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## Rural Public Transportation and Maine: Review of State Best Practices

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# Rural Public Transportation and Maine: Review of State Best Practices

## Technical Report June 2021

Erin Brown and Jonathan Rubin  
Margaret Chase Smith Policy Center and the School of Economics  
University of Maine

### Abstract

MaineDOT has a family of transit plans that have been developed over the past five years through collaborative efforts with partners and stakeholders. These plans share similar themes, guidance, and recommendations and tie into the Department's last Strategic Plan, which was completed in 2016. However, since their development, there have been a number of important and related efforts and developments that impact the strategic vision and plan for transit services in Maine. This report reviews how other states with similar demographics, population disbursements, and climates are addressing their transit challenges, with a focus on rural areas, access, and equity. One caution is that states and transit agencies do not use the same metrics when reporting program costs and benefits.

### Acknowledgements and Disclaimers

This study would not have been possible without the strong cooperation of the Maine Department of Transportation. We would like to specifically recognize the following individuals from MaineDOT: Joyce Taylor, Jennifer Brickett, Ryan Neale, Taylor LaBrecque, Dale Peabody, and Dawn Bickford. In addition, we also thank Katherine Freund, Dana Rowangould, Sarah Cushman, and Kathryn Ballingall. The views and opinions expressed in this report are solely those of the Margaret Chase Smith Policy Center and the individual authors. They do not represent those of Maine Department of Transportation or any other individual or organization that has provided information or assistance.

## Executive Summary

Access to critical services, such as jobs, education, healthcare, and shopping, is essential for the livability of any community. For those living in rural communities, these services are often farther away, requiring access to a vehicle or public transit.

From 2010 to 2016, rural America experienced a decline in population. Recently, this trend reversed, and rural counties as a whole saw a modest increase in population. Though the population may be relatively stable, from 2010 to 2019, nationally, rural public transit ridership grew over 30%. In comparison, during the same time period, urban ridership decreased by about 1%.

Given the larger population of older Americans in rural communities, this trend in rural transit is likely to continue. In Maine, the oldest and most rural state, preparing to meet this need is fundamental for our communities. The Maine Strategic Transit Plan 2025 found a great need for public transportation. Public transportation provides access to essential services for individuals and households with limited access to a private vehicle.

This report reviews how other states with similar demographics, population disbursements, and climates are addressing their transit challenges, with a focus on rural areas, access and equity.

### In Vermont

- Federal funding accounts for about 85% of total revenues for the Vermont Agency of Transportation (VTTrans)'s public transit program. The Vermont State Transportation Fund covers the remaining amount.
- Farebox revenue for rural transportation providers covers less than 3% of their operating expenses. One-third of rural transportation providers are fare-free.
- Vermont identified that the critical needs of those with substance use disorders were not being met by current transportation programs. The Recovery and Job Access Pilot Program, funded by a grant from the Federal Transit Administration (FTA) is designed to fill those gaps. It provides transportation to group meetings, access to recovery centers, drug testing sites, and medical appointments, as well as job access (training, interviews, and initial commutes). Over 2,000 trips were provided from September 2019 through April 2020.
- The Rides to Wellness program lowers the transportation barrier for medical care by providing rides to medical appointments not covered by Medicaid or the Elders and Persons with Disabilities Transportation Program. Since April 2018, about 1,000 trips have been provided.

Key takeaways from Vermont:

- 1) The consolidation of rural public transportation providers can produce cost savings through economies of scale, resulting in better pricing for vehicles, insurance, fuel, and supplies.
- 2) Integration can lead to service improvements. Existing routes can be modified to better fit customers' needs. The cooperation between service providers through joint schedules can provide increased access and a better rider experience.
- 3) Potential feasibility of microtransit for areas with small populations. A microtransit pilot program is being tested in Montpelier, the first city of its size to use microtransit.

### **In New Hampshire**

- State funding covers about 6% of operating expenses for rural providers.
- Farebox revenue makes up a small percentage of operating expenses for rural providers. In 2019, it covered 4.9% of operating expenses.
- Federal funding is the main contributor to operating expenses, covering 52.3%.
- Local funding sources cover 13.5% of operating expenses for rural transit providers.

Key takeaways from New Hampshire:

- 1) State partnerships with private transit providers can provide expanded intercity route coverage.
- 2) Volunteer drivers provide critical transportation services, especially in rural areas, but cannot compensate for insufficient funding.

### **In North Dakota**

- 1.5% of funding for public transportation is provided by the state through appropriations from the State Highway Fund.
- State funding covers 22.8% of operating expenses for rural transit providers. Federal funding covers just over half of operating expenses. Fares and local governments provide similar amounts, 10.5% and 11.9%

Key takeaways from North Dakota:

- 1) Offering programs specifically aimed at workers and allowing scheduling flexibility can make transit more accessible.

### **How Maine compares**

- When compared with the peer states, Maine is the second largest rural transit provider (in terms of unlinked passenger trips, vehicle revenue miles, and vehicle revenue hours), behind Vermont. Maine also has the second highest operating expenses overall, again behind Vermont.
- Of the four states, Maine's rural public transit providers receive the least federal funding for operating expenses. In 2019, they received \$2,394,795, or 18.4% of operating expenses. New Hampshire, which received the second lowest amount,

spent over \$3 million of federal funds for the operating expenses of rural transit providers.

- Much of the funding burden for rural public transit falls on Maine's local municipalities. Local funds covered 24.6% of rural providers' operating expenses in 2019, or over \$3 million.
- North Dakota has the highest operating expense per unlinked passenger trip, \$18.69. Maine has the second highest cost, \$12.27 per trip. Maine's cost is only slightly higher than Vermont's cost of \$12.09 per unlinked passenger trip.
- Maine's largest contributor to the operating expense per unlinked passenger trips is other funding sources, at \$5.71. These may include advertising, contract stops, and funds from other agencies and institutions. Local funds cover \$3.01 per unlinked passenger trip and federal funds cover \$2.25. For comparison, in Vermont, other funds cover \$0.21 per unlinked passenger trip, local funds \$0.87, and federal funds \$7.46.

### Innovative programs across the US

- Independent Transportation Network (ITN) is a community-based organization, specializing in the transportation of seniors and those with visual impairments. ITN uses private vehicles, in conjunction with both volunteer and paid drivers, to create a community transportation network.
- The California Green Raiteros Rideshare Program was started as an informal, self-organized, dial-a-ride program to provide service between the (low-income) rural farming community of Huron and essential services of Fresno. Through a partnership with EVgo and the Latino Equity Advocacy & Policy Institute (LEAP), the program has been expanded. The program currently receives grant funding from the Fresno Clean Shared Mobility Network.
- Dynamic bus routing operates on the same concept as "mobility-on-demand" ridesharing services, such as Uber or Lyft. Baldwin County, a rural county in Alabama, utilizes Via microtransit technology to provide on-demand transportation to a 2,000 square mile service area, with a population of 200,000. They utilize three service zones, offering different levels of service depending on location. Ben Franklin Transit (BFT), in Washington state, uses microtransit to increase transit access and help solve the first mile/last mile problem.
- The VTA Needles CarShare, in Needles, California, partnered with Enterprise to create a carshare program for a small population. Enterprise provides the vehicles. In return, VTA guarantees a minimum monthly payment, regardless of usage. To make this more accessible to lower income individuals, users do not pay annual fees or for insurance and fuel.

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## Introduction

Access to critical services, such as jobs, education, healthcare, and shopping, is essential for the livability of any community. For those living in rural communities, these services are often farther away, requiring access to a vehicle or public transit.

From 2010 to 2016, rural America experienced a decline in population (Cromartie 2018). Recently, this trend reversed, and rural counties as a whole saw a modest increase in population (Cromartie 2020). Though the population may be relatively stable, from 2010 to 2019, rural public transit ridership grew over 30%, from 95.6 million trips to 125.5 million trips (National Transit Database 2020). In comparison, during the same time period, urban ridership decreased by 0.92% (National Transit Database 2020).

Given the larger population of older Americans in rural communities, this trend in rural transit is likely to continue. In Maine, the oldest and most rural state, preparing to meet this need is fundamental for our communities.

The Maine Strategic Transit Plan 2025 found a great need for public transportation. Maine is not only the oldest state, but it is aging more rapidly than others. By 2030, one quarter of Mainers will be over 65. Moreover, Maine's strategic transit plan forecasts that 90% of Mainers want to age in place (Peter Schauer Associates 2015).

Public transit is not just for Maine's seniors. Public transportation provides access to essential services for individuals and households with limited access to a private vehicle. Additionally, in some areas, individuals prefer to be carless. Currently about 7%, or 39,628 households in Maine are without private vehicles, 75% of whom are in rental occupied housing units (American Community Survey, 2019).

However, rural public transit is often overlooked in transportation research. This report highlights lessons learned from three peer states (Vermont, New Hampshire, and North Dakota) which may inform Maine's own rural transit best practices. Innovative transit solutions are discussed, as possible inspirations for Maine's transit systems.



## Peer State Case Studies

### Vermont

Vermont has eight public transportation regions served by seven different public transit providers (Vermont Agency of Transportation Mapping Section 2020). Services offered include fixed-routes, demand-response routes, and deviated fixed-routes (fixed-routes with some deviations based on demand), as well as a recently launched on-demand microtransit service (Steadman Hill Consulting, Inc., Monahan Mobility, and Foursquare Integrated Transportation Planning 2020a). In addition to these more traditional programs, Vermont also has two pilot programs to increase transit access for at-risk groups: Rides to Wellness and Recovery and Job Access Rides (Lorber and Falbel 2018; Vermont Agency of Transportation 2019).

Transit providers vary greatly in terms of service area, number of routes, and passenger trips. Green Mountain Transit (GMT) Authority is the largest transit provider, in terms of passenger trips and vehicle revenue hours (see Table 1).<sup>1</sup> However, they are surpassed in vehicle revenue miles by Rural Community Transportation (RCT). In 2019, RCT passengers took about 10% of the number of trips that GMT passengers took.

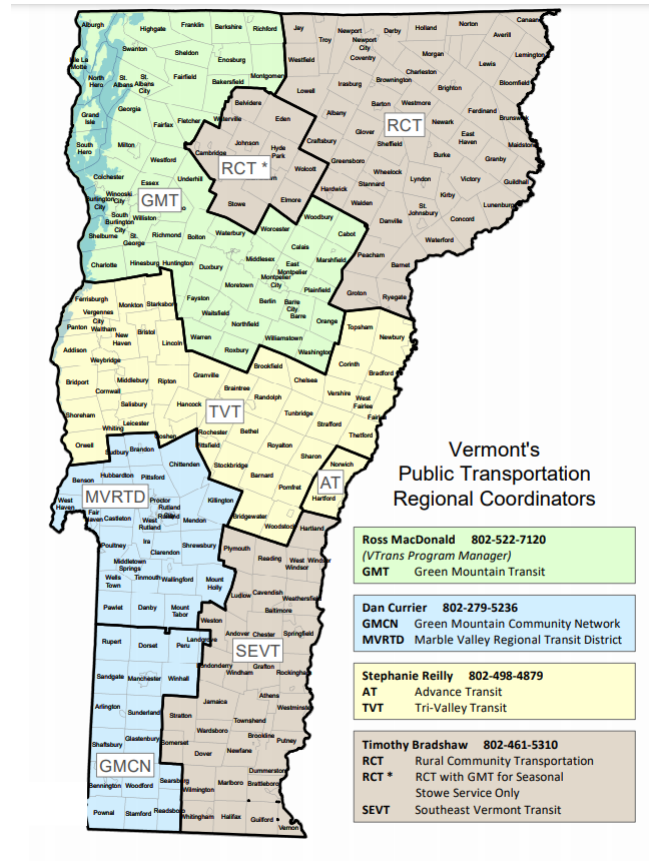


Figure 1: Map of Vermont's public transportation regions. Source: Vermont Agency of Transportation Mapping Section, 2020.

