

Assessment of North Dakota Mobility Options, Transit Needs, and Characteristics of Users



Prepared for:

North Dakota Department of Transportation

Prepared by:

Jeremy Mattson

Dilip Mistry

Jill Hough

Small Urban and Rural Center on Mobility (SURCOM)

Upper Great Plains Transportation Institute

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Acknowledgements

This research was funded by the North Dakota Department of Transportation. It was conducted by the Small Urban and Rural Center on Mobility (SURCOM), a program of the Upper Great Plains Transportation Institute at North Dakota State University.

The authors acknowledge the guidance provided by Becky Hanson of the North Dakota Department of Transportation and members of the project advisory panel: Dale Bergman, Cities Area Transit; Susan Dingle, Bismarck Citizens Transit Advisory Group; Kimberly Gabriel, Department of Human Services; Michelle Gayette, Department of Human Services, Aging Services Division; Pat Hanson, South Central Adult Services; Brian Horinka, City of Minot Busing; Dawn Mock, Department of Human Services; Steve Saunders, Bis-Man MPO; Royce Schultz, Dakota Center for Independent Living; Pam Ternes, Standing Rock Public Transportation; Kayla Ver Helst, North Dakota Housing Finance Agency; and Lonnie Wangen, North Dakota Veteran Affairs. The authors also thank the transit agencies for distributing and collecting riders surveys and providing transit agency information.

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ABSTRACT

This study identified and analyzed existing transit and other passenger mobility options in North Dakota. Information about population growth trends and demographics across the state are described and used to identify areas with the greatest needs for mobility services. Transit service levels across the state are described, based on an analysis of existing data, as well as information collected through a survey of transit agencies. The availability and characteristics of other passenger transportation services was also documented. In addition to the transit agency surveys, surveys were conducted of transit riders and stakeholders across the state. Results from the rider surveys provided information about the demographics of transit users. Results from all three surveys were used to describe the adequacy of existing services and transit agency needs. Service gaps were identified by comparing service levels across the state to benchmarks, and the level of funding needed to fill these gaps was estimated. A state-of-good repair model was developed that predicts the service lives of vehicles and estimates vehicle replacement costs over time, including backlogged costs. The study provided information about how other states manage their state aid funds and also estimated the benefits of investments in transit in North Dakota.

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EXECUTIVE SUMMARY

The state of North Dakota recognizes the need for a transportation system that allows for optimum personal mobility. Meeting this goal requires an analysis of existing mobility options, how well those options are meeting the needs of North Dakota residents, gaps in services, and funding needs. This study addresses these issues and also meets the needs of section 10 of HB 1012, passed by the North Dakota State Legislature in 2019, which called for the North Dakota Department of Transportation (NDDOT) to study public transportation services within the state. As required by the legislation, the study must include the number of users of public transportation services, demographics of the users, other transportation options available to users of public transportation services, and the identification of areas of the state which have no public or private transportation services available.

Specific objectives are:

1. Construct a demographic profile of the current users of transportation services and the state of North Dakota
2. Develop a mobility needs index
3. Describe existing levels of transit service and other passenger transportation options across the state
4. Identify base levels of required transit service and gaps in existing service
5. Develop recommendations for meeting mobility needs
6. Determine the level of funding to maintain the current level of service
7. Determine the level of funding to expand the existing level of service
8. Determine the number of users (current and potential) of the public transportation services
9. Describe how surrounding states manage their state aid funds for public transportation

Population Growth, Demographic Profiles, and Mobility Needs Index

The estimated statewide population for North Dakota in 2017 was 745,475, a 13% increase from the 2010 census. The greatest population growth during this period occurred in the northwest part of the state. Significant growth occurred in Williams, Mountrail, Stark, and other western counties, as well as the state's two most populated counties, Cass and Burleigh. Meanwhile, many rural counties in the eastern half of the state lost population. Based on recent population growth trends, population projections for 2030 were estimated for each county. These growth projections were used to estimate future demand for transit.

The demographics of the population is also important in determining need for transit, especially in rural areas. Many population groups, such as older adults, people with disabilities, low-income individuals, and those who do not have an automobile, have a higher propensity for transit use than the overall population. Many of the rural counties that have been experiencing stagnant or declining population also have a high percentage of older adults. In many rural counties, more than 20% of the population is 65 or older. The population over age 65 is projected to increase more than 50% from 2017 to 2030 in a number of counties. There is also a number of counties with declining overall population that are expected to experience increases in the older adult population.

Total population, population aged 65 or older, population with a disability, population below the poverty line, and population of workers without access to a vehicle are important factors for determining mobility needs. Using these variables, a mobility need index, expressed with a 1-5 scale, was estimated to identify areas with the greatest needs for mobility services. The values calculated for each of North Dakota's counties are presented in Figure E.1, with higher numbers indicating a greater need for mobility services. The results are fairly intuitive, as the more highly populated counties have the highest values. Some lower-population counties also rank high because of high concentrations of transportation-disadvantaged

populations. The mobility needs index is an attempt to measure concentrations of mobility needs associated with identifiable demographic groups and does not suggest that all related needs are unmet.

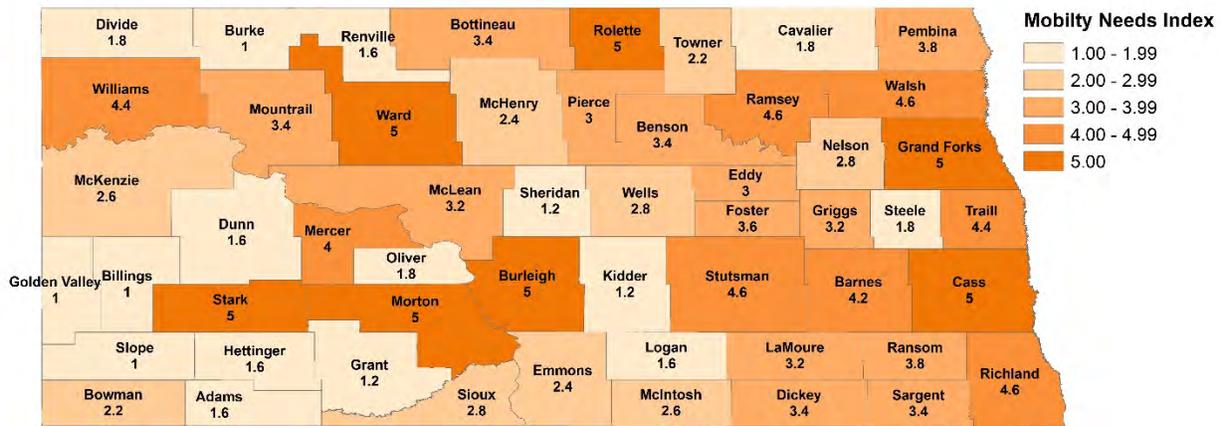


Figure E.1 Mobility Needs Index Map, County Level

Existing Levels of Transit Service

Existing levels of transit services for the state were analyzed by examining National Transit Database (NTD) data and transit agency survey data. NTD data on ridership, vehicle revenue miles and hours of service, number of vehicles in service, and various performance measures were analyzed. A survey of transit agencies provided additional information on service coverage, span of service, types of services provided, and other service characteristics.

North Dakota has three urban transit providers located in Fargo-West Fargo, Bismarck-Mandan, and Grand Forks. Metro Area Transit (MATBUS) is the transit system serving Fargo and West Fargo. In Bismarck-Mandan, Capital Area Transit (CAT) is the fixed-route system and Bis-Man Paratransit is the paratransit system. Grand Forks is served by Cities Area Transit (CAT). Fixed-route ridership in Fargo-West Fargo represents the largest share of urban ridership in the state. Total urban ridership had been increasing until 2011, before leveling off and decreasing after 2014. These trends follow similar national trends in bus ridership.

The NTD shows data for 31 rural transit systems, though this does not include a few operators that do not receive federal funds and do not report data to the NTD. Rural transit ridership is shown to be following a similar trend as urban ridership.

The survey of transit agencies identified the span of service across the state, as shown in Figures E.2 and E.3. Many rural areas of the state have service just one day per week or less than weekly. A few areas have service 2-4 days per week, and many areas have service 5 days per week. Weekend service is also found in some cities, usually the larger cities, but it is less common. Fixed-route services in Fargo-West Fargo, Bismarck-Mandan, and Grand Forks operate six days per week, while the complementary paratransit is available seven days per week in Fargo-West Fargo and Bismarck-Mandan and six days per week in Grand Forks. Hours of service is often limited in rural areas. Many rural areas have service for less than 9 hours per day, including several areas with less than 5 hours of service per day. Most larger cities have service at least 9 hours per day, and the urban areas have 16 or more hours of service.

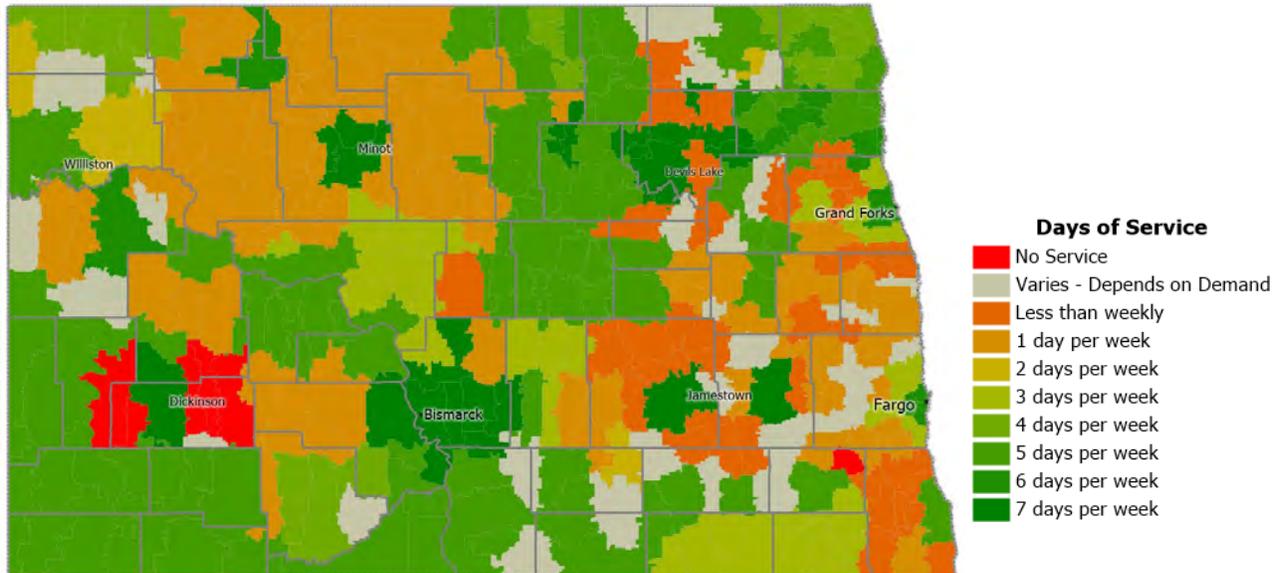


Figure E.2 Days Per Week of Transit Service

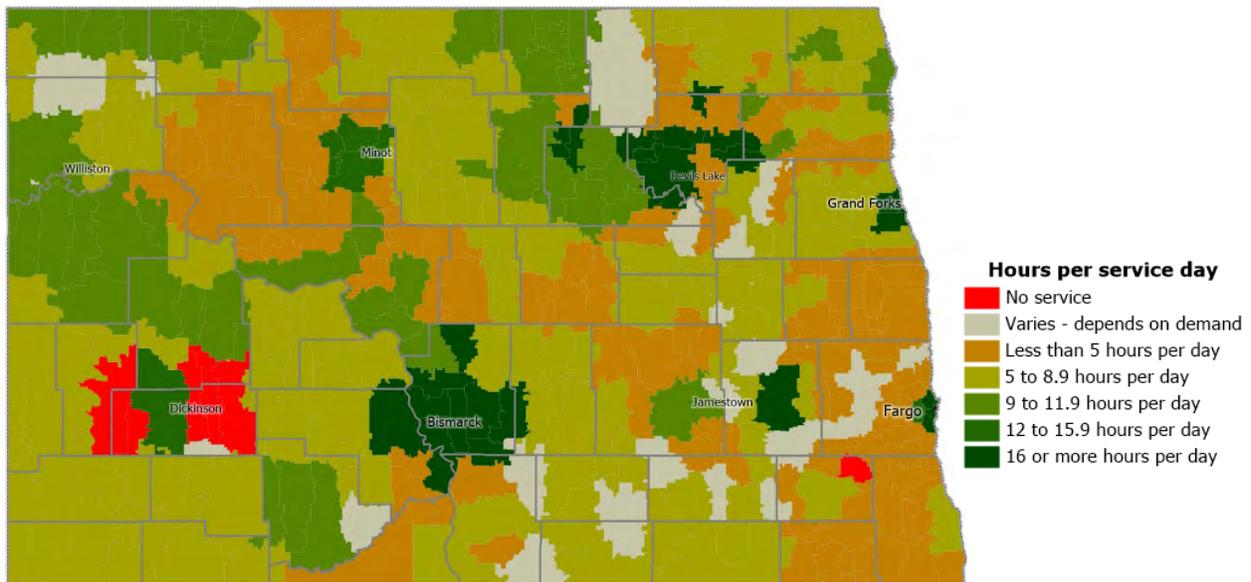


Figure E.3 Hours Per Service Day

Transit Rider Demographics

Transit riders across the state were surveyed to collect information about rider demographics. Responses were received from 751 rural transit riders and 105 urban riders. Ridership data by fare category for transit systems in Fargo and Grand Forks provide additional data about rider demographics.

Rural Transit Riders

Survey results show that a large percentage of rural transit riders are older adults. Many have a disability, cannot drive, do not have access to a vehicle, and/or have a low income. The average age was 59 and the median age 62. Almost one quarter of respondents were 80 or older, and 39% were 70 or older.

About half of riders identified themselves as having a disability, and 47% did not have a driver's license. About 8% were a veteran, and 3% said they have a service animal. Riders are predominantly low income. A majority (58%) have household incomes below \$25,000, and most (87%) have incomes below \$50,000. Many riders do not have access to a vehicle. According to survey responses, 40% do not have any vehicle in the household, and 39% have just one vehicle. About 80% of rural respondents were white, and 9% were American Indian or Alaska Native. A large majority of respondents (73%) were women.

Figure E.4 provides a comparison of the demographics of rural transit riders and the rural general population. Transit is shown to serve a disproportionately higher percentage of these population groups.

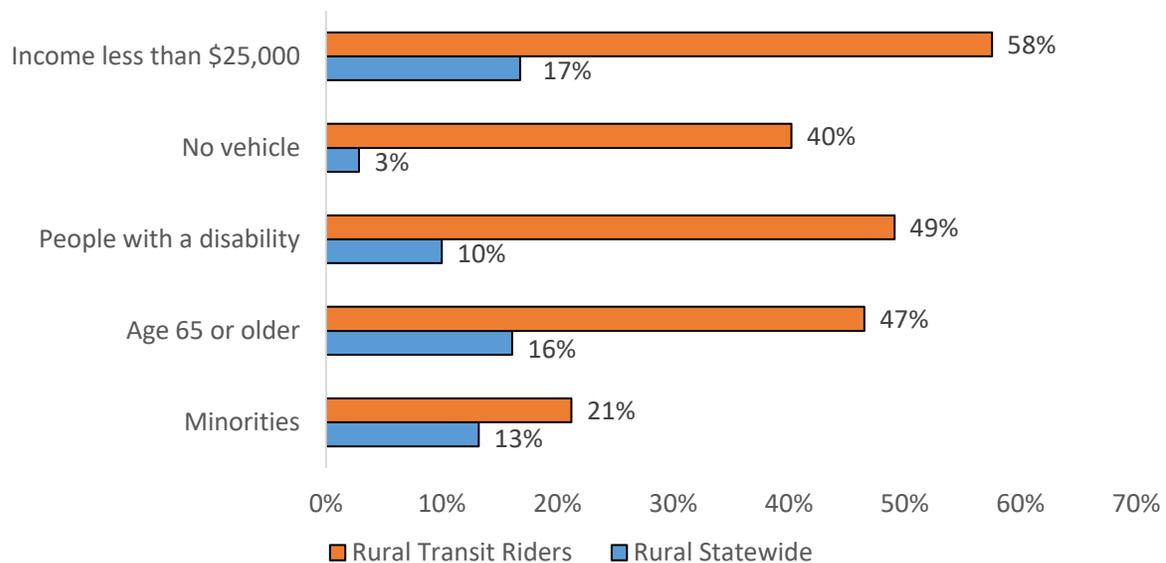


Figure E.4 Demographics of Rural Transit Riders and Rural General Population

Urban Transit Riders

Ridership data by fare category for MATBUS and Cities Area Transit provide a description of the age and disability status of urban riders in Fargo-West Fargo and Grand Forks. For MATBUS, nearly half of fixed-route trips in 2019 were taken by college students. People with disabilities accounted for 15% of trips and older adults took 6% of the trips. Including paratransit ridership, the total share of MATBUS trips taken by people with disabilities was about 19%. While MATBUS serves a lower percentage of seniors, Metro Senior Ride helps to fill that gap. In 2019, 13% of Cities Area Transit fixed-route trips were taken by college students, 7% by seniors, and 5% by people with disabilities. Including both fixed-

route and demand-response trips, people with disabilities accounted for 18% of total ridership and seniors 13%. Cities Area Transit has served a smaller percentage of college students, as compared to MATBUS, but the number of trips taken by college students will increase significantly as the transit agency is taking over the University of North Dakota (UND) campus shuttle service previously operated by UND.

Survey responses for the urban riders are not as representative because of a small number of responses from Fargo and Bismarck. However, the responses that were received showed a large percentage of riders have a disability, a majority do not have a driver's license, most are low-income, and a majority do not have any vehicles in the household.

State-of-Good-Repair Analysis

Transit agencies seeking federal grants must keep their transit assets in a state of good repair. The ability to accurately predict the service life of revenue vehicles is crucial in achieving this. Therefore, North Dakota transit systems need an intelligent predictive model for analyzing their transportation rolling stock, determining current conditions, predicting when vehicles need to be replaced or rehabilitated, and determining funding needed in a future year to maintain the state of good repair.

This study developed a machine learning predictive model (MLPM) by training and fitting with NTD's retired revenue vehicles inventory data. Then the MLPM was deployed on the North Dakota's transit agencies' 2018 revenue vehicles data and calculated the service life of each vehicle. The service life of each vehicle depends on many important features such as vehicle type, vehicle length, fuel type, seating capacity, standing capacity, mode, etc.

After the predicted service lives of vehicles were determined, the projected retirement years of vehicles currently in use were estimated. Based on these estimates, the replacement backlog and projected vehicle replacement cost for each year thereafter were estimated, providing a 12-year long-range plan.

The results show a backlog of 58 vehicles (17% of the current 350 vehicles) that need to be replaced to bring the revenue vehicles into a state of good repair, assuming vehicles will be replaced following the predicted service life. Estimates were also made of the number of vehicles that would need to be replaced each year to maintain a state of good repair. The cost to replace the backlog of vehicles that exceed their useful lives in North Dakota is estimated as \$7.57 million. Estimates for annual vehicle replacement costs are presented in Figure E.5. Federal funding is expected to cover 80% of new vehicle costs, so the non-federal share of the backlog cost is \$1.51 million.

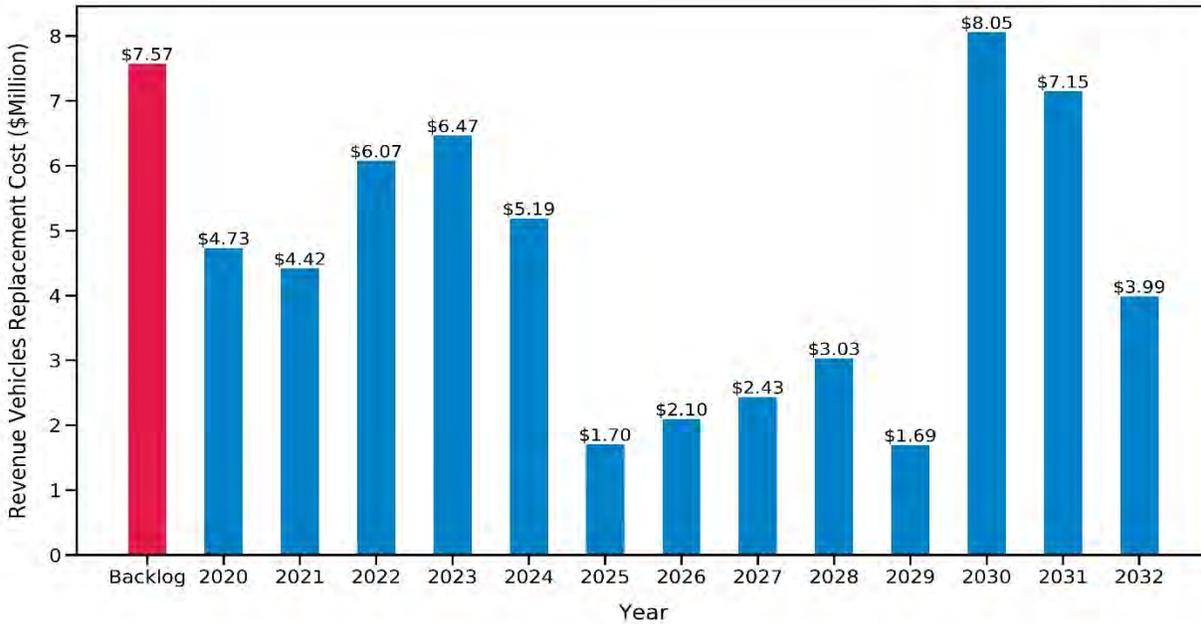


Figure E.5 Backlog and Projected Replacement Costs for Revenue Vehicles in North Dakota (Yearly)

Other Passenger Transportation Services in North Dakota

In addition to public transit services, there are other passenger transportation services available across the state. They include taxi services, transportation network companies (TNCs) or ridehailing companies such as Uber and Lyft, private intercity bus service, intercity rail, veterans’ transportation services, and others.

Taxi services and TNCs are available in the larger cities across the state. Cities with a population of 3,500 or greater all have taxi services. Some of these taxi companies also provide services to other areas within the region. A search for Uber services across the state revealed that it was available only in the larger cities with a population of 20,000 or more, as well as a few smaller cities near Fargo or Grand Forks. On the other hand, Lyft services were found to be more extensive across with state. While these services provide another mobility option for North Dakota residents, they are more expensive than public transit and may not be accessible for people with disabilities. Finding a wheelchair accessible TNC vehicle may currently be difficult or unlikely. Similarly, most taxis are also not accessible.

Intercity bus services are provided in North Dakota by Jefferson Lines. Stops are located in Fargo, Grand Forks, Valley City, Jamestown, Bismarck, and Dickinson. The east-west route, however, does not run every day, and service times may be inconvenient for some types of trips. About 48% of North Dakota’s population live within 10 miles of a Jefferson Lines stop. Souris Basin Transportation and Standing Rock Public Transportation also provide intercity routes into Bismarck. The former traveling from Minot three days a week and the latter from the Standing Rock Reservation five days per week. Intercity rail service is provided by Amtrak’s Empire Builder route. About 38% of the state’s population lives within 10 miles of an Amtrak stop.

Other transportation services are provided by veterans transportation programs, assisted living facilities, wheelchair van companies or medical transport organizations, and other programs that provide transportation for their clients.

Adequacy of Service and Transit Agency Needs

Surveys of transit agencies and stakeholders across the state collected information regarding the need for new services to meet the demands of service area residents and an evaluation of how well the needs of residents are being met. The transit agency survey also collected information regarding needed facility upgrades, the capacity for transit agencies to meet service requests, and staffing needs.

Survey results suggest a need for an expansion of service. Most stakeholders and a majority of transit agencies agreed that there are transportation services needed by their service area residents that are not currently available. Stakeholder and transit agency respondents most commonly identified a need for weekend service, longer hours of service, and, generally, an expansion of currently available services. In general, the stakeholders tended to be more likely to report a need for additional services. Transit agencies commented that inadequate funding and staffing are the major challenges to providing the additional service.

Many stakeholders commented on the need for later or earlier hours of service, especially for people who work earlier or later hours. Similarly, many remarked about the need for weekend service, Sunday service, or additional days of service in rural areas where current services are available just a few days per week. Another common remark was the need for better services for people traveling from rural areas and smaller communities to the larger cities for services, especially for medical care.

Cost concerns were also mentioned by many respondents. Many stakeholders noted that their clients are low-income and cannot afford taxi, Uber, or Lyft services, or to own a vehicle. Even the cost of public transportation services can be a barrier for some. Some commented on how there is generally a need for more transportation options, especially when existing services are not available. The lack of options in rural areas was commonly mentioned.

Results of the rider survey showed that most riders are generally satisfied with services provided. However, transit riders did note some challenges to using public transit. The most common challenges identified again were hours of service and lack of weekend service. Others mentioned challenges with scheduling or reserving a ride ahead of time, and some mentioned waiting times, timeliness, and challenges from winter weather, especially for fixed-route riders walking to and from bus stops.

Transit agencies were asked to describe the adequacy of their facilities for meeting current and expected future needs (within the next five years). Most agencies said that maintenance and administrative facilities are adequate for current and expected future needs. Agencies were more likely to identify needs for vehicle storage facilities or passenger facilities.

One of the main findings from a previous study published in 2015 was a need to improve staffing capabilities among transit agencies. In the previous study, half of the agencies reported inadequate staff to meet current needs. Results from this survey show only a slight improvement. Eleven of the responding 26 agencies (42%) indicated they have inadequate staff to meet current needs. Among the agencies with adequate staff, 11 reported that they will need additional staff within the next five years to meet expected future needs. Many mentioned a need for more drivers, among other positions.

Service Gaps and Funding Needs

To evaluate service levels in North Dakota, the state was divided into 20 regions, consisting of the three urban areas, (Fargo-West Fargo, Bismarck-Mandan, and Grand Forks), and 17 rural regions consisting of one or multiple counties. These regions were determined based on the current service boundaries of the state's transit providers. Figures E.6 – E.8 show rural transit trips, vehicle revenue miles, and vehicle revenue hours per capita for each rural transit region. These data show the lowest levels of service, measured per capita, in the Red River Valley and Northwest regions.

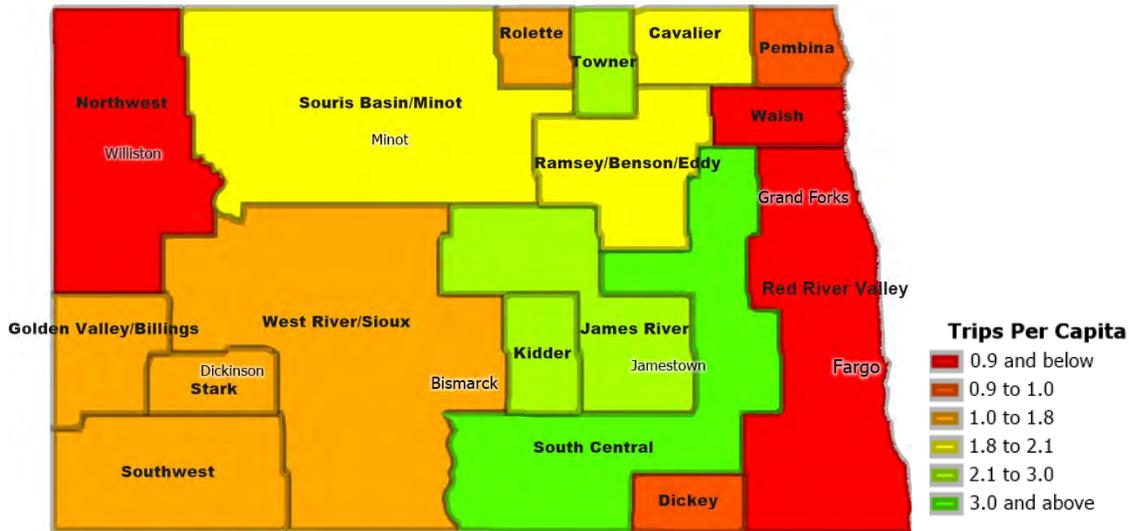


Figure E.6 Rural Transit Trips Provided Per Capita, by Region

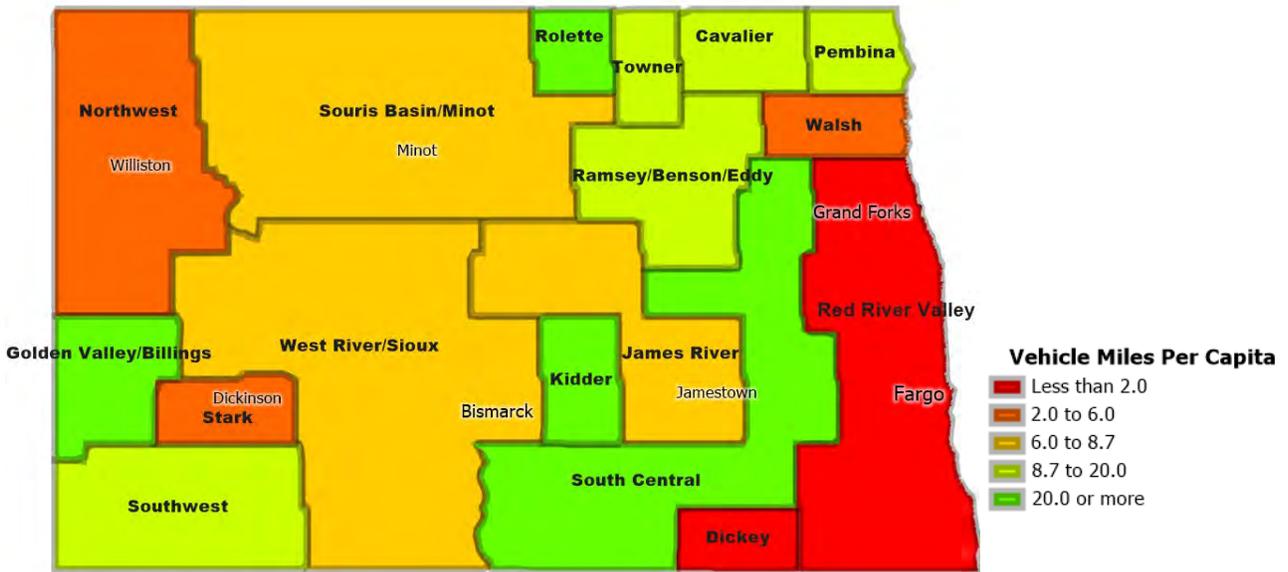


Figure E.7 Rural Transit Vehicle Revenue Miles of Service Per Capita, by Region

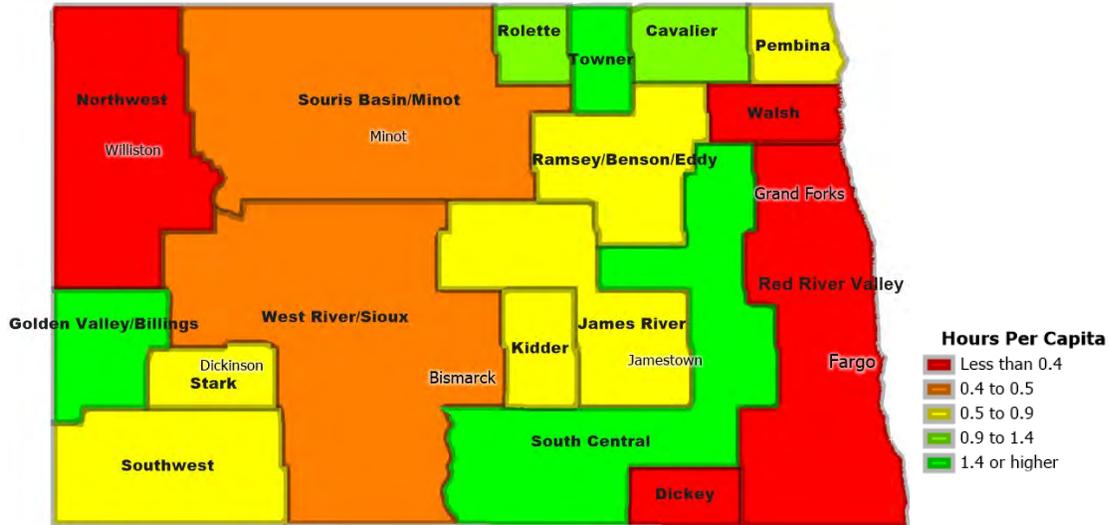


Figure E.8 Rural Transit Vehicle Revenue Hours of Service Per Capita, by Region

Because the need for rural and urban demand-response transit services is significantly influenced by demographics, the level of services provided in comparison to the population of older adults, people with disabilities, and those with low income also needs to be analyzed.

Service gaps were determined by comparing the current level of service to benchmark values. For rural transit, the analysis was based on the level of service provided in comparison to the population of older adults, people with disabilities, and those with low income. Table E.1 provides data for each region for trips, vehicle miles, and vehicle hours per transportation disadvantaged population. Values are highlighted in green if they are above the benchmarks and red if they are below.

Table E.1 Trips, Vehicle Revenue Miles, and Vehicle Revenue Hours Per Transportation Disadvantaged Population, by Region for 2018

Region	Trips Per Senior or Disabled Population	Vehicle Miles Per Senior or Disabled Population	Vehicle Hours Per Senior or Disabled Population	Trips Per Low-Income Population	Vehicle Miles Per Low-Income Population	Vehicle Hours Per Low-Income Population
Rural Transit						
Northwest	2.7	18.8	0.9	3.3	23.3	1.1
Golden Valley/Billings	4.5	123.9	5.3	7.0	194.1	8.3
Southwest	4.0	32.5	2.1	8.2	67.3	4.4
Stark County	5.6	24.6	2.4	7.7	33.9	3.3
Souris Basin/Minot	8.3	27.2	2.1	11.9	39.1	3.0
West River/Sioux	5.6	32.2	2.4	8.6	49.7	3.6
Rolette County	4.6	85.5	3.9	2.9	54.5	2.5
Towner County	7.9	58.0	4.7	9.8	72.1	5.8
Cavalier County	5.8	42.4	3.0	13.6	100.0	7.0
Pembina County	3.0	47.3	2.4	6.7	105.9	5.5
Walsh County	1.3	13.8	0.8	2.0	21.3	1.3
Ramsey/Benson/Eddy	6.8	46.2	2.9	7.3	49.9	3.2
James River	8.1	26.1	2.3	13.8	44.7	3.9
Kidder County	8.4	69.1	2.7	9.7	79.6	3.1
South Central	10.6	72.0	4.5	20.8	141.6	8.9
Dickey County	3.4	7.0	1.3	7.5	15.2	2.7
Red River Valley	1.2	7.8	0.7	2.6	16.3	1.6
Urban Transit Fixed-Route						
Bismarck-Mandan	4.6	15.3	0.9	7.2	24.1	1.4
Grand Forks	22.3	32.6	1.9	15.2	22.1	1.3
Fargo-West Fargo	48.8	34.2	2.8	45.7	32.0	2.6
Urban Transit Demand-Response						
Bismarck-Mandan	5.2	23.6	1.7	8.2	37.2	2.7
Grand Forks	5.5	21.1	2.4	3.8	14.3	1.6
Fargo-West Fargo	3.3	21.2	1.7	3.1	19.9	1.6

This study calculated the increase in rural transit service that would be required to meet the benchmarks for vehicle miles and vehicle hours. The study did not calculate the increase required to meet the benchmarks for total trips.

For urban transit, transit needs were assessed separately for fixed-route and demand-response services. Fixed-route services were assessed based on vehicle revenue miles and vehicle revenue hours provided per capita. Demand-response services were assessed based on vehicle revenue miles and vehicle revenue hours provided per population of older adults and people aged 18-64 with a disability. Fargo-West Fargo meets the benchmarks for fixed-route service, Grand Forks meets one of the benchmarks, and Bismarck-Mandan does not meet any. For demand-response, all urban areas meet the benchmarks.

Table E.2 summarizes the increased funding needed to meet the target service levels and fill the service gaps for the base scenario and a 2030 scenario that takes into consideration projected population for 2030. An increase in annual operating funding statewide of \$5.3 million is needed in the base scenario to meet the service gaps for both urban and rural transit. By 2030, the projected need in increased funding is \$14.4 million statewide. For rural transit, this represents an increase in funding of 21% for the base case and 55% by 2030. For urban transit, this is an increase of 14% for the base and 46% by 2030.

One-time new vehicle purchases are \$13.5 million and \$33.5 million in the base and 2030 scenarios, respectively. The long-term increase in annual vehicle replacement costs resulting from the increased fleet size is \$1.0 million and \$2.5 million the base and 2030 scenarios.

Table E.2 Total Statewide Funding Increases Needed for Base and 2030 Scenarios

	Base		2030	
	Total	Non-Federal Share*	Total	Non-Federal Share*
Increase in Annual Operating Funds				
Rural	\$3,179,828	\$1,589,914	\$7,335,260	\$3,667,630
Urban	\$2,071,211	\$1,387,712	\$7,099,346	\$4,756,562
Total	\$5,251,040	\$2,977,626	\$14,434,606	\$8,424,192
New Vehicle Purchases				
Rural	\$3,394,832	\$678,966	\$7,860,406	\$1,572,081
Urban	\$6,691,511	\$1,338,302	\$17,811,363	\$3,562,273
Total	\$10,086,343	\$2,017,269	\$25,671,769	\$5,134,354
Long-term Increase in Vehicle Replacement Costs				
Rural	\$490,191	\$98,038	\$1,134,990	\$226,998
Urban	\$477,965	\$95,593	\$1,390,173	\$278,035
Total	\$968,156	\$193,631	\$2,525,163	\$505,033

*Estimated non-federal shares of 20% for vehicles, 50% for rural operating, and 67% for urban operating.

These cost estimates represent the total operating and vehicle expenses, which can be funded through various sources. It is assumed that federal funding will cover 80% of vehicle purchases, and based on data from previous years, half of rural operating expenses and about one third of urban operating expenses.

Managing State Aid Funds and Generating Local Match

Transit providers within each state rely on a combination of federal, state, and local funds. Each state has a process in place to award funds to transit providers. Further, each state has specific criteria in which the transit providers are evaluated to determine funds administered. This study examined how state aid funds are managed in North Dakota and neighboring states. Transit providers are required to come up with local match dollars, and the states provide examples of match possibilities but also indicate other methods of match can be utilized as long as proper documentation is used.

Benefits of Transit

Investments in transit services in North Dakota provide numerous benefits to transit users, communities, and the state. Transit provides a vital service to their users, connecting them to health care, education, employment, shopping, social activities, and other important activities. Without transit, many who rely on the service would miss health care trips, have difficulties maintaining employment, and miss out on other important activities and opportunities. The lack of transit would have economic consequences for transit riders, as well as communities, and could also result in poorer health, increased health care costs, increased social isolation, and reduced overall quality of life.

Societal benefits of transit include mobility benefits and efficiency benefits. If transit service was not available, transit users would either make the trip in some other way or forgo the trip. Mobility benefits are those of providing trips that otherwise would have been forgone, and efficiency benefits are those that originate from making trips with transit instead of by automobile or some other mode. Economic impacts of transit, which are estimated separately from societal benefits, include those from transit spending, improved access to shopping, and increased population in the community.

Many users of public transit in North Dakota use the service because they cannot drive or do not like to drive or do not have access to a vehicle. A majority of transit riders are frequent users of the service, riding multiple times per week. Among rural transit riders surveyed, 26% said they would not have made their current trip if transit was not available, and 34% of urban riders said the same. Among those who said they would still have made the trip, many would have relied on a family member, friend, or someone else to provide a ride. Many urban transit riders said they would have walked. Some would have taken a more expensive taxi, Uber, or Lyft. Few would have driven themselves.

Societal benefits were estimated in dollar terms for rural and urban transit across the state. Using data for 2018, statewide benefits were estimated as \$18.5 million for rural transit and \$30.3 million for urban transit (Table E.3). These benefits exceed the costs of providing the service. Benefit-cost ratios were estimated as 1.5 for rural transit and 1.7 for urban transit, meaning every dollar invested in transit yielded \$1.50 in benefits in rural areas and \$1.70 in benefits in urban areas. A large share of these benefits are from improving access to health care. Without transit, many health care trips would be missed, which results in reduced quality of life and increased health care costs, as missed health care trips often lead to more expensive care later on.

Table E.3 Benefit-Cost Analysis of Transit in North Dakota for 2018

	Rural Transit		Urban Transit	
	Total	Per trip	Total	Per trip
Total Benefits	\$18,474,488	\$28.04	\$30,334,823	\$14.85
Costs	\$12,545,933	\$19.04	\$18,234,645	\$8.93
Benefit-cost ratio	1.5		1.7	

Transit provides other benefits that were not quantified in dollar terms. These include relocation avoidance, intangible user benefits, increased productivity, and equity.

Separate from these societal benefits are the economic impacts to local economics. Transit impacts local economies in several ways. Economic impacts include those from transit spending, improved access to shopping, and increased population in the community. Based on the data available, the study made rough estimates of the economic impacts from increased access to shopping and keeping people living in the community. Without transit, some transit riders would need to move, such as to an assisted living facility

or another community with better access. Table E.4 shows the sum of the estimated economic impacts in local communities from keeping people living in the community.

Table E.4 Sum of Economic Impacts in Local Communities from Keeping People Living in the Community

	Rural	Urban	Total
Earnings (\$)	1,039,853	3,955,463	4,995,316
Jobs	29	110	138
Value Added (\$)	1,997,323	7,597,552	9,594,875

Conclusions

This study analyzed population and demographic trends in the state of North Dakota to identify areas with the greatest current needs for mobility services and areas expected to have the greatest increases in demand. Population has been growing the fastest in the urban areas and the western oil region. These areas are generally experiencing the greatest need for increased services. Many rural counties outside of the oil region have had stagnant or declining populations. However, the demographics of these areas often create a need for transit services. Results showed that the highest population shares for older adults, people with disabilities, and those in poverty are mostly in rural counties.

Results from surveys of transit agencies, stakeholders, and riders consistently identified the greatest needs for improvement as being an increase in the number of days of service and the hours of service per day. A need for weekend service or Sunday service was often identified as a need. Other areas also have needs for increased service on weekdays. Many rural areas of the state have service fewer than five days per week, including many areas where service is provided just one day per week, and in some cases less than weekly. Respondents in both urban and rural areas also identified the need for service starting earlier in the morning and running later into the evening to serve a wider range of trip purposes. In particular, many potential transit riders work early in the morning, late at night, or on the weekends, and existing services do not meet their needs.

Among the rural transit regions, the Red River Valley and the Northwest region, along with Walsh County and Dickey County, were identified as the areas with the greatest need for increased services. Service levels in the rural areas of the Red River Valley region were found to be well below the benchmarks. Population has grown significantly the Northwest region, but transit services have not increased to meet the demand. Other regions that have experienced population growth, such as Stark County, Souris Basin/Minot, and West River/Sioux have higher levels of service but still have service gaps and unmet needs. The cities of Williston and Dickinson both have populations exceeding 20,000, but neither have a fixed-route system.

Within the urban areas, the greatest identified need was improved fixed-route service in Bismarck-Mandan. Investments will be needed to increase services in all urban areas as populations continue to grow and demands increase.

An increase in annual operating funding statewide of \$5.3 million is needed in the base scenario to meet the service gaps for both urban and rural transit. By 2030, the projected need in increased annual funding is \$14.4 million statewide. Meeting the base scenario target levels requires an additional 57 vehicles statewide, at a cost of \$10.1 million, and meeting the 2030 scenario requires 152 new vehicles at a cost of \$25.7 million. If it is assumed that the federal share of vehicle purchases is 80%, then the cost to state and local jurisdictions is \$2.1 million for the base scenario and \$5.1 million for 2030.

Other passenger transportation services, such as taxis, Uber, and Lyft, are also provided in the state to help meet the mobility needs of North Dakota residents. However, these services are often too expensive for many, and most vehicles are not wheelchair accessible. Intercity bus and rail options also exist but are limited.

The study showed that public transportation in North Dakota serves riders who are mostly low income. Many have a disability, and many either cannot drive or do not have access to a vehicle. A large share of rural transit riders are older adults. Urban transit, particularly in Fargo, serves a large share of students. These populations are not as well served by other transportation options, and they would be disproportionately impacted if transit services decreased or did not exist. An analysis of the benefits of transit investments in North Dakota showed the benefits exceed the costs, justifying further investment in areas where needs exist.

1. INTRODUCTION

The state of North Dakota recognizes the need for a transportation system that allows for optimum personal mobility. Meeting this goal requires an analysis of existing mobility options, how well those options are meeting the needs of North Dakota residents, gaps in services, and funding needs. This study addresses these issues and also meets the needs of section 10 of HB 1012, passed by the North Dakota State Legislature in 2019, which called for the North Dakota Department of Transportation (NDDOT) to study public transportation services within the state. As required by the legislation, the study must include the number of users of public transportation services, demographics of the users, other transportation options available to users of public transportation services, and the identification of areas of the state which have no public or private transportation services available.

Previous research by Mattson and Hough (2015) identified the needs of transit agencies in North Dakota, gaps in transit service, and additional services and funding needed to meet current demand as well as projected future demand. This study updates and expands upon the previous research. It updates the previous research with updated data for transit services, as well as updated population and demographic data and updated population projections. It also includes new surveys of transit stakeholders and transit providers to understand the needs of transit agencies and the users of the services. It expands upon the previous research by specifically addressing the requirements in HB 1012. It includes a survey of transit riders across the state to understand the demographics of transit users, as well as the challenges faced in using public transit. Unlike the previous study, it identifies other passenger transportation services available in the state. The study also includes a state of good repair analysis, a discussion of funding strategies, and an analysis of the benefits of providing public transportation in the state.

Specific objectives are:

1. Construct a demographic profile of the current users of transportation services and the state of North Dakota
2. Develop a mobility needs index
3. Describe existing levels of transit service and other passenger transportation options across the state
4. Identify base levels of required transit service and gaps in existing service
5. Develop recommendations for meeting mobility needs
6. Determine the level of funding to maintain the current level of service
7. Determine the level of funding to expand the existing level of service
8. Determine the number of users (current and potential) of the public transportation services
9. Describe how surrounding states manage their state aid funds for public transportation

This study provides North Dakota policy makers with a guide to future development of personal mobility options and identifies gaps that either exist now in mobility services or are likely to exist in the near future as the result of service modifications or changing demographics. The scope of the study includes local and intercity passenger transportation including local and intercity bus, intercity rail, passenger transportation services from private companies, and public and human service paratransit services.

The results may be used by NDDOT and state policy makers to identify programmatic and funding needs related to personal mobility. They can also be used to help determine funding priorities for the use of state funds and federal funds under state control and to provide guidance to city and county governments for addressing personal mobility needs. Further, the data collected as a part of the study can be used by local and regional agencies to plan for new or revised local services.

The report is organized as follows. Section 2 provides county-level population growth and demographic data, and well as some city-level data. These data were used to construct a mobility needs index, which is presented in Section 3. The mobility needs index was created to show areas of the state that have the greatest needs for mobility services. Three surveys were conducted for this study. These include surveys of transit providers, stakeholders, and riders. Section 4 describes the survey methodology and administration. Section 5 presents data on existing levels of transit service across the state. These data include data from the National Transit Database (NTD) and data collected through the survey of transit agencies. The demographics of transit riders are presented in Section 6, based on results from the transit rider survey and additional data collected from the urban transit agencies. Section 7 provides a state-of-good-repair analysis. Other passenger transportation services available in the state are identified in Section 8. Section 9 discusses transit agency needs and mobility goals and gaps. Target levels of transit service are identified, and the service and funding increases needed to reach those targets, including funds to cover increased operating expenses and vehicle purchases, are estimated in Section 10. Section 11 discusses funding strategies for transit, and Section 12 provides an analysis of the benefits of transit services. Finally, Section 13 provides conclusions and recommendations and a summary of findings.

2. POPULATION GROWTH AND DEMOGRAPHIC PROFILES

Understanding the distribution of different demographic population groups is an important part of planning public transit services across the state. Population demographics, such as age distribution, people with disabilities, individuals with low income, and those without vehicle access, may relate to the use of transit service. Some demographic groups may demonstrate greater propensity to use transit services than others, depending on the population density (Felsburg Holt & Ullevig 2015).

2.1 County Level Population Estimates

The estimated statewide population for North Dakota in 2017 was 745,475, a 13% increase from the 2010 census. Previously, the population grew 5% from 2000 to 2010. Figure 2.1 shows the 2017 population estimates by county level. Cass County has the highest population at 170,620, and Slope County has the lowest population at 674.

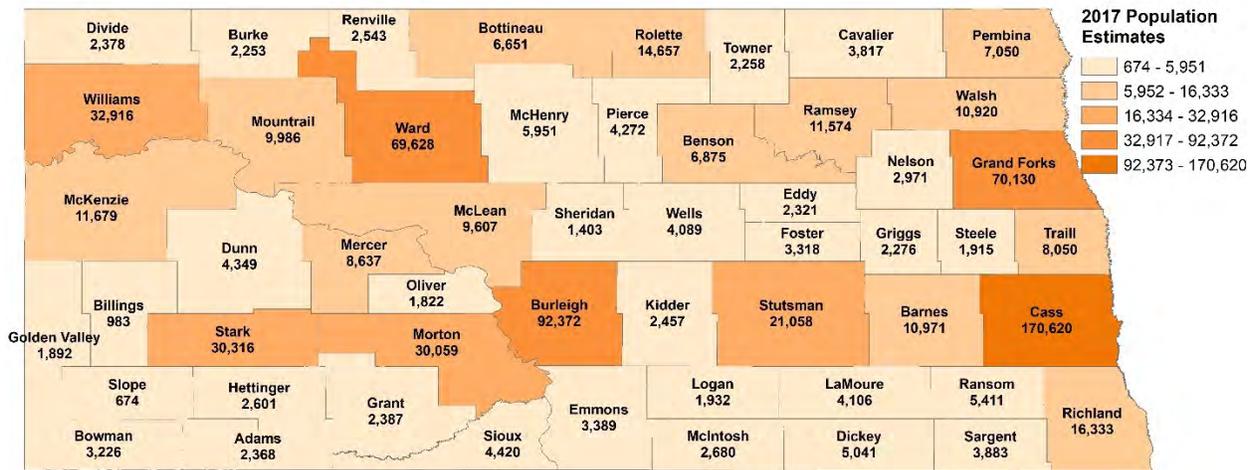


Figure 2.1 2017 County Level Population Estimates

2.2 Population Growth Estimates

The greatest population growth from 2010 to 2017 occurred in the northwest part of the state, as shown in Figure 2.2. The population in McKenzie County increased 95% during this period. Significant growth also occurred in Williams, Mountrail, Stark, and other western counties, as well as the state's two most populated counties, Cass and Burleigh. Meanwhile, many rural counties in the eastern half of the state lost population.

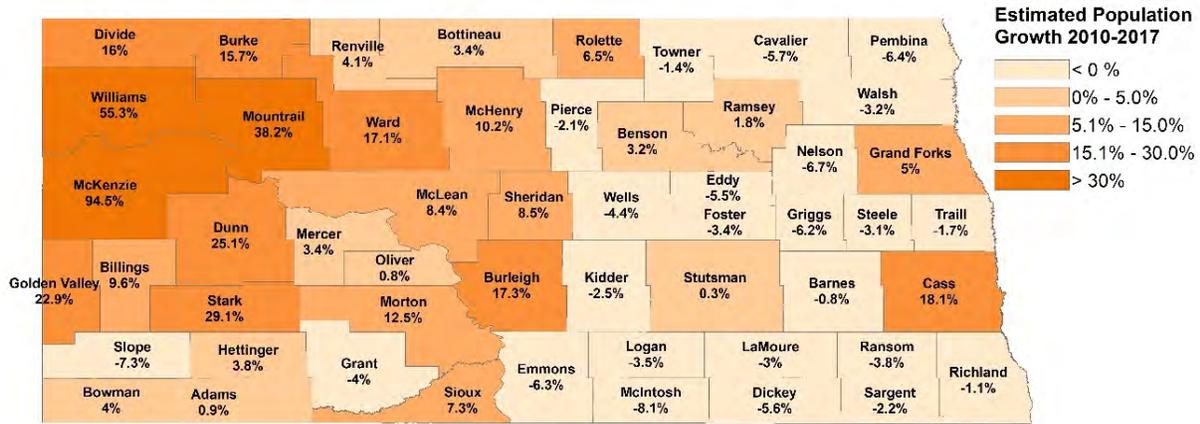


Figure 2.2 Estimated Population Growth From 2010 to 2017

2.3 Projected Population Growth Estimates

Based on population growth trends from 2010 to 2018, population projections for 2030 were estimated for each county, as shown in Figure 2.3. Projecting growth rates in the oil region of northwest North Dakota is especially difficult because past growth has been inconsistent and has been highly dependent on the oil industry. Population grew dramatically in the first half of the decade before dropping or stagnating when oil production declined. Other counties, such as Cass County, have experienced more consistent growth rates. Because these population projections cannot account for factors such as oil industry or other economic activity, they are based on the assumption that previous trends will continue.

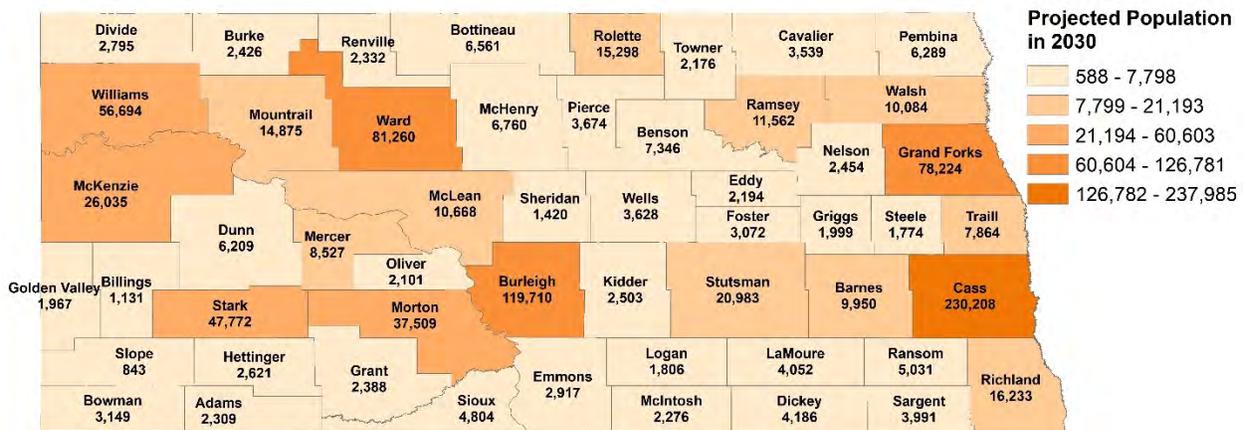


Figure 2.3 Projected Population in 2030

Projected population growth from 2017 to 2030 is shown in Figure 2.4. The largest population growth is expected in McKenzie and Williams counties, with increases of 123% and 72%, respectively, over this period. However, growth in the western counties could be much lower if the oil industry continues to stagnate. Significant population growth is also expected in Cass and Burleigh counties. Meanwhile, many counties in the eastern half of the state, as well as some in the southwest and north central regions, are expected to lose population. Outside of the northwest or west central region, projections show losses of population in the rural areas and increases in the urban areas.

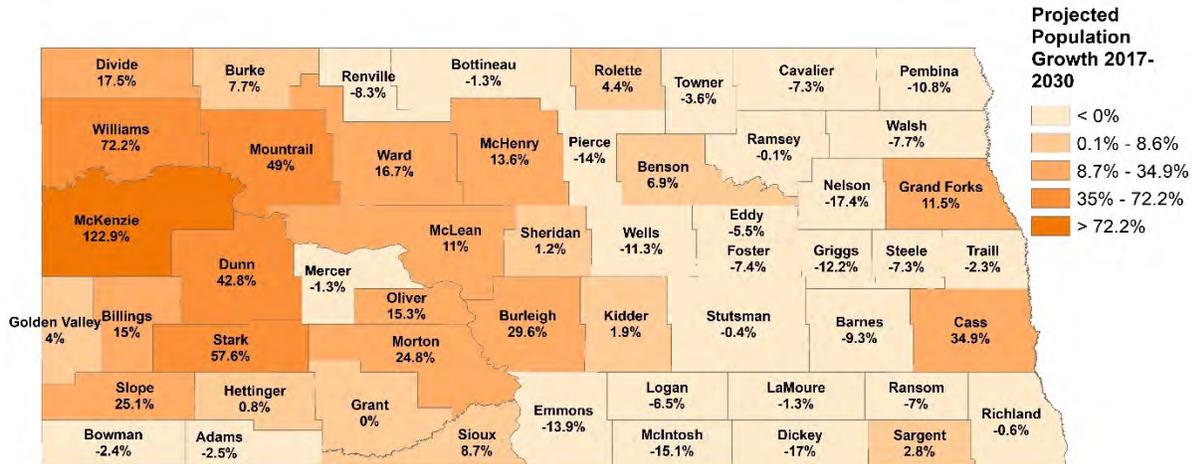


Figure 2.4 Projected Population Growth From 2017 to 2030

2.4 Key Demographic Groups

While data on current and projected population is important for understanding current and expected future demand for public transportation services, the demographics of the population is also important, especially in rural areas. Many population groups such as older adults, people with disabilities, low-income individuals, and those who do not have an automobile, have a higher propensity for transit use than the overall population. When a significant number of people who are more likely to use transit cluster together, they can influence the demand for transit. Therefore, American Community Survey (ACS) data were used to build the demographic profiles for population groups with a higher propensity for transit use. Surveys of rural transit riders have shown that rural transit serves a disproportionately higher percentage of older adults, people with disabilities, low-income individuals, and those without access to a personal vehicle (Mattson et al. 2020).

2.4.1 Population Aged 65 or Older

Based on data from ACS 2017 five-year estimates, Figure 2.5 shows the population aged 65 or older in each county, and Figure 2.6 show the percentage of the population in each county consisting of those aged 65 or older. Many of the rural counties that have been experiencing stagnant or declining population also have a high percentage of older adults. In McIntosh County, 32% of the population is aged 65 or older. In many other rural counties, more than 20% of the population is 65 or older. In the urban counties and counties experiencing significant growth in the oil region, the older adult population represents smaller shares of the total population.

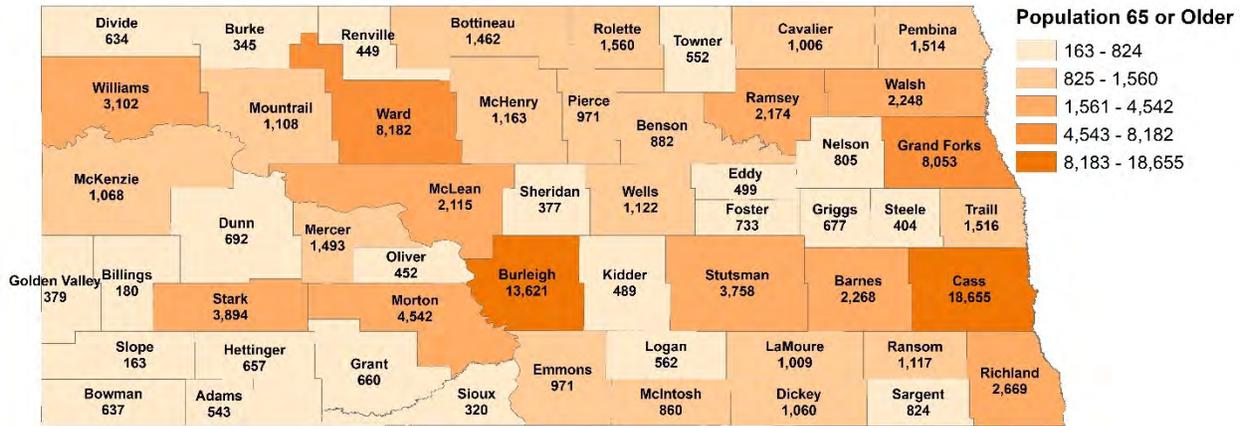


Figure 2.5 Population Age 65 or Older, 2017 ACS 5-Year Estimates

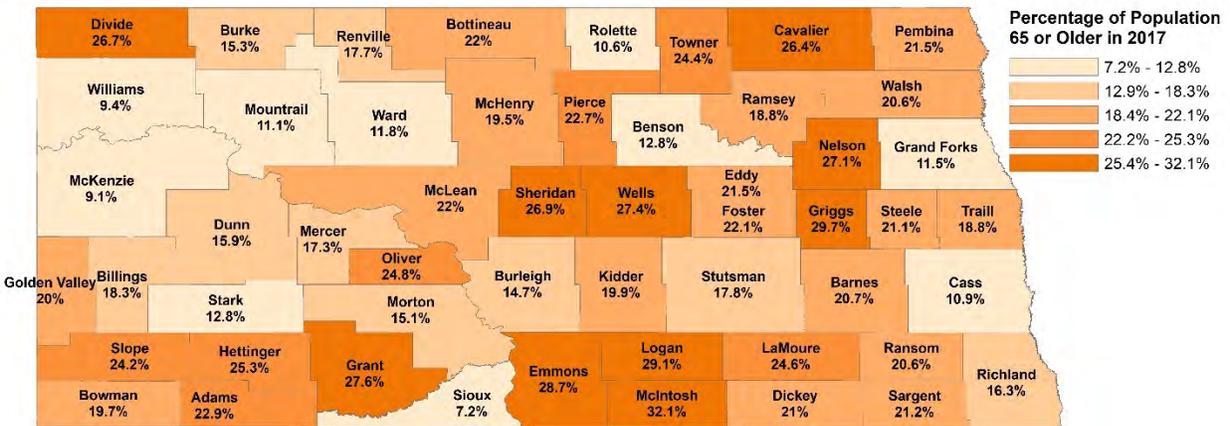


Figure 2.6 Percentage of Population Age 65 or Older, 2017 ACS 5-Year Estimates

Figure 2.7 shows the projected population of those over 65 in 2030. These projections were produced by Hauer (2019) using a model that included current age structure data and projected trends for mortality rates and net migration. Figure 2.8 shows the projected increase in the population over 65 from 2017 to 2030. The population for this group is projected to increase 44% in 13 years, from 107,196 in 2017 to 154,692 in 2030. As shown in Figure 2.8, the population of those over age 65 is projected to increase more than 50% in a number of counties. Some counties are expected to have decreases in the older adult population, but there is also a number of counties with declining overall population that are expected to experience increases in the older adult population.

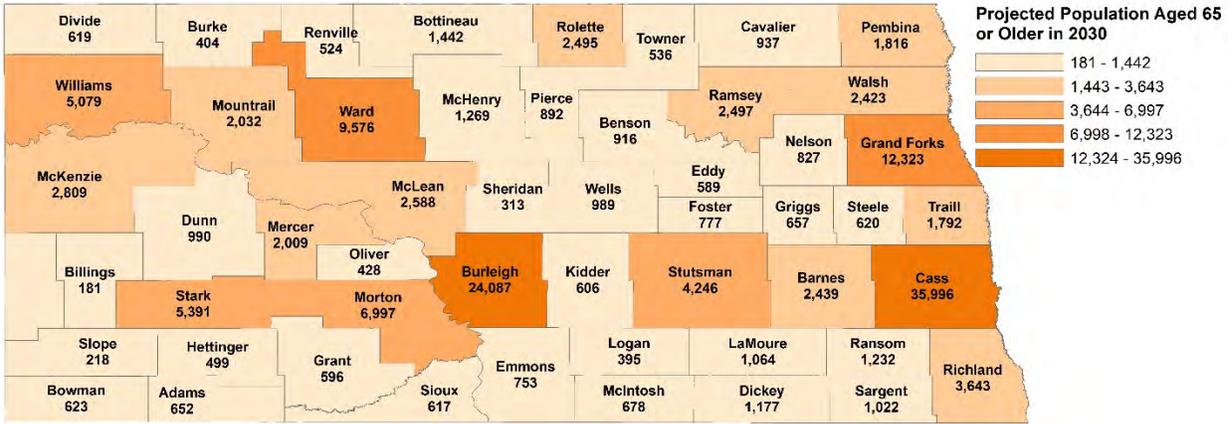


Figure 2.7 Projected Population Aged 65 or Older in 2030

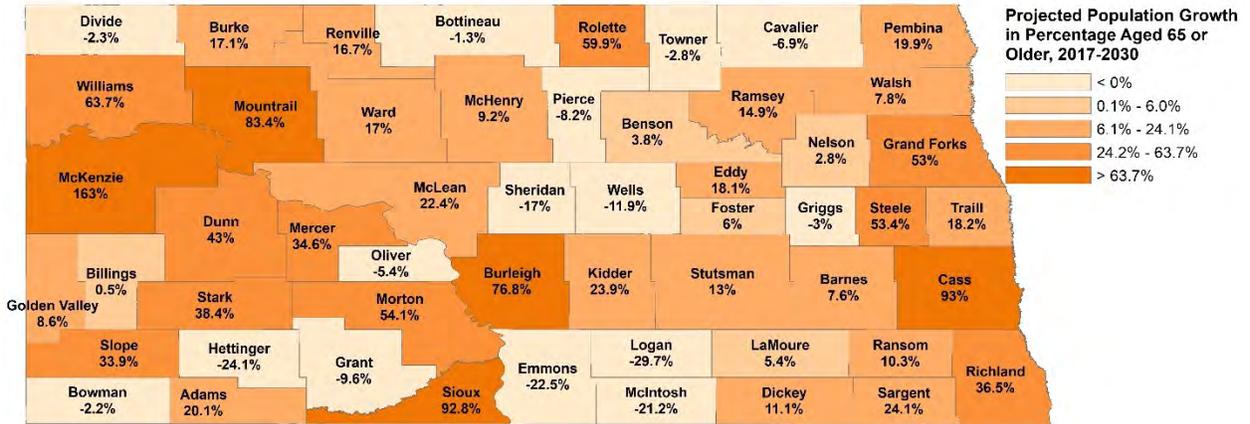


Figure 2.8 Projected Growth of Population Aged 65 or Older, 2017 – 2030

2.4.2 Population Below the Poverty Level

Poverty is one of the factors used to identify those who may need transit services (Felsburg Holt & Ullevig 2015). The statewide poverty rate is 10.7%. Figure 2.9 shows the population below the poverty level in each county, and Figure 2.10 shows the percentage of population below the poverty level based on data from the 2017 ACS five-year estimates. Sioux (37%), Benson (33%), and Rolette (32%) counties have the highest rates of poverty in the state. These are counties that contain Indian reservations and have high concentrations of Native American populations. A number of other counties have poverty rates in the 10%-17% range.

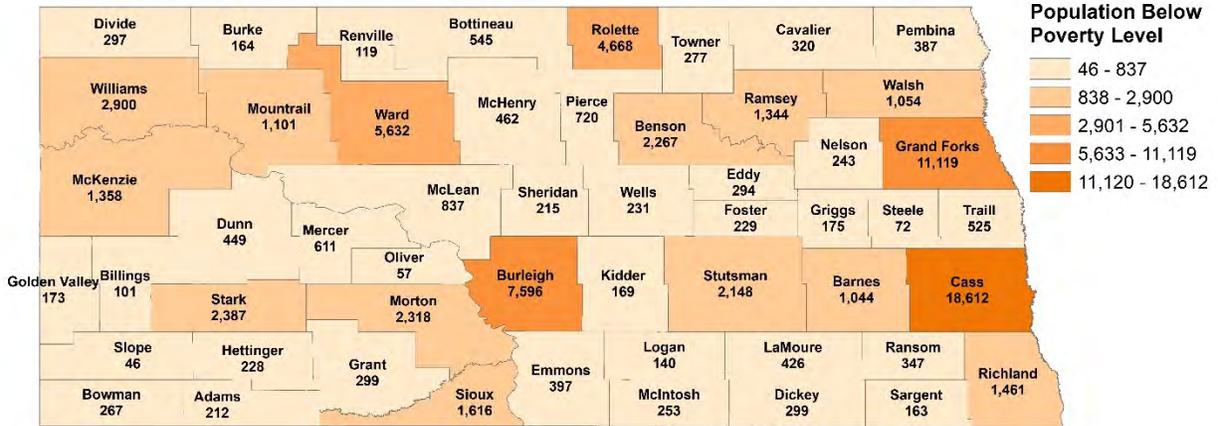


Figure 2.9 Population Below the Poverty Level, 2017 ACS 5-Year Estimates

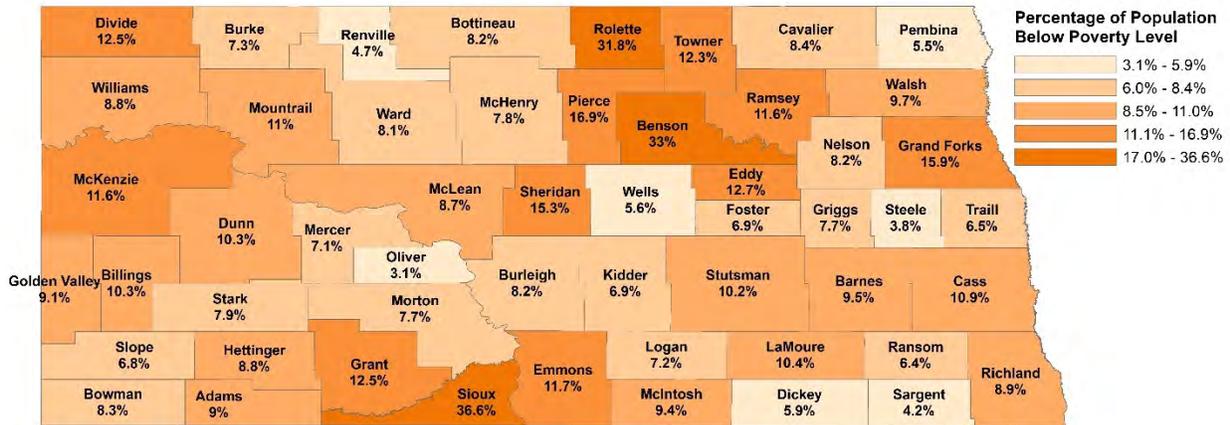


Figure 2.10 Percentage of Population Below the Poverty Level, 2017 ACS 5-Year Estimates

2.4.3 Population with a Disability

People with disabilities are more likely to depend on public transit services to maintain their mobility. Figure 2.11 shows the population with a disability by county, and Figure 2.12 shows the percentage of the population with a disability based on data from the 2017 ACS five-year estimates. About 10.5% of the overall state’s population has a disability, according to ACS data, and the county averages range from 8.1% to 17.8%. Counties with a significantly higher proportion of population with disabilities include Divide, Golden Valley, McIntosh, Slope, Steele, and Walsh. Many counties with higher proportions of older adults also have higher proportions of population with a disability.

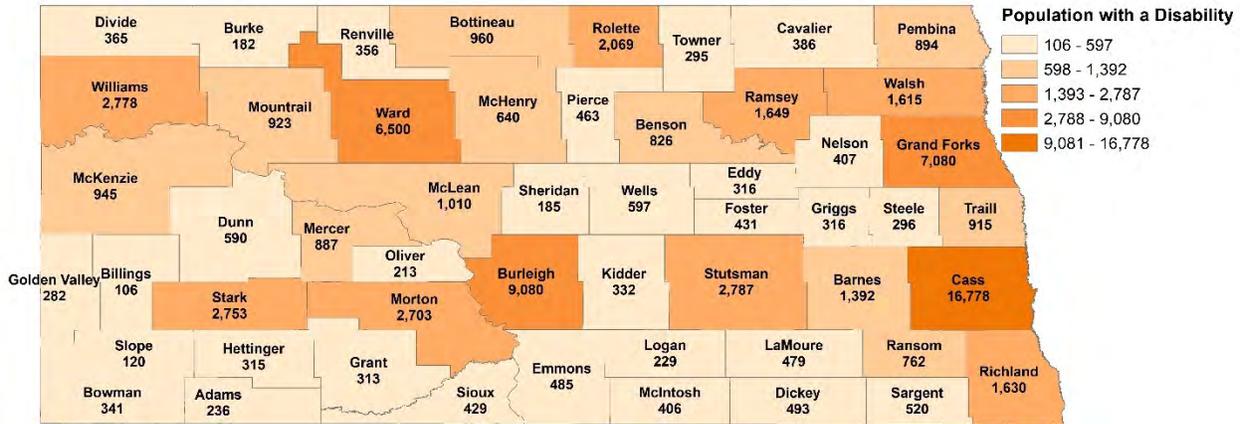


Figure 2.11 Population With a Disability, 2017 ACS 5-Year Estimates

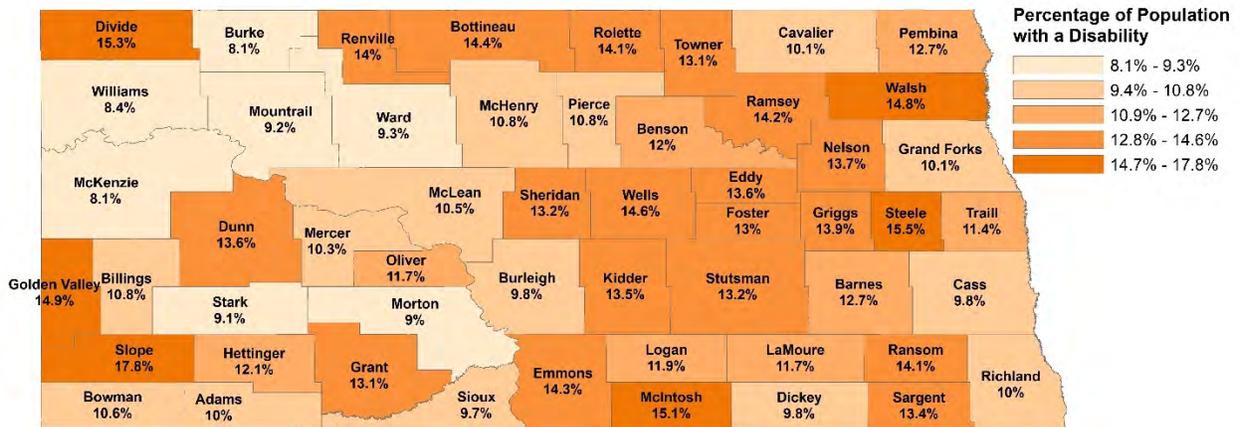


Figure 2.12 Percentage of Population With a Disability, 2017 ACS 5-Year Estimates

2.4.4 Workers without Access to a Vehicle

The population of those without an automobile consists of either low-income people or those who do not drive. According to the ACS 2017 five-year estimates, nearly 1.6% of workers in the state aged 16 and older lived in a household with no vehicle. Figure 2.13 shows the population of workers without access to a vehicle, and Figure 2.14 shows the percentage of workers without access to a vehicle. The following counties have the highest portion of workers without access to a vehicle: Barnes, Stutsman, Nelson, and Grand Forks.

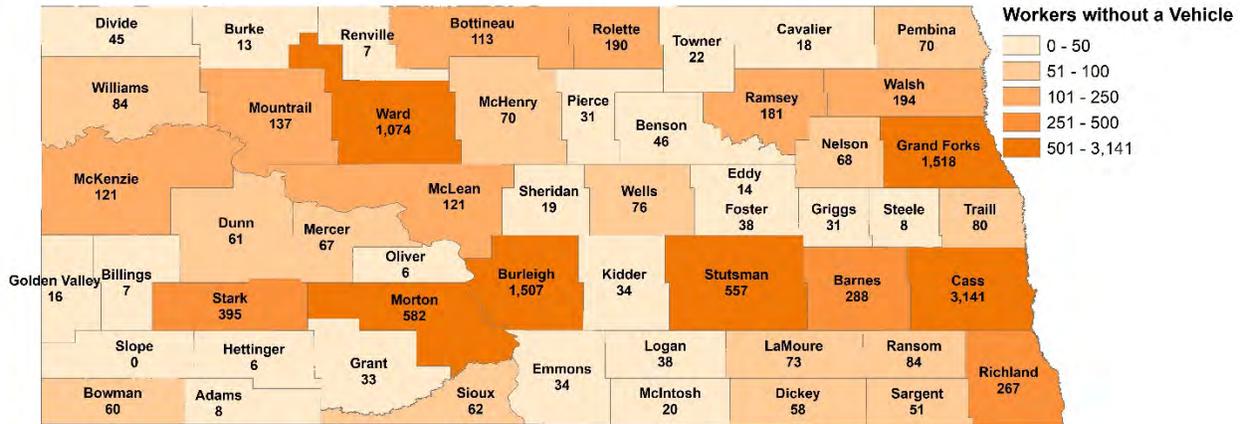


Figure 2.13 Workers Without Access to a Vehicle, 2017 ACS 5-Year Estimates

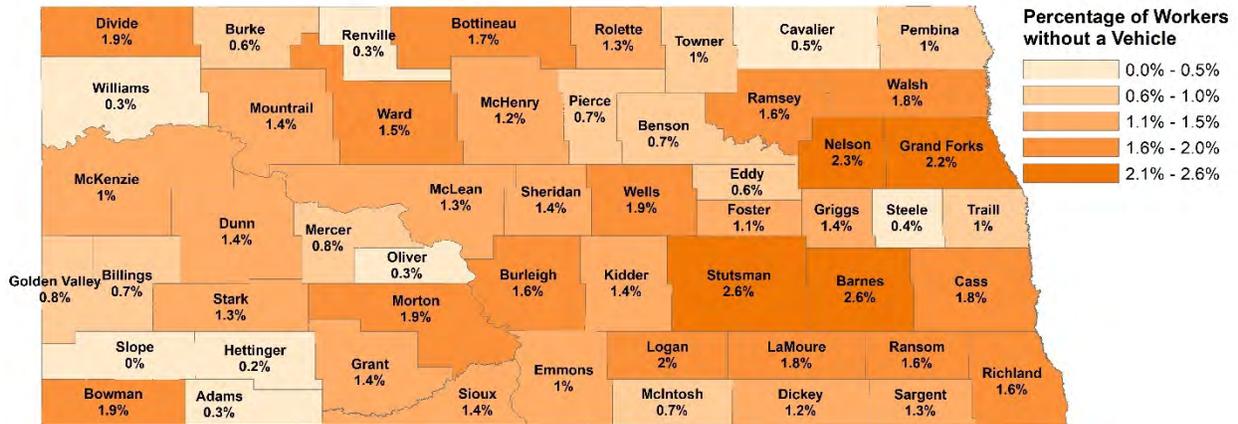


Figure 2.14 Percentage of Workers Without Access to a Vehicle, 2017 ACS 5-Year Estimates

2.4.5 Population Densities by Demographic Group

The demographic characteristics were also analyzed with data at the zip code level. The population density (person per square mile) provides more information on areas with the highest level of transit need (Mattson and Hough 2015). Figures 2.15-2.19 show population density. Figure 2.15 shows total population per square mile, while Figures 2.16-2.19 show population densities for various demographic population groups more likely to use transit services. The demographic data provide information about where transit-dependent populations are located within the state. This information can help transit planners identify where limited transit resources should be used to ensure that mobility is provided throughout the state.

