland to use electric water heaters, electric appliances, electric lawn equipment, and electric vehicles will create an unnecessary problem. The grid from all that additional electricity will get over-used and we will face bond issues for bigger electrical plants. Piling on top, the additional electrical requirements for up-and-coming Artificial Intelligence—which is estimated to require double the electrical power currently provided—our community will be facing some very serious issues.

I also worry that the households that currently utilize solar panels will find the added drain for these tools to be more than most panels can keep up with.

Ater much research, and with my many years of experience, I believe that this is not the right direction for our city. If this bill does pass, I would expect that the city would need to sell off their control of the electric utilities, so that any undue conflict could be resolved.

6.) From Tomas M. via email: I don't think electric powered tool are the way to go.. yet. I am a landscaper and electric tool have not been yet built to a heavy duty standard. I just purchased a \$600 backpack leaf blower from ace. The electric one doesn't get the job done when it comes to commercial use. Health wise, I read about people supposedly feeling the exposures to cobalt in electric cars

I don't

We are in a position to go in that direction Electric garden tool still not ass sturdy Please listen to the actual people who use, expends money and repairs yard equipment Please feel free to contact me if you have any questions
641-350-2236
Tomas

Strategy to Phase-out Gas-Powered Lawn and Garden Equipment (GLGE)

The strategy establishes a timeline to phase-out the use of gas-powered blowers, weed whackers, lawn mowers, hedge trimmers, and non-commercial chainsaw use. This questionnaire is intended to gather community input. Please consider sharing your ideas and perspectives about the strategy.

1. Do you think climate change has impacted or is impacting Ashland?

☒ YES

☐ NO

AND THIS WILL MAKE IT WORSE!

2. Do you support phasing-out GLGE? Rate on a scale of 0 to 5 with 0 being "strong opposition" and 5 being "strong support."

0

1

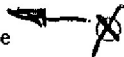
2

3

4

5

Oppose



Support

3. The above listed GLGE equipment could be "phased out" by 2030 and possibly as early as 2026 or 2027 on lots of a half-acre or smaller. Do these timelines provide enough time for residents, businesses and governments to transition from gas-powered to electric or battery powered equipment?

☐ YES

☒ NO

4. An incentive might be available to ease the transition between gas and electric/battery powered lawn and garden equipment. On a scale of 0 to 5, how important do you think an incentive is to the success of the phase-out? Rate using with 0 being "not at all" and 5 being "extremely important."

0

1

2

3

4

5

Not at all



Extremely Important

5. How would you best describe yourself?



Resident (homeowner/renter)

67 YEARS



Owner or employee of a lawn and garden maintenance firm

LANDSCAPE DESIGN-
CONSTRUCTION



Local or state government representative



Other - please list

6. Do you own or use GLGE?

☒ YES

☐ NO

7. If yes, please list the equipment that you use and the estimated hours that you use it each year (use back of page if more space is needed).

NOT IMPORTANT - STUPID QUESTION!
YOU NEED TO RESEARCH HOW/WHERE RAW MATERIALS

8. Name (optional). If you'd like to receive updates about the phase-out strategy, please include your email address.

YOU WILL HERE FROM ALL OF US, YOU WANT
VS TO WORK FOR YOU, BUT NOT LIVE TOO CLOSE \$,
NOT PAY VS MUCH. WE WILL FIGHT YOUR RACISM!
"WE WILL GO - I DID -
NATIONAL"
WITH THIS

FOR BATTERIES ARE EXTRACTED & WHAT HAPPENS
TO THESE AREAS, WHERE DOES THE POWER
TO CHARGE THESE BATTERIES COME FROM?
HOW LONG DO THEY RUN? (30 MIN., 45 MIN.,?) -
BEFORE NEEDING ANOTHER CHARGE FROM
"THIS" SOURCE? LITHIUM, CADMIUM, LEAD,
COBALT, NICKEL!!!

PBS CLAIMS "ALL SAFE" IN THE STATES,
BUT WE ARE GLOBAL. THESE OTHER COUNTRIES
HAVE VERY-EXTREMELY 'LAX' CONTROLS ON
MINING (IF ANY) AND THEY ARE KNOWN
TO USE CHILD LABOR AS WELL. THEY
POISON WATER SUPPLIES, RUIN FERTILE LAND,
KILL MILLIONS OF ORGANISMS & CREATURES
AS WELL. SOUNDS GREAT ON THE SURFACE,
BUT WHEN THE ULTRA-RICH WORK THEIR
EXTREME MARKETING, IT IS IMPORTANT
TO STUDY & RESEARCH. THEY ONLY CARE
ABOUT MONEY, NOT OUR PLANET!
WHAT ABOUT LANDFILLS FULL OF MOWERS,
BLOWERS, CHAINSAWS, ETC. & FINALLY, THE
BATTERIES THEMSELVES!

I ALSO BELIEVE THIS TO BE CRITICALLY
RACIST! HOW MANY POOR LATINO'S ARE
YOU GOING TO PUT OUT OF BUSINESS? WILL
THEY RECEIVE A LIVING WAGE WORKING
FOR MORE WEALTHY WHITE BUSINESSES THAT
CAN NEGOTIATE THE ECONOMICS? SOLID GROUND
WILL HAVE A LARGE & UNDERPAID CREW!

I'M GOING TO ALERT THE MEDIA'S (SOCIAL
AS WELL) ABOUT ALL THIS & MORE!
(PARTICULARLY RACISM) IN ASHLAND!! SHAME
POORLY THOUGHT OUT

Bryan Sohl
Chair, (CEPAC)
Ashland, Oregon

Phase-out-Gas-Powered Equipment

My name is Jason Holt, I am a graduate from SOU (2006) with a bachelors in Geography and a land use minor. I played Rugby those years and also coached the high school team. I started my business while attending college in order to schedule my work around my school schedule. God blessed me with the woman and home of my dreams in the Greenspring's. I have more respect than most for nature, biology and geography. I have contributed my services to this community since 2003. Reducing fire danger by removing fuel loads from homes, roofs and properties. I have kept irrigated lawns, trees and shrubbery alive and thriving all along. I have reduced the waste of water and maximized its use through drought years and none. I love the geography of our area and take pride in doing the best I can to protect Gods country. Socially, I am getting fed up with the way we are criticized for our way of life!

The use of my equipment has maximized efficiency and kept costs down for my clients in this community. The gas-powered equipment used in this field is reliable, much more Powerful than battery pack, and there for more efficient! Every business in this field, as well as myself should be given an honor for the services we provide for this community! If asked to do more with less, working with less efficiency, as you are proposing, the side effects will be a buildup of ladder fuels and increased fire danger.

The first question asked was, "Do you think climate change has impacted Ashland?". What has impacted the climate of Ashland is the filth, drugs, Feces, urine, crime and Homelessness! This town used to be safe, quant and beautiful. The time, energy, money and resources from GLGE would better benefit this community by addressing the drug and homelessness matters. The overall "Climate" of Ashland was far better before the homeless Crisis! Bear Creeks riparian areas are polluted with feces, needles, trash and God knows what else. I studied Bear Creek in college, if that waterway didn't have enough issues with nitrates, fertilizers and a lack of Beavers and pollution it is now a dump site all the way to Medford. Drug needles have been reported in Bear Creek and the Rogue River. And you want to talk about the "Climate"? Our parks are not safe for the children, elderly or any of us who used to frequent the beautiful parks of this town. Parking lots are now a peddler's market, where we are harassed daily for drug money. These people don't want food. Public and business' restrooms are locked up due to the vandalism, drugs and disrespect from this group. Super 8 was converted to a homeless encampment. The byproduct of this was APD had to use half of the laundry mat to add personnel to the area, Craving Cave had to close because people didn't feel safe in that part of town, and they lost customers.