<sup>1</sup> Green Mountain Transit Authority serves Chittenden, Franklin, Grand Isle, Lamoille, and Washington counties.

Table 1: Vermont Transit Providers: Revenue Miles and Hours.

Transit Provider <sup>2</sup>	Reporter Type	Annual Unlinked Trips	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours
<b>Marble Valley Regional Transit</b>	Rural General Public Transit	806,778	3,632,945	147,343
<b>Tri-Valley Transit</b>	Rural General Public Transit	282,751	3,513,911	121,803
<b>Green Mountain Community Network</b>	Rural General Public Transit	200,154	1,959,304	79,708

Differences in annual vehicle revenue miles are largely accounted for by differences in service mixes and population density. GMT serves the most densely populated part of the state and its most utilized service is bus transportation (fixed route or deviated fixed route service). For RCT, about 71% of its service is demand-response service (see Table 2).

<sup>2</sup> Source: Office of Budget and Policy 2020.

Table 2: Unlinked passenger trips by mode, Vermont 2019.

Transit Provider <sup>3</sup>	Commuter Bus Trips	Demand-response Trips	Demand-response - Taxi Trips	Bus Trips
<b>Green Mountain Transit Authority</b>	8.46%	5.59%	0.00%	85.95%
<b>Marble Valley Regional Transit</b>	17.51%	17.55%	0.00%	64.94%
<b>Southeast Vermont Transit</b>	6.22%	6.03%	0.00%	87.75%
<b>Tri-Valley Transit</b>	20.48%	42.28%	0.00%	37.23%
<b>Rural Community Transportation</b>	10.56%	65.91%	5.13%	18.41%
<b>Green Mountain Community Network</b>	0.00%	56.31%	0.00%	43.69%
<b>Advance Transit</b>	0.00%	1.22%	0.00%	98.78%

Tri-Valley Transit, which has similar annual vehicle revenue hours as GMT, also sees demand-response as its most used mode of transportation (Office of Budget and Policy 2020). Their service area includes Addison, Orange, and northern Windsor counties.

A brief description of the routes and services offered by each rural public transportation provider can be found in the Appendix.

### Funding

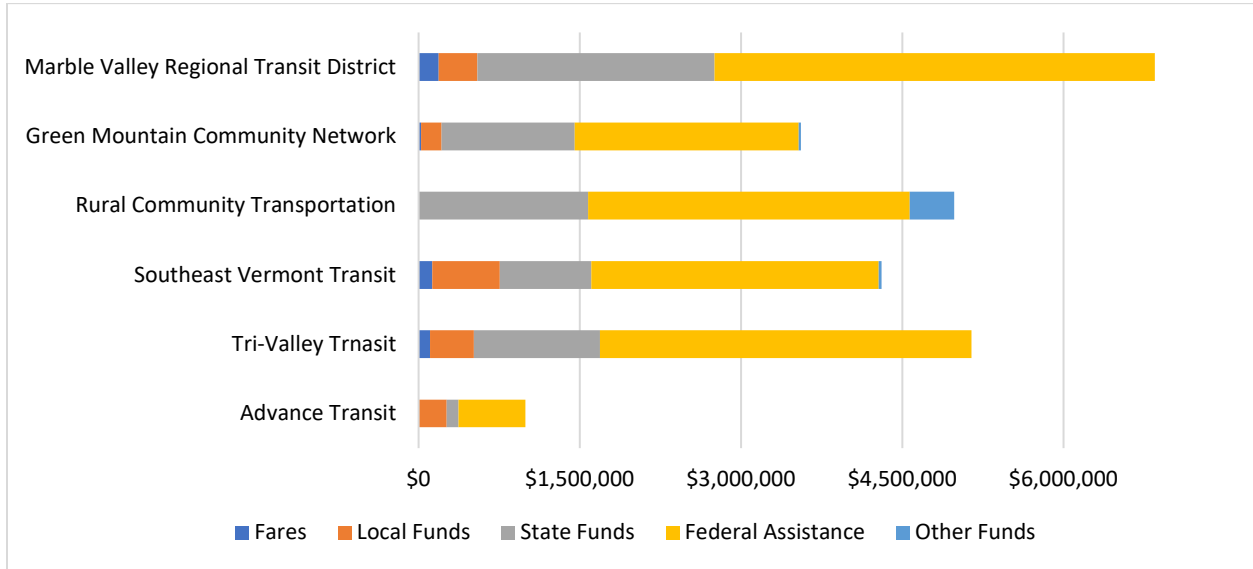
Funding for the Vermont Agency of Transportation’s public transportation program is provided by a combination of state and federal funding (“FY 2021 Transportation Program” 2020; Office of Budget and Policy 2020). In Vermont, federal funding accounts for about 85% of total revenues. The Vermont State Transportation Fund covers the remaining percentage (“FY 2021 Transportation Program” 2020). Contributors to the Transportation Fund include motor vehicle taxes, penalties and fees, gasoline taxes, sales and use taxes on aviation jet fuel, and pilot and aircraft license fees (*Transportation Fund* 2019). For the 2021 fiscal year, the Vermont legislature has budgeted \$41,234,820 for transit (“FY 2021 Transportation Program” 2020).

Funding for local providers is a mix of federal, state, and local funds, as well as farebox revenue. Federal assistance to transit provides for the majority of operating expenses of every local transit provider in Vermont. Passenger fares account for less than 3% of operating expenses (see Figure 2). State and local sources have varying levels of

<sup>3</sup> Source: Office of Budget and Policy 2020.

significance, depending on the transportation provider. Local funding ranges from 0% to 26.15% (7.16% of all rural operating expenses) and state funding ranges from 11.07% to 34.77% (27.69% of all rural operating expenses) in 2019 (Office of Budget and Policy 2020).

Figure 2: Funding Sources for Operating Expenses of Vermont Rural Transit Providers, 2019. Source: Office of Budget and Policy 2020.



## Vermont Alternative Transportation and Pilot Programs

### Go! Vermont

Go! Vermont is Vermont’s statewide transportation information clearinghouse. Their mission is to help individuals save money, reduce their carbon footprint, and provide mobility. Their website provides resources on public transportation, ferries, ridesharing, train travel, and cycling, as well as information on working remotely and telecommuting. For bus users, Go! Vermont provides real time bus tracking. Electric vehicle owners can use Go! Vermont to find electric vehicle charging stations.

By joining Go! Vermont, users can earn rewards for utilizing green transit, as well as qualifying for the Guaranteed Ride Home Benefit. To earn rewards, members track their green trips, for which they earn points. For many commuters, one of the barriers to using shared transit or alternative transportation is the fear of “getting stuck” if there were to be an emergency. The Guaranteed Ride Home ensures a ride home for bus riders, carpoolers, and vanpoolers. The Guaranteed Ride Home Benefit will reimburse individuals for their travel costs, such as taking a taxi, up to \$70 (“Guaranteed Ride Home Benefit” 2021).

Go! Vermont also has a trip planner. After entering starting and ending locations, the trip planner shows users non-private car transportation options including carpool and vanpool matches, public transit routes, bike routes, and walking routes. If there are carpool or vanpool matches, registered Go! Vermont users can contact them to arrange a shared ride.

The trip planner also shows the locations of park and ride lots, bike shares, car shares, bike paths, and electric vehicle charging stations.

### *Rides to Wellness Pilot Program*

Access to transportation can be a barrier to receiving non-emergency medical care. Lack of transportation causes patients to miss appointments or avoid scheduling appointments, because they know they cannot get to the appointment (Lorber and Falbel 2018). Rides to Wellness is a pilot program in Vermont, funded by a grant from the Federal Transit Administration (FTA).

Rides to Wellness has three main goals:

- A. To improve health outcomes for the vulnerable populations that use community centers.
- B. To reduce the use of emergency services, thereby saving additional resources.
- C. To improve financial performance for health centers, hospitals and funding programs (such as Medicaid) by reducing missed appointments. (Lorber and Falbel 2018, 5).

This effort began in April 2017 and an implementation plan was established in April 2018. This program started with two pilot sites, the Mount Ascutney region and St. Johnsbury, and has since expanded to five sites (MacDonald 2020). Though initially funded with a grant, each pilot site has committed to providing sustainable funding. Since April 2018, about 1,000 trips have been provided through this program (MacDonald 2020)

### *Recovery and Job Access Rides Pilot Program*

In spring of 2018, the Recovery Transportation Working Group was formed. They identified access to support groups and meetings, recovery centers, drug testing sites, job training and access, and medical appointments as critical needs. The working group estimated that transit providers could provide 800-1,000 trips per month, with costs ranging from \$17-\$36 per trip. Assuming an average trip cost of \$20-\$25 and 1,000 trips per month, the program cost would be between \$20,000 to \$25,000 per month (Baker et al. 2018). VTrans received a grant for \$170,000 to fund this program and cover gaps in service. Rural Community Transportation and Marble Valley Regional Transit District also received \$40,000 in federal assistance, with a 50% match requirement (Vermont Agency of Transportation 2019). Between September 2019 and April 2020, over 2,000 trips were provided (MacDonald 2020)

## **Lessons Learned**

### *Consolidation of public transportation providers*

The consolidation of rural public transportation providers can have many benefits. Cost savings can be realized through economies of scale, resulting in better pricing for vehicles, insurance, fuel, and supplies. Integration can lead to service improvements. Existing routes can be modified to better fit customers' needs, or service can be expanded into new areas.

Through consolidation, transit providers may be able to attain higher staff levels than they could individually.

Since 2011, Vermont has seen several mergers between multiple public transportation providers. Chittenden County Transportation Authority and Green Mountain Transit Agency combined to form Green Mountain Transit. Starting in 2014 and formally completed in 2017, Stagecoach Transportation Services and Addison County Transit Resources merged to become Tri-Valley Transit. In 2015, Connecticut River Transit was absorbed by Deerfield Valley Transit, becoming Southeast Vermont Transit.

The State of Vermont supports the consolidation of public transportation agencies, as a way to find cost savings (Monahan et al. 2017). VTrans provides technical assistance, facilitates meetings, provides funding assistance, and can manage consolidation efforts, if requested, to help with the transition.

The merger between Deerfield Valley Transit Association and Connecticut River Transit was able to realize many benefits. With a larger staff, management and operational efficiency increased. These efficiency increases gave time to review the bus routes and create service improvements (Monahan et al. 2017). They have also benefited from economies of scale when purchasing phone systems, insurance, and operating supplies. Though they have not experienced significant cost savings due to improvements in service, operating expenses per vehicle revenue mile in 2018 and 2019 were less than 2017 (Office of Budget and Policy 2020).

#### *Cooperation between operators*

Moving between service regions on public transportation usually requires transferring from one operator to another. With cooperation between service providers, Vermont has been able to improve the rider experience, by providing regional routes that extend beyond any individual service area. Providers can maintain their autonomy and their own fee structures, while operating a joint schedule.

There are currently four regional routes that are operating under a joint schedule, provided by four of Vermont's seven transit providers: The 116 Commuter travels between Middlebury and Burlington; The Burlington/Middlebury LINK, the Rutland Connector (as called by TVT), or the Middlebury Route; the Route 2 Commuter.