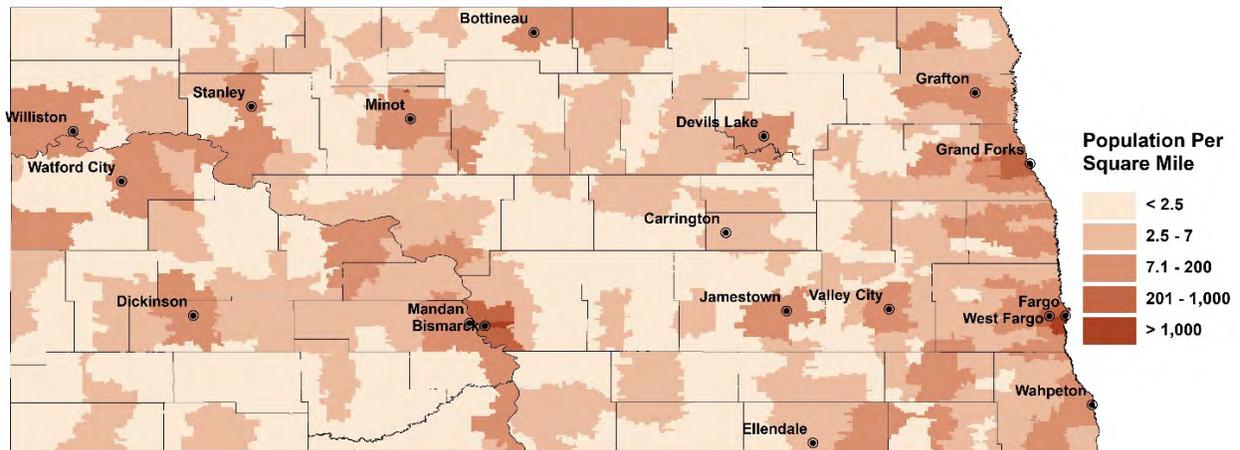


Figure 2.15 Total Population Density, 2017

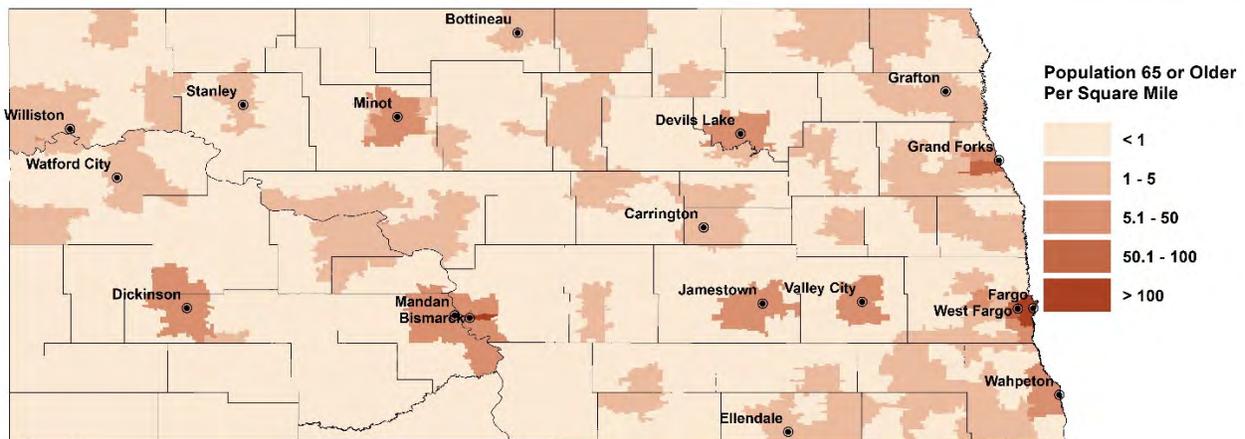


Figure 2.16 Population Aged 65 or Older per Square Mile, 2017

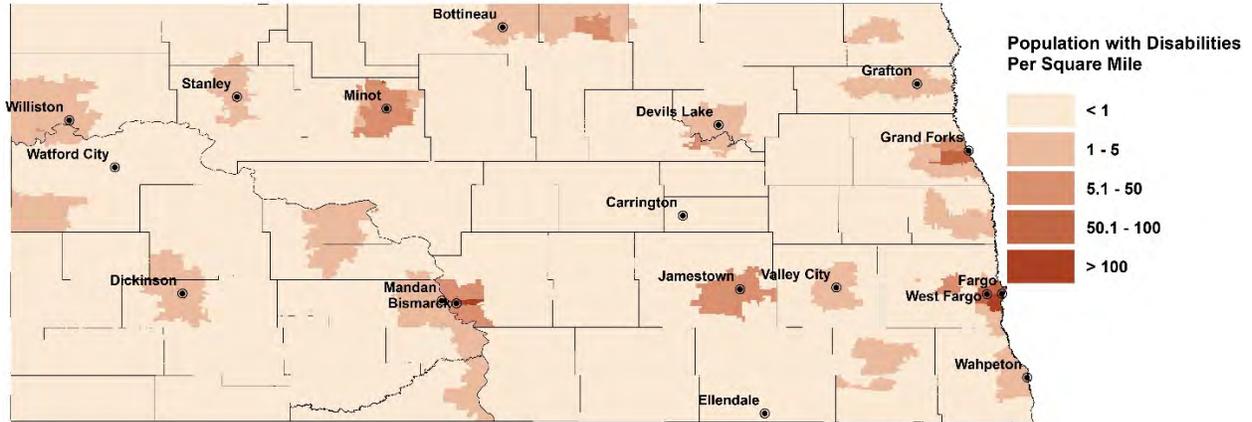


Figure 2.17 Population With Disability per Square Mile, 2017

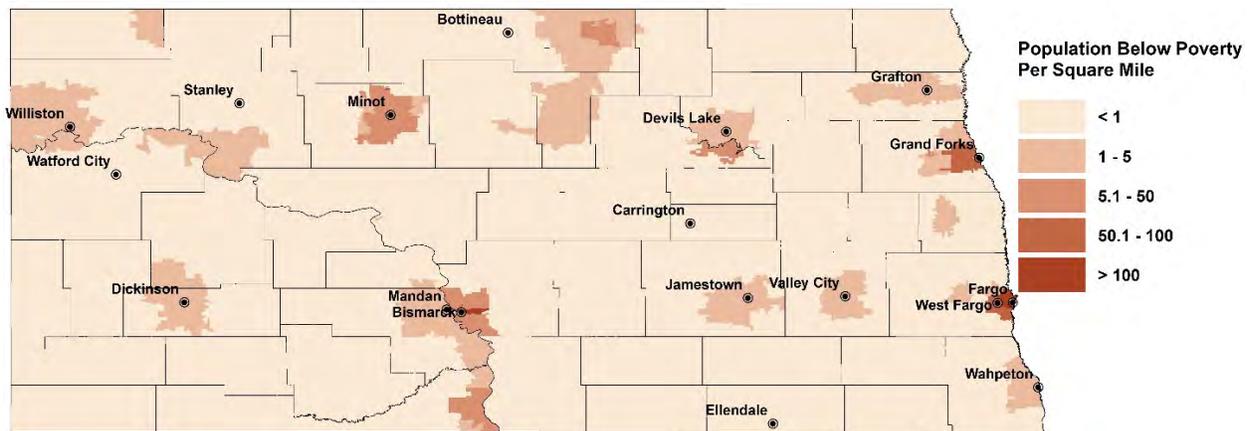


Figure 2.18 Population Below Poverty Line per Square Mile, 2017

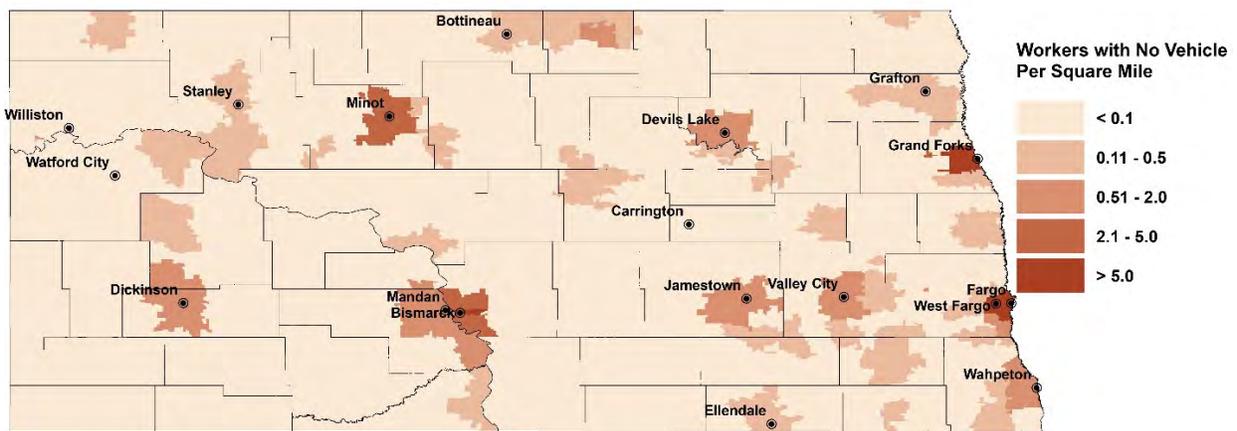


Figure 2.19 Workers Without Access to a Vehicle per Square Mile, 2017

2.5 City-Level Population and Demographic Data

Table 2.1 provides community-specific data for all cities or places in the state with an estimated population above 1,000. These data are based on the 2013-2017 ACS five-year estimates. Among the three metro areas, Bismarck has the highest percentage of population aged 65 or older, and Grand Forks has the highest percentage in poverty. Devils Lake and Valley City have higher shares of older adults, with 21.9% and 23.5% aged 65 or older, respectively. In some smaller cities, more than a quarter of the population is 65 or older, including Rugby, Langdon, Carrington, Harvey, Garrison, Park River, New Rockford, Ellendale, Cavalier, Cooperstown, and Linton. The highest poverty rates are 68% in Fort Totten, 35% in Belcourt and Shell Valley, and 30% in Rolla. Other cities with high poverty rates include Rugby (21%), Grand Forks (18%), New Town (18%), and Devils Lake (16%).

Table 2.1 City-Level Population and Demographic Data, 2013-2017 Five-Year Estimates

Place	Total Population	Population per Square Mile	Population 65 or Older	Population with a Disability	Population Below Poverty Line	Total Workers	Workers with No Vehicle	Pop % 65 or older	Pop % Below Poverty
Fargo	118,099	2,373	13,095	12,138	15,760	69,208	2,650	11.1	13.3
Bismarck	70,536	2,060	11,492	7,735	6,507	38,367	1,171	16.3	9.2
Grand Forks	56,236	2,068	6,333	6,010	10,331	30,813	1,371	11.3	18.4
Minot	48,171	1,771	6,079	4,751	4,429	27,783	863	12.6	9.2
West Fargo	33,089	2,088	2,850	2,986	2,263	19,189	308	8.6	6.8
Williston	25,072	1,076	2,237	2,146	2,392	13,716	46	8.9	9.5
Dickinson	22,309	1,570	2,472	1,973	1,970	12,223	333	11.1	8.8
Mandan	21,472	1,573	3,093	1,960	2,027	12,366	401	14.4	9.4
Jamestown	15,367	1,180	2,720	2,165	1,811	7,766	479	17.7	11.8
Wahpeton	7,822	1,500	1,127	800	855	4,214	167	14.4	10.9
Devils Lake	7,313	1,064	1,605	1,223	1,191	3,838	113	21.9	16.3
Valley City	6,547	1,586	1,539	940	686	3,407	214	23.5	10.5
Minot AFB	5,789	755	0	197	365	3,417	62	0.0	6.3
Watford City	5,441	604	630	277	437	2,788	51	11.6	8.0
Grafton	4,243	1,190	863	820	500	1,965	99	20.3	11.8
Lincoln	3,467	2,676	154	250	10	1,922	24	4.4	0.3
Beulah	3,312	1,380	508	279	215	1,644	24	15.3	6.5
Grand Forks AFB	2,922	356	0	39	98	1,852	46	0.0	3.4
Rugby	2,847	1,260	750	347	597	1,277	18	26.3	21.0
Casselton	2,773	1,437	377	324	92	1,391	6	13.6	3.3
Hazen	2,643	1,986	473	292	205	1,414	21	17.9	7.8
Horace	2,603	232	212	168	46	1,495	57	8.1	1.8
Stanley	2,487	1,349	392	284	139	1,095	48	15.8	5.6
New Town	2,459	2,065	158	226	436	1,033	42	6.4	17.7
Bottineau	2,300	1,990	523	334	146	1,053	60	22.7	6.4
Lisbon	2,082	908	436	365	97	1,054	33	20.9	4.7
Oakes	2,018	1,266	373	216	99	1,074	10	18.5	4.9
Langdon	1,946	1,233	487	211	193	1,005	17	25.0	9.9
Belcourt	1,933	322	249	416	679	603	36	12.9	35.1
Carrington	1,923	925	519	271	140	1,084	27	27.0	7.3
Mayville	1,874	995	373	268	252	847	10	19.9	13.5
Harvey	1,762	981	511	223	96	807	59	29.0	5.5
Bowman	1,611	1,010	328	186	123	868	30	20.4	7.6
Hillsboro	1,576	1,418	308	218	65	767	19	19.5	4.1
Larimore	1,518	2,546	215	112	149	695	11	14.2	9.8
Garrison	1,508	1,108	412	138	160	677	37	27.3	10.6
Park River	1,452	672	410	195	156	606	15	28.2	10.7
Washburn	1,432	718	233	146	87	814	24	16.3	6.1
New Rockford	1,405	803	358	224	226	662	12	25.5	16.1
Fort Totten	1,372	155	51	165	935	245	7	3.7	68.1
Shell Valley	1,360	90	29	95	476	487	42	2.1	35.0
Burlington	1,332	699	68	65	71	762	0	5.1	5.3
Velva	1,288	1,336	245	109	84	577	20	19.0	6.5
Rolla	1,273	901	132	138	378	552	13	10.4	29.7
Ellendale	1,271	897	323	130	103	646	27	25.4	8.1
Cavalier	1,203	1,406	315	194	31	572	0	26.2	2.6
Cooperstown	1,166	1,195	328	117	115	542	25	28.1	9.9
Surrey	1,165	549	154	125	71	696	8	13.2	6.1
Thompson	1,161	2,612	58	88	31	696	33	5.0	2.7
Hettinger	1,124	1,309	254	93	136	687	8	22.6	12.1
Tioga	1,116	542	247	118	51	496	0	22.1	4.6
Cando	1,085	1,686	243	96	150	496	6	22.4	13.8
Linton	1,047	1,347	376	205	100	466	21	35.9	9.6
Parshall	1,036	1,852	88	119	174	449	6	8.5	16.8
Gwinner	1,012	491	140	82	29	591	8	13.8	2.9
Walhalla	1,008	958	227	128	93	472	17	22.5	9.2

Source: American Community Survey, 2017 5-year estimates

3. MOBILITY NEEDS INDEX

The population and demographic data presented in the previous section provide guidance for determining where the greatest needs for mobility services exist. There is no generally accepted low-cost methodology to accurately calculate the mobility needs for the community. Mielke, et al. (2005), developed a theoretical model for measuring mobility needs for North Dakota, which was also used by Mattson and Hough (2015). The model was used in this study to identify needs for mobility services. The methodology ranks regions based on population and demographic data by creating a mobility needs index. This methodology is only used to measure mobility needs based on identifiable demographic groups and does not suggest that all related needs are unmet. Nevertheless, some cities may have their own methodologies and systems to measure mobility needs.

This study uses five important demographic groups to create a mobility needs index for determining mobility needs. As illustrated in the previous section, those groups are total population, population aged 65 or older, population with a disability, population below the poverty line, and population of workers without access to a vehicle. County-level and ZIP-code-level data from the ACS 2017 five-year estimates were used to calculate the index values for the five demographic groups. First, population densities were calculated for each of these demographic groups. Second, geographic areas were ranked in descending order from highest density value to lowest density value for each demographic group. Third, the geographic areas were grouped into five equally sized classes using quintile values for each demographic group. Next, geographic areas in the lowest 20% were given a value equal to 1, the next 20% were given a value equal to 2, and so on, while the highest 20% were given a value of 5. Finally, the individual five values from each demographic group were averaged for each geographic area to produce the mobility needs index. These mobility needs index values rank all regions on a scale of 1 to 5, with higher values identifying areas with greater mobility needs (Mattson and Hough 2015).

The mobility needs index values for all counties in North Dakota are calculated and shown in Figure 3.1. The results show that the more highly populated counties, and counties with higher concentrations of transportation disadvantaged populations, such as Burleigh, Cass, Grand Forks, Morton, Rolette, Stark and Ward, have the highest mobility needs index values of 5. Ramsey, Richland, Stutsman, and Walsh counties have mobility needs index values of 4.6. Even though Ramsey and Walsh counties are less populated, their ranks are higher because the disadvantaged demographic group densities are higher. Again, a mobility needs index map was created with the ZIP-code-level data for greater detail, as shown in Figure 3.2. The mobility needs index map in Figure 3.2 indicates most of the largest cities, such as Fargo, Grand Forks, Bismarck, Minot, West Fargo, and Williston, have the highest mobility needs index values.

As previously indicated, this mobility needs index is an attempt to measure concentrations of mobility needs associated with identifiable demographic groups and does not suggest that all related needs are unmet. Therefore, comparisons need to be performed between these calculated indices with the existing level of transit services in each county, ZIP code, or community, which will provide information on where the greatest needs are for service improvements (Mattson and Hough 2015).

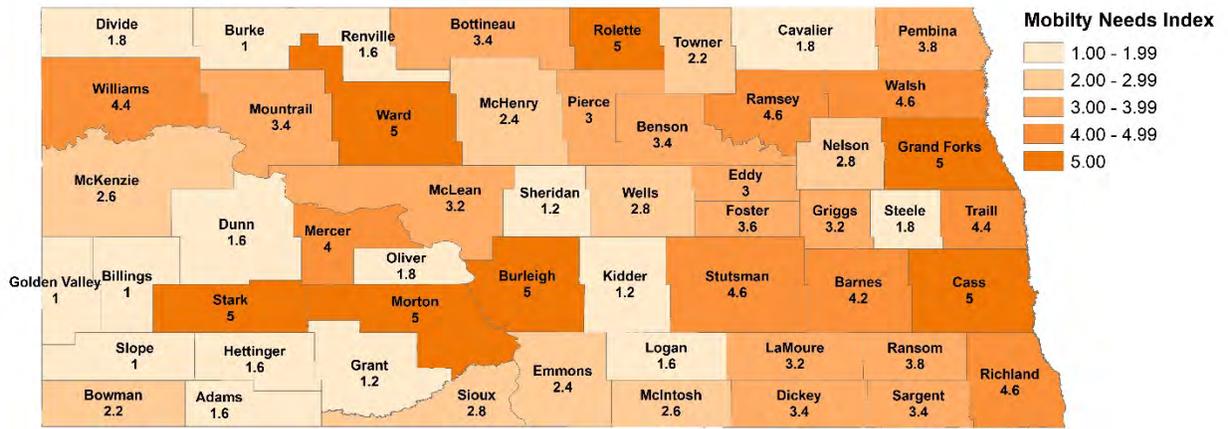


Figure 3.1 Mobility Needs Index Map, County Level

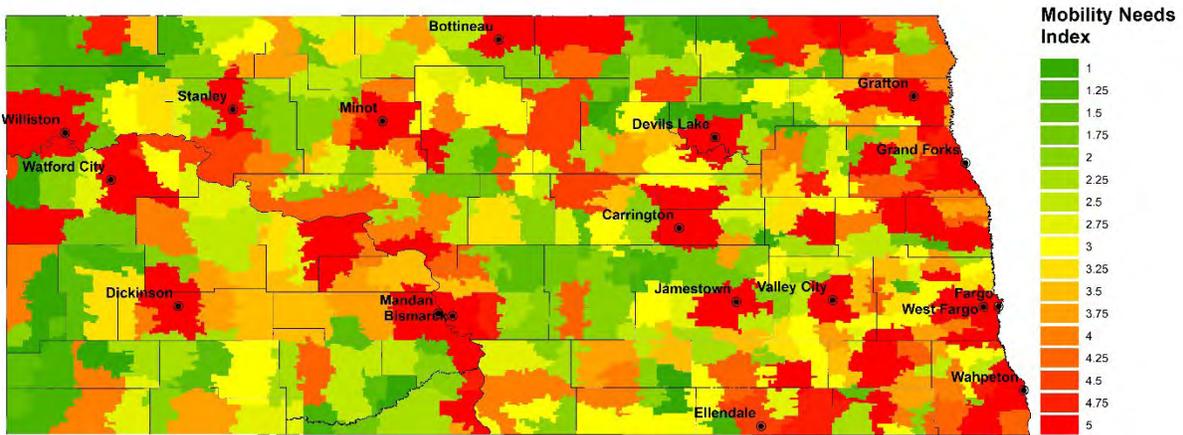


Figure 3.2 Mobility Needs Index Map, ZIP Code Level

4. SURVEY METHODOLOGY AND ADMINISTRATION

Three surveys were conducted to meet the project's objectives. These included surveys of transit agencies, stakeholders, and riders. All three surveys are useful for identifying transit needs and challenges across the state. Results from the rider survey were also used to identify the demographics of transit users. All surveys were conducted in January – March 2020.

4.1 Transit Agency Survey

The transit agency survey was sent to every transit provider in the state to collect information on current level of service, fare levels, funding sources, needed facility upgrades, need for new service, challenges to providing new service, staffing capabilities, and other issues. It was distributed by email to 30 agencies identified by the NDDOT. Responses were received by 27 of these agencies. The survey is shown in Appendix A.

4.2 Transit Stakeholder Survey

The stakeholder survey asked respondents to identify and comment on how well the transportation needs of their clients were being met and if there was a need for additional services. This survey was also conducted online and distributed by email to agencies that serve transportation-disadvantaged populations across the state. This included the eight regional human service centers; 31 members of the North Dakota Association of Community Providers, which are organizations that provide services for people with disabilities; the six Centers for Independent Living in the state; seven Community Action Partnerships; seven senior service providers that do not operate transit; AARP North Dakota; and 27 local public health units. A total of 99 responses were received. Within some organizations, more than one individual completed the survey.

Most of these agencies serve people with disabilities, and a large majority serve low-income individuals, people with mental health issues, older adults, and children and families. Many also serve people with addictions and the homeless. Figure 4.1 shows the number of responses for each county. This includes the number of respondents who indicated that their organization serves that county, but it excludes responses from 12 survey participants who said their organization serves the entire state. Responses were received from agencies across the state, but the greatest number of responses came from the southeast region. Stakeholder survey questions and responses are provided in Appendix B.

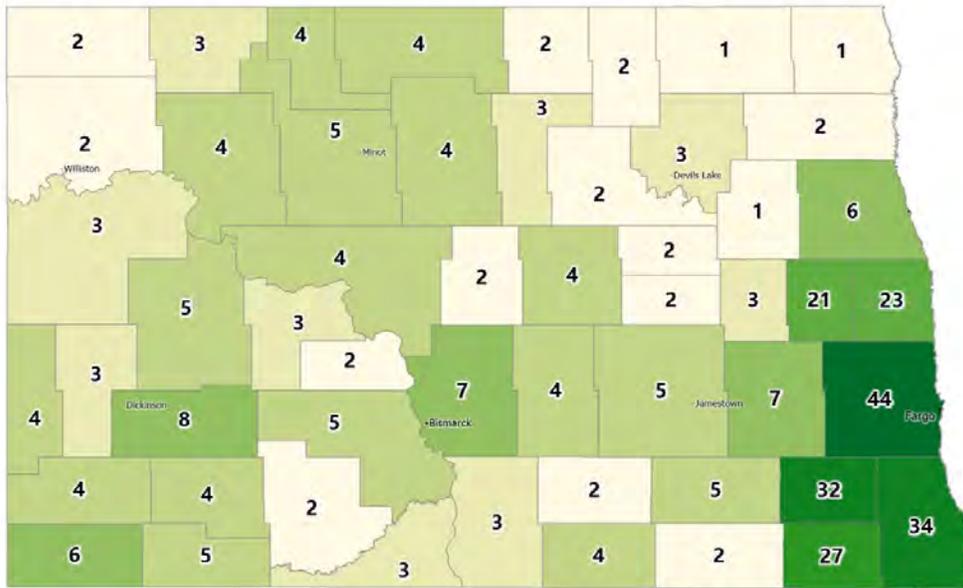


Figure 4.1 Number of Stakeholder Reponses for Each County

4.3 Transit Rider Survey

Each transit agency in the state was contacted to distribute surveys to their riders. The survey collected information about why the riders use transit, how often they use it, the purpose of their trips, other options available to them, their level of satisfaction with the service, challenging aspects of riding public transit, and their demographic information. The survey is shown in Appendix C.

Most of the transit agencies in the state distributed paper copies of the survey to riders over the course of a few days to a week or longer. The survey was also made available online. Paper surveys included a QR code and web address as an option for riders who preferred to take the survey online.

A total of 856 responses were received across the state, including 751 responses from rural transit agencies and 105 from the three urban systems in the Fargo, Bismarck, and Grand Forks metro areas. The number of responses from the urban systems, particularly those in Fargo and Bismarck were low in comparison to their level of ridership, so results may not be representative. On the other hand, the large number of responses from rural systems across the state provides useful information.

Respondents were asked to provide their home zip code, which provides information linking their responses to a geographic location. Based on zip-code responses, Figure 4.2 shows the number of responses for each county. Some respondents did not provide a zip code, so their responses could not be mapped.

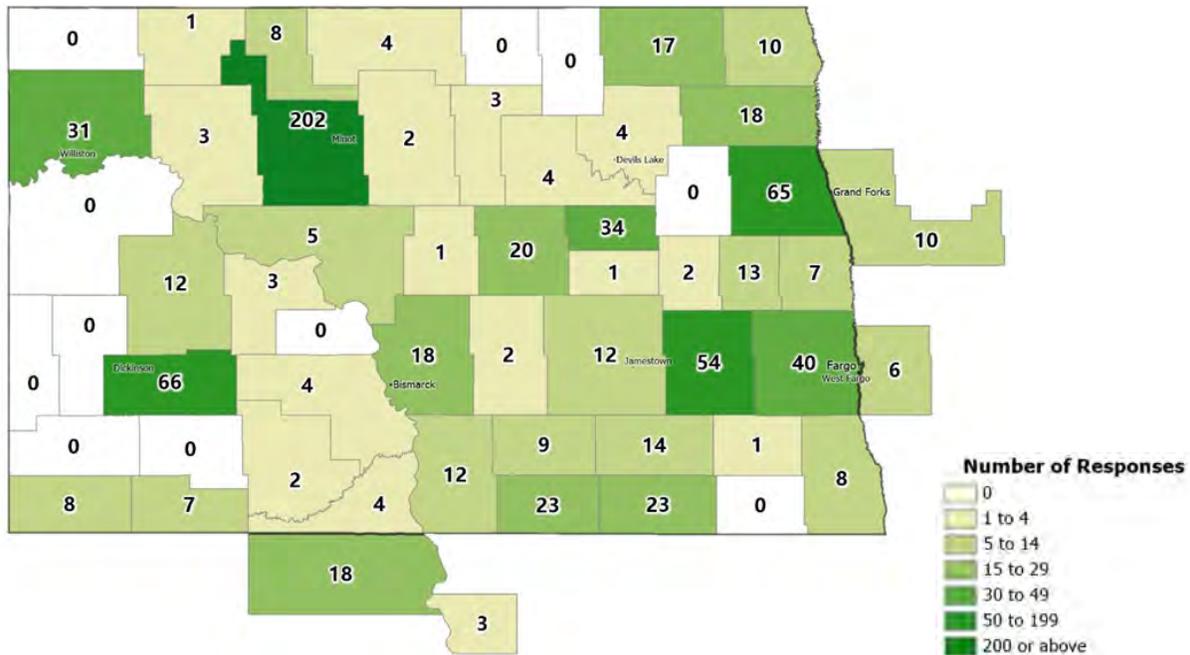


Figure 4.2 Number of Rider Survey Responses by County

The largest number of responses came from Ward County, which includes riders from Souris Basin Transportation and Minot City Transit. The next largest number of responses came from Stark, Grand Forks, and Barnes counties. Overall, the geographic distribution of results for rural transit is fairly representative given that most responses came from the counties with the greatest ridership, and most counties had a least some responses. However, there were a few rural counties with no responses, and some areas were under-represented. The distribution of urban respondents is not representative because of the lower number of responses from Fargo. As the figure shows, there were some responses from residents outside of North Dakota. These include riders of Standing Rock Public Transportation or transit systems in Grand Forks or Fargo, as these systems serve areas or connect to systems in Minnesota or South Dakota.

5. EXISTING LEVELS OF TRANSIT SERVICE

Existing levels of transit services for the state were analyzed by examining National Transit Database (NTD) data and transit agency survey data. NTD data on ridership, vehicle revenue miles and hours of service, number of vehicles in service, and various performance measures were analyzed. The transit agency survey provided information on service coverage, span of service, types of services provided, and other service characteristics.

5.1 Data from the National Transit Database

Data for urban transit agencies receiving FTA section 5307 Urbanized Area Formula Program funding and rural transit agencies receiving section 5311 Non-Urbanized Area Formula Program funding are reported to the NTD. Data from transit providers receiving funding under the 5310 Enhanced Mobility of Seniors and Individuals with Disabilities Program or those not receiving any federal funding may not be reported to the NTD. The most recent data available from the NTD at the time of this report is for 2018.

5.1.1 Data for Urban Transit Providers

North Dakota has three urban transit providers located in Fargo-West Fargo, Bismarck-Mandan, and Grand Forks. Metro Area Transit (MATBUS) serves a population of 155,620 in Fargo and West Fargo. In Bismarck-Mandan, Capital Area Transit (CAT) is the fixed-route system and Bis-Man Paratransit is the paratransit system, serving a population of 99,142. Grand Forks is served by Cities Area Transit (CAT), with a service area population of 61,298. Operating, financial, and fleet statistics for both fixed-route and demand-response services from these transit agencies were obtained from the NTD for 2009-2018. Data for 2018 for fixed-route and demand-response services are shown in Tables 5.1 and 5.2, and total operating and capital funding data, by source for 2018, is presented in Table 5.3.

Table 5.1 Urban Fixed-Route Bus Transit Data, 2018

	Fargo: Metro Area Transit	Grand Forks: Cities Area Transit	Bismarck: Bis- Man Transit Board
Service Data			
Unlinked Passenger Trips	1,439,017	253,657	107,172
Passenger Miles Traveled	5,852,450	1,080,992	-
Vehicle Revenue Miles	1,008,093	370,412	358,470
Vehicle Revenue Hours	82,895	27,506	21,340
Capital Operating Expense	\$6,407,291	\$1,574,148	\$2,251,929
Fleet Data			
Vehicle Available for Maximum Service	24	10	6
Average Fleet Age (years)	7.3	6.8	9.1
Performance Measures			
Unlinked Passenger Trips per Revenue Mile	1.43	0.68	0.30
Unlinked Passenger Trips per Revenue Hour	17.36	9.22	5.02
Unlinked Passenger Trips per Total Vehicles	59,959	25,366	17,862
Vehicle Revenue Miles per Total Vehicles	42,004	37,041	59,745
Vehicle Revenue Hours per Total Vehicles	3,454	2,751	3,557
Passenger Miles per Vehicle Revenue Mile	5.81	2.92	-
Operating Cost per Trip	\$4.45	\$8.88	\$14.69
Operating Cost per Vehicle Revenue Mile	\$6.36	\$6.08	\$4.39
Operating Cost per Vehicle Revenue Hour	\$77.29	\$81.87	\$73.77
Farebox Recovery Ratio	10%	8%	5%

Source: National Transit Database, 2018

Table 5.2 Urban Demand-Response Transit Data, 2018

	Fargo: Metro Area Transit	Grand Forks: Cities Area Transit	Bismarck: Bis- Man Transit Board
Service Data			
Unlinked Passenger Trips	52,665	62,895	121,520
Passenger Miles Traveled	303,128	187,207	-
Vehicle Revenue Miles	324,795	239,720	552,669
Vehicle Revenue Hours	22,865	27,308	40,047
Total Operating Expense	\$1,409,989	\$1,319,334	\$2,288,926
Fleet Data			
Vehicles Available for Maximum Service	13	11	18
Average Fleet Age (years)	2.8	3.0	4.0
Performance Measures			
Unlinked Passenger Trips per Revenue Mile	0.16	0.26	0.22
Unlinked Passenger Trips per Revenue Hour	2.30	2.30	3.03
Unlinked Passenger Trips per Total Vehicles	4,051	5,718	6,751
Vehicle Revenue Miles per Total Vehicles	24,984	21,793	30,704
Vehicle Revenue Hours per Total Vehicles	1,759	2,483	2,225
Passenger Miles per Vehicle Revenue Mile	0.93	0.78	-
Operating Cost per Trip	\$26.77	\$20.98	\$18.84
Operating Cost per Vehicle Revenue Mile	\$4.34	\$5.50	\$4.14
Operating Cost per Vehicle Revenue Hour	\$61.67	\$48.31	\$57.16
Farebox Recovery Ratio	11%	15%	15%

Source: National Transit Database, 2018

Table 5.3 Urban Transit Funding Data, by Source, 2018

	Fargo: Metro Area Transit		Grand Forks: Cities Area Transit		Bismarck: Bis-Man Transit Board	
	Fund (\$)	(%)	Fund (\$)	(%)	Fund (\$)	(%)
Operating Funds by Source						
Federal	\$2,495,484	32%	\$927,581	26%	\$1,402,287	36%
State	\$490,498	6%	\$268,230	8%	\$317,377	8%
Local	\$2,952,986	38%	\$1,552,720	43%	\$1,530,996	40%
Fares	\$767,194	10%	\$384,256	11%	\$410,099	11%
Other	\$1,116,394	14%	\$439,691	12%	\$202,315	5%
Total	\$7,817,280	100%	\$3,571,263	100%	\$3,863,074	100%
Capital Funds by Source						
Federal	\$2,434,550	67%	\$1,028,901	80%	\$535,349	74%
State	\$0	0%	\$0	0%	\$59,348	8%
Local	\$1,177,101	33%	\$258,676	20%	\$130,988	18%
Fares & Other	\$5,280	0%	\$1,215	0%	\$0	0%
Total	\$3,616,931	100%	\$1,288,792	100%	\$725,685	100%

Source: National Transit Database

Figure 5.1 shows trends in urban transit ridership for 2009-2018. Fixed-route ridership in Fargo-West Fargo represents the largest share of urban ridership in the state. Total urban ridership had been increasing until 2011, before leveling off and decreasing after 2014. These trends follow similar national trends in bus ridership. Detailed time series data for 2009-2018 for each agency are presented in Appendix D. Mattson and Hough (2015) previously presented data for 2003-2013.

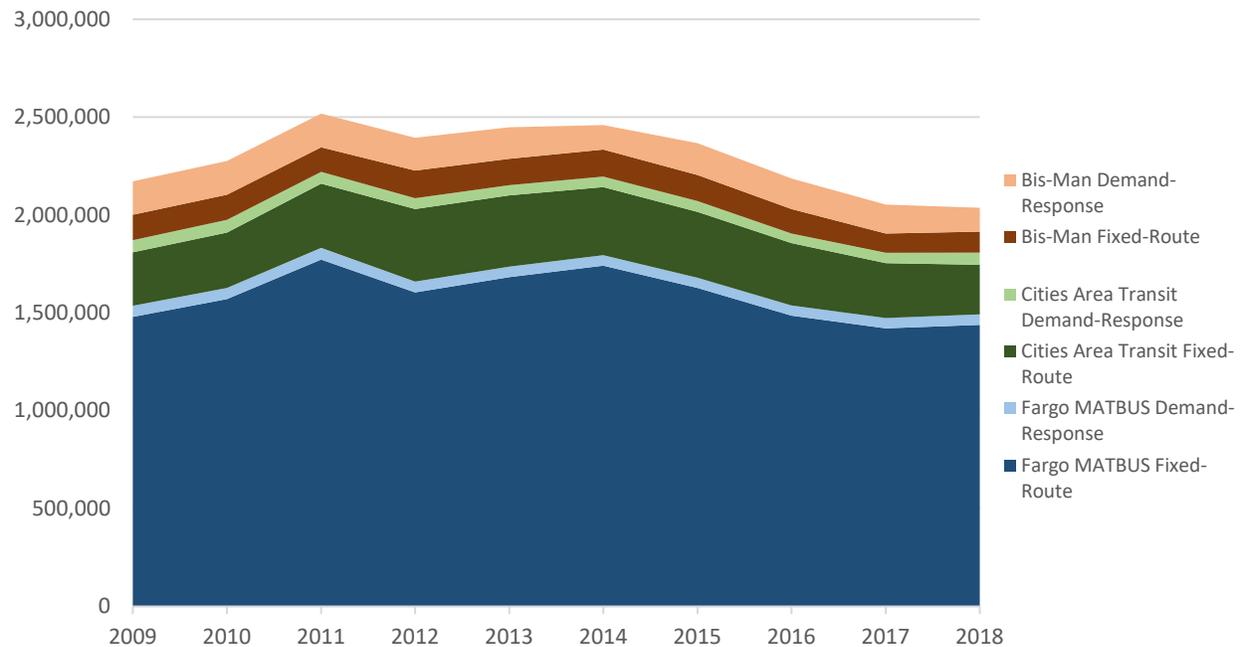


Figure 5.1 Urban Transit Ridership, 2009-2018

5.1.2 Data for Rural Transit Providers

Table 5.4 provides an overview of data for rural transit providers in North Dakota receiving FTA section 5311 rural transit funding, as reported in the NTD for 2015-2018. The data show 31 rural transit agencies that reported to the NTD. Note that data for three providers – Glen Ullin Transportation, City of Jamestown Taxi, and Handi-Wheels – are not included in this table and following figures, as they only receive state aid and do not report data to the NTD. They are included in later tables where data are available. Note also that while Valley Senior Services provides transportation in both rural areas and the Fargo metro area, its data are all reported in this section.

Table 5.4 Rural Transit Agencies: Statewide Data

	2015	2016	2017	2018
Number of Agencies	31	31	30	31
Ridership	678,831	659,906	635,868	658,786
Vehicles Miles	3,547,087	3,769,227	3,856,818	3,772,830
Vehicle Hours	252,975	263,427	267,017	259,170
Capital Funding				
Local	\$158,293	\$566,968	\$210,309	\$256,943
State	\$322,827	\$189,090	\$87,668	\$72,337
Federal	\$1,131,379	\$1,820,370	\$1,141,204	\$1,160,907
Other	\$25,840	\$72,572	\$114,846	\$198,022
Operating Funding				
Local	\$1,127,275	\$1,049,092	\$2,288,286	\$2,005,994
State	\$3,695,717	\$3,378,836	\$2,930,966	\$2,669,976
Federal	\$4,290,060	\$4,812,282	\$5,307,850	\$5,830,853
Other	\$1,711,648	\$1,535,469	\$1,430,619	\$1,542,110
Number of Vehicles	211	225	217	221
ADA Vehicles	173	177	192	197
Average Vehicle Age	5.6	5.8	5.5	6.0
Average Vehicle Length (feet)	22.4	21.8	22.1	22.0
Average Vehicle Capacity	11.1	11.1	10.8	11.0
Trips Per Vehicle	3,217	2,933	2,930	2,981
Miles Per Vehicle	16,811	16,752	17,773	17,072
Hours Per Vehicle	1,199	1,171	1,230	1,173
Trips Per Vehicle Mile	0.19	0.18	0.16	0.17
Trips Per Vehicle Hour	2.68	2.51	2.38	2.54
Operating Expense Per Trip (\$)	15.95	16.17	18.77	18.29
Operating Expense Per Mile (\$)	3.05	2.83	3.09	3.19
Operating Expense Per Hour (\$)	42.79	40.52	44.69	46.48
Farebox Recovery Ratio	11%	12%	10%	11%

Source: National Transit Database

Figures 5.2 and 5.3 plot rural transit ridership, vehicle revenue miles, and vehicle revenue hours statewide for 2009-2018. Rural transit ridership is shown to follow a similar trend as urban ridership. Table 5.5 provides agency-level data for total ridership, vehicle miles, and vehicle hours for each agency for 2015-2018. Tables 5.6-5.8 provide additional agency-level data for fleet statistics, operating expenses, and performance measures.

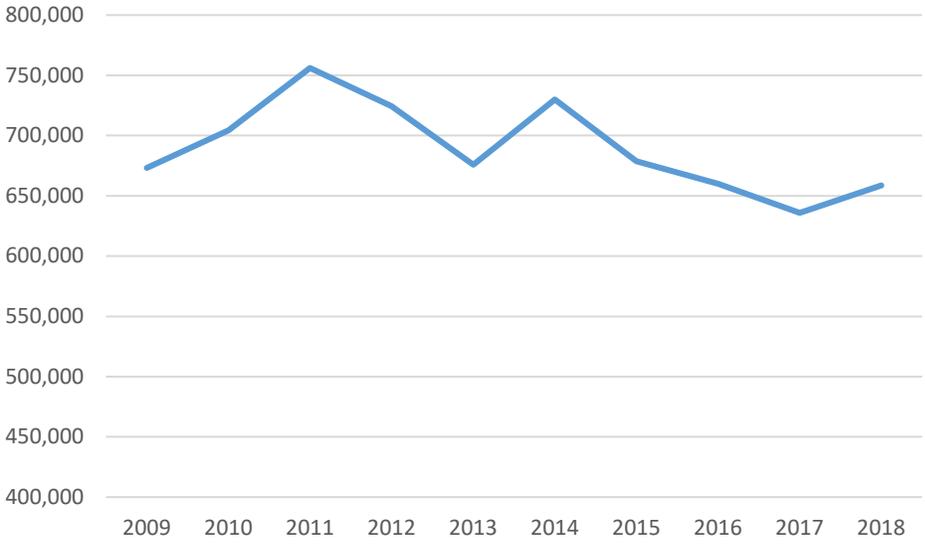


Figure 5.2 Rural Transit Ridership in North Dakota, 2009-2018

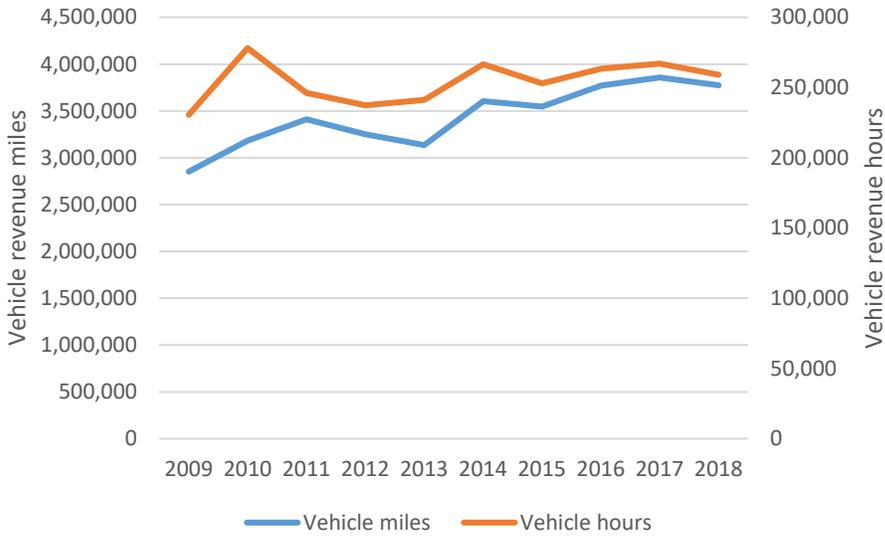


Figure 5.3 Vehicle Revenue Miles and Hours for Rural North Dakota Transit, 2009-2018

Table 5.5 Rural Transit Agencies: Agency-Level Operating Statistics, 2015-2018

Agency Name	City	Total Rides (thousands)				Total Vehicle Miles (thousands)				Total Vehicle Hours (thousands)			
		2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
Golden Valley/Billings County Council On Aging	Beach	2.9	3.5	4.0	3.3	107.3	115.0	112.1	91.7	4.0	4.4	4.4	3.9
Turtle Mountain Nutrition & Support Services	Belcourt	3.2	3.2	1.8	-	24.4	54.5	35.2	-	2.8	2.2	1.5	-
Turtle Mountain Band of Chippewa Indian	Belcourt	2.2	2.6	5.4	6.0	33.1	34.2	53.6	101.9	2.0	2.3	3.0	7.3
West River Transit	Bismarck	22.2	23.9	28.4	33.0	181.8	191.0	218.9	165.9	13.0	16.6	16.9	15.2
Southwest Transportation Services	Bowman	9.8	9.8	10.9	10.4	80.7	72.4	83.4	85.4	5.9	5.4	8.1	5.5
Devils Lake Transit (Senior Meals & Services)	Devils Lake	26.4	27.2	29.9	28.6	48.8	44.0	52.7	51.1	6.8	7.2	7.7	7.7
Stark County Council on Aging / Elder Care	Dickinson	32.4	31.9	28.9	35.9	142.5	128.4	113.1	158.9	14.6	14.9	14.7	15.6
Pembina County Meals and Transportation	Drayton	5.1	5.4	5.4	6.6	94.8	117.6	95.5	104.5	4.5	5.3	4.8	5.4
Dickey County Transportation	Ellendale	5.2	-	-	4.7	10.3	-	-	9.6	1.8	-	-	1.7
Valley Senior Services	Fargo	74.8	67.6	66.3	57.4	425.4	418.5	423.5	366.0	36.7	36.7	37.9	32.1
Handi-Wheels	Fargo	-	9.0	8.6	9.2	-	54.4	59.3	66.6	-	4.7	4.9	6.6
Spirit Lake Tribe	Fort Totten	4.8	10.5	12.9	12.6	94.7	155.9	204.2	204.6	4.9	6.9	9.5	9.4
Standing Rock Public Transportation	Fort Yates	14.0	14.6	16.7	18.7	204.9	200.7	202.9	224.4	6.1	7.2	9.0	9.9
Glen Ullin Transportation	Glen Ullin	-	1.3	0.9	0.5	-	7.5	5.4	3.3	-	-	0.3	0.1
Hazen Busing Project	Hazen	25.2	28.0	26.7	23.1	32.4	39.9	35.6	40.5	4.2	5.7	6.0	6.7
City of Jamestown Taxi	Jamestown	-	9.6	13.9	7.0	-	75.4	86.7	41.8	-	5.5	14.8	3.3
James River Senior Citizens Center, Inc.	Jamestown	55.7	54.3	55.3	60.1	185.2	184.9	173.0	175.6	15.0	15.5	15.1	15.5
Kenmare Wheels & Meals	Kenmare	8.4	5.6	6.7	10.9	6.9	7.0	7.6	11.5	1.4	1.2	1.3	1.7
Cavalier County Senior Meals & Services	Langdon	6.2	5.8	7.0	7.2	31.2	49.5	56.6	52.7	2.8	3.5	3.8	3.7
Benson County Transportation	Maddock	3.7	3.0	1.6	1.3	67.0	78.5	41.2	35.1	2.6	2.7	1.5	1.2
Nelson County Council On Aging	McVille	5.4	5.2	4.8	5.7	52.4	45.8	44.6	48.3	1.8	1.8	1.9	2.3
Souris Basin Transit	Minot	79.7	82.2	85.2	87.5	372.9	405.8	493.8	436.4	29.5	31.4	39.7	33.4
City of Minot	Minot	124.3	98.1	87.1	87.4	231.1	213.6	152.8	159.4	20.3	18.9	11.2	11.3
Walsh County Transportation Program	Park River	6.4	5.8	5.9	4.6	47.9	50.9	48.6	48.7	3.1	3.1	2.9	2.9
Nutrition United	Rolla	8.5	12.4	11.8	11.3	155.5	180.6	227.6	223.9	6.7	7.0	7.8	7.6
Can-Do Transportation	Rolla	4.8	6.0	5.8	5.2	44.9	42.8	40.9	38.2	3.3	3.3	3.3	3.1
Kidder-Emmons County Senior Services	Steele	8.6	8.0	5.9	6.1	59.9	51.9	49.4	50.1	2.2	2.0	2.1	1.9
Trenton Indian Service Area Aging Program	Trenton	4.0	3.9	3.8	2.3	53.8	39.4	45.9	46.2	1.0	0.6	0.8	1.0
South Central Adult Services	Valley City	103.9	118.2	94.9	105.3	646.9	741.6	719.6	707.7	53.7	53.7	47.2	45.4
Wildrose Public Transportation	Wildrose	-	1.7	2.6	2.4	-	21.8	55.3	32.8	-	0.9	2.3	1.6
Williston Council for the Aging	Williston	34.3	24.6	22.2	21.1	134.8	137.5	104.2	101.7	5.3	5.2	4.1	6.3

Source: National Transit Database, North Dakota Department of Transportation

Table 5.6 Rural Transit Agencies: Agency-Level Fleet Statistics and Performance Measures, 2016-2018

Agency Name	City	Total Vehicles			Trips Per Vehicle			Miles Per Vehicle			Hours Per Vehicle		
		2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
Golden Valley/Billings County Council On Aging	Beach	4	5	5	881	790	659	28,757	22,427	18,340	1,095	881	782
Turtle Mountain Nutrition & Support Services	Belcourt	3	2	--	1,082	903	--	18,161	17,601	--	724	726	--
Turtle Mountain Band of Chippewa Indian	Belcourt	2	3	4	1,298	1,807	1,503	17,116	17,860	25,481	1,129	1,003	1,813
West River Transit	Bismarck	20	20	18	1,194	1,419	1,834	9,549	10,947	9,218	832	846	844
Southwest Transportation Services	Bowman	8	8	8	1,227	1,369	1,305	9,048	10,430	10,672	678	1,015	691
Devils Lake Transit (Senior Meals & Services)	Devils Lake	6	6	6	4,530	4,982	4,765	7,332	8,779	8,523	1,202	1,280	1,289
Stark County Council on Aging / Elder Care	Dickinson	11	11	12	2,898	2,624	2,991	11,677	10,284	13,239	1,351	1,338	1,300
Pembina County Meals and Transportation	Drayton	4	5	5	1,349	1,089	1,315	29,405	19,103	20,897	1,319	953	1,079
Dickey County Transportation	Ellendale	--	--	2	--	--	2,358	--	--	4,804	--	--	867
Valley Senior Services	Fargo	25	25	25	2,704	2,650	2,297	16,741	16,940	14,639	1,468	1,514	1,282
Handi-Wheels	Fargo	4	4	4	2,245	2,155	2,299	13,604	14,820	16,652	1,178	1,225	1,654
Spirit Lake Tribe	Fort Totten	4	5	5	2,633	2,571	2,521	38,966	40,842	40,929	1,725	1,907	1,889
Standing Rock Public Transportation	Fort Yates	11	14	15	1,328	1,191	1,250	18,246	14,491	14,958	655	640	658
Glen Ullin Transportation	Glenn Ullin	1	1	1	1,290	935	490	7,539	5,446	3,239	--	324	130
Hazen Busing Project	Hazen	5	4	5	5,606	6,677	4,611	7,972	8,905	8,105	1,138	1,501	1,330
City of Jamestown Taxi	Jamestown	3	3	3	3,212	4,644	2,338	25,136	28,914	13,949	1,829	4,948	1,104
James River Senior Citizens Center, Inc.	Jamestown	11	12	13	4,936	4,607	4,626	16,810	14,420	13,511	1,413	1,254	1,192
Kenmare Wheels & Meals	Kenmare	2	2	2	2,806	3,354	5,454	3,501	3,795	5,774	585	652	830
Cavalier County Senior Meals & Services	Langdon	3	3	3	1,949	2,324	2,394	16,484	18,874	17,576	1,169	1,283	1,237
Benson County Transportation	Maddock	4	2	3	751	779	438	19,637	20,616	11,684	683	770	410
Nelson County Council On Aging	McVillie	2	2	2	2,578	2,389	2,869	22,902	22,290	24,130	877	938	1,136
Souris Basin Transit	Minot	21	26	23	3,916	3,277	3,805	19,325	18,991	18,975	1,496	1,528	1,451
City of Minot	Minot	16	5	5	6,132	17,420	17,472	13,348	30,562	31,888	1,180	2,245	2,265
Walsh County Transportation Program	Park River	3	3	3	1,932	1,956	1,550	16,976	16,197	16,241	1,035	973	965
Nutrition United	Rolla	5	5	5	2,483	2,353	2,267	36,127	45,526	44,770	1,405	1,568	1,523
Can-Do Transportation	Rolla	2	2	2	2,976	2,902	2,589	21,415	20,440	19,083	1,634	1,661	1,535
Kidder-Emmons County Senior Services	Steele	3	3	3	2,666	1,981	2,043	17,295	16,482	16,709	682	685	647
Trenton Indian Service Area Aging Program	Trenton	7	6	5	559	636	451	5,622	7,652	9,231	89	135	192

Source: National Transit Database, North Dakota Department of Transportation

Table 5.7 Rural Transit Agencies: Agency-Level Operating Expenses and Performance Measures, 2015-2018

Agency Name	City	Operating Expense (thousand \$)				Operating Expense Per Trip (\$)				Operating Expense Per Mile (\$)				Farebox Recovery Ratio			
		2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
Golden Valley/Billings County Council On Aging	Beach	162	181	159	182	56.37	51.40	40.36	55.16	1.51	1.57	1.42	1.98	11%	9%	11%	11%
Turtle Mountain Nutrition & Support Services	Belcourt	83	71	143	--	25.86	22.01	79.31	--	3.40	1.31	4.07	--	1%	2%	2%	0%
Turtle Mountain Band of Chippewa Indian	Belcourt	81	63	140	260	36.32	24.11	25.81	43.33	2.45	1.83	2.61	2.56	0%	0%	0%	0%
West River Transit	Bismarck	797	693	760	712	35.89	29.03	26.78	21.58	4.38	3.63	3.47	4.29	10%	9%	10%	8%
Southwest Transportation Services	Bowman	318	308	323	294	32.59	31.43	29.53	28.20	3.94	4.26	3.87	3.45	8%	6%	6%	7%
Devils Lake Transit (Senior Meals & Services)	Devils Lake	256	295	342	308	9.68	10.84	11.43	10.78	5.24	6.70	6.49	6.03	14%	8%	10%	7%
Stark County Council on Aging / Elder Care	Dickinson	1,072	995	1,105	912	33.10	31.21	38.30	25.41	7.52	7.75	9.77	5.74	15%	15%	10%	8%
Pembina County Meals and Transportation	Drayton	202	242	256	260	39.70	44.93	47.05	39.54	2.13	2.06	2.68	2.49	8%	6%	6%	4%
Dickey County Transportation	Ellendale	63	--	--	57	12.12	--	--	12.01	6.13	--	--	5.89	5%	4%	--	---
Valley Senior Services	Fargo	1,016	916	968	984	13.59	13.55	14.61	17.14	2.39	2.19	2.29	2.69	18%	18%	15%	16%
Spirit Lake Tribe	Fort Totten	141	224	329	380	29.19	21.24	25.63	30.15	1.49	1.44	1.61	1.86	1%	2%	3%	2%
Standing Rock Public Transportation	Fort Yates	801	941	1,038	1,139	57.23	64.41	62.22	60.76	3.91	4.69	5.11	5.08	6%	6%	6%	6%
Hazen Busing Project	Hazen	159	158	116	145	6.32	5.63	4.36	6.30	4.92	3.96	3.27	3.59	18%	17%	20%	12%
James River Senior Citizens Center, Inc.	Jamestown	703	642	625	700	12.63	11.82	11.30	11.64	3.80	3.47	3.61	3.99	20%	15%	18%	14%
Kenmare Wheels & Meals	Kenmare	88	73	81	84	10.50	13.03	12.11	7.71	12.81	10.44	10.70	7.28	5%	4%	5%	5%
Cavalier County Senior Meals & Services	Langdon	127	136	153	159	20.53	23.27	22.00	22.20	4.08	2.75	2.71	3.02	13%	8%	7%	9%
Benson County Transportation	Maddock	113	158	111	100	30.18	52.63	71.18	75.82	1.69	2.01	2.69	2.84	10%	5%	3%	3%
Nelson County Council On Aging	McVille	134	132	141	134	24.71	25.60	29.42	23.36	2.57	2.88	3.15	2.78	7%	6%	6%	4%
Souris Basin Transit	Minot	1,403	1,499	1,624	1,671	17.61	18.23	19.05	19.09	3.76	3.69	3.29	3.83	12%	11%	10%	11%
City of Minot	Minot	734	633	956	1,000	5.91	6.45	10.98	11.44	3.18	2.96	6.26	6.27	15%	12%	14%	8%
Walsh County Transportation Program	Park River	196	191	193	201	30.82	32.92	32.95	43.25	4.09	3.75	3.98	4.13	8%	6%	7%	7%
Nutrition United	Rolla	169	179	196	211	19.98	14.38	16.63	18.59	1.09	0.99	0.86	0.94	5%	4%	2%	4%
Can-Do Transportation	Rolla	81	75	86	69	16.83	12.59	14.90	13.36	1.79	1.75	2.12	1.81	9%	8%	8%	6%
Kidder-Emmons County Senior Services	Steele	96	100	97	111	11.15	12.56	16.37	18.18	1.60	1.94	1.97	2.22	7%	9%	6%	5%
Trenton Indian Service Area Aging Program	Trenton	85	85	51	60	20.96	21.75	13.32	26.48	1.57	2.16	1.11	1.29	2%	0%	1%	3%
South Central Adult Services	Valley City	1,186	1,255	1,407	1,416	11.41	10.61	14.82	13.45	1.83	1.69	1.95	2.00	9%	9%	11%	7%
Wildrose Public Transportation	Wildrose	--	50	61	72	--	28.67	23.25	30.49	--	2.30	1.09	2.19	--	--	8%	14%
Williston Council for the Aging	Williston	641	450	615	424	18.70	18.28	27.75	20.09	4.76	3.27	5.90	4.17	16%	14%	17%	10%

Source: National Transit Database

Table 5.8 Rural Transit Agencies: Trips Per Vehicle Mile and Trips Per Vehicle Hour, 2015-2018

Agency Name	City	Trips Per Vehicle Mile				Trips Per Vehicle Hour			
		2015	2016	2017	2018	2015	2016	2017	2018
Golden Valley/Billings County Council On Aging	Beach	0.03	0.03	0.04	0.04	0.72	0.80	0.90	0.84
Turtle Mountain Band of Chippewa Indian	Belcourt	0.07	0.08	0.10	0.06	1.13	1.15	1.80	0.83
Turtle Mountain Nutrition & Support Services	Belcourt	0.13	0.06	0.05	--	1.13	1.50	1.24	--
West River Transit	Bismarck	0.12	0.13	0.13	0.20	1.71	1.44	1.68	2.17
Southwest Transportation Services	Bowman	0.12	0.14	0.13	0.12	1.64	1.81	1.35	1.89
Devils Lake Transit (Senior Meals & Services)	Devils Lake	0.54	0.62	0.57	0.56	3.91	3.77	3.89	3.70
Stark County Council on Aging / Elder Care	Dickinson	0.23	0.25	0.26	0.23	2.21	2.15	1.96	2.30
Pembina County Meals and Transportation	Drayton	0.05	0.05	0.06	0.06	1.13	1.02	1.14	1.22
Dickey County Transportation	Ellendale	0.51	--	--	0.49	2.97	--	--	2.72
Valley Senior Services	Fargo	0.18	0.16	0.16	0.16	2.04	1.84	1.75	1.79
Handi-Wheels	Fargo	--	0.16	0.15	0.14	--	1.91	1.76	1.39
Spirit Lake Tribe	Fort Totten	0.05	0.07	0.06	0.06	0.99	1.53	1.35	1.33
Standing Rock Public Transportation	Fort Yates	0.07	0.07	0.08	0.08	2.28	2.03	1.86	1.90
Glen Ullin Transportation	Glenn Ullin	--	0.17	0.17	0.15	--	--	2.89	3.77
Hazen Busing Project	Hazen	0.78	0.70	0.75	0.57	5.99	4.93	4.45	3.47
City of Jamestown Taxi	Jamestown	--	0.13	0.16	0.17	--	1.76	0.94	2.12
James River Senior Citizens Center, Inc.	Jamestown	0.30	0.29	0.32	0.34	3.71	3.49	3.67	3.88
Kenmare Wheels & Meals	Kenmare	1.22	0.80	0.88	0.94	6.22	4.80	5.14	6.58
Cavalier County Senior Meals & Services	Langdon	0.20	0.12	0.12	0.14	2.23	1.67	1.81	1.94
Benson County Transportation	Maddock	0.06	0.04	0.04	0.04	1.44	1.10	1.01	1.07
Nelson County Council On Aging	McVille	0.10	0.11	0.11	0.12	2.98	2.94	2.55	2.53
City of Minot	Minot	0.54	0.46	0.57	0.55	6.11	5.20	7.76	7.71
Souris Basin Transit	Minot	0.21	0.20	0.17	0.20	2.70	2.62	2.15	2.62
Walsh County Transportation Program	Park River	0.13	0.11	0.12	0.10	2.04	1.87	2.01	1.61
Can-Do Transportation	Rolla	0.11	0.14	0.14	0.14	1.46	1.82	1.75	1.69
Nutrition United	Rolla	0.05	0.07	0.05	0.05	1.27	1.77	1.50	1.49
Kidder-Emmons County Senior Services	Steele	0.14	0.15	0.12	0.12	3.95	3.91	2.89	3.16
Trenton Indian Service Area Aging Program	Trenton	0.08	0.10	0.08	0.05	4.17	6.31	4.70	2.35
South Central Adult Services	Valley City	0.16	0.16	0.13	0.15	1.94	2.20	2.01	2.32
Wildrose Public Transportation	Wildrose	--	0.08	0.05	0.07	--	1.88	1.15	1.49
Williston Council for the Aging	Williston	0.25	0.18	0.21	0.21	6.50	4.69	5.36	3.37

Source: National Transit Database, North Dakota Department of Transportation

5.2 Survey of Transit Providers

5.2.1 Types of Service Provided

Four transit agencies in the state provide traditional fixed-route services, the three urban systems previously mentioned – MATBUS in the cities of Fargo and West Fargo, Cities Area Transit in Grand Forks, and Bis-Man Transit in Bismarck and Mandan – and Minot City Transit in Minot. The remaining agencies throughout the state all provide a demand-response service for the general public. Some of the rural agencies also provide a flexible route service, and some provide veterans transportation or human service transportation for clients of human service programs (Table 5.9). The three urban systems also provide ADA complementary paratransit in the Fargo, Bismarck, and Grand Forks metro areas, and Souris Basin Transportation provides this service in the city of Minot.

Table 5.9 What type of transportation services does your organization provide (check all that apply)?

Service Type	Number of Agencies	Percentage of Agencies
Traditional fixed route	4	13%
Flexible route	6	20%
Demand response for the general public	26	87%
ADA complementary paratransit	4	13%
Human service transportation (for clients of human service programs)	6	20%
Veterans transportation	12	40%

5.2.2 Span of Service

Service span measures the days per week and hours per day that service is available in a particular area. It is one of the measures of demand-response quality of service used in the Transit Capacity and Quality of Service Manual (TCQSM) (Kittelson & Associates et al. 2013). The survey asked transit agencies to first identify the counties where they provide service, and then, within those counties, they were asked to identify the span of service provided in specific communities and areas of the county. The results were then mapped at the zip code levels, as shown in Figures 5.4 and 5.5. The mapping is not perfect, as service levels do not exactly follow zip code boundaries, and zip code boundaries often cross county borders, but the results are a good approximation of the span of service across the state.

As shown in Figure 5.4, many rural areas of the state have service just one day per week or less than weekly. A few areas have service 2-4 days per week, and many areas have service 5 days per week. Weekend service is also found in some cities, usually the larger cities, but it is less common. Fixed-route services in Fargo-West Fargo, Bismarck-Mandan, and Grand Forks operate six days per week, while the complementary paratransit is available seven days per week in Fargo-West Fargo and Bismarck-Mandan and six days per week in Grand Forks.

Hours of service is often limited in rural areas. Figure 5.5 shows that many rural areas have service for less than 9 hours per day, including several areas with less than 5 hours of service per day. Most larger cities have service at least 9 hours per day, and the urban areas have 16 or more hours of service per day.

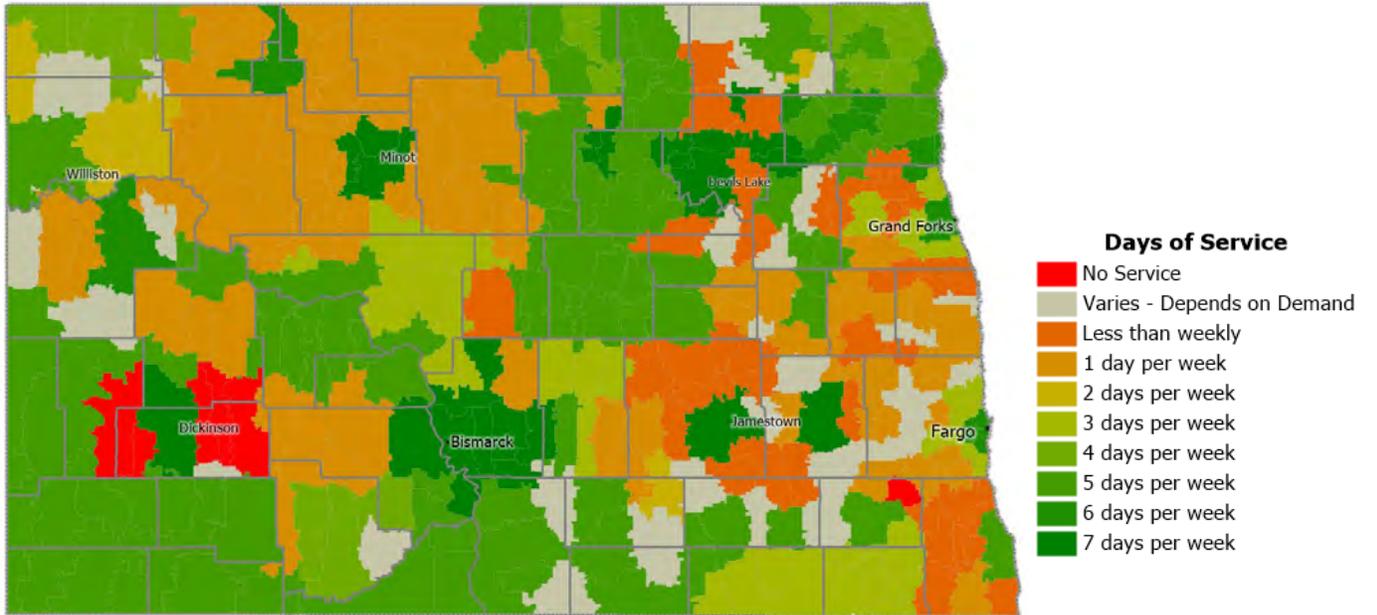


Figure 5.4 Days Per Week of Transit Service

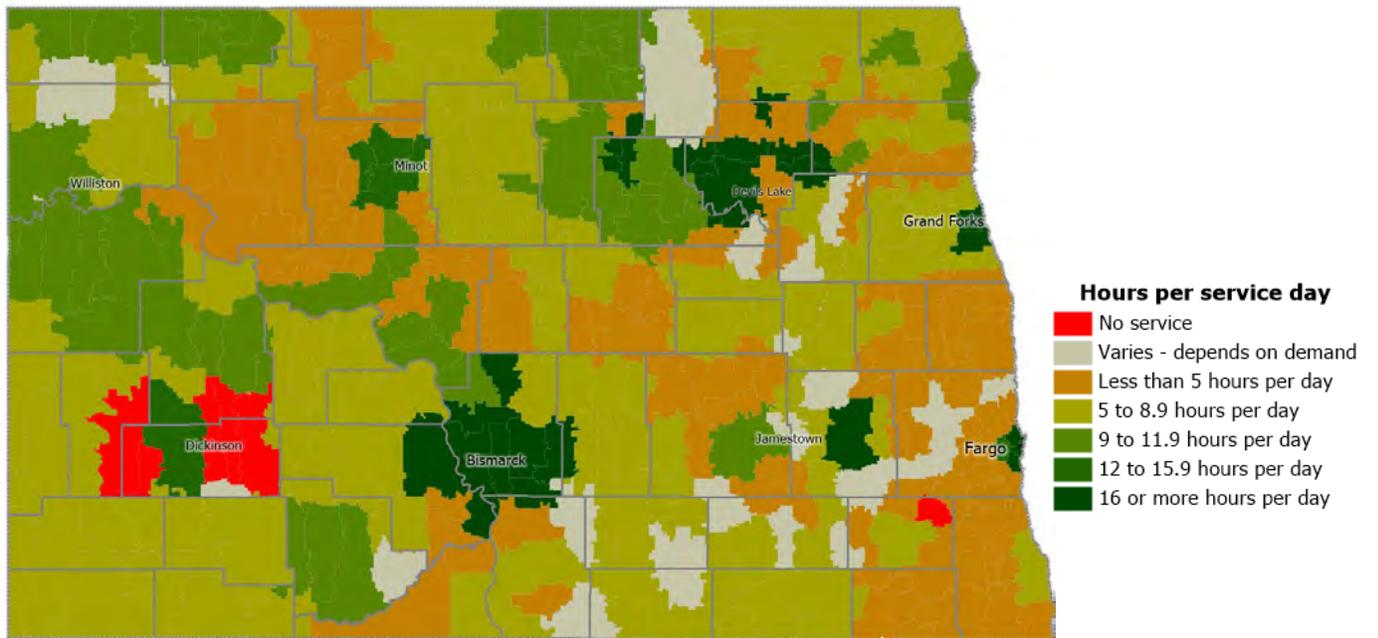


Figure 5.5 Hours Per Service Day

5.2.3 ADA Complementary Paratransit

The Americans with Disabilities Act (ADA) requires agencies operating fixed-route service to provide complementary paratransit for those not able to use fixed-route service. Generally, it must operate in the same areas and during the same hours as fixed-route transportation. The ADA requires that complementary paratransit be provided within $\frac{3}{4}$ mile of all fixed routes, but transit agencies may provide a higher level of service that goes beyond this requirement, which is the case in North Dakota. MATBUS provides complementary paratransit within the city limits of Fargo and West Fargo; the Bis-Man Transit Board provides the services within the city limits of Bismarck, Mandan, and Lincoln and also within $\frac{3}{4}$ mile of the fixed route that serves the University of Mary; Cities Area Transit operates the service within the city limits of Grand Forks; and Souris Basin Transportation provides complementary paratransit service throughout the city of Minot.

Span of service is also greater for the complementary paratransit in some cities. The Bis-Man Paratransit service runs seven days a week, as does MATBUS in Fargo and West Fargo, while the fixed-route service runs six days a week in those cities. In Minot, the fixed-route service runs five days a week, while the paratransit service is available seven days a week.

5.2.4 Advance Reservation Time

Response time, or advance reservation time, is an important measure of transit availability. Allowing riders to schedule trips with shorter advance notice increases the availability of the service to the user. The TCQSM includes reservation time as a measure of demand-response transit quality of service. Transit agencies were asked to identify their minimum advance reservation time for demand-response or complementary paratransit service.

Transit agencies in the state commonly require reservations to be made 24 hours in advance, or during the previous service day, but some allow for same-day trips for some types of trips or if space is available. Out-of-town trips or longer-distance trips typically require at least one day or sometimes two days of notice.

5.2.5 Fares

Information on fares was collected for fixed-route and demand-response providers for both in-town and longer-distance trips. Data for rural demand-response fares are shown in Table 5.10. Many rural transit agencies charge a round-trip fare. These fares were divided by two to calculate a one-way fare. The average fare for in-town trips is \$1.26 one-way. Rural providers charge senior citizens the same fare as the general public, and most also charge children the same fare. The table also shows estimates for average fares for out-of-town trips of different distances.

Table 5.10 One-Way Fares Charged by Demand-Response Transit Providers

One-way trip distance	Average	Median	Minimum	Maximum
In-town	1.26	1.00	0.00	4.00
Out-of-town up to 15 miles	3.79	2.50	1.00	14.00
16-30 miles	5.25	4.00	1.00	26.50
31-45 miles	7.86	4.25	1.50	41.50
46-60 miles	9.93	5.25	2.00	56.50
61-75 miles	14.50	8.75	5.00	71.50
76-100 miles	16.82	10.00	5.00	91.50
More than 100 miles	26.71	16.25	7.50	104.00

Fares charged by the fixed-route systems are shown in Table 5.11. These fares are accurate as of March 2020. All fixed-route systems charge a cash fare of \$1.50. MATBUS offers discount fares of \$0.75 to older adults (age 60 or older), Medicare card holders, people with disabilities, and youth (K-12th grade). Preschool children, disabled veterans, personal care attendants, and U-Pass college students can ride fare-free. Cities Area Transit offers discount fares of \$0.75 to K-12 students and \$0.60 to older adults (age 62 or older), Medicare card holders, and people with disabilities. Bis-Man Transit provides \$0.75 reduced fares to students (K-12 and higher education), Medicare card holders, and veterans. Seniors aged 65 and older and paratransit members can ride the Bis-Man fixed-route system for free.

Table 5.11 Fares Charged by Fixed-Route Transit Providers

	Cash Fare			Regular Passes			
	Adult	Youth	Senior Citizen	31-day pass	14-day pass	1-day pass	10-ride ticket
Bismarck: Bis-Man Transit	\$1.50	\$0.75	Free	\$36	na	\$6	na
Fargo: Metro Area Transit	\$1.50	\$0.75	\$0.75	\$40	21	\$5	\$15
Grand Forks: Cities Area Transit	\$1.50	\$0.75	\$0.60	\$35	18	\$5	\$13
Minot: City Transit	\$1.50	\$1.50	\$1.50	\$36	na	\$5	\$10

The fixed-route operators also provide other fare products such as passes and 10-ride tickets. Costs of regular monthly passes (either 30- or 31-day passes) range from \$35 to \$40. Discount monthly passes are provided by Bis-Man Transit (\$24), MATBUS (\$26), and Minot City Transit (\$28 for students, senior citizens aged 55 or older, and people with disabilities). Discounted 10-ride tickets are also provided by Cities Area Transit (\$6.50 for K-12 students and \$5.25 for others eligible for reduced fares), and Minot City Transit (\$8 for students, senior citizens 55 or older, and people with disabilities).

Bis-Man Transit, MATBUS, and Cities Area Transit all charge a \$3 fare for ADA complementary paratransit. Souris Basin Transportation charges a \$2.50 fare for paratransit trips within the city of Minot.

6. TRANSIT RIDER DEMOGRAPHICS

Results from the transit rider survey provide information about the demographics of transit riders. With 751 responses from rural transit users across the state, the survey results provide good information about the characteristics of rural transit riders. Because fewer responses were received from urban transit riders, survey responses are not as representative for urban transit. However, additional information provided by urban transit agencies help describe the demographics of their users. Transit agency ridership data by fare category identifies the number of trips taken by riders who qualify for reduced fares because of different demographic characteristics. These data, along with the survey results, provide a description of transit rider demographics in the state. Data are reported separately for rural and urban transit riders in the following sections.

6.1 Rural Transit Rider Demographics

Survey results show that a large percentage of rural transit riders are older adults. Many have a disability, cannot drive, do not have access to a vehicle, and/or have a low income. Figure 6.1 shows the age distribution of survey respondents. The average age was 59 and the median age 62. Almost one quarter of respondents were aged 80 or older, and 39% were 70 or older. About 3% of respondents were under age 20, though this age group could have been underrepresented in the survey.

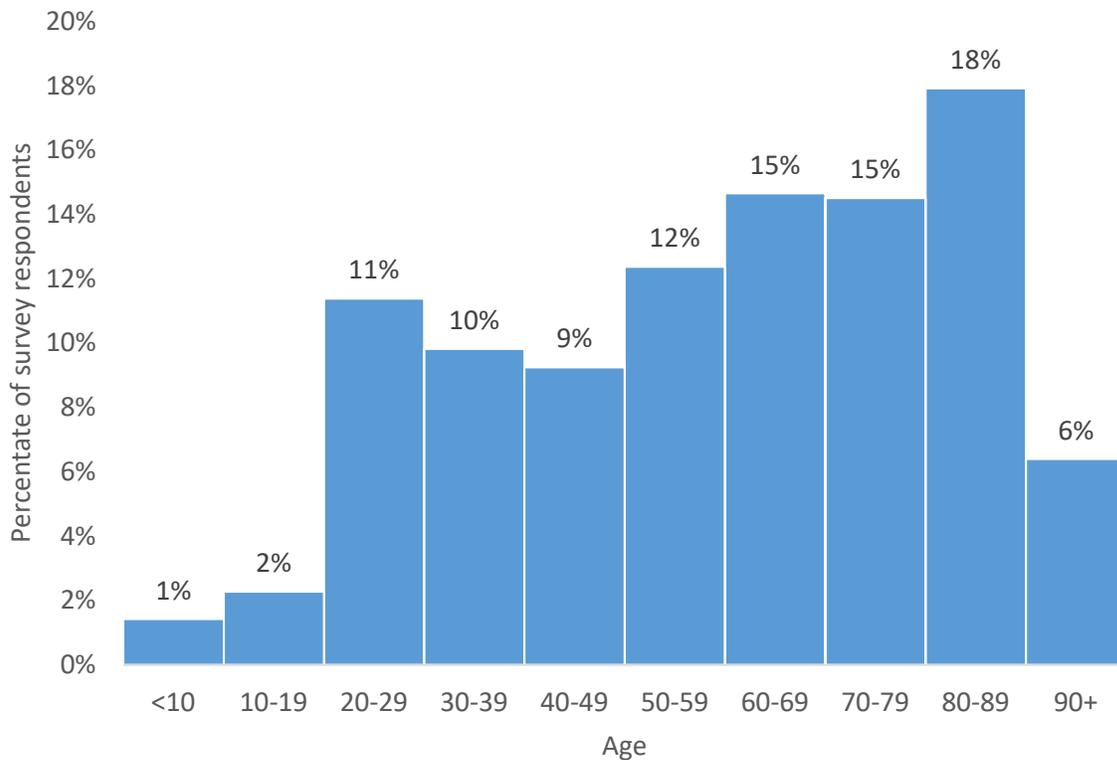


Figure 6.1 Age Distribution of Rural Transit Riders

About half of riders identified themselves as having a disability, and 47% did not have a driver's license (Figure 6.2). About 8% were veterans, and 3% said they have a service animal. As shown in Figure 6.3, riders are predominantly low income. A majority have household incomes below \$25,000, and most have incomes below \$50,000. Many riders do not have access to a vehicle. According to survey responses, 40% do not have any vehicle in their households, and 39% have just one vehicle (Figure 6.4). About 80%

of rural respondents were white, and 9% were American Indian or Alaska Native (Figure 6.5). A large majority of respondents (73%) were women (Figure 6.6).

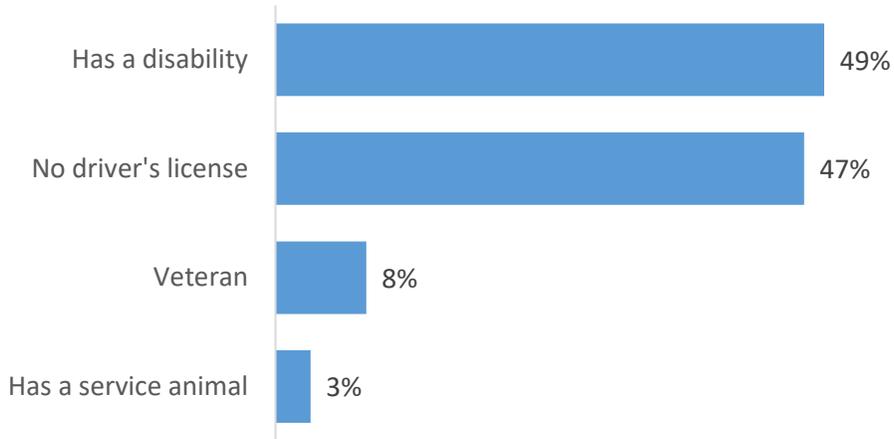


Figure 6.2 Rural Transit Rider Characteristics

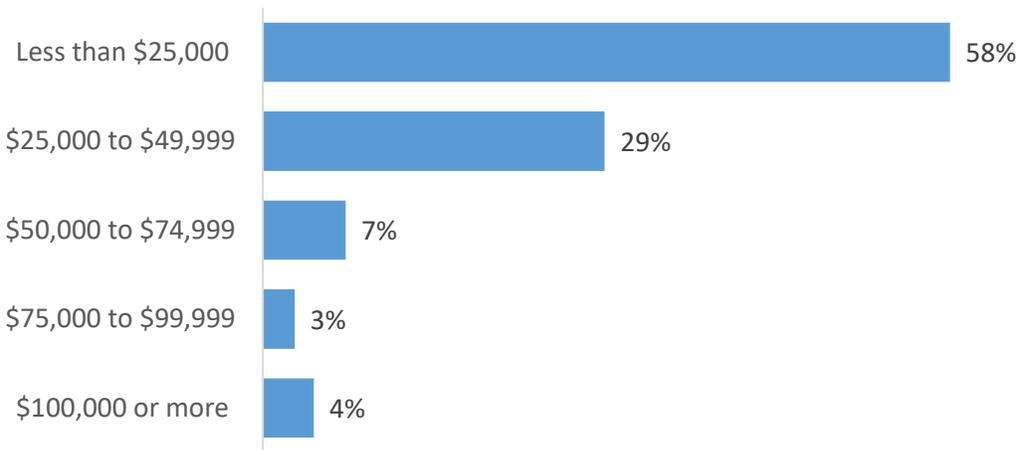


Figure 6.3 Rural Transit Rider Household Income

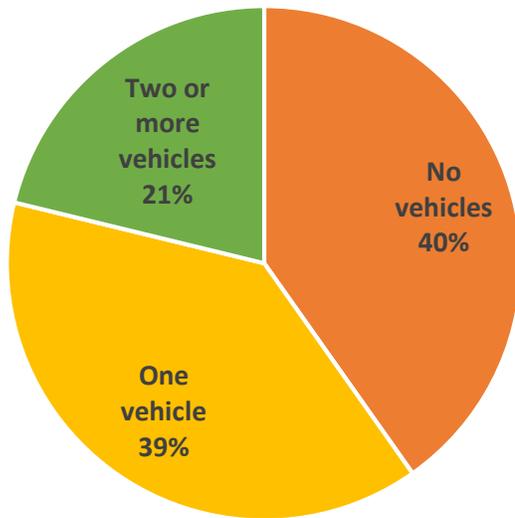


Figure 6.4 Number of Vehicles in Household for Rural Transit Riders

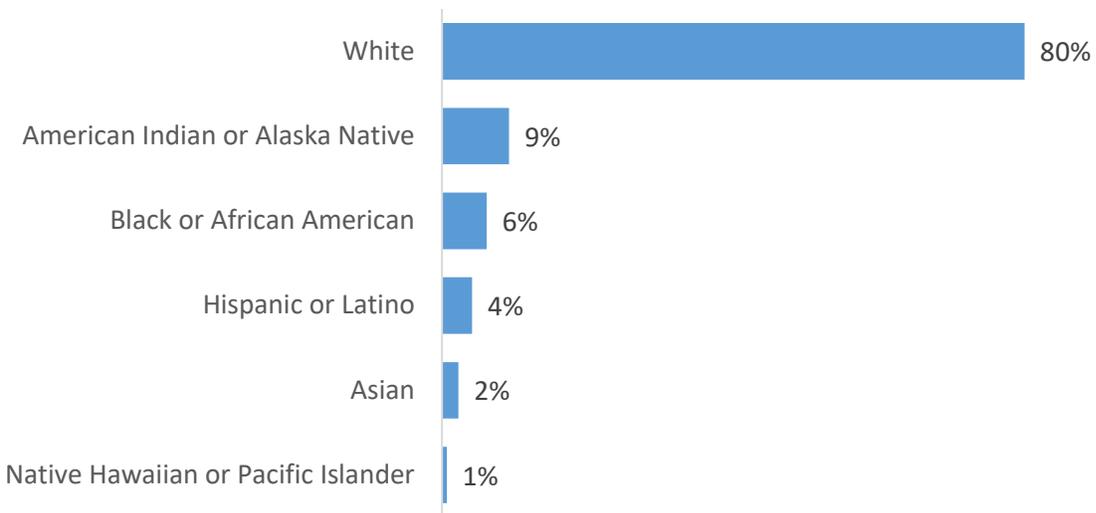


Figure 6.5 Race of Rural Transit Riders

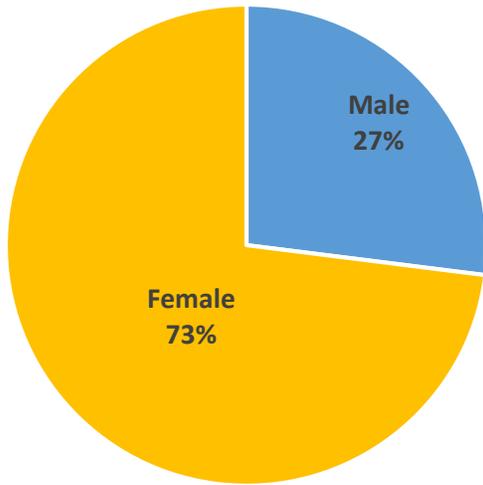


Figure 6.6 Sex of Rural Transit Riders

Figure 6.7 provides a comparison of the demographics of rural transit riders and the rural general population. The rural general population is defined to include the population of the entire state, excluding the populations of the Fargo-West Fargo, Bismarck-Mandan, and Grand Forks metro areas. As the figure shows, transit serves a disproportionately higher percentage of low-income individuals, people without access to a vehicle, people with a disability, older adults, and minorities. For example, 40% of transit riders do not have any vehicles in the household, compared to just 3% statewide. Statewide, 17% have household incomes below \$25,000 and 10% have a disability, compared to 58% and 49%, respectively, for rural transit riders.

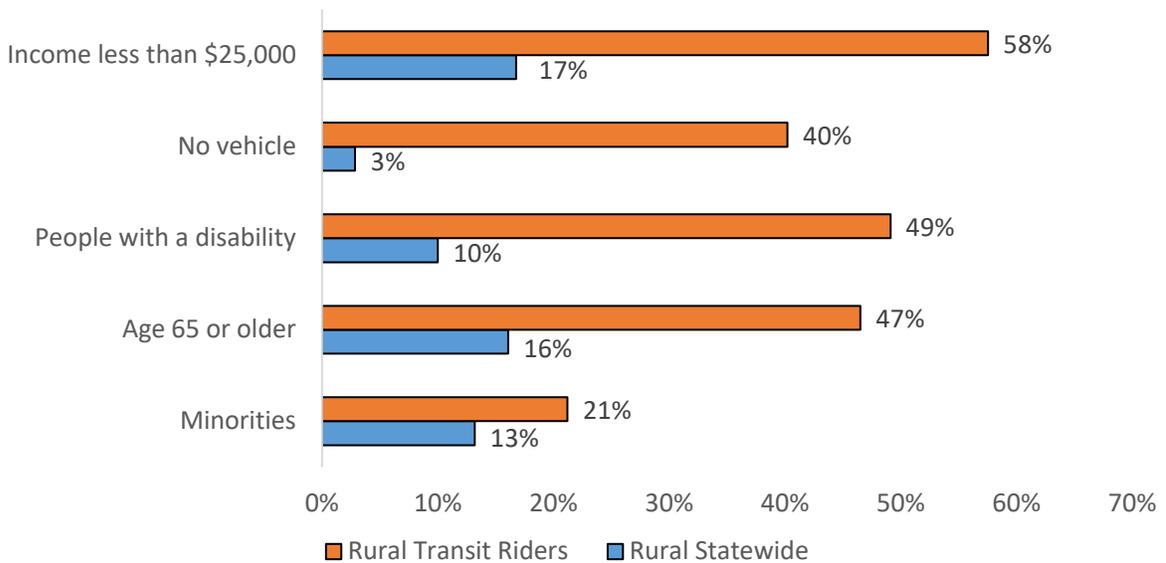


Figure 6.7 Demographics of Rural Transit Riders and Rural General Population Urban Transit Rider Demographics

6.1.1 Survey Responses

Survey data for urban agencies are based on responses from 105 riders, the majority of which were from Grand Forks. Because of the lower response rate and the underrepresentation of riders from Fargo, which by far has the highest ridership in the state, these results may not be representative of all urban transit ridership. This is especially true of the age distribution of respondents, as shown in Figure 6.8. Only 15% of respondents were under age 30, yet it is known that a large share of MATBUS riders are students. Results are, therefore, more likely to be representative of non-student riders or Grand Forks riders, in particular. Even with college students underrepresented, the age distribution skews a bit younger, with a smaller percentage of riders over age 70.