I worked at Napa for a couple years and had to clean up feces, needles, and trash from the homeless population. I'm glad I don't work there anymore, but 2 years ago my 700-dollar blower

was stolen from the parking lot while I was around the corner picking up a pile of debris. The thief was caught on camera at the mini-mart next door carrying my blower. Cops were called and the thief was not caught or prosecuted. I am a contributing factor to this society who has to deal with theft, vandalism, trash and now the Ashland Climate Committee is after my livelihood?

Gas powered Weedeaters are the most efficient tool for controlling the grass. I often put 10-12 hours a day on those machines in the spring reducing fire danger before the 4th of July. Battery powered weedeaters cannot keep up with me! I have plenty of weedeating to be done if any of you want to try your hand with your battery powered equipment.

The saying I heard from the high school kids when I coached rugby holds true, "Ashland is 7 Sq. miles surrounded by reality". Limiting the process by which gas powered equipment for yard maintenance is used will not have a viable impact on the overall climate. This is a microcosm of regulation due to the worldwide use of fossil fuels. The result will be business' moving out of Ashland, leaves and debris will build up very quickly. This will cause an increase of ladder fuels which will make Ashland even more of a tinder box for fire danger!

To answer the third question and sixth questions, the timeline given is asked as if I will have no choice to do business in Ashland without conforming to your policies. I have been a contributing factor to this community for over 20 years without any issues, until now. I have found a use for battery powered equipment, It consists of drills, Sawzall's and skill saws (if the job is small enough for their use).

Will Ashland be able to provide enough power for the E.V.'s and landscapers? Ashland's power is subject to the snow and rain fall in the Greenspring's. The water from Hyatt lake fills Keene creek Reservoir, where it is then sent through the mountain to dump into Emigrant creek to produce the power you use. Can you assure me that there will be enough water through drought years to generate the power needed to charge batteries? And if one runs out of stored batter power and has no more batteries then what is your solution to that dilemma? Are gas and diesel vehicles going to be next on the list of "phasing out"? Are you going to be able to make a significant impact on the environment with all these regulations? Or do you agree with me that there are more important issues facing Ashland?

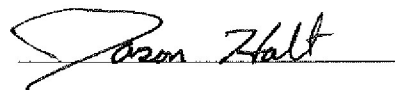
These regulations are a drop of water in the ocean. It would be impossible to clean up all the debris from the diverse flora of this beautiful community with a hair dryer or rakes alone. Is this a "feel good" set of regulations, or can you provide the public factual data on the impact of your policies?

Thank you for your time.

Jason Holt

14689 Highway 66

Ashland.

A handwritten signature in black ink that reads "Jason Holt". The signature is written in a cursive, flowing style with a horizontal line underneath the name.

Appendix B



CITY OF
BAINBRIDGE ISLAND

Climate Change Advisory
Committee Regular Meeting
May 15, 2024
5:30 PM
Council Conference Room
280 Madison Avenue N
+ Zoom Webinar

ORDINANCE 2024-

AN ORDINANCE of the City of Bainbridge Island, Washington, adding a new chapter 16.14 to the Bainbridge Island Municipal Code prohibiting the use of landscaping tools powered by internal combustion engines and regulating the use of electric-powered landscaping tools.

WHEREAS, use of small landscaping tools that are powered by internal combustion engines contributes to noise, toxic emissions, particulate matter, vibration, and greenhouse gases that negatively impact human health and the environment; and

WHEREAS, electric-powered alternatives for small landscaping tools are widely available in the market; and

WHEREAS, the Bainbridge Island City Council desires to limit the use of certain small landscaping tools that are powered by internal combustion engines in furtherance of the City's commitment to reducing greenhouse gases and providing a safe, healthy and sustainable environment.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF BAINBRIDGE ISLAND, WASHINGTON, DOES HEREBY ORDAIN AS FOLLOWS:

Section 1. Small Landscaping Tools. A new chapter 16.14 is hereby added to the Bainbridge Island Municipal Code to read as follows:

SMALL LANDSCAPING TOOLS

16.14.010 Purpose.

16.14.020 Definitions.

16.14.030 Use of Small Landscaping Tools.

16.14.040 Exception for Emergency Responders.

16.14.050 Penalty.

16.14.010 Purpose.

The purpose of this chapter is to control dust and other airborne pollution, reduce health hazards, and minimize noise pollution resulting from the use of leaf blowers and other small landscaping tools that are powered by internal combustion engines.

16.14.020 Definitions.

As used in this chapter, the following terms have the meanings set forth below:

- A. “Hedge trimmer” means a powered gardening tool used for trimming and cutting back bushes, shrubs, and hedges.
- B. “Internal combustion engine” means an engine within which fuel (typically gasoline or diesel) is combined with an oxidizer and ignited, thereby producing hot gases that drive a piston or perform other work as they expand.
- C. “Lawn edger” means a powered cutting tool used to form distinct boundaries between a lawn, typically consisting of grass or other botanical ground cover, and another ground surface feature such as paved, concreted or asphalted area, or a granular material such as sand or uncovered soil.
- D. “Leaf blower” means a tool that propels air out of a nozzle to move debris, such as leaves or grass cuttings.
- E. “Non-riding lawn mower” means a tool that uses one or more revolving blades to cut grass or other landscape material to an even height and that is not designed to be ridden by the operator.
- F. “Small Landscaping Tools” means hedge trimmers, lawn edgers, leaf blowers, non-riding lawnmowers, and string trimmers.
- G. “String trimmer” means a tool that uses a rapidly spinning flexible monofilament line or plastic line to cut grass or other landscape material.

16.14.030 Use of Small Landscaping Tools.

- A. Use of the following small landscaping tools is prohibited in the City of Bainbridge Island:
 - 1. Hedge trimmers powered by internal combustion engines;
 - 2. Lawn edgers powered by internal combustion engines;
 - 3. Leaf blowers powered by internal combustion engines;
 - 4. Non-riding mowers powered by internal combustion engines that are rated at 25 horsepower or less; and
 - 5. String trimmers powered by internal combustion engines.
- B. The use of electric-powered small landscaping tools is permitted in residential zones subject to the requirements of this section, provided, that hours of

- operation are limited to 8:00 a.m. to 5:00 p.m. weekdays and Saturdays. Operation is prohibited on Sundays and on federal, state, and City holidays.
- C. The use of electric-powered small landscaping tools is permitted in nonresidential zones subject to the requirements of this section, provided, that hours of operation are limited to 8:00 a.m. to 6:00 p.m. Operation is prohibited on federal, state, and City holidays.
- D. Cuttings, refuse, and debris shall not be blown or deposited onto neighboring properties, into critical areas (such as streams, ravines, and wetlands), into storm facilities (such as gutters, catch basins, rain gardens and dispersion trenches), or into a street.
- E. After small landscaping tool use, all debris and waste materials shall be disposed of in yard waste receptacles (if available from the local solid waste hauler), at a transfer station (if yard waste is accepted for disposal separate from garbage), or retained on site for compost or other uses. Debris and waste materials shall not be disposed of in containers designated for trash or garbage.

16.14.040 Exception for Emergency Responders.

Notwithstanding any contrary provision of this chapter, small landscaping tools powered by internal combustion engines may be used by police, fire, and public works emergency responders for the purpose of responding to emergency situations, including but not limited to, the clearing of downed trees and brush in areas needing expedient clearing for the safety of the public.