#### *Feasibility of Microtransit*

Starting in 2018, the Vermont Microtransit Working Group<sup>4</sup> began exploring the potential for microtransit service as a substitute for some of the existing fixed-route and demand-response services currently being offered (Microtransit Working Group 2019). In 2019, VTrans, in conjunction with Via, conducted a microtransit feasibility study for the

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<sup>4</sup> The Microtransit Working Group consists of members from VTrans, Montpelier City Council, Green Mountain Transit, the Sustainable Montpelier Coalition, Vermont Center for Independent Living, and the Central Vermont Regional Planning Commission (Microtransit Working Group 2019).

Montpelier area. Via used historic ridership, land-use, demographic, and economic data, input from community partners, quality of service assumptions, and information on street layout and design to conduct their analysis. Different microtransit options, as well as different levels of demand, were modeled (VIA 2019). Via's recommendation, based on their analysis, was the replacement of three fixed-routes and on-demand transportation for non-emergency medical care, seniors and individuals with disabilities, and Medicaid services with a fleet of 3-5 microtransit vehicles. They estimated that a fleet of five vehicles could meet ridership needs of 35 trips per hour, which was greater than the current level of ridership (27 trips per hour at peak hours) (VIA 2019). Via estimated wait times of less than 15 minutes for riders in the 7.8 square miles service zone, a significant reduction from the current one hour bus wait times (VIA 2019). The feasibility study concluded that microtransit in Montpelier can offer riders a higher quality of service than traditional fixed-routes and demand-response services currently being offered.

Green Mountain Transit (GMT), Sustainable Montpelier Committee, and VTrans launched Montpelier's microtransit service, a two year pilot program called MyRide by GMT, on January 4<sup>th</sup>, 2020 (White 2020). MyRide by GMT replaces three fixed-routes. The service area currently includes most of Montpelier, as well as destinations in Berlin. Rides can be scheduled either through the MyRide by GMT app, an internet browser, a GMT kiosk, or through GMT's call center.



## New Hampshire

New Hampshire has ten local transportation providers. Service is concentrated in the southern half of the state, where nine of the ten providers are located (New Hampshire Department of Transportation 2019a). Public transportation offerings include fixed-route, deviated fixed-route, and demand-response services. In 2019, ridership on public transit was 3,309,109 one-way trips, plus 45,684 rides for seniors and individuals with disabilities. The New Hampshire DOT subsidizes Concord Coach’s North Country routes. Riders took 16,295 intercity bus trips on those subsidized routes (NHDOT 2019).

The level of ridership and service varies widely depending on the service provider. Wildcat Transit, the University of New Hampshire public transportation system, accounted for nearly a third of unlinked passenger trips in 2019 (Office of Budget and Policy 2020). Compared to national peers, overall, the rural providers in New Hampshire provide significantly less service, with the exception of Advance Transit, the largest rural provider (Steadman Hill Consulting, Inc. et al. 2020). Advance Transit is based in the Upper Valley and provides transportation in both New Hampshire and Vermont. Their higher service level is attributed to their relationship with Dartmouth College and Dartmouth-Hitchcock Medical Center (Steadman Hill Consulting, Inc. et al. 2020). Sullivan County Transportation and Tri-County CAP (including both North Country Transit and

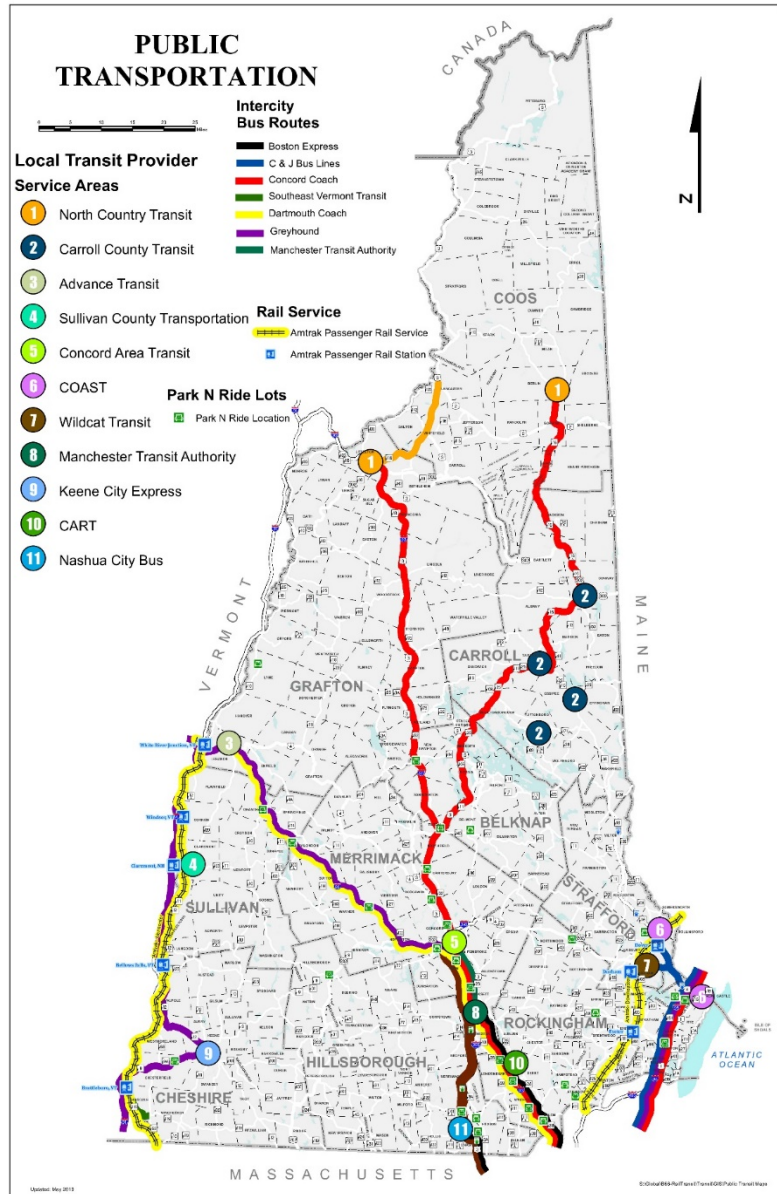


Figure 3: Public transportation in New Hampshire, May 2019. North Country Transit and Carroll County Transit are both provided by Tri-County Transit. Source: New Hampshire Department of Transportation, 2019.



Carroll County Transit) operate about 1/3 as much as their peers. Home Healthcare, Hospice, and Community Services, in the Keene area, operates about 60% as much, and Concord Area Transit operates about 70% as much (Steadman Hill Consulting, Inc. et al. 2020).

Table 3: New Hampshire summary of services provided in 2019.

Transit Provider <sup>5</sup>	Reporter Type	Annual Unlinked Trips	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours
<b>Wildcat Transit (University Transportation Services)</b>	Reduced	1,084,633	389,148	25,879
<b>Advance Transit</b>	Rural General Public Transit	758,025	489,015	39,666
<b>Nashua Transit System</b>	Full	462,549	612,037	44,800
<b>COAST</b>	Full	427,023	813,335	53,488
<b>Manchester Transit Authority</b>	Reduced	409,319	646,729	55,121
<b>Belknap-Merrimack CAP/ Concord Area Transit</b>	Rural General Public Transit	82,403	188,487	12,828
<b>Tri-County CAP/North Country Transit</b>	Rural General Public Transit	47,268	190,793	23,134
<b>Home Healthcare, Hospice, and Community Services (Keene City Express)</b>	Rural General Public Transit	42,599	136,096	9,606
<b>Sullivan County Transportation (Southwestern Community Services Transportation)</b>	Rural General Public Transit	21,829	85,653	6,049
<b>CART</b>	Reduced	18,060	140,341	8,758
<b>Tri-County CAP/ Carroll County Transit</b>	Rural General Public Transit	8,214	74,014	12,998

Service mixes vary widely between rural transit providers. Trips with Advance Transit are almost entirely bus trips (fixed-route or deviated fixed-route), while 100% of trips with Carroll County Transit are demand-response. The other transit provider operating under Tri-County CAP, North Country Transit, offers the second largest percentage of demand-response trips. For the other rural providers, bus trips heavily outweigh demand-response trips.

<sup>5</sup> Advance Transit’s ridership only represents ridership in New Hampshire. Source Office of Budget and Policy 2020.

Table 4: Unlinked passenger trips by mode for rural transit providers in New Hampshire, 2019. Source: Office of Budget and Policy 2020.

Transit Provider	Demand-response Trips	Bus Trips
<b>Advance Transit</b>	0.85%	99.15%
<b>Belknap-Merrimack CAP/ Concord Area Transit</b>	8.85%	91.15%
<b>Tri-County CAP/North Country Transit</b>	52.31%	47.69%
<b>Home Healthcare, Hospice, and Community Services (Keene City Express)</b>	29.03%	70.97%
<b>Sullivan County Transportation (Southwestern Community Services Transportation)</b>	10.69%	89.31%
<b>Tri-County CAP/ Carroll County Transit</b>	100.00%	0.00%

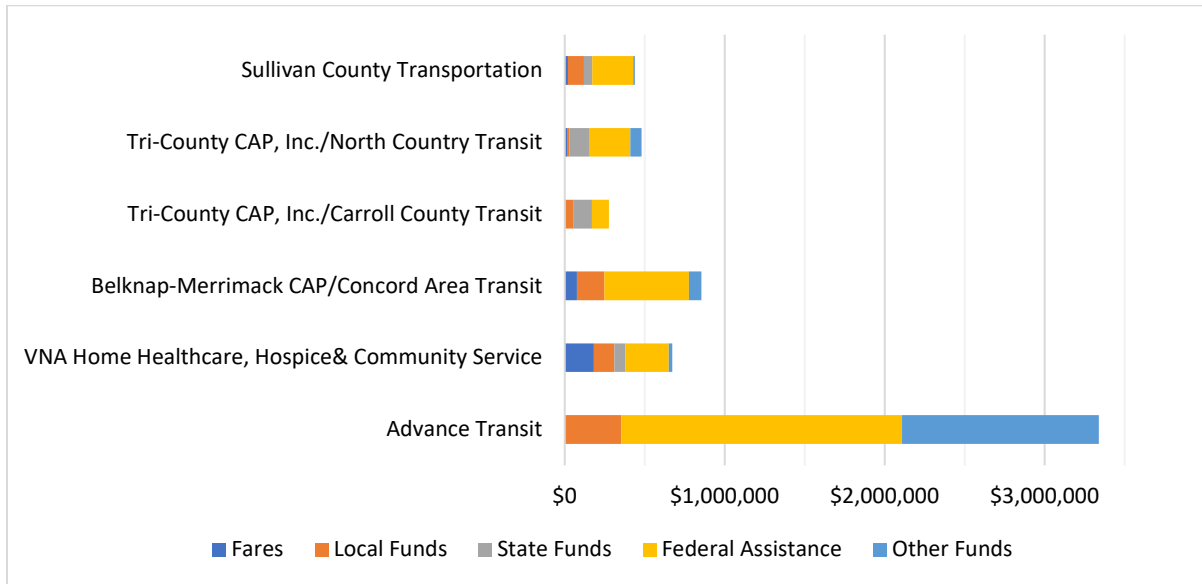
A brief description of the rural transportation providers and their routes and services can be found the Appendix.

