Transportation and Mobility

According to the recent ICLEI study, transportation is the third largest contributor to global warming in our community, accounting for approximately 21% of green house gas emissions. Transportation accounts for 24% of emissions in the state, and 29% across the nation as a whole.

ICLEI[1], as well as several government bodies and nonprofit organizations, have developed recommendations for addressing this sector. The tables below list these recommendations so that they can be compared side-by-side. Possible solutions are organized into five categories (A-E), which are based on the ICLEI report.

Assumptions:
1. Recommendations will be linked to new or existing **Green Jobs**. To address issues of equity and economic justice, plans will include targeting BIPOC and displaced workers for training and hiring programs. This may include providing training and production in underserved neighborhoods and/or providing transport to installation sites.
2. Recommendations from the Transportation Workgroup will align with those from the Land-use and Buildings workgroups.

How to use the tables:

A general description of recommended tactics and rationale is provided in the first two columns. Read across the columns to find more detailed information listed by source. Specific ICLEI recommendations are in blue. Examples and recommended resources are provided in the last column. Links are live. Here is an overview:

Strategies & Tactics	Rationale/ Equity Lens	ICLEI [& City /County Task Force]	State Task Force on Climate Change	SEWRPC Vision 2050 Regional Plan	✓1,000 Friends[2] and Other	Examples
Goal: Implement transportation and land-use plans that mitigate climate impact and create more equitable access	Sprawling, car-oriented development contributes to more driving / emissions and economic inequity. Multiple studies show that reductions in emissions will depend on taking fewer car trips and shifting to transit, walking, and biking.[3]	**Reduce vehicle miles traveled** by providing robust transportation alternatives. Support SEWRPC plan; reduce GHG emissions 45% by 2030	**Transportation Planning**: WI-DOT to perform climate and environmental justice impact analyses for transportation-related projects.	**Land use, and transportation planning** ▪ Smart growth and compact mixed use development	✓**Smart Growth and Compact Development** **5-16% emissions reduction by 2050** Use "Passenger Miles Traveled" instead of level of service as the guiding metric for planning. (RMI)	Smart Growth America

A. ENABLE ACTIVE MODES OF TRAVEL: move people instead of vehicles

Tactics	Rationale/ Equity Lens	ICLEI [& City /County Task Force]	State Task Force on Climate Change	SEWRPC Vision 2050 Regional Plan	✓1,000 Friends and Other	Examples
1. Make **walking safe** and convenient ▪ Fully implement *Complete Streets* policy adopted 2018 ▪ Implement state TAP funded Safe Routes to School programs ▪ **Design sidewalks** to entice walking – e.g. sidewalk zones, parklets, "rollable" sidewalks for access and no curb cuts.	Mke is over-represented in pedestrian deaths, with 45% of state's fatalities. Walkable and bikeable neighborhoods positively impact individuals and cities: better health, safer neighborhoods, lower costs, talent attraction, and zero emissions. [4]	**Alternative mode shift** ▪ Increase pedestrian zones	**Require WisDOT to include Complete Streets designs**	**Pedestrian facilities** ▪ Address gaps in network ▪ Buffers, curb extensions, etc ▪ Signal phases	✓**Active Transportation 0.4 – 1.1% reduction by 2050** ITDP Walkability Report Transit priority lanes, sidewalk expansions, and bike lanes (RMI) See Jeff Speck, *Walkable City Rules*, for detailed recommendations	Smart Growth America Portland's 20-Minute Complete Neighborhoods NACTO Urban Street Design Guide Minneapolis Plan
2. **Encourage biking** for transport and pleasure ▪ Increase access to bikes through bike sharing programs ▪ Improve biking infrastructure. E.g. expand bike lanes, trails,	Every $1 spent on biking infrastructure generates twice as many jobs as for driving. (Speck) Low-income and people of color are 2x as likely to bike to work and walk, making them most vulnerable to traffic fatalities. (RMI)	▪ Increase docked bike share programs ▪ Improve cycling access ▪ Cycle/ walk to work programs	▪ Use eminent domain for bike & walking trails ▪ Fund TAP and bike infrastructure	**Expand bicycle network & facilities** ▪ Protected, buffered, raised lanes ▪ Enhanced corridors and paths ▪ Bike share programs		See Milwaukee Complete Streets
3. **Other**: ● Encourage alternate modes such as electric bikes, scooters, and plan around accessibility needs etc.						
4. See also "C.3. Road Design" below						