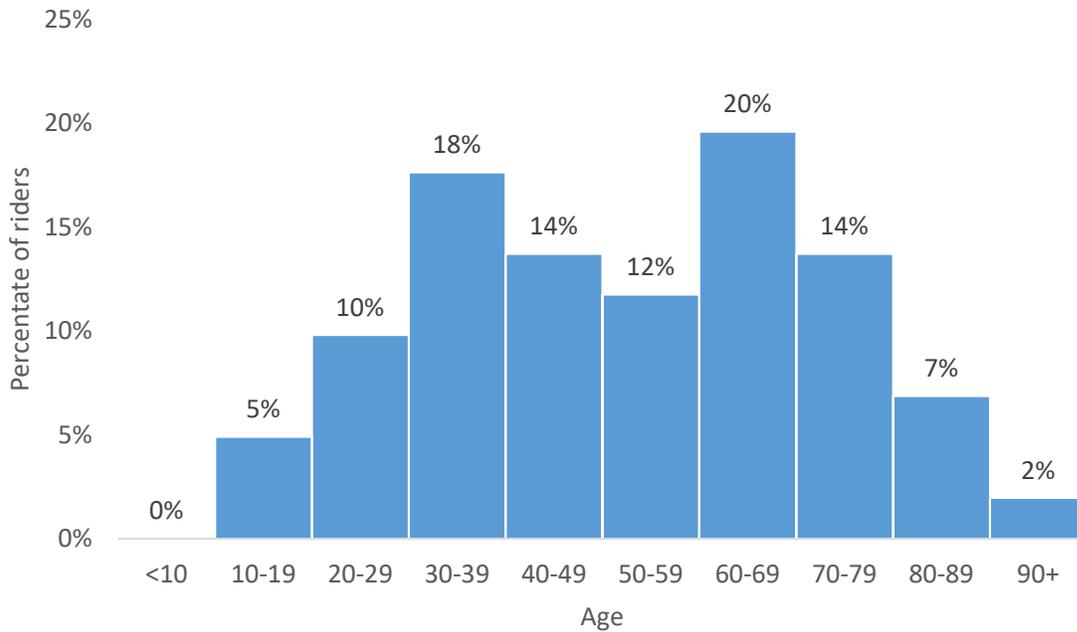


Figure 6.8 Age Distribution of Urban Transit Rider Survey Respondents

Similar to the rural respondents, a large share of urban respondents reported having a disability and/or low income and not having a driver’s license or access to any vehicles. About half of urban respondents reported having a disability, 61% said that do not have a driver’s license, 70% reported household income below \$25,000, and 64% said they do not have any vehicles in their household (Figures 6.9-6.11). About 79% of respondents were white, compared to 15% that were American Indian or Native Alaskan (Figure 6.12). Again, a larger share of respondents were women, but the difference was not as great as in the rural results, as 58% were women (Figure 6.13).

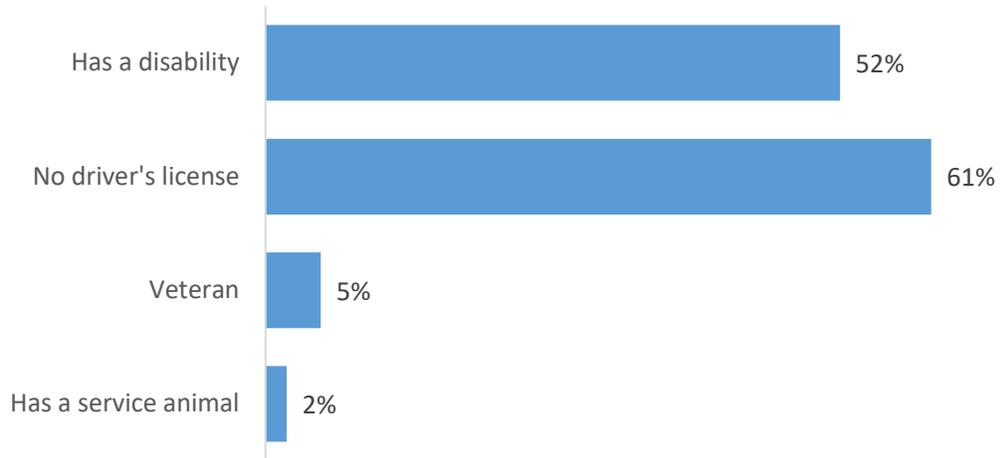


Figure 6.9 Characteristics of Urban Transit Rider Survey Respondents

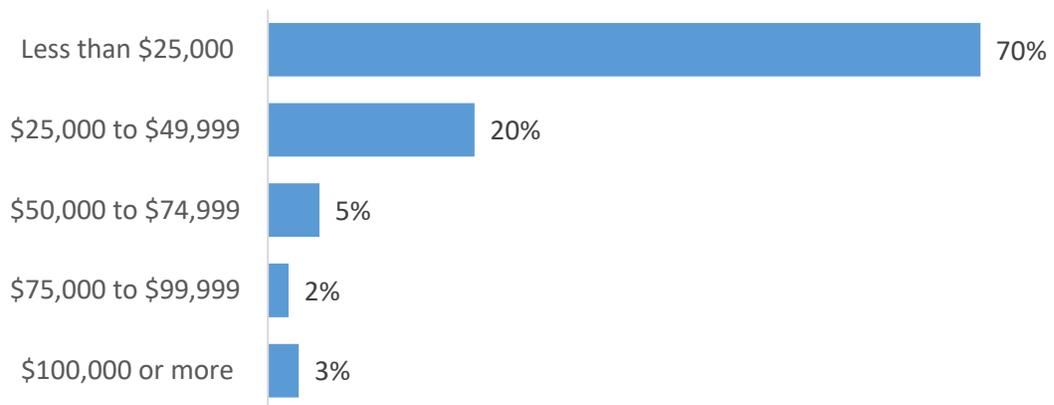


Figure 6.10 Age Distribution of Urban Transit Rider Survey Respondents

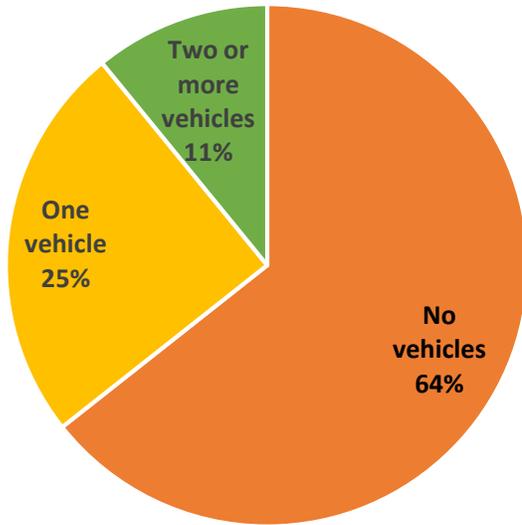


Figure 6.11 Number of Vehicles in the Household for Urban Transit Rider Survey Respondents

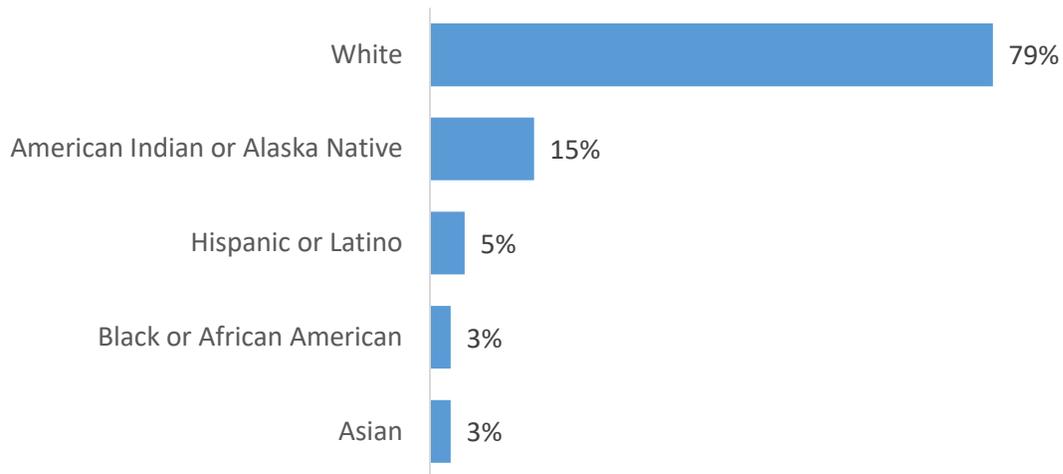


Figure 6.12 Race of Urban Transit Rider Survey Respondents

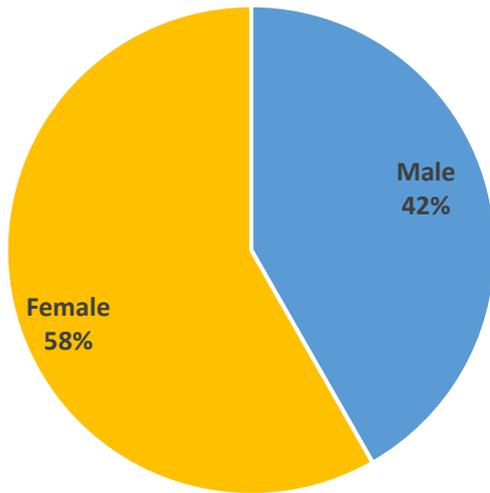


Figure 6.13 Sex of Urban Transit Rider Survey Respondents

6.1.2 Fare Category Ridership Data

Ridership data by fare category from the urban agencies provide a better description of the age and disability status of urban riders, though they do not provide any information about income, vehicle access, or race. Riders qualify for different fare categories based on age or disability. For MATBUS, this includes children preschool aged and younger, youth (K-12th grade), college students (students from NDSU, MSUM, Concordia, or NDSCS Fargo), elderly (age 60 and older), and people with a disability.

Figure 6.14 shows the distribution of MATBUS’s fixed-route ridership in 2019 by each of these categories. Fixed route ridership totaled 1.31 million in 2019, and nearly half (47%) of those trips were taken by college students. People with disabilities accounted for 15% of trips and older adults took 6% of the trips. The “Adult” category refers to all other riders not qualifying for any of the other fare categories. MATBUS also provides a paratransit system that specifically serves people with disabilities. Paratransit ridership has been about 50,000 to 55,000 trips per year in recent years. Including paratransit ridership, the total share of MATBUS trips taken by people with disabilities is about 19%. While MATBUS serves a lower percentage of seniors, Metro Senior Ride helps to fill that gap. Metro Senior Ride is a separate service provided by Valley Senior Services to ambulatory seniors aged 60 or older in the Fargo metro area.

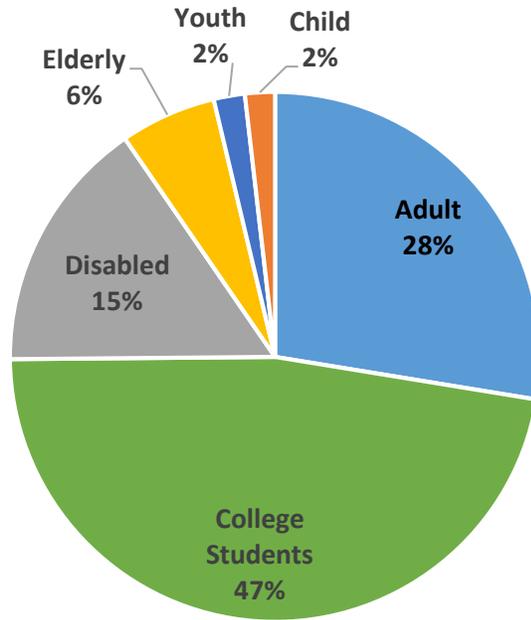


Figure 6.14 Distribution of MATBUS Fixed-Route Ridership by Fare Category, 2019

Cities Area Transit (CAT) in Grand Forks also provides different fare categories for children under age 6, K-12 students, college students, seniors (age 62 or older), and people with disabilities. A much larger share of CAT riders fall into the “Adult” category, not belonging to any of the other reduced fare categories. This is largely due to the smaller share of college students, which could be explained by the fact that the University of North Dakota (UND) has been providing its own transportation. However, CAT is taking over the provision of transportation for UND. The UND campus shuttle provided an estimated 175,581 trips in the 2018-2019 academic year. With CAT taking over the UND service, total CAT ridership and its share of college student riders will increase considerably. Among the other CAT riders, 7% were seniors (note that MATBUS and CAT use different age definitions for seniors), 5% were people with a disability, and the remainder were children or K-12 students.

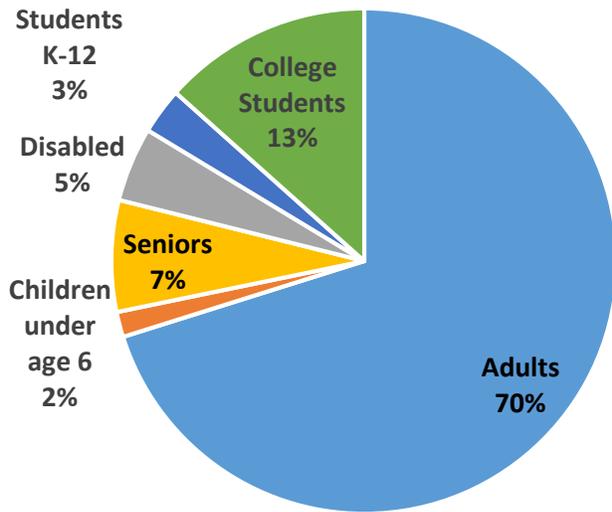


Figure 6.15 Distribution of Cities Area Transit Fixed-Route Ridership by Fare Category, 2019

CAT also provides a paratransit service for people with disabilities and a demand-response senior ride service. As shown in Figure 6.16, 62% of demand-response trips in 2019 were for paratransit passengers, 35% were senior riders, and the remainder were guests or personal care attendants. In total, CAT provided 225,141 fixed-route trips and 65,183 demand-response trips in 2019. If fixed-route and demand-response ridership are combined, people with disabilities account for 18% of total ridership and seniors 13%.

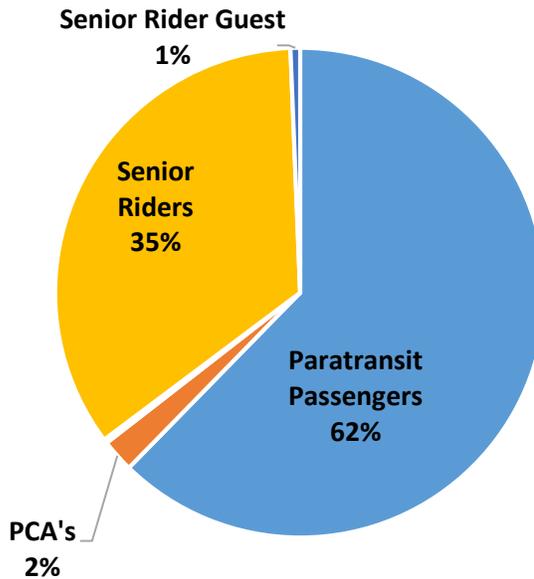


Figure 6.16 Distribution of Cities Area Transit Demand-Response Ridership, 2019

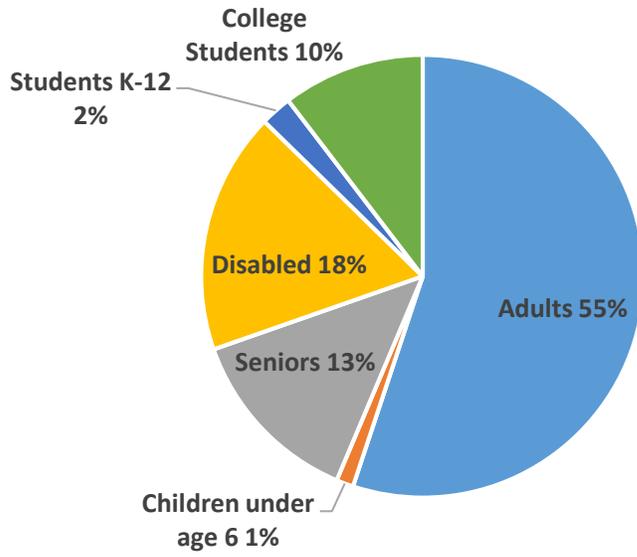


Figure 6.17 Distribution of Cities Area Transit Combined Fixed-Route and Demand-Response Ridership, 2019

7. STATE-OF-GOOD-REPAIR ANALYSIS

Transit agencies seeking federal grants must keep their transit assets in a state of good repair. The ability to accurately predict the service life of revenue vehicles is crucial in achieving this. Therefore, North Dakota transit systems need an intelligent predictive model for analyzing their transportation rolling stock, determining current conditions, predicting when vehicles need to be replaced or rehabilitated, and determining funding needed in a future year to maintain the state of good repair.

The Federal Transit Administration (FTA) established a minimum useful life policy for transit vehicles funded with federal grants (Laver et al. 2007). The policy is to ensure that federally funded vehicles have a significant service life serving transit riders. Useful life of rolling stock begins when a transit vehicle is placed in revenue service and continues until it is removed from revenue service. The FTA set guidelines for a rolling stock useful life threshold based on the vehicle type purchased by FTA funds (iDOT 2017). The minimum service life indicates the number of years or miles that transit vehicles purchased with federal funds must be in service before they can be retired without financial penalty. This minimum service life requirement is shown in Table 7.1. These requirements have become perceived as the actual useful life of these vehicles (Laver et al. 2007).

Table 7.1 Minimum Service Life in FTA’s Five Service Life Categories

Category	Typical Characteristics			Minimum Life (Whichever comes first)	
	Length	Approx. GVW	Seats	Years	Miles
Heavy-Duty Large Bus	35 to 48 ft and 60 ft artic.	33,000 to 40,000	27 to 40	12	500,000
Heavy-Duty Small Bus	30 ft	26,000 to 33,000	26 to 35	10	350,000
Medium-Duty and Purpose-Built Bus	30 ft	16,000 to 26,000	22 to 30	7	200,000
Light-Duty Mid-Sized Bus	20 to 30 ft	10,000 to 16,000	16 to 25	5	150,000
Light-Duty Small Bus, Cutaways, and Modified Van	16 to 28 ft	6,000 to 14,000	8 to 22	4	100,000

Source: Federal Transit Administration (2007)

Based on an analysis of the average retirement age of transit assets, as reported in the National Transit Database (NTD), the FTA found that the average retirement age was older than the minimum required age in practice (Edrington et al. 2014). The average retirement age of 4-year van is 5.6 years, with 29% of the vehicles retired one or more years after the FTA minimum retirement age. The analysis also showed that about 20% of 5- and 12-year vehicles exceed one or more year past the minimum retirement age. Further, 10% of 4-year vehicles exceed three or four years past the minimum retirement age (Edrington et al. 2014).

The “Useful Life of Transit Buses and Vans” research, published in 2007 by the FTA, assessed the policy on existing minimum service life for transit buses and vans (Laver et al. 2007). The study team interviewed transit agencies and performed engineering and economic analyses to evaluate the minimum service life policy. The engineering analysis showed that the bus lifespan was restricted by the bus structure, while the economic analysis showed that the optimal replacement points for various bus types were at or later than the FTA’s minimum service life. The study also showed that the actual ages when agencies were retiring buses from service exceeded FTA’s minimum service life and suggested that the minimum service life policy should be changed (Laver et al. 2007).

This study developed a machine learning predictive model (MLPM) by training and fitting with NTD's retired revenue vehicles inventory data. Then the MLPM was deployed on the North Dakota's transit agencies' 2018 revenue vehicles data and calculated the service life of each vehicle. The service life of each vehicle depends on many important features such as vehicle type, vehicle length, fuel type, seating capacity, standing capacity, mode, etc. The predictive model built in this research finds the patterns, learns the importance of such features, and predicts the service life of revenue vehicles from these hidden insights.

The regression algorithm used in this model identifies the features most important for predicting vehicle service life. The relative importance of features indicates how much a feature can contribute to predicting a target variable, which in this case is the service life of a vehicle. The greater the feature's importance means the feature is being used more often. For this predictive model, the relative feature importance for the top ten features are most significant and account for about 60% of total feature importance. The model produced the root mean squared error of 0.77 and an R^2 score of 0.96, which indicates that the predictions will fall less than one year below or above the standard deviation with a 96% accuracy rate and a mean absolute error of 0.38 for predictions. The results show that the model is performing well enough, using a gradient boosting regression model, to predict the future service life of vehicles.

After the predicted service life of vehicles were determined, the projected retirement years of vehicles currently in use were estimated. Based on these estimates, the replacement backlog and projected vehicle replacement cost for each year thereafter were estimated, providing a 12-year long-range plan.

The predicted replacement years for all revenue vehicles in North Dakota were calculated by deploying MLPM on 2018 NTD Revenue Vehicle Inventory data. The results show a backlog of 58 vehicles (17% of the current 350 vehicles) that need to be replaced to bring the revenue vehicles into a state of good repair, assuming vehicles be replaced following the predicted service life. Figure 7.1 shows the number of vehicles that would need to be replaced each year to maintain a state of good repair. This includes vehicles that may be replaced more than once during the period and assumes vehicles will be replaced with similar types of vehicles and total fleet size will not change.

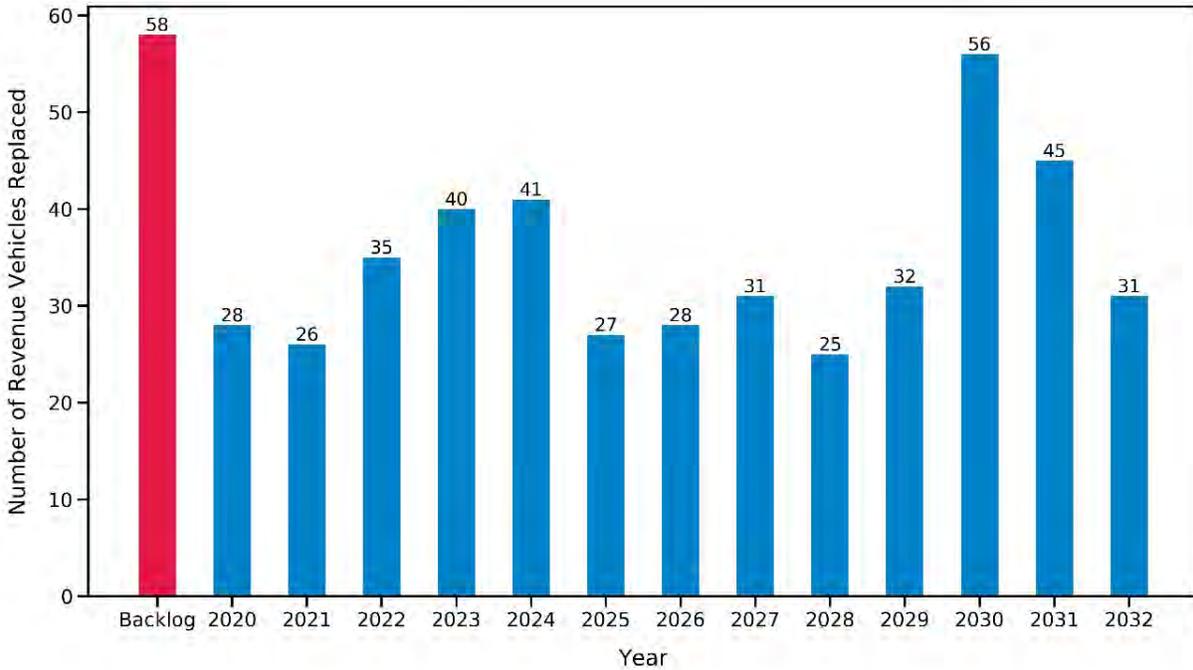


Figure 7.1 Backlog and Projected Replacement of Revenue Vehicles in North Dakota Transit System

Revenue vehicle inventory data from the NTD and the American Public Transportation Association’s (APTA’s) public transportation vehicle database were used to estimate the cost of the vehicles. Based on these estimates, the cost to replace the backlog of vehicles is \$7.57 million. Federal funding is expected to cover 80% of new vehicle costs, so the non-federal share of the backlog cost is \$1.51 million. The rest of the vehicles will need to be periodically replaced. Estimates for average annual vehicle replacement costs are presented in Figure 7.2, considering the current fleet and minimum fleet costs.

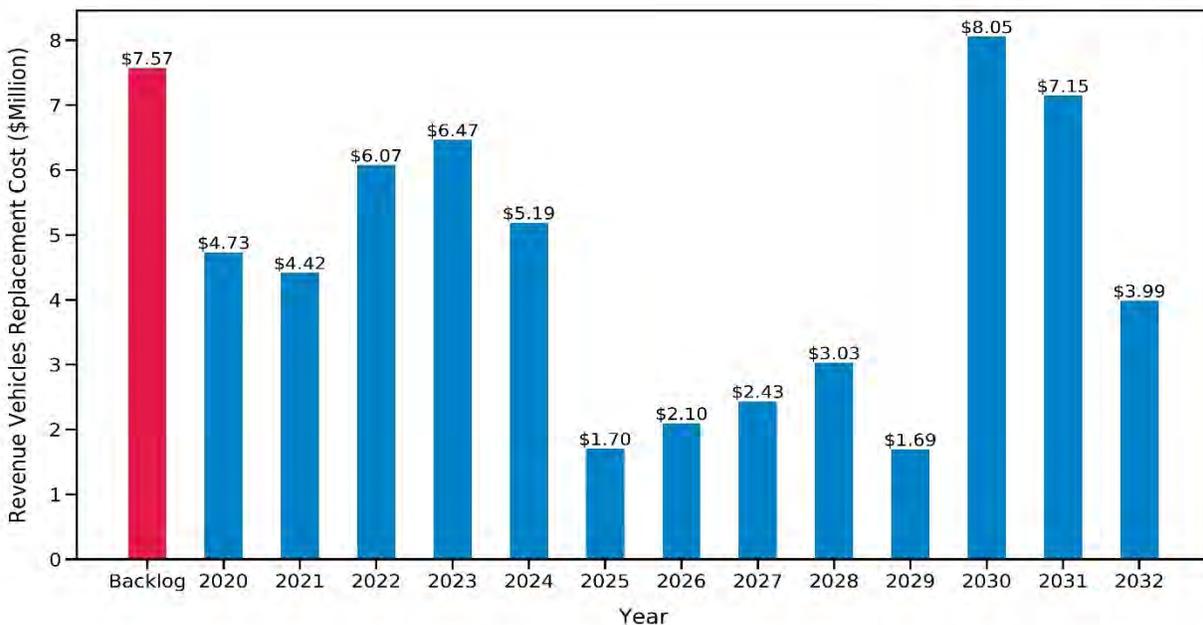


Figure 7.2 Backlog and Projected Replacement Costs for Revenue Vehicles in North Dakota (Yearly)

Vehicles are categorized in the NTD as buses, cutaways, vans, minivans, and sports utility vehicles, using the definitions provided in Table 7.2.

Table 7.2 NTD Vehicle Type Definitions

Vehicle Type	Definition
<p>Bus</p> 	<p>A rubber-tired passenger vehicle powered by diesel, gasoline, battery or alternative fuel engines contained within the vehicle. Vehicles in this category do not include school buses or cutaways. This group does include minibuses such as a Sprinter</p>
<p>Cutaway</p> 	<p>A transit vehicle built on a van or truck chassis by a second stage manufacturer. The chassis is purchased by the body builder, a framework is built for the body, and then the body is finished for a complete vehicle. For example, a truck chassis may be used as the base for a small transit bus.</p>
<p>Van</p> 	<p>An enclosed vehicle having a typical seating capacity of 8 to 18 passengers and a driver. A van is typically taller and with a higher floor than a passenger car, such as a hatchback or station wagon. Vans normally cannot accommodate standing passengers</p>
<p>Minivan</p> 	<p>A light duty vehicle having a typical seating capacity of up to seven passengers plus a driver. A minivan is smaller, lower and more streamlined than a full-sized van, but it is typically taller and has a higher floor than a passenger car. Minivans normally cannot accommodate standing passengers.</p>
<p>Sports Utility Vehicle</p> 	<p>A high-performance four-wheel drive car built on a truck chassis. This passenger vehicle combines the towing capacity of a pickup truck with the passenger-carrying space of a minivan or station wagon. Most SUVs are designed with a roughly square cross-section, an engine compartment, a combined passenger and cargo compartment, and no dedicated trunk. Most mid-size and full-size SUVs have three rows of seats with a cargo area directly behind the last row of seats. Compact SUVs and mini SUVs may have five or fewer seats.</p>

Source: 2019 NTD Reduced Reporter Policy Manual, FTA

The number of revenue vehicles indicated as backlog was categorized by vehicle type, as shown in Figures 7.3 and 7.4. The largest share of backlog vehicles are cutaways. Figure 7.5 shows the funds needed to replace backlog vehicles by vehicle type in North Dakota. For example, the backlog for replacing buses that have exceeded their useful lives is \$5.27 million, and the non-federal share of this is \$1.05 million.

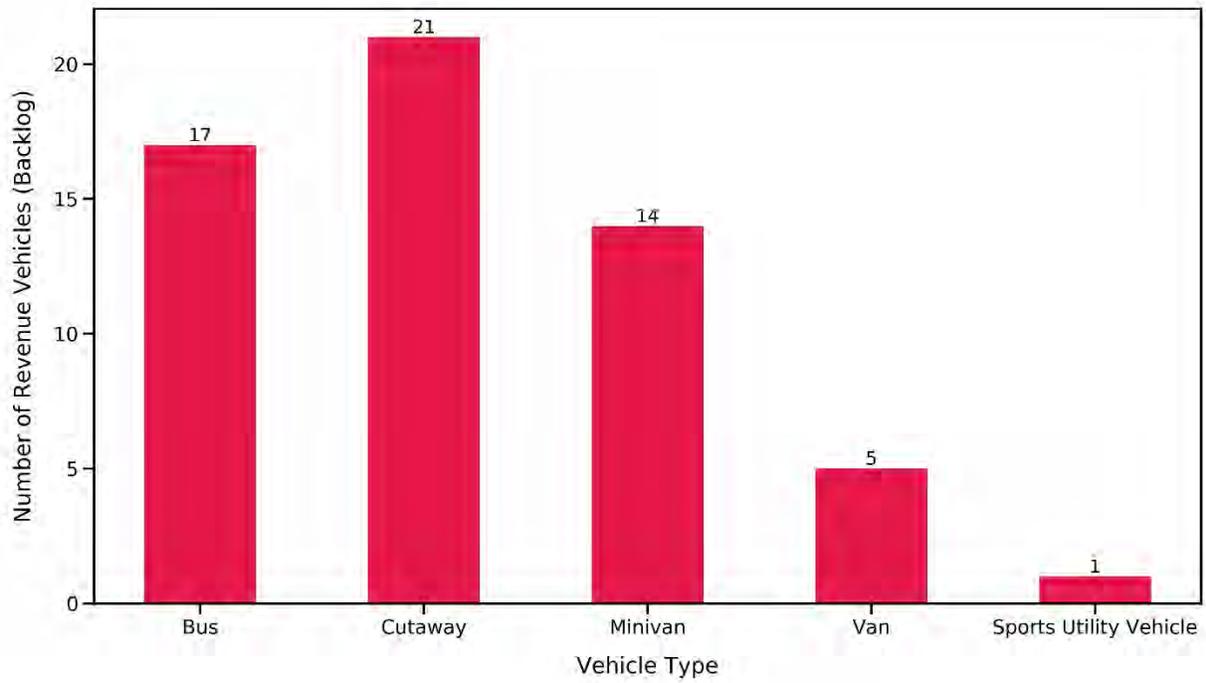


Figure 7.3 Backlog of the Revenue Vehicles by Vehicle Type

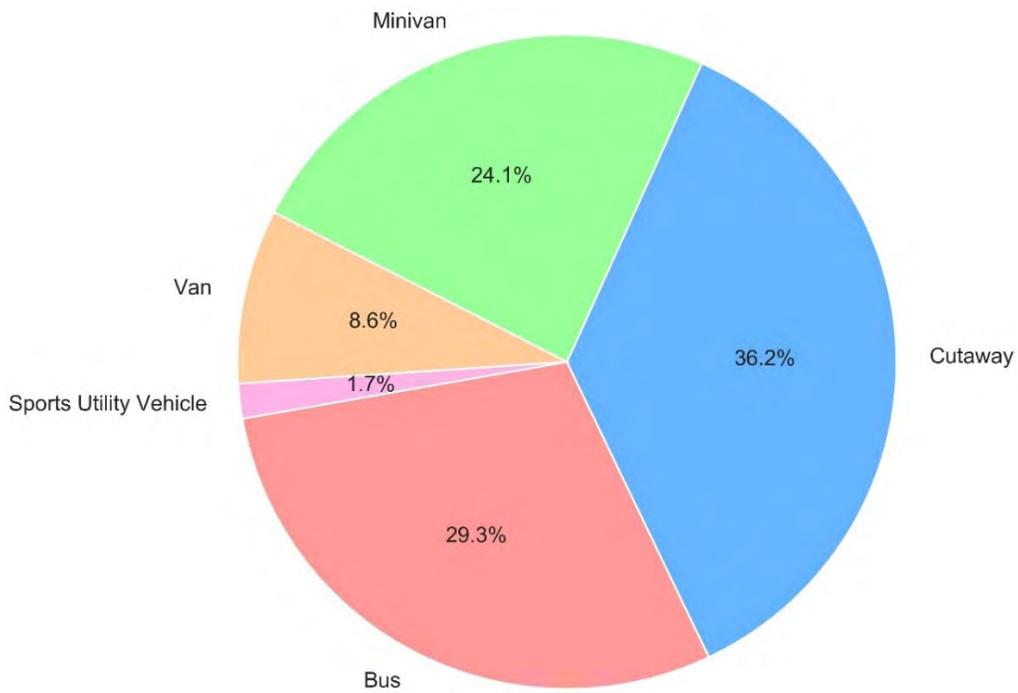


Figure 7.4 Percentage of Backlog of the Revenue Vehicles by Vehicle Type

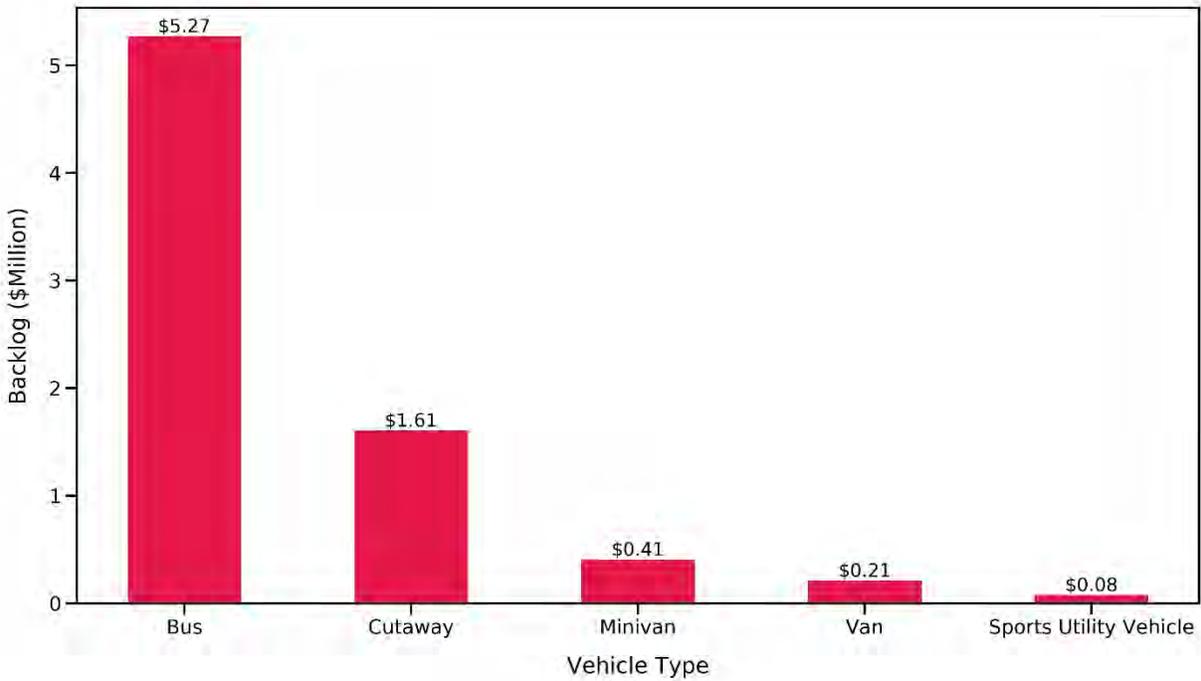


Figure 7.5 Funds Needed for Backlog by Vehicle Type

The backlog and replacement costs for buses, cutaways, minivans, vans by projected replacement year through 2032 are further detailed in Figures 7.6 to 7.13. The replacement years, backlog and replacement costs for revenue vehicles for each transit agency in North Dakota are shown in Appendix E. Again, the cost data represent total replacement costs, and it is assumed federal funding will cover 80% of these costs.

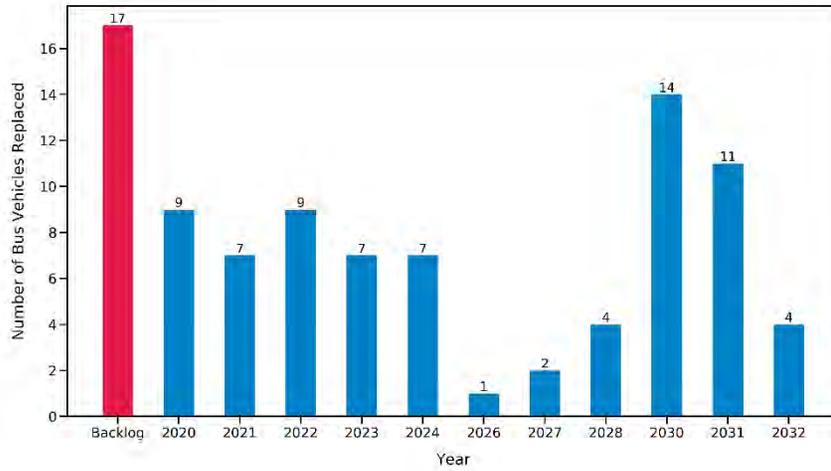


Figure 7.6 Backlog and Projected Replacement of Buses

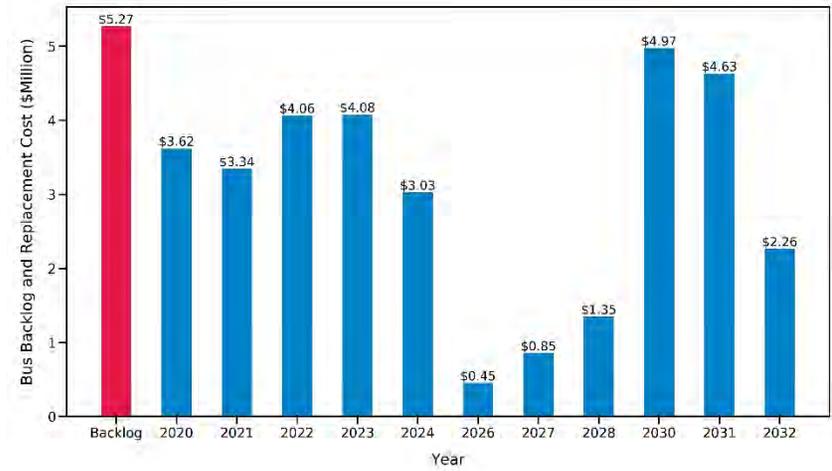


Figure 7.7 Backlog and Projected Replacement Cost for Buses

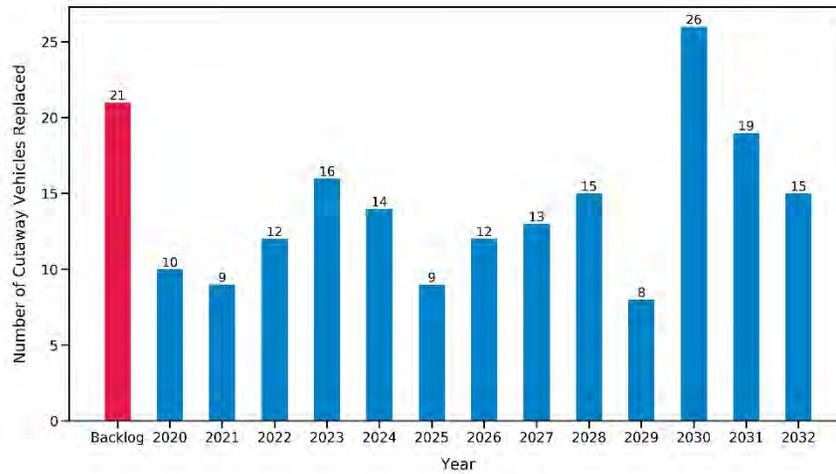


Figure 7.8 Backlog and Projected Replacement of Cutaways

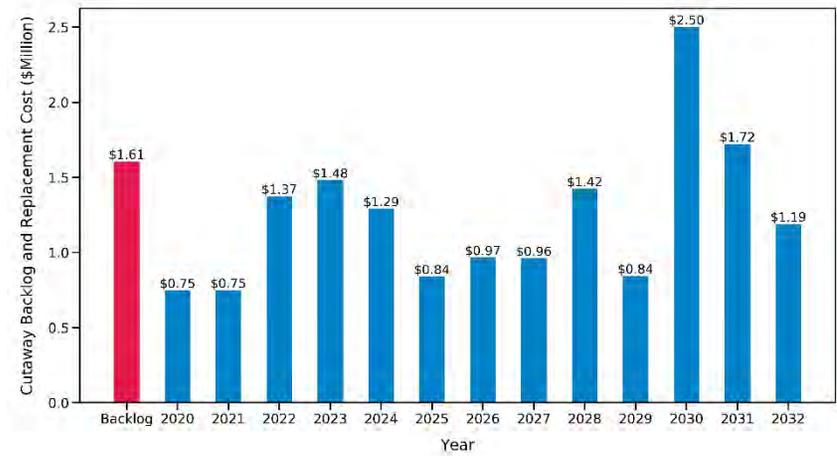


Figure 7.9 Backlog and Projected Replacement Cost for Cutaways

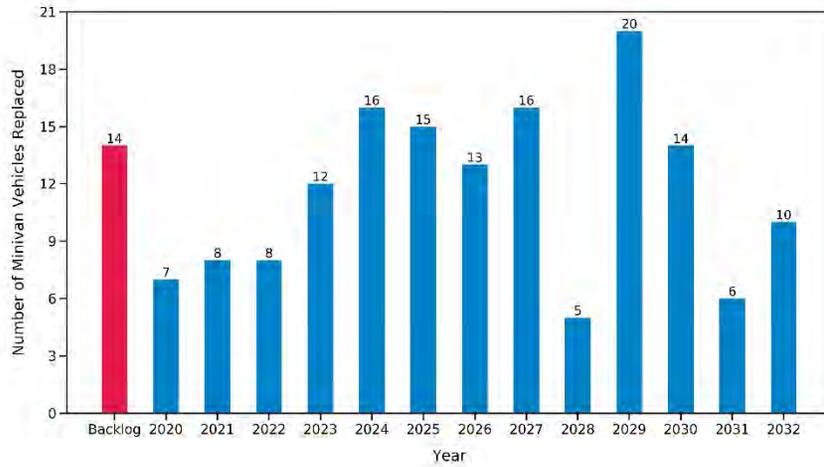


Figure 7.10 Backlog and Projected Replacement of Minivans

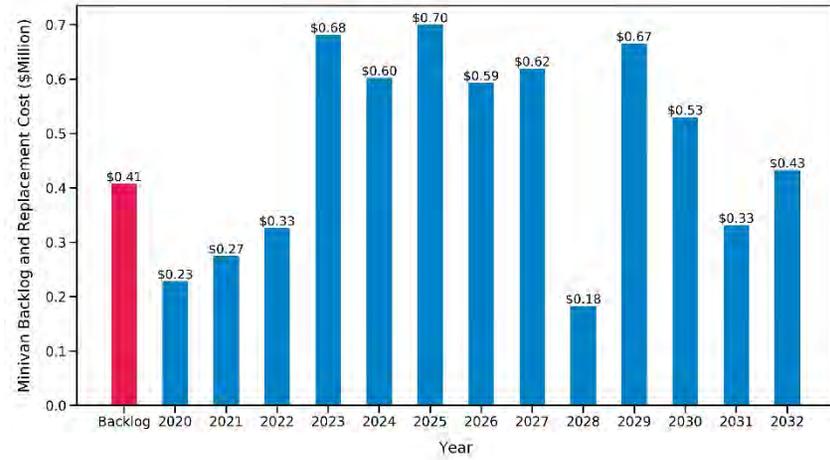


Figure 7.11 Backlog and Projected Replacement Cost for Minivans

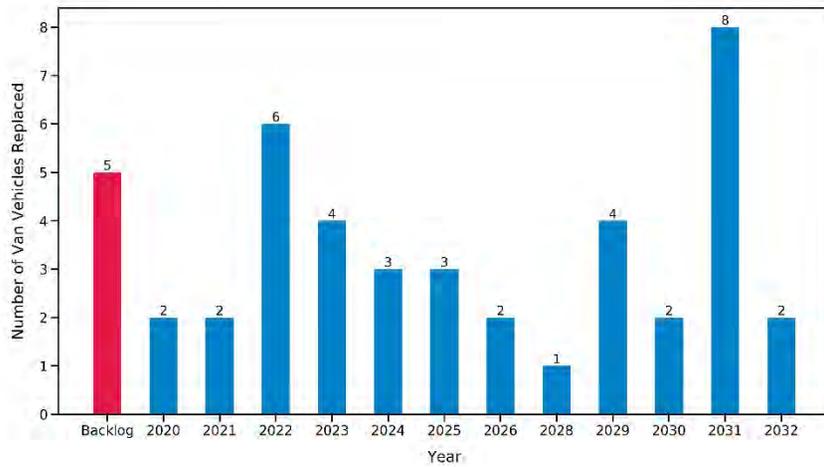


Figure 7.12 Backlog and Projected Replacement of Vans

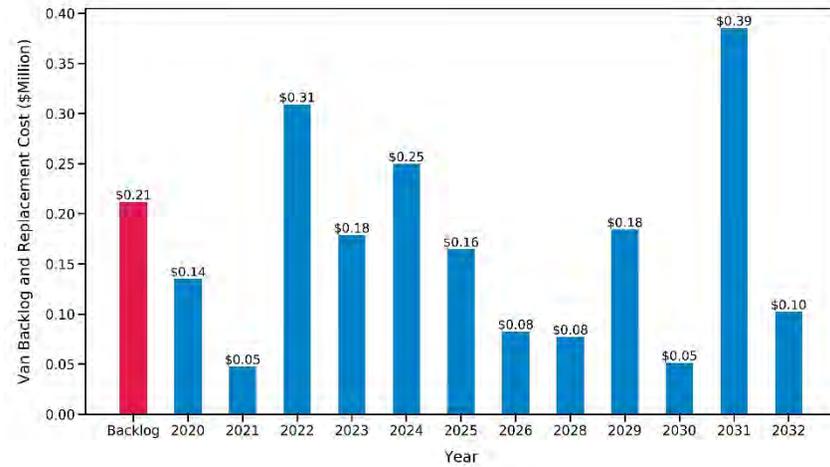


Figure 7.13 Backlog and Projected Replacement Cost for Vans

8. OTHER PASSENGER TRANSPORTATION SERVICES IN NORTH DAKOTA

In addition to public transit services, there are other passenger transportation services available across the state. These include taxi services, transportation network companies (TNCs) or ridehailing companies such as Uber and Lyft, private intercity bus service, intercity rail, veterans' transportation services, and others. This section discusses the extent and characteristics of some of these services across the state.

8.1 Taxi Services and Transportation Network Companies

Taxi services and TNCs are available in the larger cities across the state (Figure 8.1). Cities with populations of 3,500 or greater all have taxi services. There is also a taxi service in Bottineau. Some of these taxi companies also provide services to other areas within the region. Uber has announced they are offering service throughout the state, but finding service in the smaller cities can be difficult. A search for services in across the state revealed that it was available only in larger cities with populations of 20,000 or more, as well as a few smaller cities near Fargo or Grand Forks. On the other hand, Lyft services were found to be more extensive across with state, as shown in the figure.

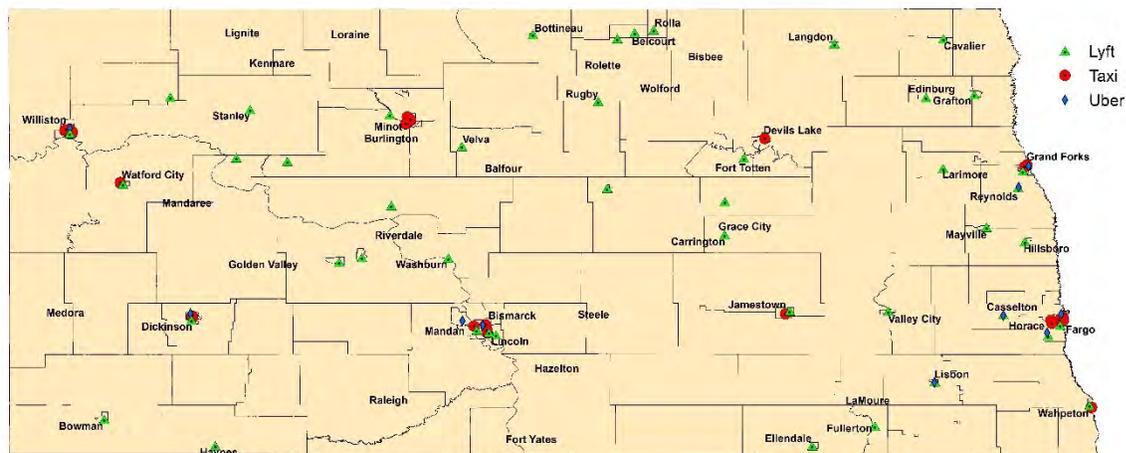


Figure 8.1 Taxi, Uber, and Lyft Services in North Dakota

While these services provide another mobility option for North Dakota residents, they are more expensive than public transit and may not be accessible for people with disabilities. The cost of a trip using Uber and Lyft services is a minimum of about \$6.00 to \$6.50 in most places and can be greater depending on trip distance, time of day (rates may be higher when demand is greater), and type of service (Uber and Lyft both offer premium services with higher costs).

Many services are not accessible for people with disabilities. Uber provides some features that are helpful to people with disabilities, such as cashless payments, on-demand transportation, anti-discrimination policies, service animal policies that require drivers to comply with applicable laws, the ability for riders to share their location and estimated time of arrival with family and friends, and an app that is accessible for people with vision impairments. However, vehicles are not all accessible. Uber provides a service called Uber WAV that uses wheelchair-accessible vehicles equipped with ramps or lifts. However, this service is not widely available as of 2020 and is not available yet in North Dakota. Lyft provides riders the option to request a vehicle with wheelchair access. However, like Uber, these vehicles are not available in all cities. While Lyft service may be extensive across the state, finding a wheelchair accessible vehicle may be difficult or unlikely currently. Similarly, most taxis are also not accessible.

8.2 Intercity Bus and Rail

Intercity bus services are provided in North Dakota by Jefferson Lines. Stops are located in Fargo, Grand Forks, Valley City, Jamestown, Bismarck, and Dickinson (Figure 8.2). Jefferson Lines provides service throughout a 14-state region in the Midwest and western United States. The network provides connections throughout this region.

Service in North Dakota includes a route between Fargo and Grand Forks that runs once per day. Jefferson Lines provides service from Grand Forks and Fargo east into Minnesota, including a route from Fargo to Minneapolis. A route also extends south from Fargo into South Dakota and Sioux Falls. East-west service extends across the state on Interstate-94, with stops in Fargo, Valley City, Jamestown, Bismarck, and Dickinson. From there, service extends farther west through Montana. However, this route does not run every day, and service times may be inconvenient for some types of trips. While the state's three largest cities are served by Jefferson Lines, more than half of the state's population is not served by this intercity service. About 48% of North Dakota's population, or 361,000 residents, live within 10 miles of a Jefferson Lines stop.

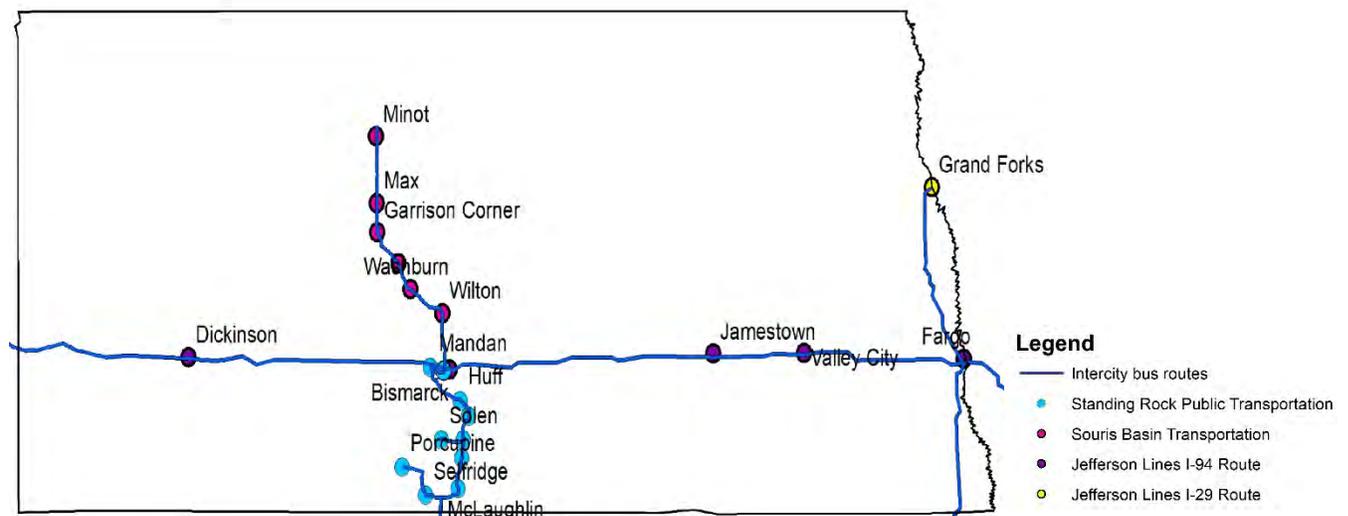


Figure 8.2 Intercity Bus Services in North Dakota

Some of the public transit systems also provide intercity bus services. These could be categorized as regional transit services, as opposed to the intercity services operated by Jefferson Lines that provide connections to a larger network. For example, Souris Basin Transportation provides a route between Minot and Bismarck three days per week. According to the current schedule, it leaves Minot at 7 a.m. and returns to Minot at about 6 p.m. Standing Rock Public Transportation provides services from the Standing Rock reservation into Bismarck-Mandan five days per week. These two services both receive intercity bus funding and are also shown in Figure 8.2. South Central Transit provides services between Valley City and Jamestown and into Fargo. Dickinson Public Transit provides service from Dickinson to Bismarck once per week. Other similar types of regional transit services are provided in the state.

Intercity rail service is provided by Amtrak's Empire Builder route. The route through North Dakota is shown in Figure 8.3. This service operates once per day in each direction. Amtrak plans to reduce service on the Empire Builder route to three times per week, beginning in October 2020 and continuing for at least one year, because of decreased ridership resulting from the COVID-19 pandemic. About 38% of the state's population, or 292,000 residents, lives within 10 miles of an Amtrak stop.

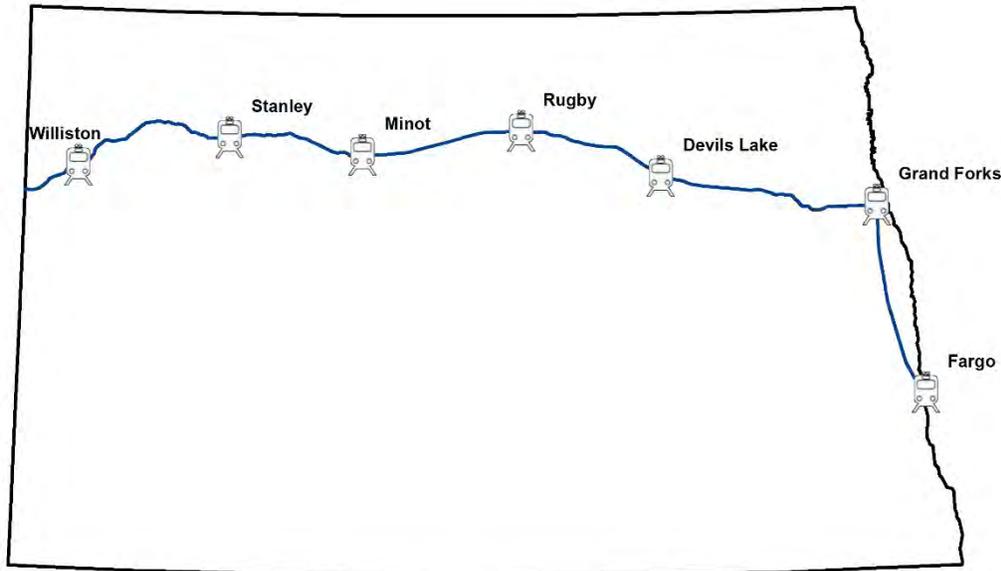


Figure 8.3 Amtrak Intercity Rail Service in North Dakota

8.3 Veterans Transportation Programs

Veterans' transportation programs in North Dakota include 10 Disabled American Veterans/Veterans Affairs (DAV/VA) vans, 14 Highly Rural Transportation Vans, and funding for current transit providers taking veterans to medical appointments.

The purpose of DAV/VA vans is to transport veterans to and from VA medical facilities. The DAV/VA vans are purchased by the ND Department of Veterans Affairs (NDDVA) and donated to the VA Health Care System (VAHCS), which provides funding for maintenance, fuel, license, and insurance. The VAHCS places the vans with County Veteran Service Offices in North Dakota which then provide volunteer drivers and coordinate van trips to the VAHCS in Fargo and Fr. Meade, SD. The vans follow fixed routes with scheduled stops and only travel to VA medical centers, so they cannot be used for other trip purposes. They are free for veterans to use and do not have wheelchair accessibility. (North Dakota Department of Veterans Affairs, <http://www.nd.gov/veterans/resources/transportation/davva-vans>)

Vans run three days per week from Bismarck to Fargo, two days per week from Wahpeton to Fargo, once per week from Pembina to Fargo (with stops in Cavalier, Grafton, Minto, Grand Forks, and Hillsboro), once per month from Stanley to Fargo (with stops in Minot, Towner, Rugby, Devils Lake, Lakota, and Grand Forks), and once per month from Golden Valley County to Fargo. These vans provided 560 trips in 2019. Vehicle hours and miles totaled 3,730 and 90,475, respectively.

Veterans' services are also provided through grants for transportation of veterans in highly rural areas. The NDDVA coordinates transportation services for veterans residing in North Dakota's 36 highly rural counties. (A highly rural county is defined as a county with population density of 7 or fewer persons per square mile.) NDDVA also works with two tribal communities. Existing services are coordinated to provide services from every county to the nearest VA facility, or to other medical facilities for VA outsourced and private medical care. In addition to this program, the NDDVA operates 14 additional vans to assist in coordinating services with existing providers and to fill in any gaps in service areas or provide services that cannot be met with existing services. If a transit provider cannot make a trip to a VA facility, NDDVA coordinates with neighboring transit providers to ensure transportation is available. The transit

providers bill the full cost of the transportation to NDDVA. In fiscal year 2018, the program provided service for 735 veterans living in highly rural counties. In total, 3,902 trips were provided, covering 345,049 vehicle miles and 10,166 vehicle hours.

8.4 Other Transportation Services

Various other organizations provide transportation to clients or specific populations. Some assisted living facilities or nursing homes operate a bus for their residents. There are various wheelchair van companies or medical transport organizations, such as FM Mobility Care, Ready Wheels, Care A Van, 1 Priority Transportation, and Medi-Van. Some county social services offer ride services for a limited population for a small fee, and some programs provide transportation for their clients. Several oil companies in the western part of the state provide shuttle services for workers.

9. ADEQUACY OF SERVICES AND TRANSIT AGENCY NEEDS

Both the transit agency survey and stakeholder survey collected information regarding the need for new services to meet the demands of service area residents or clients and an evaluation of how well the needs of residents or clients are being met. The transit agency survey also collected information regarding needed facility upgrades, the capacity for transit agencies to meet service requests, and staffing needs. Similar surveys were conducted in 2014 and published in the 2015 report (Mattson and Hough 2015). Comparing survey responses to those from 2014 can show if previously identified needs remain unmet, if improvements have been made, or if needs are increasing. Responses from the rider survey also provide information on how well transit services are meeting the needs of the users.

9.1 Adequacy of Services

9.1.1 Need for New Services

Survey results suggest a need for an expansion of service. Most stakeholders and a majority of transit agencies agreed there are transportation services needed by their service area residents that are not currently available (Figure 9.1). These results are similar to what was found in the 2014 survey.

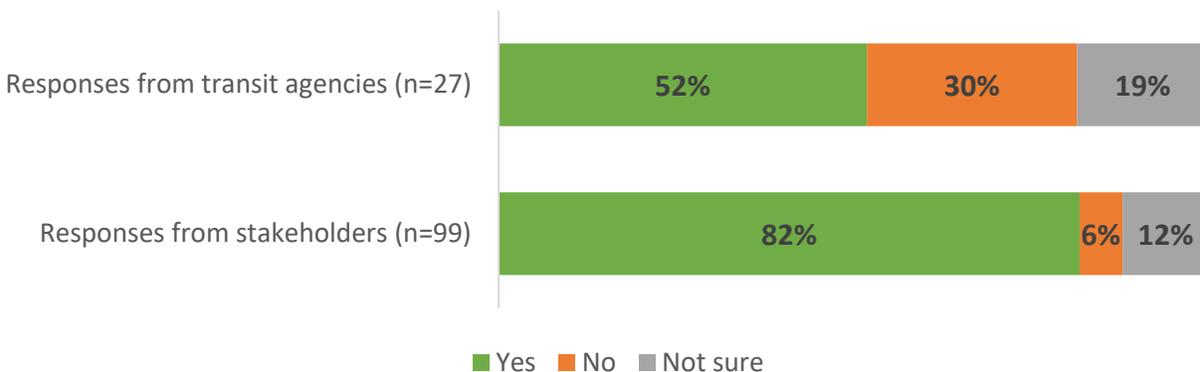


Figure 9.1 Survey Results: Are there any types of transportation services needed by your service area residents that are not currently available?

When asked about new services that are needed, stakeholder and transit agency respondents most commonly identified a need for weekend service, longer hours of service, and generally an expansion of currently available services (Figure 9.2). In general, the stakeholders tended to be more likely to report a need for additional services. Again, these responses are similar to those from the 2014 survey.

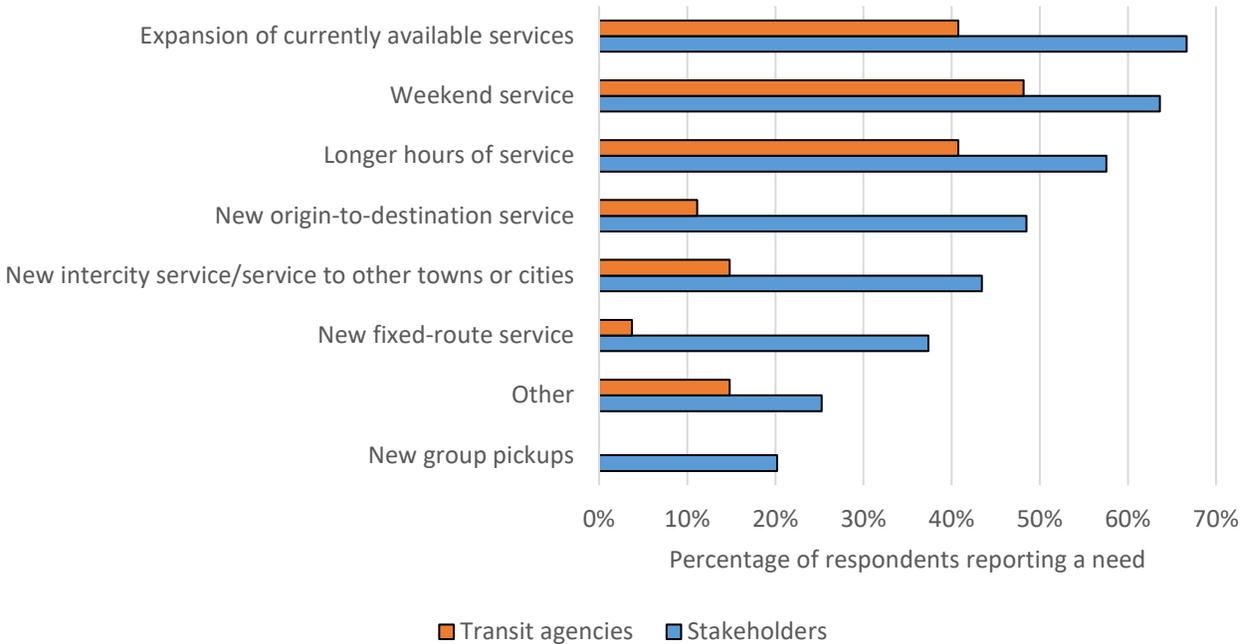


Figure 9.2 Types of Services Needed, Responses From Transit Agencies and Stakeholders

Transit agencies were asked to identify the major challenge or barrier to providing additional services. Most of those who responded commented that inadequate funding and staffing are the major challenges to providing the additional service.

9.1.2 Meeting the Needs of Residents

Transit agencies were asked how well the overall transportation needs of their service area residents were being met (Figure 9.3). Of the 26 responses, six said they are being met very well, 10 answered well, and 10 responded that they are adequately being met. Similarly, stakeholders were asked how well the transportation needs of their clients were being met. Their responses were more negative, with most answering that the needs of their clients were being met poorly or adequately. These responses are similar to what was found in the 2015 study.

Responses to this question by stakeholders vary somewhat based on where the respondent was located. Figure 9.4 shows the average response, on a 0 to 4 scale (0=very poor, 1=poor, 2=adequate, 3=well, and 4=very well), for each county. The county score is based on responses from stakeholders that work for an organization serving that county. Statewide organizations were not included. Results show the lowest scores in the easternmost counties and some rural western counties. The southeast region had the most responses and also had lower scores, especially in rural counties. Some rural counties outside of the southeast region had a low number of responses, so their average scores may not be as representative.

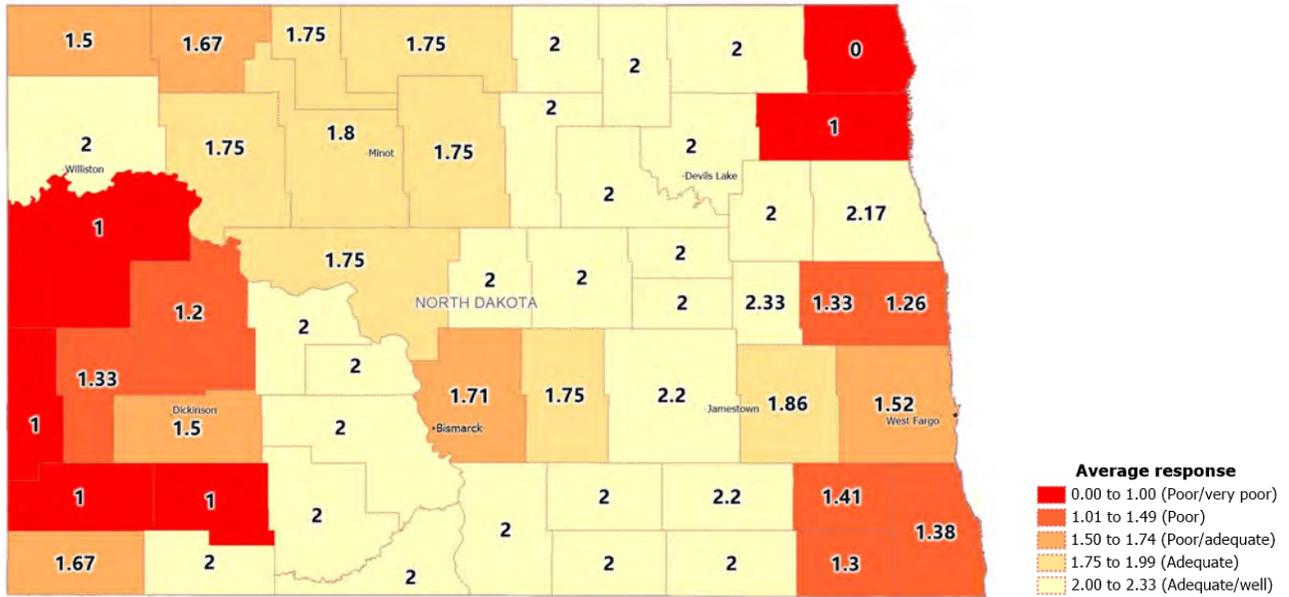


Figure 9.3 Average Responses by Stakeholders on How Well Transportation Needs are Being Met, by County

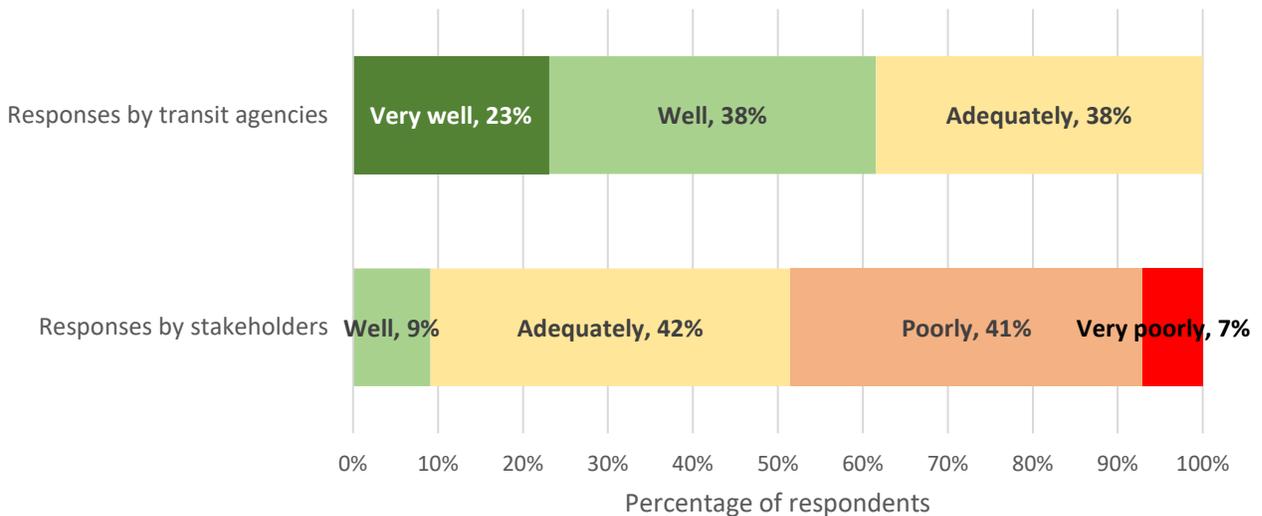


Figure 9.4 How Well the Needs of Residents are Being Met, Survey Responses from Transit Agencies and Stakeholders

Stakeholders were given an open-ended opportunity to explain their response to this question and provide any additional comments regarding the transportation needs of their clients. A total of 82 comments were received. Responses were coded into the categories shown in Table 9.1. As shown in the table, the largest number of comments made were regarding hours and days of service and service coverage.

Table 9.1 Summary of Comments Received by Stakeholders

Comment Topic	Number of Comments
Hours of service - later or earlier hours needed	26
Days of service - weekend service or additional days needed	25
Coverage - limited options in rural areas, some parts of urban areas not served	15
Difficulties or lack of options for traveling from rural areas and smaller communities to larger cities for services	13
Cost	12
More options needed	10
Waiting time	8
Difficulties for people with disabilities, mental health issues	7
Difficulties getting transportation for children	5
Reserving ride ahead of time	3
Timeliness	3
Travel time	3
Walking time to bus	3
Collaboration needed between ND and MN	2
Room for bags	2
Not safe for clients	2
Complicated schedule	1
Need fixed route	1
Not enough capacity	1
Not well marketed	1
Poor communication	1
Getting a ride to pickup points	1

Many stakeholders commented on the need for later or earlier hours of service, especially for people who work earlier or later hours. Similarly, many remarked about the need for weekend service, Sunday service, or additional days of service in rural areas where current services are available just a few days per week. Below is a sample of a few of the comments received.

“Clients have difficulty on the weekends with transportation, especially if they work.”

“Our clients work out in the community and are often forced to take jobs where they can't work on Sundays or late in the evening due to lack of bus service. This limits their choices for jobs.”

“Some of the new American clients work in industrial area and late-night shifts. There are no affordable rides and good bus timing for late night hours.”

“A lot of people we help want to do things on weekends and at night like everybody else. Hours for city transit restrict them from doing the things they like and restrict our city from being inclusive for people with disabilities.”

Another common remark was the need for better services for people traveling from rural areas and smaller communities to the larger cities for services, especially for medical care. Below is a sample of a few of these comments.

“My clients often struggle with attending appointments in Bismarck for specialty care due to lack of transportation services.”

“The biggest thing we get calls for transportation needs is for medical appointments due to the lack of access to specialists and veteran healthcare. Most doctors are in either Bismarck or Fargo.”

“Very difficult for clients coming from the western side of ND to treatment in Fargo.”

“We struggle in getting people to and from Bismarck, especially for medical appointments.”

“Out-patients struggle with transportation on a regular basis. They utilize the available services when they can, but many struggle to get here daily. A good number of our patients come from outside of Minot. Because this type of treatment is only offered at three clinics in the state, there is a need for reliable cost-effective service from all areas of the state to Minot, Fargo, and Bismarck. Many who could benefit from services are unable to get to a clinic to be treated, so they continue to struggle with addiction and all the problems that come with it.”

Cost concerns were also mentioned by many respondents. Many noted that their clients have low incomes and cannot afford taxi, Uber, or Lyft services, or to own a vehicle. Even the cost of public transportation services can be a barrier for some. Some commented on how there is generally a need for more transportation options, especially when existing services are not available. The lack of options in rural areas was commonly mentioned. Other concerns mentioned included waiting times, difficulties for people with disabilities or mental health issues, difficulty in getting transportation for children, the need to reserve a ride ahead of time, timeliness of service, travel times, and walking times to fixed-route services, among others.

The comment below addresses many of the issues faced by transit riders in the state, especially older adults, and the consequences of not having affordable and reliable transportation options available.

“Older adults affiliated with our program often don't drive any longer or have challenges that don't lend themselves to driving alone. Their needs are varied and sometimes urgent. For example, someone in Gackle might need to see an optometrist in Jamestown, or someone in Wing may need to go to Bismarck for dialysis multiple times a week. Even in the urban areas, Bis-Man Transit has changed their system, so an 82-year old now needs to walk blocks in the cold with a walker to a transit stop and time it so she can get there on time but not have to stand there and wait too long. An elderly male I talked to recently said he calls the Senior Ride service in Fargo to pick him up and take him to a congregate meal site, but the cost of each ride means he cannot afford to go there more than once a week. The social benefits of group dining and the nutritional benefits of the congregate meal are outweighed by the cost of getting there and then home again. Loneliness and isolation is real, and often the difference for people lies in their ability to get to appointments, to run errands, to socialize with others, and to interact in public situations. Without reliable, affordable transportation options, addressing the isolation is difficult. If we really want our elders to be able to remain independent as long as possible, which is what they want, then we must find creative solutions for transportation challenges.”

The complete list of comments received are provided in Appendix B.

9.1.3 Rider Feedback Regarding Satisfaction with Services and Challenges

In the transit rider survey, respondents were asked to rate their satisfaction with different aspects of transit services, including cost affordability, hours of service, days of service, service coverage, and ease of use. Rural and urban responses were separated, as shown in Tables 9.2 and 9.3.

Table 9.2 Rural Transit Riders' Satisfaction with Service

	Very satisfied	Somewhat satisfied	Neutral	Somewhat dissatisfied	Very dissatisfied
-----Percentage of riders-----					
Cost affordability	86	10	3	1	1
Hours of service	70	18	7	4	2
Days of service	75	15	6	4	1
Goes where you want to go	85	11	2	1	2
Ease of use	86	10	2	1	1

Table 9.3 Urban Transit Riders' Satisfaction with Service

	Very satisfied	Somewhat satisfied	Neutral	Somewhat dissatisfied	Very dissatisfied
-----Percentage of riders-----					
Cost affordability	71	18	7	2	2
Hours of service	46	28	10	9	8
Days of service	50	20	10	11	9
Goes where you want to go	59	19	7	11	5
Ease of use	64	22	8	6	1

Results show that riders are generally satisfied with services provided. Among rural riders, 70% to 86% indicated they are very satisfied with each of these aspects of service quality, and most said they are at least somewhat satisfied. They were least likely to be very satisfied with hours of service or days of service, which is consistent with previous findings.

Urban riders were less likely to be satisfied, compared to rural respondents, and greater dissatisfaction was again found for hours and days of service. Overall, though, results were still mostly positive for urban riders, with a majority being either very satisfied or at least somewhat satisfied. The lower satisfaction for urban transit, compared to rural transit, could be due to differences in expectations, rather than actual differences in quality, as urban residents may have greater expectations for the availability and quality of transit.

Responses to these questions were analyzed by zip code to determine if any areas of the state had responses that were significantly different, but there were no outliers or significant differences that stood out. An analysis by income showed that people with lower income tended to give slightly lower scores, but the difference was not great. Differences in scores between people with disabilities and people without disabilities were not significant.

The positive responses from transit riders may seem to conflict with the responses received from stakeholders, but the results are not necessarily inconsistent. Transit riders in the state, especially in rural areas, tend to be very appreciative of the services that are available. This was demonstrated in the survey when riders were asked to identify challenges to riding public transit, and many took the opportunity to state how appreciative they are of the service and how important it is to them. That attitude is reflected in their responses, but it does not mean that they do not have unmet needs or that they would not benefit from improved services. The stakeholders surveyed serve many people with transportation challenges, and their responses are based on having witnessed those challenges.

Despite the positive responses, transit riders did note some challenges to using public transit. Their responses tended to be consistent with those from stakeholders. The most common challenges identified again were hours of service and lack of weekend service. Others mentioned challenges with scheduling or reserving a ride ahead of time, and some mentioned waiting times, timeliness, and challenges from winter weather, especially for fixed-route riders walking to and from bus stops.

9.2 Transit Agency Needs

Transit agencies were asked about their needs regarding facilities, staffing, and capacity to meet demand. Their responses are described in this section.

9.2.1 Facilities

A few of the larger rural transit agencies own maintenance facilities, but most agencies outsource their maintenance. The urban systems have their own facilities for maintenance. Most agencies either rent or own indoor storage space for their vehicles. Some providers own office space for administrative purposes, while others rent or share office space.

Transit agencies were asked to describe the adequacy of their facilities for meeting current and expected future needs (within the next five years). Responses are shown in Figure 9.5. Most agencies said that maintenance and administrative facilities are adequate for current and expected future needs. Just one respondent said administrative facilities are currently inadequate, and two said maintenance facilities are currently inadequate. Agencies were more likely to identify needs for vehicle storage facilities or passenger facilities. Three out of 27 agencies said vehicle storage facilities are currently inadequate and ten responded that while it is currently adequate, their storage facilities would not be adequate for expected future needs.

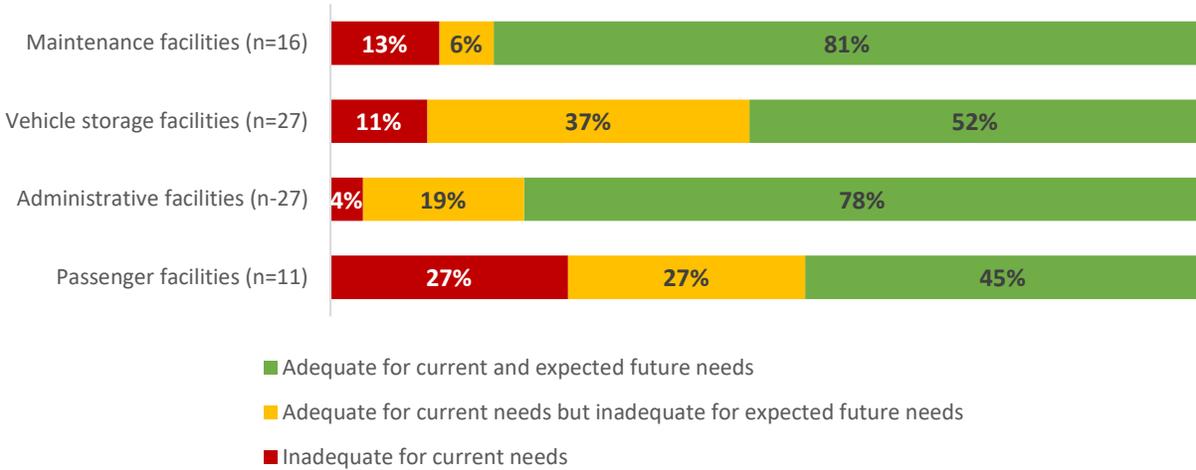


Figure 9.5 Adequacy of Facilities for Needs

Just 11 agencies commented on passenger facility needs, but of those 11, three said passenger facilities are currently inadequate, and three more said they are inadequate for expected future needs. Needs for upgraded passenger facilities were identified for Minot, Fargo, and Bismarck. These include a transfer center in downtown Minot, passenger facilities at outlying areas in Fargo, and additional bus stops and shelters throughout Bismarck. A transfer hub with indoor space for customer service was also identified as a need for Bismarck.

The results show some improvements from the 2014 survey, where a larger share of agencies reported inadequate, or expected inadequate, maintenance, vehicle storage, and administrative facilities. Detailed responses regarding needed facility upgrades are presented in Table 9.4. This study does not provide cost estimates for facility needs, and prioritizing these projects is beyond the scope of this study.