### Funding

In the 2020 fiscal year, the State of New Hampshire spent \$6,213,174 on public transportation and they have budgeted \$16,013,127 for the 2021 fiscal year (State of New Hampshire 2021). However, state funding is a minor contributor in the funding mix of rural transportation providers. In 2019, state funding covered 6% of the operating expenses of rural transit operators in New Hampshire (Office of Budget and Policy 2020). Federal assistance is the main funding source for rural providers (Figure 4). In 2019, they covered 52.27% of operating expenses. Farebox revenue plays a small role, covering 4.91% of operating expenses.<sup>6</sup> Local funding covers 13.52% of operating expenses. Due to Advance Transit’s close ties with local community organizations, "other" sources cover nearly a quarter of operating expenses. If Advance Transit is excluded, other sources provide much less, just over 6.5%.

<sup>6</sup> Both Advance Transit and Concord Area Transit received no state funding towards their operating expenses in 2019 (Office of Budget and Policy 2020).

Figure 4: Funding Sources for Operating Expenses of New Hampshire Rural Transit Providers, 2019.  
Source: Office of Budget and Policy 2020.



## Lessons Learned

### *Volunteer drivers play an important role in rural transit but cannot be the entire solution.*

Volunteer drivers provide critical access to medical care, shopping services, social activities, and more. Volunteer drivers often help fill transit gaps, providing access when none would have been provided otherwise. Especially in rural areas, volunteer drivers are often the lowest cost mode of transportation (Steadman Hill Consulting, Inc. et al. 2020; Zhao 2017).

In New Hampshire, only 33 out of 244 communities have regular public transit service. However, volunteer driver programs operate in 197 out of 244 towns (New Hampshire Department of Transportation 2019b). They provide 65,000 trips/year, many of which would not have happened without the volunteer drivers. These trips, as important as they are, only provide 4% of the total estimated transportation needs for seniors and individuals with disabilities (New Hampshire Department of Transportation 2019b).<sup>7</sup> All New Hampshire transit regions report being unable to meet all of the demand for volunteer driving. To manage, they have been prioritizing medical trips, but realize that they are not meeting all of their riders’ needs (such as trips for social activities) (Steadman Hill Consulting, Inc. et al. 2020). The Statewide Strategic Transit Study recommends the expansion of volunteer driver program capacity, while also acknowledging the shortage of volunteer drivers and the inability to meet current levels of demand (Steadman Hill Consulting, Inc. et al. 2020).

<sup>7</sup> The Community Transportation Association of America (CTAA) estimated that seniors and other transit-dependent people in New Hampshire required 1.9 million trips to meet basic life needs (New Hampshire Department of Transportation 2019b).

*State partnerships with intercity transportation providers can expand access for riders*

New Hampshire's North Country region spans over 3,000 square miles, three counties, 50 municipalities, and 25 Unincorporated Places (North Country Council 2021). In this vast area live just over 90,000 people (North Country Council 2021). Transportation from the northern part of the state to the southern is essential for access to medical care, employment opportunities, and social/recreation activities. Concord Coach Lines provides this connection, offering service from Littleton and Berlin, just north of the White Mountain National Forest, to Concord, the state capital. Riders can continue to travel from Concord down to Boston.

This service is made possible due to a partnership between Concord Coach Lines and the New Hampshire DOT. Concord Coach Lines receives an annual subsidy of about \$300,000 for the operation of this service, about 60% of the total cost for the routes (Steadman Hill Consulting, Inc. et al. 2020). Without this partnership, this service would not be economically feasible (Brooks 2019).

## North Dakota

North Dakota has 35 public transit providers in its 53 counties (North Dakota Department of Transportation 2019). Of these providers, 30 provide service solely in tribal and rural areas. In 2019, five providers did not receive any federal funding, and thus, are not included in the National Transit Database (Office of Budget and Policy 2020).<sup>8</sup> Rural and tribal transit operators provide fixed-route, deviated fixed-route, and demand-response service. Demand-response service is by far the most commonly provided service; 23 out of 25 providers only offer demand-response service.

A brief description of the rural and tribal transportation providers can be found in the Appendix.

*Table 5: Summary of North Dakota rural and tribal transit providers, 2019. The City of Minot and the Turtle Mountain Band of Chippewa Indians are the only providers with bus service.*

<b>Transit Operator<sup>9</sup></b>	<b>Reporter Type</b>	<b>Annual Unlinked Trips</b>	<b>Annual Vehicle Revenue Miles</b>	<b>Annual Vehicle Revenue Hours</b>
<b>South Central Adult Services</b>	Rural General	103,575	733,890	43,463
<b>City of Minot</b>	Rural General	94,738	155,967	10,851
<b>Souris Basin Transit</b>	Rural General	86,434	476,006	33,634
<b>James River Senior Citizens Center</b>	Rural General	55,250	169,090	15,779
<b>Stark County Council on Aging/Elder Care</b>	Rural General	37,840	165,005	16,459
<b>West River Transit</b>	Rural General	33,251	191,999	19,045
<b>Devils Lake Transit (Senior Meals and Services)</b>	Rural General	26,628	53,204	8,464
<b>Williston Council for the Aging</b>	Rural General	25,807	122,153	11,010
<b>Hazen Busing Project</b>	Rural General	21,967	32,970	5,234
<b>Standing Rock Public Transportation</b>	Tribal Reporter	18,944	228,319	9,030
<b>Southwest Transportation Services</b>	Rural General	11,946	98,380	6,249

<sup>8</sup> Only providers that report to the National Transit Database are included in this report.

<sup>9</sup> Source: Office of Budget and Policy 2020.

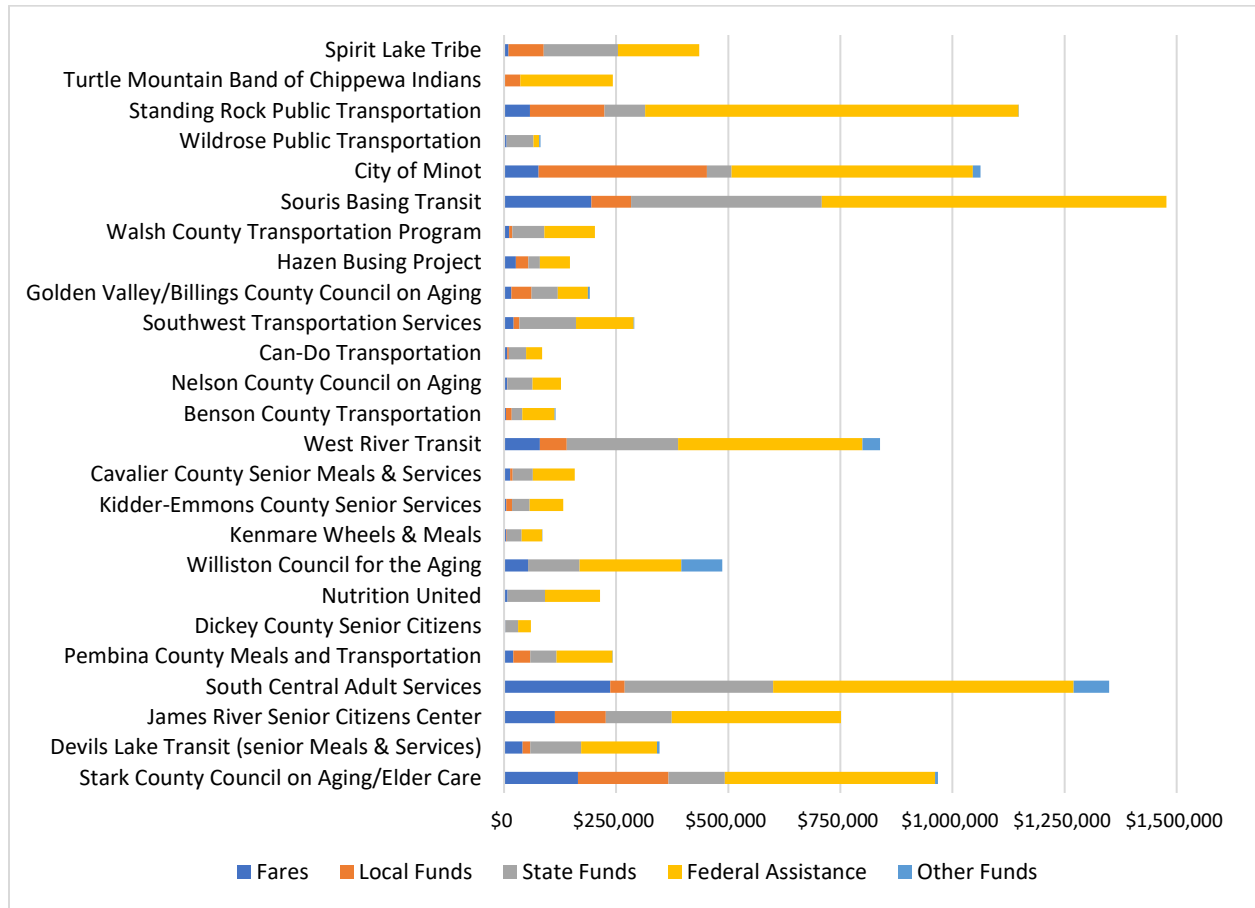
<b>Transit Operator<sup>9</sup></b>	<b>Reporter Type</b>	<b>Annual Unlinked Trips</b>	<b>Annual Vehicle Revenue Miles</b>	<b>Annual Vehicle Revenue Hours</b>
<b>Kenmare Wheels and Meals</b>	Rural General	11,891	10,816	1,698
<b>Nutrition United</b>	Rural General	11,420	222,710	7,862
<b>Spirit Lake Tribe</b>	Tribal Reporter	11,216	177,190	9,069
<b>Cavalier County Senior Meals and Services</b>	Rural General	7,380	43,471	3,264
<b>Pembina County Meals and Transportation</b>	Rural General	7,007	111,261	5,563
<b>Kidder-Emmons County Senior Services</b>	Rural General	5,271	42,710	1,675
<b>Can-Do Transportation</b>	Rural General	4,995	36,899	3,114
<b>Turtle Mountain Band of Chippewa Indians</b>	Tribal Reporter	4,890	101,197	6,220
<b>Walsh County Transportation Program</b>	Rural General	4,829	46,669	2,786
<b>Nelson County Council on Aging</b>	Rural General	4,438	47,042	1,956
<b>Dickey County Senior Citizens</b>	Rural General	4,246	8,906	1,756
<b>Golden Valley/Billings County Council on Aging</b>	Rural General	3,235	88,221	3,217
<b>Wildrose Public Transportation</b>	Rural General	2,379	34,966	1,682
<b>Benson County Transportation</b>	Rural General	1,649	51,523	1,720

## Funding

In North Dakota funding for public transportation comes from the Highway Tax Distribution Fund (“Legislative Appropriations 2019-2021 Biennium” 2017). Revenues from this fund come from the motor vehicle fuel tax, special fuel taxes, and motor vehicle registration fees. The first \$5.5 million in the Highway Tax Distribution Fund are transferred to the State Highway Fund. After that, the Public Transportation Fund receives 1.5% of the revenues to the Highway Tax Distribution Fund (*Highway Tax Distribution Fund - State Treasurer to Make Allocation to State, Counties, and Cities* n.d.) Funds are disbursed in accordance with the guidelines set by the state legislature (*Distribution of Funds - Continuing Appropriation* n.d.)

In 2019, the state of North Dakota covered 22.82% of the operating expenses for rural and tribal transit providers.<sup>10</sup> Federal funding accounts for 52.53% of expenses. Fares and local governments contribute similar amounts, 10.53% and 11.89%, respectively. Other sources contribute 2.23%. The relative importance of each funding source varies by transit provider, as seen in Figure 5.

Figure 5: Operating funding sources of North Dakota rural and tribal transit providers, 2019. Source: Office of Budget and Policy 2020.