16.14.050 Penalty.

Any person or firm violating any of the provisions of this chapter for the first time shall be issued a warning by the City. A second violation by the same person or firm shall be a Class 2 civil infraction and, upon a finding that the infraction has been committed, the violator shall be required to pay a monetary penalty in the amount of \$125.00. A third or subsequent violation shall be a Class 1 civil infraction and, upon a finding that the infraction has been committed, the violator shall be required to pay a monetary penalty in the amount of \$250.00 for each such violation.

16.14.070 Education and Outreach.

As necessary, the city manager, or their designee, and pursuant to BIMC 16.14, shall provide, or contract for the provision of, education and outreach activities to

inform residents, landscaping professionals and other interested individuals about the requirements of this chapter. Education and outreach will be designed to promote natural yard care practices, effectively convey the policies underlying this chapter, describe the actions necessary to gain compliance with its provisions, and minimize the need for formal enforcement action. The city will emphasize education and outreach rather than enforcement to achieve compliance with the requirements of this chapter.

Section 2. Severability. Should any section, paragraph, sentence, clause, or phrase of this ordinance, or its application to any person or circumstance, be declared unconstitutional or otherwise invalid for any reason, or should any portion of this ordinance be preempted by state or federal law or regulation, such decision or preemption shall not affect the validity of the remaining portions of this ordinance or its application to other persons or circumstances.

Section 3. Effective Date. This ordinance shall take effect and be in full force July 1, 2026, which is more than five (5) days from its passage and publication as required by law.

PASSED BY THE CITY COUNCIL this ____ day of _____, 2024.

APPROVED BY THE MAYOR this ____ day of _____, 2024.

Joe Deets, Mayor

ATTEST/AUTHENTICATED:

Christine Brown, MMC, City Clerk

FILED WITH THE CITY CLERK:
PASSED BY THE CITY COUNCIL:
PUBLISHED:
EFFECTIVE DATE:
ORDINANCE NUMBER:

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

Health Hazards from Gasoline-Powered Lawn and Garden Equipment

- The California Air Resources Board (CARB) staff conducted a study, and preliminary findings indicate elevated exposures to criteria and toxic air pollutants for operators of gasoline powered devices compared to electric devices and background levels. The increased exposures to benzene and 1,3-butadiene from gasoline-powered equipment could lead to possible additional cancers per million workers exposed. They concluded that moving towards zero-emission technologies may help reduce operators' exposure and associated health risks.¹
- The EPA concluded that landscaping contributes 5 to 10% of all toxic air pollution. These emissions have been designated as "probable carcinogens."²
- A report in the Journal of the American College of Cardiology stated that epidemiological studies have found that environmental noise is associated with an increased incidence of arterial hypertension, myocardial infarction, heart failure, and stroke.²
- The Icahn School of Medicine at Mount Sinai acknowledges children are highly susceptible to these hazards because they breathe more air per pound of body weight per day than adults and thus inhale more of any pollutants thrown into the air by this equipment. Children's vulnerability is further magnified by the fact that their lungs, ears, eyes, and other organ systems are still developing, making them inherently more sensitive to environmental hazards than the organs of adults.³
- Gasoline-powered lawn equipment is inefficient. The California Air Resources Board (CARB) estimates that the operation of a gasoline leaf blower for one hour releases emissions equivalent to driving a car for 15 hours or 1100 miles. The air released from gasoline leaf blowers can reach speeds of 200 mph, sending dust, pollen, pesticides, mold, and heavy metals in soil into the air where they can be breathed in. Lastly, exposure to fine particulates like those emitted from GLBs was associated with an increase in COVID-related deaths. For these reasons, the American Lung

¹ Research Division. (2018). Operator Exposure to Emissions from Lawn and Garden Equipment.

https://ww2.arb.ca.gov/sites/default/files/2023-08/Exposure%20Study%20Summary%2010-12-2018_0.pdf ²
FACT SHEET: Final rule to reduce toxic air emissions | US EPA. (2024, January 2). US EPA.

<https://www.epa.gov/stationary-engines/fact-sheet-final-rule-reduce-toxic-air-emissions>

² Münzel, T., Schmidt, F. P., Steven, S., Herzog, J., Daiber, A., & Sørensen, M. (2018). Environmental noise and the cardiovascular system. *Journal of the American College of Cardiology*, 71(6), 688–697.

<https://doi.org/10.1016/j.jacc.2017.12.015>

³ Sinaixposomics. (2023, October 17). Gas Leaf Blowers are Health Hazards. Institute for Climate Change, Environmental Health, and Exposomics. <https://mountsinaixposomics.org/gas-leaf-blowers-are-healthhazards/>

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

Association recommends using hand-powered or electric lawn care equipment instead of gas-powered.⁴

Bainbridge Island Lawn Care Rebate Program Proposal

Last Updated: May 7, 2024

Purpose

The City Council will be considering an electric landscaping tool ordinance. The potential ordinance would prohibit gas engines for leaf blowers, hedge trimmers, lawn edgers, string trimmers, and non-riding mowers with less than 25 horsepower. Equity concerns have been raised at the possibility of this ordinance. Sta are proposing the following equity-driven Lawn Care Rebate Program.

Program Funding Request

Staff request \$50,000 be allocated to rebates to eligible residents. Sta also requests \$2,000 for program outreach. This \$52,000 would come from funding allocated to the Climate Action Plan. This does not include any funding dedicated to staff time.

Process

1. A resident purchases an eligible tool from participating retailers.
2. Within 30 calendar days from the date of purchase, the resident takes their old lawnmower to Bainbridge Disposal. They must ensure all fluids have been removed from the machine to be accepted. Bainbridge Disposal has offered to for-go the resident drop-off cost for program participants.
3. A resident would then complete the online rebate application and submit it to the City. The form would require the submittal of a receipt or invoice for the lawn care equipment, proof of income eligibility, and a copy of a drop-o form designed by the City and handed out by Bainbridge Disposal.
4. Sta review and either approve or deny the application. Once approved, a check would either be mailed to the resident, or they can pick up at City Hall.

Income Qualification

Income qualification will be based on [US Department of Housing and Urban Development \(HUD\) Income Limits](#) for the Bremerton-Silverdale metropolitan statistical area (MSA). The income thresholds for income-qualified incentives are 80% area median income (AMI) and below. Income thresholds will be adjusted for household size and will follow HUD 2023 Income Limits methodology. Income thresholds are shown in the table below.

⁴ Sinaixposomics. (2023, October 17). Gas Leaf Blowers are Health Hazards. Institute for Climate Change, Environmental Health, and Exposomics. <https://mountainsinaixposomics.org/gas-leaf-blowers-are-healthhazards/>

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

Bainbridge Island Lawn Care Rebate Program Income Limits								
Household Size	1	2	3	4	5	6	7	8
80% AMI	\$61,000.00	\$69,700.00	\$78,400.00	\$87,100.00	\$94,100.00	\$101,050.00	\$108,050.00	\$115,000.00

According to Census data, the average family size is 2.84 on Bainbridge Island. Rounding up to three and based on these income qualifications, this program could assist up to 1,500 families. However, not all families live on a parcel of land that requires them to maintain their lawn, nor do all families own gas-powered lawn care equipment, thus this number is a conservative estimate.

Rebate Options

Staff researched West Coast governments that currently implement a lawn care rebate program. Based on the review, staff recommend modeling Bainbridge Island's program off of the San Joaquin Valley Air Pollution Control District's *Clean Green Yard Machines* program.