Table 9.4 Needed Facility Upgrades

Transit Provider	Comment on Needed Facility Upgrade
Bis-Man Transit Board	We need to add additional bus stops/shelters throughout the community. Ideally we would have a dedicated transit hub building that would have indoor space for customer service and exterior space to safely facilitate transfers.
Cities Area Transit	Currently doing an administrative and maintenance building upgrade and addition. This is a phase one project.
James River Senior Citizens Center	Our vehicle facility needs plumbing in order to house some administration and maintenance needs.
MATBUS	The Metro Transit Garage needs to be renovated to allow for more vehicles and shop space. The Ground Transportation Center is currently undergoing a project to improve administrative and passenger space. We need passenger facilities at outlying areas such as West Acres.
Minot City Transit	A transit transfer center is needed in downtown Minot. Currently passengers are transferred at the Minot Auditorium.
Senior Meals & Services, Inc	If we upgrade our facility it must match the current building of brick which would be very costly. If we built a new building we would need to remove the old building and replace with a new one.
Spirit Lake Public Transportation	We are in need of an administrative transportation facility that would include a maintenance facility and storage facility for transportation.
Standing Rock Public Transit	Expanded parking lot, bus port/shelter, handicapped accessible vestibule, 1 office and 1 meeting room addition.
Stark County Council on Aging Elder Care	We need a larger garage as we will run out of garage space for the number of vehicles we have this year. We also need additional office space because as we continue to grow more office personnel will be needed.
West River Transit	All buildings have been upgraded where needed, other than future need for additional vehicle parking, inside and outside.
Wildrose Public Transportation	We just acquired inside parking for the bus handling the Crosby routes. Ideally, a garage and attached small office in Crosby to house this bus and manage the business would be beneficial.

9.2.2 Capacity to Serve Demand

Transit providers may sometimes have to turn down riders’ trip requests if there is not enough capacity at the riders’ requested time. Capacity refers to the space availability on vehicles and the time available on the vehicles’ schedules. If capacity is not available at the requested time, the transit provider may try to identify a different time for the trip, but if the rider cannot adjust the trip time, then the trip is turned down and the rider is unable to use the service. If riders are unable to schedule a trip when they wish to travel, then the service will be considered less reliable.

Most demand-response providers will occasionally have to turn down a trip during periods of unusual demand, when they are unexpectedly short on drivers, or because of some other atypical event. If trip turn downs become more frequent, it indicates insufficient capacity to meet the demand. This problem could be addressed by adjusting driver schedules to provide more capacity during periods of greatest need, or it may require adding more vehicles, drivers, or service hours.

The TCQSM third edition measures quality of service using the following levels for percentage of trips turned down: 0-1%, >1-3%, >3-5%, >5-10%, and >10%. The survey collected information from demand-response providers regarding how often they turn down trips because of lack of capacity, as shown in Table 9.5. For most agencies, trip turn downs are rare. Nineteen of the 26 responding agencies reported turning down 0-1% of trips, and five providers turn down 1-3% of trips. Just one reported turning down more than 3% of trips, and none turn down more than 5%. It should be noted that agencies providing ADA complementary paratransit, rather than general public demand-response service, by law cannot turn down trips due to a lack of capacity.

Table 9.5 Percentage of Demand-Response Transit Trip Requests Turned Down Because of a Lack of Capacity

Trips Turned Down	Number of Agencies	Percentage of Agencies
0-1%	19	73%
1-3%	5	19%
3-5%	1	4%
5-10%	0	0%
More than 10%	0	0%
Don't know/don't collect data	1	4%

9.2.3 Staffing Needs

One of the main findings from the study published in 2015 was a need to improve staffing capabilities among transit agencies. In the previous study, half of the agencies reported inadequate staff to meet current needs. Results from this survey show only a slight improvement. Eleven of the responding 26 agencies (42%) indicated they have inadequate staff to meet current needs (Figure 9.6). Among the agencies with adequate staff, 11 reported that they will need additional staff within the next five years to meet expected future needs. Many mentioned a need for more drivers, among other positions.

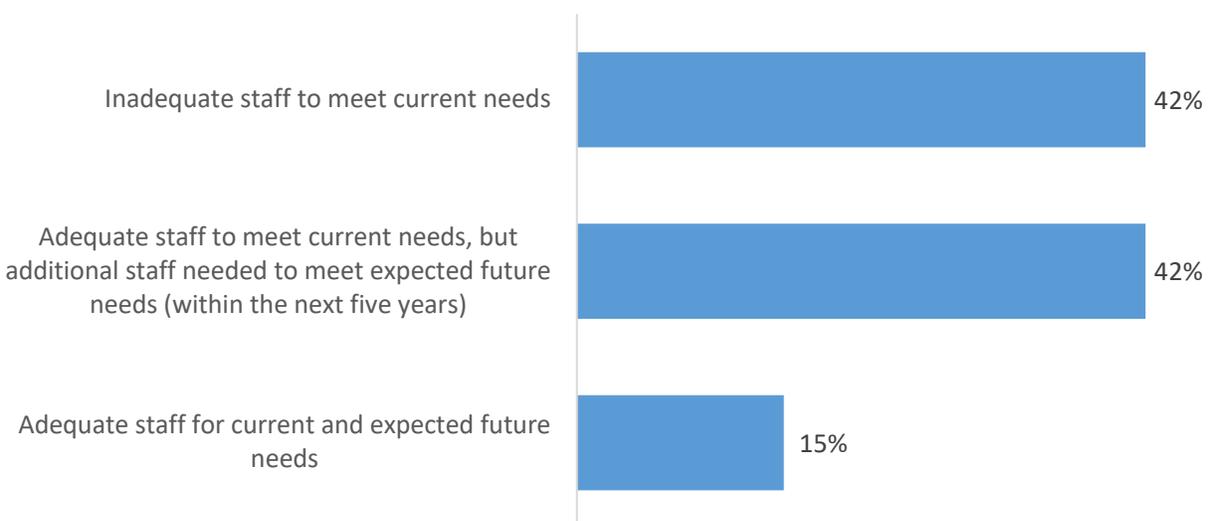


Figure 9.6 Staffing Capabilities of Transit Agencies

According to results from the survey, the average starting wage for transit vehicle operators in the state is about \$14 per hour, ranging from \$9 per hour to \$18 per hour. This is an increase from the average starting wage of \$11.65 per hour found in the 2014 survey.

9.3 Findings from Previous Studies

9.3.1 ND Moves

NDDOT published ND Moves, the Statewide Active and Public Transportation Plan, in 2019. ND Moves provides guidance on programming and policies to help improve walking, biking, and transit systems and services in the state. It established six goals for public transportation:

- Improve public transit opportunities within and between communities
- Maintain or increase the amount of transportation funding dedicated to public transit
- Maintain public transit assets in a state of good repair
- Increase communications and promote public transit as a viable and important mode of travel
- Increase communication, collaboration, and coordination within the statewide public transit network
- Improve public transit safety across the state

The report included an analysis of transit service data across the state, similar to the previous analysis by Mattson and Hough (2015) and the analysis conducted in Section 10 of this report. For rural transit, they identified the greatest transit service gaps in the Red River Valley, Stark County, and the Northwest regions, with smaller gaps in the West River and Souris Basin regions and elsewhere. They also identified some gaps in the urban areas, with the greatest gaps in Bismarck-Mandan. The study estimated that \$5.5 million in additional resources are needed to address statewide gaps in the base scenario, and \$17.5 million in additional resources are needed in the 2040 scenario.

The study recommended improving public transit-based mobility across the state through improved intercity and regional bus systems, development of new small urban systems, and expansion and preservation of existing systems. The report noted there is a need to better create multimodal public transit services in North Dakota's largest urban areas, and additional planning efforts are needed for Minot, Dickinson, and Williston as they evaluate new and/or improved service.

9.3.2 MPO Studies

Additional evidence regarding transit needs in urban areas can be obtained from recent studies published by the state's three metropolitan planning organizations (MPOs). MPOs for the Fargo, Bismarck, and Grand Forks urban areas publish transit development plans (TDPs) every five years. The TDP is developed under a five-year planning horizon and is intended to identify strategies and recommendations to improve transit service delivery in the metro areas.

Fargo-West Fargo

The most recent TDP for the Fargo metro area was adopted in 2016 by the Fargo-Moorhead Metropolitan Council of Governments (Metro COG). The report noted that transit service in the Fargo metro area generally falls in line with service offered in peer cities, with a few deviations. MATBUS cost per revenue mile was found to be lower than average for its peer group, and revenue miles and ridership for paratransit services were both lower than many of its peer organizations. Their analysis showed that most major origins and destinations are served by fixed-route transit.

Surveys of MATBUS users revealed most riders feel the price paid to ride MATBUS is a good value. The most important service improvements identified were later evening service and more frequent service. New Sunday service was the highest ranked new service need, followed by service to the airport. Non-users were surveyed about why they never use MATBUS, and by far the greatest rationale was that it takes too long. When asked which factors would increase their likelihood of using MATBUS, respondents most often identified more direct routes, increased frequency, stops closer to home/school/work, and comparable travel times to the mode currently used.

Metro Grow, the 2045 Fargo-Moorhead Transportation Plan adopted in 2019 identified several transit system issues based on input received through surveys and public open houses. These include:

- Extending the hours of operation to include Sundays
- Providing improved access to jobs via extended routes
- More amenities at bus stops, like heated shelters
- Need for express service to suburban areas

Bismarck-Mandan

The Bismarck-Mandan MPO adopted its most recent TDP in 2019. The report noted the unique distribution of services between fixed-route transit and paratransit. In similar metro areas, including other metro areas in North Dakota, fixed-route service levels are much greater than paratransit service levels, as measured by ridership, revenue miles, or revenue hours. However, in Bismarck-Mandan paratransit ridership has traditionally been greater than fixed-route ridership.

The study provided recommendations for service enhancements if additional operating funding was available. They noted that the need for expanded transit has been identified by community leaders, residents, business owners, employers, human service agencies, and others. Current fixed routes have headways of one or two hours, and service is not available in the evenings or Sundays. Recommendations included new flex routes in Mandan and northwest Bismarck and increased frequency on the core routes. The study also recommended a new transit center and designated fixed-route stops.

Grand Forks

The latest TDP for Grand Forks was published in 2017. A peer group analysis showed CAT's fixed-route system had fewer rides per revenue mile and per revenue hour than the peer cities average. The demand-response system, on the other hand, was found to have more rides per revenue mile and per revenue hour than the peer cities average.

Surveys of non-users revealed that they do not use transit because they believe it takes too long and do not know where the bus goes. Users were also surveyed, and they responded that the most important improvements CAT could make include Sunday service, more frequent evening service, and better or more shelters. Users found on-time performance, courtesy and helpfulness of drivers, safety and security, cleanliness of buses, and ease of use to be very good.

The study addressed previously identified barriers that impact the effectiveness and desirability of the CAT system, and they found the barriers to still exist. These barriers include:

- Information gap – This was found to be a significant barrier.
- Accessibility to routes – Environmental barriers, like ice and snow or lack of sidewalks, and physical ability may prevent riders from using the fixed-route system
- Coverage area – Providing service in new areas is a challenge.

- Cost – Cost is a burden for some riders.
- Hours of service – A need for additional early morning or late-night service was identified.
- Frequency of routes – Most routes run with a one-hour headway. Low frequency makes it difficult to rely on transit as a primary means of transportation. The study recommended prioritizing service improvements to the areas with greatest demand.
- Indirectness of routes – Indirect routes are less convenient for riders.

10. SERVICE GAPS AND FUNDING NEEDS

10.1 Regions

To evaluate service levels in North Dakota, the state was divided into 20 regions, consisting of the three urban areas, (Fargo-West Fargo, Bismarck-Mandan, and Grand Forks), and 17 regions consisting of one or multiple counties. These regions were determined based on the current service boundaries of the state's transit providers. County-level data are not available for every county because some providers serve multiple counties and do not report data by county. Table 10.1 provides a description of these regions and the transit providers in each. The division into regions is not perfect because some agencies provide services outside their regions, but it is a fairly accurate representation of where services are located.

Table 10.1 Regional Transit Service Areas

Region	Counties	Providers
Rural		
Northwest	Divide, McKenzie, Williams	Northwest Dakota Public Transit, Wildrose Public Transportation
Golden Valley/Billings	Billings, Golden Valley	Golden Valley/Billings Council on Aging
Southwest	Adams, Bowman, Hettinger, Slope	Southwest Transportation Services
Stark County	Stark	Stark County Council on Aging Elder Care
Souris Basin/Minot	Bottineau, Burke, McHenry, Mountrail, Pierce, Renville, Ward	Souris Basin Transportation, Minot City Transit, Kenmare Wheels and Meals
West River/Sioux	Burleigh, Dunn, Grant, McLean, Mercer, Morton, Oliver, Sioux	West River Transit, Hazen Busing, Glen Ullin Transportation, Standing Rock Public Transportation
Rolette County	Rolette	Nutrition United/Rolette County Transp., Turtle Mountain Transit
Towner County	Towner	Cando Transportation
Cavalier County	Cavalier	Cavalier County Transit
Pembina County	Pembina	Pembina County Meals & Trans
Walsh County	Walsh	Walsh County Transportation
Ramsey/Benson/Eddy	Benson, Eddy, Ramsey	Senior Meals & Services, Benson County Transportation, Spirit Lake Transit
James River	Sheridan, Stutsman, Wells	James River Public Transit, City of Jamestown Taxi
Kidder County	Kidder	Kidder Emmons Senior Services
South Central	Barnes, Emmons, Foster, Griggs, LaMoure, Logan, McIntosh, Nelson	South Central Adult Services
Dickey County	Dickey	Dickey County Senior Citizens
Red River Valley	Cass, Grand Forks, Ransom, Richland, Sargent, Steele, Traill	Valley Senior Services
Urban		
Bismarck-Mandan	Burleigh and Morton metro areas	Bis-Man Transit Board
Grand Forks	Grand Forks metro area	Cities Area Transit
Fargo-West Fargo	Cass metro area	Fargo Metro Area Transit, Handi-Wheels, Valley Senior Services

Table 10.2 shows population data by region. Included are 2018 and projected 2030 total population and population of transportation disadvantaged populations. The population of adults aged 65 or older was added to the population of people with a disability aged 18-64. The low-income population was defined as the population with household income at or below 150% of the poverty level.

Table 10.2 Population Data for 2018 and Projected 2030 Population by Region

Region	2018 Population			Projected 2030 Population		
	Total	Aged 65+ or 18-64 with a disability	Low income	Total	Aged 65+ or 18-64 with a disability	Low income
Rural						
Northwest	51,265	9,602	7,741	85,523	16,111	13,116
Golden Valley/Billings	2,688	740	472	3,098	839	540
Southwest	8,647	2,626	1,269	8,922	2,675	1,308
Stark County	30,997	6,463	4,685	47,772	9,232	7,220
Souris Basin/Minot	98,744	22,327	15,546	117,888	26,652	18,460
West River/Sioux ^a	67,460	13,492	8,728	58,477	21,397	8,605
Rolette County	14,301	3,810	5,979	15,298	4,896	6,396
Towner County	2,192	659	529	2,176	683	526
Cavalier County	3,829	1,245	527	3,539	1,134	487
Pembina County	6,947	2,210	987	6,289	2,439	893
Walsh County	10,667	3,532	2,289	10,084	3,684	2,164
Ramsey/Benson/Eddy	20,756	6,291	5,827	21,103	6,721	5,991
James River	26,223	8,331	4,868	26,030	8,595	4,848
Kidder County	2,450	726	629	2,503	856	643
South Central	30,704	10,495	5,339	28,527	10,157	4,961
Dickey County	4,903	1,374	631	4,186	1,469	538
Red River Valley ^{b,c}	69,214	16,850	8,105	60,868	30,382	5,546
Urban						
Bismarck-Mandan	99,410	23,408	14,854	133,438	31,420	19,939
Grand Forks	56,948	11,378	16,741	64,050	12,796	18,828
Fargo-West Fargo ^c	161,410	29,499	31,479	218,408	39,915	42,595

^a Population data for West River/Sioux excludes Bismarck, Mandan, and Lincoln and includes Corson County and Walworth County in South Dakota because Standing Rock Public Transportation also provides service in those counties.

^b Population data for Red River Valley excludes Fargo, Grand Forks, and West Fargo.

^c Valley Senior Services provides service in both the Fargo metro area and the rural Red River Valley. For this analysis, their rural services were considered part of Red River Valley rural transit, and their urban services were considered part of Fargo-West Fargo urban demand-response transit.

10.2 Service Benchmarks

Service levels in each region can be evaluated in comparison to benchmarks based on national data. Table 10.3 shows national averages for trips per capita, vehicle revenue miles per capita, and vehicle revenue hours per capita for rural transit. The rural per capita averages were calculated by summing 2018 NTD data for all providers receiving funding from the 5311 program across the country and dividing by total rural population. The small urban averages were based on data reported to the 2018 NTD for agencies receiving funding from the 5307 program with service area populations of 50,000 to 200,000 that are in metro areas with a population below 200,000.

Table 10.3 Rural and Small Urban Transit Service Benchmarks: National Per Capita Averages

	Trips Per Capita	Vehicle Revenue Miles Per Capita	Vehicle Revenue Hours Per Capita
Rural	2.1	8.7	0.5
Small Urban Fixed Route	8.5	6.2	0.4
Small Urban Demand Response	0.5	3.1	0.2

Because the need for rural transit services, as well as urban demand response services, is significantly influenced by demographics, the level of services provided in comparison to the size of transportation disadvantaged populations also needs to be analyzed. Older adults, people with disabilities, and low-income populations have the greatest need and are most likely to use rural public transportation. Older adults and people with disabilities also have the greatest needs for demand-response transit in urban areas. Table 10.4 provides benchmarks for rural transit and small urban demand-response transit for trips, vehicle revenue miles, and vehicle revenue hours per population of seniors or people with disabilities. It is calculated as total trips, vehicle miles, or vehicle hours divided by population aged 65 or older or 18-64 with a disability. Table 10.5 shows benchmarks for trips, vehicle revenue miles, and vehicle revenue hours per low-income population for rural transit. The benchmarks in Tables 10.4 and 10.5 are based on national averages.

Table 10.4 Benchmark Service Levels Based on Population of Older Adults and People with Disabilities

	Trips Per Senior or Disabled Population	Vehicle Revenue Miles Per Senior or Disabled Population	Vehicle Revenue Hours Per Senior or Disabled Population
Rural	8.2	33.7	1.8
Small Urban Demand Response	2.0	12.1	0.8

Table 10.5 Benchmark Service Levels Based on Low-Income Population

	Trips Per Low-Income Population	Vehicle Revenue Miles Per Low-Income Population	Vehicle Revenue Hours Per Low-Income Population
Rural	10.2	42.3	2.2

10.3 Existing Service Levels

Table 10.6 provides total and per capita service data for each region for the following: trips provided, vehicle revenue miles, vehicle revenue hours, and number of vehicles in service. For urban areas, the demand-response and fixed-route data are separated. Fargo area demand-response service includes Metro Area Transit’s complementary paratransit service in addition to services from Handi-Wheels and Metro Senior Ride provided by Valley Senior Services. Values are highlighted in green if they are above the benchmarks provided in Table 10.3 and in red if they are below the benchmarks. Figures 10.1 – 10.3 show the rural transit per capita data by region.

Table 10.6 Transit Service Data by Region for 2018

Region	Trips Provided	Vehicle Miles	Vehicle Hours	Vehicles	Trips Provided Per Capita	Vehicle Miles Per Capita	Vehicle Hours Per Capita	Active Fleet Per 1,000 People
Rural Transit								
Northwest	25,712	180,630	8,813	16	0.50	3.52	0.17	0.31
Golden Valley/Billings	3,295	91,700	3,910	5	1.23	34.11	1.45	1.86
Southwest	10,441	85,372	5,529	8	1.21	9.87	0.64	0.93
Stark County	35,892	158,868	15,599	12	1.16	5.13	0.50	0.39
Souris Basin/Minot	185,775	607,414	46,358	30	1.88	6.15	0.47	0.30
West River/Sioux	75,314	434,117	31,834	39	1.12	6.44	0.47	0.58
Rolette County	17,343	325,777	14,867	9	1.21	22.78	1.04	0.63
Towner County	5,177	38,166	3,069	2	2.36	17.41	1.40	0.91
Cavalier County	7,183	52,728	3,712	3	1.88	13.77	0.97	0.78
Pembina County	6,575	104,487	5,395	5	0.95	15.04	0.78	0.72
Walsh County	4,649	48,723	2,894	3	0.44	4.57	0.27	0.28
Ramsey/Benson/Eddy	42,509	290,835	18,411	14	2.05	14.01	0.89	0.67
James River	67,154	217,484	18,808	16	2.56	8.29	0.72	0.61
Kidder County	6,129	50,128	1,942	3	2.50	20.46	0.79	1.22
South Central	111,010	755,963	47,679	33	3.62	24.62	1.55	1.07
Dickey County	4,715	9,607	1,734	2	0.96	1.96	0.35	0.41
Red River Valley	20,970	132,153	12,570	11	0.30	1.91	0.18	
Urban Transit Fixed-Route								
Bismarck-Mandan	107,172	358,470	21,340	6	1.08	3.61	0.21	0.06
Grand Forks	253,657	370,412	21,340	10	4.45	6.50	0.37	0.18
Fargo-West Fargo	1,439,017	1,008,093	82,895	24	8.92	6.25	0.51	0.15
Urban Transit Demand-Response								
Bismarck-Mandan	121,520	552,669	40,047	18	1.22	5.56	0.40	0.18
Grand Forks	62,895	239,720	27,308	11	1.10	4.21	0.48	0.19
Fargo-West Fargo	98,305	625,222	48,968	28	0.61	3.87	0.30	0.17

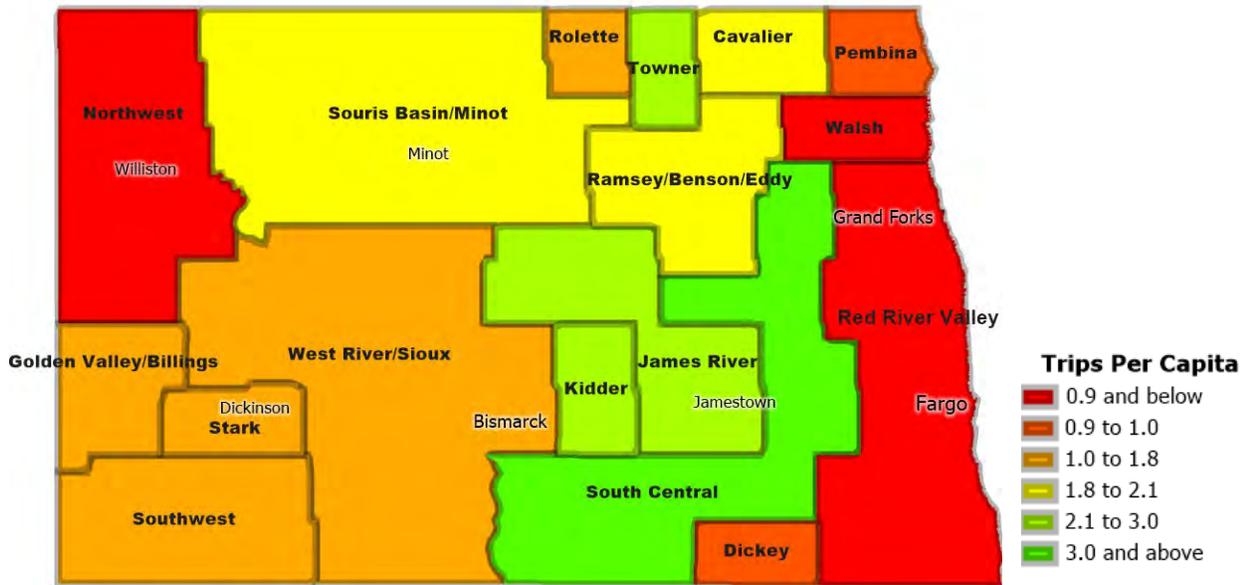


Figure 10.1 Rural Transit Trips Provided Per Capita, by Region

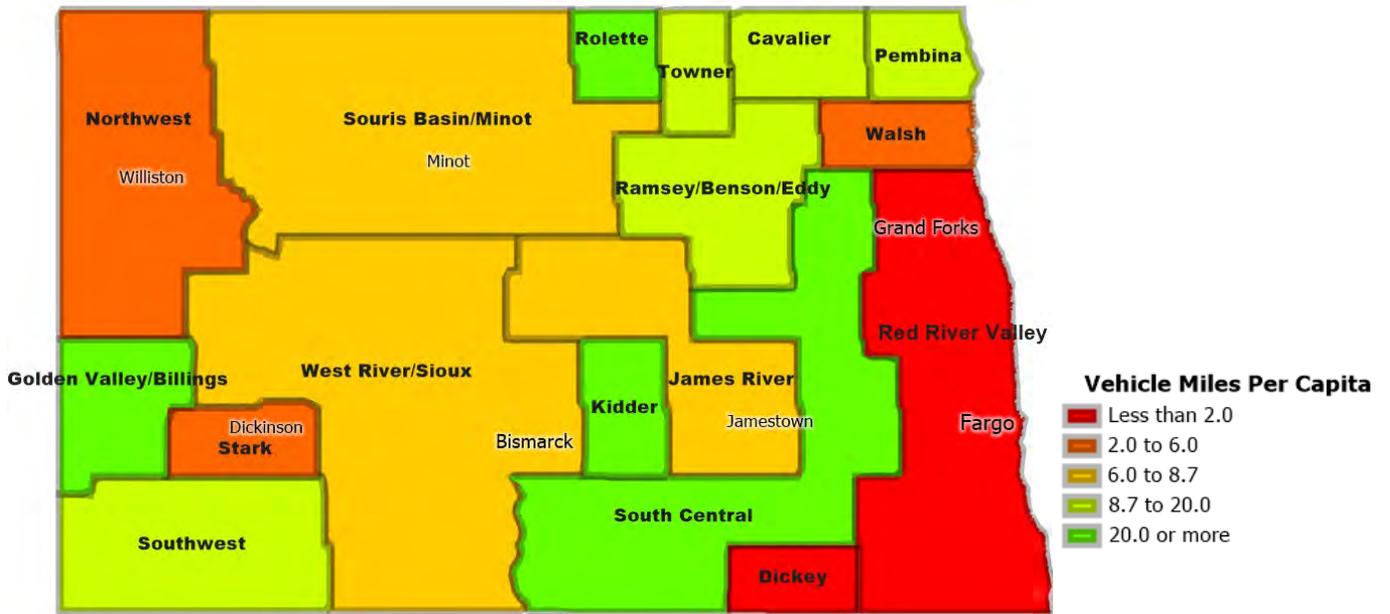


Figure 10.2 Rural Transit Vehicle Revenue Miles of Service Per Capita, by Region

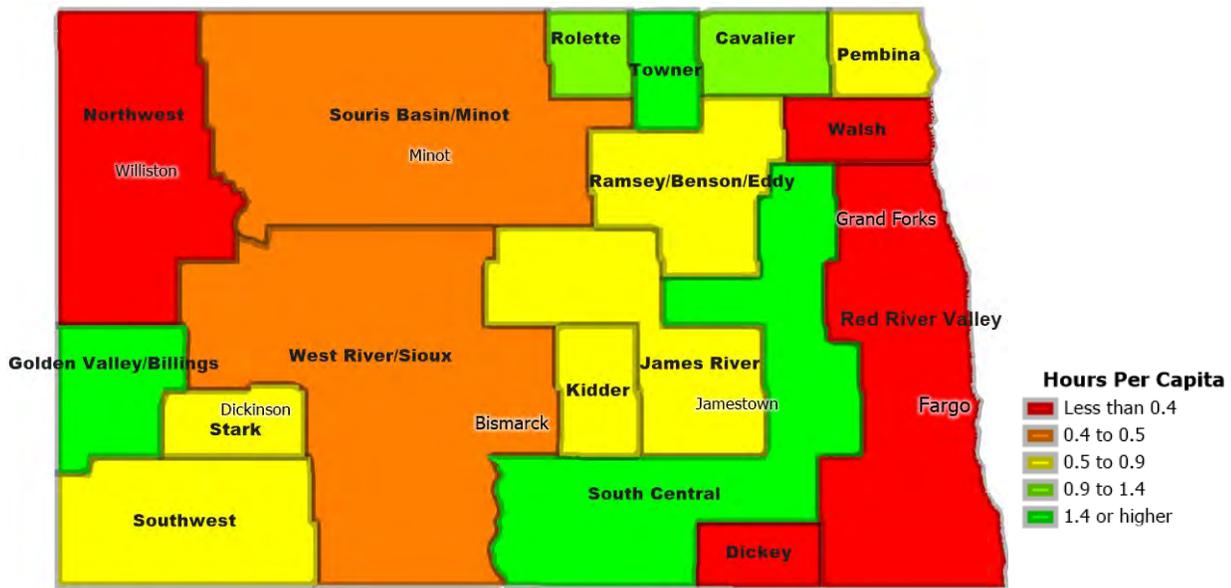


Figure 10.3 Rural Transit Vehicle Revenue Hours of Service Per Capita, by Region

Table 10.7 provides data for each region for trips, vehicle miles, and vehicle hours per transportation disadvantaged population. Values again are highlighted in green if they are above the benchmarks provided in Tables 10.4 and 10.5 and red if they are below.

Table 10.7 Trips, Vehicle Revenue Miles, and Vehicle Revenue Hours Per Transportation Disadvantaged Population, by Region for 2018

Region	Trips Per Senior or Disabled Population	Vehicle Miles Per Senior or Disabled Population	Vehicle Hours Per Senior or Disabled Population	Trips Per Low-Income Population	Vehicle Miles Per Low-Income Population	Vehicle Hours Per Low-Income Population
Rural Transit						
Northwest	2.7	18.8	0.9	3.3	23.3	1.1
Golden Valley/Billings	4.5	123.9	5.3	7.0	194.1	8.3
Southwest	4.0	32.5	2.1	8.2	67.3	4.4
Stark County	5.6	24.6	2.4	7.7	33.9	3.3
Souris Basin/Minot	8.3	27.2	2.1	11.9	39.1	3.0
West River/Sioux	5.6	32.2	2.4	8.6	49.7	3.6
Rolette County	4.6	85.5	3.9	2.9	54.5	2.5
Towner County	7.9	58.0	4.7	9.8	72.1	5.8
Cavalier County	5.8	42.4	3.0	13.6	100.0	7.0
Pembina County	3.0	47.3	2.4	6.7	105.9	5.5
Walsh County	1.3	13.8	0.8	2.0	21.3	1.3
Ramsey/Benson/Eddy	6.8	46.2	2.9	7.3	49.9	3.2
James River	8.1	26.1	2.3	13.8	44.7	3.9
Kidder County	8.4	69.1	2.7	9.7	79.6	3.1
South Central	10.6	72.0	4.5	20.8	141.6	8.9
Dickey County	3.4	7.0	1.3	7.5	15.2	2.7
Red River Valley	1.2	7.8	0.7	2.6	16.3	1.6
Urban Transit Fixed-Route						
Bismarck-Mandan	4.6	15.3	0.9	7.2	24.1	1.4
Grand Forks	22.3	32.6	1.9	15.2	22.1	1.3
Fargo-West Fargo	48.8	34.2	2.8	45.7	32.0	2.6
Urban Transit Demand-Response						
Bismarck-Mandan	5.2	23.6	1.7	8.2	37.2	2.7
Grand Forks	5.5	21.1	2.4	3.8	14.3	1.6
Fargo-West Fargo	3.3	21.2	1.7	3.1	19.9	1.6

10.4 Service Gaps and Funding Requirements

10.4.1 Rural Transit

Service gaps were determined by comparing the current level of service to benchmark values. For rural transit, the analysis was based on the level of service provided in comparison to the population of older adults, people with disabilities, and those with low income, because these are the primary users of rural transit.

As shown in Table 10.7, most regions are below the benchmarks for trips provided per population of older adults, people with disabilities, and low-income individuals. Only 3 of 17 regions are above average for trips per population of older adults or people aged 18-24 with a disability, and just 4 regions are above average for trips per low-income population. However, a number of regions are above the benchmarks for vehicle miles or vehicle hours provided. The poorer performance for trips provided, in comparison to vehicle miles or hours, indicates that rural transit in North Dakota is less efficient than rural transit elsewhere in the United States. This can be explained by low population densities and long travel distances in the state that require additional vehicle miles and hours of services to provide the same number of trips.

Because of the rural nature of the state, substantial increases in service and funding would be required for each region to meet the benchmarks for trips provided. While this should be a goal, a more attainable objective is to first ensure that each region meets the benchmarks for vehicle miles and vehicle hours. This would mean that the quantity of service supplied in each region meets target levels, even if the quantity of service consumed does not. Therefore, this study calculated the increase in vehicle miles and vehicle hours for rural transit that would be required to meet the benchmarks, as shown in Table 10.8.

Table 10.8 Needed Increase in Service for Rural Transit to Meet Benchmarks

Region	Based on population of seniors and people with disabilities		Based on low income population	
	Additional Vehicle miles needed	Additional Vehicle hours needed	Additional Vehicle miles needed	Additional Vehicle hours needed
Northwest	142,833	6,583	146,640	8,365
Golden Valley/Billings	0	0	0	0
Southwest	3,091	0	0	0
Stark County	58,852	0	39,175	0
Souris Basin/Minot	144,732	0	49,802	0
West River/Sioux	20,399	0	0	0
Rolette County	0	0	0	0
Towner County	0	0	0	0
Cavalier County	0	0	0	0
Pembina County	0	0	0	0
Walsh County	70,275	2,172	48,059	2,186
Ramsey/Benson/Eddy	0	0	0	0
James River	63,180	0	0	0
Kidder County	0	0	0	0
South Central	0	0	0	0
Dickey County	36,692	320	17,059	0
Red River Valley	435,479	8,285	210,504	5,415
Total	975,534	17,360	511,239	15,966

Table 10.9 shows the costs of providing these service increases. This is based on costs of \$3.25 per vehicle mile and \$48.71 per vehicle hour, which are statewide averages for rural transit based on 2018 data. For example, as shown in Table 10.9, for the Northwest region, the cost of meeting the benchmarks for vehicle miles and vehicles hours per population of seniors and people with disabilities is \$463,765 and \$320,633, respectively; and the cost of meeting the benchmarks for vehicle miles and vehicle hours per low-income population is \$476,127 and \$407,414, respectively. The maximum of these values is the cost required to meet all four of the benchmarks. For the Northwest region, an increase in annual operating funding of \$476,127 is needed to meet all four benchmarks. Statewide for rural transit, an increase in annual operating funding of \$3.2 million is needed for each region to meet the targets.

Table 10.9 Increased Annual Operating Funding Needed to Meet Benchmarks for Rural Transit, Base

Region	Based on population of seniors and people with disabilities		Based on low income population		Maximum
	Cost of vehicle miles needed	Cost of vehicle hours needed	Cost of vehicle miles needed	Cost of vehicle hours needed	
Northwest	\$463,765	\$320,633	\$476,127	\$407,414	\$476,127
Golden Valley/Billings	\$0	\$0	\$0	\$0	\$0
Southwest	\$10,037	\$0	\$0	\$0	\$10,037
Stark County	\$191,087	\$0	\$127,196	\$0	\$191,087
Souris Basin/Minot	\$469,933	\$0	\$161,702	\$0	\$469,933
West River/Sioux	\$66,233	\$0	\$0	\$0	\$66,233
Rolette County	\$0	\$0	\$0	\$0	\$0
Towner County	\$0	\$0	\$0	\$0	\$0
Cavalier County	\$0	\$0	\$0	\$0	\$0
Pembina County	\$0	\$0	\$0	\$0	\$0
Walsh County	\$228,176	\$105,811	\$156,043	\$106,466	\$228,176
Ramsey/Benson/Eddy	\$0	\$0	\$0	\$0	\$0
James River	\$205,140	\$0	\$0	\$0	\$205,140
Kidder County	\$0	\$0	\$0	\$0	\$0
South Central	\$0	\$0	\$0	\$0	\$0
Dickey County	\$119,135	\$15,562	\$55,389	\$0	\$119,135
Red River Valley	\$1,413,960	\$403,551	\$683,487	\$263,761	\$1,413,960
Total	\$3,167,467	\$845,556	\$1,659,944	\$777,642	\$3,179,828

Table 10.9 presents base increases in funding needed to meet the targets, but funding will need to increase further in future years as populations grow. Based on population projections for 2030, Table 10.10 shows the projected increase in annual operating funding needed by 2030. It shows the costs needed to maintain current per capita trip rates with projected population growth, as well as the costs of meeting the four benchmarks for vehicle miles and vehicle hours with projected growth in the population of older adults, people with disabilities, and those with low income. For each region, the maximum value represents the additional operating costs needed to meet all of the targets. These additional costs include the costs from Table 10.9 plus costs resulting from population growth. Statewide, the additional annual costs needed by 2030 to meet these targets is \$7.3 million.

Table 10.10 Increased Annual Operating Funding Needed to Meet Benchmarks for Rural Transit, 2030

Region	Cost to maintain per capita trip rate with projected population growth	Based on projected population of seniors and people with disabilities		Based on projected low-income population		Maximum
		Cost of vehicle miles needed	Cost of vehicle hours needed	Cost of vehicle miles needed	Cost of vehicle hours needed	
Northwest	\$371,198	\$1,175,757	\$881,227	\$1,213,924	\$988,327	\$1,213,924
Golden Valley/Billings	\$27,727	\$10,815	\$8,515	\$9,304	\$7,325	\$27,727
Southwest	\$9,380	\$15,454	\$4,265	\$5,400	\$4,251	\$15,454
Stark County	\$493,536	\$494,027	\$238,523	\$475,196	\$274,001	\$494,027
Souris Basin/Minot	\$534,017	\$943,056	\$372,519	\$561,730	\$314,966	\$943,056
West River/Sioux	\$0	\$930,902	\$680,806	\$0	\$0	\$930,902
Rolette County	\$32,837	\$118,741	\$93,492	\$57,214	\$45,048	\$118,741
Towner County	\$0	\$2,723	\$2,144	\$0	\$0	\$2,723
Cavalier County	\$0	\$0	\$0	\$0	\$0	\$0
Pembina County	\$0	\$25,023	\$19,702	\$0	\$0	\$25,023
Walsh County	\$0	\$244,739	\$118,851	\$156,043	\$106,466	\$244,739
Ramsey/Benson/Eddy	\$13,165	\$47,049	\$37,045	\$22,530	\$17,739	\$47,049
James River	\$0	\$234,040	\$22,755	\$0	\$0	\$234,040
Kidder County	\$2,398	\$14,243	\$11,214	\$1,860	\$1,464	\$14,243
South Central	\$0	\$0	\$0	\$0	\$0	\$0
Dickey County	\$0	\$129,464	\$23,694	\$55,389	\$0	\$129,464
Red River Valley	\$0	\$2,894,149	\$1,568,993	\$683,487	\$263,761	\$2,894,149
Total	\$1,484,259	\$7,280,180	\$4,083,745	\$3,242,075	\$2,023,350	\$7,335,260

10.4.2 Urban Transit

For urban transit, transit needs were assessed separately for fixed-route and demand-response services. Fixed-route services were assessed based on vehicle revenue miles and vehicle revenue hours provided per capita. Demand-response services were assessed based on vehicle revenue miles and vehicle revenue hours provided per population of older adults and people aged 18-64 with a disability.

As shown previously in Table 10.6, Fargo-West Fargo meets the benchmarks for fixed-route service, Grand Forks meets one of the benchmarks, and Bismarck-Mandan does not meet any. For demand-response, as shown in Table 10.7, all urban areas meet the benchmarks.

Table 10.11 shows the additional vehicle miles and vehicle hours needed to meet the benchmarks, and the cost of meeting each. Total additional annual operational funding needed to meet the benchmarks for urban transit is \$2.1 million, entirely for fixed-route services.

Table 10.11 Increased Annual Operating Funding Needed to Meet Benchmarks for Rural Transit, Base

	Additional vehicle miles needed	Additional vehicle hours needed	Cost of vehicle miles needed	Cost of vehicle hours needed	Maximum
Urban Transit Fixed-Route					
Bismarck-Mandan	260,713	22,599	\$1,144,868	\$1,666,982	\$1,666,982
Grand Forks	0	3,831	\$0	\$404,229	\$404,229
Fargo-West Fargo	0	0	\$0	\$0	\$0
Urban Transit Demand-Response					
Bismarck-Mandan	0	0	\$0	\$0	\$0
Grand Forks	0	0	\$0	\$0	\$0
Fargo-West Fargo	0	0	\$0	\$0	\$0
Total	260,713	26,429	\$1,144,868	\$2,071,211	\$2,071,211

Funding needs based on 2030 projected population is shown in Table 10.12. This includes the costs presented in Table 10.11 plus additional costs resulting from projected population growth. Urban transit is expected to need an additional \$7.1 million in annual operating funding by 2030.

Table 10.12 Increased Annual Operating Funding Needed to Meet Benchmarks for Urban Transit, 2030

	Cost to maintain per capita trip rate with projected population growth	Cost of vehicle miles needed	Cost of vehicle hours needed	Maximum
Urban Transit Fixed-Route				
Bismarck-Mandan	\$538,830	\$2,075,587	\$2,776,420	\$2,776,420
Grand Forks	\$280,836	\$268,928	\$735,477	\$735,477
Fargo-West Fargo	\$2,262,564	\$2,256,419	\$1,947,234	\$2,262,564
Urban Transit Demand-Response				
Bismarck-Mandan	-	\$402,584	\$366,243	\$402,584
Grand Forks	\$164,533	\$94,738	\$54,822	\$164,533
Fargo-West Fargo	\$757,768	\$433,737	\$365,061	\$757,768
Total	\$4,004,531	\$5,531,992	\$6,245,256	\$7,099,346

10.4.3 Estimated Vehicle Expenses for Expanded Mobility Options

The cost estimates provided in previous sections are the increased annual operating costs that would be incurred from meeting the target levels of service. However, there would also be additional capital costs as new vehicles may be required to provide the additional service. The number of new vehicles required to provide the additional service is uncertain, as there may be some excess capacity that already exists. Following Mattson and Hough (2015), it is assumed that a new vehicle is required for every additional 23,000 miles of service per year for rural and urban demand-response transit and for every 30,000 miles for urban fixed-route service. The cost of new vehicles is assumed to be \$40,000 for minivans, \$50,000 for vans, \$85,000 for cutaways for rural operators, \$105,000 for cutaways for urban transit, \$375,000 for rural transit fixed-route buses, and \$450,000 for urban transit fixed-route buses. (Actual costs vary based on size and type of technology chosen.)

Assuming that the types of vehicles purchased to expand services would be similar to the current fleet composition, the number of new vehicles needed in the base and 2030 scenarios are provided in Table 10.13, and the total cost of those vehicles is shown in Table 10.14. Meeting the base scenario target levels requires an additional 57 vehicles statewide, at a cost of \$10.1 million, and meeting the 2030 scenario requires 151 new vehicles at a cost of \$35.7 million. If it is assumed that federal share of vehicle purchases is 80%, then the cost to state and local jurisdictions is \$2.0 million for the base scenario and \$5.1 million for 2030.

Table 10.13 Number of New Vehicles Needed to Meet Target Service Levels

	Base	2030
Rural		
Minivan	19	43
Van	4	9
Cutaway	18	41
Bus	3	6
<i>Subtotal</i>	<i>43</i>	<i>99</i>
Urban		
Minivan	0	3
Van	0	4
Cutaway	0	8
Bus	15	37
<i>Subtotal</i>	<i>15</i>	<i>52</i>
Total	57	151

Table 10.14 Cost of New Vehicles Needed to Meet Target Service Levels

	Base		2030	
	Total	Non-Federal Share (20%)	Total	Non-Federal Share (20%)
Rural				
Minivan	\$740,522	\$148,104	\$1,714,608	\$342,922
Van	\$185,131	\$37,026	\$428,652	\$85,730
Cutaway	\$1,514,600	\$302,920	\$3,506,909	\$701,382
Bus	\$954,580	\$190,916	\$2,210,237	\$442,047
<i>Subtotal</i>	<i>\$3,394,832</i>	<i>\$678,966</i>	<i>\$7,860,406</i>	<i>\$1,572,081</i>
Urban				
Minivan	\$0	\$0	\$124,105	\$24,821
Van	\$0	\$0	\$193,914	\$38,783
Cutaway	\$0	\$0	\$855,159	\$171,032
Bus	\$6,691,511	\$1,338,302	\$16,638,185	\$3,327,637
<i>Subtotal</i>	<i>\$6,691,511</i>	<i>\$1,338,302</i>	<i>\$17,811,363</i>	<i>\$3,562,273</i>
Total	\$10,086,343	\$2,017,269	\$25,671,769	\$5,134,354

While the increased operating expenses calculated previously are ongoing annual expenses, the new vehicles are one-time expenses. However, these vehicles will need to be replaced over time, resulting in increases in long-term annual capital expenses. Assuming average lifespans of 5.6 years for minivans and vans, 5.9 years for cutaways, and 14 years for buses, Table 10.15 shows a long-run annual increase in total capital expenses of \$1.0 million in the base scenario and \$2.5 million in the 2030 scenario. The non-federal share of these costs are \$0.2 million and \$0.5 million, respectively.

Table 10.15 Increase in Long-Term Annual Average Vehicle Replacement Cost

	Base		2030	
	Total	Non-Federal Share (20%)	Total	Non-Federal Share (20%)
Rural				
Minivan	\$132,236	\$26,447	\$306,180	\$61,236
Van	\$33,059	\$6,612	\$76,545	\$15,309
Cutaway	\$256,712	\$51,342	\$594,391	\$118,878
Bus	\$68,184	\$13,637	\$157,874	\$31,575
<i>Subtotal</i>	<i>\$490,191</i>	<i>\$98,038</i>	<i>\$1,134,990</i>	<i>\$226,998</i>
Urban				
Minivan	\$0	\$0	\$22,162	\$4,432
Van	\$0	\$0	\$34,627	\$6,925
Cutaway	\$0	\$0	\$144,942	\$28,988
Bus	\$477,965	\$95,593	\$1,188,442	\$237,688
<i>Subtotal</i>	<i>\$477,965</i>	<i>\$95,593</i>	<i>\$1,390,173</i>	<i>\$278,035</i>
Total	\$968,156	\$193,631	\$2,525,163	\$505,033

10.5 Summary of Funding Needs

Table 10.16 summarizes the increased funding needed to meet the target service levels and fill the service gaps for the base scenario and the 2030 scenario. An increase in annual operating funding statewide of \$5.3 million is needed in the base scenario to meet the service gaps for both urban and rural transit. By 2030, the projected need in increased funding is \$14.4 million statewide. For rural transit, this represents an increase in funding of 21% for the base case and 55% by 2030. For urban transit, this is an increase of 14% for the base and 46% by 2030.

One-time new vehicle purchases are \$13.5 million and \$33.5 million in the base and 2030 scenarios, respectively. The long-term increase in annual vehicle replacement costs resulting from the increased fleet size is \$1.0 million and \$2.5 million the base and 2030 scenarios.

Table 10.16 Total Statewide Funding Increases Needed for Base and 2030 Scenarios

	Base		2030	
	Total	Non-Federal Share*	Total	Non-Federal Share*
Increase in Annual Operating Funds				
Rural	\$3,179,828	\$1,589,914	\$7,335,260	\$3,667,630
Urban	\$2,071,211	\$1,387,712	\$7,099,346	\$4,756,562
Total	\$5,251,040	\$2,977,626	\$14,434,606	\$8,424,192
New Vehicle Purchases				
Rural	\$3,394,832	\$678,966	\$7,860,406	\$1,572,081
Urban	\$6,691,511	\$1,338,302	\$17,811,363	\$3,562,273
Total	\$10,086,343	\$2,017,269	\$25,671,769	\$5,134,354
Long-term Increase in Vehicle Replacement Costs				
Rural	\$490,191	\$98,038	\$1,134,990	\$226,998
Urban	\$477,965	\$95,593	\$1,390,173	\$278,035
Total	\$968,156	\$193,631	\$2,525,163	\$505,033

*Estimated non-federal shares of 20% for vehicles, 50% for rural operating, and 67% for urban operating.

These cost estimates represent the total operating and vehicle expenses, which can be funded through various sources. It is assumed that federal funding will cover 80% of vehicle purchases, and based on data from previous years, half of rural operating expenses and about one third of urban operating expenses. The next section provides data on previous shares of operating and capital expenses covered by federal, state, local, and directly generated funds.

Funding from the Coronavirus Aid, Relief, and Economic Security Act, also known as the CARES Act, of 2020 could be used to meet some of these needs. NDDOT was awarded \$18.0 million to be used for 5311 rural and intercity agencies. NDDOT plans to use these funds for operating, administrative, preventive maintenance, and minor capital expenses. They do not plan to use the funds for vehicles or facilities. Urban systems received \$15.1 million, and tribal agencies received about \$1 million (Table 10.17). There is no time frame for when these funds need to be used, but NDDOT intends to mostly spend it within two years.

Table 10.17 CARES Act Funding Received by North Dakota Transit Agencies

Agency Type	Funding Received
Rural 5311	\$17,996,449
Urban 5307	\$15,075,108
Tribal	\$986,307

11. MANAGING STATE AID FUNDS AND GENERATING LOCAL MATCH

Transit in North Dakota is funded through a combination of federal, state, and local sources, as well as via directly generated funds. The section first shows the amount of capital and operating funding that came from each of these sources for North Dakota agencies in 2018. Then a description is provided of how state aid funds are managed in North Dakota and neighboring states. Finally, sources of local match for North Dakota and surrounding states are discussed.

11.1 Sources of Funding

Tables 11.1 and 11.2 show total operating and capital funding, respectively, in 2018 from each source, and the share contributed by each. Statewide, the federal government covered 39% of operating costs, the state government covered 14%, local governments provided 29%, and 18% of operating funding was directly generated. A large share of the directly generated funds consists of fare revenues, but it also includes other sources such as advertising, contract revenue, donations, asset sales, rent revenues, and others. MATBUS, for example, has a contract with NDSU that provides directly generated funds not counted as fare revenues. Compared to rural transit, urban transit covers a larger share of its operating expenses with directly generated funds and local government sources. Rural transit agencies are more reliant on federal and state sources. The federal government covers close to half of operating expenses for rural agencies and a larger share of capital expenditures, about 70% in 2018. The remaining share of capital expenses are mostly covered by local governments. Tables 11.3 and 11.4 shows the shares of funding sources for operating and capital expenditures for each agency in the state.

Table 11.1 Operating Funding by Source, 2018

	Directly Generated		Federal Government		Local Government		State Government		Total (\$)
	Total (\$)	Share	Total (\$)	Share	Total (\$)	Share	Total (\$)	Share	
Rural Transit	1,542,110	13%	5,830,853	48%	2,005,994	17%	2,669,976	22%	12,048,933
Urban Transit	3,313,458	22%	4,825,352	32%	6,036,702	40%	1,076,105	7%	15,251,617
State Total	4,855,568	18%	10,656,205	39%	8,042,696	29%	3,746,081	14%	27,300,550

Source: National Transit Database

Table 11.2 Capital Funding by Source, 2018

	Directly Generated		Federal Government		Local Government		State Government		Total (\$)
	Total (\$)	Share	Total (\$)	Share	Total (\$)	Share	Total (\$)	Share	
Rural Transit	198,022	12%	1,160,907	69%	256,943	15%	72,337	4%	1,688,209
Urban Transit	6,495	0%	3,998,800	71%	1,566,765	28%	59,348	1%	5,631,408
State Total	204,517	3%	5,159,707	70%	1,823,708	25%	131,685	2%	7,319,617

Source: National Transit Database

Table 11.3 Share of Operating Funding by Source for Each Transit Agency, 2018

Transit Agency	Directly Generated	Federal Government	Local Government	State Government
Benson County Transportation	3%	49%	10%	38%
Bis-Man Transit Board	16%	36%	40%	8%
Can-Do Transportation	11%	51%	0%	38%
Cavalier County Senior Meals & Services	9%	57%	7%	27%
Cities Area Transit	23%	26%	43%	8%
City of Fargo	24%	32%	38%	6%
City of Minot	7%	52%	34%	6%
Devils Lake Transit (Senior Meals & Services)	15%	39%	8%	38%
Dickey County Senior Citizens	4%	46%	0%	50%
Fargo Park District /Valley Senior Services	25%	20%	20%	35%
Golden Valley/Billings County Council On Aging	9%	41%	25%	26%
Hazen Busing Project	25%	49%	12%	13%
James River Senior Citizens Center, Inc.	16%	49%	15%	21%
Kenmare Wheels & Meals	9%	50%	15%	26%
Kidder-Emmons County Senior Services	5%	54%	7%	34%
Nelson County Council On Aging	6%	49%	6%	40%
Nutrition United	4%	57%	0%	40%
Pembina County Meals and Transportation	7%	52%	20%	21%
Souris Basin Transit	14%	43%	21%	22%
South Central Adult Services	21%	46%	11%	22%
Southwest Transportation Services	9%	41%	0%	51%
Spirit Lake Tribe	3%	46%	38%	13%
Standing Rock Public Transportation	6%	72%	14%	8%
Stark County Council on Aging / Elder Care	18%	50%	21%	11%
Trenton Indian Service Area Aging Program	3%	48%	19%	29%
Turtle Mountain Band of Chippewa Indian	1%	81%	18%	0%
Walsh County Transportation Program	7%	57%	3%	34%
West River Transit	10%	49%	8%	33%
Wildrose Public Transportation	7%	55%	0%	37%
Williston Council for the Aging	14%	48%	10%	29%

Source: National Transit Database

Table 11.4 Share of Capital Funding by Source for Each Transit Agency, 2018

Transit Agency	Directly Generated	Federal Government	Local Government	State Government
Benson County Transportation	5%	80%	16%	0%
Bis-Man Transit Board	0%	74%	18%	8%
Can-Do Transportation	-	-	-	-
Cavalier County Senior Meals & Services	-	-	-	-
Cities Area Transit	0%	80%	20%	0%
City of Fargo	0%	67%	33%	0%
City of Minot	-	-	-	-
Devils Lake Transit (Senior Meals & Services)	-	-	-	-
Dickey County Senior Citizens	-	-	-	-
Fargo Park District /Valley Senior Services	0%	0%	100%	0%
Golden Valley/Billings County Council On Aging	0%	75%	0%	25%
Hazen Busing Project	0%	80%	12%	8%
James River Senior Citizens Center, Inc.	-	-	-	-
Kenmare Wheels & Meals	-	-	-	-
Kidder-Emmons County Senior Services	-	-	-	-
Nelson County Council On Aging	-	-	-	-
Nutrition United	0%	80%	20%	0%
Pembina County Meals and Transportation	0%	74%	26%	0%
Souris Basin Transit	37%	53%	0%	11%
South Central Adult Services	12%	78%	10%	0%
Southwest Transportation Services	6%	78%	15%	0%
Spirit Lake Tribe	0%	80%	20%	0%
Standing Rock Public Transportation	0%	99%	1%	0%
Stark County Council on Aging / Elder Care	0%	73%	19%	7%
Trenton Indian Service Area Aging Program	-	-	-	-
Turtle Mountain Band of Chippewa Indian	-	-	-	-
Walsh County Transportation Program	0%	64%	36%	0%
West River Transit	0%	78%	22%	0%
Wildrose Public Transportation	-	-	-	-
Williston Council for the Aging	27%	73%	0%	0%

Source: National Transit Database

Transit funding strategies for North Dakota and the surrounding states of Minnesota, Montana, and Wyoming were reviewed through website visits and phone discussions with department of transportation transit staff. The information gathered provides insight into how these states manage their state aid funds and how some communities raise their local match funds. Transit providers in North Dakota responded to a survey that included where their local match resources come from, including their creative sources.

11.2 Managing State Aid Funds

Several states publish their *Transit Grant Application Guidelines* for Federal Transit Administration and State Public Transit Programs on their websites. The guidelines cover all of the transit fund programs: Bus and Bus Facilities Program (Section 5339), Rural Area Formula Grants (Section 5311), Intercity Bus Program (Section 5311f), and Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310). The guidelines also lay out the local match requirements and identify sources of local match for transit projects to use. Some of the surrounding states use the *BlackCat Grant Management System* for grant applications. This software package has made it easier for the application process, review and approval, and award tracking.

While reviewing each states transit funding strategies, it was clear that several states have a specific evaluation process and criteria they use to evaluate the transit agency applications. Some states, such as Minnesota and Wyoming, use specific criteria assigning percentages or values to identified performance measures that encourage transit providers to meet requirements. The processes and criteria for North Dakota, Minnesota, Montana, and Wyoming are presented in this section.

11.2.1 North Dakota Evaluation Process and Criteria

The North Dakota Legislature appropriates transit funds every two years during the biennium. The current biennium is for 2019-2021. North Dakota's State Aid for Public Transit comes from the Highway Tax Distribution Fund. Transit receives 1.5% of this fund (NDCC 54-27-19). The NDDOT disburses the funds according to guidelines established by the legislation. The funds are required to be used by transportation providers to maintain public transportation for the elderly populations and for people with disabilities. These funds may be used to contract public transportation and for match as well as for other expenditures authorized by the Director. All of the transit providers that receive the state aid funds are required to comply with the regulations required by the Federal Transit Administration (FTA) (NDDOT 2020, <https://www.dot.nd.gov/divisions/localgov/docs/transit/20200801-ND-Transit-Grant-ApplicationGuidelines.pdf>, accessed May 11, 2020).

NDDOT has a review and approval schedule for administering the transit funds to the provider applicants. The state's annual announcements provide a schedule of dates for application submittals and review by NDDOT's grant committee. The general schedule is shown below:

- May – receipt of applications
- May – proposal review by NDDOT's grant committee
- May/June – grant committee recommendations are submitted to the Director of the Office of Transportation Programs for review and approval by the deputy director and director
- June/July – contract preparation and notification, which is subject to availability of federal funds

The NDDOT's grant review committee is made up of three NDDOT employees and four non-NDDOT employees. The non-NDDOT committee members are solicited from other state agencies such as Department of Human Services, Aging Services, etc. The non-NDDOT committee members serve a three-year term.

Section 5311 rural public transit applications are evaluated based on the criteria listed below. No numeral values or percentages are assigned to the funding criteria.

- Availability of funds
- Addresses public transportation service in the community or service area
- Addresses service area expansion, fare increases, extended service hours
- Identifies service area needs and goals to meet those needs
- Demonstrates that the applicant has participated in a public participation effort
- Provides a balanced and feasible budget and includes the availability and source of local match
- Has met or exceeded compliance requirements in previous years
- Has submitted a current Cost Allocation Plan (if applicable)
- Has submitted a 3-5 Year Program Plan
- Describes community benefits resulting from the funding request
- Indicates the prospective grantee is attempting to improve or maintain program efficiency and effectiveness

Final funding decisions are made at the discretion of the NDDOT Director. The funds are administered through the NDDOT's BlackCat System.

11.2.2 Montana Funding Criteria

Montana administers a small amount of state aid funds to transit providers. The funding was placed into state law, Montana Code Annotated (MCA) 7-14-112, in 2001 as it was determined that senior citizens and persons with disabilities would receive the special funds for transportation. The funds may be used to provide operating or matching funds for grants to agencies qualified to receive 5311 dollars. Initially the funds were legislated to come from a 25-cent vehicle registration fee; however, those funds only totaled between \$200,000 to \$350,000.

Montana changed its transit funding source, directing that a percent of each rental car tax is designated for transit. This change increased the level of funds to \$750,000 to \$800,000 a year. During the past few years the value was approximately \$1.5 million dollar. However, this is expected to decrease due to the COVID-19 pandemic, according to the transit coordinator.

Montana Department of Transportation (MDT) refers to the funds as TRANSADE, transportation assistance for disabled and elderly. Funds are allocated based on Census data of elderly and disabled populations living in the counties served by transit as well as the number of rides provided for these groups. This is the only criterion used to administer the state dollars. The funds are administered through the software package Webgrants until July 2021 when MDT anticipates moving to BlackCat.

11.2.3 Minnesota Evaluation Process and Criteria

In Minnesota, constitutionally, a percentage of funding from the Motor Vehicle Sales Tax is dedicated to public transit. A portion of the tax stays in the Highway User Tax Distribution fund; 36 percent is administered to the seven-county Twin Cities metro area and 4 percent is administered to Greater Minnesota. Greater Minnesota also receives funds from leased vehicles. These funds are split among the state general fund and county state-aid highways.

Under the Minnesota Public Transit Participation Program, the Minnesota Department of Transportation (MnDOT) disburses the funds for Greater Minnesota transit. The transit providers apply annually for the operating, capital and planning activities. Eligibility is determined by Minnesota Statute 174.24, which states, "Any legislatively established public transit commission or authority, any county or statutory or

home rule charter city providing financial assistance to or operating public transit, any private operator of public transit, or any combination thereof is eligible to receive financial assistance through the Public Transit Participation Program” (MnDOT 2020, <https://www.dot.state.mn.us/transit/reports/transit-report/pdf/transit-report-2019.pdf>).

Minnesota has a three-step process for evaluating funding applications. The description of the process below is from MnDOT’s 2020 Public Transit Solicitation Summary. Minnesota also has scoring criteria for new services, facilities and large capital expenses, and vehicle replacement. The scoring is presented in Tables 11.5-11.7.

Step 1. Transit Project Manager Review. All applications are due at MnDOT via BlackCat by a specified date. At this point, transit project managers are given the task of conducting an in-depth review for their respective systems. Considerations include:

- Comparison of funding request to historic spending patterns both overall and by budget line item.
- Review of budgets for any line item variations in excess of the inflationary rate, with written justification provided to explain budget line item variations.
- Determination of eligibility for activities identified.
- Consideration of immediate needs as identified in recently completed Five-Year Transit System Plans for rural systems and Transit Development Plans for small urban systems.
- Consideration of known initiatives and challenges for the individual systems.

Transit project managers provide comments and recommendations to the Operating Grant Review Committee.

Step 2: Operating Grant Review Committee. A three-person Operating Grant Review Committee provides a second round of review and makes recommendations to the Office of Transit and Active Transportation (OTAT) Director. The review committee considers the comments and recommendations provided in step 1 with added focus on those systems with the greatest proposed increase in operating funding levels. The objective of the review committee is to assure consistency of review across all systems to confirm that funding levels proposed and recommended are justified by the application narrative.

Step 3: Final Review and Approval by OTAT Director. The comments and recommendations of the transit project managers and the review committee are presented to the OTAT Director for consideration. Final awards are set by the Director.

New Service. Funding for proposed increases in service hours are evaluated by a review committee of OTAT staff using the scoring criteria shown in Table 11.5. Proposals are scored and ranked based on these criteria. Systems that submit multiple proposals are asked to identify their top-ranked project. The awards may also include additional capital in support of the additional service hours.

Table 11.5 MnDOT New Service Scoring Criteria

Criteria	Percentage of Score	Description
Feasibility	30%	The transit agency has sufficient staffing levels, facilities, vehicles for current level of service.
Market Research/Anticipated Performance	15%	Based on assessment new service would be expected to perform well in terms of: passengers per hour, cost per hour, and cost per passenger trip
Alignment with Plan	30%	Proposed new service is identified in the system Five Year plan (5311), the Transit Development Plan and/or the Regional Transportation Plan (5307)
Contract Compliance	15%	Based on timely monthly reporting and state and federal requirements
New Service Promotion	10%	

Source: MnDOT 2020 Public Transit Solicitation Summary

Facilities, Large Capital Expenses, and Vehicle Replacement. Facilities and proposed capital investments of \$5,000 or greater are evaluated using the scoring criteria shown in Table 11.6. Vehicle replacement follows a four-step evaluation process. First, the fleet inventories for all systems are reviewed and updated to determine the eligibility of vehicles for replacement. Second, OTAT provides a list of eligible vehicles from which the transit systems could choose to replace. Third, OTAT scores and ranks the vehicles that are requested to be replaced, using the scoring criteria shown in Table 11.7. Finally, after the vehicles are scored and ranked, funds are allocated to each vehicle in the prioritized list until the categorical funding target is reached.

Table 11.6 MnDOT Facilities and Large Capital Scoring Guidelines

Criteria	Points Allocated	Description
Improve customer experience	0	There is no discernable impact on customer experience/level of service
	1	Investment may lead to a higher level of service
	3	There is a clear link between investment and customer experience/level of service but impact is moderate
	5	There is a clear link between investment and customer experience/level of service and impact would be significant
Improve operational efficiency	0	There is no discernable impact on operational efficiency
	1	Investment may lead to greater operational efficiency
	3	There is a clear link between investment and operational efficiency but impact is moderate
	5	There is a clear link between investment and operational efficiency and impact would be significant
Improve public or employee safety	0	There is no discernable impact on public or employee safety
	1	Investment may lead to enhancement of public or employee safety
	3	There is a clear link between investment and public or employee safety but impact is moderate
	5	There is a clear link between investment and public or employee safety and impact would be significant
Mitigate environmental impacts	0	There is no discernable impact on the environment
	1	Investment may address identified environmental concern
	3	There is a clear link between investment and environmental mitigation objective, but impact is moderate
	5	There is a clear link between investment and environmental mitigation objective and impact would be significant
Extend service life of existing facility	0	There is no discernable impact on service life
	1	Investment may extend service life of the existing facility
	3	There is a clear link between investment and extension of service life but impact is moderate

Source: MnDOT 2020 Public Transit Solicitation Summary

Table 11.7 MnDOT Vehicle Replacement Scoring

Criteria	Weight	Points	
		Allocated	Description
Age	40%	10	At ceiling life or above
		7	Age between min and ceiling life
		5	Age at min life
		0	Age below min life
Mileage	40%	10	At 125% or more of mileage requirement
		7	Between mileage requirement and 125% of mileage requirement
		5	Between 75% mileage requirement and mileage requirement
		3	Below 75% mileage requirement
Maintenance Costs-to-Vehicle Cost Ratio	20% (only applies to 5311)	10	Maintenance costs at or greater than 75% of total vehicle cost
		5	Maintenance costs between 50 and 75% of total vehicle cost
		3	Maintenance costs between 25 and 50% of total vehicle cost
		0	Maintenance costs below 25% of total vehicle cost

Source: MnDOT 2020 Public Transit Solicitation Summary

11.2.4 Wyoming Evaluation Process and Criteria

Transit Section 5311/Statewide Rural Public Transit applications are evaluated by the WYTRANS Budget Advisory Committee. Final funding decisions are made at the discretion of the WYDOT Transit Staff. The transit coordinator identified that the WYDOT Transit Staff uses performance measures to track how the transit agencies are performing, which is included in the decisions in how to distribute funds. The specific performance measures or scoring criteria used were not identified. However, the general criteria considered for distributing 5311 funds are:

- Addresses public transportation service in the community or service area;
- Addresses service area expansion, extended service areas and/or meeting identified and currently unmet needs;
- Leverages funding from other sources to support overall project;
- Demonstrates a coordinated community transportation human services planning effort;
- Demonstrates that the applicant has participated in a public participation effort;
- Reflects a balanced and feasible budget and the availability of local match;
- Demonstrates a sustainable project, contributing to the livability of the service area;
- Has shown contractual responsibilities and program compliance requirements in previous funding cycles;
- The project sets forth goals to be accomplished which would measure success of the project;
- The application describes community benefits resulting from the funding request; and
- The application indicates the prospective grantee is attempting to improve program efficiency and effectiveness.

Section 5339 funds are used to replace, rehabilitate, and purchase buses and bus-related equipment, as well as to construct bus-related facilities. Decisions on the distribution of 5339 funds are made at the discretion of the WYDOT Transit Staff, based on the following criteria:

- availability of funds;
- qualifications of applicant;
- service area;
- cost estimate and local match availability;
- proposed procurement method;
- identified needs to be addressed by the capital request;
- existing public transit services provided in the service area are identified;
- number of persons estimated to be served;
- if a replacement vehicle: evaluation of existing vehicle fleet factors;
- if requesting a new or additional vehicle: factors necessitating the need for additional equipment;
- availability of the equipment to the general public, if requesting vehicle;
- adequacy of maintenance plan for equipment and facilities.

(WYDOT Transit Applications Guidelines

http://www.dot.state.wy.us/files/live/sites/wydot/files/shared/Local_Government/Fiscal-Year-Applications/BlackCat%20Application%20Guidelines%20Mar%202020.pdf accessed May 12, 2020).

11.3 Local Match Requirements

North Dakota

North Dakota requires transit providers to be responsible for local match to receive federal funds. Matching funds are required for administration, operating, maintenance, and capital projects. The NDDOT has minimum matching ratios for operating (50% FTA and 50% local), administration (80% FTA and 20% local), and capital funds (80% FTA and 20% local). Local match can only be counted once and it cannot be used to match Federal funds for more than the single project in which it was identified. Transit providers are required to provide documentation of the sources and amounts of local match.

Sources of local match can include state or local appropriations, mill levies (up to 5 mills can be dedicated to transit), donations, Medicaid reimbursements, fundraising, and contract revenue. Examples of local funding sources for Cities Area Transit in Grand Forks and South Central Transit are shown below.

Grand Forks: Grand Forks has a dedicated funding source of 5 mills. The 5 mills are split with 1 mill going to the Dial-A-Ride service and 4 mills going to the bus service. Other sources of funds include from advertising, state aid, senior citizens tax, disabled veteran credit, electric tax, communications tax, and mobile home tax.

South Central Transit: South Central uses some older persons mill levy and state mill levy match funds, contract income, Medicaid and Expanded Medicaid, United Way grants, foundation grants from places like Alliance Pipeline, KEM Electric, MDU, Northern Plains Electric, Cass County Electric and many donations from private individuals and church organizations.

Montana

The Montana Department of Transportation recognizes that obtaining local match is difficult for transit providers, so the TRANSIDE is used as local match for the 5311 dollars. Agencies do have other methods to raise local match, but these are somewhat limited. Other sources of local match include local sales tax, county support, and resort taxes, and the larger systems can levy property taxes to support their operations.

Minnesota

In Minnesota, state law requires those receiving public transit funds in Greater Minnesota to provide local match. Minnesota has a statutory fixed-share funding formula that sets the local share of operating costs by system classification. As identified in the MnDOT *2019 Transit Report: A Guide to Greater Minnesota's Public Transit Systems* (MnDOT 2020), the required local share of operating costs by system classification is as follows:

- elderly and disabled 15%
- rural (population less than 2,500) 15%
- small urban (population 2,500-50,000) 20%
- urbanized (populations over 50,000) 20%

Transit providers are required to take care of the local match percentages through local sources, which can include city or county funds, contract revenue, or other sources.

Wyoming

Local match is required for for operating, administration, maintenance, and capital projects. WYTRANS has minimum matching ratios for each of the categories. The breakdown is similar to those presented for North Dakota.

The state identifies the sources of local match for transit projects. The local match may be provided from an undistributed cash surplus, cash reserve fund, and service agreements with state or local human service agencies. Some examples of these sources include:

- state or local appropriations
- dedicated tax revenue
- private donations
- revenue service contracts
- net income from marketing/advertising

In certain instances, the local match may be derived from Federal programs that are eligible to be expended for transportation, other than Federal Department of Transportation programs. Examples of these sources include:

- Temporary Assistance for Needy Families (TANF)
- Medicaid
- Employment training programs
- Rehabilitation Services
- Older Americans Act (Title 3B)
- Community Services Block Grant (CSBG) funding

- Community Development Block Grant (CDBG) funding

Non-cash match such as donations, volunteer services and in-kind contributions, as well as funding from other federal programs, may be used as local match. However, such match must be thoroughly documented and supported by statements of value. Prior approval from WYDOT is mandatory.

Creative Local Match

We sought to identify the creative or innovative ways that surrounding state transit agencies provide local match. Although many agencies rely on the traditional methods of mill levies, sales tax, and the examples provided above, some agencies identified that they seek out other funds through:

- holiday donation letters
- fundraisers such as “fun night with dinner”
- bake sales
- Giving Hearts Campaign
- searching out grant opportunities
- resort taxes
- selling advertisements on vehicles

In summary, transit providers within each state rely on federal, state, and local funds to operate the transit agencies. Each state has a process in place to award the funds to the transit providers. Some of the states utilize software such as BlackCat to administer the funds. Further, each state has specific criteria in which the transit providers are evaluated to determine funds administered. The transit providers always need to come up with their local match dollars and the states provide examples of match possibilities but also indicate other methods of match can be utilized as long as proper documentation is used.

12. BENEFITS OF TRANSIT SERVICES

Investments in transit services in North Dakota provide numerous benefits to transit users, communities, and the state. Rural and small urban transit agencies provide a vital service to their users, connecting them to health care, education, employment, shopping, social activities, and other important activities. Without transit, many who rely on the service would miss health care trips, have difficulties maintaining employment, and miss out on other important activities and opportunities. The lack of transit would have economic consequences for transit riders, as well as communities, and could also result in poorer health, increased health care costs, increased social isolation, and reduced overall quality of life.

Mattson et al. (2020) recently analyzed the benefits and economic impacts of transit in Greater Minnesota. They developed a method for measuring benefits and impacts of rural and small urban transit and applied it to six case studies in the state. For all six transit agencies studied, estimated benefits were found to exceed the costs of providing service. Benefit-cost ratios were found to range from 1.5 to 4.2, indicating that the benefits of transit ranged from \$1.50 to \$4.20 for every \$1 spent on transit. Across Greater Minnesota, benefit-cost ratios were found to equal 2.2 for rural transit and 2.9 for urban transit.

Given that the Minnesota study focused on rural and small urban transit, its methods and results are relevant to North Dakota. The potential benefits of transit in Greater Minnesota were conceptualized through a transit benefits assessment tree (Figure 12.1). Two main types of benefits were identified: societal benefits and economic impacts. Societal benefits include mobility benefits and efficiency benefits. If transit service was not available, transit users would either make the trip in some other way or forgo the trip. Mobility benefits are those of providing trips that otherwise would have been forgone, and efficiency benefits were those that originate from making trips with transit instead of by automobile or some other mode. Some of the societal benefits were measured in monetary terms and others were quantified in other ways.

Economic impacts include those from transit spending, improved access to shopping, and increased population in the community. Economic impacts were estimated by Mattson et al. (2020) using an input-output model, a quantitative economic model that traces the path of spending throughout the local economy. The societal benefits and economic impacts were estimated and reported separately. They could not be added because they represented different forms of analysis.

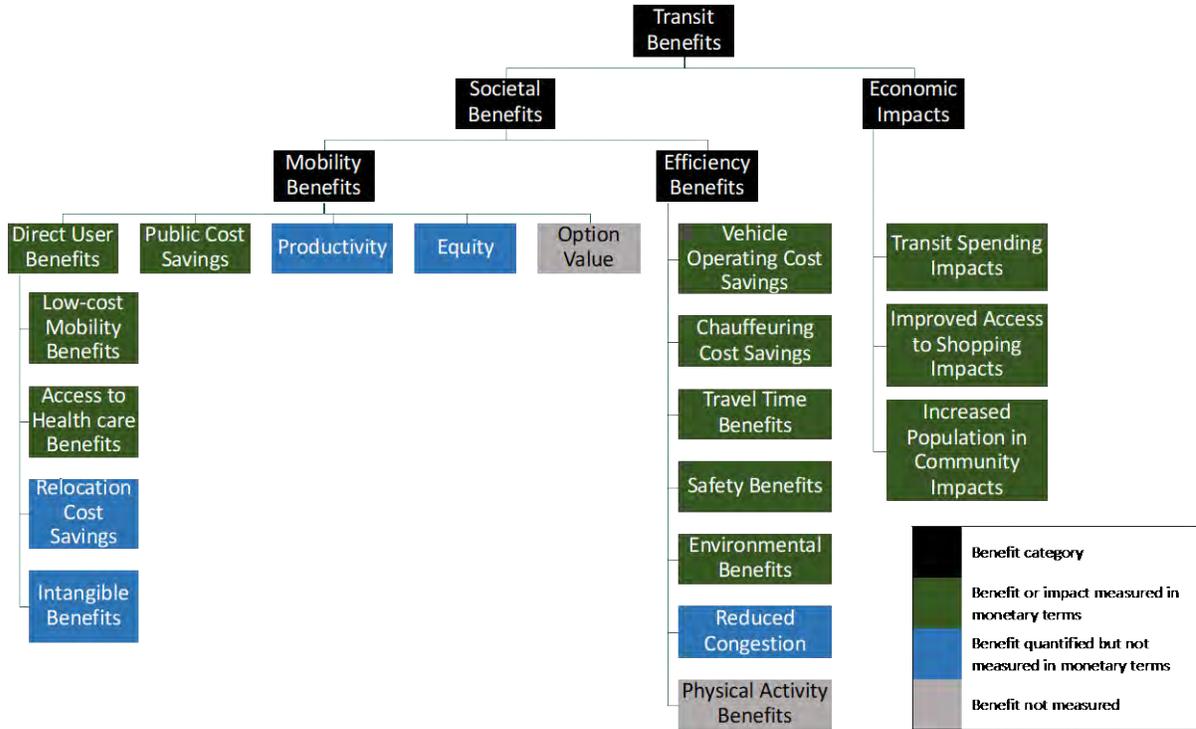


Figure 12.1 Transit Benefits Assessment Tree

A large share of the transit benefits found by Mattson et al. (2020) for Greater Minnesota was driven by the access to health care benefits. These benefits resulted from providing health care trips to riders who otherwise would not make these trips. Other benefits were also demonstrated. Work trips were the most common type of transit trip. Most riders traveling to work relied on transit as their primary means of transportation, and a majority reported they would not be able to keep their jobs without transit. Therefore, by improving access to work, transit reduced spending on public assistance that would be needed to support those who are unemployed. Shopping trips were another common type of transit trip. Shopping trips helped support local businesses and contributed to the local economy. Transit also allowed people to live where they preferred to live; and by keeping people living in small communities there were positive impacts to local economies. Spending on transit also provided jobs and stimulated local economic activity. There were also intangible benefits that were difficult to quantify. Transit was shown to support independent living and improve social connectedness. It was also shown to promote equity and quality of life by increasing access to a range of activities for transportation-disadvantaged populations.

Below are definitions of all the types of benefits and impacts.

Definitions of Benefits

Access to health care benefit	Reduced health care costs and improved quality of life resulting from providing transportation to someone who otherwise would have missed a health care trip.
Chauffeuring cost savings	Savings from riding transit instead of getting a ride from someone, which includes vehicle operating costs and the value of time for the driver.
Economic impact	Any effect of a policy or project on the economy of a designated project area.

Definitions of Benefits

Efficiency benefits	The benefits from making trips with transit instead of the automobile or some other mode.
Environmental benefits	The difference between the environmental costs of how transit trips would have been made in the absence of transit and the environmental costs of transit, including costs of air pollution and greenhouse gas emissions.
Improved access to shopping impacts	Economic impacts resulting from transit providing trips to local businesses that otherwise would not have been made.
Increased population in community impacts	Economic impacts resulting from transit keeping people living in the community and, therefore, spending money in the local economy.
Low-cost mobility benefits	Value to the user for having transit as a low-cost mobility option.
Mobility benefits	The benefits of providing trips that otherwise would have been forgone.
Option value	The value of having an option for future transit use.
Public assistance cost savings	Reduction in spending on public assistance programs resulting from transit providing increased access to work.
Relocation cost savings	Cost savings by allowing transit users to remain at their current residence.
Safety benefits	The value of the safety difference between transit and the alternative with no transit.
Societal benefits	Positive outcomes to society, including mobility benefits and efficiency benefits.
Transit spending impacts	Economic impacts resulting from the existence of transit operations, including jobs created by the transit agency, businesses that benefit from selling to the transit agency, and induced economic activity.
Travel time benefits	The value of the travel time difference between transit and an alternative mode.
Vehicle operating cost savings	Savings from riding transit instead of driving.

Data for the Minnesota study were collected through surveys of riders for the six case study agencies. The rider surveys conducted in North Dakota contained some similar questions that can be used to demonstrate the value of the service. The next section summarizes survey results from the North Dakota rider surveys that explore how riders use the service and the importance of transit. The following section will then apply methods from the Minnesota study and estimate benefits of North Dakota transit using data for North Dakota.

12.1 Rider Survey Responses

Many users of public transit in North Dakota use the service because they cannot drive or do not like to drive or do not have access to a vehicle, as shown in Figures 12.2 and 12.3. Many also use it because it is convenient and because they think it is important to be independent. Others say they use transit because it is too difficult to get a ride from others or because it saves them money. A smaller percentage say they ride because they enjoy the social interaction or think it is good for the environment.

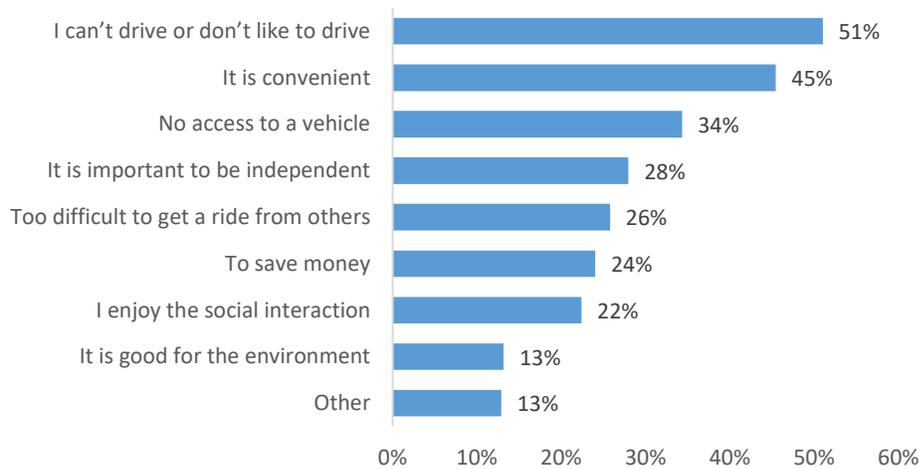


Figure 12.2 Reasons Given by Rural Transit Riders for Using Transit

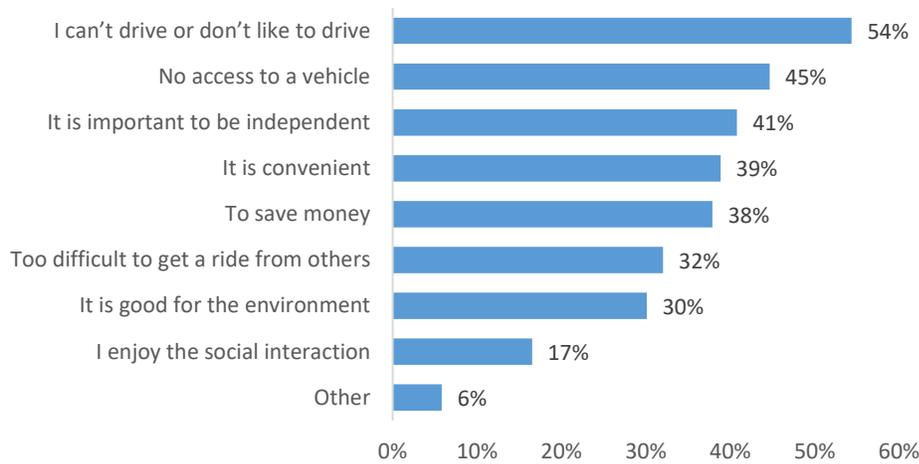


Figure 12.3 Reasons Given by Urban Transit Riders for Using Transit

A majority of transit riders are frequent users of the service, riding multiple times per week, as shown in Figures 12.4 and 12.5. This is especially true for urban transit, where about half said they ride transit at least five days per week. These results show that many riders rely on transit as a primary means of transportation.