### Highly Rural Veteran Transportation Grant

The Highly Rural Veteran Transportation Grant program gives grant funding to Veterans Service Organizations and State Veterans Service Agencies for the transportation of veterans to medical care in eligible counties (U.S. Department of Veterans Affairs 2021). “Highly rural” is defined as a county or counties with population density of less than seven people per square mile (U.S. Department of Veterans Affairs 2015). The North Dakota Department of Veterans Affairs, in conjunction with the North Dakota DOT, has contracted existing transit operators to provide this service. 36 out of 53 counties in North Dakota are eligible (North Dakota Department of Veterans Affairs 2016). In Maine, Piscataquis County

<sup>10</sup> This does not include transit providers who do not report to the National Transit Database.

is the only eligible county and provides transportation to clinics in Bangor and Lincoln (U.S. Department of Veterans Affairs 2021). If the definition of “highly rural” is expanded, this grant program may be able to help meet the transit needs of Maine’s veterans.

## Lessons Learned

### *Flexibility for workers*

Given the highly rural nature of North Dakota, the vast majority of transit providers only offer demand-response service. Two transit providers in North Dakota have taken innovative approaches to make their services more attractive to workers.

Kenmare Wheels and Meals provides service seven days a week. However, they do not regularly offer transportation services in the evenings (Mattson and Hough 2015). For many workers who rely on public transportation, this creates a barrier for employment. Kenmare Transit has implemented a “work transit” service. Employees can schedule rides to and from work outside of regular service hours, by special arrangement with Kenmare Transit (Kenmare Wheels & Meals 2020).

Having to schedule daily rides to and from work can be burdensome. James River Senior Citizens Center has created a service to reduce this burden. They have created a monthly master list of riders’ work-related transit needs (James River Public Transit 2021). Riders fill out a monthly calendar with their pick-up times and these are then scheduled by the main office (James River Public Transit 2021). This simple process greatly reduces the daily tasks that would have previously been required to schedule work-related transportation.



## Maine

Maine has eight transit regions (see Figure 6). Each region has one designated regional transportation provider. In addition to the designated regional providers, Maine DOT partners with other public transportation systems across the state (Multimodal Planning Division 2019). In total, there are 16 local public transportation providers seven of which are rural. A summary of their ridership in 2019 can be found in Table 6. A brief summary of the rural transit providers can be found in the Appendix.

Figure 6: Maine transit regions. Source: Bureau of Maintenance and Operations, 2018.

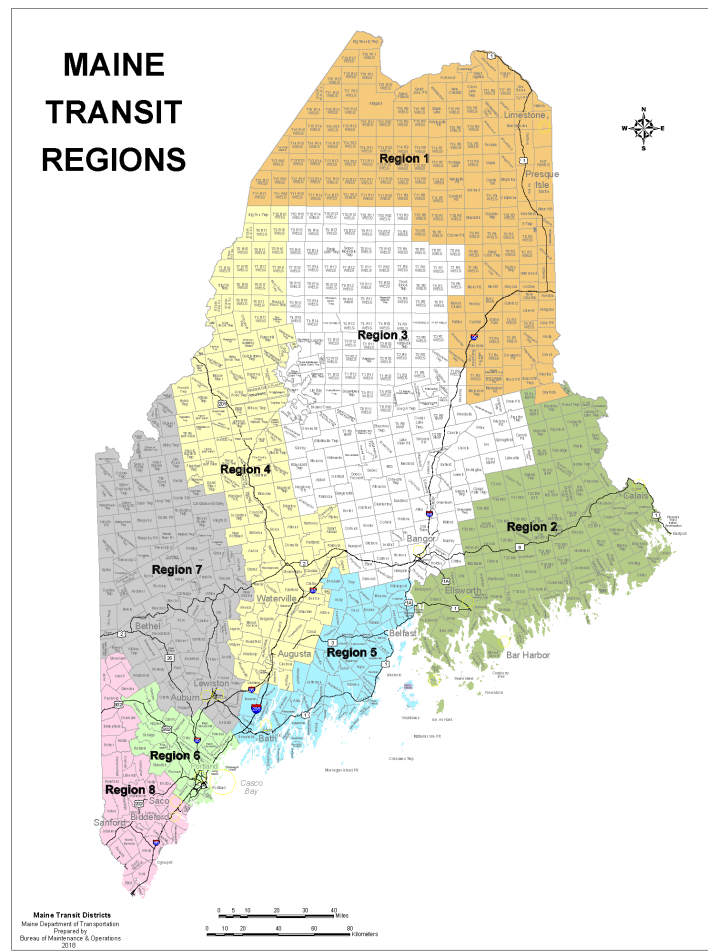


Table 6: Summary of services provided by Maine rural transit providers, 2019.

<b>Provider<sup>11</sup></b>	<b>Annual Unlinked Trips</b>	<b>Annual Vehicle Revenue Miles</b>	<b>Annual Vehicle Revenue Hours</b>
<b>Downeast Transportation</b>	671,879	701,870	44,002
<b>Kennebec Valley Community Action Program</b>	173,878	1,150,653	75,183
<b>Waldo Community Action Partners d/b/a Mid-Coast Public Transportation</b>	86,212	1,319,555	62,150
<b>Aroostook Regional Transportation System</b>	61,804	299,133	18,281
<b>Downeast Community Partners</b>	48,871	1,023,984	46,511
<b>City of Bath</b>	11,769	39,054	3,075
<b>West's Transportation</b>	8,097	83,171	3,660

### Comparison with Peer States

Through the aggregation of service metrics for rural transportation providers, Maine can be compared against its peer states. Vermont is the largest service provider, by far (see Table 7). In 2019, they had about three times the annual vehicle revenue miles as Maine. Riders in Vermont took about double the trips that riders in Maine took. That being said, Maine is the second largest service provider, outpacing both New Hampshire and North Dakota. Due to North Dakota's highly rural nature and reliance on demand-response service, it had more vehicle revenue miles and hours than New Hampshire, despite having about a third fewer passenger trips.

<sup>11</sup> Source: Office of Budget and Policy 2020.

Table 7: Aggregation of service metrics for rural transportation providers by state, 2019. Source: Office of Budget and Policy 2020.

State <sup>12</sup>	Annual Unlinked Trips	Annual Vehicle Revenue Miles (VRM)	Annual Vehicle Revenue Hours (VRH)
Vermont	2,136,227	14,727,801	568,572
New Hampshire	960,338	1,164,058	104,281
North Dakota	601,226	3,450,564	230,800
Maine	1,062,510	4,617,420	252,862

Given the service levels, it should be unsurprising that Vermont greatly outspends New Hampshire, North Dakota, and Maine when it comes to the operating expenses of rural transit providers (see Table 8). Interestingly, other funding sources, a combination of advertising revenue, contract stop, and funds from other agencies, cover almost half of the operating expenses of rural transit providers in Maine, a far larger percentage than any of the peer states. Local funding sources are also a larger contributor in Maine than in the other states, covering almost a quarter of the operating expenses. Rural providers in Maine receive the least federal assistance, both in terms of absolute and relative values.

Table 8: Funding sources for operating expenses of rural transit providers by state, 2019.

State <sup>13</sup>	Fares	Local Funds	State Funds	Federal Assistance	Other Funds	Total
Vermont	\$443,560 1.72%	\$1,849,562 7.16%	\$7,152,124 27.69%	\$15,927,587 61.66%	\$457,571 1.77%	\$25,830,404
New Hampshire	\$297,310 4.91%	\$819,322 13.52%	\$364,893 6.02%	\$3,167,172 52.27%	\$1,410,480 23.28%	\$6,059,177
North Dakota	\$1,183,284 10.53%	\$1,335,581 11.89%	\$2,564,221 22.82%	\$5,901,160 52.53%	\$250,321 2.23%	\$11,234,567
Maine	\$457,088 3.50%	\$3,203,701 24.56%	\$920,090 7.06%	\$2,394,795 18.36%	\$6,066,360 46.51%	\$13,042,034

Comparing absolute operating expenses does not account for the number of passenger trips, vehicle hours, or vehicle miles. In Table 9, below, the operating expense per unlinked passenger trip is broken down by funding sources. For Maine, the operating expense per unlinked passenger trip is \$12.27, the second highest. However, the amount of federal assistance per unlinked passenger trip is the lowest, at \$2.25, and the contribution of local funds is the highest, \$3.02. In comparison, Vermont, with an operating expense per

<sup>12</sup> Source: Office of Budget and Policy 2020.

<sup>13</sup> Source: Office of Budget and Policy 2020.

unlinked passenger trip of \$12.09, receives \$7.46 in federal assistance and \$0.87 from local sources. Their state contribution is much higher than Maine’s, \$3.35 compared to \$0.87.

Table 9: Operating expense per unlinked passenger trip of rural transit providers by funding source, 2019.

State <sup>14</sup>	Fares	Local Funds	State Funds	Federal Assistance	Other Funds	Total <sup>15</sup>
<b>Vermont</b>	\$0.21	\$0.87	\$3.35	\$7.46	\$0.21	\$12.09
<b>New Hampshire</b>	\$0.31	\$0.85	\$0.38	\$3.30	\$1.47	\$6.31
<b>North Dakota</b>	\$1.97	\$2.22	\$4.26	\$9.82	\$0.42	\$18.69
<b>Maine</b>	\$0.43	\$3.02	\$0.87	\$2.25	\$5.71	\$12.27

When looking at efficiency metrics, Maine’s rural transit providers are middle-of-the-road (see Table 10). Vermont, though being mid-pack in terms of operating expense per trip, has the lowest operating expense per vehicle revenue mile and vehicle revenue hour. Conversely, New Hampshire has the lowest operating expense per trip and average vehicle revenue miles per trip, but the highest operating expense per vehicle revenue mile and vehicle revenue hour.

Table 10: Efficiency metrics of rural transit providers, by state, 2019.

State <sup>16</sup>	Operating Expense/Trip	Average VRM/Trip	Operating Expense/VRM	Operating Expense/VRH
<b>Vermont</b>	\$12.09	6.89	\$1.75	\$45.43
<b>New Hampshire</b>	\$6.31	1.21	\$5.21	\$58.10
<b>North Dakota</b>	\$18.69	5.74	\$3.26	\$48.68
<b>Maine</b>	\$12.27	4.35	\$2.82	\$51.58

## Innovative Solutions

### Green Raiteros—California

The Green Raiteros is a ride share program founded in 2018 in Huron, California. Their population is made up of mostly farmworkers and the median household income is \$25,060, about one-third of California’s median household income (Shared-Use Mobility Center 2020). Huron lacks many critical services, including hospitals and social services. Most of these services are located in Fresno, 50 miles northeast of Huron. However, about

<sup>14</sup> Source: Office of Budget and Policy 2020.

<sup>15</sup> Differences between the total and the breakdown of operating expenses are due to rounding.