The program would offer the following rebates:

- Up to \$100 for a purchase of \$200 or less¹
- \$150 for a purchase of \$201-\$350
- \$250 for a purchase of \$351+

If all 1,500 families were to participate in this program, the estimated rebate amount that would be distributed would range from \$150,000² to \$375,000,³ however, staff expect this to be a conservative estimate based on factors mentioned in the previous section.

Per the funding request, the budget would allow up the following:

Voucher Amount	Maximum Number of Vouchers Available
Up to \$100	500
\$150	333
\$250	200

Program and Eligibility Requirements

The City would implement the following program and eligibility requirements:

- Submittal of an application does not guarantee a rebate. Program eligibility is determined at the sole discretion of the City. The participant will be notified if their application is deemed ineligible.
- Applicant must be a resident at the address identified in the application.
- Limit one (1) rebate per address for every two (2) consecutive years.
- Combo kit with one power unit and multiple attachments is considered one equipment type.
- For bundle purchases of two or more pieces of eligible equipment, separate applications must be submitted for each piece of equipment. Equipment purchased as part of a bundle are eligible for separate rebates only if each piece of equipment has a separate power unit. For the first piece of eligible equipment, the rebate amount is based on the current individual retail price of that specific

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

equipment. The rebates for subsequent eligible pieces of equipment in the bundle with a separate power unit are based on the remaining balance of the purchase price of the bundle, less the current individual retail price of the first piece of equipment for which the rebate was applied.

- Applicant must submit a rebate application within three (3) months of the purchase date of the new equipment.

¹ Applicant will be responsible for a minimum of 50% of the purchase price for equipment priced \$200 or less.

² 100% participation on the \$100 rebate

³ 100% participation on the \$250 rebate

- The new electric equipment must be purchased with a power unit and from a manufacturer authorized retailer or dealer.
- Applicant must turn in a fully functional old gas- or diesel-powered lawn care equipment to Bainbridge Disposal for permanent recycling.
- Applicant must maintain ownership of the new lawn care equipment for a minimum of two (2) consecutive years following the purchase date.
- New equipment must:
 - Be new, not used, or previously owned
 - Be electric (corded or battery-powered)
 - For mowers, be push or self-propelled under 25 horsepower (or equivalent) for residential use
 - Have a minimum one-(1) year manufacturer warranty □ Lawnmowers that are not eligible:
 - Reel mowers
 - Riding lawn mowers
 - Tractors used to pull mowing equipment
 - Tow-behind mowers
- The rebate period would begin upon passage of the ordinance and end when the mandate for electric lawn care equipment begins.

Appendix C

July 2017

GAS VS BATTERY POWERED MAINTENANCE TOOLS ON THE UNIVERSITY OF ARKANSAS CAMPUS



UNIVERSITY OF
ARKANSAS
Office for Sustainability

Fischer Jones and Eric Boles

UNIVERSITY OF ARKANSAS Office for Sustainability

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

Purpose

The University of Arkansas (UA) has made a commitment to becoming carbon neutral by 2040. To meet this goal, the UA is systematically identifying opportunities to cost effectively reduce scope 1, 2, and 3 emissions. This doesn't mean that changing the way things are done is the purpose, it's to determine if there's a better method available. After reviewing the current equipment that are grounds crew utilize, we've determined that they're not only more expensive and have higher emissions but they are bad for the health of students, faculty, and staff on campus. The Office for Sustainability has done a review of the current 2-stroke engines used by our grounds crew, against battery powered alternatives.

Comparison

The Office for Sustainability compared the current model of leaf blower (Stihl 450 BR), as well as the current trimmer (Stihl 111 FSA R). For the battery powered grounds equipment we chose a Stihl BGA 85, and HUSQVARNA 436LiB battery powered leaf blowers, as for the trimmers we used the Stihl FSA 85 and HUSQVARNA 536LiLx (HUSQVARNA, STIHLUSA). The Stihl equipment is powered by an AP 300 Stihl Lithium-Ion Battery, which maintains a varying charge time depending on which equipment it is used with. The comparison is primarily to determine the capital, environmental, and societal benefits to our campus. To better find this we compared the two energy sources for each category using carbon emissions (equivalents), monetary value, and energy consumption. At the time of comparison, the 2stroke Engine grounds equipment used an Ethanol blend (E10) that is mixed into the fuel, which is the source of its primary pollutants.

Trimmers

Stihl FSA 111 R

*Stihl FSA 90 w/
AP300 Battery*

Husqvarna 536LiLx

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

<i>Power source</i>	Gas	Battery	Battery
<i>Service Life</i>	5	5	5
<i>Annual Cost</i>	\$300	\$129	\$133
<i>Annual Carbon</i>	642 Lbs.	242 Lbs.	220 Lbs.

Leaf Blowers

	<i>Stihl BR 450</i>	<i>Stihl BGA 100 w/ AP300 Battery</i>	<i>Husqvarna 436LiB w/ BLi150x</i>
<i>Power source</i>	Gas	Battery	Battery
<i>Service Life</i>	5	5	5
<i>Annual Cost</i>	\$329	\$139	\$120
<i>Annual Carbon</i>	641 Lbs.	176 Lbs.	176 Lbs.

Information pulled from Tables 2 & 3

Trimmers

During analysis of the trimmers, there was an assumed 5-year service life along with using the current Arkansas averages for gas prices and energy. Using the June 2017 regional gas price we determined the amount of money it takes to power a 2-stroke Trimmer over its life against a cleaner battery powered version. In Table 1 you will see that the amount of money it takes to operate the fuel powered trimmer, as well as the CO₂ emission far exceed that of the Battery powered version. As of 6/20/2017 the current rates for fuel were at \$2.04, and the current rate for energy consumption is \$0.09 per kilo-watt hour (Administration, U. E. 2017). Which was used to help determine the reasoning behind why the 2-stroke engine emits more carbon then the battery powered version. Due to the E10 blend associated with operating the trimmer, and there being little to no regulations on their exhaust, the blend emits very dense emissions when compared with automobile exhaust. This E10 blend can be up to 200 times

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

more polluting than the emissions of a car, and is therefore 200 times worse for the staff who breathe it. To ensure the accuracy of our calculations we used the hours, and locations of the grounds crew throughout campus to see if the usage of these machines were being used at times that would increase the maximum amount of people exposed. As for the battery powered versions of the trimmers, they don't directly emit any carbon however through the charging of its battery the power plant will emit carbon instead. To determine the proper amount of carbon emitted we used a study conducted by Environmental Protection Agency that covered the National Lawn and Garden Equipment emissions (Jamie L. Banks, P.M.). To be accurate we calculated the amount of emissions coming from the UA into the environment for each battery charge using the regions current emissions rate generated by power plants.

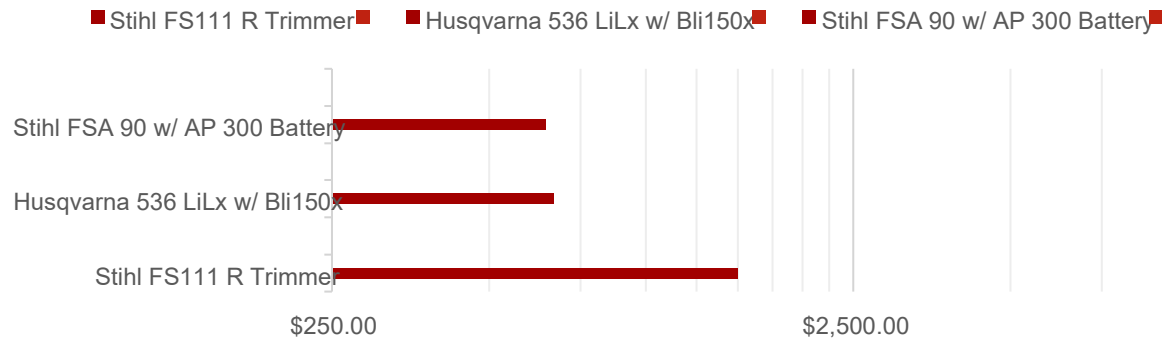
To further the investigation into the choice of battery over fuel powered trimmers, the need of knowing whether the battery powered trimmers can be sufficient enough to even pay themselves off. To figure this out a Return on Investment was calculated for each battery trimmer in relation to the Stihl trimmer currently being used. For the Stihl battery trimmer, it was found that the savings generated by switching to the battery powered version will completely cover the entire capital cost in 2.7 years after purchase. As for the HUSQVARNA battery trimmers ROI, it was found to be 2.4 years after the initial purchase. The capital benefits of switching to battery powered trimmers far outweighs the usage of the fuel powered versions, and will eventually save the university enough to replace the battery powered versions at their earliest expected end of use.