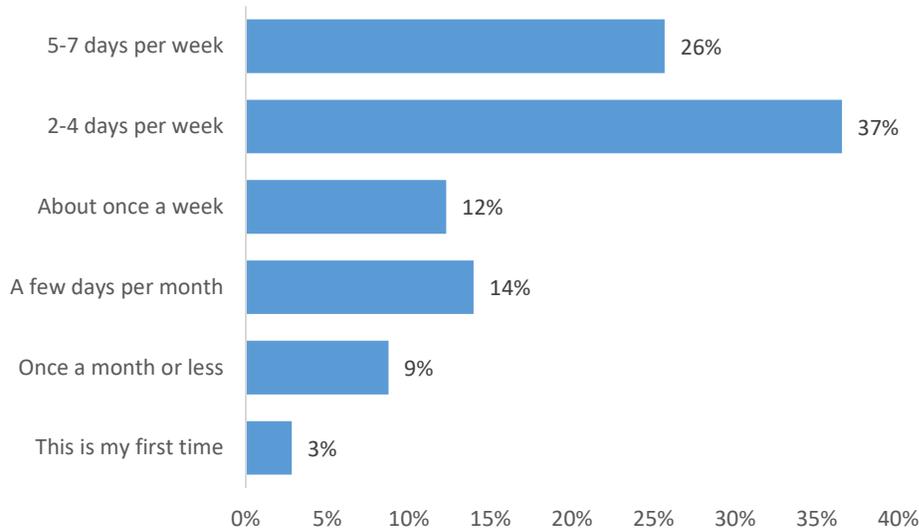


Figure 12.4 Frequency of Transit Use, Rural Riders

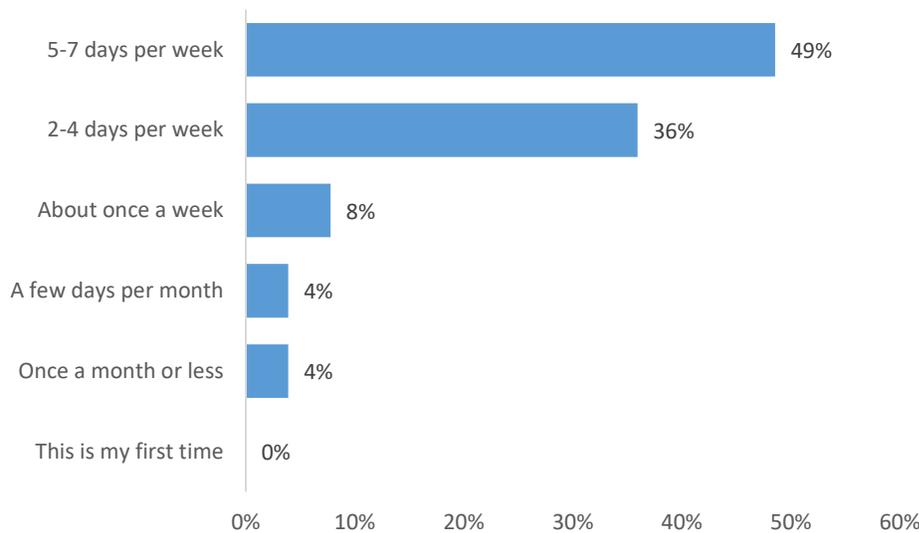


Figure 12.5 Frequency of Transit Use, Urban Riders

Respondents were asked to identify the different trip purposes for which they ride transit. As shown in Figure 12.6, 57% of rural riders use transit for health care trips, 38% for shopping or eating out, 29% for work, and smaller percentages for other purposes. Because work trips are more frequent than health care or shopping trips, rural transit likely provides more trips for work than any other purpose. Results show that work trips, health care trips, and shopping trips are common trip purposes for both rural and urban transit. A higher percentage of urban transit riders reported using transit for work, shopping, errands, social or recreational trips, and school trips, as compared to rural riders. Because, as previously shown, nearly half of Fargo transit trips are made by college students, and because college students were

underrepresented in the survey, these results likely underestimate school trips for urban transit by a significant amount.

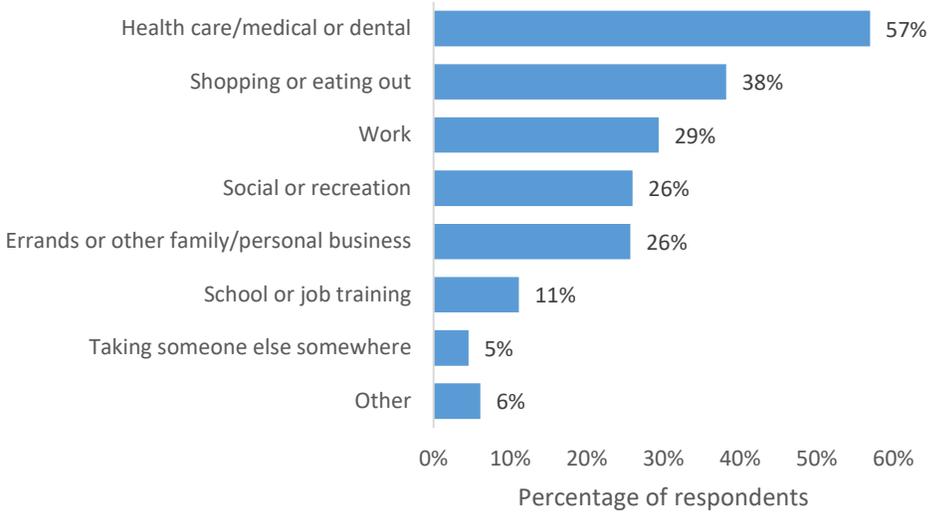


Figure 12.6 Percentage of Rural Transit Riders Surveyed Using Transit for Different Purposes

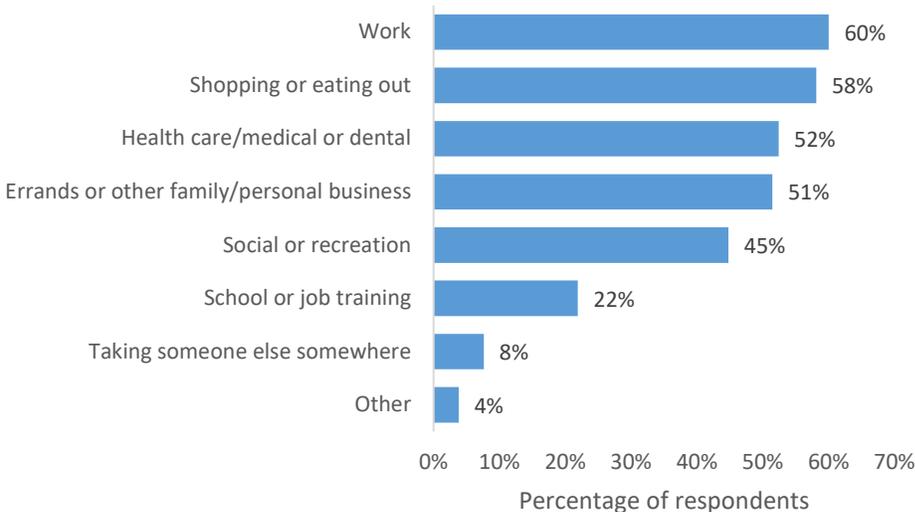


Figure 12.7 Percentage of Urban Transit Riders Surveyed Using Transit for Different Purposes

To understand the benefits of transit requires and assessment of how travel behavior would change if transit was not available. If transit was not available, would riders miss trips? If so, what types of trips and how often? Would riders still make their trips some other way? If so, what are the costs of making the trip a different way? To help answer those questions, the survey asked riders to identify how or if they would have made the trip they were taking if transit was not available (Figures 12.8 and 12.9). Among rural respondents, 26% said they would not have made the trip, and 34% of urban riders said the same. Among those who said they would still have made the trip, many would have relied on a family member, friend, or someone else to provide a ride. Many urban transit riders said they would have walked. Some, including both rural and urban riders, would have taken a more expensive taxi, Uber, or Lyft. Only 5% of urban riders and 12% of rural riders would have driven themselves.

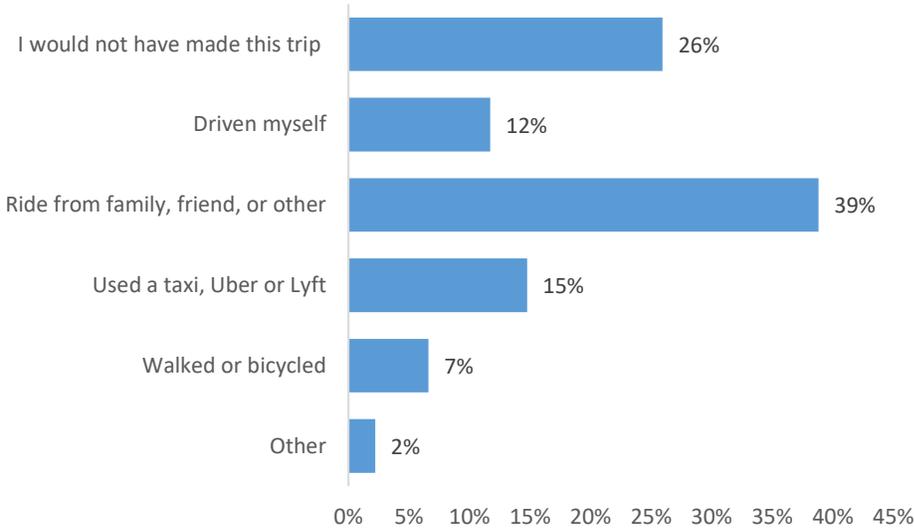


Figure 12.8 How Rural Transit Riders Would Have Made Trip if Transit Was Not Available

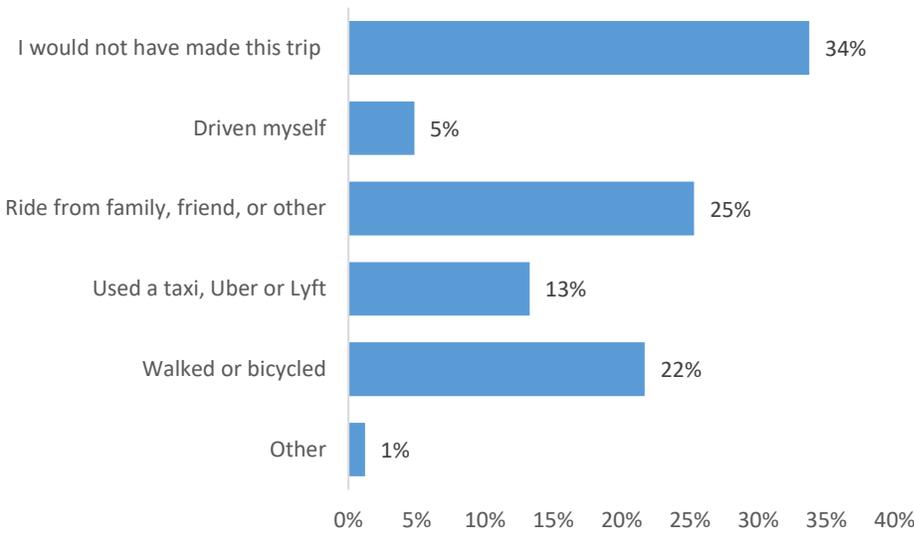


Figure 12.9 How Urban Transit Riders Would Have Made Trip if Transit Was Not Available

12.2 Measurement of Societal Benefits of Transit in North Dakota

The model developed by Mattson et al. (2020) for the Minnesota study was used to estimate the societal benefits of transit in North Dakota. While the model was developed for Greater Minnesota, it can be transferable to North Dakota. Operating and financial data for 2018 for North Dakota's transit systems were used in the model, and adjustments were made to the model based on rider survey responses regarding expected travel behavior in the absence of transit and trip purpose data. Some of the input data were derived from Minnesota, such as data for public assistance cost savings and crash rates, so those results can only be viewed as approximations.

Estimated monetary benefits for rural transit are shown in Table 12.1, and a comparison of the total benefits to costs are provided in Table 12.2. Total benefits are estimated to be \$18.5 million, and the benefit-cost ratio is estimated to be 1.5. This means that every dollar invested in rural transit yields \$1.50 in benefits. Results for urban transit are presented in Tables 12.3 and 12.4. Urban transit benefits are estimated at \$30.3 million, with a benefit-cost ratio of 1.7. A large share of these benefits are from improving access to health care. Without transit, many health care trips would be missed, which results in reduced quality of life and increased health care costs, as missed health care trips often lead to more expensive care later on.

Table 12.1 Estimated Monetary Benefits of Rural Transit in North Dakota

	Total	Per trip
<i>Mobility Benefits</i>		
Low-cost mobility benefit	\$661,449	\$1.00
Access to health care benefit	\$15,970,554	\$24.24
Public assistance cost savings	\$1,160,277	\$1.76
<i>Efficiency Benefits</i>		
Vehicle operating cost savings	\$7,383	\$0.01
Chauffeuring cost savings	\$2,290,088	\$3.48
Travel time impacts	-\$1,055,621	-\$1.60
Safety benefits	\$115,435	\$0.18
Environmental benefits	-\$675,076	-\$1.02
Total	\$18,474,488	\$28.04

Table 12.2 Comparison of Rural Transit Benefits and Costs

	Total	Per trip
Total Benefits	\$18,474,488	\$28.04
Costs	\$12,545,933	\$19.04
Benefit-cost ratio	1.5	

Table 12.3 Estimated Monetary Benefits of Urban Transit in North Dakota

	Total	Per trip
<i>Mobility Benefits</i>		
Low-cost mobility benefit	\$867,941	\$0.42
Access to health care benefit	\$23,211,923	\$11.36
Public assistance cost savings	\$3,616,758	\$1.77
<i>Efficiency Benefits</i>		
Vehicle operating cost savings	\$1,593	\$0.00
Chauffeuring cost savings	\$1,938,449	\$0.95
Travel time impacts	\$1,159,575	\$0.57
Safety benefits	\$14,551	\$0.01
Environmental benefits	-\$475,967	-\$0.23
Total	\$30,334,823	\$14.85

Table 12.4 Comparison of Urban Transit Benefits and Costs

	Total	Per trip
Total Benefits	\$30,334,823	\$14.85
Costs	\$18,234,645	\$8.93
Benefit-cost ratio	1.7	

Transit provides other benefits that were not quantified in dollar terms. These include relocation avoidance, intangible user benefits, increased productivity, and equity. Mattson et al. (2020) estimated that 23% of rural transit riders and 45% of urban riders in Greater Minnesota would relocate if transit was not available, including many who would move to a different town or city and some who would need to move to an assisted living facility. They also found that transit has intangible benefits for users by improving social connectedness, reducing stress, allowing for independent living, and improving overall quality of life. Increased productivity is a result of the improved access to work and education, which is demonstrated by the high percentage of riders that rely on transit for those purposes. Another important benefit of transit is that it promotes equity by serving populations not well served by other transportation options. Transit serves a disproportionately higher percentage of low-income individuals, those without access to a vehicle, people with disabilities, minorities, and older adults.

12.3 Economic Impacts of Transit

Separate from these societal benefits are the economic impacts to local economics. Transit impacts local economies in several ways. Economic impacts include those from transit spending, improved access to shopping, and increased population in the community.

12.3.1 Economic Impacts from Transit Spending

The impacts from transit spending are those that result from the existence of transit operations, including direct effects, indirect effects, and induced economic activity. The direct effect includes jobs created directly by the transit system – drivers, dispatchers, mechanics, bookkeepers, program directors, etc. The indirect effect results from jobs and income spent in industries that supply inputs or services to public transit such as fuel, repairs, insurance, etc. Induced economic activity results from the income generated through both the direct and indirect effects. These induced effects occur when the people who work for the transit system or the businesses indirectly affected by transit spend their new income in the community. This spending supports additional jobs in the local economy. These economic impacts can be estimated for any transit agency using the TRED Transit Calculator, an online software tool developed by TREDIS, which can be accessed from the APTA website and is available for free to any APTA member.

While government investment in other activities could also generate jobs, income, and economic activity, investment in transit is particularly effective in generating economic impacts because labor costs represent a large majority of transit costs, and transit employees typically live within the communities they serve. Therefore, dollars spent on transit are likely to stay within the local community.

12.3.2 Economic Impacts from Improved Access to Shopping

Transit also impacts the local economy by improving access to local businesses for those who cannot or do not drive. To estimate these impacts, rider surveys collected information about the number of transit trips, such as for shopping and restaurants, that support local businesses and otherwise would not have been made had transit not been available. The surveys conducted in Minnesota by Mattson et al. (2020) collected additional information to estimate the impacts of shopping trips, such as average spending per trip and the percentage of local shopping trips that would be diverted to out-of-state online sales if transit were not available. Based on these data, estimates were made for the average amount of spending made on shopping trips to estimate total new spending in the community. Then, economic multipliers were used to estimate the overall impacts of this increased spending. The analysis estimated total jobs supported, labor income, and value added. Value added includes labor income, taxes, and other income or profit.

Table 12.5 shows the estimated economic impacts of total shopping trips made by transit riders in North Dakota. Some of these shopping trips would still occur if transit was not available, but some would be lost to out-of-state online shopping. Table 12.6 estimates the economic impacts of shopping supported by transit that would have occurred online if there were no transit.

Table 12.5 Economic Impacts of Total Shopping Trips Made by Transit Riders in North Dakota

	Rural	Urban	Total
Earnings (\$)	155,965	270,419	426,384
Jobs	6	11	17
Value Added (\$)	326,023	565,273	891,296

Table 12.6 Economic Impacts in North Dakota of Shopping That Would Have Occurred Online

	Rural	Urban	Total
Earnings (\$)	22,615	51,380	73,995
Jobs	1	2	3
Value Added (\$)	47,273	107,402	154,675

12.3.3 Economic Impacts from Keeping People Living in the Community

Transit can further impact the local economy by allowing residents to continue living in the community. Without transit, some may need to move to another city with improved access to amenities. Transit, therefore, supports population, which then supports the local economy. Based on survey responses in Minnesota, Mattson et al. (2020) found that 7% to 21% of transit riders, depending on the transit agency, would move to another town or city if the bus service was not available in their community. Similar data were not collected for North Dakota, but it could be assumed that responses in North Dakota would be similar. Based on this estimate of the number of transit riders that would move out of their communities and survey data collected regarding the average income of transit ridership, estimates were made for the economic impacts of keeping people living in the community, following Mattson et al. (2020).

Results are shown in Table 12.7. An estimated total of 138 jobs are supported, with total earnings of \$5.0 million and value-added of \$9.6 million. Note that this is a sum of all impacts in communities across North Dakota where transit exists. It should not be interpreted as statewide impacts because some of those who decide to move may move somewhere else within North Dakota. Results show how transit supports local economies by keeping people living and spending money in the community.

Table 12.7 Sum of Economic Impacts in Local Communities from Keeping People Living in the Community

	Rural	Urban	Total
Earnings (\$)	1,039,853	3,955,463	4,995,316
Jobs	29	110	138
Value Added (\$)	1,997,323	7,597,552	9,594,875

13. CONCLUSIONS

This study analyzed population and demographic trends in the state of North Dakota to identify areas with the greatest current needs for mobility services and areas expected to have the greatest increases in demand. Population has been growing the fastest in the urban areas and the western oil region. These areas are generally experiencing the greatest need for increased services.

Many rural counties outside of the oil region have had stagnant or declining populations. However, the demographics of these areas often create a need for transit services. The study presented county-level data for the percentage of population aged 65 or older, percentage of population below the poverty level, percentage of population with a disability, and percentage of workers without a vehicle. High concentrations of these transportation-disadvantaged populations create a need for transit. Results showed that the highest population shares for older adults, people with disabilities, and those in poverty are mostly in rural counties. The mobility needs index takes into consideration all of these factors to identify areas that have the greatest demand for transit.

An analysis of existing service levels and survey responses from transit agencies, stakeholders, and transit riders identified service gaps and needs for improvement. Results from transit agencies, stakeholders, and riders consistently identified the greatest needs for improvement as being an increase in the number of days of service and the hours of service per day. A need for weekend service or Sunday service was often identified as a need. Other areas also have needs for increased service on weekdays. Many rural areas of the state have service fewer than five days per week, including many areas where service is provided just one day per week, and in some cases less than weekly. Respondents in both urban and rural areas also identified the need for service starting earlier in the morning and running later into the evening to serve a wider range of trip purposes. In particular, many potential transit riders work early in the morning, late at night, or on the weekends, and existing services do not meet their needs.

Service levels in different regions of the state were studied to identify service gaps. Among the rural transit regions, the Red River Valley and the Northwest region, along with Walsh County and Dickey County, were identified as the areas with the greatest need for increased services.

Service levels in the rural areas of the Red River Valley region were found to be well below the benchmarks. Many of these areas have service just one day per week or less than weekly. Further, much of the region has service less than five hours per day, while all rural areas have service less than nine hours. Many of the stakeholder respondents were from this region, and they commented on how existing transit services are not adequate to meet the needs of the region. Additional service is needed within these rural communities and also to and from Fargo and Grand Forks.

Population has grown significantly in the Northwest region, but transit services have not increased to meet the demand. Service levels in this region are also well below the benchmarks. Other regions that have experienced population growth, such as Stark County, Souris Basin/Minot, and West River/Sioux have higher levels of service but still have service gaps and unmet needs. The cities of Williston and Dickinson both have populations exceeding 20,000, but neither have a fixed-route system.

Within the urban areas, the greatest identified need was improved fixed-route service in Bismarck-Mandan, as its service levels are well below the benchmarks. Investments will need to increase in all urban areas as populations continue to grow and demands increase. Outside of the oil region, population growth rates have been the highest in Cass and Burleigh counties.

An increase in annual operating funding statewide of \$5.3 million is needed in the base scenario to meet the service gaps for both urban and rural transit. By 2030, the projected need in increased annual funding is \$14.4 million statewide. For rural transit, this represents an increase in funding of 21% for the base case and 55% by 2030. For urban transit, this is an increase of 14% for the base and 46% by 2030.

In addition to needs for increased operating spending, additional vehicles will need to be purchased to provide the expanded service. Meeting the base scenario target levels requires an additional 57 vehicles statewide, at a cost of \$10.1 million, and meeting the 2030 scenario requires 152 new vehicles at a cost of \$25.7 million. If it is assumed that federal share of vehicle purchases is 80%, then the cost to state and local jurisdictions is \$2.1 million for the base scenario and \$5.1 million for 2030. These new vehicle costs are above the vehicle replacement costs needed to keep the current fleet in a state of good repair. The cost of replacing the backlog of vehicles is estimated to be \$7.6 million, with the non-federal share being \$1.5 million.

Other passenger transportation services are also provided in the state to help meet the mobility needs of North Dakota residents. Taxi services are available in the larger cities. Uber and Lyft are available in many areas of the state. However, these services are often too expensive for many. Transit riders are predominately low income, and they cannot afford to rely on other forms of transportation. Taxis and TNCs might be able to meet some trip demands, but a low-income person could not rely on them to get to work every day or for other needed trips. Further, most of these vehicles are not wheelchair accessible.

Jefferson Lines and Amtrak provide intercity bus and rail services, respectively, across the state. However, the reach and frequency of these services is limited. Many of the regional rural transit systems provide trips between cities, including to and from the larger cities in the state. However, this was identified by stakeholders as one of the areas of greatest need for improvement. Residents in smaller communities and rural areas need improved transportation services to larger cities, especially for medical appointments.

The study showed that public transportation in North Dakota serves riders who are mostly low income. Many have a disability, and many either cannot drive or do not have access to a vehicle. A large share of rural transit riders are older adults. Urban transit, particularly in Fargo, serves a large share of students. These populations are not as well served by other transportation options, and they would be disproportionately impacted if transit services decreased or did not exist.

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APPENDIX A. NORTH DAKOTA TRANSIT AGENCY SURVEY

Organization name: _____

What types of transportation services does your organization provide (check all that apply)?

- Demand-response for the general public
- Traditional fixed-route
- Flexible route
- ADA complementary paratransit
- Limited-eligibility demand-response (serving only certain rider groups)
- Human service transportation (for clients of human service programs)
- Veterans transportation

Which counties' residents does your organization serve?

Describe your service in the counties you serve. First, identify how many days per week service is available for the towns or cities shown below. (Note: the survey presented to transit agencies listed the towns and cities within the counties they selected.)

Next, identify how many hours service is available per service day (for a typical weekday).

How is your ADA paratransit service area defined?

- Operate within 3/4 mile of fixed-route system
- Operate within some other distance of the fixed-route system, please indicate distance:
- Operate within city limits
- Other, please describe your service area: _____

Who is eligible to use your demand-response or paratransit service (check all that apply)?

- General public
- People with disabilities
- Senior citizens
- Other, please specify: _____

If you provide multiple types of demand-response service with different eligibility requirements, please explain: _____

How far in advance must a rider schedule a demand-response or paratransit trip (check all that apply)?

- Up to 1/2 hour
- More than 1/2 hour and up to 2 hours
- More than 2 hours but still same day
- 24 hours in advance, or prior service day
- 48 hours, or 2 days, in advance
- More than 48 hours in advance and up to 1 week
- More than 1 week in advance, and up to 2 weeks
- More than 2 weeks

Is the minimum advance reservation time the same for all areas that your organization serves?

- Yes
- No, please explain: _____

Please specify the approximate percentage of demand-response trip requests you have to turn down due to lack of capacity.

- 0-1%
- >1-3%
- >3-5%
- >5-10%
- More than 10%
- Do not know/do not collect data

Please describe the current fares you charge for your demand-response or complementary paratransit service (leave sections blank if not applicable).

One-Way Trip Distance	Rider Category		
	Youth	Adults	Seniors
In town	<input type="text"/>	<input type="text"/>	<input type="text"/>
Out-of-town up to 15 miles	<input type="text"/>	<input type="text"/>	<input type="text"/>
16-30 miles	<input type="text"/>	<input type="text"/>	<input type="text"/>
31-45 miles	<input type="text"/>	<input type="text"/>	<input type="text"/>
46-60 miles	<input type="text"/>	<input type="text"/>	<input type="text"/>
61-75 miles	<input type="text"/>	<input type="text"/>	<input type="text"/>
76-100 miles	<input type="text"/>	<input type="text"/>	<input type="text"/>
More than 100 miles	<input type="text"/>	<input type="text"/>	<input type="text"/>

Provide any additional information about your fares, if necessary: _____

Please describe the facilities you currently use for maintenance, vehicle storage, and administrative functions. Indicate if you own facilities for these purposes and the size and capacity of these facilities.

Maintenance facilities:

Vehicle storage:

Administrative:

Describe the adequacy of your facilities for meeting current and expected future needs (within the next five years).

	Inadequate for current needs	Adequate for current needs but inadequate for expected future needs	Adequate for current and expected future needs	Not applicable
Maintenance facilities				
Vehicle storage facilities				
Administrative facilities				
Passenger facilities				

If facility upgrades are currently needed or expected to be needed, please explain the types of upgrades needed:

Are there any types of transportation services needed by your service area residents that are not currently available?

- Yes
- No
- Not sure

Please identify the types of services needed (check all that apply).

- New origin-to-destination service
- New group pickups
- New fixed-route service
- New intercity service/service to other towns or cities
- Expansion of currently available services
- Weekend service
- Longer hours of service
- Other, please explain: _____

What is the main challenge or barrier to providing these additional services?

Describe your staffing capabilities:

- Inadequate staff to meet current needs
- Adequate staff to meet current needs, but additional staff needed to meet expected future needs (within the next five years)
- Adequate staff for current and expected future needs

Describe current or expected future staffing needs (within the next five years):

What is your starting wage rate for vehicle operators? _____

Overall, how well are the transportation needs of your service area residents being met?

- Very well
- Well
- Adequately
- Poorly
- Very poorly

Explain your response to the previous question.

What sources of funds are used to fund your agency's transit services?

Do you have any examples of innovative or unique funding strategies your agency has pursued either currently or in the past? Please elaborate on the process and outcomes.

Please list other providers of transportation services in your area that you know about, including public providers or private companies.

Please provide any additional comments about the needs of your agency and your service area residents, the issues or challenges you are facing, funding levels, etc.

APPENDIX B. STAKEHOLDER SURVEY AND RESULTS

Organization Name:

Organization Name:

Centre Inc.

Anne Carlsen

Community Action Partnership

Southeast Human Service Center

City-County Health District

Anne Carlsen Center

Grand Forks Public Health Dept.

Kidder County District Health Unit

Community Living Services

Sargent County District Health Unit

Bismarck-Burleigh Public Health

McIntosh District Health Unit

Walsh County Health District

Dakota Center for Independent Living

Opportunity Foundation, Inc.

Minot Commission on Aging

Traill District Health Unit

Burleigh County Senior Adults Program

South Valley Special education unit

Community Action Program Region VII, Inc.

Poppy's Promise

Open Door Center

Sehsc

CHI Friendship

Southeast Human Services

Anne Carlsen Center-Region 5

Southeast Human Service Center

Independence, Inc.

Senior Companions

SEHSC

Sanford Health

Southeast Human Service Center

Department of Human Services

South East Human Services

Fargo VA Healthcare System

Richland County Social Services

Southeast Human Service Center

RSR Human Service Zone

Southeast Human Service Center

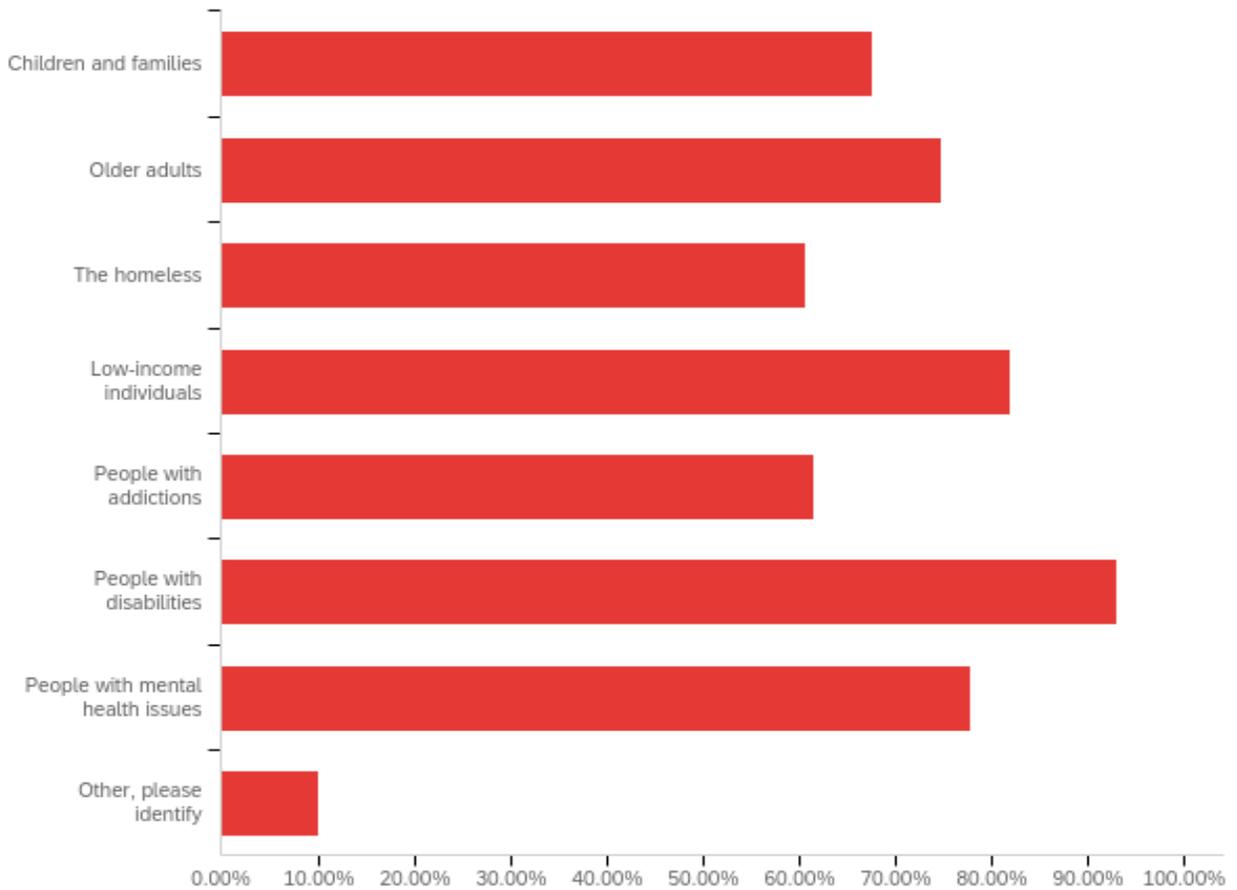
Freedom Resource Center (CIL Wahpeton)

RSR Human Service Zone

VA

Human Services
ABLE, Inc.
Easter Seals Goodwill
RSR Human Service Zone
Community Medical Services
Northland PACE
Pediatric Therapy Partners
Lutheran Social Services ND, RSVP Program
Sanford Health
Southeast Human Service Center
Fargo VA
ND DVR
Southeast Human Service Center
Southeast Human Service Center
Southeast human services
SEHSC
ShareHouse, Inc.
SEHSC
Southeast Human Service Center
Southeast Human Service Center
SEHSC
LSSND
NDVR
SEHSC
Cass County Sheriff's Office
SEHSC
Southeast Human Service Center
SEHSC
FirstLink
ND Dept of Human Services, Division of Vocational Rehabilitation
Southeast Human Service Center
Southeast Human Service Center
SEHSC
Southeast Human Resource
Southeast Human Service Center
Community Action Partnership
LISTEN Inc.
LISTEN, Inc.
Triumph, Inc.
HAV-IT Services
Lake Region Corporation
Dakota Prairie Community Action Agency
Success Unlimited, Inc.
Red River Human Services Foundation
ABLE, Inc.
Community Action Partnerhsip-Minot Region
Community Action region VI

What populations does your organization serve? (Check all that apply.)



#	Answer	%	Count
1	Children and families	12.84%	67
2	Older adults	14.18%	74
3	The homeless	11.49%	60
4	Low-income individuals	15.52%	81
5	People with addictions	11.69%	61
6	People with disabilities	17.62%	92
8	Other, please identify	1.92%	10
7	People with mental health issues	14.75%	77
	Total	100%	522

Other, please identify

Potentially, the entire population of Valley City/Barnes County

Inmates at local county jail

All Traill County Citizens

People with a brain injury, children with autism.

Veterans

Early intervention

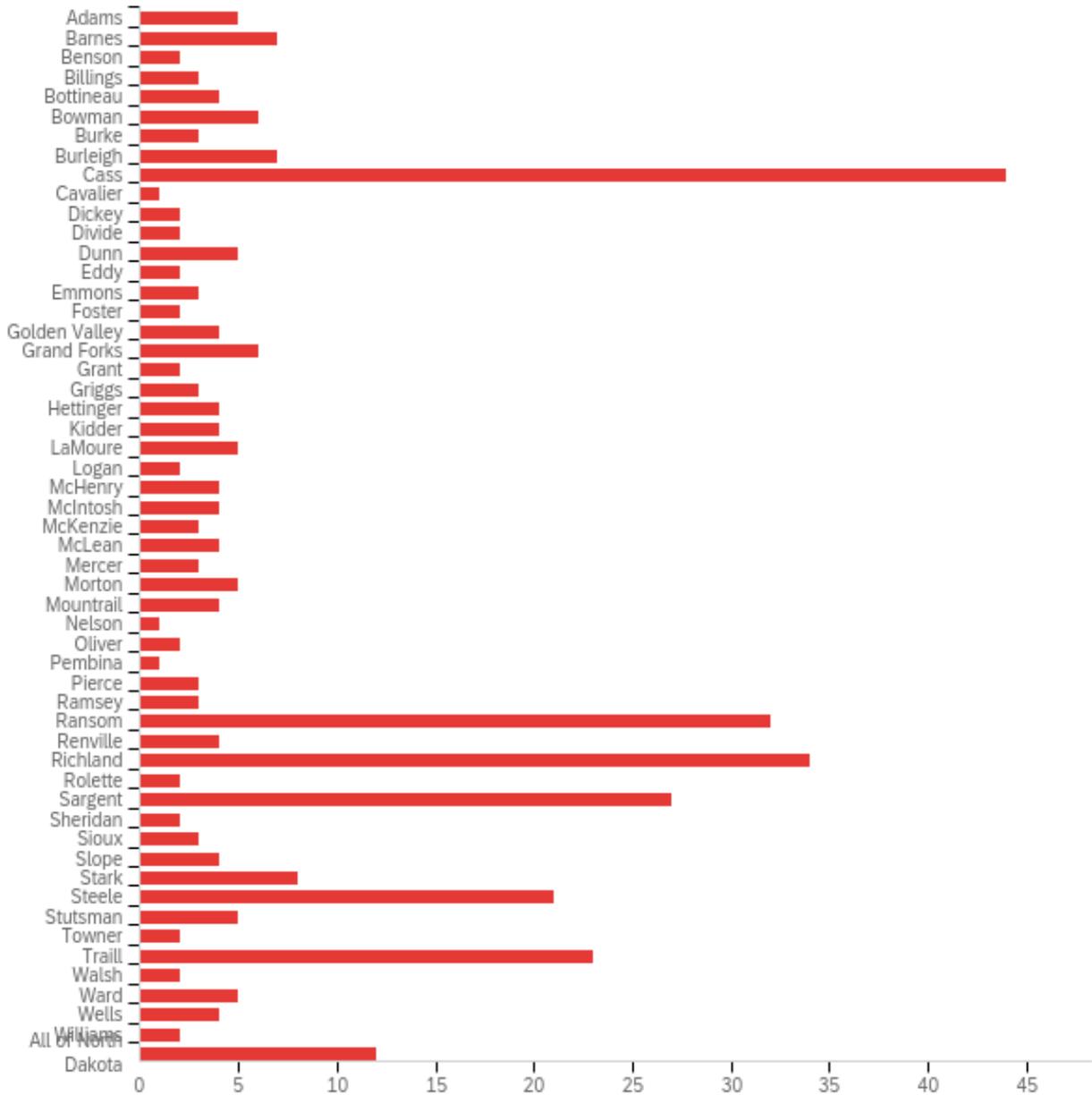
All clients are Veterans who are enrolled in VA Health Care.

New Americans

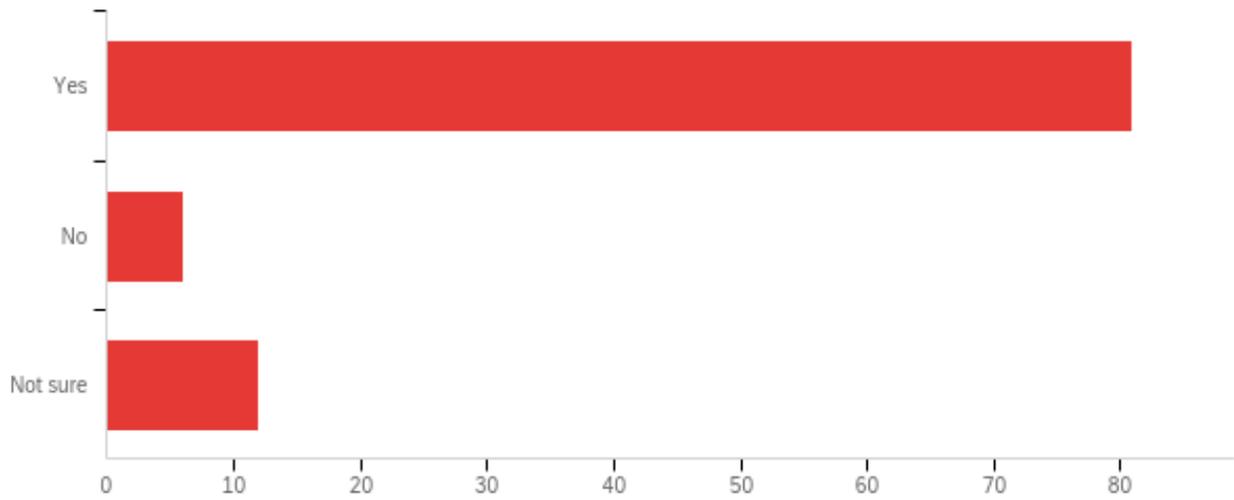
justice involved

anyone

Which counties' residents does your organization serve?



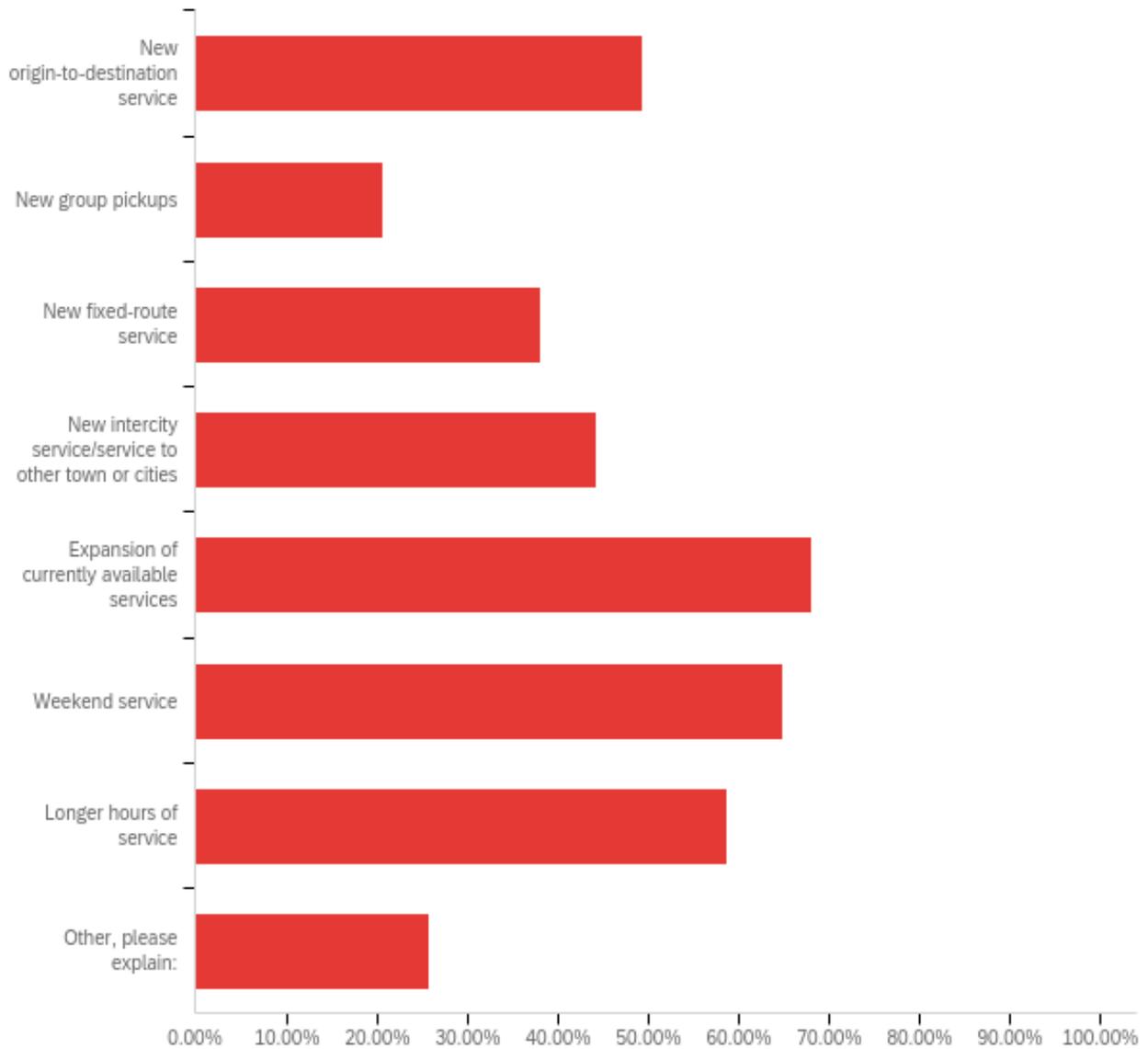
Are there any types of transportation services needed by your clients that are not currently available?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Are there any types of transportation services needed by your clients that are not currently available?	1.00	3.00	1.30	0.67	0.45	99

#	Answer	%	Count
1	Yes	81.82%	81
2	No	6.06%	6
3	Not sure	12.12%	12
	Total	100%	99

Are any of the following types of services needed by your clients (check all that apply)?



#	Answer	%	Count
1	New origin-to-destination service	13.37%	48
4	New group pickups	5.57%	20
5	New fixed-route service	10.31%	37
6	New intercity service/service to other town or cities	11.98%	43
7	Expansion of currently available services	18.38%	66
8	Weekend service	17.55%	63
9	Longer hours of service	15.88%	57
10	Other, please explain:	6.96%	25
	Total	100%	359

Other, please explain:

Veteran travel to VA Hospital in Fargo for appointments

South Central Adult Services meets the needs of most clientele, but there is sometimes a long wait while school children are being ferried to other locations.

Sunday services, services to newer developed areas within town

Patient complain that when they go to Bismarck, Jamestown, etc,,,they are "stuck" there all day and it can be very long for them.

Walsh County Transportation does a great job for people to get to appointments and shopping. There are people who need rides to specific appointments that don't fit the county van schedules.

Longer holiday and sunday service for fixed and paratransit

I think we could always use better, longer and more services, but also realize this comes at a cost

People with needs outside hours of service for County transportation include dialysis, same day surgery

More wheelchair spots on the bus

free transportation

A service such as he one provided by Productive Alternatives in Breckenridge. The Valley Senior Services states they provide that service or similar, they do not

Transportation from outlying rural towns to larger towns (Wahpeton, Fargo, etc). Transportation from Wahpeton to Fargo.

transportation to medical appointment to Fargo from rural area

There is simply nothing affordable available.

Help with medical appts

More vendors who provide wheel chair van services reimbursed by Medicaid.

More then one stop for parent and child transfers..

Low cost cab

many individuals require public transit for grocery/personal needs shopping and limits of how many bags/items can accompany a person using public transit is a barrier requiring individuals to make more trips or buy smaller quantities that are less economical.

Rural transportation to get groceries, doctors appointments

Supportive public transportation for also having groceries (i.e food pantry gives lots of food)

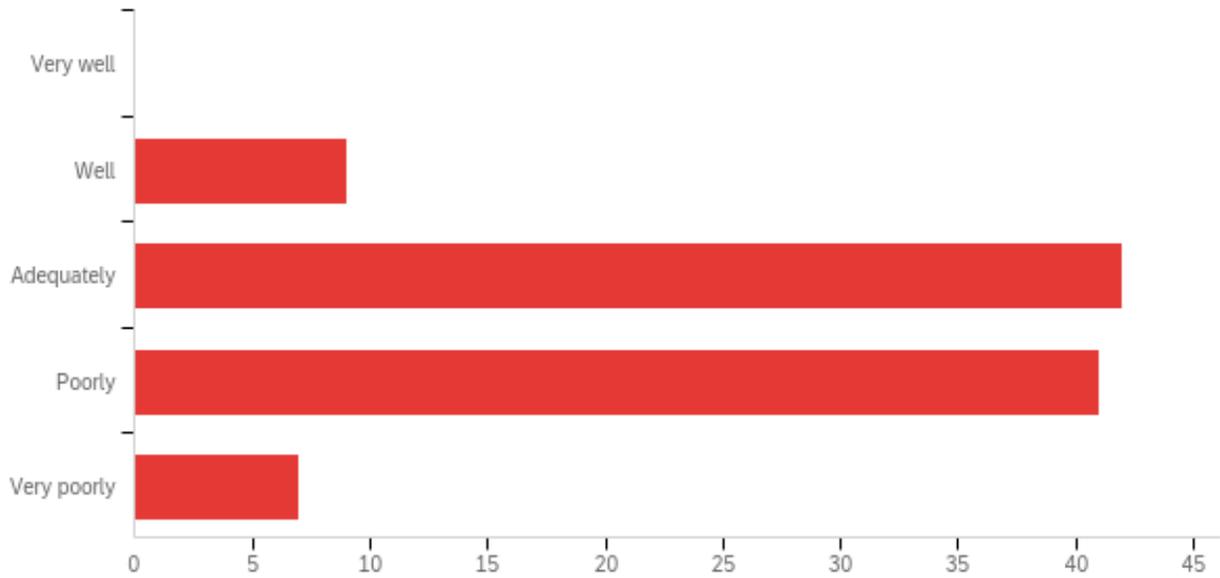
funding to support transportation

pretty well met, some services through city can be short staff sometimes

accessibility for disabled

Transportion needs are met by our agency vehicles and thje fargo bus system.

Overall, how well are the transportation needs of your clients being met?



#	Field	Minimum	Maximum	Mean	Std Deviation	Variance	Count
1	Overall, how well are the transportation needs of your clients being met?	2.00	5.00	3.46	0.76	0.57	99

#	Answer	%	Count
1	Very well	0.00%	0
2	Well	9.09%	9
3	Adequately	42.42%	42
4	Poorly	41.41%	41
5	Very poorly	7.07%	7
	Total	100%	99

Explain your response to the previous question and provide any additional comments regarding the transportation needs of your clients.

During the summer our clients work construction. Most jobs are closer to the edges of town are they are expected to be to work around 6:30 am. The busses do not run until 6 am and therefore will not get to the edge of town by 6:30 am, nor do they get farther out there. Clients also work on weekends/Sunday in particular. The TAP ride has been effective for our clients that work in the industrial area and if that could be attempted for a Sunday to gauge interest for Sunday rides that would be beneficial for our clients.

The transportation services in the area are expensive and limited to the larger counties, mainly Stark. The rural areas have no transportation services and if they use the ones in the main area, the cost is too much to outweigh the benefit of using the transportation. The biggest thing we get calls for transportation needs is for medical appointments due to the lack of access to specialists and veteran healthcare. Most doctors are in either Bismarck or Fargo. Some veterans choose to go to Sturgis South Dakota area to the VA Hospital there. Regardless of reasons, due to healthcare plan restrictions, individuals are unable to get the health care they need in the local area and need to travel. The cost of that travel is too much for low income families and they are unable to then get the care they need.

Our clients are low income. Other than the city bus, there is not a great transportation system for our clients to utilize. We transport as we are able, but it pull staff away from services for other clients.

Please refer to the "other" explanation above regarding wait time during after school hour.

Lack of service on weekends and holidays. Bus service ends at 9pm and the people we support would benefit from extended hours.

Many clients need to be able to bring multiple bags on buses for grocery shopping and this is not allowed. Longer hours of service and weekend hours for shift work in more remote areas. New Americans have manufacturing jobs at the fringes of city borders and have challenges with service that lines up with shifts.

Current transportation hours: Tuesday to Bismarck: arrive at 10:30 and leave at 3:15 Pick up locations: Pettibone, Robinson, Tuttle, and Coffee Cup in Steele. Thursday to Bismarck: arrive at 10:30 and leave at 3:15 Pick up locations: Tappen Standard Oil Co, Dawson Café, and Steele Senior Center Second Wednesday of each month to Bismarck: arrive at 9:30, leave at 12:00 p, Jamestown: 3rd Wednesday of each month - north route only: arrive at 10:30 depart at 3:15 Some residents have difficulties to get a ride to the pickup points, find it hard to schedule appointments during these times

Some transportation needs are being met. MAT bus and MAT paratransit are sufficient, and even great for, some people we support. The limited days and the lack of routes (especially in "new" south Fargo) negatively affect people choices for living and working.

We have no mass transit, taxi service, uber or lift services within out county. All clients are responsible to get themselves to and from appointments. Those without a vehicle or driver's license must rely on family or friends to assist them.

Clients in need of transportation are at the mercy of the Transit and bus system and the system's schedule rather than that of the individual. This is not convenient for appointments, work schedules, etc. especially if there are children that need to get to daycare prior to going to work.

It would be nice to have another type of transportation for longer distances where people didn't have to be up there all day. Or possibly the main bus that goes up could do a half way meeting point to another bus that could take clients home from the morning so they don't have to stay the entire day when they don't have anymore appointments.

It would be great to have some type of Taxi or Uber service for people to use when their vehicles don't start or when they need to go to an appointment that is not part of the regular county transport schedules. There are low income people who get rides from others and who "wear out" their resource people and will call to cancel appointments due to no transportation. Some sort of voucher program, as I know many could not pay a taxi or Uber.

the fixed route service does not run on Sundays or holidays and quits running at 7-730pm the other days. With Bismarck growing the paratransit needs to expand it's services delivery are along with fixed route.

Transportation costs are a little high for some of the individuals that we support.

In Region II I think we have a great rural and city transit system, could it be improved of course because if you are not looking at offering better services, you're going backwards. Fixed bus routes could use early morning and later hours to better serve the public. Our rural routes could be available more days but again there is a cost factor that has to be address when you increase services.

Poorly may be too strong of descriptor. Our transportation services are not well marketed to citizens under age 65.

Fixed routes too far to walk to / from origin/destination. Long wait times for pick up on Transit, then if they miss ride b/c they need to use restroom or something, they get left. Must be 70 to use Transit - Leaves out 60 - 69 year olds that need Transit. Senior Center started its own Shuttle in February of 2018 for people coming to Senior Center -- we now pick them up from home, bring to Center and give them a ride home when they are done with their meal and/or activities.

We deal with mostly seniors and we have Senior Rider which does an amazing job for our seniors. Also Dial-A-Ride for disabled clients. We also have the City Bus which some of them use.

Stark County is very rural and there are issues with transportation options being available for those who don't drive/own a vehicle

Some individuals who come from home have difficulty with scheduling as local transportation is not always timely. It would be nice to have additional hours.

Need more services on the weekend and all hours of operation. More options as current services are full or too busy to provide transportation to some.

Walsh and Pembina have little to none transportation supports. Fargo bus's don't have enough wheelchair spots. Drivers are not nice or helpful to people in wheelchairs!!

I would with some families that do no have a driver's license and/or on the continued DD services. They are limited to only the DD parent being able to go shopping or to major cities so the spouse and children never have the chance to leave their small town.

It depends on the county if transportation is available or provided to residents. Cass county is much better than Sargent or Richland County for example.

Our clients are not safe on the city bus, however many cannot afford matpara and limited hours.

Many of our clients need reliable transportation for clinic appointments. We also have clients who have kidney dialysis and they are at the mercy of a cab or public transportation. They cannot count on being at their appointment in a timely manner.

Our clients need more budget friendly options and options that can be called upon when current ones are not available.

Working in a Children's Clinic often times there is not transportation for families to and from medical appointments.

Most of the clients I work with are children and can be transported to parents who have vehicles. However several families don't have access to a vehicle or can't afford a vehicle and upkeep. It is

often difficult for my clients to ride the city bus due to significant behaviors and/or the amount of time it takes to get from place to place on a city bus. Taxi / medical assistance service transportation isn't terribly helpful for my clients.

A lot of our clients are low income, do not own cars, and are not able to pay for taxi rides. Getting to Fargo for doctor, mental health or addiction counseling is very, very difficult for them.

We have good services in place in the city of Fargo for individuals with disabilities such as Paratransit and Senior Ride service. The Senior Ride service is difficult for some as the appointments need to be made far in advance and can not assist when appointments come up last minute. They also do not provide transportation on the weekends. The elderly need more options for reliable, 1:1 transportation.

No bus runs in Fargo on Sundays. Limited transportation options from rural towns to Fargo.

We have a taxi and a Richland County transit and those on MA are able to utilize a taxi card and receive reduced fair rides. However, the rides are only provided to work, medical appointments and grocery stores, no other. Those not on MA and only on the Sanford Expansion plan are not able to use to transit system then for grocery or work. And, unless they finally are approved, there is not currently a taxi in the Richland County area that those on the Sanford Expansion plan are able to utilize for medical appointments, even locally.

Clients cannot ride the bus on Sundays which impacts their abilities to shop and work. Clients do not always have money for cabs/lyft/uber. Some ride services require a few days notice such as handi wheels

We live in a rural area and clients who need to go to Fargo for doctor appts and have no way to get there are limited to when they can make appts because the senior citizens bus only goes on certain days and if the client is having dialysis for just 3 hrs then they have to wait all day to come home.

My clients in Steele and Traill county have no means to get around other than family members, it is a barrier to them receiving the appropriate services they are in need of. Also if they are in need of mental health or behavioral services, they would need to travel to Grand Forks or Fargo and there are no means to get them there.

People with disabilities and the like are not being served well . Transportation for ppl who use wheelchairs or other assistive devices are put on hold due to Seniors getting priority. Times are limited and no weekend evening services are offered. There could be a collaboration between ND DOT and MN DOT to provide the same service in Wahpeton through Productive Alternatives as there is in Breckenridge here in Wahpeton. The PA bus runs in Wahpeton however cannot pick up a ride her originates in Wahpeton due to funding. Its silly and would cost very little in terms of overall cost to have this cohesive transportation in the twin towns. Its become a turf war and the consumers are he ones that suffer.

There is very limited transportation options for clients in outlying, rural communities to get to the larger towns where there are services (Wahpeton, Fargo, etc.). The hours are limited as are the days of the week. With a lack of needed mental health and chemical dependency services in our rural counties, clients often need to travel to Fargo to receive those services. Those same clients generally do not have vehicles, gas money, or driver's licenses, creating a barrier to accessing needed services.

My clients often struggle with attending appointment in Bismarck for specialty care due to lack of transportation services. The services that are available are costly and leave folks in a bus terminal in the middle of the night.

out of town transportation for the rural counties is not being met. local clinics are making medical referrals for client to go out of town for their medical need; however, they do not have transportation available.

SW Transit is very accommodating and we work well with them in our Bowman and Hettinger communities. Their operating hours are M-F 8am-4pm and this can at times put a crunch on available transportation.

Clients in rural areas struggle getting to services that are often only offered in larger cities (ie. medical specialists, mental health providers, addiction services).

Out patients struggle with transportation on a regular basis. They utilize the available services when they can, but many struggle to get here daily. A good number of our patients come from outside of Minot (many from the New Town or Williston areas). Because this type of treatment is only offered at three clinics in the state, there is a need for reliable cost-effective treatment from all areas of the state to Minot, Fargo, and Bismarck. Many who could benefit from services are unable to get to a clinic to be treated, so they continue to struggle with addiction and all the problems that come with it.

In times when we need support by transit services, they are able to perform the service but we frequently receive complaints of wait time and poor communication.

The only transportation option is taxi and almost all families I work with can not afford that.

They cannot provide transportation to their children with disabilities as it costs too much and i work in Rural counties and the only services are in Fargo so the children and families simply do NOT GET THE CARE

Older adults affiliated with our program often don't drive any longer or have challenges that don't lend themselves to driving alone. Their needs are varied and sometimes urgent. For example, someone in Gackle might need to see an optometrist in Jamestown, or someone in Wing may need to go to Bismarck for dialysis multiple times a week. Even in the urban areas, Bis-Man Transit has changed their system, so an 82-year old now needs to walk blocks in the cold with a walker to a transit stop and time it so she can get there on time but not have to stand there and wait too long. An elderly male I talked to recently said he calls the Senior Ride service in Fargo to pick him up and take him to a congregate meal site, but the cost of each ride means he cannot afford to go there more than once a week. The social benefits of group dining and the nutritional benefits of the congregate meal are outweighed by the cost of getting there and then home again. Loneliness and isolation is real, and often the difference for people lies in their ability to get to appointments, to run errands, to socialize with others, and to interact in public situations. Without reliable, affordable transportation options, addressing the isolation is difficult. If we really want our elders to be able to remain independent as long as possible, which is what they want, then we must find creative solutions for transportation challenges.

Very few on demand low income options especially for people with disabilities. Many ride services are required to be set up in advance (48+ hours). This is difficult for patients who had rides to the Emergency room or are getting discharged from the hospital. The bus does not run to certain parts of the FM area and does not go out of town. Also there is no service on Sundays and overnights.

A lot of our rural clients struggle with being able to access healthcare on a regular basis due to transportation barriers. Additionally, those in town sometimes have difficulty navigating the complicated schedule and there are locations in town which are not within the bus system. Extended hours would also be a huge benefit.

1. I have one Veteran in particular who lives out of town, but not far enough to qualify for free rides provided by the DAV (Disabled American Veterans). We are currently using the rural Senior Ride service which is not the most ideal as they are limited on when they can transport. Also, there is a cost associated for this service (which is low). 2. I have heard many comments from Veterans that they do not like to use Mat Paratransit as it may be a lengthy wait for a return ride home. 3. Some assisted living and nursing home facilities have their own wheel chair vans, but not always available

for residents to use for appointments, etc. 4. Cost of transportation is a big concern for those that need to take wheel chair vans to their destination.

Due to limited route options (time, locations, days of service) a lot of the consumers I work with who are not able to obtain a driver's license are not able to get to and from work.

Clients from outside of Fargo tend to have a lot of difficulty with transportation and often have to rely on borrowing cars or getting rides from other agencies to get here.

We need more specific pick up to drop off services. There are many families with small children who are unable to use the bus because of the length of time it would take to get anywhere and difficulty getting to/waiting at the bus stop.

I directly work with youth and their families; at this time, many of the older youth experience difficulty getting to and from appointments when parents are unable to get time off of work. An example is a student that attends school in the far south area of Fargo; this client is able to successfully navigate the public bus system, but there is no bus route that takes them to/near the school.

Parents often have barriers to owning or maintain a vehicle and if a child has many appointments they either have to keep the child home all day since there is only one pick up and drop off location or parents have to walk to the child location and back, this is often difficult in very frigid months, made even worse with a parent with a physical or cognitive impairment or both.

The families I work with struggle with all transportation issues. Bus routes not adequate end too early in the evening. Children that need access to services that parent are unable to provide transportation to for a number of reasons. The ability to get to medical providers. As an example: a parent that does not drive needs to get her child who is in school to a doctors appointment for either physical or mental health. Taxis will only allow one pick up and drop off site. So does the parent keep the kid home from school that day. Does the parent walk to the school which maybe miles away and walk back after the appointment? Kids need to meet their health needs. Think of the same situation but the family is riding the bus.

Very difficult for clients coming from the western side of ND to treatment in Fargo, they do not have reliable cars nor cash for gas. Can be a real barrier. The DHS SUD voucher does not provide assistance for bus-train services despite having a line item in the budget for transportation.

Client's experiencing mental health needs struggle with the bus system at times and a lower cost cab option for running errands, groceries, moving, etc. would be helpful.

I have individuals on my caseload that could utilize fixed bus route services to jobs from their High School, but the busses do not run that far into South Fargo. It would require several blocks/miles of walking in sometimes unfavorable conditions to be able to utilize a bus route. The MAT Paratransit has varied times which sometimes can be long of the pick up and drop off times, which is difficult when someone is riding it to and from a Day Habilitation and/or job.

I've said this numerous times in previous transportation surveys about designing public transport vehicles akin to airport shuttle buses that have luggage racks as a potential solution for passengers to load more than 2 or 3 bags of items from shopping. There isn't a way to pilot something like that in Fargo-Moorhead?

I primarily work with adults who live in rural communities with in the SE region. People have a difficult time making it to their appointments due to lack of transportation. Transportation may only be offered once a week (for example from Kindred into Fargo). Limited hours. Some medical providers don't work during the transportation time, or in addition, you have to pick getting groceries this week or going to the doctor due to timing or general expense of taking rural transportation. Some transportation programs do not cross over into Minnesota (Moorhead) but some of our medical providers work in a Moorhead office.

Some of the now American clients work in industrial area and late night shifts. There are no affordable rides and good bus timing for late night hours.

If I'm unable to provide transportation to my clients they may miss appointments. Sometimes they are extremely vulnerable and expected to ride the bus which isn't necessarily safe for them. Treatment providers (case managers) are unable to provide this services. Also - there are several on 24/7 that are unable to drive or get transportation (can't afford) and they end up walking from North Fargo to the Cass County Jail twice a day just to comply with a Court order.

clients with limited income find it challenging to get to and from appointments, are unable to afford cabs resulting in them often missing appointment and not getting their physical or mental health issues met.

Clients have difficulty on the weekends with transportation especially if they work. Also we have clients that live out of town that have difficulty with transportation to and from appointments.

Individuals lack transportation as they do not have funds to purchase vehicle, some have lost license, don't have the necessary documentation to obtain a license, or legal are restricted. Many struggle in riding the bus due to MH symptoms and/or inability to learn the system. They lack family or friend supports to assist in transportation. This results in missed appointments and lack of needed medication and medical care.

We get many callers/texters who need help getting to job interviews, appts etc. but they can not afford it.

Local Fargo Metro transportation needs are lacking service on Sundays and only serve select locations in the metro. Rural counties lack options for scheduling rides to and from the Fargo Metro that are reliable and timely. MATBus new policy of having all riders pass through the GTC at least once to obtain a photo ID is creating barriers for individuals in accessing transportation options and is discriminatory for individuals who otherwise would not access the downtown region of the Fargo Metro.

Transportation is the largest barrier to individuals receiving behavioral health services or assisting in sustaining their recovery. Most individuals we serve do not have the means to pay for transportation services, even the discounted services provided to those with a disability. The bus system is limited in time and area of town. The amount of time it takes to get anywhere on the current bus system takes too long for most to get where they need to go throughout the day. There is highly limited options for those who need to get services in Fargo that are coming from a rural area.

Need to have service on Sundays. Serve past 10pm. Lower cost for lower income or to get to work or to treatment. More bus stop locations.

I work with several parents who need transportation to bring their children to appointments.

Elder Care/Public Transit is the only affordable option in the Dickinson Area at this time, and even at \$4/way is still unaffordable for many persons in the Dickinson Area. In the outlying counties of Region 8 I am unaware of any public transit options. It would be greatly beneficial to the area, especially in Dickinson if we had a fixed route bus system that would run during certain hours that was either free or at an extremely low cost. We also struggle in getting people to and from Bismarck, especially for medical appointments.

NA

Alot of people we help want to do things on weekends and at night like everybody else. Hours for city transit restrict them from doing the things they like and restrict our city from being inclusive for people with disabilities.

It is difficult to have to have a social life and rely on public transportation if you require accessibility (use a wheelchair). Taxi services get to be expensive on a regular basis for work purposes.

Some of the people who have developmental disabilities live in their own apartment. The transportation service that is available operates Monday through Friday between 8:30 AM and 4:30 PM. If a person wants to attend an event after hours or on weekends, our direct service staff will give them a ride. We would prefer there to be a generic/public transportation as that is more integrated.

There are more people using wheelchairs and getting off work at 4pm than transit can take. Sometimes they have to take a group and then come back for people. The turnover is very high and the buses are frequently late due to delays and drivers not knowing the route. Transit has been rough lately.

Our city transit service is only open until late afternoon on weekdays on not on weekends. Many riders are left with no affordable options if they work night or weekend shifts.

Our clients work out in the community and are often forced to take jobs where they can't work on Sundays or late in the evening due to lack of bus service. This limits their choices for jobs.

extended service hours for employed and evening activities. Taxis service is NOT accessible

Again, our agency vehicles and para-transit are meeting people's needs.

ABLE, Inc. has been providing transportation to people supported for many years. We have increased our fleet of vehicles to meet people's needs as public transit fell short; i.e. people were not getting to their jobs in a timely manner. There were conflicts on the bus with public transit, etc. Dickinson's public transit, however, has really upped their game with Colleen R as the director. She needs to be applauded for her dedication and commitment to people as her primary focus. Honestly, she rocks it! (I could provide examples of her advocacy that goes far beyond the day to day transportation). Back to ABLE.... A big priority for us was to increase our fleet of vehicles that have ramps and accessibility for people who use wheelchairs. WHAT IS NOT AVAILABLE IN THIS COMMUNITY is a rentable or free unit that can be used by the community for transporting people who use WC's and are in need for travel outside of areas! ABLE gets the calls for this and we have gotten really creative. I think community access for WC assessible vehicles could be improved with collaborative relationships. One other suggestion is that I believe we need to restructure WC assessible vehicles in the Northland.... I have ideas if anyone is interested in a serious partnership for improvement. it will take inventing new systems and structures.

City needs an expansion of the routes for people using the city bus and probably more city buses. Especially during the winter.

Please list all transportation services that you know about that are available in your area.

City Bus Cabs Uber/Lyft TAP ride Medicaid/Sanford Expansion transportation for medical appointments Salvation Army - 30 day bus pass if client just received employment and has a letter from employer

Elder Care Various Taxi Companies (high turnover) Jefferson Lines Bus Transportation

City Bus, Taxis.

South Central Adult Services bus transit that serves elderly and other clients. Taxi service for all (through South Central Adult Services). VA transportation service to VA facilities outside Valley City. On an emergency basis, the Salvation Army may have volunteers who will transport someone to a medical appointment in another ND city.

Busing, taxis, Ubers, Lyft.

Busses through Cities Area Transit Dial a ride Door to door service from rural areas

Kidder County Public Transit

Mat bus, paratransit, handiwheels, readywheels, valley senior services

Ransom / Sargent Senior Services

Taxi 9000 BisMan Transit CAT bus Uber/Lyft

South Central

Walsh County Transportation Vans (a number of vans that travel locally and to surrounding cities). The Veterans Van that picks up veterans at a Grafton Site for transport to the Fargo VA. There was a person who moved to the community who was providing Lyft services. I have not heard if she continues to do this. As far as I am aware there are no bus or train services in our county.

fixed route, paratransit and taxi service

Northwest Dakota Public Transit Various taxi services

Minot City fixed bus route SBT who handles the curb to curb routes throughout the 7 county region and the intercity transit not only in the region but also offers service to Bismarck

Traill County Senior Services. Informal ride service provided by friends and family, Traill County Social services for income eligible clients on their services.

Bis-Man Transit CAT Bus West River Transportation RSVP+ Medical rides (limited)

Senior Rider, Dial-A-Ride, City Bus Services.

CAT Bus, Transit

Bis/Man Transit Taxi 9000 Metro Taxi CAT bus system School busing system Uber Lyft Dakota Taxi - Dickinson Hometown Taxi - Dickinson D-CAB - Dickinson

Senior Citizen bus Our organization runs about 223 vehicles out of need to provide services. Transportation is expensive for people not living in our residential services.

Mat fixed route Para transit Senior ride Taxi Handi wheels

Continued DD individuals have support from their staff but only a couple times a month, elderly transit is available but not always flexible for families.

Matpara City bus Handiwheels Uber Lyft Taxi

There is public transit in most large cities in ND. There is also transportation available to smaller cities where they will transport people to larger cities. The Volunteer Companions program provides rides, but only to their clients. The RSVP program provides rides but on a case by case basis.

MAT Bus Para Transit Senior Ride

Handi Wheels

Mat bus Mat para transit Cab / Uber/ Lyft Handiwheels

Taxi, Community transport bus - only runs during certain hours.

Mat Bus, Mat Paratransit

Taxi. Richland County Transit. scheduled rides to Fargo on specific days and times through the Richland County Transit.

bus, cabs/lyft/uber, senior rides, handi wheels,

Ransom County Senior bus Taxi service that comes out of Fargo

MAT Bus and MAT Para are available right in Fargo. Traill County has a vehicle that runs but not every day and limited hours.

In Breckenridge it is Transit Alternatives 218-998-3002 or 866- 998- 3002 in Wahpeton it is Valley Senior Services and our Twin Town Taxis/Red River Taxi which have recently merged, no accessible transportation available through the taxi service. All of Transit alternatives have accessible transportation- door to door service and assistance with packages.

Taxi service in Wahpeton/Breckenridge. Richland County has a contract with the taxi service to provide discounted rides for medical, work, and groceries trips for clients in Wahpeton. Richland County Transportation (run through the Senior Center) provides once a week transportation to Fargo for appointments between the hours of 9am-2pm on Thursdays only. Veterans transportation. Oftentimes, clients and community members will rely on volunteers from local churches.

Public Transit Dickinson, Highly rural DAV van - Beach, Jefferson Lines.

local cab

SW Transit (we use them daily also) ABLE (we too provide transportation as needed)

Mat Bus, Mat Para Transit, Uber, Lyft in the Fargo area

Senior Citizens bus in Wahpeton Twin Town Taxi Med Van through Wahpeton Senior Center

Taxi, Lyft/Uber, Souris Valley Transit, Train. There are city buses in Minot, but they do not come close to the clinic.

Taxi There may be a bus service for the elderly, I work with families who have at least one child under the age of 3.

IN Wahpeton they pay for a cab in Fargo and Bus that is not feasible for most with other kids •
***Bus 701-642-5746 M-F 8-4 1\$ wahp, and 1st, 2nd, 3rd H to Fargo 7\$ Apply for card at the county

Senior Ride Service, HandiWheels, MAT bus in Fargo James River Transit in Jamestown Bis-Man
Transit in Bismarck/Mandan Minot Bus Service Eldercare Transit in Dickinson

MAT bus, cab, ride share (Uber, etc.), Medical transport (Care-A-Van, etc.), senior ride, MAT
paratransit

MAT bus, senior rides, some county social services offer ride services for a limited population for a
small fee, cab rides, Uber, Lyft

Taxi, Senior Ride, Mat Para Transit, City bus (fixed routes), Wheel Chair van companies (i.e.: Ready
Wheels, Maxime and Co., Priority 1, Medivan, etc.), volunteer drivers including DAV drivers which are
typically only offered in rural areas, wheel chair vans at particular assisted living or nursing home
facilities.

The city bus including Paratransit and tap ride

I'm aware there is fairly good bus service within Fargo city limits, and clients who live right here in
town tend to be able to get around okay. People who live on the outskirts of town or in nearby
counties don't seem to have a public transportation option.

MAT transit Paratransit Handiwheels Private companies

MATBUS system, paratransit, handi-wheels, uber/lyft, and taxi services.

Medicaid voucher program

city bus handi wheels (not useful for the youth i work with) taxi for medical appointments.

MAT, Blue Plus PMAP insurance offeres rides but need sometimes needs 2 day notice...Pay for
services, private options but clients don't have money for that.

Mat Bus Doyle's cab FM mobility Handi-wheels. Mat para transit

Mat Fixed Route Bus Lines Mat Paratransit Ready Wheels Lyft Uber Doyle Cab Personal Vehicles
Motorcycle or other motorized vehicles pedal bike walking

MATBus Paratransit Handiwheels. Valley Senior Center Various cab companies Uber/Lyft Other
companies that specialize in transporting individuals with unique mobility or medical concerns

Rural transportation for disabled is needed

MATBUS Uber TaxiHandiwheels

city bus Cab paratransit

Case management Probation taxi uber lyft law enforcement Mat bus

MAT Para Transit Handi-Wheels Doyle Cab Uber Lyft MA will pay for cab (I think the individual needs
to qualify though) VA I think assists veterans

Mat Bus Para Transit Taxi cab Uber

Bus, Valley Senior Services, Cabs, Mobile Outreach (Glady's Ray shelter), insurance based
transportation

we have a long list in our 211 database.

MATBus, HandiWheels, ReadiWheels, Doyle Taxi, Traill County Transit, Steele County Transit, Richland County Transit, Senior Rides, Paratransit, Uber, VA Transportation Network

MAT Paratransit Handi Wheels Withdrawal Management Transport through Fargo Withdrawal Management Unit Valley Senior Services North Dakota Rural Transit Cab Voucher paid for by Southeast Human Service Center Individuals will use FM Ambulance when not medically needed because they have no other way to get crisis services

MAT Cabs bikes Uber

Matbus Handiwheels Uber/Lyft Taxi

Public Transit/Elder Care, several taxi services, Uber, Lyft

Dial A Ride, city busses, independent taxi's, uber, lyft

Grand Cities Transit Dial A Ride Uber Lyft

Taxi, public transit

Public Transit LYFT - does not work for people with wheelchairs and is expensive Taxi's - if a taxi company has 3+ vehicles, I believe one has to be wheelchair accessible. I am not aware of any taxi service that accommodates wheelchairs.

Devils Lake City Transit Taxi

Dial-a-ride, Senior rides, City Bus, Taxi

I directly serve Stutsman and Barnes county and Jamestown and Valley City provide accessible transportation in town and to Bismarck and Fargo. Taxis services however they are not accessible.

Para-transit, City of Fargo buses, Senior ride and our agency vehicles.

Bowman, Hettinger and Dickinson all have city transit systems with definable hours. Dx has more access to Lift and other transportation.

Souris Basin Transit City Bus

transit bus cabs bus volunteer

APPENDIX C. TRANSIT RIDER SURVEY

North Dakota Transit Rider Survey

The Upper Great Plains Transportation Institute at North Dakota State University is conducting a research project for the North Dakota Department of Transportation to identify transit needs in your community and across the state. **It is our hope that we will learn more about who uses transit, the benefits of transit service, and the needs of transit users.**

Because you are a transit rider, you are invited to complete this two-page survey. Your participation is entirely your choice, and you may change your mind or quit participating at any time, with no penalty to you. It is not possible to identify all potential risks in research procedures, but we have taken reasonable safeguards to minimize any known risks. You may not get any benefit from being in this research study. However, the study results will be used to evaluate the need for increased investment in transit, which could benefit transit users in your community or across the state.

It should take about 5 minutes to complete the questions about your use of transit, satisfaction with the service, and personal characteristics. This study is anonymous. If you have any questions about this project, please contact Jeremy Mattson at 701-231-5496 or jeremy.w.mattson@ndsu.edu. You have rights as a research participant. If you have questions about your rights or complaints about this research, you may talk to the researcher or contact the NDSU Human Research Protection Program at 701.231.8995, toll-free at 1-855-800-6717, by email at ndsu.irb@ndsu.edu, or by mail at NDSU HRPP Office, NDSU Dept. 4000, P. O. Box 6050, Fargo, ND 58108-6050.

Thank you taking part in this research

A. Questions About Transit

Please answer the following questions about your experiences and use of public transit.

1. Why do you ride public transit? (Check all that apply.)

- | | |
|--|---|
| <input type="checkbox"/> I can't drive or don't like to drive | <input type="checkbox"/> To save money |
| <input type="checkbox"/> No access to a vehicle | <input type="checkbox"/> It is convenient |
| <input type="checkbox"/> Too difficult to get a ride from others | <input type="checkbox"/> It is good for the environment |
| <input type="checkbox"/> It is important to be independent | <input type="checkbox"/> I enjoy the social interaction |
| <input type="checkbox"/> Other: _____ | |

2. How often do you use public transit?

- | | |
|--|--|
| <input type="checkbox"/> 5-7 days per week | <input type="checkbox"/> A few days per month |
| <input type="checkbox"/> 2-4 days per week | <input type="checkbox"/> Once a month or less |
| <input type="checkbox"/> About once a week | <input type="checkbox"/> This is my first time |

3. For what purposes do you take public transit? (Check all that apply.)

- | | |
|--|--|
| <input type="checkbox"/> Work | <input type="checkbox"/> Health care/medical or dental appointment |
| <input type="checkbox"/> School or job training | <input type="checkbox"/> Shopping or eating out |
| <input type="checkbox"/> Social or recreation | <input type="checkbox"/> Errands or other family/personal business |
| <input type="checkbox"/> Taking someone else somewhere | <input type="checkbox"/> Other: _____ |

4. If public transit was not available, how would you have made this trip? (Choose one option.)

- | | |
|---|--|
| <input type="checkbox"/> I would not have made this trip | <input type="checkbox"/> Used a taxi, Uber or Lyft |
| <input type="checkbox"/> Driven myself | <input type="checkbox"/> Walked or bicycled |
| <input type="checkbox"/> Ride from family, friend, or other | <input type="checkbox"/> Other: _____ |

Prefer to take the survey online?

Go to this link: bit.ly/ndtransitsurvey

Or use the QR code.



5. Please rate your level of satisfaction with this transportation service.

	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Dissatisfied	Very Dissatisfied
Cost affordability	<input type="checkbox"/>				
Hours of service	<input type="checkbox"/>				
Days of service	<input type="checkbox"/>				
Goes where you want to go	<input type="checkbox"/>				
Ease of use	<input type="checkbox"/>				

6. What is the most challenging aspect of riding public transit?

B. About You

It is important to learn more about the people using public transit. Please answer the following questions about yourself. Your answers will be kept entirely confidential.

7. What is your age? _____

8. How do you describe yourself? (Select one or more responses.)

- American Indian or Alaska Native
- Asian
- Black or African American
- Hispanic or Latino
- Native Hawaiian or Pacific Islander
- White

9. What is your sex? Male Female

10. Have you served on active duty in the U.S. Armed Forces, Reserves, or National Guard?

- Yes No

11. Do you consider yourself to have a disability? Yes No

12. Do you use a service animal? Yes No

13. Do you have a driver's license? Yes No

14. How many vehicles are in your household? 0 1 2 or more

15. Information about income is very important to understand. Please indicate the answer that includes your entire household income in 2019 before taxes.