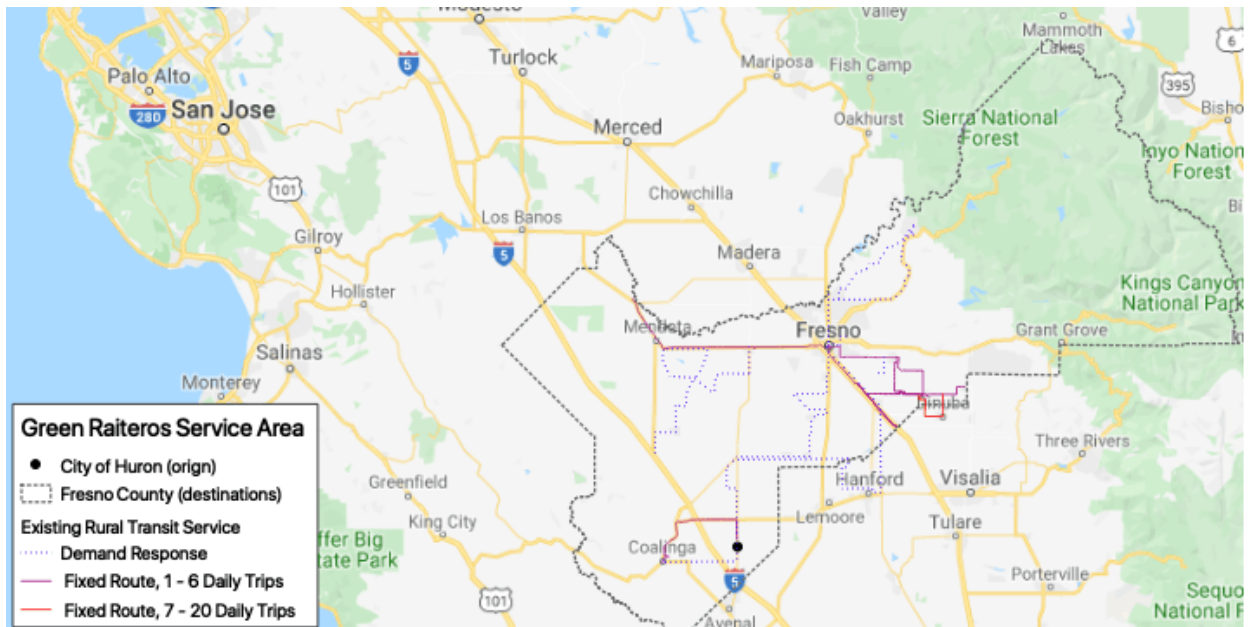
<sup>16</sup> Source: Office of Budget and Policy 2020.

25% of residents do not own a car (Godavarthy et al. 2019). Bus service to Fresno is available, but it requires a six hour round trip bus ride (Godavarthy et al. 2019).

The raiteros network is a community-led, self-organized answer to this transportation gap. “Raitero” is a Spanish slang term for a driver that transports individuals for a fee. These drivers are usually retired or semi-retired neighbors who act similarly to an Uber or taxi service. This service is relatively expensive and residents of Huron spent about 20-30% of their income on transportation costs alone (Godavarthy et al. 2019).

Green Raiteros was created in December 2018 by the Latino Environmental Advancement & Policy Institute (LEAP), alongside EVgo, Mobility Development Partners, and the Shared-Use Mobility Center (Shared-Use Mobility Center 2021; EVgo 2021; Latino Environmental Advancement Project 2021). Huron leveraged their preexisting raiteros network as well as \$519,000 from a legal settlement with the California Public Utilities Commission. The program’s goal was to address five major problems: economic justice, environmental justice, climate justice, health justice, and transportation justice. LEAP developed a business plan with the Shared-Use Mobility Center and purchased two electric cars (Chevy Volt and BMW i3) and installed several charging stations in Fresno and Huron.

Figure 7: Green Raiteros service area. Source: Shared-Use Mobility Center 2020.



Green Raiteros was implemented in three phases. The first phase involved setting aside \$8,000 for a promotional period in order to serve Green Raiteros clients for free, with the goal of marketing the program to both drivers and riders, and to collect data on driver’s preferences for vehicles (electric or conventional private). The second phase, implemented nine months later, involved asking for clients to pay \$0.55 per mile for rides. This part of the plan also involved recruiting additional volunteer drivers and accepting rides

reimbursed by California Medicaid. The issues that occurred in this phase are twofold: their registration as a primary NEMT (non-emergency medical transportation) is still awaiting approval from the State of California and the Green Raiteros was denied enrollment in the Fresno County taxi scrip program, because with only volunteer drivers, they are not a formal taxi program.

Potential hurdles for the implementation of similar ride systems include the cumbersome method for reserving a ride which requires pre-registration with the LEAP office one week in advance where they are manually matched up with a volunteer driver whose availability matches that of the client. This program also does not provide service to the disabled population due to the use of conventional, not handicapped equipped, vehicles. In addition, the volunteer drivers can refuse rides such as those involving children on trips that do not directly require the child's involvement (such as a parent's medical appointment). These details complicate the system, slowing down registration, adding to the cost, and limiting the client base.

Despite these limitations, Green Raiteros provides a round trip ride to Fresno at about \$25, which is a 75% decrease from the traditional raiteros system rate of \$100. The program currently receives grant funding from the Fresno Clean Shared Mobility Network and plans to pursue funding from California DOT and the California Air Resources Board. Green Raiteros is looking for increased funding in order to expand into new towns and counties.

The successful implementation of this program demonstrates the value and power of rural and environmentally friendly transit options and supplies a method of incorporating such a system into one's own state. However, a challenge arises when considering the roots of such an organization, as it was founded upon the already established Latinx cultural tradition of raiteros. Adopting this type of community-led transit program has promise for Maine but would require a network of volunteers and, perhaps, a unifying sense of community.

## **Microtransit**

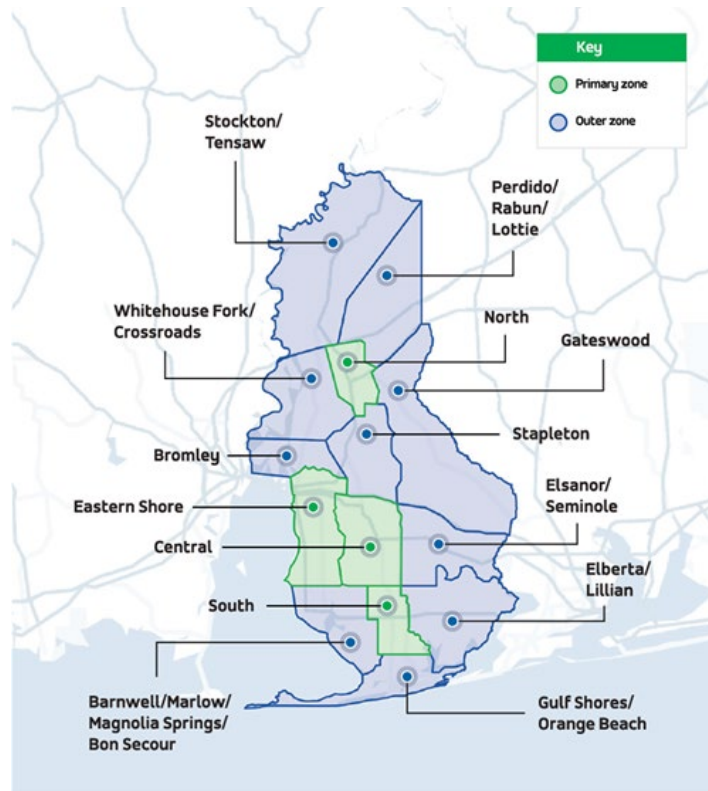
Microtransit is small-scale, on-demand public transit. It utilizes dynamic routing software to operate similarly to on-demand ridesharing services, such as Uber or Lyft. Instead of operating on a standard fixed-route or deviated fixed-route, buses follow no predetermined route. Users in the service area can request a ride using a phone call or app. Routes are then generated in real-time in response to user requests (Koh et al. 2018).

Microtransit services have been deployed in many urban areas, but there's limited deployment in rural areas. Via, a prominent microtransit service, believes that rural communities may be one of the best applications of dynamic routing (Godavarthy et al. 2019). Sending vehicles directly to the rider, instead of having low-density fixed-routes, saves gas, miles traveled, and wear and tear on the vehicle. Several case studies are discussed below, to better describe the application of microtransit in different settings.

The City of Arlington, Texas became the first city to rely solely on microtransit when they launched Arlington On-Demand in December 2017, replacing their fixed-route bus. Service was provided to a 24 square mile operating zone, which included the University of Texas at Arlington, AT&T Stadium, the downtown, and the entertainment district. In the first year, over 120,000 rides were taken (Via 2019). Since its launch, Arlington On-Demand has grown. The service has grown from 18 to 53 vehicles and increased the service area to 99 square miles (Via 2021a). Public transit ridership has increased tenfold and as a result, decreased vehicle miles traveled by 400,000 miles (Via 2021a).

Baldwin County, Alabama became one of the first in the nation to use microtransit in a rural setting. The Baldwin County Commission received a grant through the Federal Transit Administration's Integrated Mobility Innovation Program to fund the creation of their mobility on-demand system, known as BRATS On Demand (Federal Transit Administration 2020). BRATS On-Demand has a service zone of over 2,000 square miles, serving a population of 223,000 people (Via 2021b). Providing service to such a large area can be challenging. To make it more manageable, the service area has been broken down into primary zones and outer zones (see Figure 8). Those in the primary zone can use on-demand service. Those in-between primary zones, such as in Stapleton, need to book a trip three hours in advance. Those in the outer zones, such as Gulf Shores, need to book twelve hours in advance (Baldwin County Commission 2021). This approach allows BRATS to efficiently offer service to a larger area. BRATS On-Demand can serve as a model for rural counties with variation in population density. In Maine, this zoned approach may work well in Aroostook County. Population centers, such as Caribou and Presque Isle, could serve as primary zones. Less densely populated areas could be outer zones. This could have the potential to increase transit access in an efficient manner.

Figure 8: Service zones for BRATS On-Demand. Source: Baldwin County Commission n.d.



Ben Franklin Transit (BFT), located in the Tri-Cities area of Washington state, has deployed their own microtransit service, BFT CONNECT, to increase transit access and help solve the first mile/last mile problem (Madison 2020). BFT operates 18 bus routes, dial-a-ride, and demand-response service. With BFT Connect, they have subdivided their service area into six service zones. All rides must begin and end in the same service zone and also begin or end at a designated Transit Connection. Riders can request a ride from their home to the Transit Connection, on demand, or from the Transit Connection back to their home (Ben Franklin Transit 2020). This service mode may work well in Maine in conjunction with the commuter services offered by Downeast Transportation. Commuters could take the bus from Bangor to Ellsworth or Bar Harbor, and then use the microtransit service to get to their place of employment. This mixed fixed-route/on-demand system has broad applicability when it comes to solving the first mile/last mile problem.

### Independent Transportation Network

The Independent Transportation Network (ITN) is a community-based organization, specializing in the transportation of seniors and those with visual impairments. ITN uses private vehicles, in conjunction with both volunteer and paid drivers, to create a community transportation network (Freund 2015). In 2019, the ITN affiliate network provided 100,927 rides (ITNAmerica 2019).



ITN has three branches: *ITNAmerica*, *ITNCountry*, and Trusted Transportation Partners. *ITNAmerica* affiliates provide 24/7 transportation services in their service areas. *ITNAmerica* affiliates are intended to be sustainable without taxpayer support, instead relying on user fees and donations (Freund 2015). However, for the first seven years of service, they may fund their service with up to 50% public funding (ITNPortland 2021). *ITNCountry* is built upon the *ITNAmerica* model, though it has been customized for rural and small communities (ITNAmerica 2021). *ITNCountry* affiliates can choose their service area, fares, service type, and times; they are not required to provide 24/7 service. *ITNCountry* affiliates are not required to be self-sufficient without taxpayer support (Freund 2021). Trusted Transportation Partners are independent transportation services that have been approved by *ITNAmerica* and received the ITN “seal of excellence”(ITNAmerica 2019).

