

BIKING, WALKING, AND CLIMATE CHANGE

HOW BIKING AND WALKING ARE NECESSARY TO COMBAT THE CLIMATE CRISIS



Climate change is affecting Maine’s economy, residents, and way of life

Rising temperatures, extreme weather, destructive droughts, and shorter winters—climate change is here, and, without action, the impacts will become worse.

Here in Maine, we are seeing more dramatic temperature shifts than the rest of the country. In the last century, Maine has warmed by about 3°F—twice as much warming as the rest of the 48 contiguous United States¹—and the Gulf of Maine is warming faster than 99% of the global ocean.²

Table 8: Gallons of Fuel and Tons of CO₂ Saved Annually Due to Walking and Bicycling

| Factor | Fuel Savings (Million Gallons) | | | CO ₂ Reductions (Million Tons) | | |
|--|--------------------------------|-----------------|----------------------|---|-----------------|----------------------|
| | Status Quo | Modest Scenario | Substantial Scenario | Status Quo | Modest Scenario | Substantial Scenario |
| Trips < 1 mile | 531 | 1,055 | 1,291 | 5 | 9 | 11 |
| Trips 1–3 miles | 529 | 922 | 1,311 | 5 | 8 | 12 |
| Trips 3–5 miles | 174 | 270 | 558 | 2 | 2 | 5 |
| Increase of public transportation ridership because of walking and bicycling | unknown | 131 | 873 | unknown | 1 | 8 |
| Trip length reduction of 1%-3% through induced mixed use (1–15 miles) | unknown | 507 | 1,360 | unknown | 4 | 12 |
| Savings from congestion relief | 103 | 292 | 644 | 1 | 3 | 6 |
| Totals | 1,337 | 3,177 | 6,037 | 13 | 27 | 54 |

Increasing the proportion of biking/walking trips can spur vast emissions reductions. The status quo values represent a business-as-usual scenario, whereas the modest and substantial scenarios display emissions reductions with greater investment and use of bike/ped infrastructure going forward, each to a different extent of bike/ped investment.

SOURCE: https://www.railstotrails.org/media/869945/activetransport_2019-report_final_reduced.pdf

CONSEQUENCES

Without deep reductions in emissions, we can anticipate that rising sea levels, more frequent natural disasters, and increasing temperatures will damage:



Jobs & Infrastructure

Mainers can anticipate the loss of about 22,000 jobs by 2050 and building damage of \$17.5 billion cumulatively between 2020 and 2050 due to sea-level rise and storm surge.

Tourism

Maine is estimated to lose \$1.67 billion in tourism spending annually by 2100, as 13 million fewer people are expected to visit the state’s narrowing beaches.

Public Health

The state could see health care costs for heat-related illness increase to nearly \$10 million annually—36 times the current levels.³

1. <https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-me.pdf>

2. <https://gmri.org/stories/gulf-maine-explained-warming-gulf-maine/>

3. https://www.maine.gov/future/sites/maine.gov.future/files/inline-files/ERG_MCC_AssessingImpactsClimateChangeMaine_Summary.pdf



EMISSIONS IN MAINE

Transportation is the greatest source of carbon emissions in Maine, making up 54% of the state's emissions, with 86% originating from on-road vehicles.⁴ As outlined in the Maine Climate Council Transportation Working Group's recommendations, an important strategy for meeting emissions reductions goals is to reduce vehicle miles traveled (VMT). However, investing in bikeability/walkability in village and urban centers and expanding public transportation does not receive nearly enough attention for its ability to lower VMT. Together with the transition to electric vehicles, these investments could not only get Maine on a path toward reducing carbon emissions by 80% by 2050, but will also have enormous co-benefits.

INVESTING IN BIKE/PED INFRASTRUCTURE IS:

Effective. It can be implemented quickly, producing immediate results. This would mean starting in urban and village centers with sidewalks, bike lanes, multi-use paths, and expanding public transit routes and frequency.

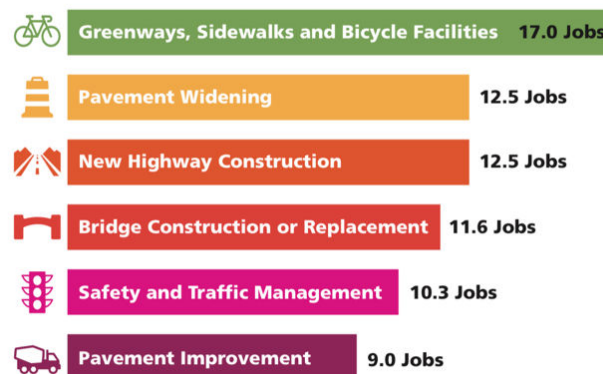
Practical. We already have the tools to implement bike/ped facilities and scale up transit systems in more communities.

Cost Effective. Bike/ped- and Americans with Disabilities Act-compliant infrastructure is significantly cheaper than roads, pavement, or highway infrastructure, and has greater benefits to public health, economic development, and community building.

Equitable. Walking, bicycling, and public transit are all low-cost options that require minimal individual investment and can serve a wide range of communities. Maine is the oldest state in the nation⁶, and combining public transportation with walkability and bikeability offers necessary transport options for this large population to maintain greater independence and connectivity.

Good for business. Surveys show people entering the workforce strongly prefer to live in walkable and bikeable communities.⁷ That means having shops, services and other common destinations nearby, as well as safe, natural, green spaces. People biking or walking through village centers are also more likely to stop for food/drink or to shop.

Jobs Created Per Million Dollars Spent



SOURCE: American Association of State Highway and Transportation Officials (AASHTO), Average Direct Jobs by Project Type (2012); jobs in terms of full-time equivalents (FTE)

MAINE WON'T WAIT

Investment in infrastructure for cyclists and pedestrians is profoundly impactful in improving communities' quality of life and reducing carbon emissions. If Maine's cities and towns put in more walking and biking facilities with safety as a top priority, they would not only reduce road injuries and fatalities, but also make strides towards shifting our transportation culture away from being car-centric, improve public health, and get us closer to making Maine's climate goals a reality.

4. <https://climatecouncil.maine.gov/strategies/transportation>

5. https://www.railstotrails.org/media/869945/activetransport_2019-report_final_reduced.pdf

6. <https://www.prb.org/resources/which-us-states-are-the-oldest/>

7. <https://theconversation.com/young-people-want-walkable-neighborhoods-but-safety-is-a-worry-88081>