- Less than \$25,000
- \$25,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 or more

16. What is your ZIP code? _____

APPENDIX D. URBAN NTD DATA, 2009-2018

Table A.1 Urban Transit Agencies: Unlinked Passenger Trips

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	57,428	57,850	58,995	54,543	53,426	53,921	51,439	52,373	52,508	52,665
Fixed-Route	1,479,646	1,570,055	1,772,443	1,604,693	1,682,267	1,741,524	1,627,916	1,486,051	1,421,294	1,439,017
Total	1,537,074	1,627,905	1,831,438	1,659,236	1,735,693	1,795,445	1,679,355	1,538,424	1,473,802	1,491,682
Grand Forks: Cities Area Transit										
Demand-Response	61,630	65,240	61,078	55,212	52,551	54,336	54,748	48,363	52,905	62,895
Fixed-Route	271,704	282,627	328,880	371,242	364,317	346,673	336,652	317,992	280,289	253,657
Total	333,334	347,867	389,958	426,454	416,868	401,009	391,400	366,355	333,194	316,552
Bismarck: Bis-Man Transit Board										
Demand-Response	170,251	171,652	171,892	168,121	160,582	124,722	162,309	156,032	147,332	121,520
Fixed-Route	131,601	127,790	124,653	141,067	135,466	138,610	133,348	125,760	98,646	107,172
Total	301,852	299,442	296,545	309,188	296,048	263,332	295,657	281,792	245,978	228,692

Table A.2 Urban Transit Agencies: Vehicle Revenue Miles

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	337,982	341,699	347,222	336,514	344,491	334,761	316,469	320,998	327,601	324,795
Fixed-Route	625,507	639,047	782,983	857,329	927,601	936,562	957,777	957,430	978,055	1,008,093
Total	963,489	980,746	1,130,205	1,193,843	1,272,092	1,271,323	1,274,246	1,278,428	1,305,656	1,332,888
Grand Forks: Cities Area Transit										
Demand-Response	260,233	275,768	256,237	204,665	190,734	198,365	199,247	207,711	218,431	239,720
Fixed-Route	381,873	387,907	381,522	382,788	382,632	342,846	343,466	371,166	375,538	370,412
Total	642,106	663,675	637,759	587,453	573,366	541,211	542,713	578,877	593,969	610,132
Bismarck: Bis-Man Transit Board										
Demand-Response	640,881	654,437	666,306	623,172	628,858	367,274	639,759	619,449	632,707	552,669
Fixed-Route	313,080	317,940	300,994	302,977	300,704	304,200	305,378	306,579	357,095	358,470
Total	953,961	972,377	967,300	926,149	929,562	671,474	945,137	926,028	989,802	911,139

Table A.3 Urban Transit Agencies: Vehicle Revenue Hours

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	24,445	25,494	26,272	25,442	25,822	26,411	23,719	23,454	23,374	22,865
Fixed-Route	50,464	51,416	60,643	66,560	73,730	74,814	77,767	80,173	80,947	82,895
Total	74,909	76,910	86,915	92,002	99,552	101,225	101,486	103,627	104,321	105,760
Grand Forks: Cities Area Transit										
Demand-Response	40,030	25,782	22,747	20,683	20,110	20,136	19,182	22,291	24,098	27,308
Fixed-Route	25,699	25,705	24,848	25,292	25,124	25,125	25,305	25,318	25,296	27,506
Total	65,729	51,487	47,595	45,975	45,234	45,261	44,487	47,609	49,394	54,814
Bismarck: Bis-Man Transit Board										
Demand-Response	46,218	45,732	46,736	44,507	44,488	27,553	47,025	43,851	45,012	40,047
Fixed-Route	19,643	19,787	19,787	19,787	19,944	19,878	19,554	19,605	24,146	21,340
Total	65,861	65,519	66,523	64,294	64,432	47,431	66,579	63,456	69,158	61,387

Table A.4 Urban Transit Agencies: Passenger Miles Traveled

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	353,291	357,341	358,998	297,907	302,978	301,769	284,021	302,287	289,994	303,128
Fixed-Route	4,556,441	5,180,088	5,400,681	5,050,293	5,925,833	6,222,125	5,814,310	5,307,621	5,814,310	5,852,450
Total	4,909,732	5,537,429	5,759,679	5,348,200	6,228,811	6,523,894	6,098,331	5,609,908	6,104,304	6,155,578
Grand Forks: Cities Area Transit										
Demand-Response	260,233	197,204	172,056	170,704	170,276	174,382	179,957	156,594	247,848	187,207
Fixed-Route	1,078,665	1,222,029	1,520,000	1,524,118	1,683,145	1,248,342	1,211,947	1,145,057	1,073,510	1,080,992
Total	1,338,898	1,419,233	1,692,056	1,694,822	1,853,421	1,422,724	1,391,904	1,301,651	1,321,358	1,268,199
Bismarck: Bis-Man Transit Board										
Demand-Response	595,878	667,726	601,622	635,485	-	-	-	-	-	-
Fixed-Route	539,564	523,939	596,782	674,300	-	-	-	-	-	-
Total	1,135,442	1,191,665	1,198,404	1,309,785	-	-	-	-	-	-

Table A.5 Urban Transit Agencies: Vehicle Available for Maximum Service

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	14	14	16	14	14	15	23	15	16	15
Fixed-Route	23	26	28	28	32	32	34	30	31	38
Total	37	40	44	42	46	47	57	45	47	53
Grand Forks: Cities Area Transit										
Demand-Response	10	13	13	21	21	21	22	11	10	12
Fixed-Route	12	12	12	12	11	11	11	11	11	15
Total	22	25	25	33	32	32	33	22	21	27
Bismarck: Bis-Man Transit Board										
Demand-Response	33	31	32	31	32	28	27	20	19	20
Fixed-Route	8	13	10	10	10	10	12	10	10	9
Total	41	44	42	41	42	38	39	30	29	29

Table A.6 Urban Transit Agencies: Average Fleet Age

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	2.14	3.14	3.75	3.71	4.29	5.07	3.96	2.80	2.00	2.80
Fixed-Route	5.61	5.00	5.57	6.57	6.63	7.63	8.12	7.80	7.94	7.29
Grand Forks: Cities Area Transit										
Demand-Response	0.00	1.00	1.89	2.22	3.22	3.56	4.20	2.73	2.60	3.00
Fixed-Route	6.67	4.67	3.75	4.75	5.18	6.18	7.18	8.18	8.27	6.80
Bismarck: Bis-Man Transit Board										
Demand-Response	5.60	5.91	5.92	5.35	5.63	5.95	6.68	5.40	6.00	4.00
Fixed-Route	5.50	5.92	5.40	6.40	7.40	7.20	6.83	7.60	8.60	9.11

Table A.7 Urban Transit Agencies: Total Operating Expenses

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
..... Million Dollars.....										
Fargo: Metro Area Transit										
Demand-Response	\$1.18	\$1.23	\$1.23	\$1.25	\$1.37	\$1.43	\$1.26	\$1.33	\$1.32	\$1.41
Fixed-Route	\$3.86	\$4.19	\$4.42	\$4.98	\$5.63	\$5.71	\$5.75	\$5.61	\$5.98	\$6.41
Total	\$5.04	\$5.43	\$5.65	\$6.23	\$7.00	\$7.13	\$7.01	\$6.94	\$7.30	\$7.82
Grand Forks: Cities Area Transit										
Demand-Response	\$0.53	\$0.59	\$0.83	\$0.97	\$0.96	\$1.07	\$1.23	\$1.23	\$1.41	\$1.32
Fixed-Route	\$1.63	\$1.78	\$1.91	\$1.86	\$1.91	\$2.04	\$2.06	\$2.05	\$2.15	\$2.25
Total	\$2.16	\$2.37	\$2.74	\$2.82	\$2.87	\$3.11	\$3.29	\$3.28	\$3.56	\$3.57
Bismarck: Bis-Man Transit Board										
Demand-Response	\$1.70	\$1.67	\$1.83	\$1.88	\$1.99	\$1.50	\$1.99	\$1.88	\$2.15	\$2.29
Fixed-Route	\$0.99	\$1.04	\$1.32	\$1.39	\$1.44	\$1.31	\$1.21	\$1.17	\$1.61	\$1.57
Total	\$2.69	\$2.71	\$3.15	\$3.27	\$3.43	\$2.81	\$3.20	\$3.05	\$3.76	\$3.86

Table A.8 Urban Transit Agencies: Unlinked Passenger Trips per Vehicle Revenue Mile

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
--	------	------	------	------	------	------	------	------	------	------

Fargo: Metro Area Transit										
Demand-Response	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Fixed-Route	2.37	2.46	2.26	1.87	1.81	1.86	1.70	1.55	1.45	1.43
Total	1.60	1.66	1.62	1.39	1.36	1.41	1.32	1.20	1.13	1.12
Grand Forks: Cities Area Transit										
Demand-Response	0.24	0.24	0.24	0.27	0.28	0.27	0.27	0.23	0.24	0.26
Fixed-Route	0.71	0.73	0.86	0.97	0.95	1.01	0.98	0.86	0.75	0.68
Total	0.52	0.52	0.61	0.73	0.73	0.74	0.72	0.63	0.56	0.52
Bismarck: Bis-Man Transit Board										
Demand-Response	0.27	0.26	0.26	0.27	0.26	0.34	0.25	0.25	0.23	0.22
Fixed-Route	0.42	0.40	0.41	0.47	0.45	0.46	0.44	0.41	0.28	0.30
Total	0.32	0.31	0.31	0.33	0.32	0.39	0.31	0.30	0.25	0.25

Table A.9 Urban Transit Agencies: Unlinked Passenger Trips per Vehicle Revenue Hour

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	2.35	2.27	2.25	2.14	2.07	2.04	2.17	2.23	2.25	2.30
Fixed-Route	29.32	30.54	29.23	24.11	22.82	23.28	20.93	18.54	17.56	17.36
Total	20.52	21.17	21.07	18.03	17.44	17.74	16.55	14.85	14.13	14.10
Grand Forks: Cities Area Transit										
Demand-Response	1.54	2.53	2.69	2.67	2.61	2.70	2.85	2.17	2.20	2.30
Fixed-Route	10.57	11.00	13.24	14.68	14.50	13.80	13.30	12.56	11.08	9.22
Total	5.07	6.76	8.19	9.28	9.22	8.86	8.80	7.70	6.75	5.78
Bismarck: Bis-Man Transit Board										
Demand-Response	3.68	3.75	3.68	3.78	3.61	4.53	3.45	3.56	3.27	3.03
Fixed-Route	6.70	6.46	6.30	7.13	6.79	6.97	6.82	6.41	4.09	5.02
Total	4.58	4.57	4.46	4.81	4.59	5.55	4.44	4.44	3.56	3.73

Table A.10 Urban Transit Agencies: Unlinked Passenger Trips per Vehicle

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	4,102	4,132	3,687	3,896	3,816	3,595	2,236	3,492	3,282	3,511
Fixed-Route	64,332	60,387	63,302	57,310	52,571	54,423	47,880	49,535	45,848	37,869
Total	41,543	40,698	41,624	39,506	37,732	38,201	29,462	34,187	31,357	28,145
Grand Forks: Cities Area Transit										
Demand-Response	6,163	5,018	4,698	2,629	2,502	2,587	2,489	4,397	5,291	5,241
Fixed-Route	22,642	23,552	27,407	30,937	33,120	31,516	30,605	28,908	25,481	16,910
Total	15,152	13,915	15,598	12,923	13,027	12,532	11,861	16,653	15,866	11,724
Bismarck: Bis-Man Transit Board										
Demand-Response	5,159	5,537	5,372	5,423	5,018	4,454	6,011	7,802	7,754	6,076
Fixed-Route	16,450	9,830	12,465	14,107	13,547	13,861	11,112	12,576	9,865	11,908
Total	7,362	6,806	7,061	7,541	7,049	6,930	7,581	9,393	8,482	7,886

Table A.11 Urban Transit Agencies: Vehicle Revenue Miles per Vehicle

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	24,142	24,407	21,701	24,037	24,607	22,317	13,760	21,400	20,475	21,653
Fixed-Route	27,196	24,579	27,964	30,619	28,988	29,268	28,170	31,914	31,550	26,529
Total	26,040	24,519	25,686	28,425	27,654	27,049	22,355	28,410	27,780	25,149
Grand Forks: Cities Area Transit										
Demand-Response	26,023	21,213	19,711	9,746	9,083	9,446	9,057	18,883	21,843	19,977
Fixed-Route	31,823	32,326	31,794	31,899	34,785	31,168	31,224	33,742	34,140	24,694
Total	29,187	26,547	25,510	17,802	17,918	16,913	16,446	26,313	28,284	22,597
Bismarck: Bis-Man Transit Board										
Demand-Response	19,421	21,111	20,822	20,102	19,652	13,117	23,695	30,972	33,300	27,633
Fixed-Route	39,135	24,457	30,099	30,298	30,070	30,420	25,448	30,658	35,710	39,830
Total	23,267	22,099	23,031	22,589	22,132	17,670	24,234	30,868	34,131	31,419

Table A.12 Urban Transit Agencies: Vehicle Revenue Hours per Vehicle

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	1,746	1,821	1,642	1,817	1,844	1,761	1,031	1,564	1,461	1,524
Fixed-Route	2,194	1,978	2,166	2,377	2,304	2,338	2,287	2,672	2,611	2,181
Total	2,025	1,923	1,975	2,191	2,164	2,154	1,780	2,303	2,220	1,995
Grand Forks: Cities Area Transit										
Demand-Response	4,003	1,983	1,750	985	958	959	872	2,026	2,410	2,276
Fixed-Route	2,142	2,142	2,071	2,108	2,284	2,284	2,300	2,302	2,300	1,834
Total	2,988	2,059	1,904	1,393	1,414	1,414	1,348	2,164	2,352	2,030
Bismarck: Bis-Man Transit Board										
Demand-Response	1,401	1,475	1,461	1,436	1,390	984	1,742	2,193	2,369	2,002
Fixed-Route	2,455	1,522	1,979	1,979	1,994	1,988	1,630	1,961	2,415	2,371
Total	1,606	1,489	1,584	1,568	1,534	1,248	1,707	2,115	2,385	2,117

Table A.13 Urban Transit Agencies: Operating Cost per Trip

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	20.51	21.31	20.79	22.86	25.58	26.44	24.50	25.33	25.10	26.77
Fixed-Route	2.61	2.67	2.50	3.11	3.35	3.28	3.53	3.78	4.21	4.45
Total	3.28	3.33	3.08	3.76	4.03	3.97	4.17	4.51	4.95	5.24
Grand Forks: Cities Area Transit										
Demand-Response	8.65	9.03	13.64	17.54	18.21	19.60	22.55	25.41	26.60	20.98
Fixed-Route	6.00	6.29	5.81	5.00	5.24	5.89	6.12	6.44	7.68	8.88
Total	6.49	6.80	7.04	6.62	6.87	7.74	8.42	8.95	10.68	11.28
Bismarck: Bis-Man Transit Board										
Demand-Response	9.97	9.74	10.64	11.18	12.36	12.03	12.27	12.08	14.60	18.84
Fixed-Route	7.51	8.12	10.59	9.85	10.64	9.43	9.08	9.30	16.33	14.69
Total	8.90	9.05	10.62	10.57	11.57	10.66	10.83	10.84	15.30	16.89

Table A.14 Urban Transit Agencies: Operating Cost per Vehicle Revenue Mile

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	3.49	3.61	3.53	3.71	3.97	4.26	3.98	4.13	4.02	4.34
Fixed-Route	6.17	6.56	5.65	5.81	6.07	6.09	6.00	5.86	6.11	6.36
Total	5.23	5.53	5.00	5.22	5.50	5.61	5.50	5.43	5.59	5.86
Grand Forks: Cities Area Transit										
Demand-Response	2.05	2.14	3.25	4.73	5.02	5.37	6.20	5.92	6.44	5.50
Fixed-Route	4.27	4.58	5.01	4.85	4.99	5.95	6.00	5.52	5.73	6.08
Total	3.37	3.57	4.30	4.81	5.00	5.74	6.07	5.66	5.99	5.85
Bismarck: Bis-Man Transit Board										
Demand-Response	2.65	2.55	2.75	3.02	3.16	4.08	3.11	3.04	3.40	4.14
Fixed-Route	3.16	3.26	4.38	4.59	4.79	4.30	3.97	3.82	4.51	4.39
Total	2.82	2.79	3.26	3.53	3.69	4.18	3.39	3.30	3.80	4.24

Table A.15 Urban Transit Agencies: Farebox Recovery Ratio

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fargo: Metro Area Transit										
Demand-Response	35%	25%	24%	25%	12%	11%	12%	12%	12%	11%
Fixed-Route	17%	15%	13%	13%	12%	12%	11%	11%	9%	10%
Total	21%	17%	16%	15%	12%	12%	11%	11%	10%	10%
Grand Forks: Cities Area Transit										
Demand-Response	31%	30%	24%	17%	16%	15%	13%	12%	12%	15%
Fixed-Route	10%	9%	10%	12%	13%	12%	0%	15%	9%	8%
Total	15%	15%	14%	13%	14%	13%	5%	14%	10%	11%
Bismarck: Bis-Man Transit Board										
Demand-Response	24%	24%	22%	20%	19%	13%	21%	22%	21%	15%
Fixed-Route	7%	6%	5%	6%	6%	5%	6%	6%	4%	5%
Total	18%	18%	15%	14%	13%	9%	15%	16%	14%	11%

Table A.16 Urban Transit Agencies: Operating Funds by Source

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
----- thousand dollars -----										
Fargo: Metro Area Transit										
Federal	\$1,976	\$1,957	\$2,068	\$2,007	\$2,447	\$2,242	\$2,337	\$2,650	\$2,397	\$2,495
State	\$515	\$316	\$349	\$574	\$676	\$725	\$722	\$680	\$440	\$490
Local	\$610	\$1,318	\$1,388	\$1,599	\$1,749	\$1,775	\$2,598	\$2,319	\$3,116	\$2,953
Other	\$1,935	\$1,835	\$1,844	\$2,051	\$2,126	\$2,390	\$1,351	\$1,288	\$1,343	\$1,878
Total	\$5,036	\$5,427	\$5,649	\$6,231	\$6,998	\$7,132	\$7,008	\$6,937	\$7,296	\$7,817
Grand Forks: Cities Area Transit										
Federal	\$861	\$950	\$998	\$1,134	\$1,195	\$1,172	\$1,395	\$1,488	\$1,385	\$928
State	\$201	\$226	\$209	\$191	\$308	\$396	\$397	\$285	\$219	\$268
Local	\$566	\$625	\$828	\$794	\$608	\$781	\$733	\$766	\$1,189	\$1,553
Other	\$535	\$566	\$710	\$705	\$755	\$756	\$770	\$738	\$767	\$823
Total	\$2,163	\$2,367	\$2,744	\$2,825	\$2,866	\$3,105	\$3,295	\$3,277	\$3,560	\$3,571
Bismarck: Bis-Man Transit Board										
Federal	\$1,193	\$1,230	\$1,317	\$1,440	\$1,568	\$1,199	\$995	\$859	\$1,200	\$1,402
State	\$309	\$306	\$247	\$513	\$530	\$428	\$733	\$475	\$378	\$317
Local	\$650	\$673	\$696	\$720	\$768	\$778	\$912	\$1,055	\$1,525	\$1,531
Other	\$535	\$501	\$888	\$596	\$559	\$874	\$563	\$665	\$660	\$612
Total	\$2,686	\$2,709	\$3,149	\$3,269	\$3,426	\$3,278	\$3,203	\$3,054	\$3,762	\$3,863

Table A.17 Urban Transit Agencies: Capital Funds by Source

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
----- thousand dollars -----										
Fargo: Metro Area Transit										
Federal	\$2,409	\$2,145	\$1,447	\$105	\$2,253	\$146	\$1,414	\$813	\$350	\$2,435
State	\$33	\$8	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Local	\$222	-\$84	\$268	\$25	\$472	\$65	\$337	\$324	\$179	\$1,177
Other	\$253	\$86	\$54	\$0	\$5	\$3	\$24	\$45	\$5	\$5
Total	\$2,917	\$2,156	\$1,769	\$131	\$2,730	\$214	\$1,775	\$1,183	\$534	\$3,617
Grand Forks: Cities Area Transit										
Federal	\$362	\$2,516	\$462	\$339	\$1,164	\$230	\$395	\$242	\$370	\$1,029
State	\$0	\$0	\$0	\$5	\$117	\$0	\$0	\$0	\$0	\$0
Local	\$89	\$254	\$0	\$75	\$0	\$44	\$98	\$110	\$74	\$259
Other	\$0	\$42	\$0	\$6	\$0	\$0	\$0	\$8	\$19	\$1
Total	\$451	\$2,812	\$462	\$423	\$1,281	\$274	\$494	\$361	\$463	\$1,289
Bismarck: Bis-Man Transit Board										
Federal	\$580	\$1,479	\$1,808	\$589	\$304	\$798	\$1,190	\$603	\$433	\$535
State	\$0	\$0	\$0	\$0	\$49	\$0	\$0	\$0	\$0	\$59
Local	\$0	\$0	\$0	\$0	\$0	\$200	\$317	\$151	\$108	\$131
Other	\$0	\$144	\$0	\$0	\$162	\$0	\$0	\$0	\$0	\$0
Total	\$580	\$1,624	\$1,808	\$589	\$515	\$998	\$1,506	\$754	\$541	\$726

APPENDIX E. TRANSIT AGENCY INFORMATION

This appendix provides detailed responses from transit agencies regarding their current facilities, needed facility upgrades, additional services needed, challenges to providing additional services, staffing needs, comments about how well they are meeting the needs of their service area residents, and other comments. Also provided is each agency's most recent service data, backlog and calculated vehicle replacement costs yearly.

Agency Name: City of Fargo, DBA: Metropolitan Area Transit (MATBUS)

Counties: Cass

Service provided: Demand-response for the general public, Traditional fixed-route, Flexible route

2018 Service Data

Total trips: 1,491,682

Vehicles: 53

Vehicle miles: 1,332,888

Vehicle hours: 105,760

Operating expense: \$7,817,280

Facilities:

Maintenance: Metro Transit Garage (MTG) maintain, store and administrative. We own 2/3 of building, Moorhead owns 1/3.

Storage: Metro Transit Garage (MTG)

Administrative: MTG and Ground Transportation Center (GTC)

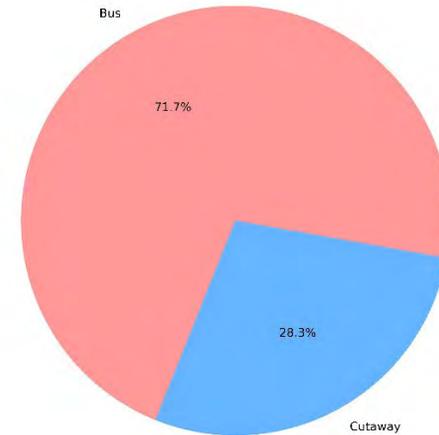
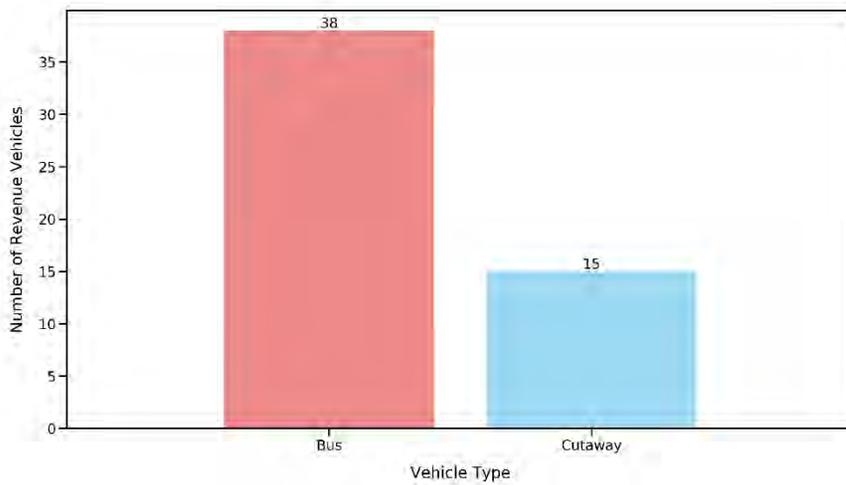
Needed upgrades: MTG needs to be renovated to allow for more vehicles and shop space. GTC is currently undergoing a project to improve administrative and passenger space. We need passenger facilities at outer lying areas such as West Acres.

Challenges: Funding.

Staffing needs: Need at least 2 more FTE's, plus redesign of how our operation is set up.

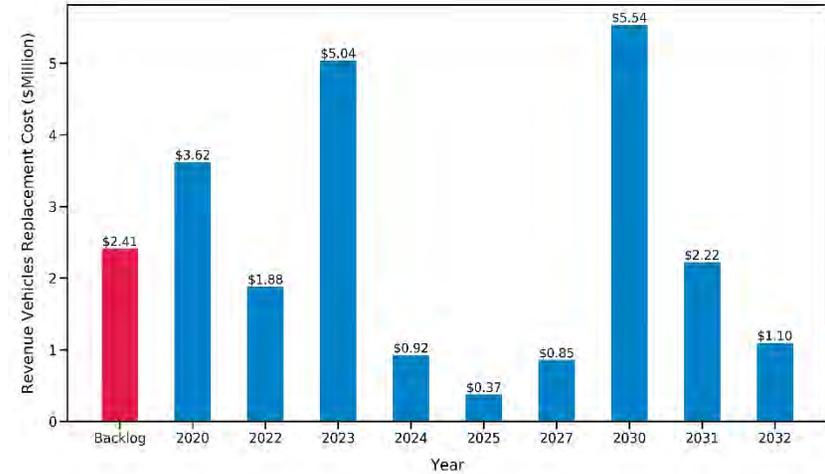
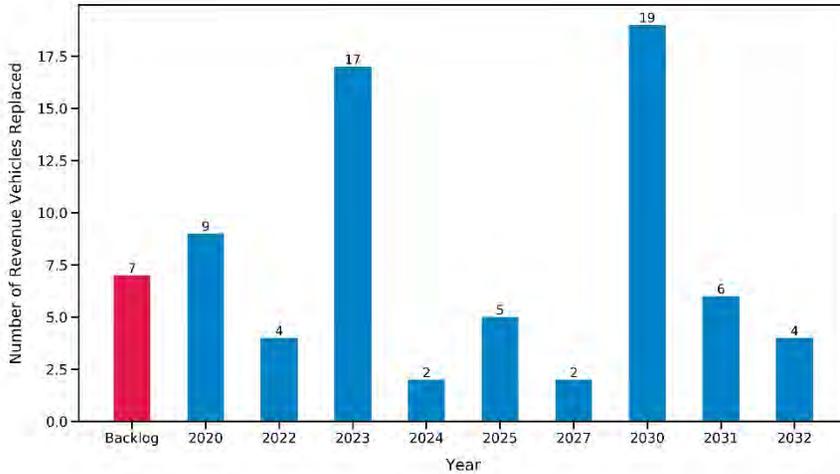
Meeting needs of residents: There is room for improvement, but we have a consistent fixed route service.

State of Good Repair information:



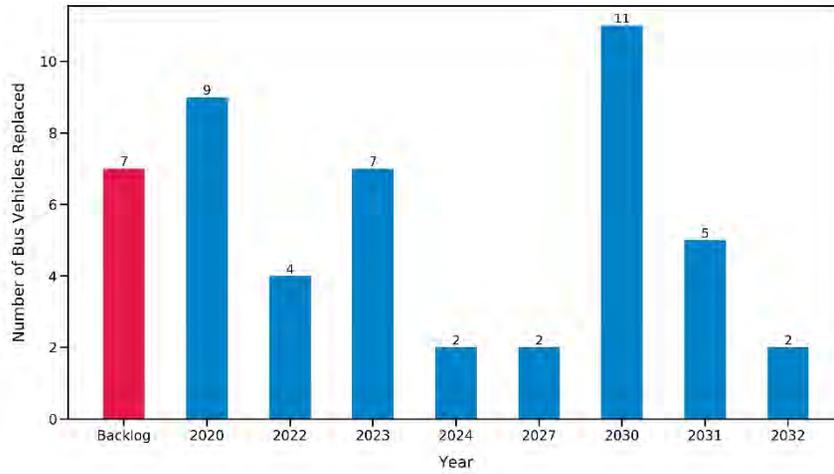
Number of Revenue Vehicles by Vehicle Type

Percentage of Revenue Vehicles

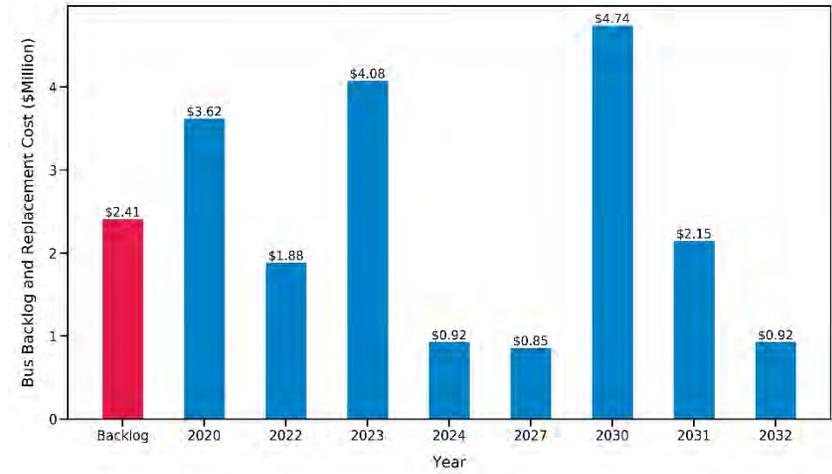


Backlog and Projected Replacement of Revenue Vehicles

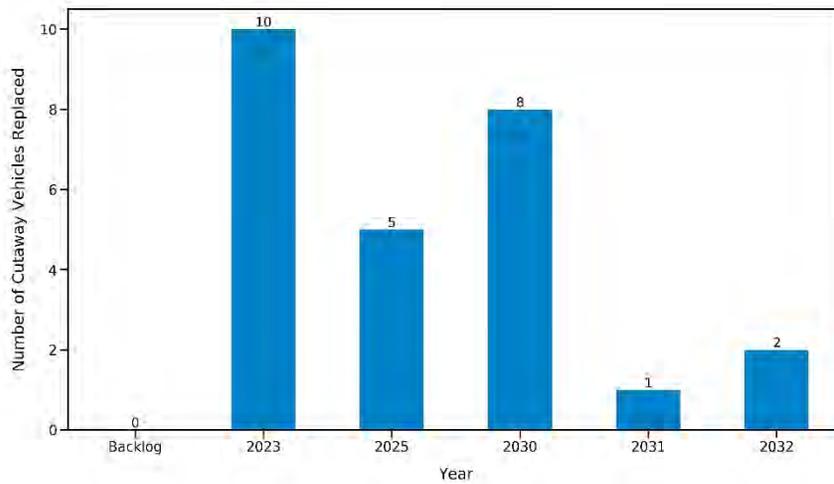
Backlog and Projected Replacement Costs for Revenue Vehicles



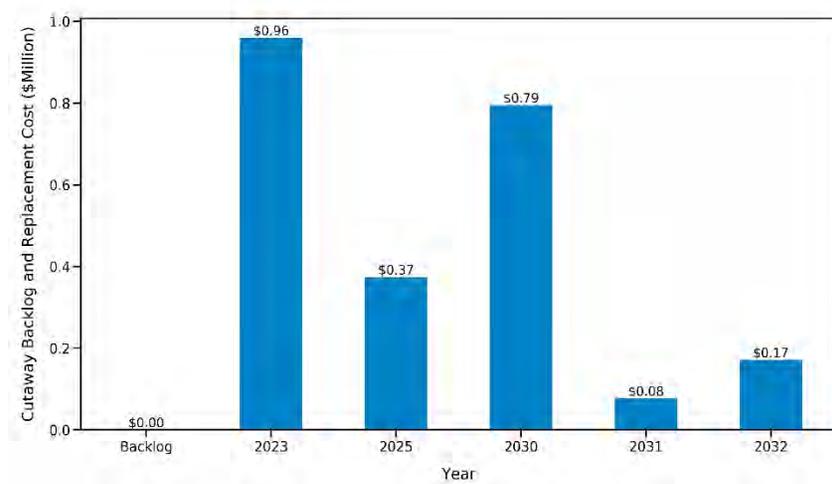
Backlog and Projected Replacement of Buses



Backlog and Projected Replacement Costs for Buses



Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways

Agency Name: Cities Area Transit (CAT)

Counties: Grand Forks

Service provided: Traditional fixed-route, ADA complementary paratransit.

2018 Service Data

Total trips: 316,552

Vehicles: 32

Vehicle miles: 610,132

Vehicle hours: 54,814

Operating expense: \$3,571,263

Facilities:

Maintenance: 38,000 square foot building to maintain and store the vehicles inside.

Storage:

Administrative:

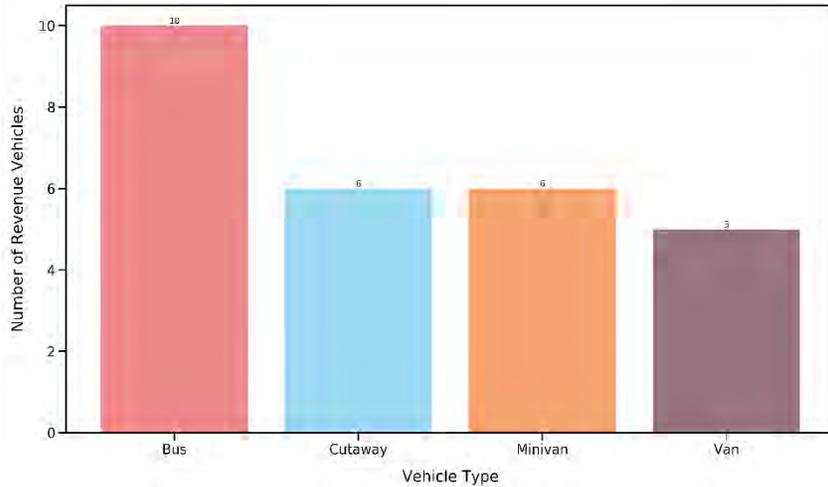
Needed upgrades: Currently doing an administrative and maintenance building upgrade and addition. This is a phase one project.

Challenges: Funding

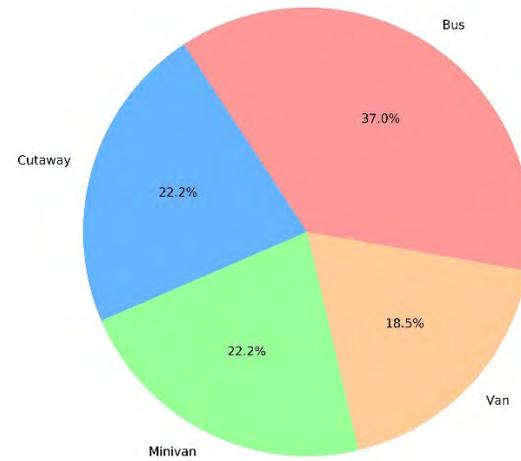
Staffing needs: Additional staff for assistant director, project manager, and bus operators.

Meeting needs of residents: Additional funding could provide more services and service area coverage.

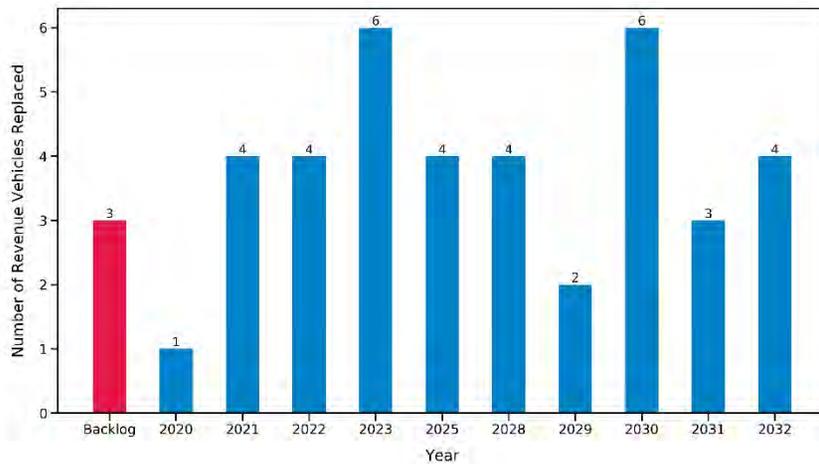
State of Good Repair Information:



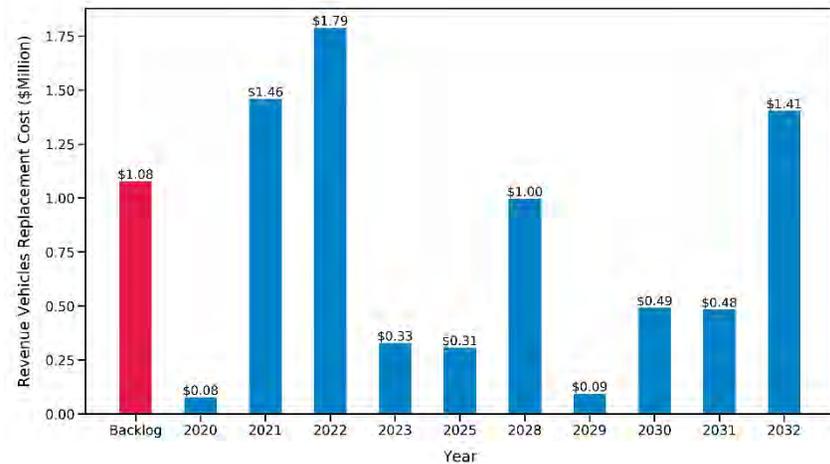
Number of Revenue Vehicles by Vehicle Type



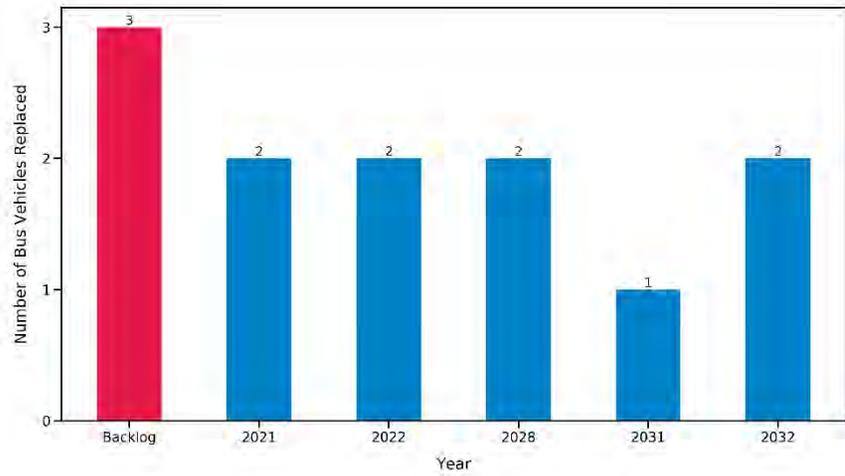
Percentage of Revenue Vehicles



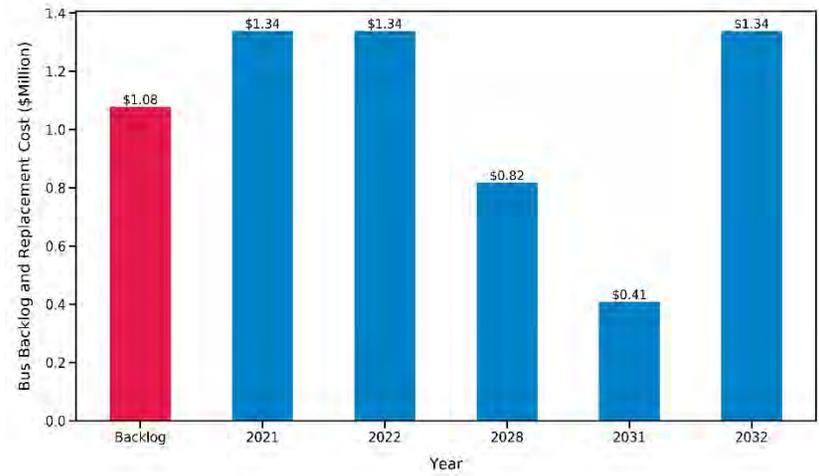
Backlog and Projected Replacement of Revenue Vehicles



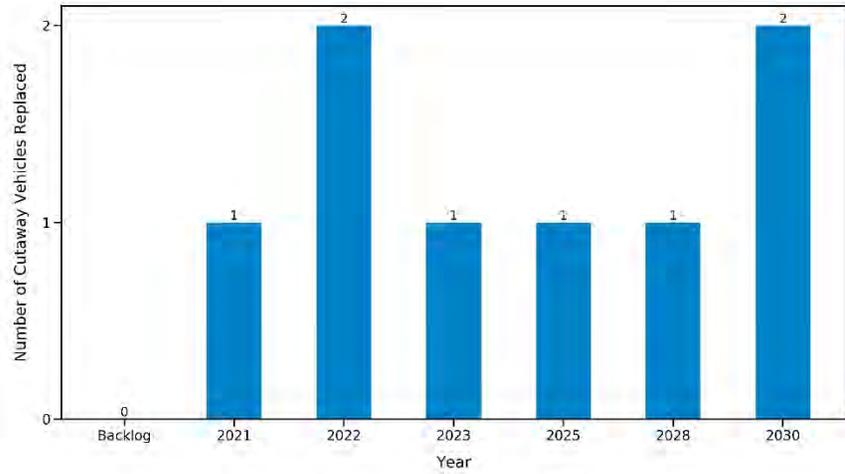
Backlog and Projected Replacement Costs for Revenue Vehicles



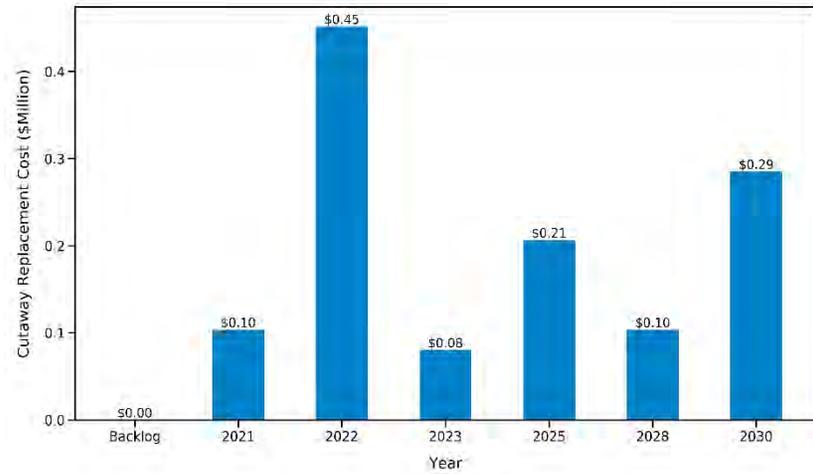
Backlog and Projected Replacement of Buses



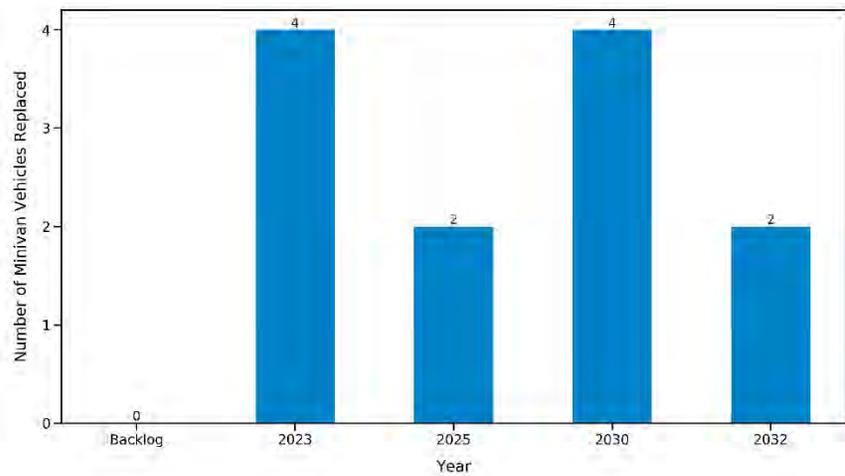
Backlog and Projected Replacement Costs for Buses



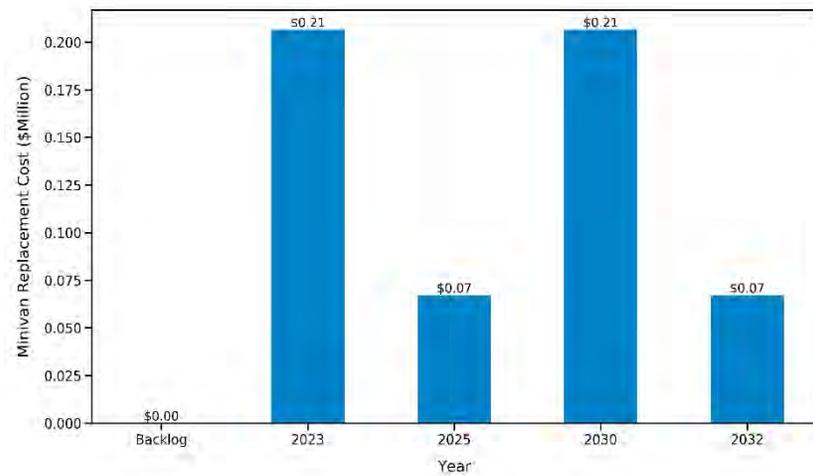
Backlog and Projected Replacement of Cutaways



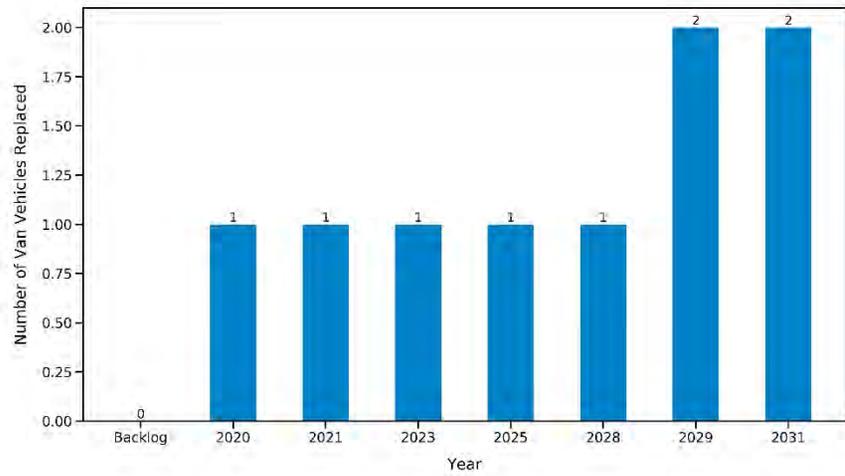
Backlog and Projected Replacement Costs for Cutaways



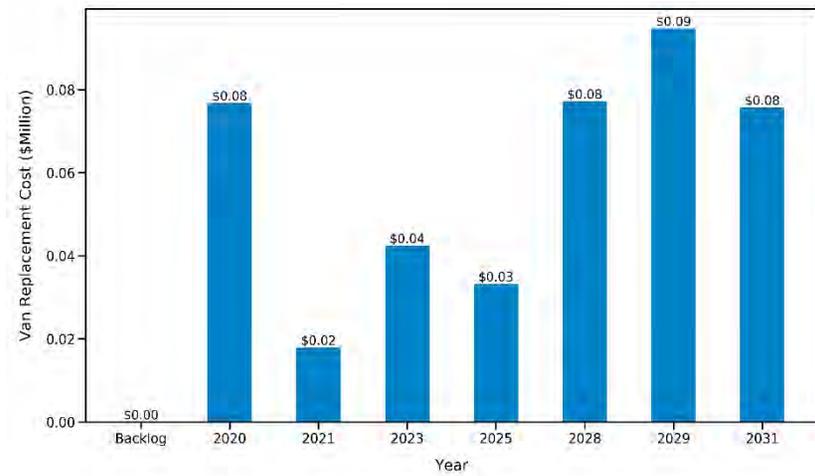
Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans



Backlog and Projected Replacement of Van



Backlog and Projected Replacement Costs for Vans

Agency Name: Bis-Man Transit Board

Counties: Burleigh, and Morton

Service provided: Traditional fixed-route, ADA complementary paratransit, and Limited-eligibility demand-response (serving only certain rider groups).

2018 Service Data

Total trips: 228,692

Vehicles: 31

Vehicle miles: 911,139

Vehicle hours: 61,387

Operating expense: \$3,863,074

Facilities:

Maintenance: Maintenance is performed in a 4093 square foot, four bay garages at the transit facility which is owned by the City of Bismarck.

Storage: The City owned facility houses all of our vehicles in three garages totaling 41,000 square feet.

Administrative: Administrative/operations offices utilize approximately 7,000 square feet of space in the city owned facility.

Needed upgrades: We need to add additional bus stops/shelters throughout the community. Ideally, we would have a dedicated transit hub building that would have indoor space for customer service and exterior space to safely facilitate transfers.

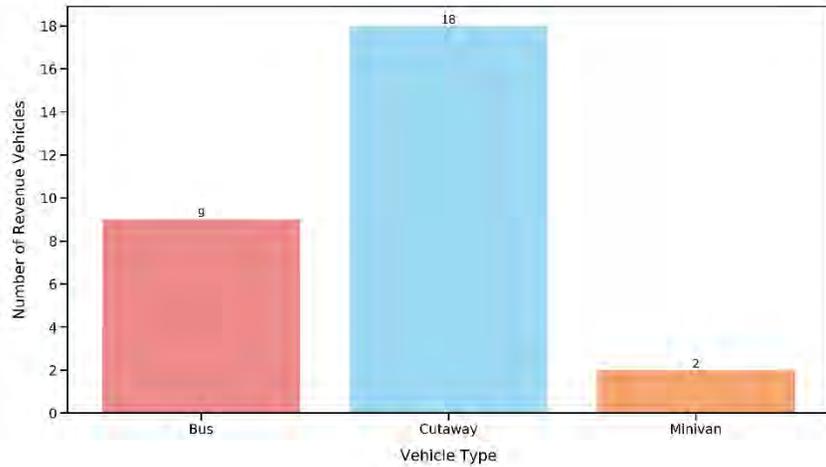
Challenges: Funding is our biggest challenge as we are currently operating in a budgetary deficit. Community sentiment is the second largest challenge in that the opposition to any change to improve efficiency is great.

Staffing needs: At the minimum, we need to hire a finance employee and an Administrative Assistant.

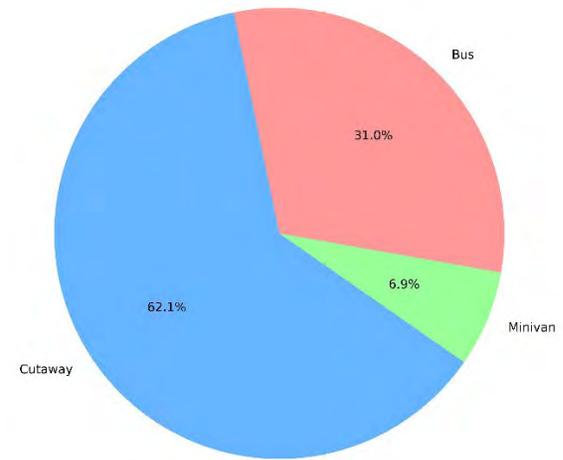
Other Services Needed: The paratransit service is performing well and provides above average service. The fixed route system is extremely limited with long headways and too few buses on the road to be able to provide convenient service.

Other comments: Funding is our biggest issue. Sometimes we meet the thresholds for STIC funding in two categories in amounts exceeding \$500,000 and other times we don't. We don't find out until the end of our first quarter which makes it difficult to budget. It would be nice if the state could do more to help provide operating funds as we have almost depleted our reserve funds for capital projects to cover operational costs.

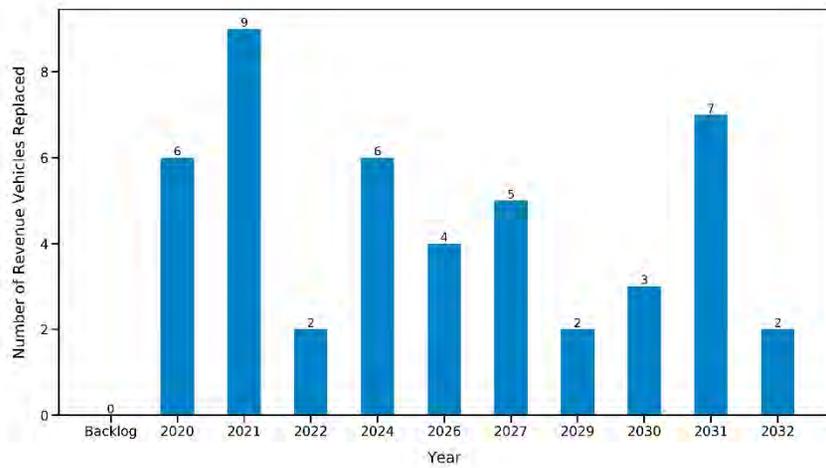
State of Good Repair Information:



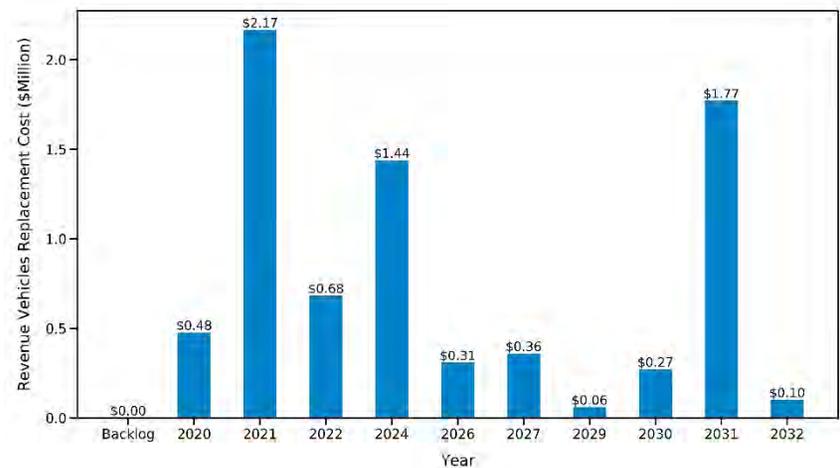
Number of Revenue Vehicles by Vehicle Type



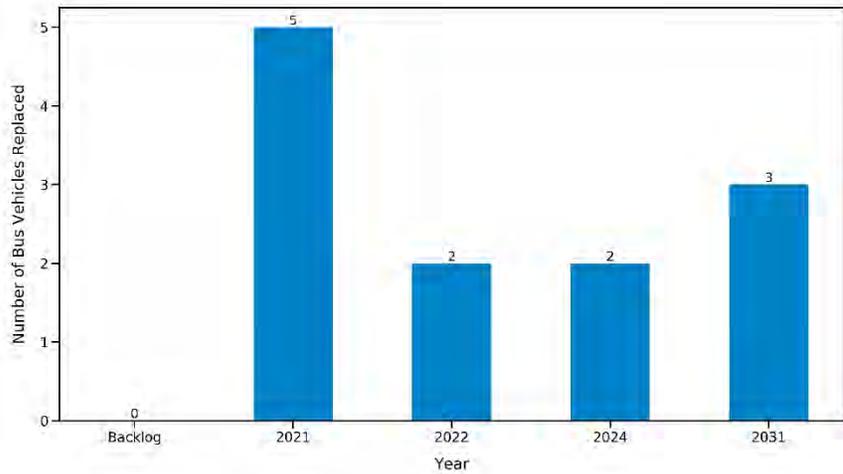
Percentage of Revenue Vehicles



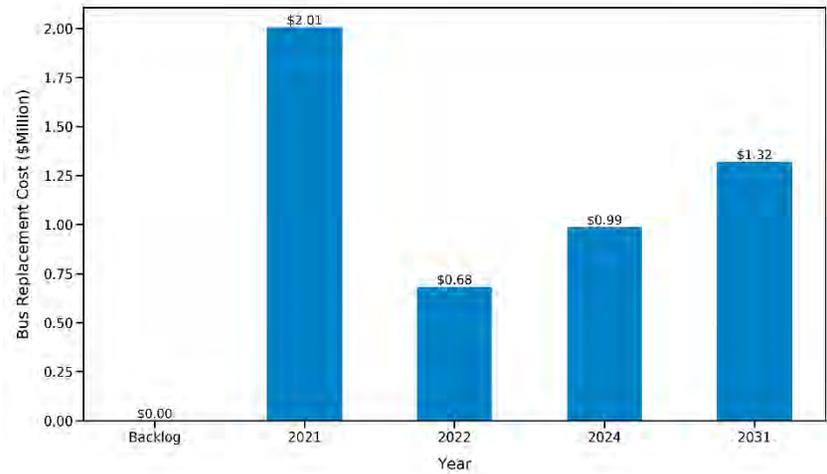
Backlog and Projected Replacement of Revenue Vehicles



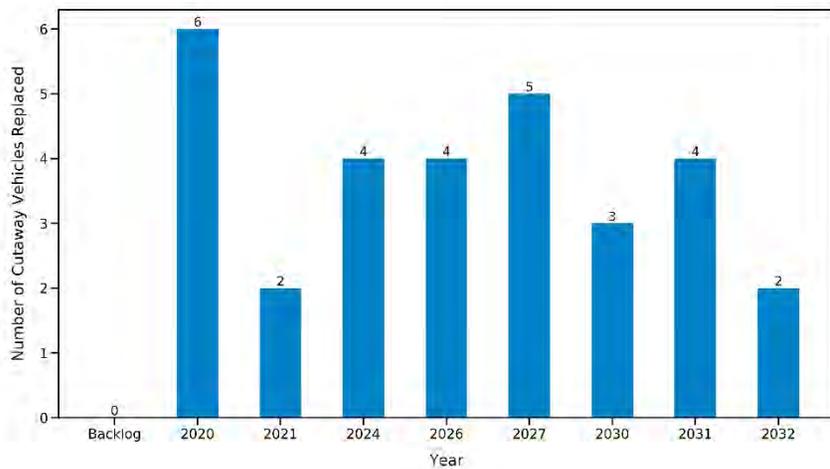
Backlog and Projected Replacement Costs for Revenue Vehicles



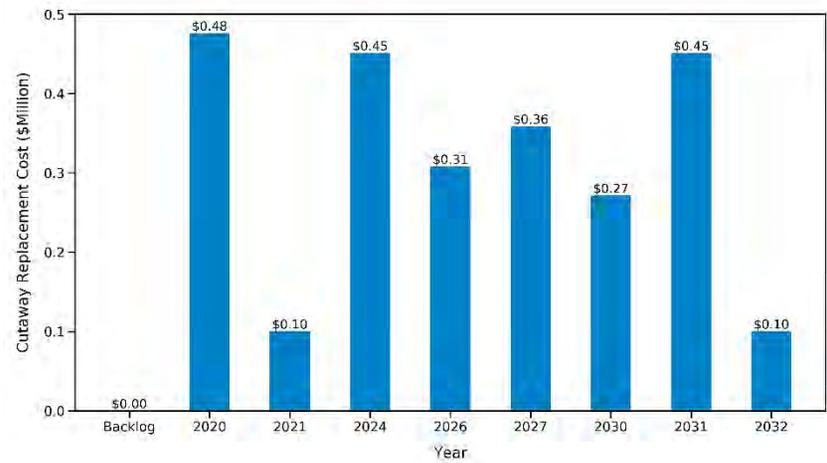
Backlog and Projected Replacement of Buses



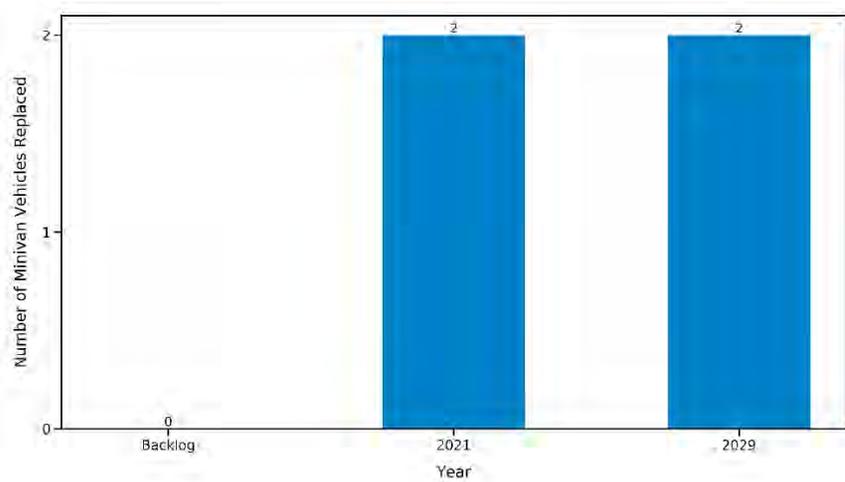
Backlog and Projected Replacement Costs for Buses



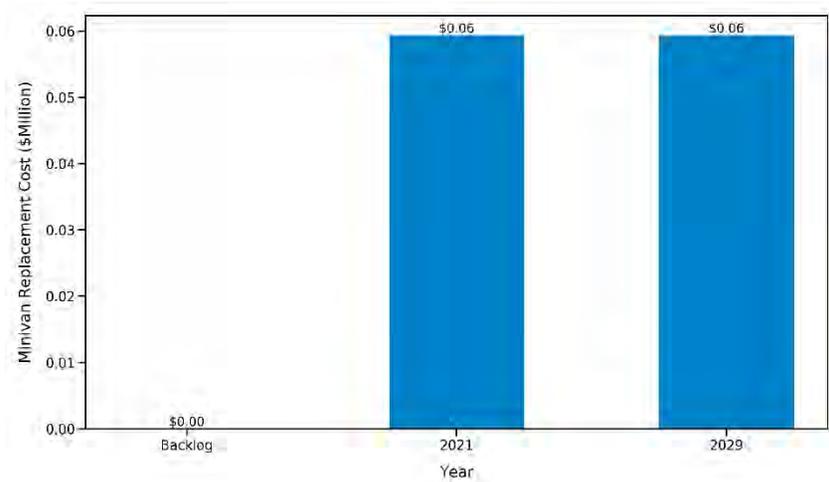
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Benson County Transportation

Counties: Benson

Service provided: Demand-response for the general public.

2018 Service Data

Total trips: 1,315

Vehicles: 3

Vehicle miles: 35,052

Vehicle hours: 1,231

Operating expense: \$99,709

Facilities:

Maintenance: N/A.

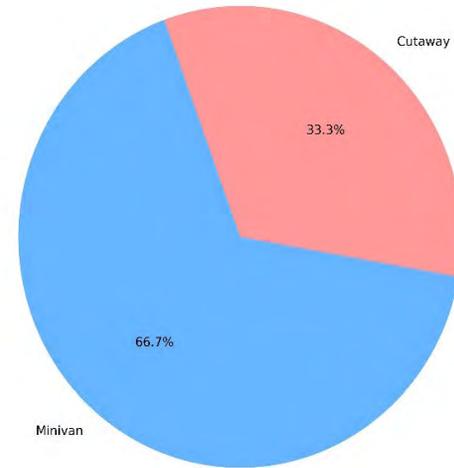
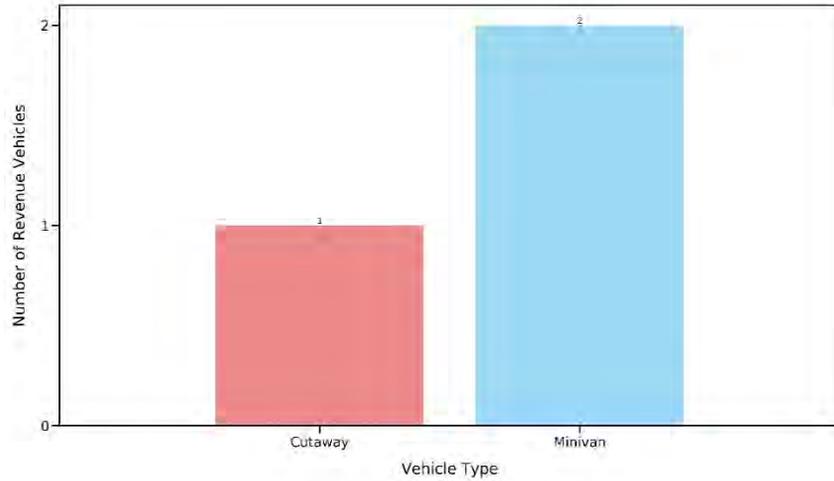
Storage: Own facility for parking of our 4 vehicles.

Administrative: Own facility that is combination parking garage and admin offices.

Needed upgrades:

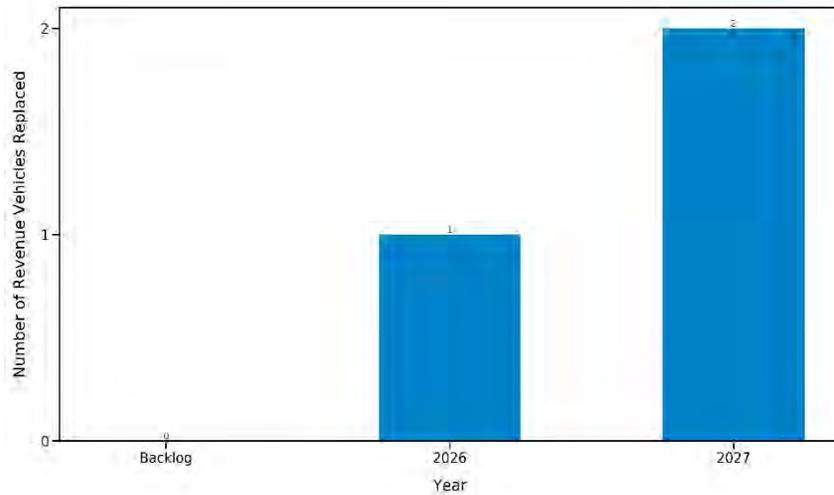
Staffing needs: in need of additional driver

State of Good Repair Information:

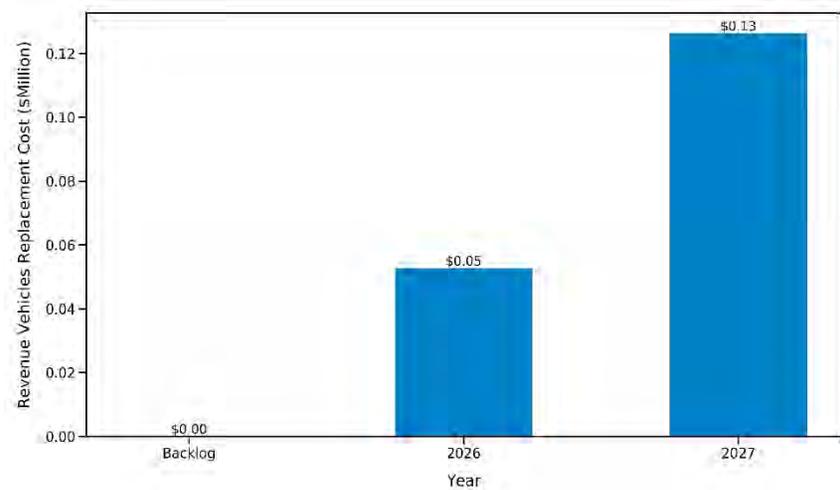


Percentage of Revenue Vehicles

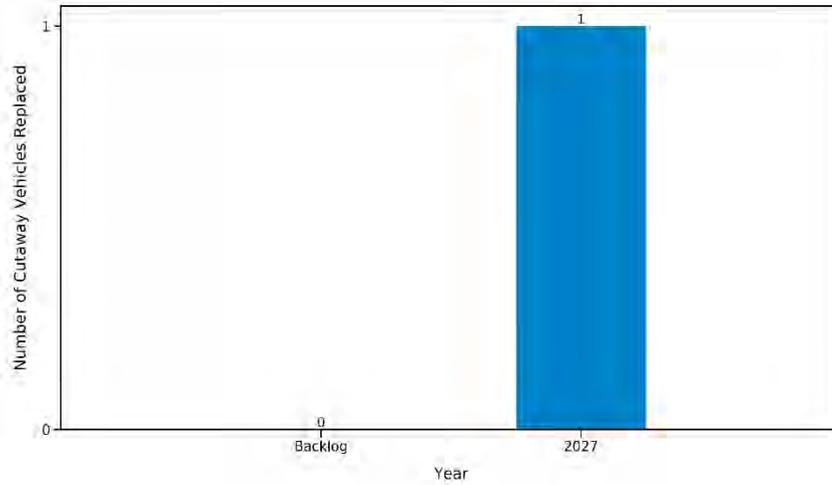
Number of Revenue Vehicles by Vehicle Type



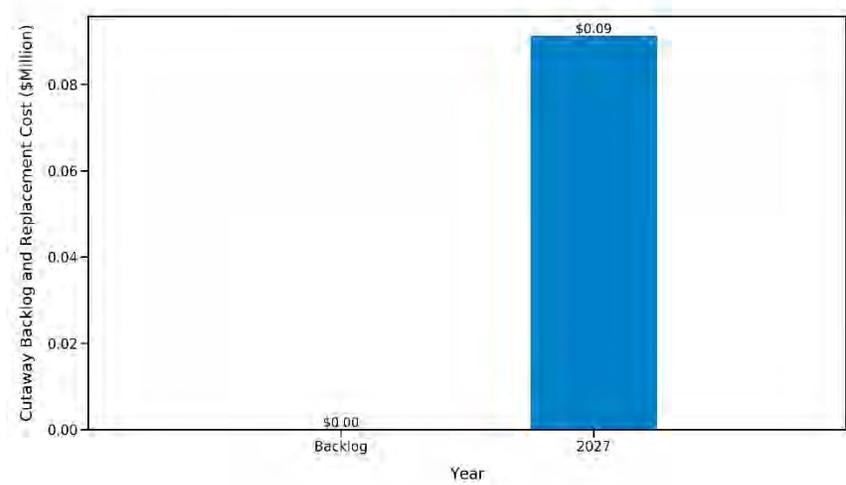
Backlog and Projected Replacement of Revenue Vehicles



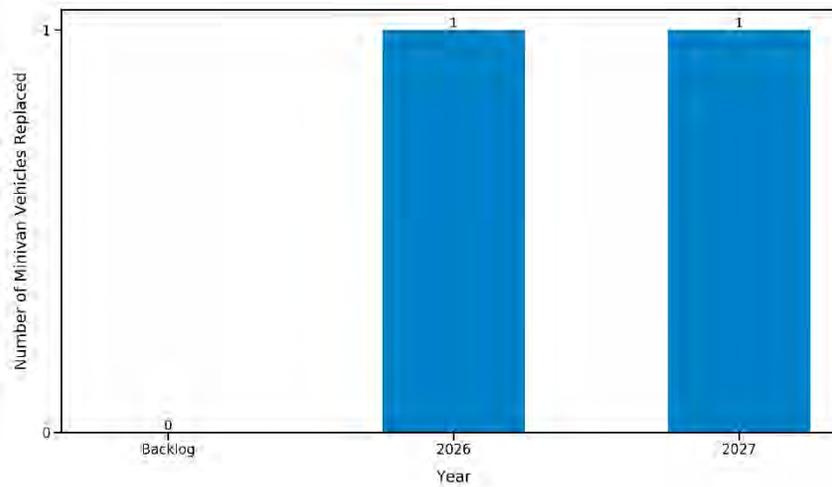
Backlog and Projected Replacement Costs for Revenue Vehicles



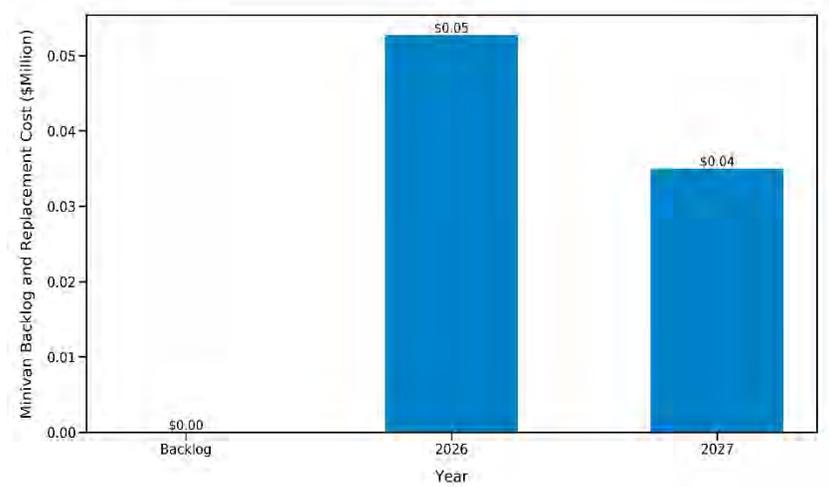
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Can-Do Transportation

Counties: Rolette

Service provided:

2018 Service Data

Total trips: 5,177

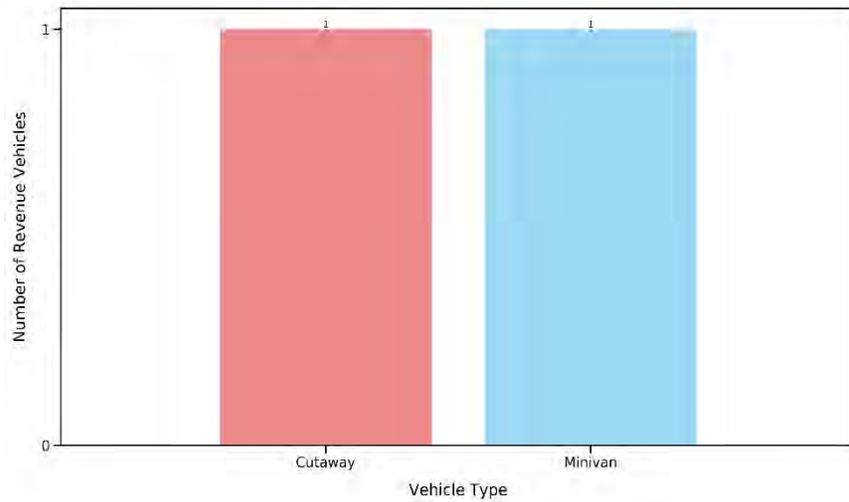
Vehicles: 2

Vehicle miles: 38,166

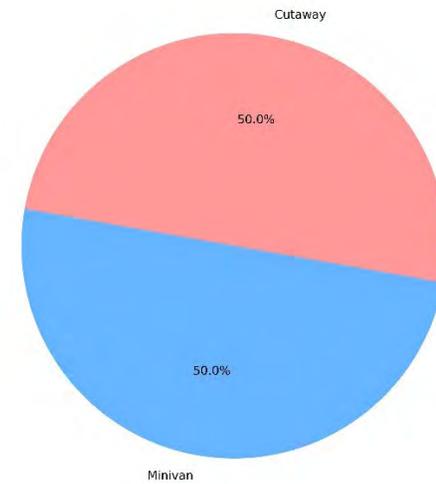
Vehicle hours: 3,069

Operating expense: \$69,187

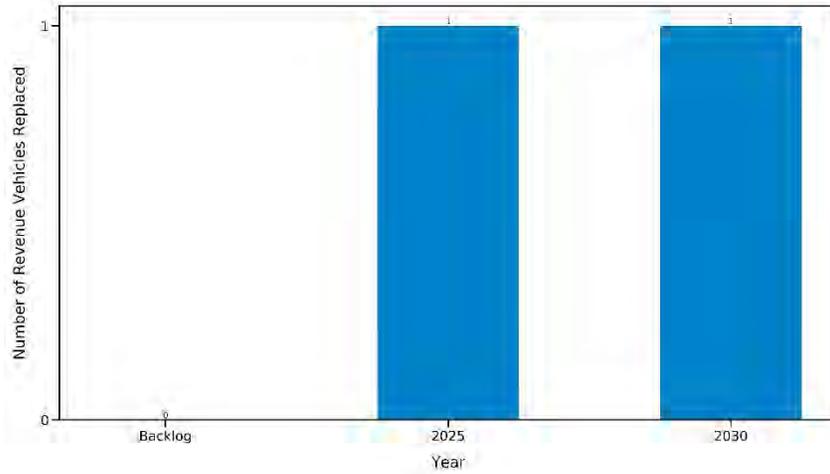
State of Good Repair Information:



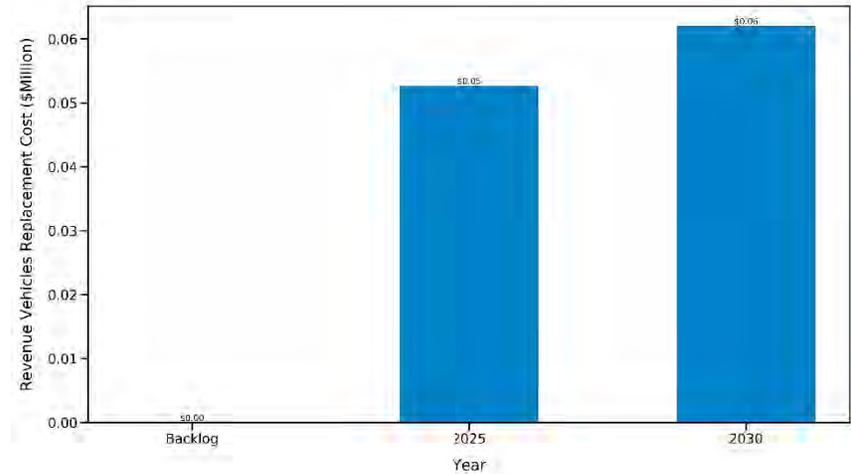
Number of Revenue Vehicles by Vehicle Type



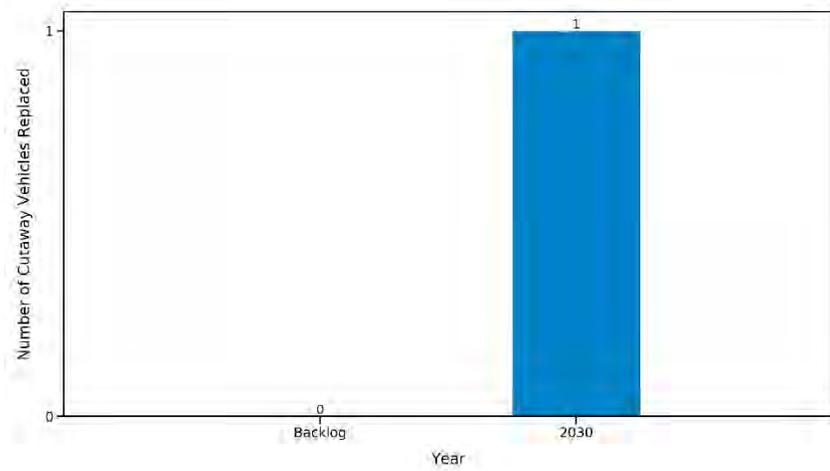
Percentage of Revenue Vehicles



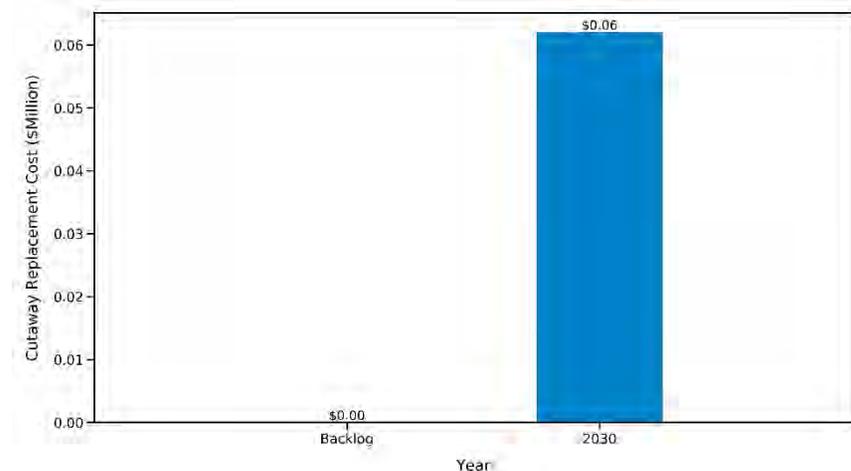
Backlog and Projected Replacement of Revenue Vehicles



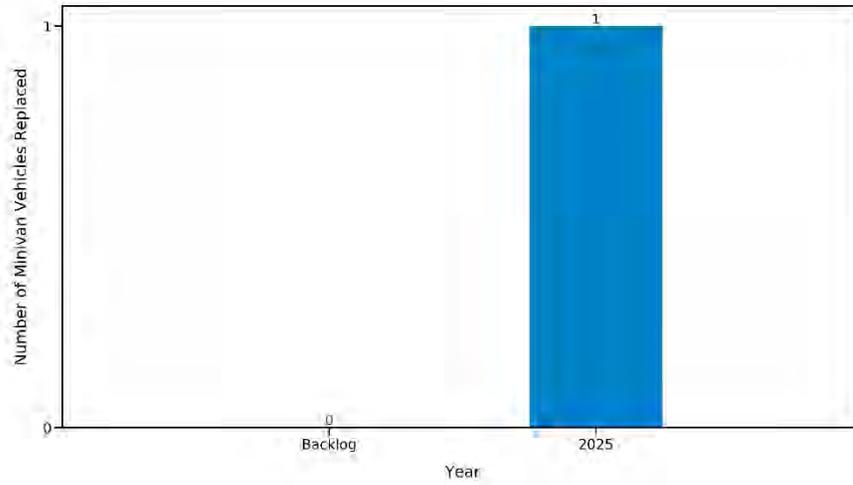
Backlog and Projected Replacement Costs for Revenue Vehicles



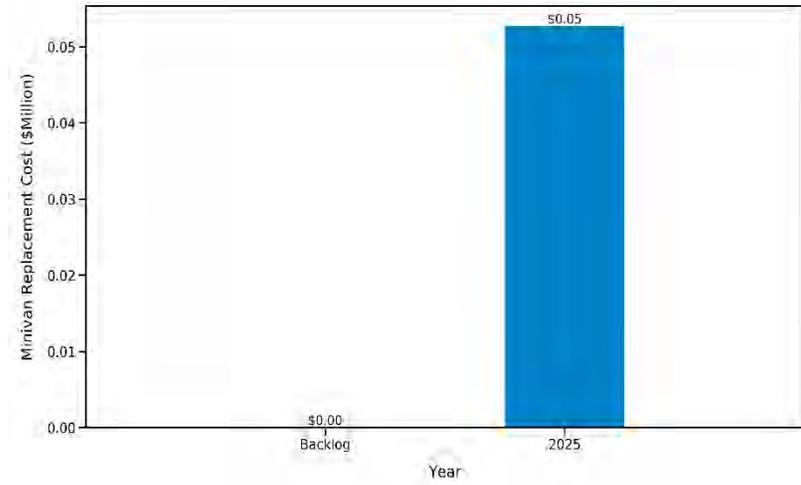
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Cavalier County Senior Meals & Services

Counties: Cavalier

Service provided: Demand-response for the general public, ADA complementary paratransit, Human service transportation (for clients of human service programs), and Veterans transportation.

2018 Service Data

Total trips: 7,183

Vehicles: 3

Vehicle miles: 52,728

Vehicle hours: 3,712

Operating expense: \$159,480

Facilities:

Maintenance: N/A

Storage: 2 garages, one is a single car garage and the other holds one bus, two vans, and a car
220 square feet, 350 square feet.

Administrative: We pay rent for our office space.

Needed upgrades: We pay rent so it's up to the owners of the building if there are going to be upgrades.

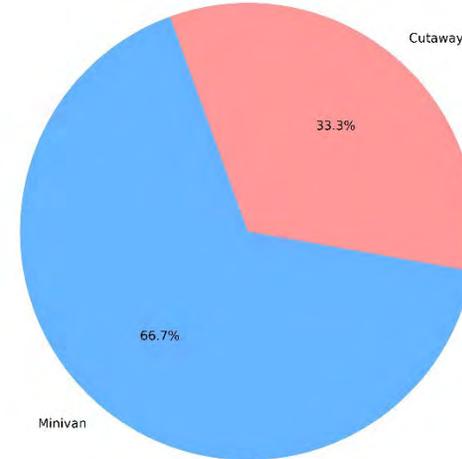
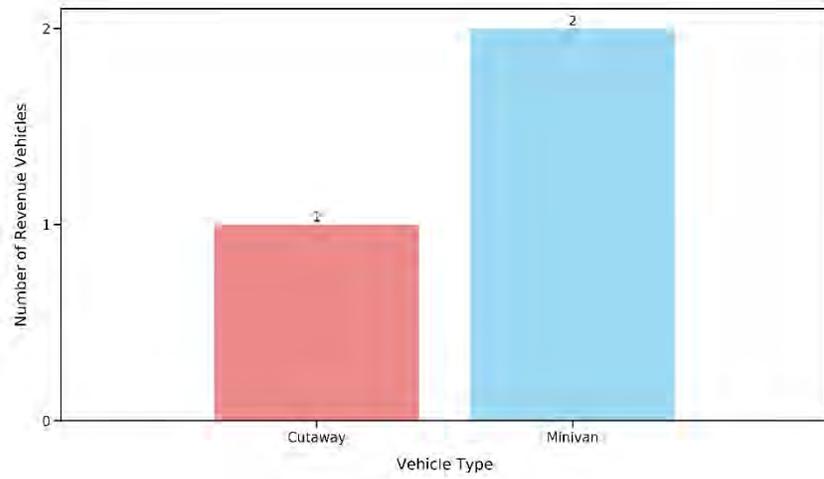
Challenges: Not enough staff and not enough interest at this time.

Staffing needs: Drivers/dispatchers will be retiring.

Meeting needs of residents: We are busy and try hard not to deny a ride.