Riders with ITN have Personal Transportation Accounts. Riders use these accounts to pay for their rides. These accounts can be funded through a multitude of options, including direct payment, gift certificates, credits for volunteer driving, and car donations to ITN. For low income seniors who may not be able to afford rides, they offer the ITN Road Scholarship. ITN volunteer drivers can donate their transportation credits to the Road Scholarship program, which will in turn provide transportation funds to seniors in need (ITNAmerica 2019). ITN also partners with local stores and medical providers to provide transportation discounts to seniors. Through the Ride & Shop and Healthy Miles programs, seniors can access the critical services they need, at a discount (ITNAmerica 2019).

### **VVTA Needles CarShare**

Needles, California, is a small town of just under 5,000 people, lying on the borders of Arizona and Nevada. Over a quarter of its residents are living below the poverty line (Data USA n.d.). Many of the essential services, such as grocery stores and medical centers, are nearby but across the border in Laughlin, NV, or Bullhead, AZ, out of the reach of public transit (Gray 2017). Victor Valley Transit Authority (VVTA) was already operating in conjunction with Enterprise Rent-A-Car for their vanpool service (Gray 2017). VVTA’s Consolidated Transportation Services Agency (CTSA) director contacted Enterprise to form a partnership, this time for a carshare program (Godavarthy et al. 2019).

VVTA guaranteed Enterprise a minimum monthly payment, regardless of usage (Godavarthy et al. 2019). Enterprise provides the program with two vehicles, a Nissan Altima and a Dodge Caravan (VVTA 2021). Licensed drivers, age 21 and older, can rent one of the vehicles for \$5 an hour, with no annual membership fee (VVTA 2021). Fuel is included with the rental via a free gas card. The vehicles are parked at a local bank, Desert Communities Federal Credit Union. For those who don’t have access to computers or a smartphone, a kiosk is available inside the bank for reservations. For those without credit cards, VVTA partnered with Sole Financial to create payroll debit cards (Godavarthy et al. 2019). Despite the low cost, the user fees for the program cover about 70% of the cost; VVTA pays the remaining percentage (Godavarthy et al. 2019). For those without a vehicle, this small carshare service provides access to essential services.

## Appendix

### Vermont Rural Public Transportation Providers

#### Advance Transit

Advance Transit operates in both New Hampshire and Vermont, providing transit services in the Upper Valley. In total, they provide or operate six fixed-routes, three shuttles, and ACCESS AT, their complementary paratransit service (Steadman Hill Consulting, Inc., Monahan Mobility, and Foursquare Integrated Transportation Planning 2020c). All services are fare free, due to contributions from the surrounding towns, Dartmouth College, and Dartmouth-Hitchcock Medical Center (Advance Transit 2021).

#### Green Mountain Community Network

The Green Mountain Community Network (GMCN) provides deviated fixed-route and demand-response services in and around Bennington County (Steadman Hill Consulting, Inc., Monahan Mobility, and Foursquare Integrated Transportation Planning 2020b). Their deviated fixed-route service is made up of both regional and local routes. GMCN provides demand-response services for Medicaid, Reach Up, Fair Hearing, and individuals who are eligible for Vermont's Elders and Persons with Disabilities (E&D) Transportation Program ("Services" 2021; Steadman Hill Consulting, Inc., Monahan Mobility, and Foursquare Integrated Transportation Planning 2020b). GMCN utilizes volunteer drivers to help meet the transit needs of their riders ("Services" 2021).

#### Marble Valley Regional Transit District

The Marble Valley Regional Transit District (MVRTD), also known as The Bus, provides transit in Rutland County. Their services are a mix of fixed-routes, deviated fixed-routes, and demand-response services. MVRTD operates five local routes and six regional routes. Their demand-response service provides Medicaid transportation and ADA Paratransit services. The Medicaid Transportation program provides free service to medical, Reach Up, and Fair Hearing appointments. Transportation may be provided by standard fixed-route service, volunteer drivers, or taxis. The Paratransit service operates within 0.75 miles of the fixed-route system and operates on the same schedule as the Rutland City fixed-routes.

#### Southeast Vermont Transit

SEVT offers fixed-route, deviated fixed-route, and demand-response services in Windham and southern Windsor counties. All services are fare free. The Wilmington MOOver has four year-round deviated fixed-routes and nine seasonal routes. The Rockingham MOOver operates eleven year-round routes, one seasonal route, and one shopping shuttle.

The MOOver operates demand-response services for seniors, individuals with disabilities, and approved Medicaid transportation. For seniors and individuals with disabilities, the MOOver will provide transportation for non-emergency medical trips, critical care trips, congregate meal sites and meals-on-wheels deliveries, congregate shopping trips, and personal care trips. For those with approved Medicaid transportation, the MOOver will provide transportation to non-emergency medical appointments for residents of Windham or southern Windsor County without access to a vehicle. ADA services for the Rockingham MOOver are provided for those

who live within 0.75 miles of the Red or White Line. The Wilmington MOOver provides ADA services for those living within 0.25 miles of one of the Wilmington MOOver's fixed-routes. Rides for both services must be requested at least 24 hours in advance.

### **Tri-Valley Transit**

TVT provides service in Addison, Orange, and northern Windsor counties. Services provided include fixed-route, deviated fixed-routes, and demand-response transit. At this time, Addison County Transit Resources (ACTR) and Stagecoach still operate separately, though they are integrated with Tri-Valley Transit.

ACTR operates five deviated fixed-routes and one fixed-route. Stagecoach offers three commuter routes, four shopping routes, and two local shuttles. Stagecoach and ACTR both offer dial-a-ride services. Rides for their dial-a-ride programs are usually provided by volunteer drivers or wheelchair accessible buses when required.

### **Rural Community Transportation**

Rural Community Transportation (RCT) is a public transportation provider in the Northeast Kingdom. They provide free commuter, shuttle, and shopping routes. RCT operates five deviated fixed-route shopping shuttles. RCT has a number of demand-response services, which make up the majority of their ridership ("Annual Report" 2021). Their Dial-A-Ride program can be used to access school, medical appointments, social activities, et cetera. They are also participants in the Rides to Wellness Pilot Project and the Rides to Recovery and Job Access Pilot Program. More information on these programs can be found under "Alternative Transportation and Pilot Programs."

## **New Hampshire Rural Transportation Providers**

### **Tri-County Transit**

Transportation in Coos, Carroll, and northern Grafton counties is provided by Tri-County Transit, a division of the Tri-County Community Action Partnership (CAP) (Tri-County CAP 2021). Their service area spans over 3,000 square miles and covers more than 40 towns (Tri-County Transit 2017a). They provide two deviated fixed-routes, door-to-door, and long-distance medical services.

Door-to-door service provides shared ride trips for those who are unable to use a traditional deviated fixed-route service. These rides are provided by six different service agencies and cover approximately forty towns (Tri-County Transit 2017b).

The long-distance medical transportation provides transportation for non-emergency medical appointments for persons age sixty or older and disabled individuals. Their service area covers Vermont, New Hampshire, and Maine. These services are provided completely by volunteer drivers. By utilizing volunteer drivers and a mix of funding sources, the service is free for seniors. Those under sixty must pay, as the funding sources don't cover the cost (Tri-County Transit 2018).

### **Advance Transit**

Advance Transit provides service in both New Hampshire and Vermont. This service offers six fixed-routes and three local shuttles, in addition to ACCESS AT, their paratransit service. Advance Transit is completely fare free, due to contributions from Dartmouth College, Dartmouth-Hitchcock Medical Center, and towns in the Upper Valley. ACCESS AT offers shared-ride curb-to-curb paratransit services to individuals with disabilities. This service covers Hanover, Hartford, Lebanon, and Norwich.

### **Sullivan County Transportation Program**

The Sullivan County Transportation Program, a division of Southwestern Community Services, provides deviated fixed-route and demand-response services. Their three deviated fixed-routes cover Claremont, Newport, and Charlestown. Demand-response services include Dial-A-Ride (only available in Claremont) and volunteer drivers. The volunteer drivers program provides rides for individuals with a disability or seniors over the age of sixty. Most trips are taken using private vehicles, but paratransit vans are available for individuals who cannot use traditional vehicles. This program covers all of Sullivan County (Upper Valley Lake Sunapee Regional Planning Commission 2019) .

### **Concord Area Transit**

Concord Area Transit (CAT), a division of Belknap-Merrimack CAP, operates three fixed-routes, as well as demand-response service. The fixed-routes provide access to medical appointments and hospitals, shopping destinations, higher education, and residential neighborhoods (Concord Area Transit 2017).

There are three different origin-to-destination demand-response services. The ADA Paratransit service serves individuals who cannot access a fixed-route service. CAT Senior Transit Services (CST) is a shared ride service for those aged sixty or older in the Greater Concord Area. The third service is the Rural Transportation Service. This service provides transportation for seniors 60 years and older who live outside the Greater Concord Area (Concord Area Transit 2020).

### **Home Healthcare, Hospice & Community Services (HCS) Transportation**

HCS operates four transportation programs in the City of Keene. The City Express is Keene's fixed-route service ("City Express" 2020). The Friendly Bus is a shared-ride demand-response service for seniors age sixty or older. This service is fare free and can be used for any reason (HCS 2021a). The Para Express is Keene's shared-ride door-to-door para-transit service. This service will pick up and drop off riders within 0.75 miles of the City Express's fixed-routes (HCS 2021c). HCS also operates a deviated fixed-route shared long-distance medical transportation service. While priority is given to seniors, veterans, and individuals with disabilities, this service is open to the general public. A donation is suggested, but the service is fare free (HCS 2021b).

### **North Dakota Tribal Transportation Providers**

#### **Standing Rock Public Transit**

Standing Rock Public Transit provides demand-response service in Sioux, Morton, and Burleigh counties in North Dakota and Corson and Walworth counties in South Dakota. The service

operates thirteen routes, providing service to twelve communities, two casinos, and two Veterans Affairs hospitals. Three routes are in-town; the rest are intercity routes. Trips to the hospitals are run twice monthly, on alternating Wednesdays. Additionally, they provide Medicaid transportation services. Advance reservations are required for all routes. Fees vary depending on the trip. For those attending college courses or GED tutoring and testing sessions, Standing Bull College will pay their transit fares.

### **Spirit Lake Tribe**

The Spirit Lake Transportation Program provides demand-response service for community members upon request (Spirit Lake Nation 2020). They also provide transportation for clients of human service programs (Mattson, Mistry, and Hough 2020).

### **Turtle Mountain Band of Chippewa Indians**

The Turtle Mountain Tribal Transit Program (TTP) operates deviated fixed route service in Rolette County. They have two routes – East and West – that leave from a central transportation hub. Service is provided Monday through Thursday, 7:00 AM to 5:00 PM (Turtle Mountain Band of Chippewa Indians, n.d.)

## **North Dakota Rural Transportation Providers<sup>17</sup>**

### **South Central Adult Services**

The South Central Transit Network provides demand-response service in eight counties (Barnes, Emmons, Foster, Griggs, Lamoure, Logan, McIntosh, and Nelson). Trips must be scheduled in advance. Transit needs are met through a combination of bus, van, and taxi service. In-town services are offered in six out of eight counties, in select communities. Intercity service is offered in all counties, on a rotating basis (South Central Transit Network n.d.).

### **City of Minot**

Minot City Transit operates a fixed-route bus service, Monday through Friday. They have six local routes that run from 7:00 AM to 7:00 PM (Minot City Transit 2020). They offer live tracking services, through Routematch by Uber. Minot City Transit does not operate their own paratransit service. Instead, they have contracted Souris Basin Transit to provide this service for them (City of Minot 2021).

### **Souris Basin Transit**

Souris Basin Transportation provides demand-response transportation in the city of Minot, as well as Burke, Bottineau, McHenry, Mountrail, Pierce, Renville, and Ward counties. Services include both local and intercity routes. Local routes are offered in Bottineau, Minot, and Rugby. Fares and days of service vary depending on the location and route. All rides must be scheduled in advance.