Table 2: Comparison of trimmer profiles and performance (5-year service life).

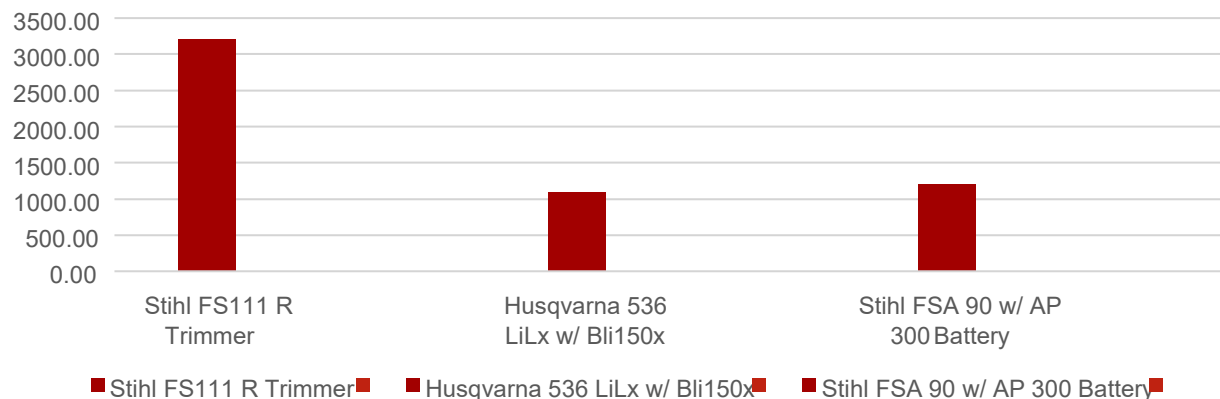
Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

<i>Model</i>	<i>Stihl FSA 111 R</i>	<i>Stihl FSA 90 w/ AP300 Battery</i>	<i>Husqvarna 536 LiLx</i>
<i>Power source</i>	Gas	Battery	Battery
<i>Estimated life</i>	5	5	5
<i>Capital cost</i>	\$380	\$200	\$300
<i>O + M cost(5yr)</i>	\$1,122	\$343	\$366
<i>Overall cost</i>	\$1,502	\$573	\$666
<i>Cost per year</i>	\$300	\$129	\$133
<i>R.O.I.</i>	-	2.7	2.4
<i>Weight Carbon emissions</i>	11 Lbs.	10.4 Lbs.	10.7 Lbs.
	3210 Lbs.	1208 Lbs.	1097 Lbs.

Trimmer Expenses Comparison



Trimmer CO2 Emissions



Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

Trimmer Profiles



Stihl FSA 90 w/ AP 300 Battery

- Runs for 35-45 minutes with battery at max
- Battery Charges in 25 minutes
- Less expensive than Husqvarna model, yet provides more power and versatility.
- Higher emission rate than Husqvarna 536



STIHL FS 111 R

- Fuel operated, longer and stronger run time
- Exhaust emissions are many times more harmful to health than a normal car
- Currently used model; highly rated
- With changing fuel costs the potential operating costs could skyrocket



HUSQVARNA 536 LiLx w/ Bli150x

- Runs for 25 minutes per charge
- Significantly cheaper than current model
- Lower CO₂ than the STIHL FSA 90
- Shorter battery life, more inconvenient

Leaf Blowers

As for the comparison of battery-powered leaf blowers to their fuel counterparts, we analyzed the current model against one from the same manufacturer. The results of the comparisons can be found in Table II seen below. If you look at the amount of gasoline it takes to fuel the leaf blower over a five-year period, letting you see how quickly the cost of refueling these can be. The amount of carbon that is emitted from the 2-stroke leaf blower is nearly double that of the carbon emitted from the charging of the battery. As for the decibels, you can see that the combustion engine makes more noise, however to make up for the loud noise it has an 80mph advantage on the battery powered models. In relation to the capital costs differences you can see where the most cost-effective model can be found. The calculations for my battery powered example include both the prices of a charger and one battery, even if you added 3 more batteries you'd still be saving money in the long run. Similar to the fuel trimmers emissions output, it has very deadly chemicals that are exhausted from the leaf blower engines. This is due to the leaf blower having both a denser and higher rate of emission. Due to the inefficiency of the 2-stroke engine you can easily see that electric Leaf blower may in fact be weaker than the 2-stroke, however it is quieter, cost-efficient, and helps combat noise pollution on campus.

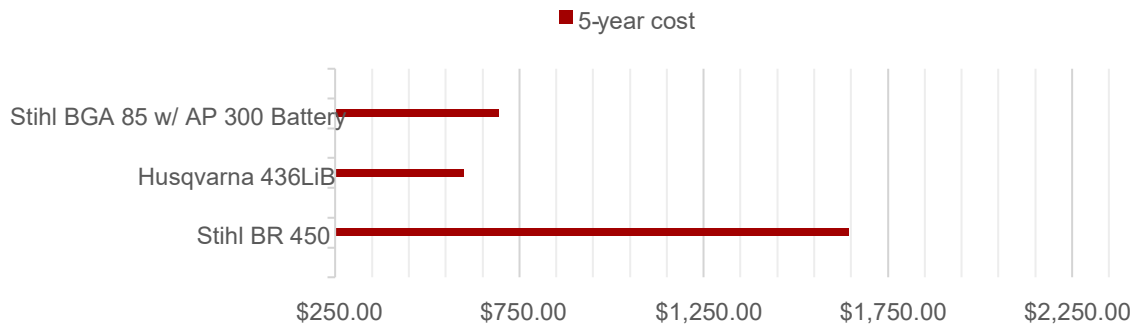
To better determine if the switch to the battery powered leaf blowers was cost effective there was a Return on Investment calculated for the STIHL and HUSQVARNA models alike. The Stihl model was found to have generated enough in savings to pay off the initial capital cost in 4.7 years, which is before the earliest expected end of use. What the HUSQVARNA model lacked in power it made up for in cost effectiveness, with an ROI of 3.26 years it was significantly cheaper than the fuel powered versions. Its ROI is nearly enough to replace the leaf blower itself after it's shortest end of use.

Table 3: Comparison of leaf blower profiles and performance (5-year service life).