B. EXPAND PUBLIC TRANSIT: Make public transit convenient and affordable/ cost effective

Tactics	Rationale/ Equity Lens	ICLEI [& City /County Task Force]	State Task Force on Climate Change	SEWRPC Vision 2050 Regional Plan	✓1,000 Friends and Other	Examples
1. **Expand local public transit** ridership: ■ increase bus lines and bus rapid transit routes ■ Extend hours and frequency ■ Support city rapid transit lines ■ <u>Link</u> low-income neighborhoods to city centers, areas of employment	60% of survey respondents said they drive because of a lack of options, 62% that transit is important in choosing where to live.(SGA) 64% of millennials select neighborhoods by access to transit. (Peck) Black Americans are four times more likely to commute by public transit (RMI) Transit-dependent low-income households pay a high price when transit fails to meet their needs. [5]	**Public Transit** ■ Increase public transit ridership City/County Task Force recommendations: ■ Increase County Transit Bus Ridership; ■ Support bus rapid transit (BRT) lines, ■ Address funding gaps ■ Evaluate access & efficiency.	**Promote public transit** ■ Increase state funding ■ Connect people to jobs ■ Develop regional plans	**Expand public transit lines, times, service areas, and amenities** ■ Expand local, express, and commuter bus lines ■ Flexible shuttle lines ■	✓ **Public Transportation** 0.9 – 3.6% reduction by 2050 *Arrive Together*: Place bus stops closer to major employment centers; extend hours and frequency	The Portland Plan Cleveland Commuter Choice Advantage program with 856 businesses that subsidize cost of transit passes. Milwaukee Transit Redesign
2. **Create Transit Oriented Development** ■ Maximize business and leisure space within walking distance of transit. ■ Promote alongside dense development ■ Enhance <u>transit amenities</u> such as heated shelters, hubs, and access to Wi-Fi	Every $1 invested in public transit creates $4 of economic activity in the community and 70% more jobs per dollar than new or expanded roads. (RMI) Ridership is tied to frequency, which is connected to the space. Transit enables the clustering of jobs, an economic opportunity estimated at $1.5 M to $1.8 B a year. (RMI)	■ Create Transit-Oriented Development (TOD) including transit hubs City/County Task Force recommendations: ■ Install Wi-Fi on buses		■ "Transit First" street design ■ Enhance shelters, walking access to them ■ Shared ride taxi services for last mile		Urban Sustainability Directors Network: Financing Sustainable Cities Toolkit
3. **Improve long distance transit connectivity between urban, suburban, and rural areas**: ■ Advocate for creation of a <u>Regional Transit Authority</u> ■ Support <u>rapid transit/ light rail</u> linking city-urban and state - inter-state cities.	Investment in commuter rail transit is an important contribution to social and economic equality at the regional level.[6]		■ Promote high speed rail and long distance transit	Develop a rapid transit network ■ 8 rapid transit lines ■ 4 commuter rail lines	*Arrive Together*: Improve Connectivity between urban and rural areas	

C. LIMIT AND CONTROL VEHICULAR TRAFFIC: Disincentivize use of single passenger cars

	Tactics	Rationale/ Equity Lens[7]	ICLEI [& City /County Task Force]	State Task Force on Climate Change	SEWRPC Vision 2050 Regional Plan	✓1,000 Friends and Other	Examples
1.	**Disincentivize single passenger car use** ▪ <u>End subsidization of transportation / increase parking fees</u>, reduce parking spaces, charge highway tolls, and congestion charge zones, etc. ▪ Create idling regulations/ educate public ▪ Incentivize	The average American household spends 16% of its income on transportation, 93% of which is for vehicles.[8] Society pays $9.20 in infrastructure costs for every consumer $1 spent on driving, versus $1.50 for every $1 on bussing. (Speck) Every vehicle (including EVs) adds 15 tCO_2e from manufacturing, equal to about 3 years of emissions (RMI). They also emit brake dust, tires shed microplastics and degrade asphalt. [9]	**Limit Vehicle Use** ▪ Personal vehicle limitations ▪ Low Emission Zones ▪ Parking fees, etc ▪ Maximum parking standards ▪ Road pricing/ tolls		**Travel Demand Management** ▪ High occupancy preferential ▪ Park-ride lots ▪ True cost pricing: user fees, VMT fees, tolls, congestion $ ▪ Cash out employer parking	✓ **Smart Pricing** 3.6 – 10.7% reduction by 2050	
2.	**Encourage shift from owner to user model**—E.g. incentives for Ride sharing of electric vehicles such as designated parking, etc.	Short trips account for a large portion of emissions and most cars are unused 95% of the time.			▪ Car sharing	✓ **Shared mobility** 1-4% reduction by 2050	Madison Zipcar
3.	**Design infrastructure for efficiency (versus speed)** ▪ <u>Repair and maintain roads and highways</u> versus expanding ▪ <u>Manage transportation flow:</u> Use ***Road Diets***, ***Smart traffic*** lights, signal timing, etc. ▪ <u>Reduce idling and cruising for parking</u> spaces with ***dynamic signage*** and apps. ▪ Close roads and reduce one-way traffic.	Lower speed is associated with fewer car crashes, lower fatality rates, greater access, economic activity, and fewer GHG emissions. (Speck) 36% of WI's roads are in poor condition, costing motorists $2.25b a year in car repairs and increased fuel. Each lane mile of road costs $24,000 per year to maintain.(TRIP) Expansions encourage "induced demand" and BIPOC are exposed to 63% and 56% more pollution than they create. (RMI)			**Transportation System Management** ▪ Freeway traffic monitoring ▪ Advisory information ▪ Coordinated signals ▪ Arterial traffic flow systems ▪ Parking management / demand pricing systems	✓ **Repair local roads/ bridges** instead of expanding highways Reallocating traffic lanes for buses or light rail enables congestion free commuting for high volumes of passengers (RMI)	St. Luis Obispo's Road Diet www.slocity.org London's Congestion Charge Zone https://tfl.gov.uk/ modes/driving/congestion-charge