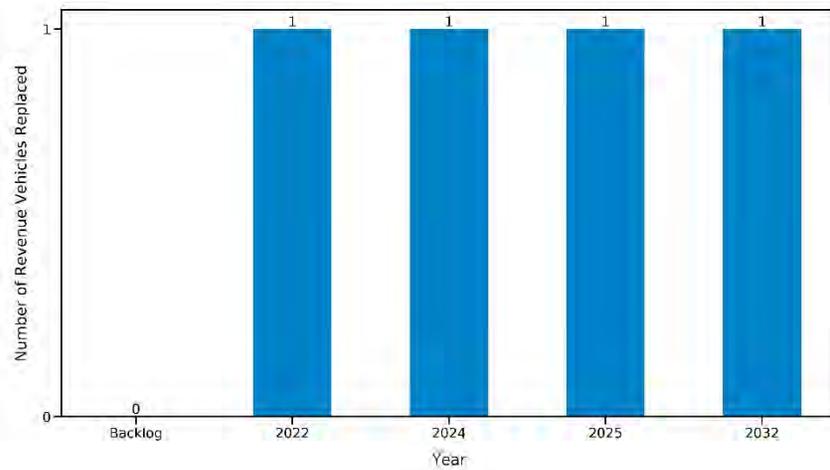
Other comments: Need more drivers

State of Good Repair Information:

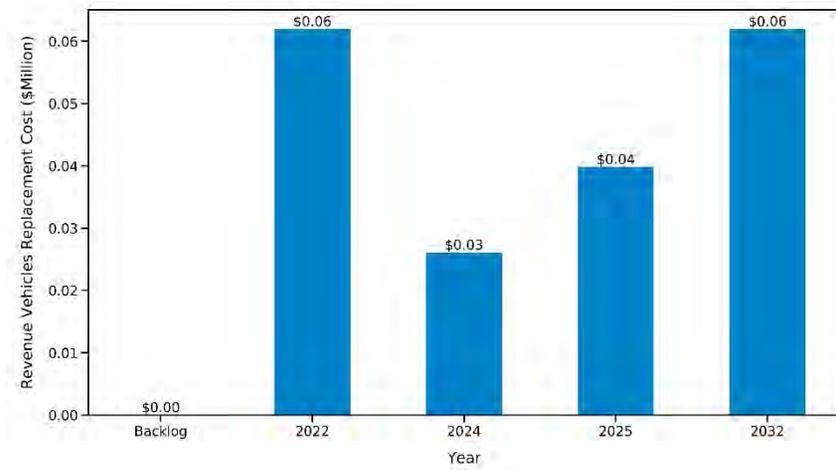


Percentage of Revenue Vehicles

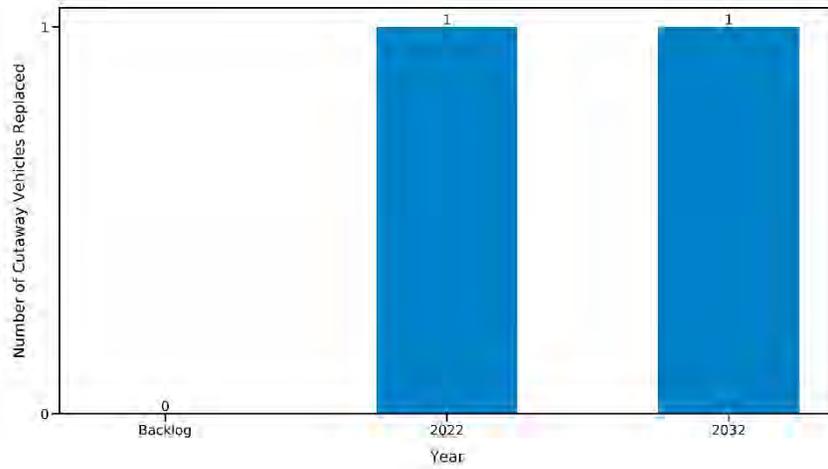
Number of Revenue Vehicles by Vehicle Type



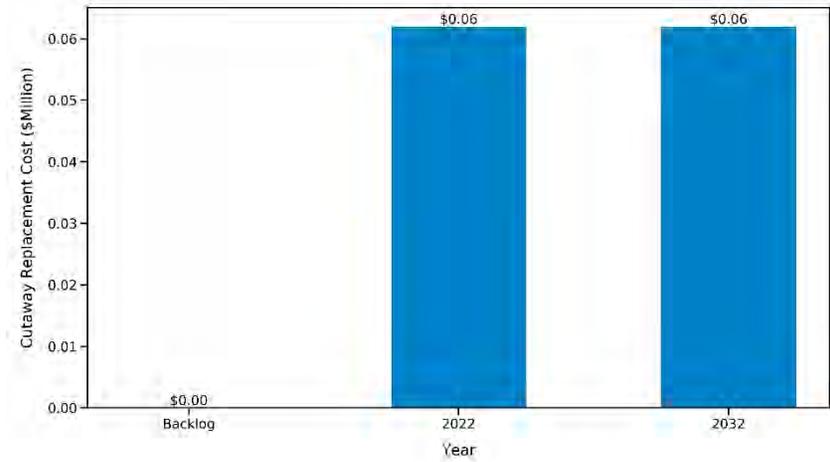
Backlog and Projected Replacement of Revenue Vehicles



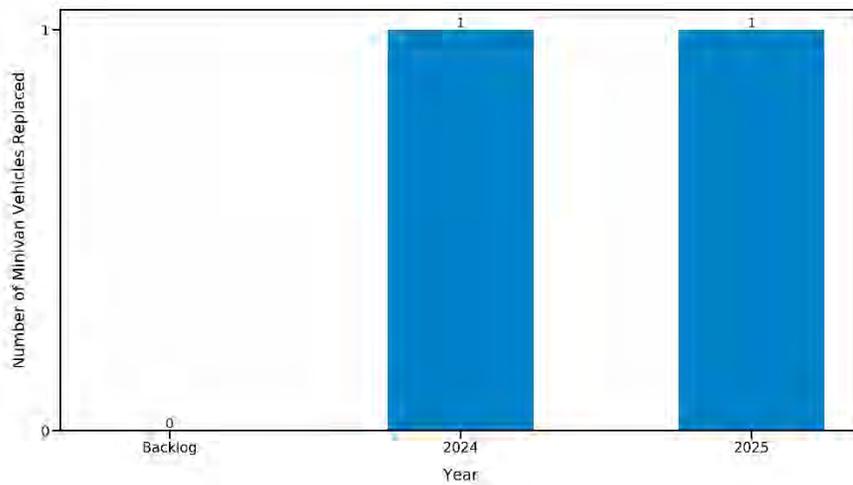
Backlog and Projected Replacement Costs for Revenue Vehicles



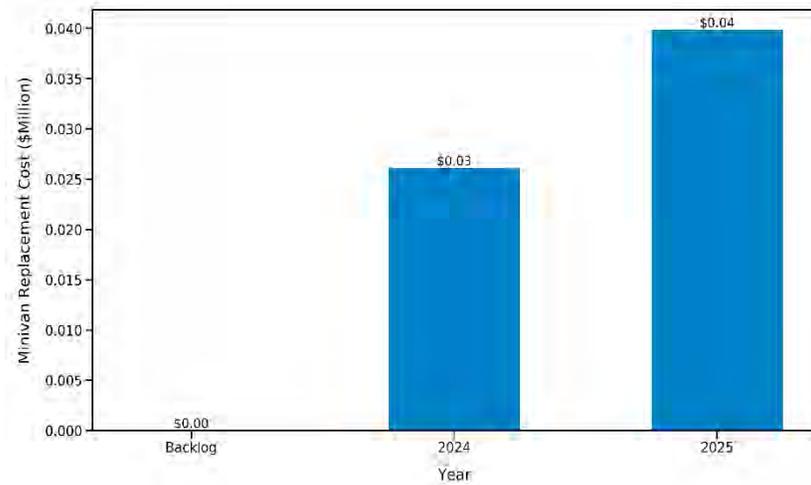
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: City of Minot

Counties: Ward

Service provided: Traditional fixed-route

2018 Service Data

Total trips: 87,361

Vehicles: 11

Vehicle miles: 159,440

Vehicle hours: 11,327

Operating expense: \$999,556

Facilities:

Maintenance: Shared maintenance facility with City of Minot Vehicle Maintenance Shop.

Storage: Indoor storage for 12 buses

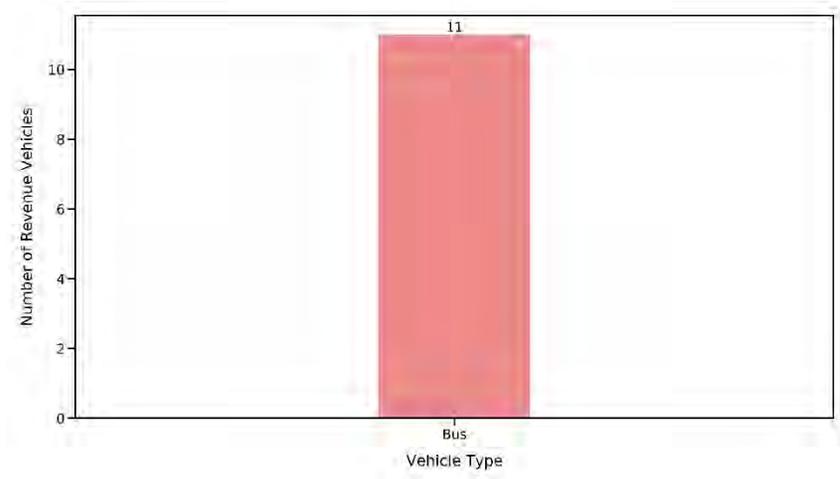
Administrative: Administrative offices are shared with Minot Public Works.

Needed upgrades: A transit transfer center is needed in downtown Minot. Currently passengers are transferred at the Minot Auditorium.

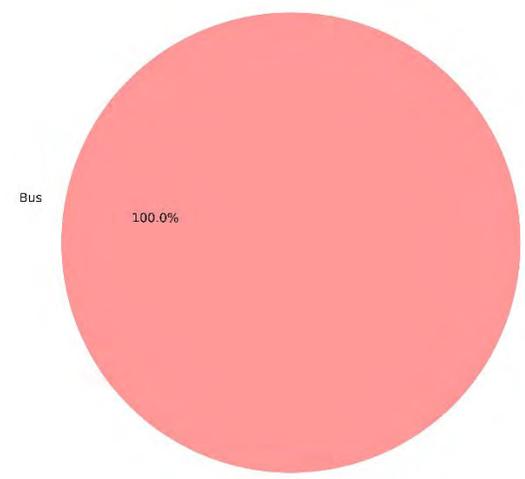
Challenges: Challenges include but are not limited to funding and difficulty hiring additional drivers and personnel.

Staffing needs: Will need 2 or 3 additional full and part time drivers for proposed route expansions.

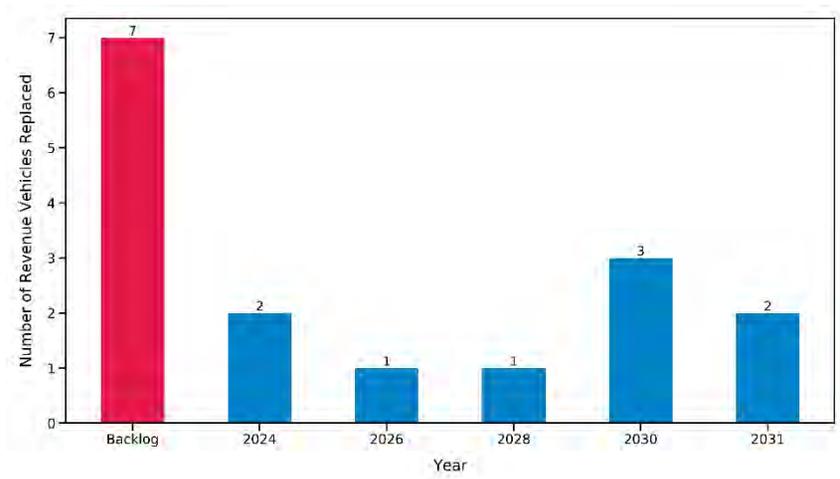
State of Good Repair Information:



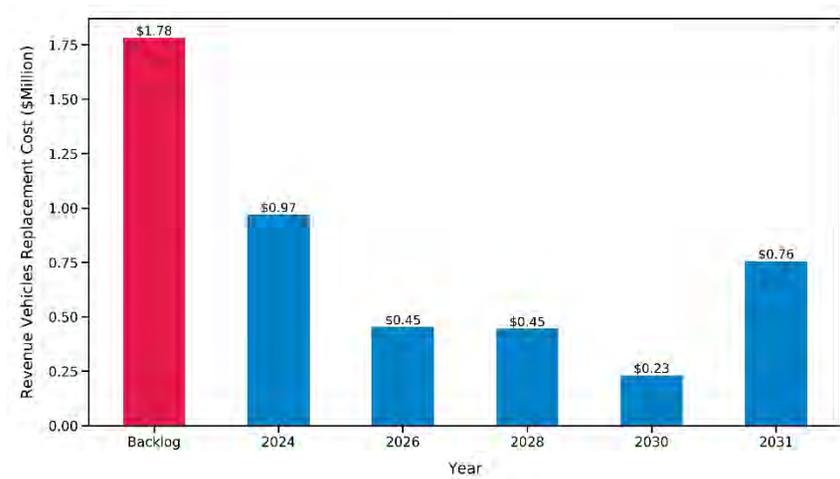
Number of Revenue Vehicles by Vehicle Type



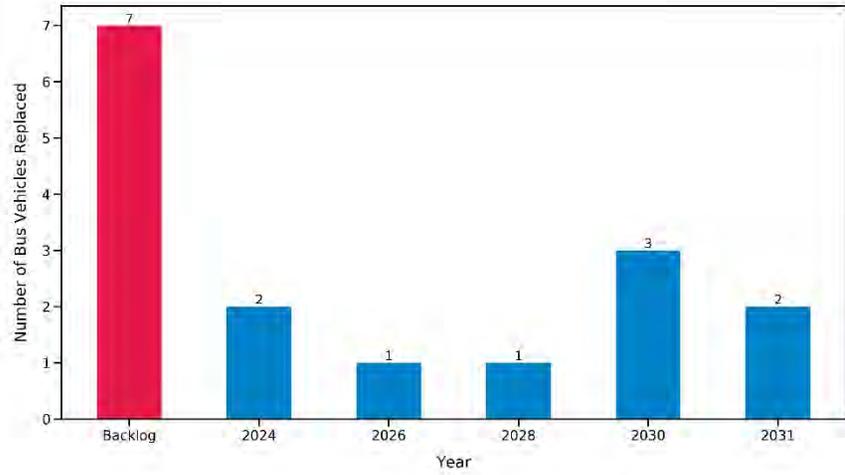
Percentage of Revenue Vehicles by Vehicle Type



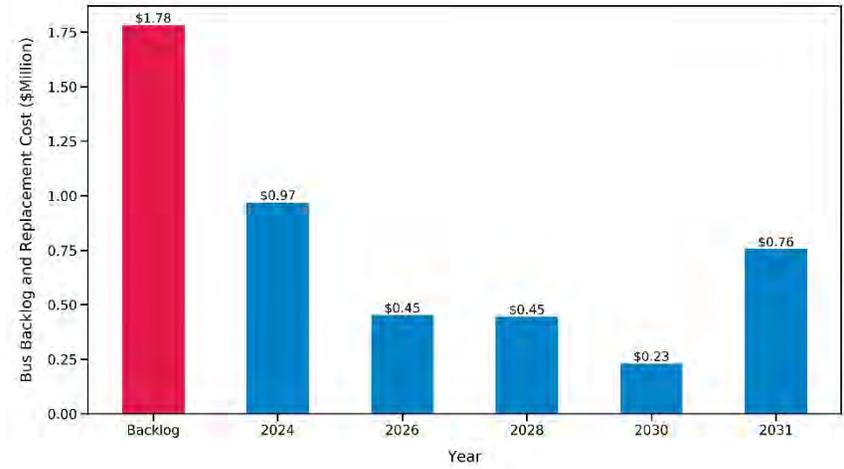
Backlog and Projected Replacement of Revenue Vehicles



Backlog and Projected Replacement Costs for Revenue Vehicles



Backlog and Projected Replacement of Buses



Backlog and Projected Replacement Costs for Buses

Agency Name: Devils Lake Transit (Senior Meals & Services)

Counties: Eddy, and Ramsey.

Service provided: Demand-response for the general public, Human service transportation (for clients of human service programs), and Veterans transportation.

2018 Service Data

Total trips: 28,587

Vehicles: 6

Vehicle miles: 51,138

Vehicle hours: 7,734

Operating expense: \$308,257

Facilities:

Maintenance: We outsource all of our maintenance.

Storage: In Ramsey County we own the storage facility. In Eddy County we lease a storage facility for one vehicle.

Administrative: In Eddy County we lease an office. In Ramsey county we lease a building from the city of Devils Lake and part of the building is used for Eddy County business.

Needed upgrades: If we upgrade our facility it must match the current building of brick which would be very costly. If we built a new building, we would need to remove the old building and replace with a new one.

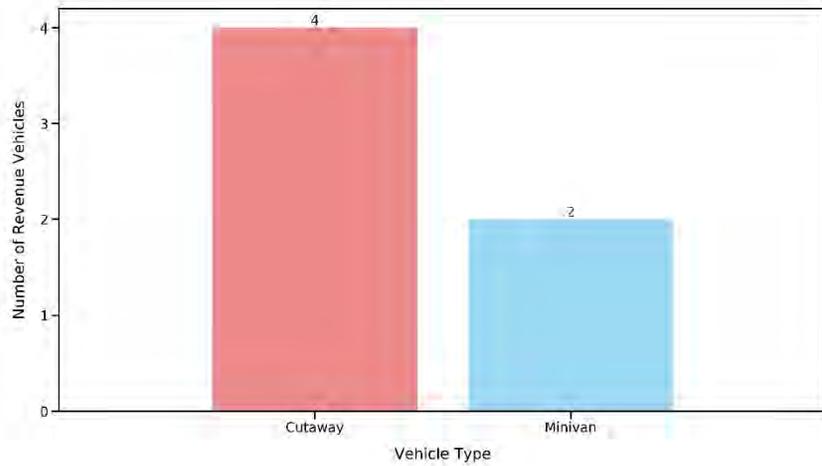
Challenges: Drivers is our biggest deterrent. It would be difficult to find a driver to cover these hours. Funding is a barrier to this service because it is not needed every evening or on weekends.

Staffing needs: We do not have enough money to cover another person.

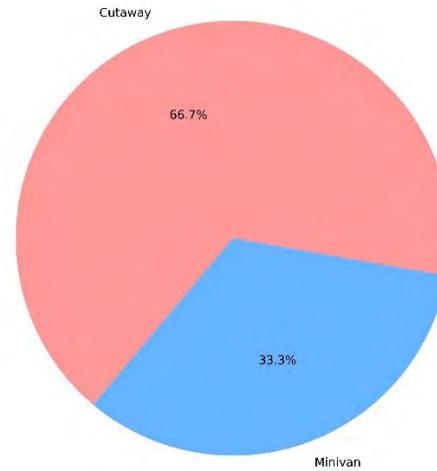
Meeting needs of residents: We do the best we can with limited resources. There are times when we can't provide rides at the time the customer requests because we are at our maximum.

Other comments: We need new vehicles, dependable drivers, and money to provide the services needed.

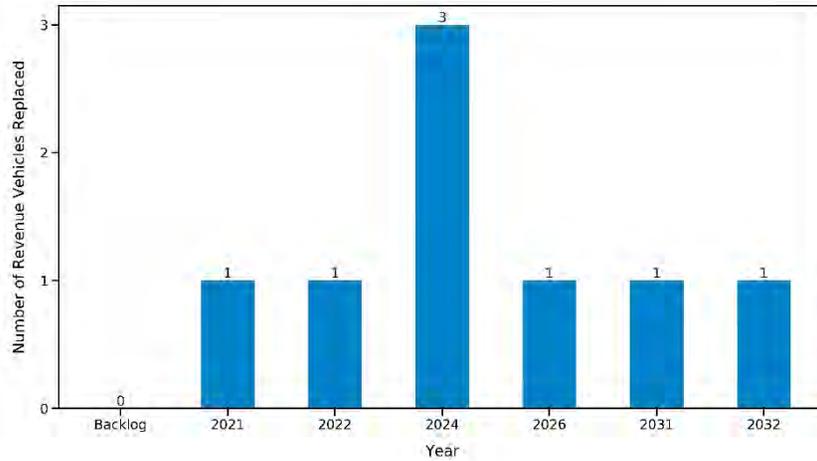
State of Good Repair Information:



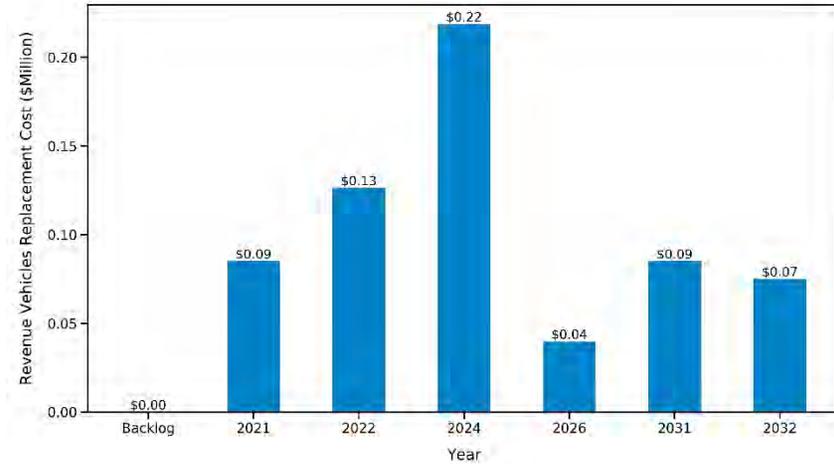
Number of Revenue Vehicles by Vehicle Type



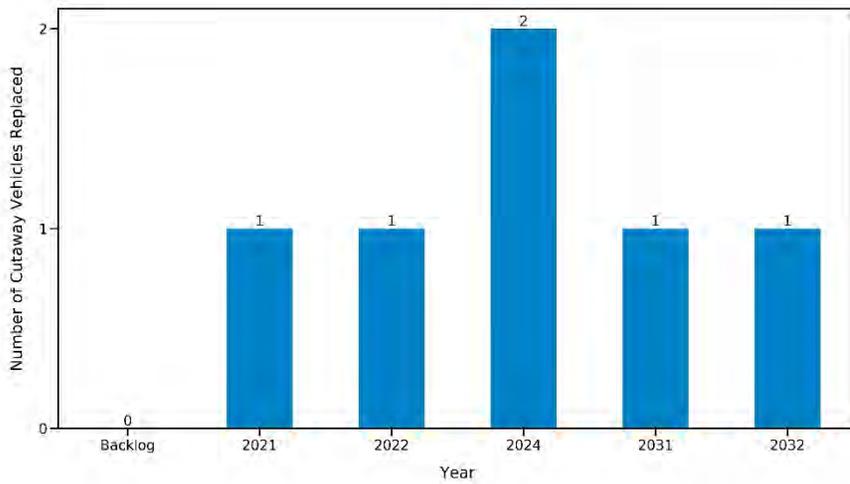
Percentage of Revenue Vehicles



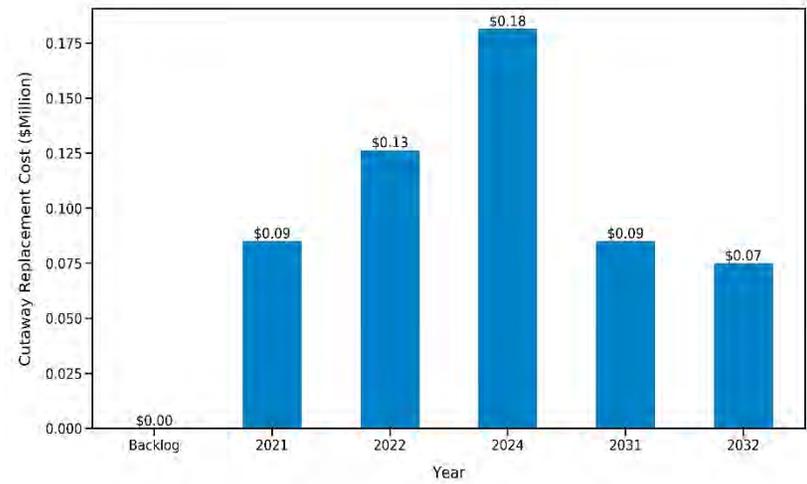
Backlog and Projected Replacement of Revenue Vehicles



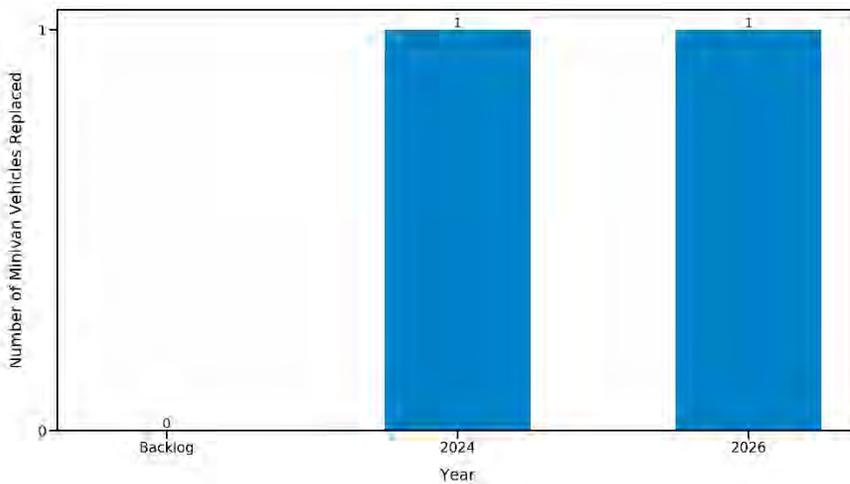
Backlog and Projected Replacement Costs for Revenue Vehicles



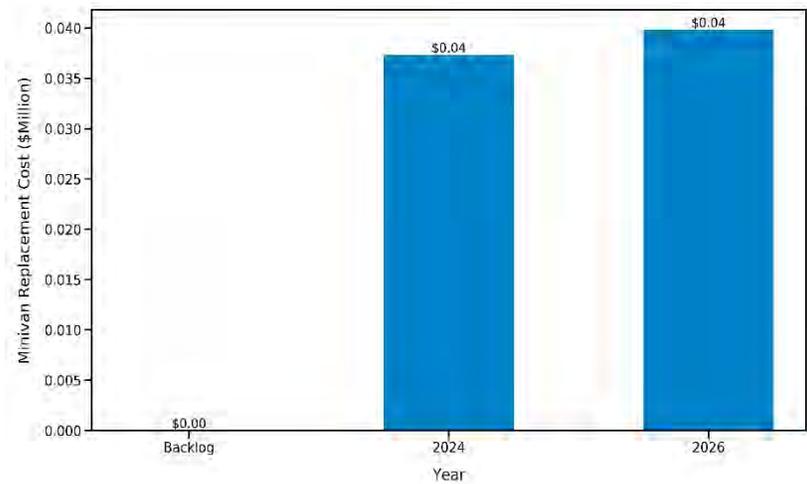
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Dickey County Senior Citizens

Counties: Dickey

Service provided: Demand-response for the general public.

2018 Service Data

Total trips: 4,715

Vehicles: 3

Vehicle miles: 9,607

Vehicle hours: 1,734

Operating expense: \$56,604

Facilities:

Maintenance: We have local mechanics at local shops work on our vehicles

Storage: We rent garages - one garage in Ellendale for a van. S section of a larger storage shed for two 12+2 vehicles.

Administrative: Our admin office is located in the Ellendale Senior Center (main office) with a person there that does many duties - one of which is dispatch for Ellendale area. Also have a person that does multiple duties including dispatch for Oakes area in the Oakes Senior Center.

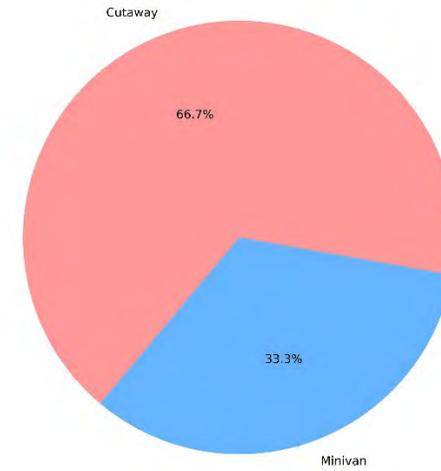
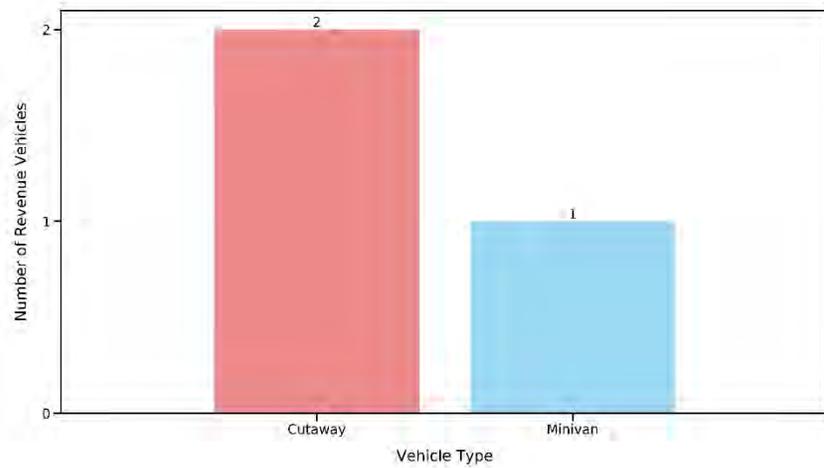
Needed upgrades:

Challenges: We would be more than willing to increase days of service and hours if we had the demand - which we don't seem to have. The only very occasional request that we get is what I would call a taxi-ride. A person wants to go to a specific "other" community (that we currently don't go to) on a specific day on their schedule and does not want to "share" a ride with anyone else.

Staffing needs: We will have some turnover of drivers due to retirement. Have no idea how hard it will be to find new drivers since labor market is so tight and these are part time jobs. Our part time dispatch persons could also turnover in the next 5 years.

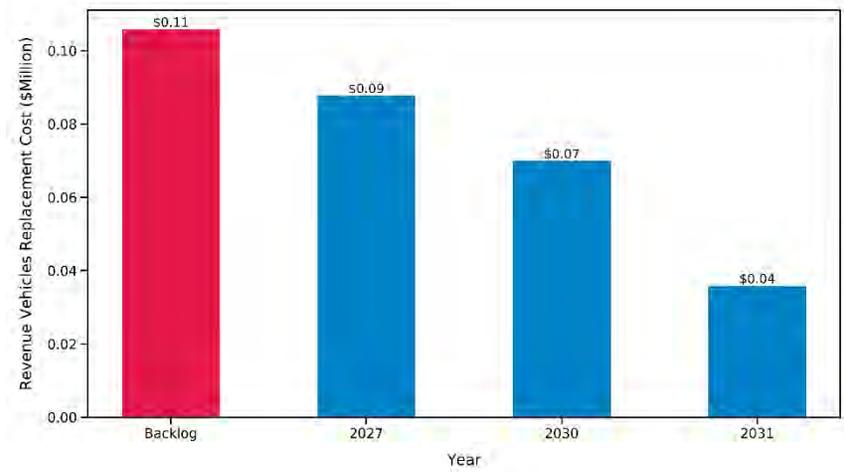
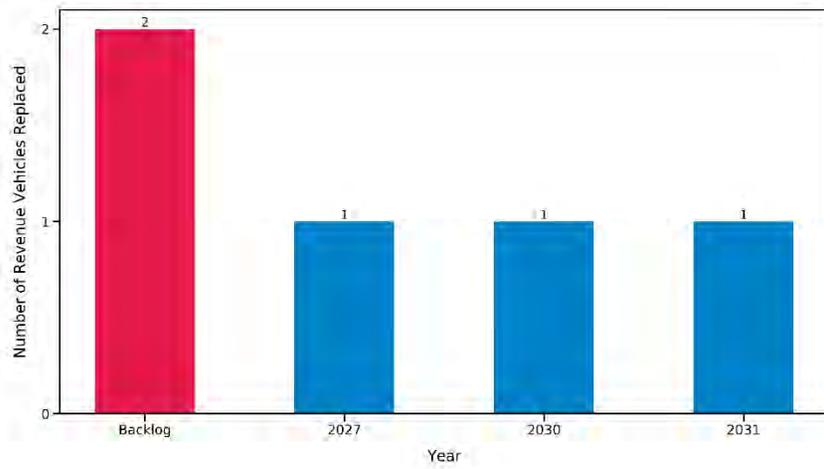
Meeting needs of residents: We have the capacity to do more - need the demand for it.

State of Good Repair Information:



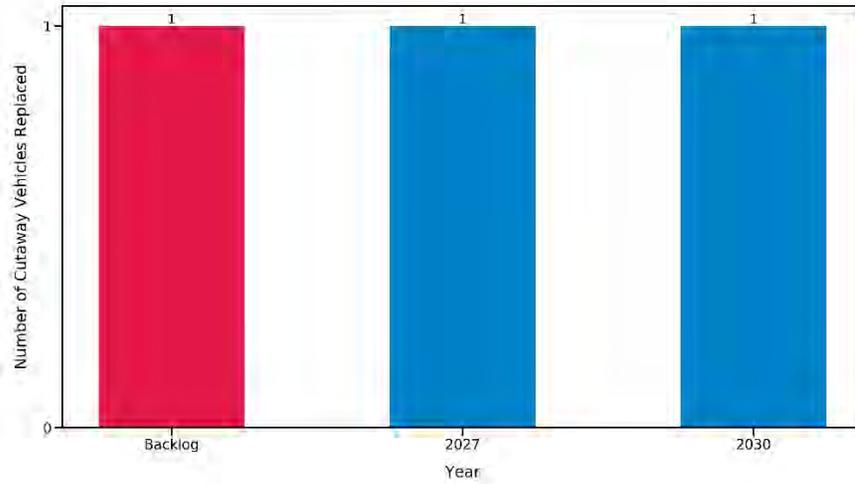
Number of Revenue Vehicles by Vehicle Type

Percentage of Revenue Vehicles

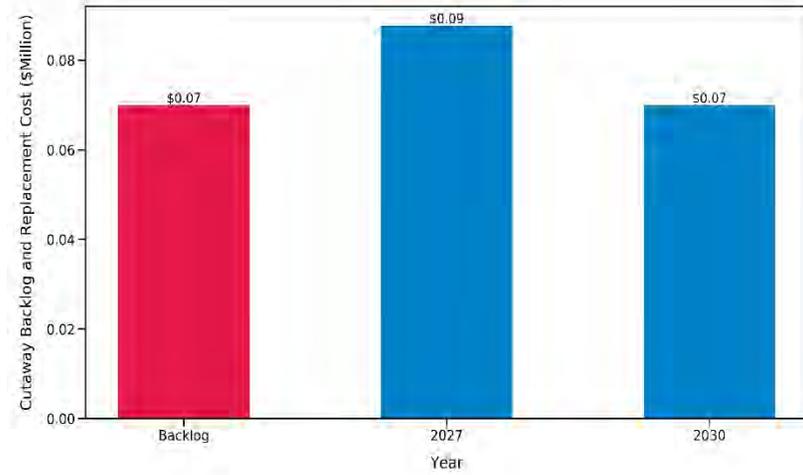


Backlog and Projected Replacement of Revenue Vehicles

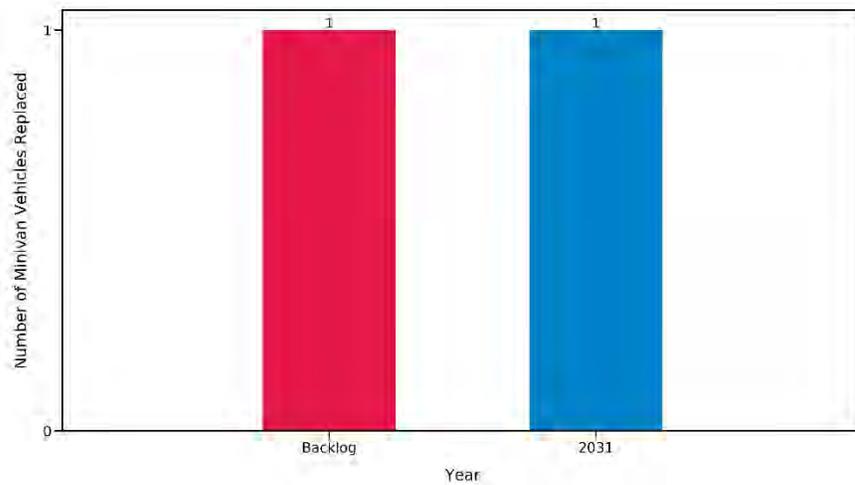
Backlog and Projected Replacement Costs for Revenue Vehicles



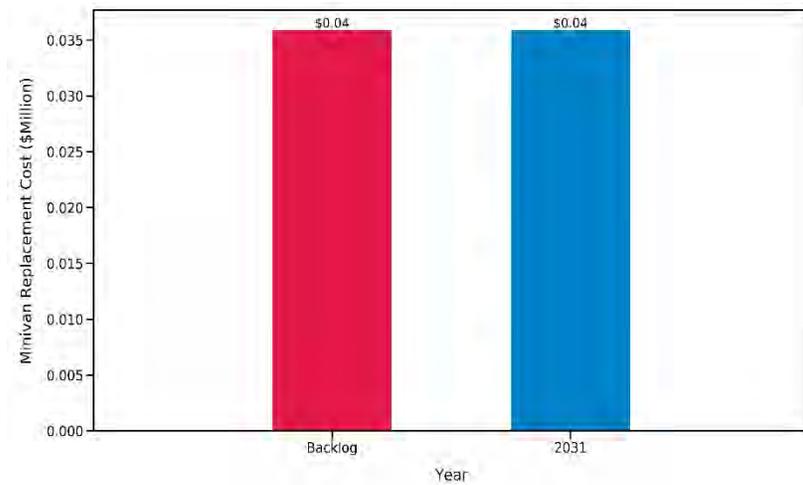
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Fargo Park District, dba: Valley Senior Services

Counties: Cass, Grand Forks, Ransom, Richland, Sargent, Steele, and Trail

Service provided: Demand-response for the general public.

2018 Service Data

Total trips: 57,416

Vehicles: 24

Vehicle miles: 365,971

Vehicle hours: 32,058

Operating expense: \$984,180

Facilities:

Maintenance: VSS does not own maintenance facilities, we use local repair shops.

Storage: In Fargo we own a Transit Storage Facility that houses our Metro Senior Ride and Cass County vehicles. We rent storage garages in the other counties we serve.

Administrative: In Fargo VSS has an office attached to our vehicle storage facility that functions as a dispatch and admin office. We also have admin and scheduling offices in Lisbon, Hillsboro and Wahpeton.

Needed upgrades:

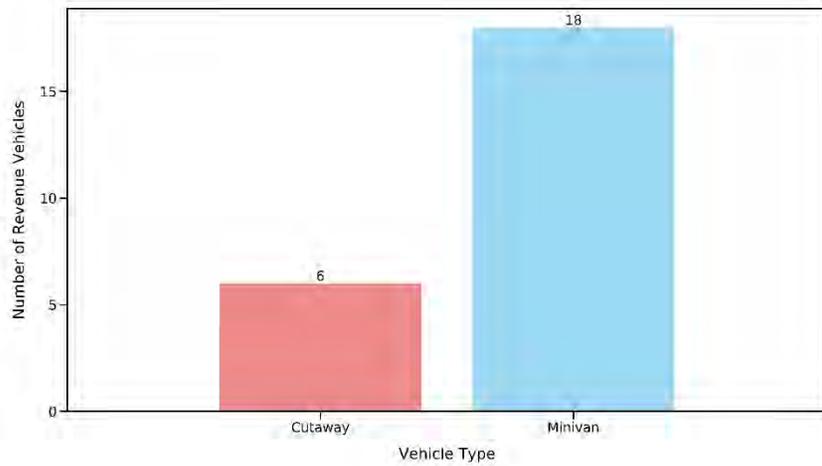
Challenges:

Staffing needs: Currently we are implementing new dispatch software in Fargo; this software could allow us to centralize all of our scheduling for our region. If this centralization happens, we will need to add staff in our Fargo office.

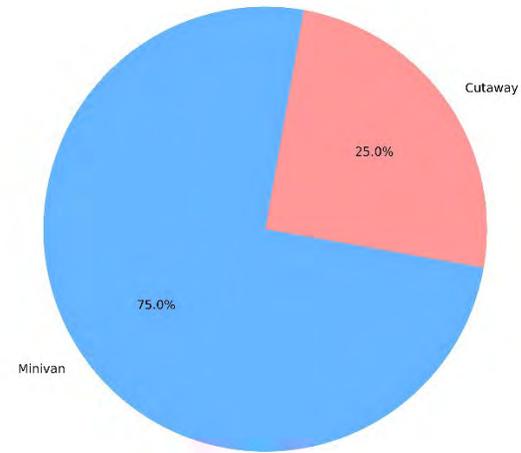
Meeting needs of residents: We turn down very few ride requests in our public service area. In addition, we have the ability to coordinate with the other counties we serve to provide most any ride that is requested. In the Metro area our senior ride is busy and the demand for senior ride service is expected to grow. We will need to access more funding and labor resources to keep up with demand in the next 2-3 years.

Other comments: As our urban Metro Senior Ride Service grows, we are noticing a slight decrease in our public sector demand. This trend seems to follow population changes and the aging of our residents. We will need to plan for additional service in our urban area while dealing with the challenges of staffing in our rural areas.

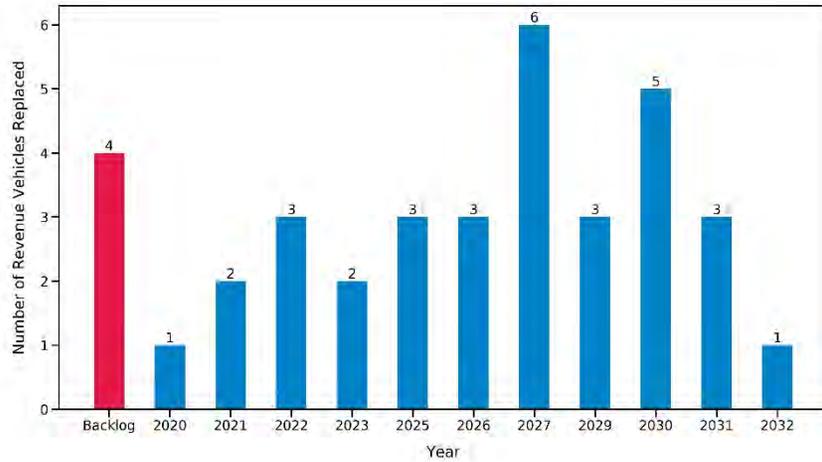
State of Good Repair Information:



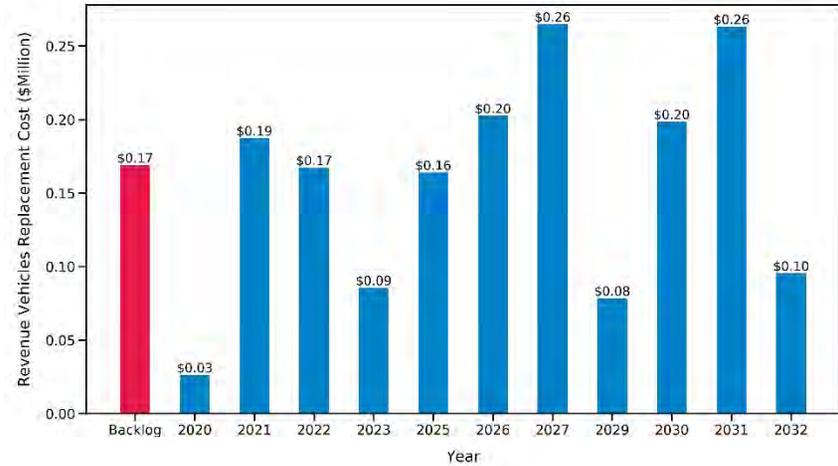
Number of Revenue Vehicles by Vehicle Type



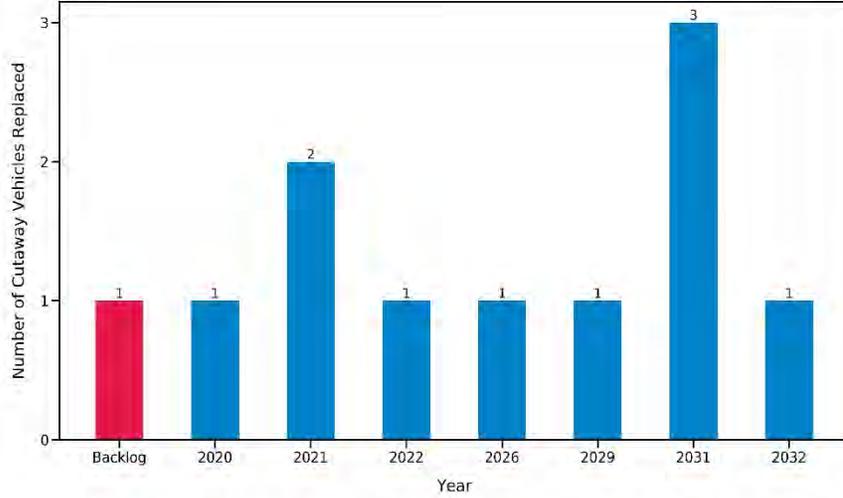
Percentage of Revenue Vehicles



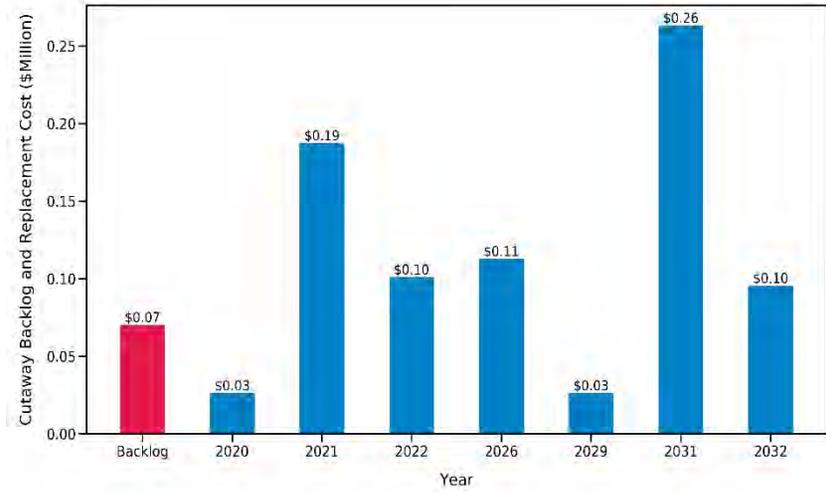
Backlog and Projected Replacement of Revenue Vehicles



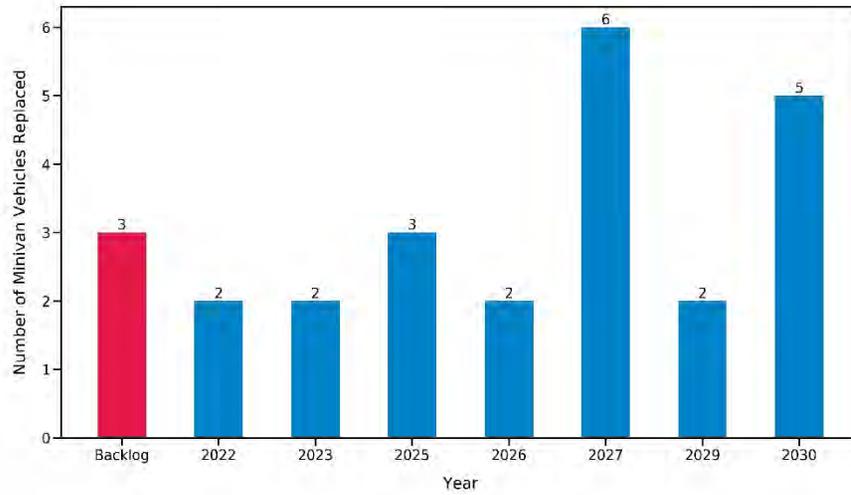
Backlog and Projected Replacement Costs for Revenue Vehicles



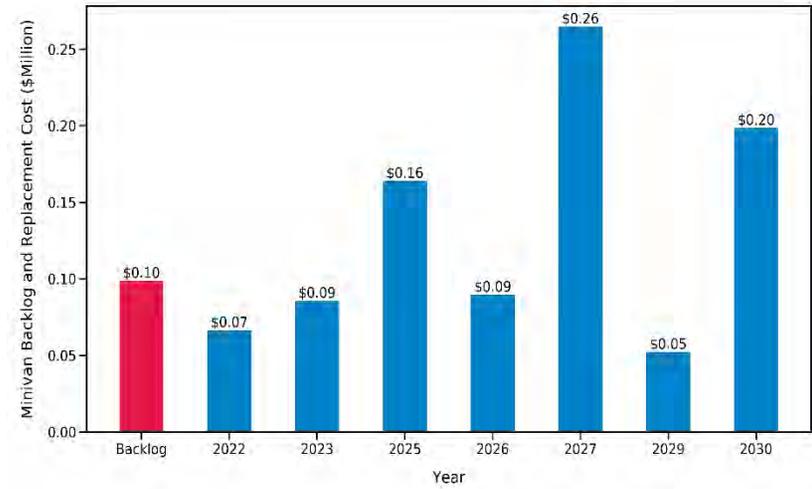
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Golden Valley/Billings County Council On Aging

Counties: Billings, and Golden Valley

Service provided: Demand-response for the general public, ADA complementary paratransit, and Veterans transportation.

2018 Service Data

Total trips: 3,295

Vehicles: 5

Vehicle miles: 91,700

Vehicle hours: 3,910

Operating expense: \$181,757

Facilities:

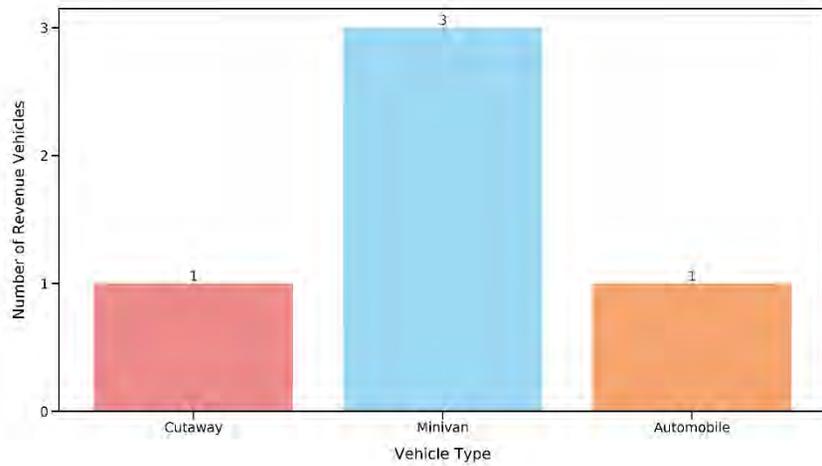
Maintenance:

Storage: We rent a four stalls garage.

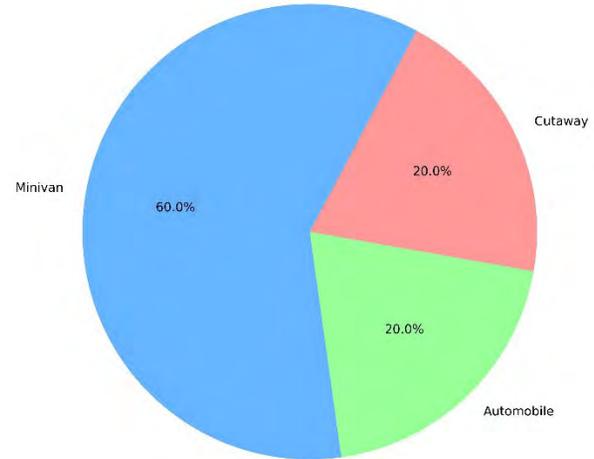
Administrative: We rent a three-bedroom house. Use the living room, kitchen, and bathrooms.

Needed upgrades:

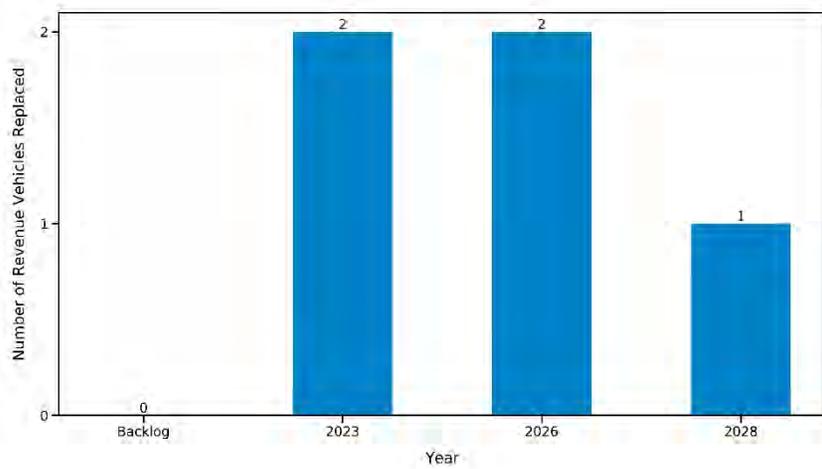
State of Good Repair Information:



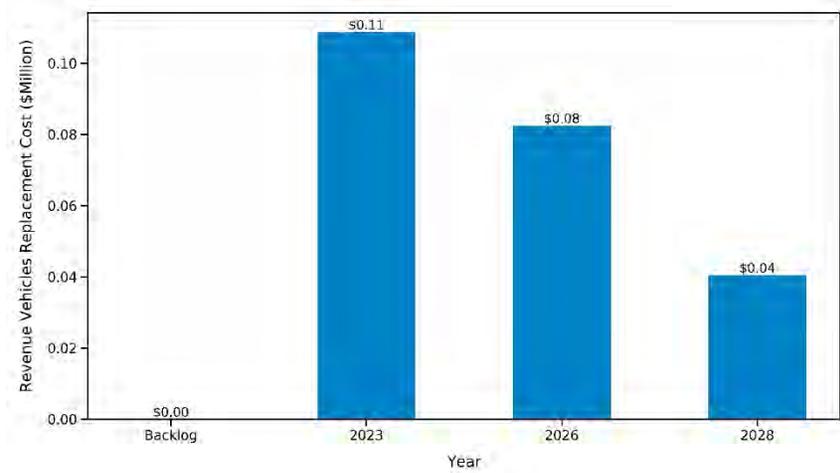
Number of Revenue Vehicles by Vehicle Type



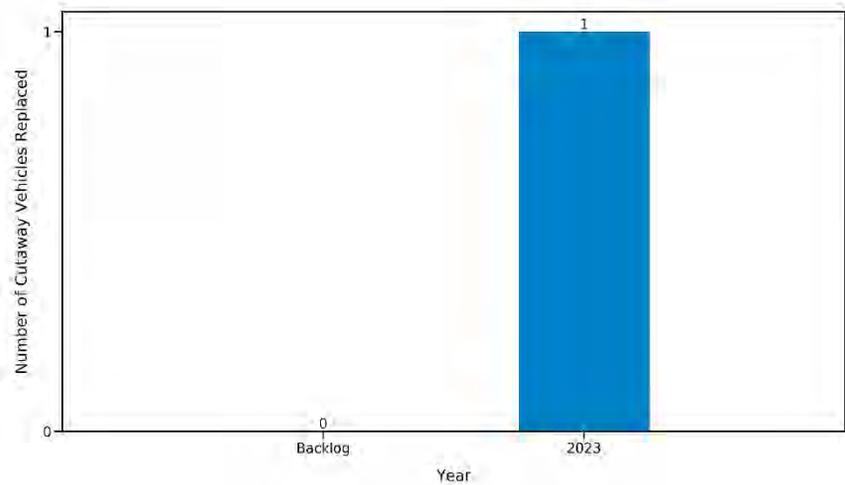
Percentage of Revenue Vehicles



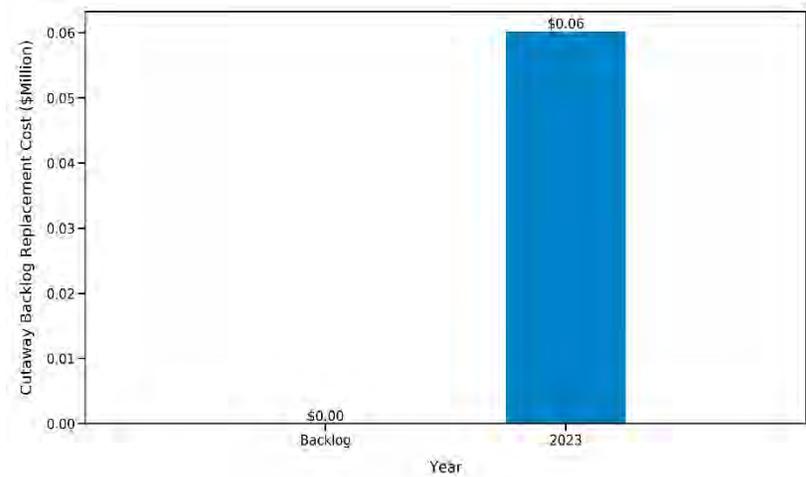
Backlog and Projected Replacement of Revenue Vehicles



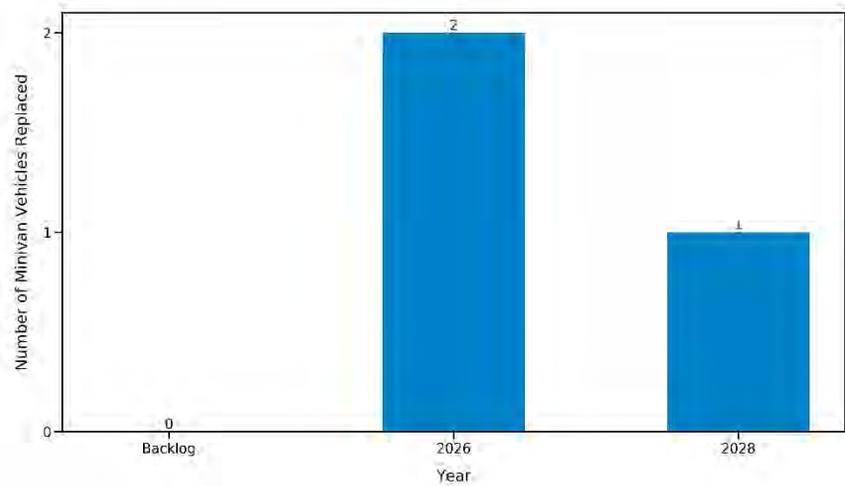
Backlog and Projected Replacement Costs for Revenue Vehicles



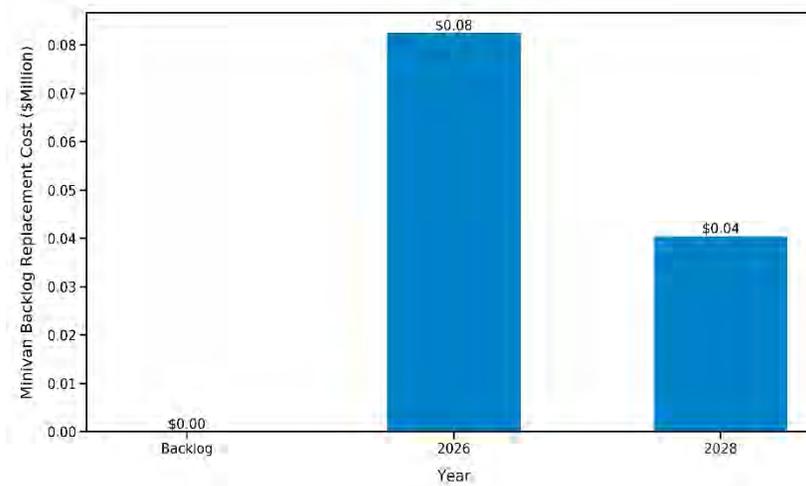
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Hazen Busing Project

Counties: Dunn, Mercer, and Oliver

Service provided: Demand-response for the general public, Flexible route, ADA complementary paratransit, Human service transportation (for clients of human service programs), and Veterans transportation.

2018 Service Data

Total trips: 23,057

Vehicles: 5

Vehicle miles: 40,525

Vehicle hours: 6,650

Operating expense: \$145,332

Facilities:

Maintenance: We own.

Storage: We own, have a garage that holds 3 24 pas. plus, a van. Also, our wash bay and furnace room.

Administrative: We own a two-office building. The larger is 16 x 20. Smaller 7 x 8. Also 2 bathrooms.

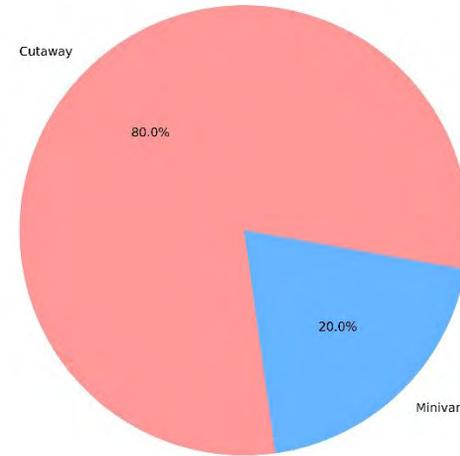
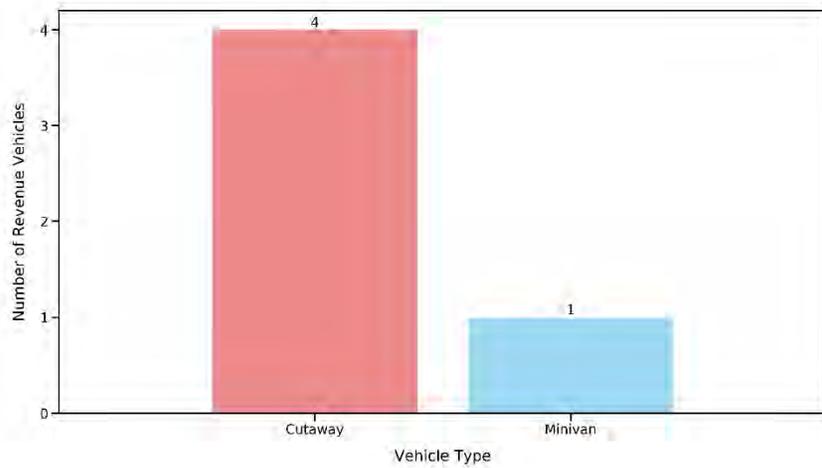
Needed upgrades:

Challenges: Not enough drivers, also would be limited ridership.

Staffing needs: Our numbers are growing every year. Need more drivers.

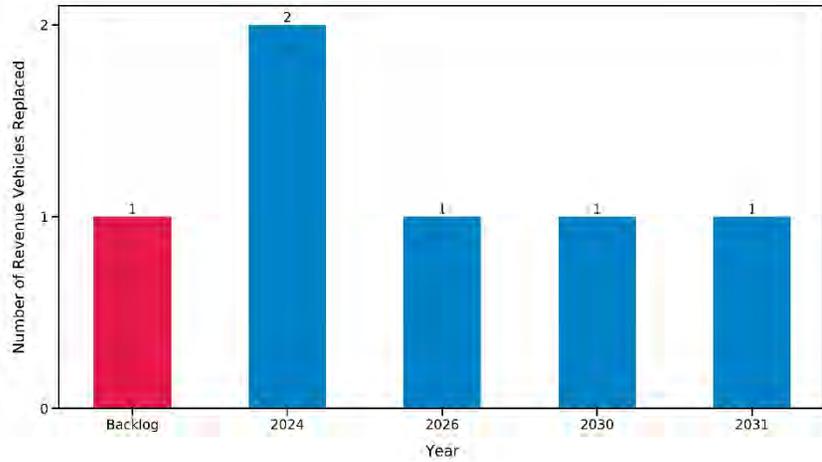
Meeting needs of residents: We are demand and so get to everyone as soon as possible. Very very rarely do we have to turn anyone down.

State of Good Repair information:

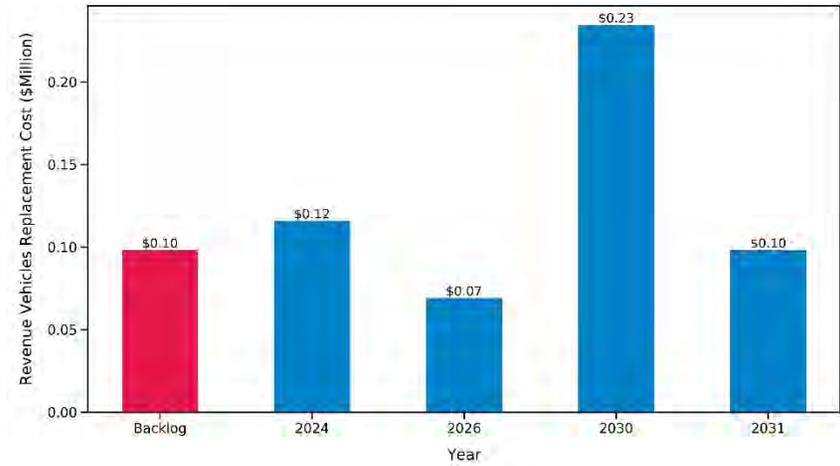


Percentage of Revenue Vehicles

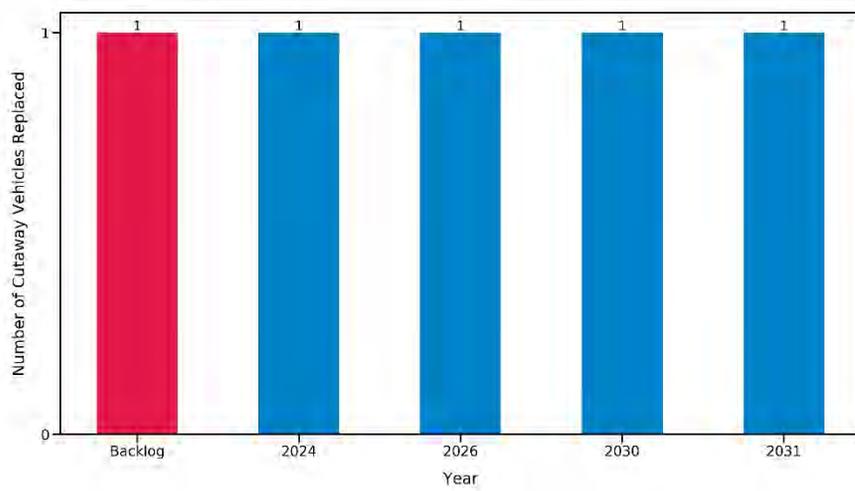
Number of Revenue Vehicles by Vehicle Type



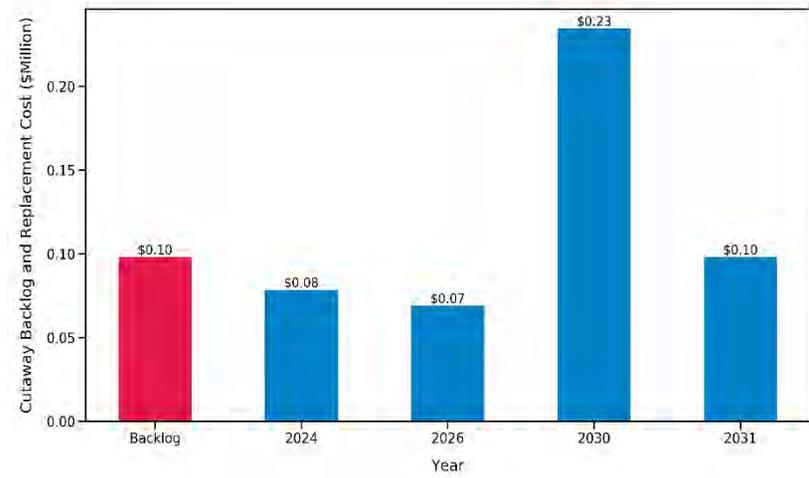
Backlog and Projected Replacement of Revenue Vehicles



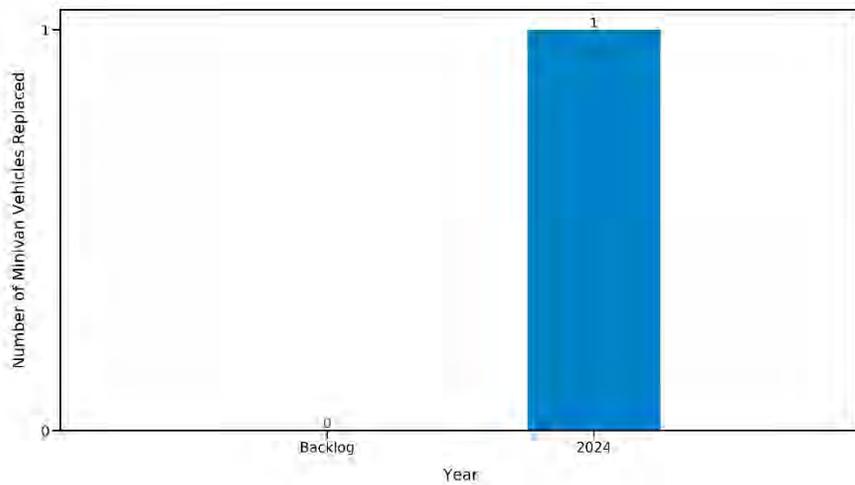
Backlog and Projected Replacement Costs for Revenue Vehicles



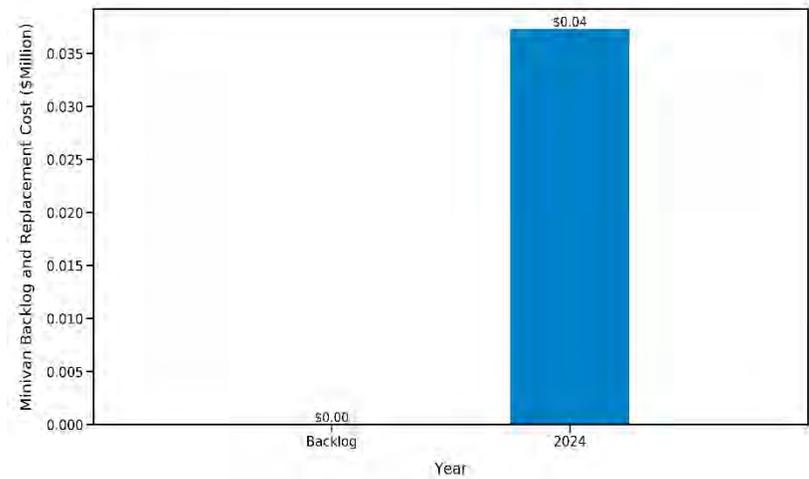
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: James River Senior Citizens Center, Inc.

Counties: Sheridan, Stutsman, and Wells.

Service provided: Demand-response for the general public.

2018 Service Data

Total trips: 60,141

Vehicles: 13

Vehicle miles: 175,637

Vehicle hours: 15,496

Operating expense: \$700,083

Facilities:

Maintenance:

Storage: We own a 60' x 60' x 14' eave building. It holds 10 transit vehicles. 5 vans and 5 larger vehicles.

Administrative: We rent a lower level of a renovated hospital building.

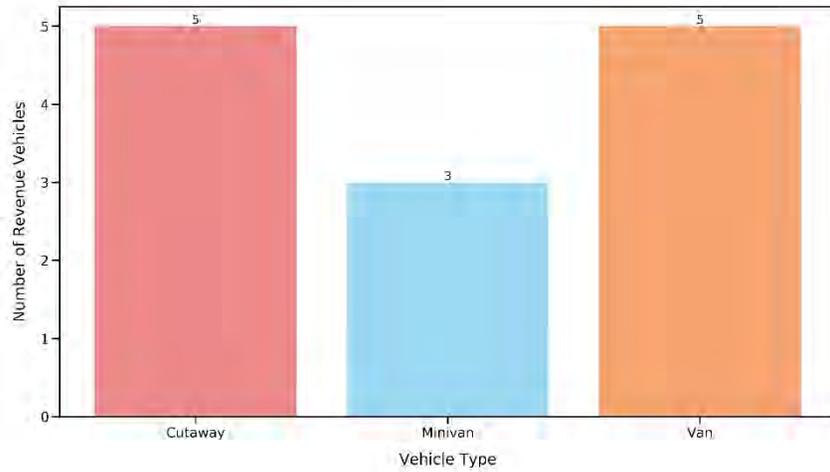
Needed upgrades: Our vehicle facility needs plumbing in order to house some administration and maintenance needs.

Staffing needs: We are currently in need of transit drivers to fulfill our staffing needs.

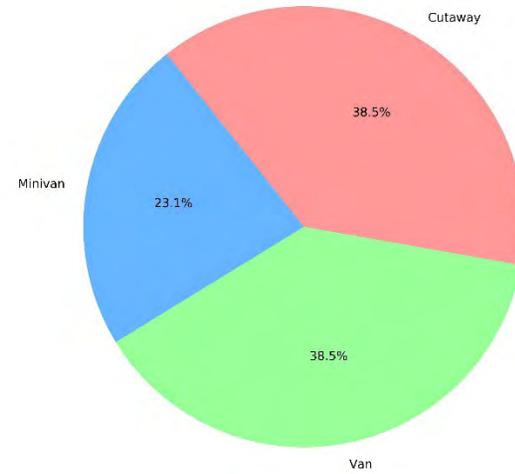
Meeting needs of residents: We have our transit, the assisted living transits and the taxis service that seems to provide good service to the community.

Other comments: An area we struggle the most is paying drivers a competitive wage and thus have a difficult time getting enough drivers. We do our best to get our residents where they need to go and feel we do a good job at that, but if we continue to struggle with getting drivers, that may become an issue."

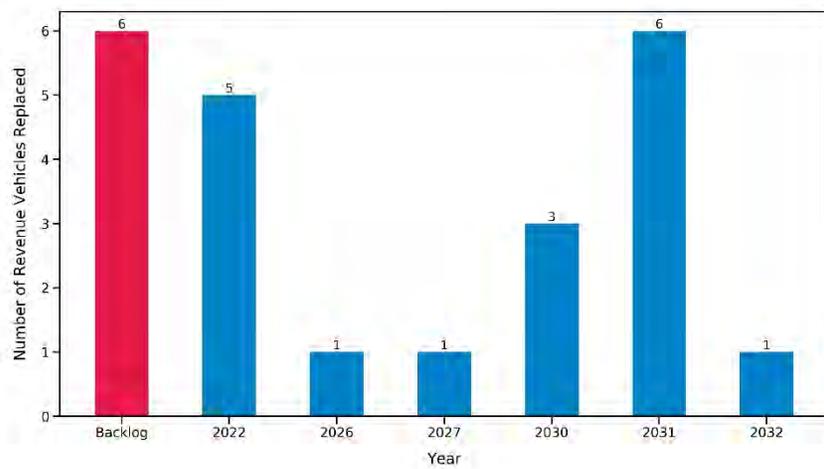
State of Good Repair Information:



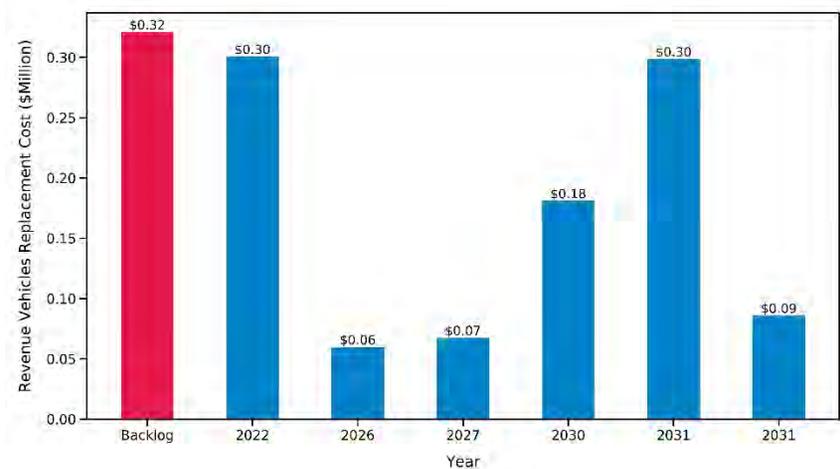
Number of Revenue Vehicles by Vehicle Type



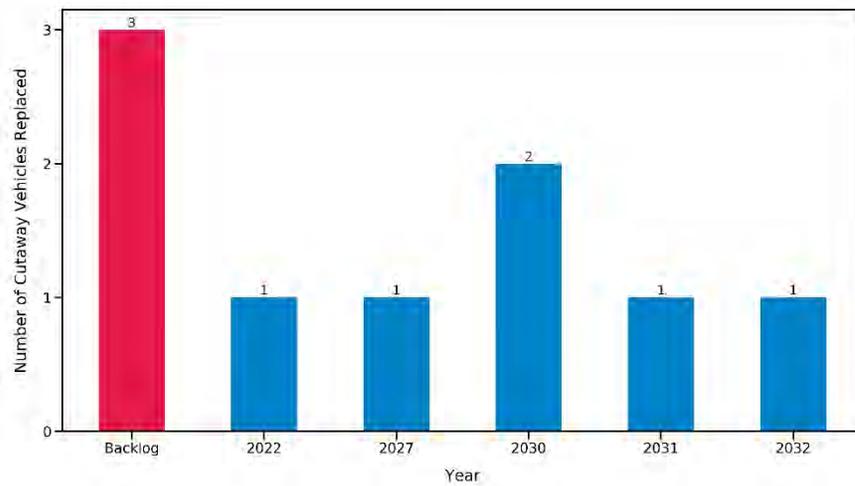
Percentage of Revenue Vehicles



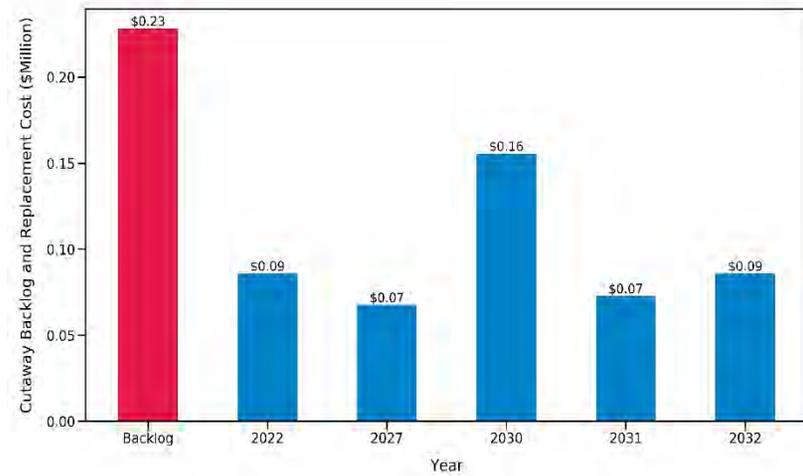
Backlog and Projected Replacement of Revenue Vehicles



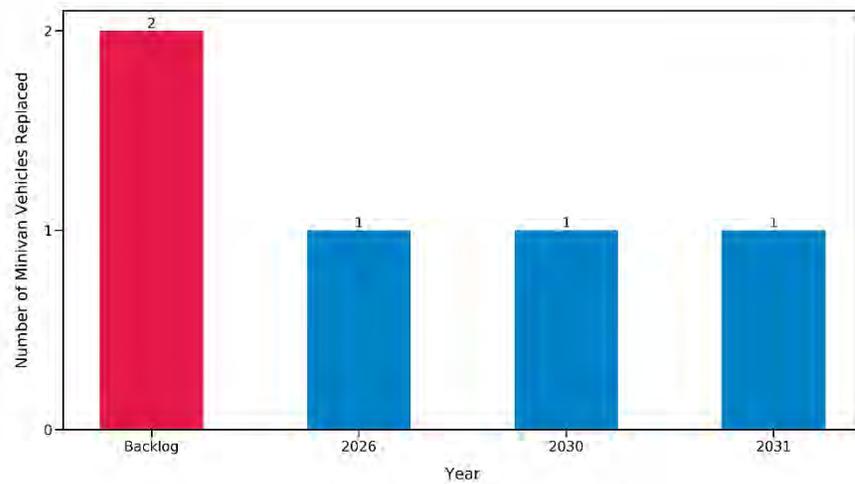
Backlog and Projected Replacement Costs for Revenue Vehicles



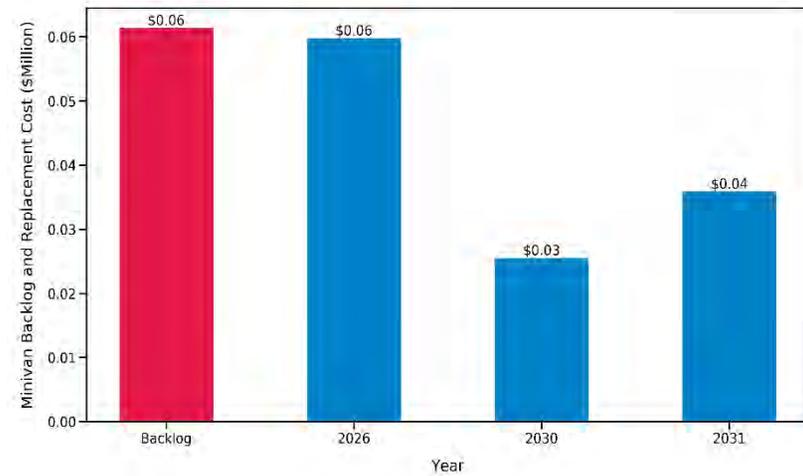
Backlog and Projected Replacement of Cutaways



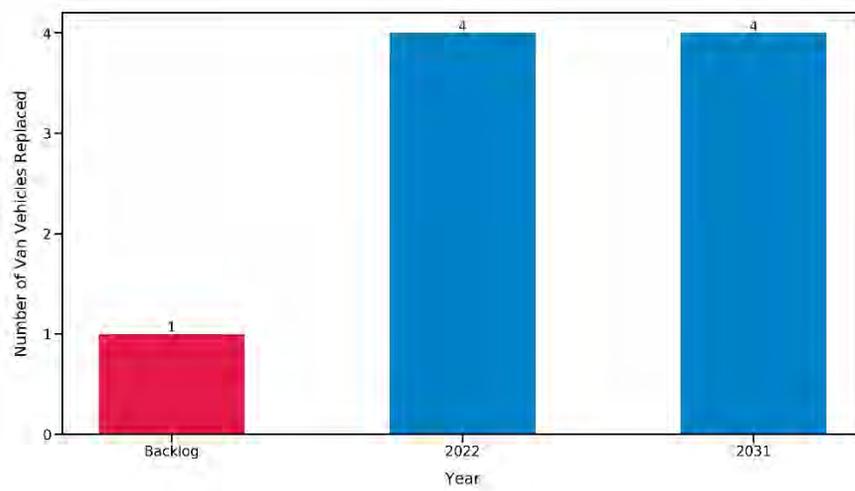
Backlog and Projected Replacement Costs for Cutaways



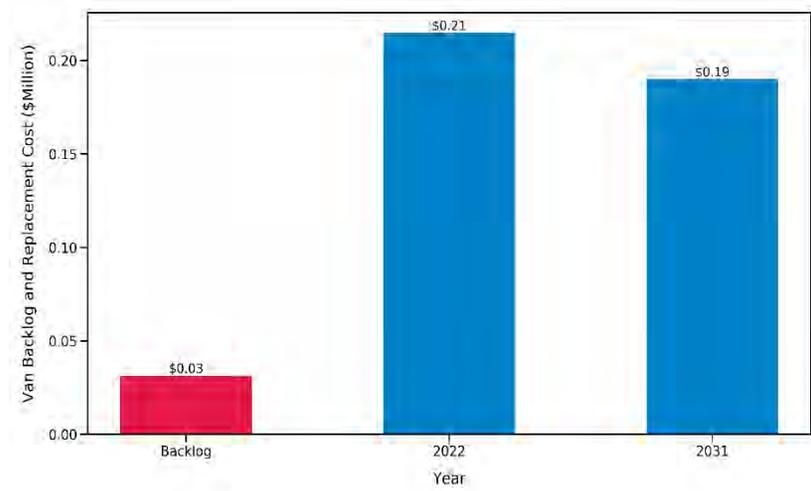
Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans



Backlog and Projected Replacement of Vans



Backlog and Projected Replacement Costs for Vans

Agency Name: Kenmare Wheels & Meals

Counties: Ward

Service provided: Demand-response for the general public

2018 Service Data

Total trips: 10,908

Vehicles: 2

Vehicle miles: 11,548

Vehicle hours: 1,659

Operating expense: \$84,075

Facilities:

Maintenance: We do not have a maintenance facility. We must drive to Minot for services and repairs.