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

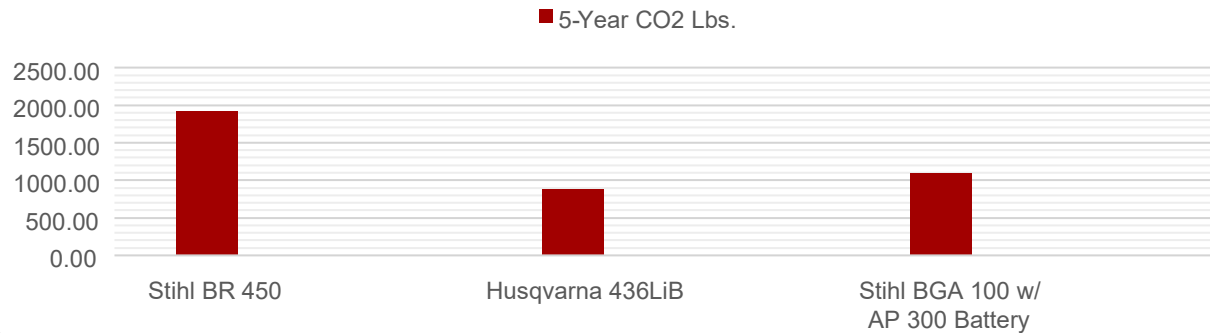
<i>Model</i>	<i>Stihl BR 450</i>	<i>Stihl BGA 100 w/ AP300 Battery</i>	<i>Husqvarna 436LiB w/ BLi150x</i>
<i>Power source</i>	Gas	Battery	Battery
<i>Estimated life</i>	5 yrs.	5 yrs.	5 yrs.
<i>Capital cost</i>	\$450	\$350	\$250
<i>O + M(5yrs)</i>	\$1,195	\$343	\$349
<i>Overall cost</i>	\$1,645	\$693	\$599
<i>Decibels</i>	\$329	\$139	\$120
<i>Air Velocity</i>	77	66	81
<i>Weight Carbon emissions</i>	184 mph	104 mph	105 mph
	23.4 Lbs.	10.8 Lbs.	8.3 Lbs.
	1926 Lbs.	1098 Lbs.	878 Lbs.

Leaf Blower Expenses Comparison



Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

Leaf Blower CO2 Emissions



Leaf Blower Profiles



STIHL BGA 100 w/ AP 300 Battery

- Less noise than alternatives
- Lower price but more emissions than alternative
- 35 minutes of run time at max output



STIHL BR 450

- Current model for the UA
- Uses a 2-stroke fuel engine
- Stronger and louder than the battery powered alternatives
- Very heavy model at 23.4 Lbs.

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024



HUSQVARNA 436LiB w/BLi150x

- Lowest amount of CO₂ emissions
- Significantly less battery life than the BGA 100, at 24 minutes run time
- Lightest version of the leaf blower choices

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Appendix D

Program Guidance Document

Posted September 30, 2024



Electric Leaf Blower Rebate

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024



Table of Contents

INTRODUCTION19

APPLICANT ELIGIBILITY20

EQUIPMENT ELIGIBILITY.....21

APPLICATION PROCESS.....22

REBATE AMOUNTS.....23

REQUIRED DOCUMENTS:.....23

TERMS AND CONDITIONS.....24

Introduction

The Office of Energy Resources (OER) is incentivizing Rhode Island landscape businesses to transition to electric leaf blower equipment statewide.

The electric leaf blower rebate program aims to encourage landscaping businesses to use electric leaf blower equipment to service Rhode Islanders across the state. By offering rebates tailored to electric leaf blower equipment, the program seeks to boost the adoption of electric equipment, reduce air pollutants from the landscaping sector, and foster environmental sustainability in alignment with the [Act on Climate](#).

OER is the lead state agency for energy policy and programs with a mission to lead the state toward a clean, affordable, reliable, and equitable energy future. OER develops policies and programs that respond to the state's evolving energy needs while advancing environmental sustainability, energy security, and a vibrant clean energy economy. OER is committed to working with public- and private-sector stakeholders to ensure that all Rhode Islanders have access to cost-effective, resilient, and sustainable energy solutions.

Incentivizing the adoption of electric leaf blowers plays a vital role in Rhode Island's efforts to combat climate change and meet the greenhouse gas (GHG) emissions reduction targets outlined in the [2021 Act on Climate](#). Traditional 2-stroke gas and diesel engines typically found in leaf blowers are known to be very inefficient and emit a large variety of air pollutants. These pollutants include nitrogen oxides, particulate matter, carbon dioxide, unburnt hydrocarbons, and other pollutants. Studies have found that operating a gas-powered commercial leaf blower for one hour emits the same amount of smog-producing pollutants as driving a new light-duty passenger car about 1100 miles – that's the same distance as driving from Providence to St. Louis, Missouri, a 17-hour ride⁵.

The electric leaf blower rebate offers numerous benefits for businesses, residents, and the environment alike. These benefits include:

- **Cost Savings:** Eligible businesses can receive \$1,000.00 or 50% (whichever is less) of the cost of an electric leaf blower and related batteries, with a limit of 2 rebates total. Additionally, eligible businesses located in municipalities with the highest asthma rates can receive an additional \$250.00.

⁵ <https://www2.arb.ca.gov/resources/fact-sheets/sore-small-engine-fact-sheet>

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

- **Noise Pollution:** Electric leaf blowers are quieter than traditional combustion engine leaf blowers, and therefore create less noise pollution.
- **Health Impact:** Switching to electric leaf blowers helps reduce air pollutants that can lead to numerous adverse health effects like asthma, cardiovascular diseases, and other respiratory diseases.
- **Environmental Impact:** Traditional leaf blowers emit a large variety of air pollutants including nitrogen oxides, particulate matter, carbon dioxide, and unburnt hydrocarbons that contribute to climate change and smog.

Rebates will be made on a first-come, first-served basis, based on adherence to application requirements and contingent on funding availability. OER reserves the right to extend, modify, or terminate this project based on funding availability and/or other factors. This is a reimbursement program, requiring applicants to cover expenses upfront and submit proof of payment for reimbursement.

For detailed information on incentives, eligibility criteria, and application instructions, please refer to this Program Guidance Document. The document may be periodically updated to clarify program requirements and improve effectiveness. Updates will be posted on the program [website at XXXXX.ri.gov](#).

Applicant Eligibility

Applicants must meet the following requirements to be eligible to receive a rebate under the Electric Leaf Blower Rebate Program.

- |
State

 - Applicants must be at least 18 years of age.
 - Only professional Rhode Island landscaping businesses are eligible.
 - Eligible businesses must be registered with the Rhode Island Secretary of
 - There is a limit of two rebates per eligible entity over the program's lifetime.
 - Qualified businesses may be eligible for an additional \$250.00 if located in a municipality with the highest rates of asthma-related emergency department visits in the state, as defined by the Rhode Island Department of Health⁶.

⁶ Municipalities with the highest asthma rates in the state are determined by RIDOH data on Rhode Island Cities/Towns by Rate of asthma-Related Emergency Department Visits, 2022.

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

- Central Falls
- Pawtucket
- Providence
- Westerly
- Woonsocket
- Applicants must pledge to use the equipment for which they receive a rebate primarily within _____ Rhode Island [for commercial purposes.](#)
- Applicants must pledge to maintain ownership and operation of the leaf blower for at least 3 years after purchase.
- Residents, non-profit organizations, and government entities are not eligible for rebates under this program.

Equipment Eligibility

To qualify for a rebate under the Electric Leaf Blower Rebate Program, applicants must purchase leaf blowers that meet the following eligibility requirements:

1. Only electric, battery-powered leaf blowers are eligible.
2. Handheld and Backpack leaf blowers are eligible.
3. Batteries purchased for the intended use of powering the leaf blower are eligible to count towards total costs.
 - Limit of 2 batteries per leaf blower.
4. Leaf blowers must be **purchased new** from a physical retail store located in RI, either online or in-person. Leaf blowers purchased from private sellers are not eligible.
 - Online purchases shall only be considered valid if they are bought directly from the

website of a retail store located physically in RI.
5. Lawn mowers, string trimmers, and any other landscape equipment or accessories that are not leaf blowers are **not eligible** for rebates.