### **James River Senior Citizens Center**

James River Public Transit (JRPT) provides local and intercity demand-response service and is also a Medicaid transit provider. Local dial-a-ride service is available in Jamestown, seven days a

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<sup>17</sup> Providers who do not report to the National Transit Database are excluded.

week. Intercity service to Bismarck is available twice a month and service to Fargo is available on Wednesdays. All trips, both local and intercity, must be booked in advance. JRPT maintains a master schedule for daily work rides. Instead of calling daily to schedule a ride to work, individuals can fill out a monthly work schedule calendar (James River Public Transit 2021). Their rides will be scheduled for the month by Dispatch. JRPT provides transportation to meal sites for James River Senior Citizens Centers for both lunch and supper meals, as well as to Jamestown Regional Medical Center (James River Senior Citizens Center 2021).

### **Stark County Council on Aging/Elder Care**

Dickinson Public Transit is governed by the Elder Care Management Board. Dickinson Public Transit provides local and intercity demand-response service. Trips in the Dickinson area are available seven days a week. Transit from Dickinson to Bismarck is available every Tuesday. Riders can request off-day trips (days other than Tuesdays) to Bismarck, but these are more expensive and subject to driver and vehicle availability. Dickinson Public Transit provides approved medical rides for those with Medicaid or Sanford Health Plans (Dickinson Public Transit 2020).

### **West River Transit**

West River Transit provides demand-response service in Burleigh, Dunn, Grant, Oliver, Mclean, Mercer, and Morton counties. They provide intercity transit to Bismarck, Prairie Knights, Dickinson, Minot, Butte, and 4 Bears Casino. In Mercer and Mclean counties, they also provide transportation to local shopping, available Monday through Friday. Shopping rides are also available in Morton county; days and locations vary. For those with children, West River Transit provides preschool and daycare transportation, Monday through Friday, in all counties. In addition to their traditional transit offerings, they also operate an “event bus.” This bus can be hired for trips to Dickinson, Bismarck, Minot, Prairie Knights Casino, and more.

### **Devils Lake Transit (Senior Meals and Services)**

Senior Meals and Services provides transportation in Devils Lake and Eddy County. All services are demand-response and must be scheduled in advance. In Devils Lake, local service is offered Monday through Friday. Intercity trips to Grand Forks, Starkweather, Hampden, Edmore, Lawton, and Brocket are provided with varying frequency. Trips to Grand Forks are provided approximately four times a month. To all other locations, trips are offered once a month. In Eddy County, local trips in New Rockford are provided Monday through Friday. Trips to Carrington, Devils Lake, and Sheyenne can be arranged by special request. Senior Meals and Services is an approved Medicaid transportation provider.

### **Williston Council for the Aging**

Northwest Public Transit, provided by Williston Council for the Aging, offers demand-response transit within the cities of Williston and Watford City. In Williams county, veterans with a VA card have their fares waived. Public transportation is available Monday through Friday, 7:00 AM to 5:30 PM.



### **Hazen Busing Project**

Hazen Busing provides demand-response transportation. Local trips, either within Hazen city limits or nearby, are offered Monday through Friday. Trips to Bismarck are taken every Wednesday and trips to Dickinson are scheduled every second Tuesday. Trips are also scheduled for special events, such as to the Medora Musical, or to casinos.

### **Southwest Transportation Services**

Southwest Public Transportation offers local and intercity demand-response services in Adam, Bowman, Hettinger, and Slope counties. Local service is provided in Bowman and Hettinger, Monday through Friday. Intercity routes are scheduled on-demand. Southwest Public Transportation has agreements with many clinics and hospitals, to share the cost of the fare. For medical appointments, fares for veterans are paid by the Department of Veterans Affairs.

### **Kenmare Wheels and Meals**

Kenmare Transit provides demand-response transit in Ward county. Local rides are available Monday through Friday. Transit to Minot is provided the first and third Tuesday of the month. They also provide special transit options for workers. For those who work within the city of Kenmare, they can arrange to have transportation provided outside of regular service hours.

### **Nutrition United**

Nutrition United provides demand-response transit in Rolette County. In-county trips are provided daily. Trips outside the county are provided on request (North Dakota Department of Transportation n.d.).

### **Cavalier County Senior Meals and Services**

Cavalier County Transit provides demand-response transit within Cavalier County. Trips within the city of Langdon are available Monday through Friday. Transportation out of town is available on-demand and fulfillment is contingent on the volume of need for the service (Cavalier County Senior Meals & Services 2020).

### **Pembina County Meals and Transportation**

Pembina County Meals and Transportation offer local and intercity demand-response service in Pembina County, with intercity trips to other counties. In-town transportation is provided in Cavalier and Drayton. General purpose intercity trips from Pembina County to Grand Forks are offered 2-4 times per month, depending on the location of origin. Trips from Drayton and St. Thomas to Grafton are offered daily, Monday through Friday. Transportation for medical appointments in Grand Forks is available every Friday. Medical transportation for other locations is available upon request. Their final service is employment transportation. Fares for rides to employment will be determined on a case-by-case basis, depending on the distance to the worksite (North Dakota Department of Transportation, n.d.).

### **Kidder-Emmons County Senior Services**

Kidder-Emmons County Senior Services' transportation service is Kidder County Transit. They provide transportation in Kidder, Burleigh and Stutsman counties. Local transportation within the city of Steele is provided daily, Monday through Friday. Travel between Robinson and Tuttle,

both in Kidder County, is provided every Tuesday and the first Friday of the month. Transportation to other locations outside the county, like Jamestown, Bismarck, Carrington, and Harvey is offered more sporadically, ranging from twice a week to once a month, depending on the location. Additional trips and locations can also be arranged upon request. Travel demand has increased due to transit needs for medical appointments.

### **Can-Do Transportation**

Can-Do Transportation is a demand-response service located in Rolla, North Dakota. They provide service in Rolette County (Mattson, Mistry, and Hough 2020).

### **Walsh County Transportation Program**

Walsh County Transportation is a demand-response service. They provide local transportation in Park River, as requested. Intercity transportation is provided for Grand Forks, Grafton, and Fargo. Transit to Grafton and Grand Forks is offered multiple times a week. Trips to Fargo are taken once a month. They are a Qualified Medicaid Provider and prioritize transportation for medical care.

### **Nelson County Council on Aging**

Nelson County Council on Aging is a demand-response service located in McVile. They operate two demand response vehicles in Nelson County.

### **Dickey County Senior Citizens**

Dickey County Transportation is operated by Dickey County Senior Citizens. They offer demand-response service in Ellendale and Oakes. Local transportation is available in Oakes and Ellendale two to three days per week. Travel from Ellendale to Oakes is occurs twice a month. Trips from Oakes and Ellendale to Aberdeen occur once a month. Fares are not required; they are donation based.

### **Golden Valley/Billings County Council on Aging**

The Golden Valley/Billings County Council on Aging provide demand response service. In-town rides are available on Thursdays. Trips out of town are available upon request (Golden Valley County n.d.).

### **Wildrose Public Transportation**

Wildrose Public Transportation provides demand-response transportation in Northwest North Dakota. Their regular service area includes Williams and Divide counties. Local service in Tioga, Crosby, and Divide County are offered multiple times per week. Transportation to Williston, either from Crosby or Wildrose, is offered at least once per week. Trips to Minot and Bismarck are offered less frequently.

### **Benson County Transportation**

Benson County Transportation provides demand response service in Benson County. Transit to Rugby, Harvey, and Devils Lake is available once-a-week. Trips to Bismarck and Grand Forks are scheduled once a month. Trips to Jamestown are provided twice per week.



## Maine Rural Transit Providers

### Aroostook Regional Transportation Services, Inc. (ARTS)

ARTS provides demand-response service in Aroostook County, Patten, Stacyville and Danforth. Transportation is offered in Caribou, St. John Valley, Presque Isle, and Houlton areas. Services are offered five days a week, though services are not offered every in every area every day. To provide their service, ARTS utilizes a combination of buses, volunteer drivers, private car drivers, and taxis.

In 2019, a new Presque Isle looped was launched in collaboration with the Going Places Network. This route offered seven days a week service in Presque Isle. The route was ended in late March 2020, when ARTS stopped serving the route during the pandemic and the Going Places Network was unable to find a replacement (Lizotte 2019; Marino Jr. 2020)

### Downeast Transportation

Downeast Transportation is Hancock County's transportation provider. They offer commuter services, in-town shuttles, and shopping trip services, as well as operating the Island Explorer (Acadia National Park). All routes are deviated fixed-routes and may deviate up to 0.75 miles. In-town shuttle services are offered in Ellsworth, Bucksport, Bar Harbor, and Stonington on varying days of the week. Shopping services are offered five days a week. Their funding is provided by the FTA, MDOT, Jackson Lab, Acadia National Park, municipalities, and other local businesses.

### Downeast Community Partners

Downeast Community Partners (DCP) provides demand response service in Washington County. They offer transportation assistance for child protective visits, sheltered workshops, and MaineCare-covered medical appointments. They also operate DCP Rides, which is open to the general public. DCP Rides operates in Eastport, Pleasant Point, Calais, Princeton, Baileyville, Lubec, Machias, Milbridge, and Columbia. Thanks to a partnership with the Eastern Area Agency on Aging and the FTA, DCP Rides is able to offer free rides to seniors from Lubec and Eastport to Bangor and Bucksport to Bangor.

### West's Transportation

West's Transportation offers intercity and local service in Washington and Hancock counties. West's Coastal Connection is their intercity service, operating seven days a week between Calais and Bangor. On Mondays, they have a route from Beals Island to Ellsworth and Tuesdays, from Steuben to Machias. On the first Wednesday of the month, they offer service from Lubec to Machias and back.

### Kennebec Valley Community Action Program (KVCAP)

KVCAP offers fixed-route, deviated fixed-route, and demand-response service in Kennebec and Somerset County. The Kennebec Explorer is a fixed-route bus service operating in the greater Waterville and Augusta area. The Somerset Explorer is a deviated fixed-route bus service operating in Somerset County. The Somerset Explorer also has the Move More Kids Transit Program. This summertime transportation program is designed to bring young adults to places with healthy activities.

Their demand-response services are all non-emergency medical transportation. The KV Vans are a fleet of paratransit vans providing door to door service for elderly, disabled, and low-income individuals in Kennebec and Somerset counties. KVCAP offers MaineCare transportation, in collaboration with Penquis CAP. Finally, though not a direct service, they provide a mileage reimbursement for friends and family members who provide transportation for those unable to transport themselves. To meet the needs of the demand-response service, KCAP utilizes volunteer drivers.

### **City of Bath**

The City of Bath operates a year-round city bus service and a seasonal trolley. The CityBus has two deviated fixed-routes within Bath that operate Monday through Friday. They also offer demand-response service to Mid Coast Hospital twice daily. The CityBus has an employee shuttle for Bath Iron Works Employees. This shuttle picks up riders at their homes. The seasonal trolley runs from June through October, six days a week, through the City of Bath.

### **Mid-Coast Public Transportation**

Mid-Coast Public Transportation operates the Rockland Downtown Area Shuttle (DASH) and the Belfast DASH, two deviated fixed-route services. The Rockland DASH operates Monday through Friday, while the Belfast DASH operates Monday, Wednesday, and Friday. They also have a volunteer driver network, which they use to bring individuals to medical and social services appointments in Waldo, Knox, Lincoln, and Sagadahoc counties.

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