4. ACCELERATE A FUEL SHIFT TO ZERO EMISSION VEHICLES: Develop a City/County EV Strategy

	Tactics	Rationale/ Equity Lens	ICLEI [& City /County Task Force]	State Task Force on Climate Change	SEWRPC Vision 2050 Regional Plan	✓1,000 Friends and Other	Examples
1.	**Create a city/county infrastructure for electric vehicle charging** ▪ Establish new commercial and residential building ordinances requiring EV charging stations ▪ Prioritize charging stations near transit hubs and businesses.	EVs in the Midcontinent region use a less carbon-intensive fuel, which is projected to become cleaner over time. Electrification is also projected by some sources to lead to significant reductions in non-carbon air pollution from transportation. Benefits were greatest when EV penetration was the highest and vehicle miles traveled were the lowest. [10]	**City-wide EV Strategy** ▪ EV incentives ▪ Expand infrastructure ▪ EV charging building ordinances City/County Task Force recommendations ▪ Electric Vehicle (EV) Infrastructure and resources. ▪ Work with state to use VW settlement money to expand EV charging stations and education.	**3. Support EVs & infrastructure/ statewide plan** ▪ Cost effective charging infrastructure ▪ Focus on underserved areas		Streamline permitting for charging infrastructure. Require that all new commercial and residential buildings and parking lots include power supply stub-outs for EV chargers. (RMI) Batteries for EVs are carbon-intensive to manufacture, as are the vehicles themselves.	Colorado EV Grant program https://afdc.energy.gov/case/3083
2.	**Lead rapid adoption** ▪ Adopt EVs for all municipal, transit, and school fleets ▪ Create incentives sor adoption by ride hailing services	Transit and ride sharing services can reduce the number of miles traveled while promoting electrification and reducing emissions. A full-time TNC driver travels three times as many miles per year as the average American. Concentrated fleets of electric TNC vehicles can serve as critical anchor tenants for high-speed public charging. Each vehicle provides a valuable public education opportunity. [11]	▪ Convert transit fleets ▪ Convert municipal fleets City/County Task Force recommendations ▪ Increase City Fleet efficiency: ▪ Acquisitions prioritize low and no emission vehicles			Invest in public transit/ bus/ school bus electrification.	100% Renewable Madison C40: How to Shift Your Fleet to Zero Emissions
3.	Implement other fuel switching strategies including **CNG vehicles and use of landfill gas.**	For larger municipal vehicles the use of CNG greatly reduces emissions of all kinds. Landfill gas is renewable. Batter electric buses have a substantial return on investment and should greatly decrease non-carbon pollution					Compare,com

5. CREATE ACCESS TO INFORMATION TECHNOLOGY / OTHER

Tactics	Rationale/ Equity Lens	ICLE [& City /County Task Force]	State Task Force on Climate Change	SEWRPC Vision 2050 ▪ Regional Plan	✓1,000 Friends and Other	Examples
1. **Adopt and Use Technology** ▪ Support online educational opportunities and working from home. ▪ **Adopt Mobility as a Service (Maas)** to make various forms of transportation available as one service. ▪ Support adoption of information technology to design more **efficient commercial shipping** routes	Access to technology affects educational and work opportunities. Technology can help individuals and commercial entities plan more efficient multi-modal transit and transport.				"Mobility as a Service" (MaaS) can provide single point access to multimodal transit.	Maas Alliance
2. **Community Education and Outreach** ▪ Work with employers to incentivize employee ride sharing, transit use, alternative work schedules, telecommuting and teleconferencing						
3. **Other?**						

References

[1] City of Milwaukee's Greenhouse Gas Forecast and Planning Scenarios, ICLEI, January 2021

[2] Transportation Solutions to Climate Change, 1000 Friends of Wisconsin, 2020

[3] Driving Down Emissions: Transportation, Land Use, and Climate Change, Transportation for America and Smart Growth America (SGA), 2020

[4] *Walkable City Rules: 101 Steps to Making Better Places*, Jeff Speck, Island Press, 2018

[5] High Cost or Opportunity Cost? Transportation and Family Economic Success, Margy Waller, Brookings Institute, 2009

[6] The relationship between transit rich neighborhoods and transit ridership: Evidence from the decentralization of poverty, Georgia Institute of Technology, 2017

[8] Coming Back Stronger: A City-Driven Infrastructure Agenda, Rocky Mountain Institute (RMI) and Bloomberg Philanthropies

[9] Four Ways Cars Pollute our Lives – Besides the Tailpipe, Organization for Economic Co-operation and Development; see also Emissions Analytics

[10] Racing to Accelerate Electric Vehicle Adoption, Rocky Mountain Institute, January 2021

[11] A Road Map to Decarbonization in the Midcontinent: Transportation Electrification, Great Plains Institute, January 2019