Leaf blowers must be purchased on or after the program launch date, Month XX, 2024. *Rebates are not retroactive to past purchases.*

Application Process

Please follow the guidelines below to apply for the electric leaf blower rebate program. Additional information or documents may be necessary to complete the application on a case-by-case basis.

1. Applicants must purchase an eligible electric leaf blower **before** applying for the electric leaf blower rebate program.
2. Applicants must apply for the rebate **within 120 days (4 months)** of the date listed on the purchase sales receipt and prior to rebate fund exhaustion or program termination.
3. Applicants must submit a photo or scan of the sales receipt that includes the purchase date and purchase price of the leaf blower.
4. Signing applicants must provide proof of age (valid driver's license or valid state-issued ID).
5. Applicant must provide proof of business license or registration with the Rhode Island Secretary of State.

• Businesses must be in good standing with the Rhode Island Secretary of State.

6. Applicants must provide the leaf blower's serial number, manufacturer, and model.
7. Applicants must pledge to maintain ownership and operation of the leaf blower for at least 3 years after purchase.
8. Applicants must pledge to use the equipment primarily within Rhode Island for commercial purposes.
9. Applicants must cover any additional costs of the leaf blower that exceed the awarded rebate amount.

It is the applicant's responsibility to check all program-related emails and the program website for status updates and requests for additional information or documents required to complete the application.

If approved, OER will award the appropriate rebate amount directly to the applicant in a single payment, by check, within four to six (4-6) weeks from the date of final approval. *Processing times may vary.*

Rebate Amounts

The rebate amounts for the electric leaf blower rebate program are based on percentages of eligible costs, up to a maximum amount. Please note that the electric leaf blower rebate program will award the recipient whichever amount is less.

Standard Rebate:

Save \$1,000.00 or 50% (whichever is less) of the purchase price of an electric leaf blower and related batteries. Limit of 2 related batteries per leaf blower. Limit of 2 rebates per applicant.

High Asthma Rate Increased Rebate:

Save up to an additional \$250.00 of the purchase price of an electric leaf blower and related batteries. Limited to qualified businesses that are located in the following municipalities with the highest rates of asthma-related emergency department visits⁷:

- Central Falls
- Pawtucket
- Providence
- Westerly
- Woonsocket

Applicants must contribute at least 10% of total cost of equipment.

Required Documents:

Applicants must submit all the documents below to be eligible to receive a rebate from the electric leaf blower rebate program.

- Rebate Application.
- Valid Driver's License, or State Issued ID.
- Proof of Business registration through the Rhode Island Secretary of State.
- Business must be in good standing with the Rhode Island Secretary of State.
- Photo of purchased electric leaf blower.

⁷ Municipalities with the highest asthma rates in the state are determined by RIDOH data on Rhode Island Cities/Towns by Rate of asthma-Related Emergency Department Visits, 2022.

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

- Electric leaf blower sales receipt that includes the purchase date and purchase price.
- Provide sales receipt that includes the purchase date and purchase price for **all** related batteries, if applicable.
- Copy of the manufacturer's or retail store document (or specification sheet) that includes the electric leaf blower's serial number, make and model.
- A completed and signed W-9 Form *(attached to the application)*.

Items can be uploaded as photos, saved screenshots, or PDFs.

Terms and Conditions

As a condition for receiving a leaf blower rebate, you (the applicant/purchaser) must comply with the requirements below. Eligible applicants must meet requirements that include the following:

Rebate Amounts:

Standard Rebate:

Save \$1,000.00 or 50% (whichever is less) of the purchase price of an electric leaf blower and related batteries. Limit of 2 related batteries per leaf blower. Limit of 2 rebates per applicant.

High Asthma Rate Increased Rebate:

Save an additional \$250.00 of the purchase price of an electric leaf blower and related batteries. Limited to qualified businesses that are located in these municipalities with the highest rates of asthma-related emergency department visits⁸:

- Central Falls
- Pawtucket
- Providence
- Westerly
- Woonsocket

Applicants must contribute at least 10% of total cost of equipment.

⁸ Municipalities with the highest asthma rates in the state are determined by RIDOH data on Rhode Island Cities/Towns by Rate of asthma-Related Emergency Department Visits, 2022.

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

Applicant Requirements:

Applicants must meet the following requirements to be eligible to receive a rebate under the Electric Leaf Blower Rebate Program.

- Applicants must be at least 18 years of age.
- Only professional Rhode Island landscaping or lawn care businesses are eligible.
- Eligible businesses must be registered and in good standing with the Rhode Island Secretary of State.
- There is a limit of two rebates per eligible entity over the program's lifetime.
- Qualified businesses may be eligible for an additional \$250.00 if located in the following municipalities with the highest rates of asthma-related emergency department visits, as reported by the Rhode Island Department of Health⁹:
 - Central Falls
 - Pawtucket
 - Providence
 - Westerly
 - Woonsocket
- Applicant must contribute at least 10% of the total cost of equipment.
- Applicants must commit to using the equipment for which they receive a rebate primarily within

Rhode Island for commercial purposes.

- Applicants must provide all required documentation found in the “Required Documents” section above, including sales receipts, proof of Rhode Island residency, proof of age, and any additional documentation requested by the program administrators.
- Applicants must apply for the rebate **within 120 days (4 months)** of the date listed on the purchase sales receipt and prior to rebate fund exhaustion or program termination.
- Applicants must maintain ownership and operation of the electric leaf blower for at least 3 years after purchase.
- Purchase date must be on or after program launch date, **Month XX, 2024**.
Rebates are not retroactive to past purchases.
- Residents, non-profit organizations, and government entities are not eligible for rebates under this program.

⁹ Municipalities with the highest asthma rates in the state are determined by RIDOH data on Rhode Island Cities/Towns by Rate of asthma-Related Emergency Department Visits, 2022.

Recommendation to Phase-out Selected Gas-Powered Lawn and Garden Equipment
CEPAC Small Engines Subgroup
12/8/2024

Equipment Requirements:

- Handheld and backpack leaf blowers are eligible.
- Only electric, battery-powered leaf blowers are eligible.
- Batteries purchased for the intended use of powering the leaf blower are eligible to count towards total costs.
- Limit of 2 batteries per leaf blower.
- Leaf blowers must be purchased new from a physical retail store located in RI, either online or in-person. Leaf blowers purchased from private sellers are not eligible.
- Online purchases shall only be considered valid if they are bought directly from the website of a retail store located physically in RI.
- Lawn mowers, string trimmers, and any other landscape equipment or accessories that are not leaf blowers are **not eligible** for rebates.

Additional Information:

- Rebates will be issued on a first-come, first-served basis, pending available funds. • *This is a reimbursement program. Applicants must cover expenses upfront and provide proof of payment for reimbursement.*
- Limit of two rebates per eligible entity – program lifetime.
- Applicants are responsible for checking all leaf blower related emails and program website for status updates and requests for additional information or documents required to complete the application.
- Applicants must contribute at least 10% of total cost of equipment.
- Rebate recipients independently select and purchase their own equipment and assume all liability.

The OER is not liable for any damages or costs associated with the purchase, maintenance, or use of the electric leaf blowers or related batteries.

The OER reserves the right to modify or terminate this rebate program at any time. Funding is limited.

SUMMARY OF REVISIONS TO GPLG RECOMMENDATION

At the May 2025 meeting, staff shared that the City Manager's office had some questions about CEPAC's recommendations regarding the use of gas-powered lawn and garden equipment.

The City Manager asked CEPAC to revise the document to address a few specific questions:

"Phase 1 – what type of education?

Phase 2 – what would the incentives look like? And who would qualify

Phase 3 - what is the scope of the recommendation? specifically as to whether they would apply to households only; households and commercial business (like landscapers) or households, businesses and institutions.

There were concerns expressed about difficulties that the city might have in compliance with this. In particular, regarding the ability of some equipment to accomplish tasks (trimming and chainsaw work were cited), along with the added costs to achieve the goal (extra batteries).

It was also noted, that similar to Ashland's early EV adoption the early EV cars lacked performance compared to current models and that the technology is just not there yet for institutions."

In response, the GPLG working group changed the report to make a specific request for staff time to support the phase out of GPLG and added more detailed language to describe each phase of the process. No other changes were made to the body of the report.

Revisions as below:

The following phasing plan is anticipated to begin in fiscal year 2026 and be completed by the end of calendar year 2030.

Phase 1 - initiate an education and information campaign focused on:

- a) adverse human health impacts of GPLG;
- b) adverse environmental impact of GPLG; and
- c) adverse climate impact of GPLG.

Specific Phase 1 educational outreach efforts could include:

- a) city newsletter articles*
- b) a link to this CEPAC report on the city's webpage
- c) information about the GPL&G equipment incentives on the city's incentive page.

*The Ashland Climate Collaborative (ACC) recently began publishing [articles on GPLG](#); the ACC effort will supplement the city's outreach.

Phase 2 – roll out incentive plan that includes:

- a) incentives for 2025 through 2027 for the purchase of battery or electric powered lawn and garden equipment; the city will offer incentives with a significant differential between residential and commercial equipment. Current incentives are listed as:

Residential Gas Lawn & Garden Equipment \$58.76 per machine

Commercial Gas Lawn & Garden Equipment \$361.61 per machine

- b) CEPAC recommends that the incentive for residential households (i.e. for any one residential electric account) be limited to one tool during any one calendar year and be restricted to only those tools specified and subject to phase-out in Phase 3, i.e. GPLG blowers, string trimmers, **walk behind** lawn mowers, non-commercial use of chainsaws, and hedge trimmers.
- c) CEPAC also recommends that the commercial incentives be limited to no more than two tools and four batteries per year, limited to the tools specified in Phase 3, and focused exclusively on those commercial landscape maintenance businesses that are licensed to do business in the city.
- d) assess effectiveness of current incentives; review examples of other incentive programs in other cities of comparable size; and
- e) determine whether incentives should be increased over the next biennium.

Phase 3 – CEPAC will need to establish criteria to measure the results of Phases 1 and 2; based on the outcome of this review, CEPAC will determine whether there is a need for an ordinance leading to the mandatory phase-out of GPLG blowers, string trimmers, **walk behind** lawn mowers, non-commercial use of chainsaws, and hedge trimmers. (The scope of any regulation, in recognition of equity and fairness, would apply to all GPLG equipment users but would be limited in scope to those types of equipment specifically cited in the CEPAC's recommendation.)

CEPAC anticipates that it will need to provide the same type of listening/outreach effort described below.

Staff time will also be required to:

- a) assess difficulties that city might have coming into compliance with any ordinance;
- b) assess status of phase out for institutions and progress toward a phase out by 2030; and
- c) assess improvements in electric powered equipment and battery life.



Planning and Development Department
Office of Energy and Sustainable Development

Berkeley's Building Emissions Saving Ordinance (BESO) Amendments Effective Jan 1, 2026¹

The new Building Emissions Saving Ordinance (BESO) amendments, effective 2026, build on BESO's current requirements of energy disclosure at the time of sale and are coupled with upgrade requirements. The amendments increase resilience and can improve indoor air quality, comfort, health, and safety. They can also help new Berkeley homeowners prepare for the Bay Area Air District's zero NOx emissions standard, which prohibits the sale and installation of NOx emitting gas-powered water heaters and furnaces, starting in 2027. Homeowners can install an electric heat pump early (which is a zero NOx appliance) or complete necessary electrical upgrades to ensure a seamless transition.

Flexible Resilience Standard

The BESO amendments would **maintain the current assessment and disclosure requirements** and **establish a flexible resilience standard** that requires small residential building owners to complete upgrades from a **menu of options** when a property is sold. **Buildings not being sold are not required to complete upgrades.** Building owners can **choose which upgrades to complete** that best fit with their preferences and building's conditions. Each upgrade measure will have a **corresponding credit value based on its emissions reductions and/or costs**. A building owner would need to complete one or more measures to meet the required **number of credits within two years of the sale, with the option of a one-year extension**. (Further extensions may be granted on a case-by-case basis.) The cost of compliance will vary, as a homeowner can choose which upgrades they want to complete. The amendments would require **6 credits for full compliance**. Here's an initial list of measures and potential credits:

Measure	Credits*	Measure	Credits*
Heat Pump Water Heater	6 (Full)	Induction Range	2
Heat Pump HVAC	6 (Full)	Window Replacements	2
Knob + Tube Replacement	6 (Full)	Attic Insulation	2
Panel Upgrade or Smart Panel	6 (Full)	Wall Insulation	2
Solar PV + Storage	6 (Full)	Floor Insulation	1-2
Duct Sealing & Replacement	3	Greywater System	1-2
Bi-Directional EV Charger	3	Air Sealing	1
EV Charger	2	Prewiring & 240v Receptacles	½ per receptacle

* The credit values may be subject to change.

¹ Berkeley City Council adopted the BESO amendments on April 15, 2025.

Installing a heat pump water heater is the simplest and cheapest way to comply. Without rebates, the average purchase and installation cost of a heat pump water heater in Alameda County is ~\$6,700-\$7,900². There are tax credits and rebates currently available to reduce this cost.

Escrow Deposit

A **\$5,000 cash deposit, split between the buyer and seller**, to help cover the cost of compliance will be held by the City through escrow and be **refunded in full once the upgrades are complete**. Building owners may **apply for an early refund** of their deposited funds if they supply sufficient evidence, such as issued building permits and a contract for qualifying work, to show the upgrades will be completed.

Heat Pump Exemption Pathway

If a building has at least one electric heat pump system, then no additional upgrades are needed. The amendments include a heat pump exemption pathway that encourages homeowners to install a heat pump in advance of a home sale in order to meet full compliance. Currently, 5-7% of Berkeley homes would already qualify for this exemption, and more will become exempt as they transition to electric heat pumps.

Additional Exemptions and Support

- **First-time Homebuyers** – First time homebuyers participating in an approved income-qualified first-time home buying program or down payment assistance program would be exempt from the flexible resilience standard.
- **High Home Energy Score Credit** – Buildings that have received a high Home Energy Score demonstrate a high level of energy efficiency and will receive bonus credits, reducing the number of upgrades needed to meet the standard.
- **Condominiums and ADUs** – Individual condominiums and ADUs that are sold are exempt from BESO and the flexible resilience standard.

Phase-In Timeline for Building Types:

- **Phase I:** Single Family Homes and Duplexes (approximately 600 buildings each year) – effective January 1, 2026
- **Phase II:** Triplexes and Fourplexes (approximately 50 buildings each year) – effective January 1, 2028

² Based on project installation data available for Alameda County from BayREN Home+ participation data (January 2020 to March 2024) and TECH Clean California (July 2021 to November 2024), <https://techcleanca.com/public-data/> accessed 12/31/2024.