Storage: We own an attached bus barn.

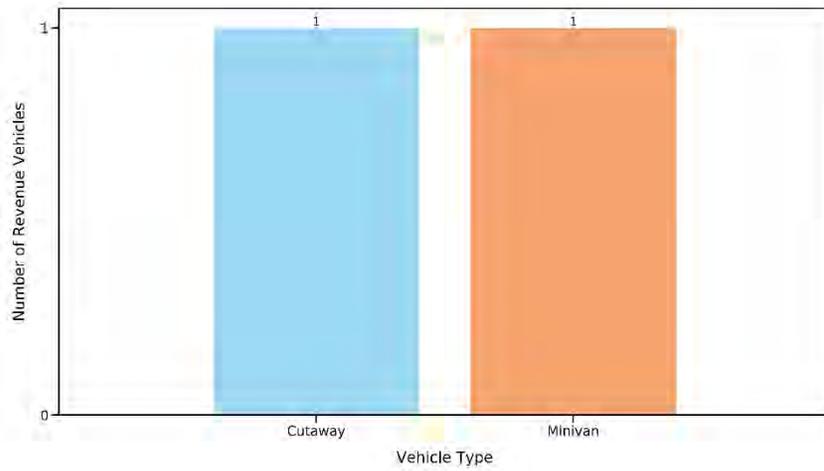
Administrative: We own an office for administrative duties for Transit.

Needed upgrades:

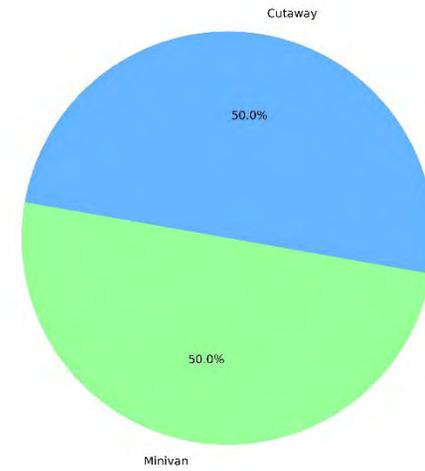
Staffing needs: If services increase and during regular trips to Minot, we are short staffed. Ideally, we would have a FT, PT, and substitute.

Meeting needs of residents: Increased ridership and customer survey display a very happy community that has their Transportation needs taken care of.

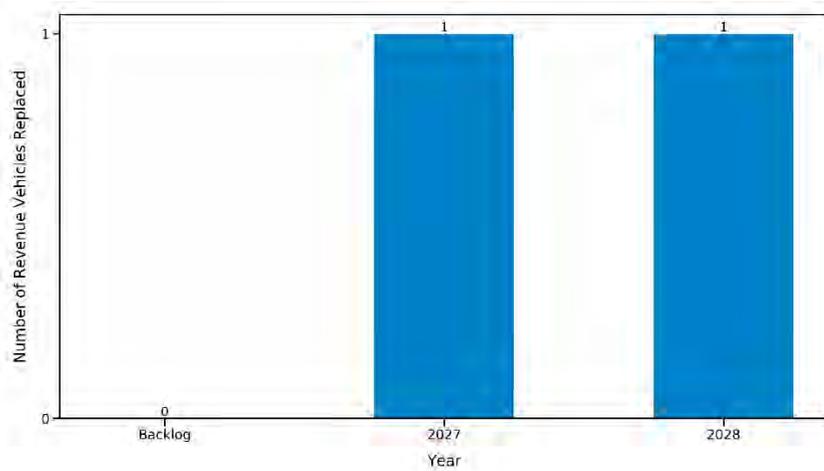
State of Good Repair Information:



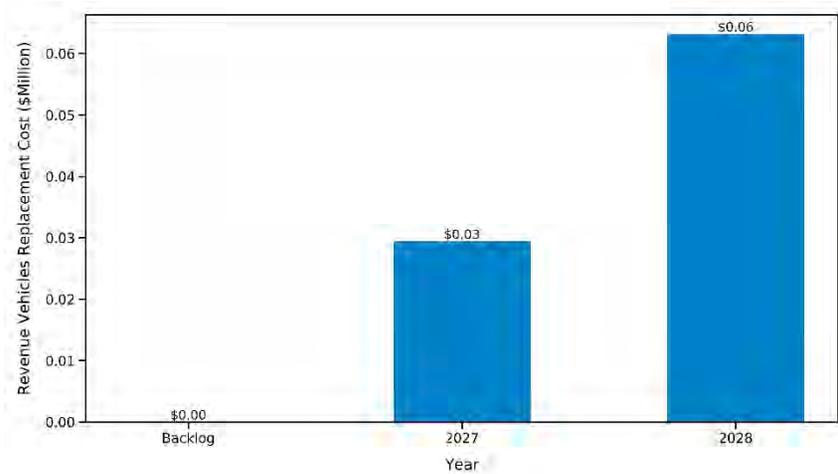
Number of Revenue Vehicles by Vehicle Type



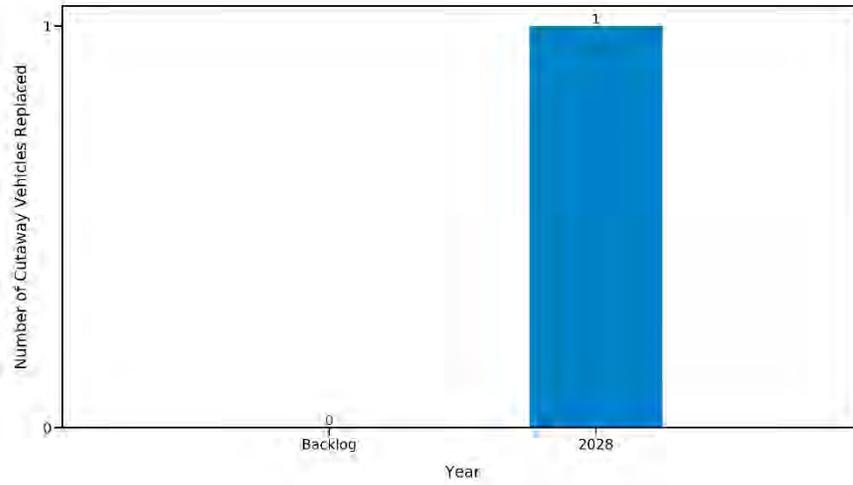
Percentage of Revenue Vehicles



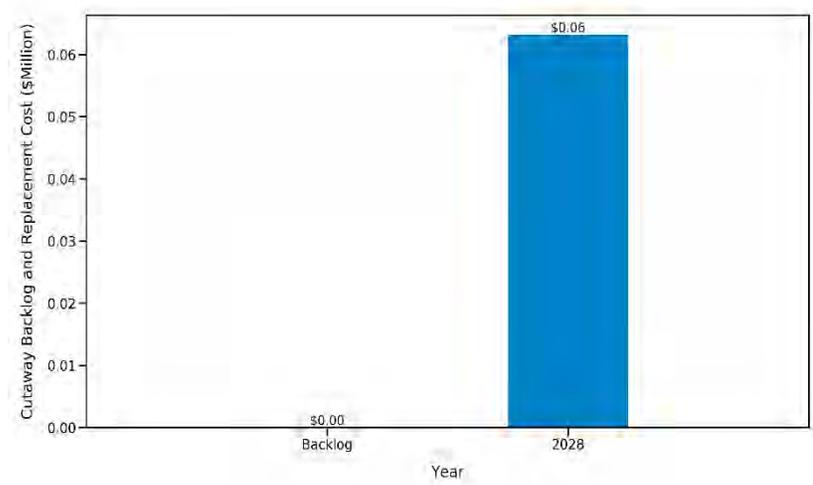
Backlog and Projected Replacement of Revenue Vehicles



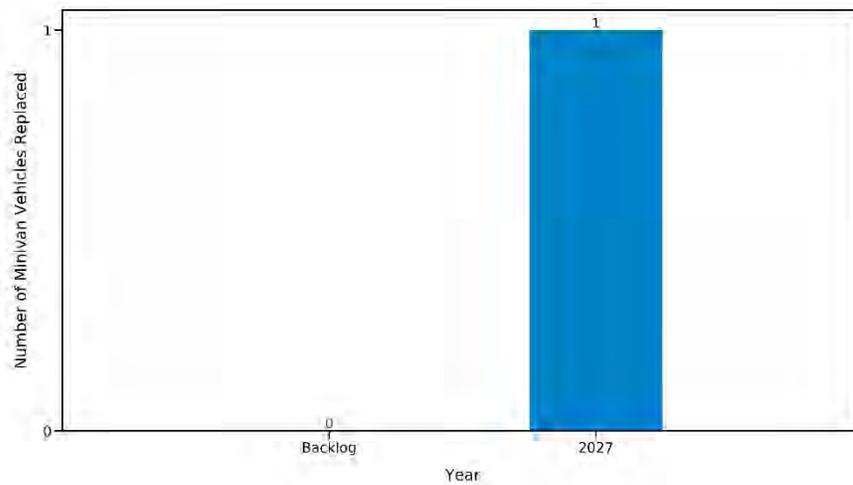
Backlog and Projected Replacement Costs for Revenue Vehicles



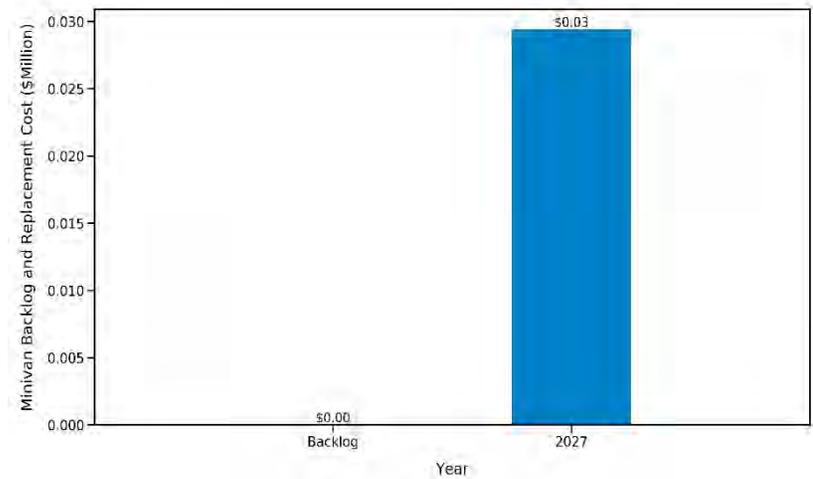
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Kidder-Emmons County Senior Services

Counties: Kidder

Service provided: Demand-response for the general public, and Veterans transportation.

2018 Service Data

Total trips: 6,129

Vehicles: 3

Vehicle miles: 50,128

Vehicle hours: 1,942

Operating expense: \$111,397

Facilities:

Maintenance: NA

Storage: Transit vehicles are stored in garages at each driver's residence. Drivers are compensated for storage of transit vehicles each month.

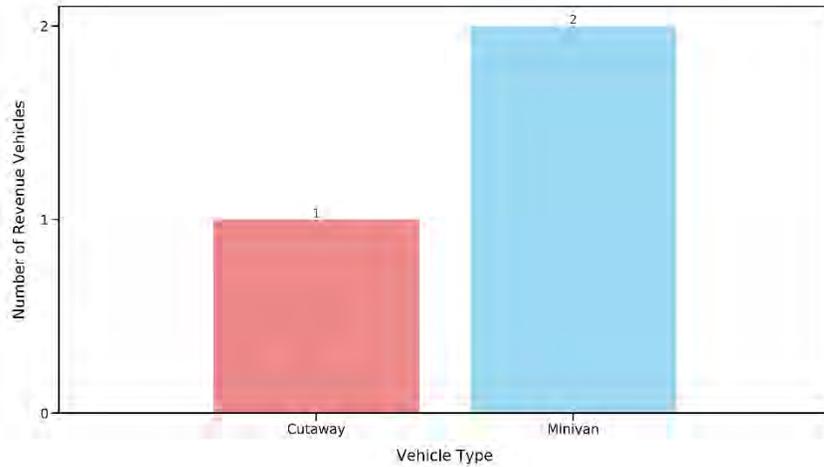
Administrative: Kidder Emmons Senior Services operates out of the Active Senior Center and pays office and storage rent.

Challenges: At the present time, the agency is not aware of barriers or challenges in the current services provided by transit.

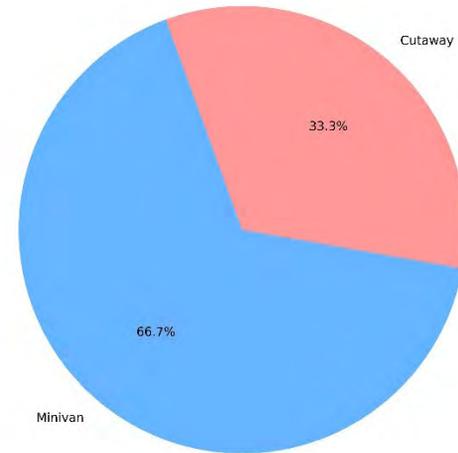
Meeting needs of residents: Kidder Emmons Senior Services strives to meet the needs of the citizens of Kidder County. The agency works with local entities to educate the public of the services available to them in the county. Communication with riders is also a key to ensure that all their needs are met when utilizing the services.

Other comments: Kidder Emmons Senior Services is always exploring and discussing ways to increase ridership and educate the citizens about transit. The agency continues to view routes to perhaps better serve the needs of the public.

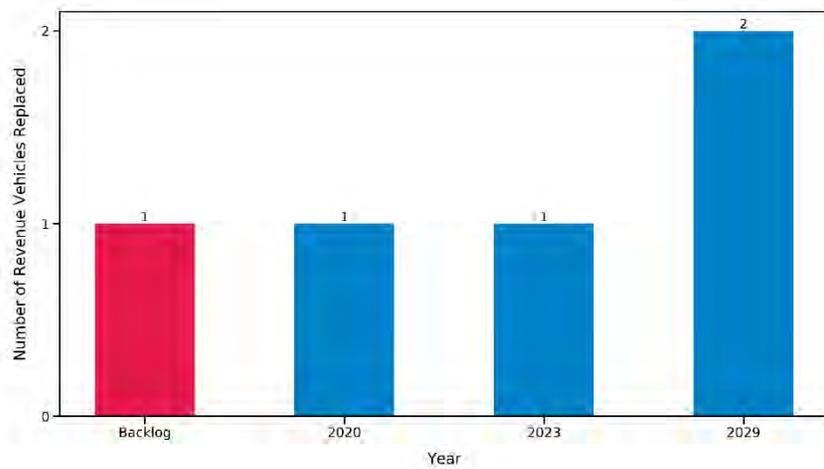
State of Good Repair Information:



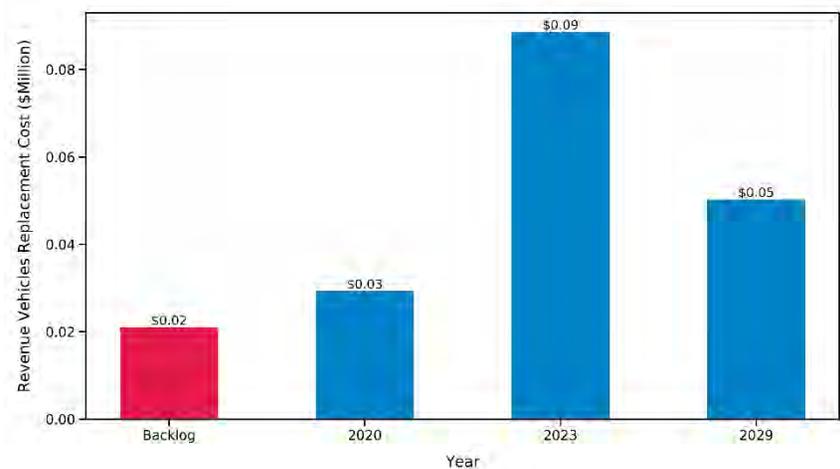
Number of Revenue Vehicles by Vehicle Type



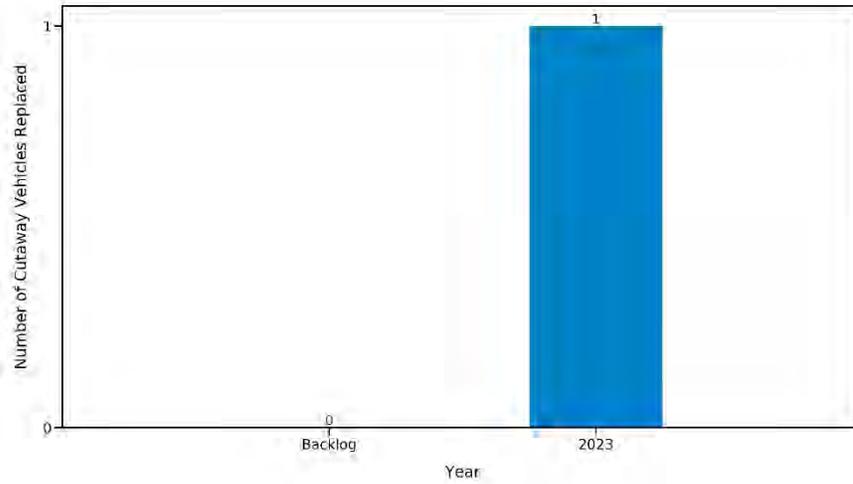
Percentage of Revenue Vehicles



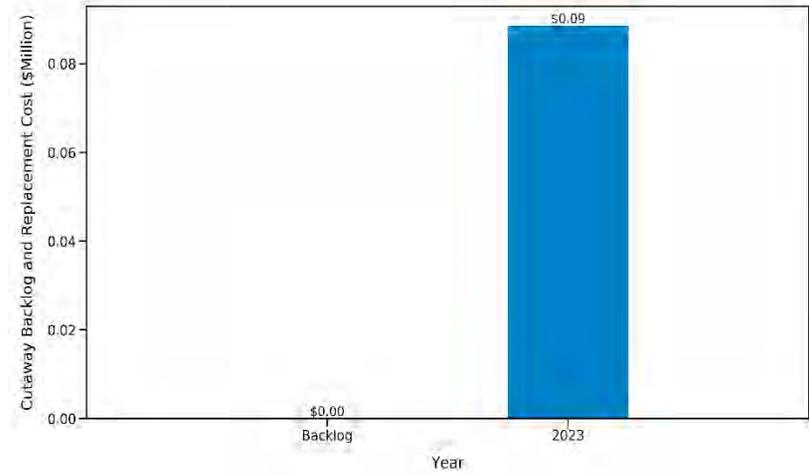
Backlog and Projected Replacement of Revenue Vehicles



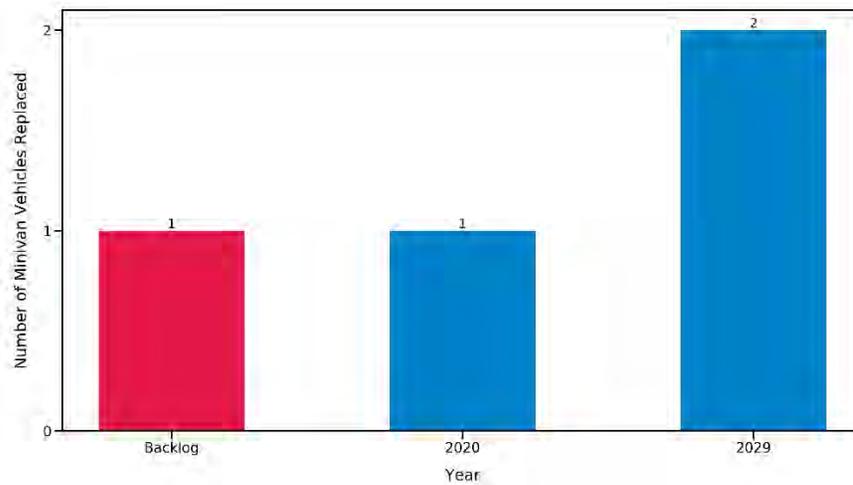
Backlog and Projected Replacement Costs for Revenue Vehicles



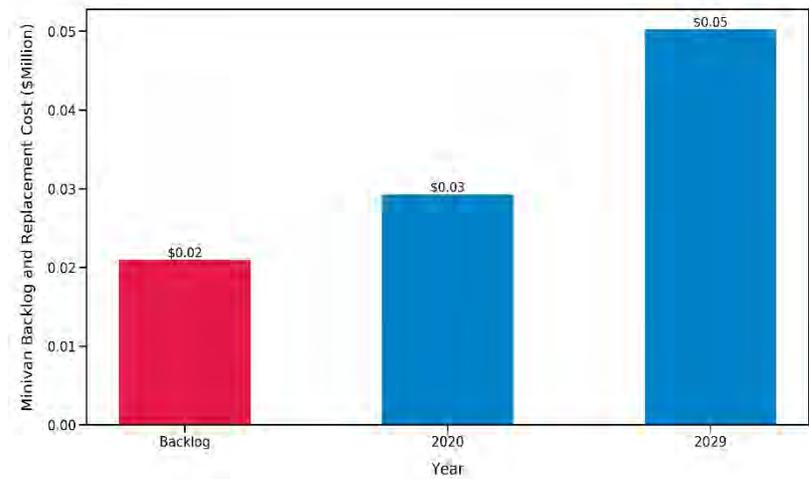
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Nelson County Council On Aging

Counties: Nelson

Service provided:

2018 Service Data

Total trips: 5,738

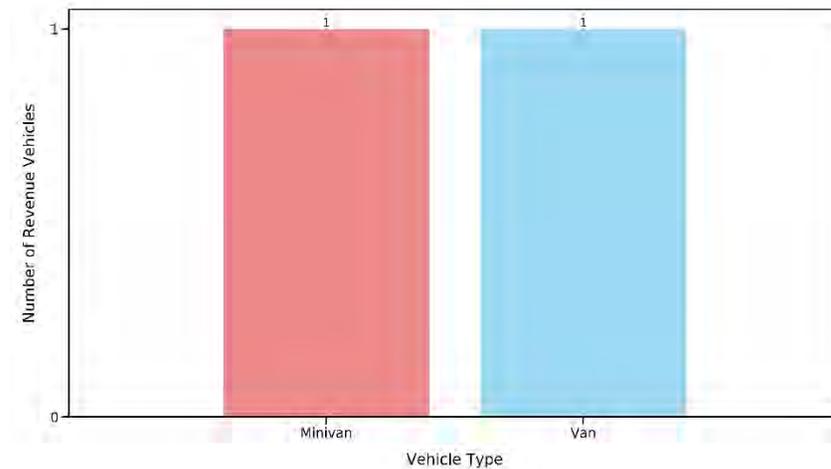
Vehicles: 2

Vehicle miles: 48,260

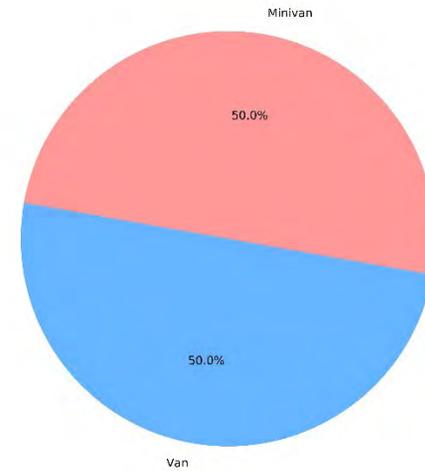
Vehicle hours: 2,271

Operating expense: \$134,030

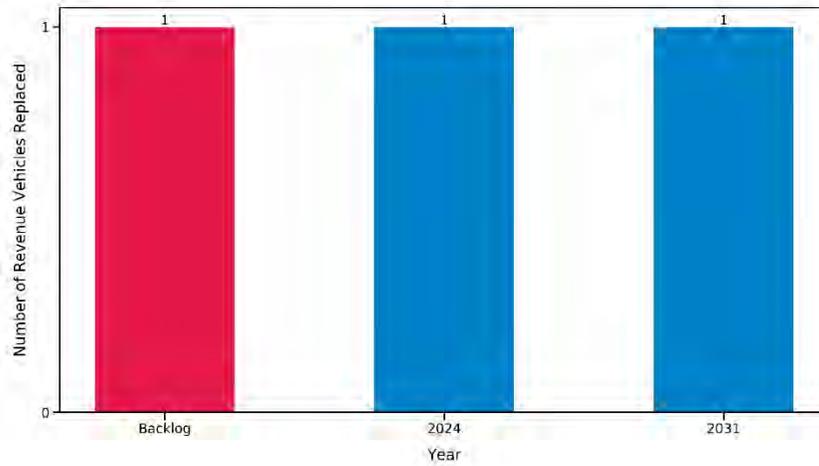
State of Good Repair Information:



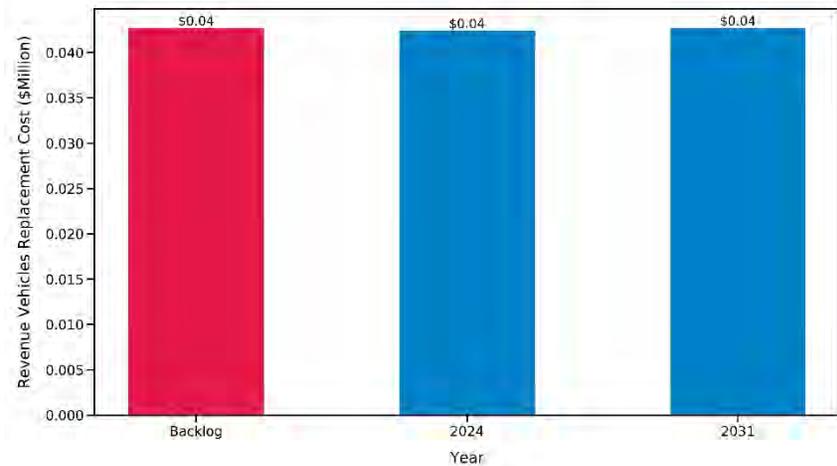
Number of Revenue Vehicles by Vehicle Type



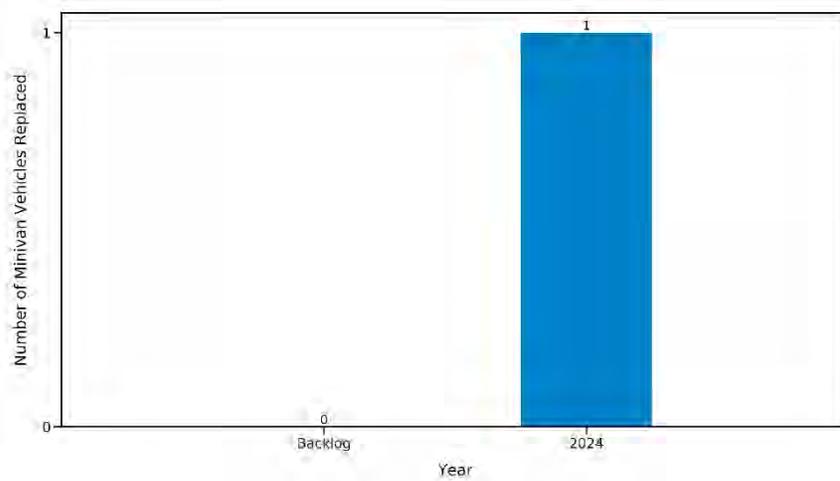
Percentage of Revenue Vehicles



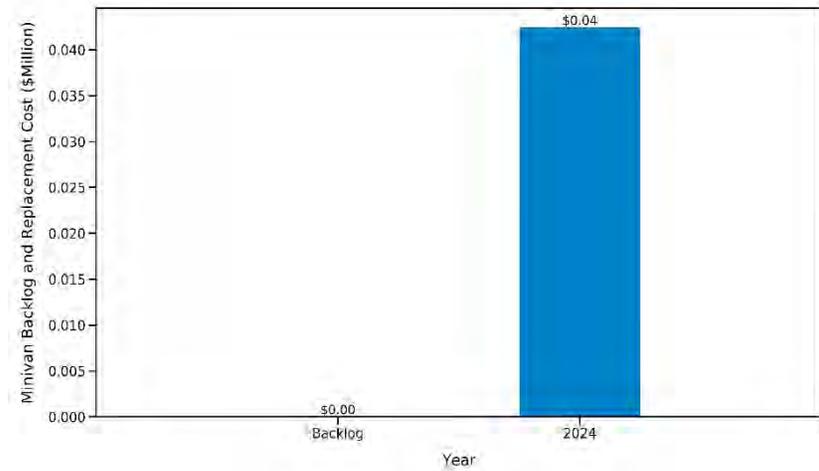
Backlog and Projected Replacement of Revenue Vehicles



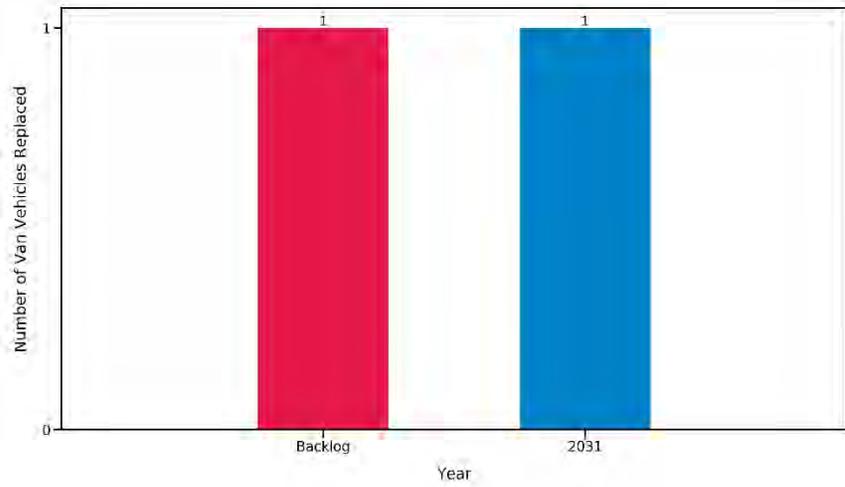
Backlog and Projected Replacement Costs for Revenue Vehicles



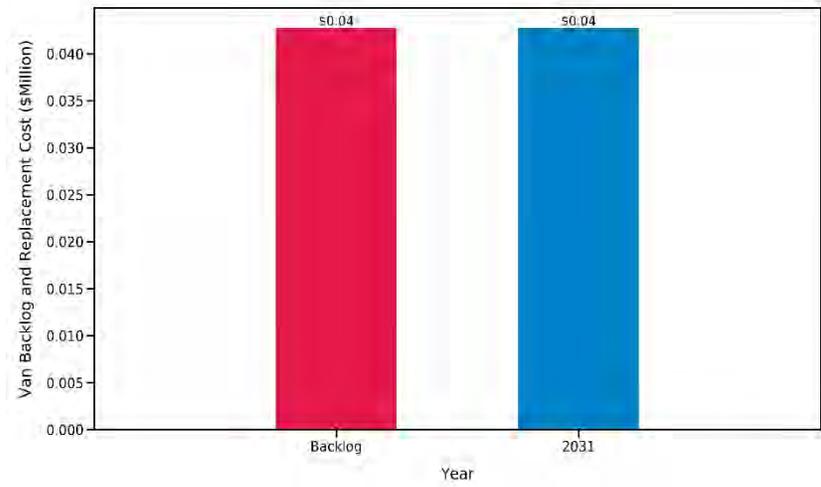
Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans



Backlog and Projected Replacement of Vans



Backlog and Projected Replacement Costs for Vans

Agency Name: Nutrition United

Counties: Rolette

Service provided:

2018 Service Data

Total trips: 11,333

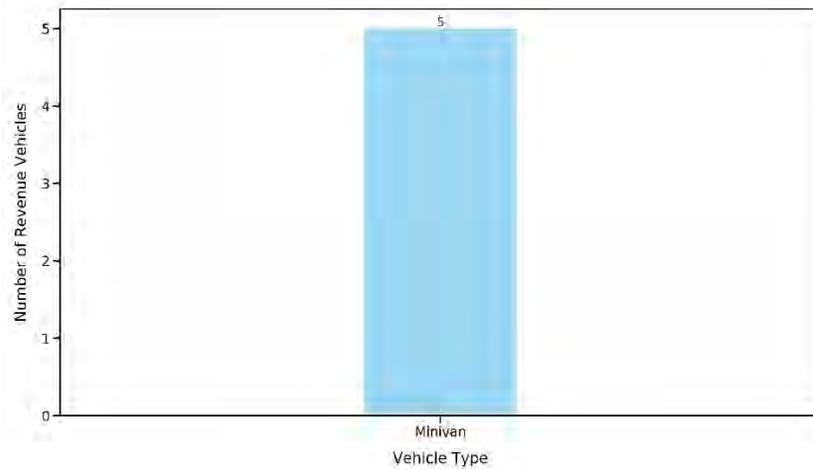
Vehicles: 5

Vehicle miles: 223,852

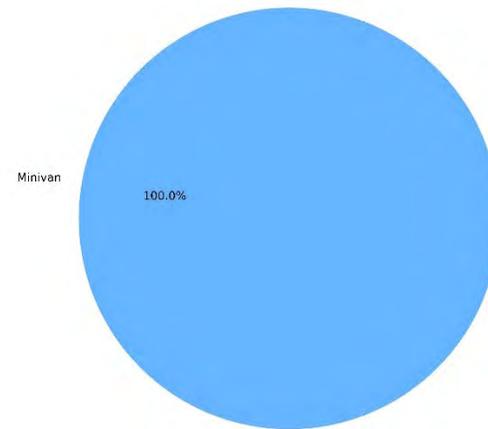
Vehicle hours: 7,617

Operating expense: \$210,631

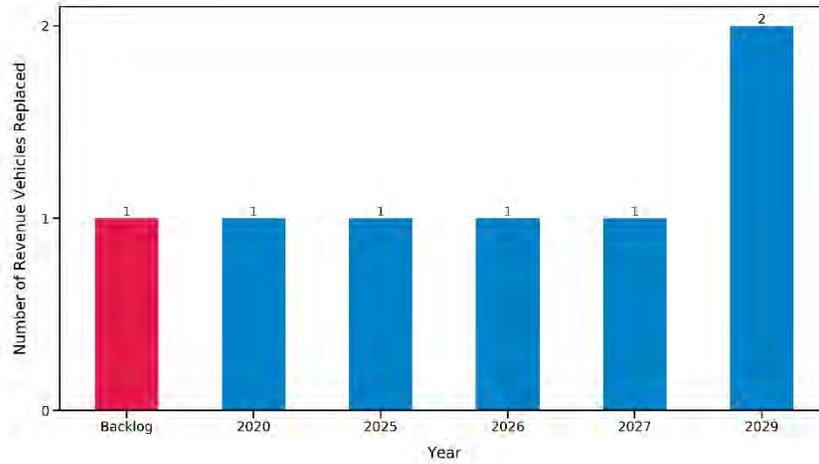
State of Good Repair Information:



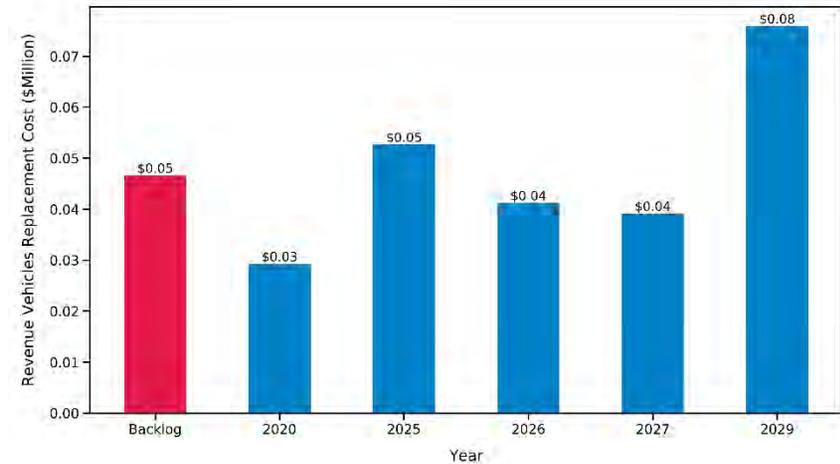
Number of Revenue Vehicles by Vehicle Type



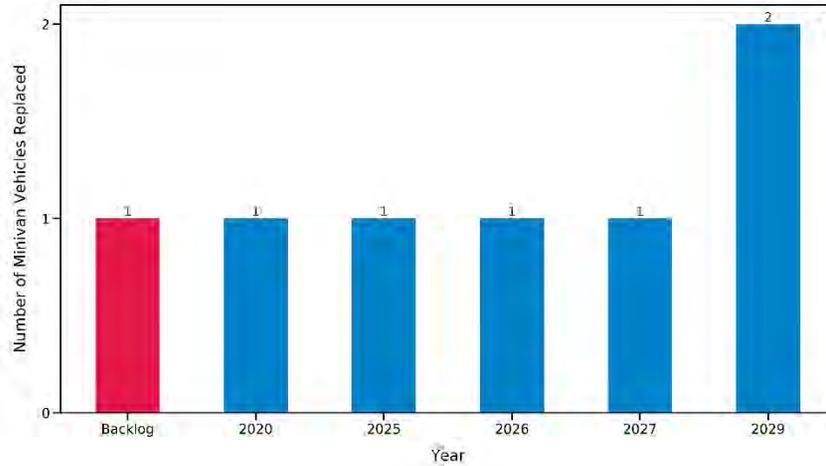
Percentage of Revenue Vehicles



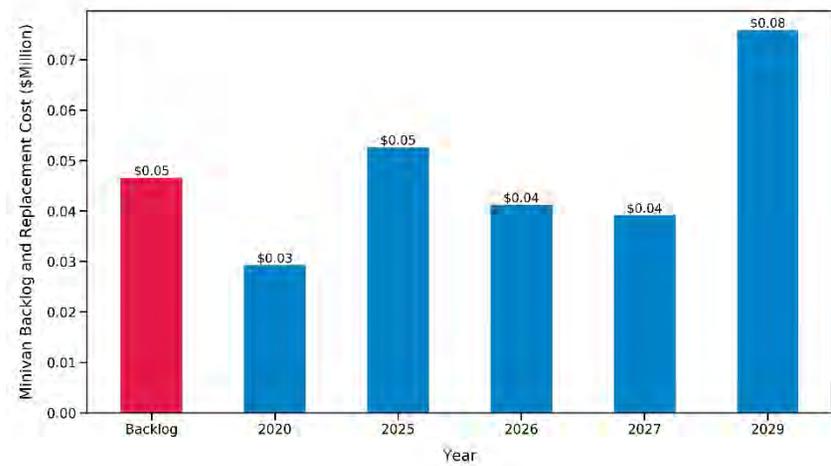
Backlog and Projected Replacement of Revenue Vehicles



Backlog and Projected Replacement Costs for Revenue Vehicles



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Cost for Minivans

Agency Name: Pembina County Meals and Transportation

Counties: Pembina

Service provided: Demand-response for the general public.

2018 Service Data

Total trips: 6,575

Vehicles: 6

Vehicle miles: 104,487

Vehicle hours: 5,395

Operating expense: \$260,002

Facilities:

Maintenance: N/A

Storage: Three stall garage.

Administrative: Office building shared with other multi-service agency staff.

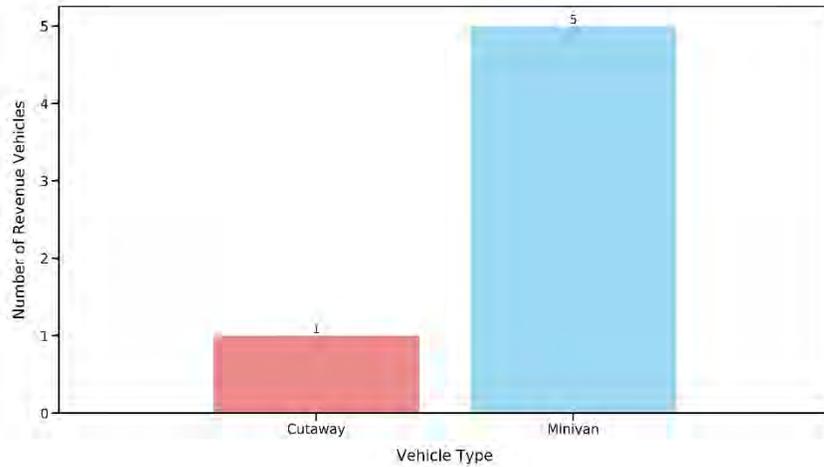
Needed upgrades:

Challenges: We travel to Grand Forks three days a week for medical appointments. We often receive requests to also go on the other two days for medical appointments. We are limited by the number of vehicles and drivers that we have, as well as fitting those rides into existing schedules of drivers. We do make the trips if possible but are not always able to provide the ride. Because they are usually a single person ride, we charge more.

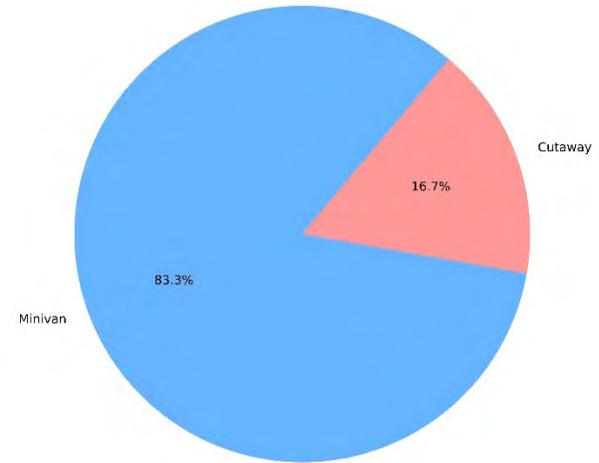
Staffing needs: Additional drivers for vacations, sick days, and future retirement of long-term drivers.

Meeting needs of residents: We go out of our way to provide any ride that is requested. We have part time drivers we can call on to work most days.

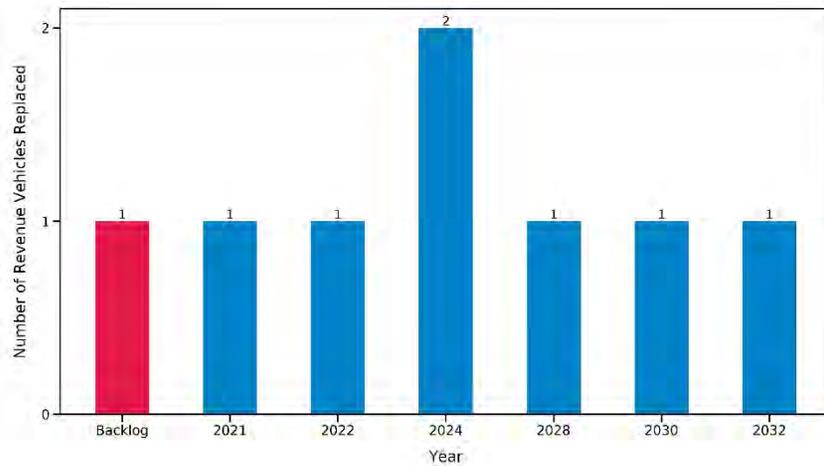
State of Good Repair Information:



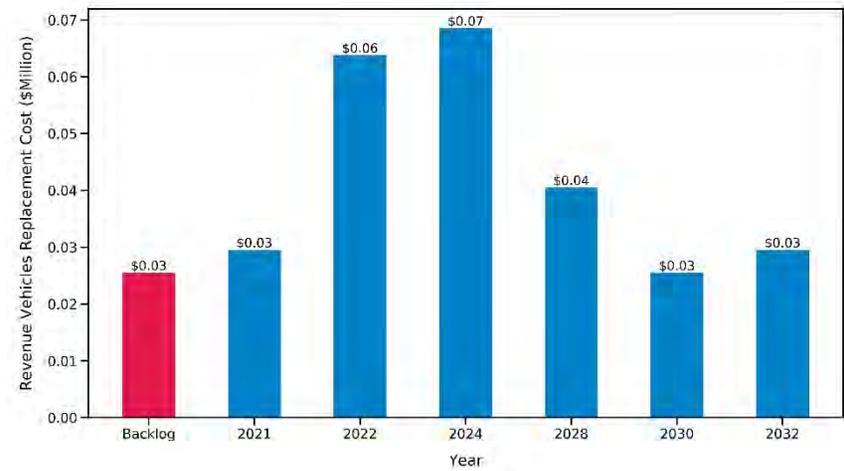
Number of Revenue Vehicles by Vehicle Type



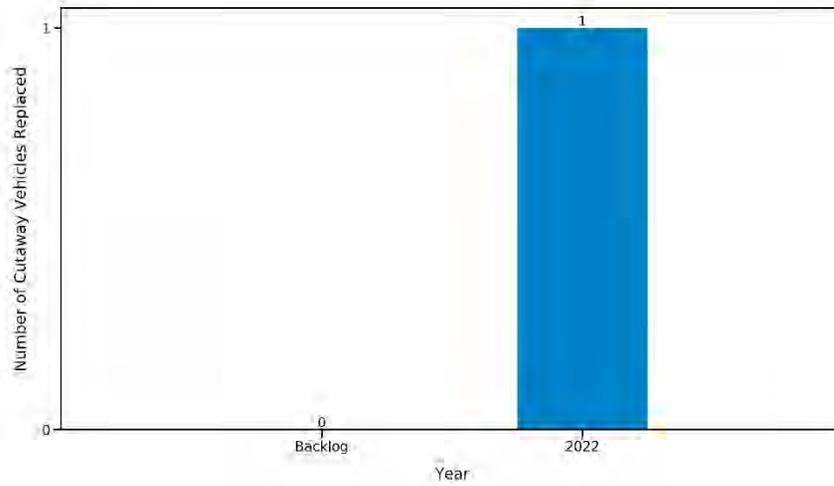
Percentage of Revenue Vehicles



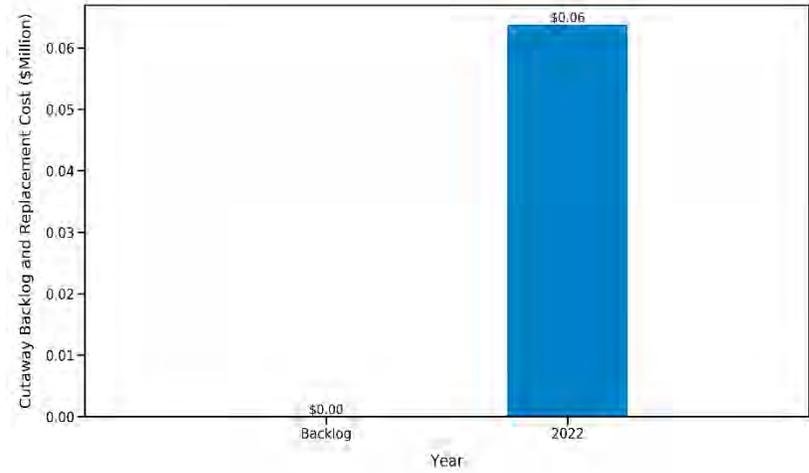
Backlog and Projected Replacement of Revenue Vehicles



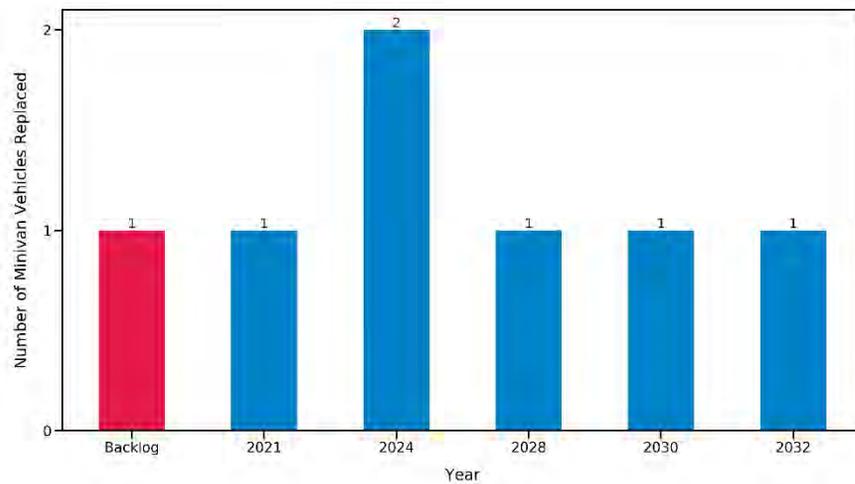
Backlog and Projected Replacement Costs for Revenue Vehicles



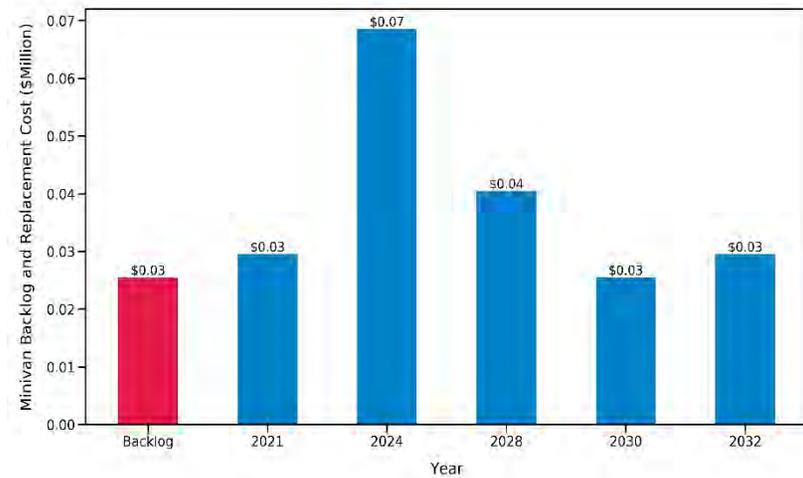
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Souris Basin Transit

Counties: Bottineau, Burke, Burleigh, Divide, McHenry, McLean, Morton, Mountrail, Pierce, Renville, and Ward.

Service provided: Demand-response for the general public, Flexible route, ADA complementary paratransit, and Veterans transportation.

2018 Service Data

Total trips: 87,506

Vehicles: 27

Vehicle miles: 436,426

Vehicle hours: 33,372

Operating expense: \$1,670,786

Facilities:

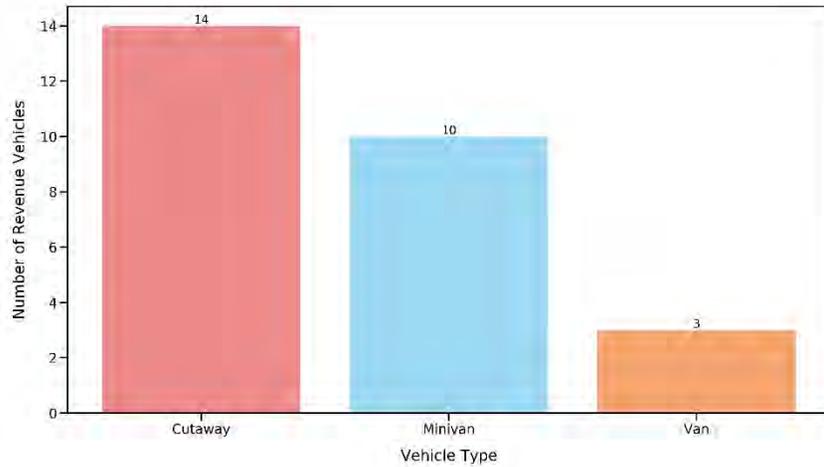
One building we own. Central location in Minot. Capacity of the building for 20+ vehicles. This is a Maintenance, storage and administrative facility. 20,000+ square feet.

Challenges: Drivers and funding. But the demand is limited, in some areas, reduce population. Other is the senior bus stigma.

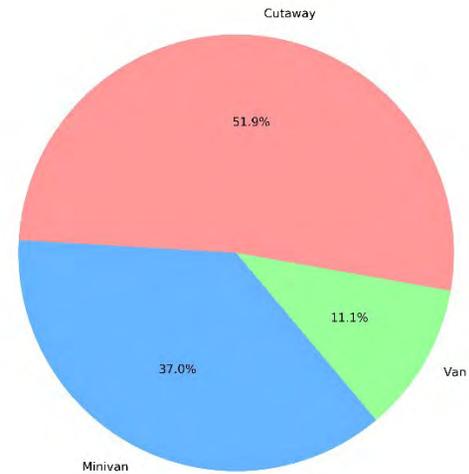
Staffing needs: Drivers, dispatchers, and schedulers.

Meeting needs of residents: Changes have to made in the cancellation process; we can increase ridership by reducing the numbers of cancelations.

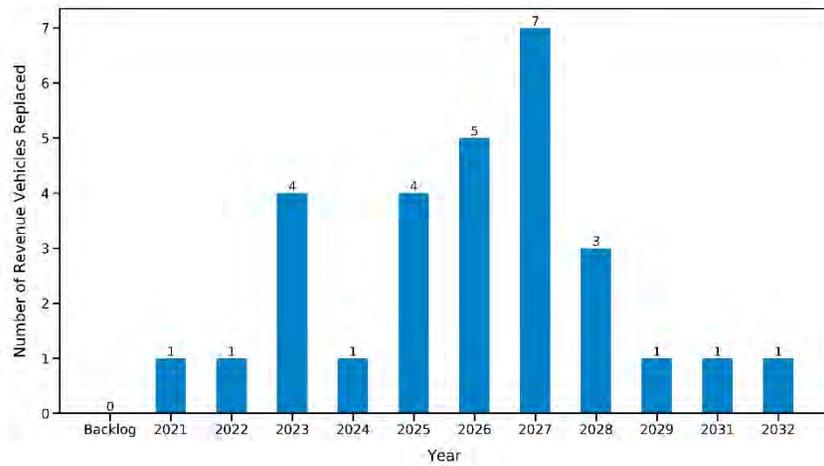
State of Good Repair Information:



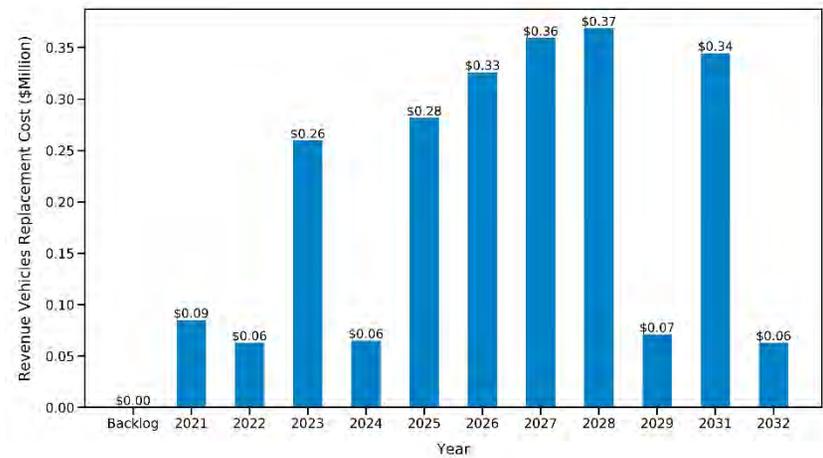
Number of Revenue Vehicles by Vehicle Type



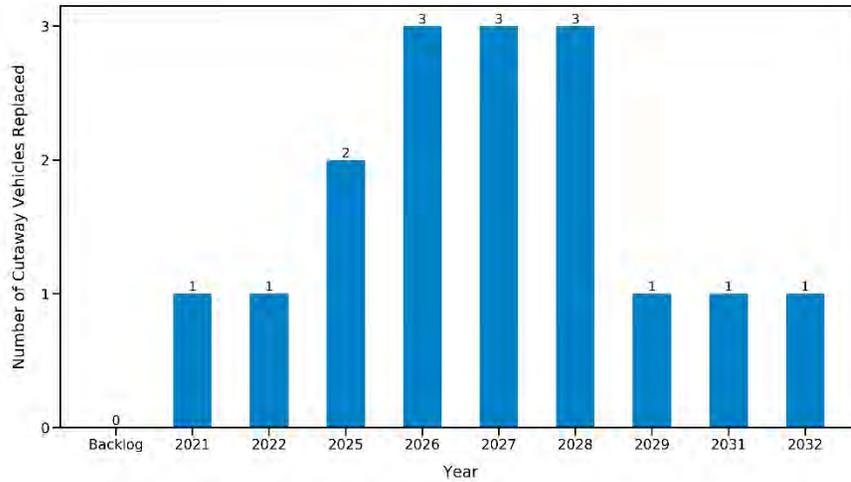
Percentage of Revenue Vehicles



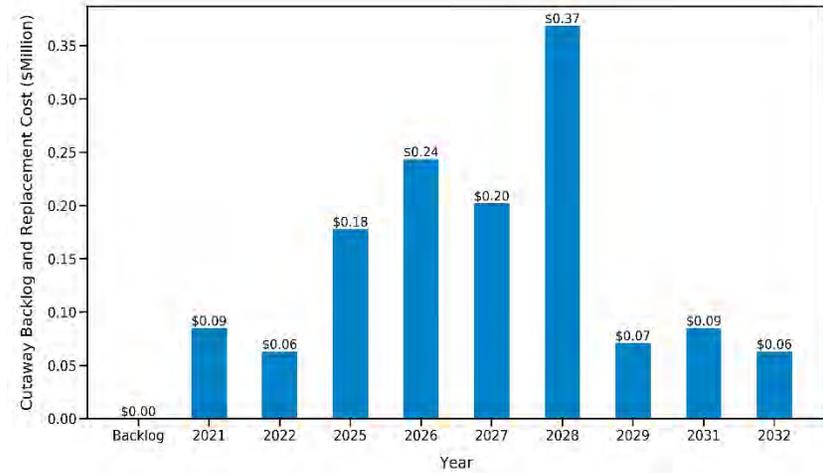
Backlog and Projected Replacement of Revenue Vehicles



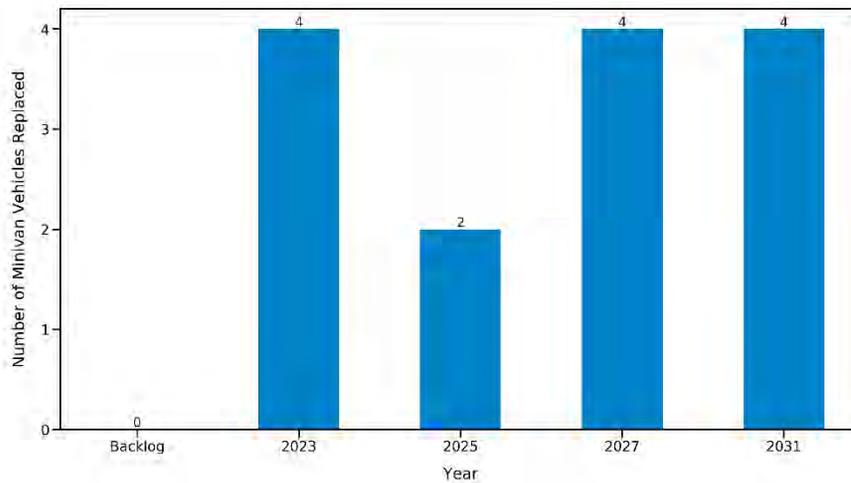
Backlog and Projected Replacement Costs for Revenue Vehicles



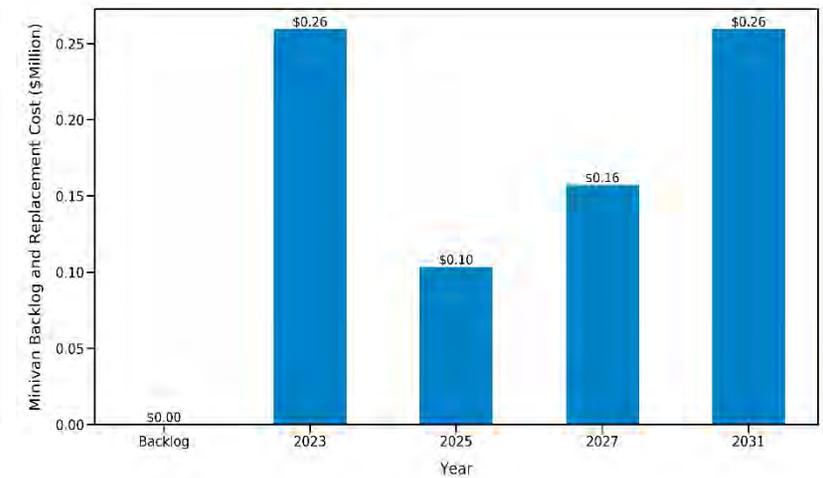
Backlog and Projected Replacement of Cutaways



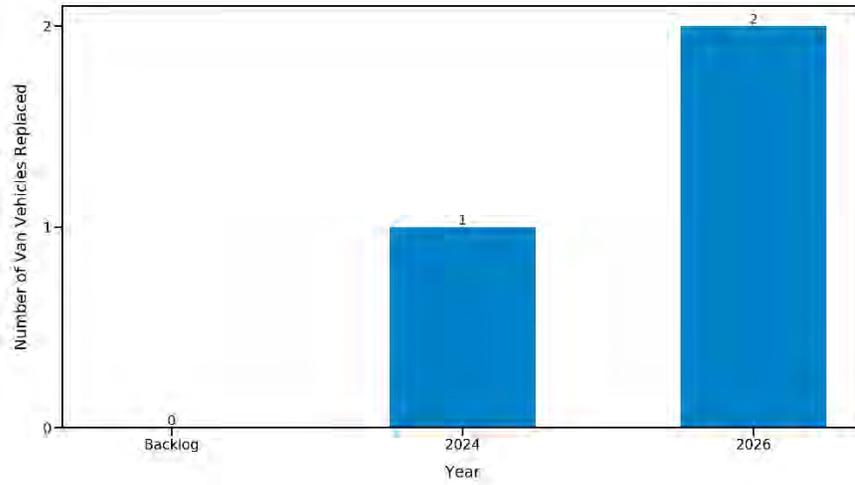
Backlog and Projected Replacement Costs for Cutaways



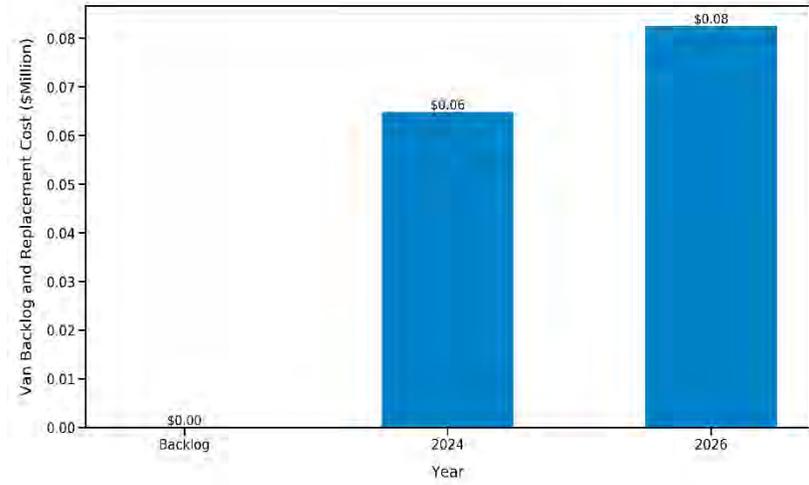
Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans



Backlog and Projected Replacement of Vans



Backlog and Projected Replacement Costs for Vans

Agency Name: South Central Adult Services

Counties: Barnes, Emmons, Foster, Grand Forks, Griggs, LaMoure, Logan, McIntosh, Nelson, Ramsey, Steele, and Stutsman.

Service provided: Demand-response for the general public, and Veterans transportation.

2018 Service Data

Total trips: 105,272

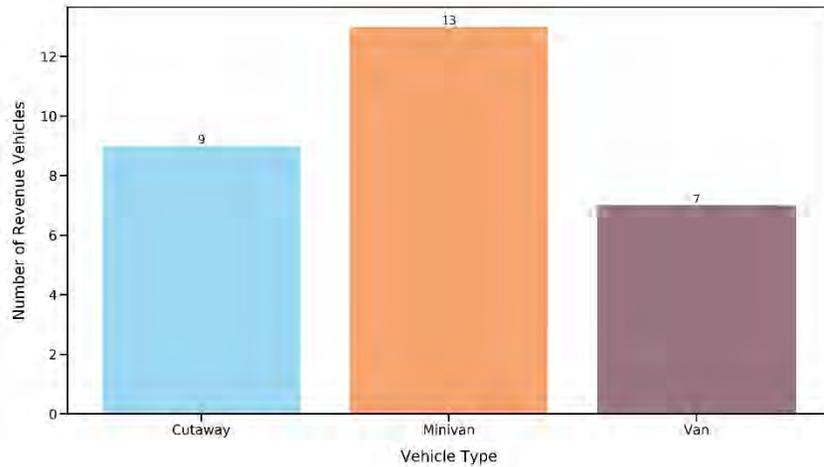
Vehicles: 30

Vehicle miles: 707,703

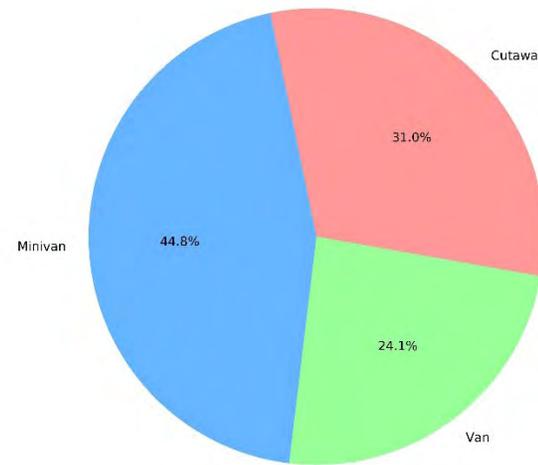
Vehicle hours: 45,408

Operating expense: \$1,415,879

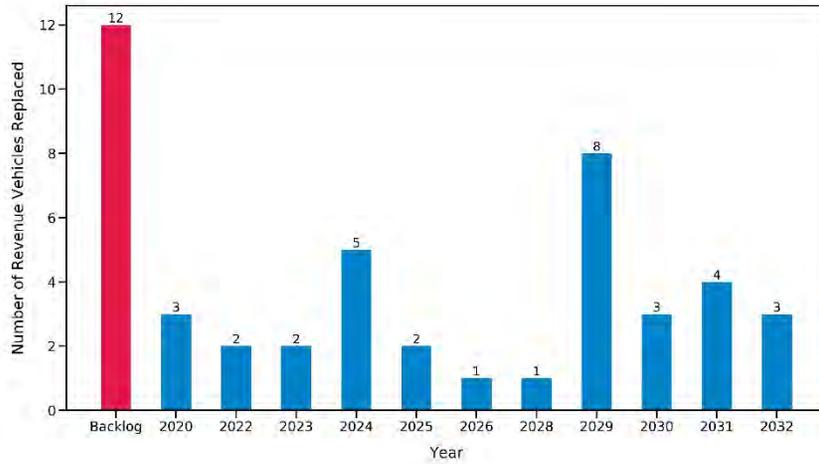
State of Good Repair Information:



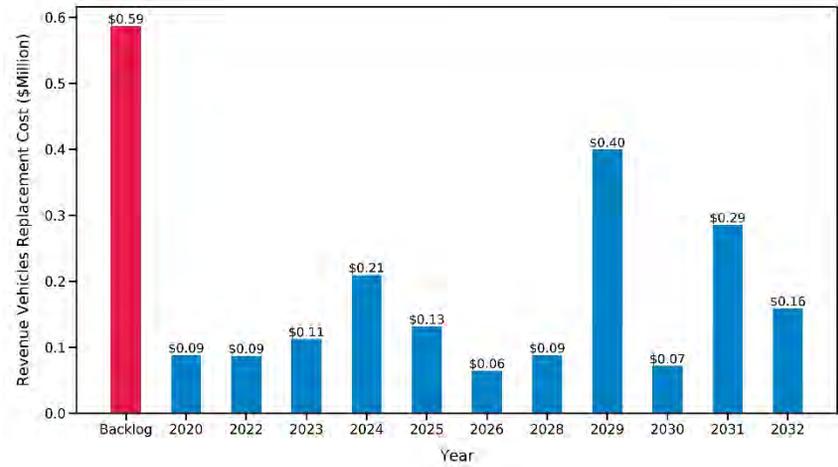
Number of Revenue Vehicles by Vehicle Type



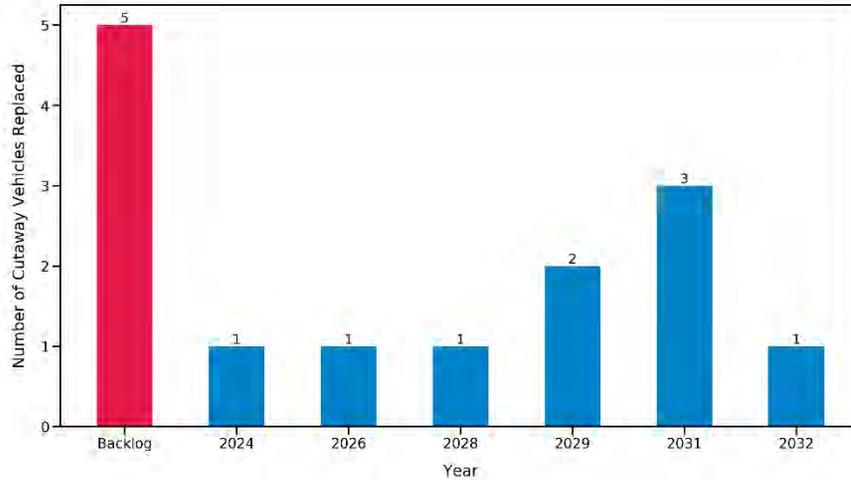
Percentage of Revenue Vehicles



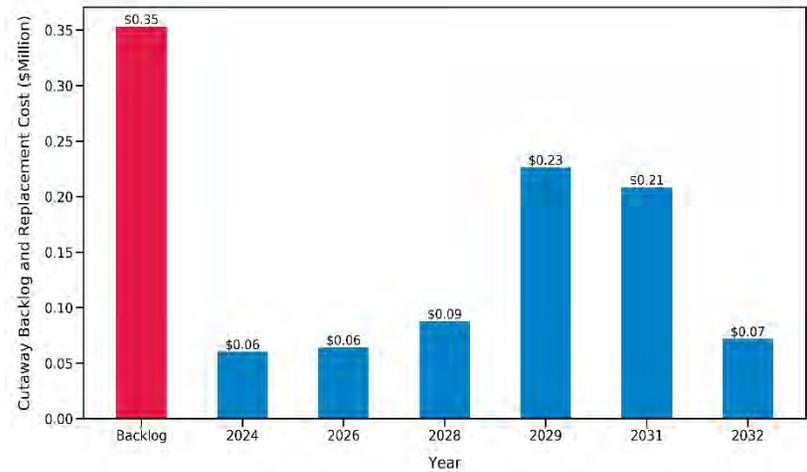
Backlog and Projected Replacement of Revenue Vehicles



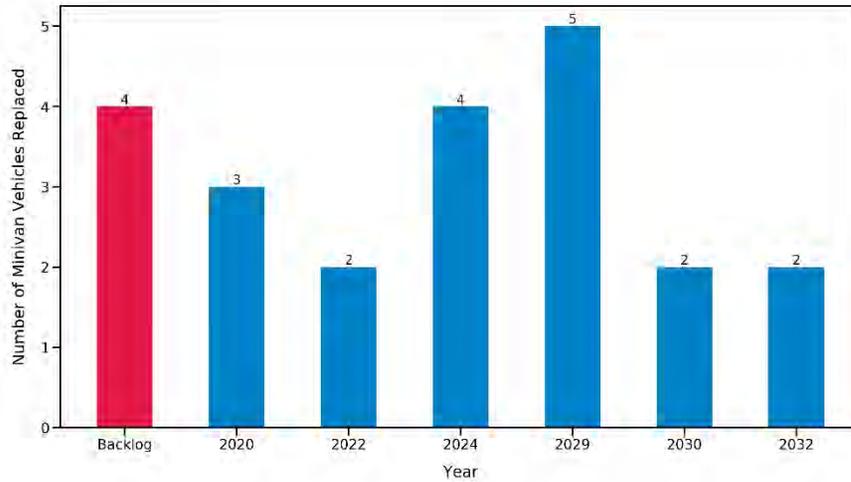
Backlog and Projected Replacement Costs for Revenue Vehicles



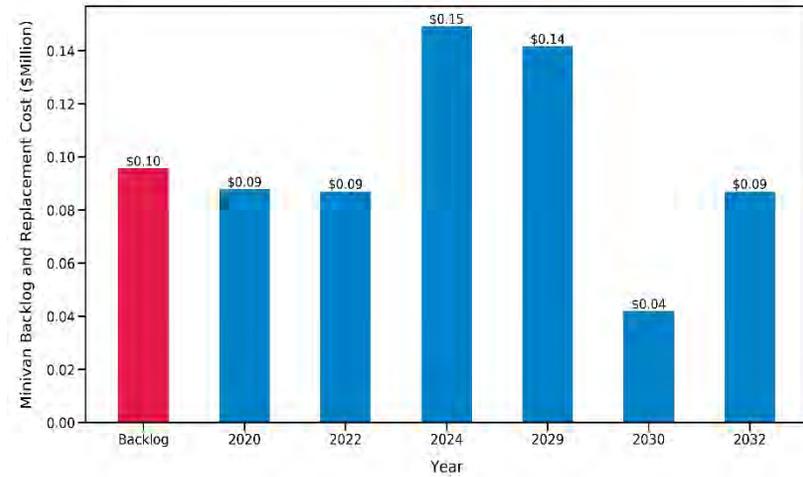
Backlog and Projected Replacement of Cutaways



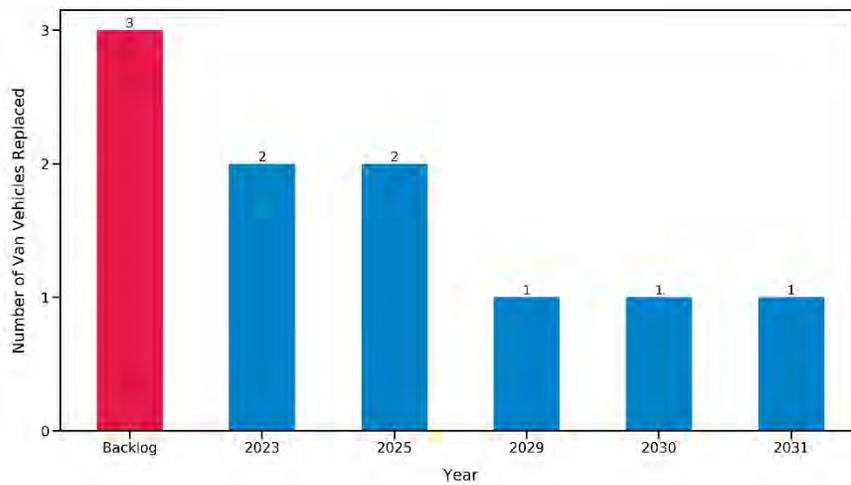
Backlog and Projected Replacement Costs for Cutaways



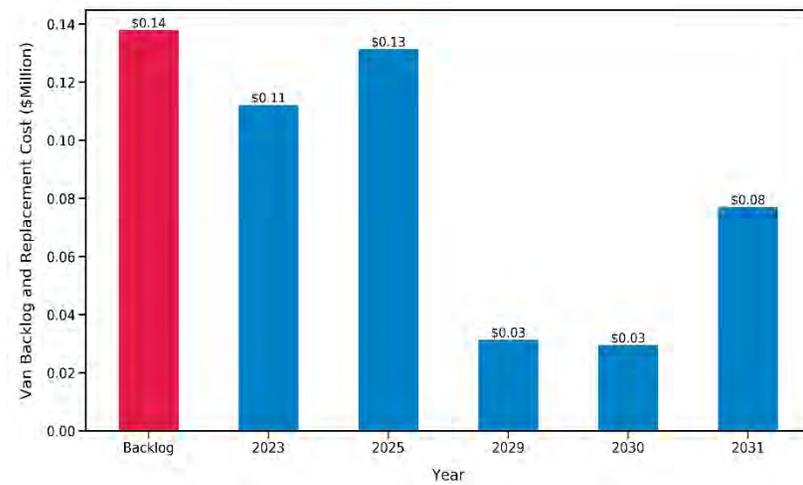
Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans



Backlog and Projected Replacement of Vans



Backlog and Projected Replacement Costs for Vans

Agency Name: Southwest Transportation Services

Counties: Adams, Bowman, Hettinger, and Slope.

Service provided: Demand-response for the general public, and Veterans transportation.

2018 Service Data

Total trips: 10,441

Vehicles: 9

Vehicle miles: 85,372

Vehicle hours: 5,529

Operating expense: \$294,423

Facilities:

Maintenance: All maintenance such as oil changes are done at businesses in the city of Hettinger & Bowman.

Storage: All vehicles are stored indoors at rented facilities in the city of Hettinger & Bowman. One vehicle is located in New England and that is stored outdoors.

Administrative: Administrative services are headquartered out of Bowman. We have a small office in both Bowman and Hettinger which is within our rented vehicle facilities.

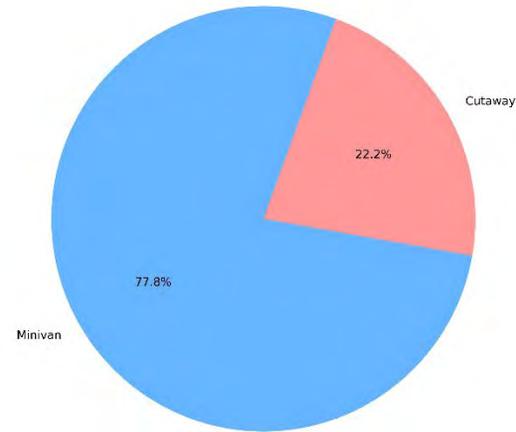
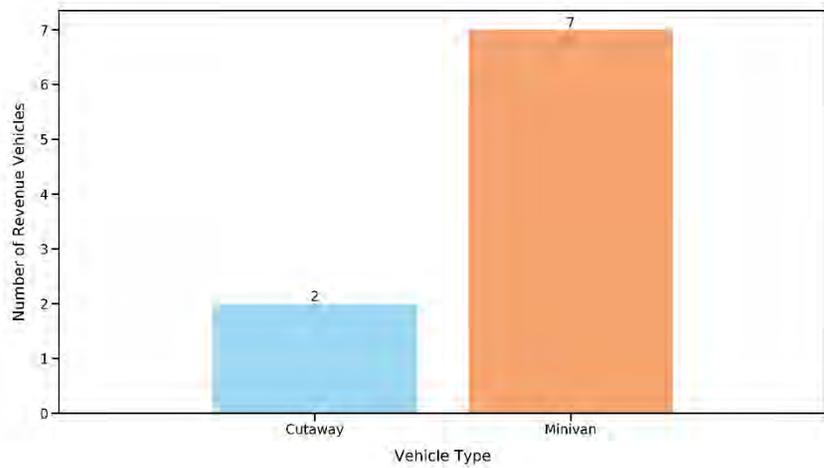
Needed upgrades:

Challenges: Staffing. Our current staff feel that Monday - Friday 8to4 or 9to4 is a benefit of the job position and they are resistive to weekends or evenings hours.

Staffing needs: I expect to see some turnover of staff in the next 5 years due to retirement of some staff members.

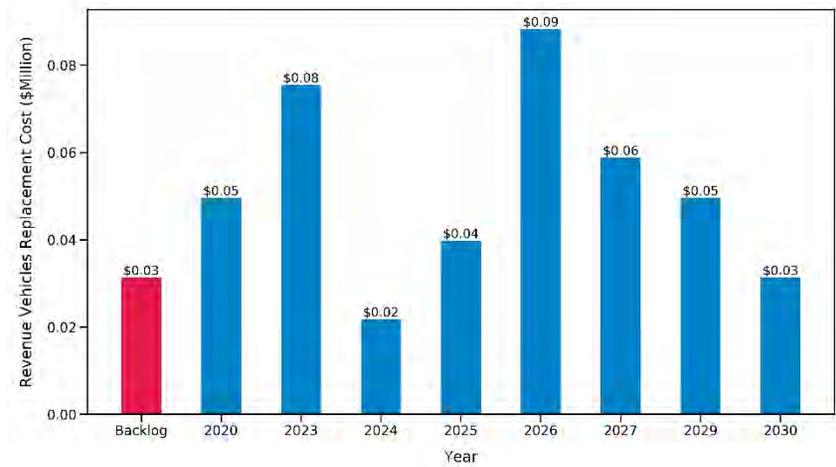
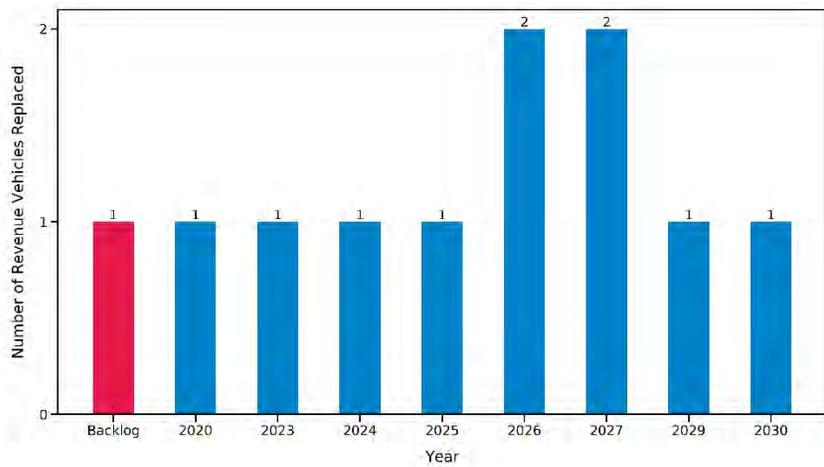
Meeting needs of residents: Our Bowman in-town driver is very busy putting on 40-50 miles each day. There are times we have questioned needing 1&1/2 drivers. We have scheduler out of New England and I strongly encourage her to ride share, but make all rides requested work.

State of Good Repair Information:



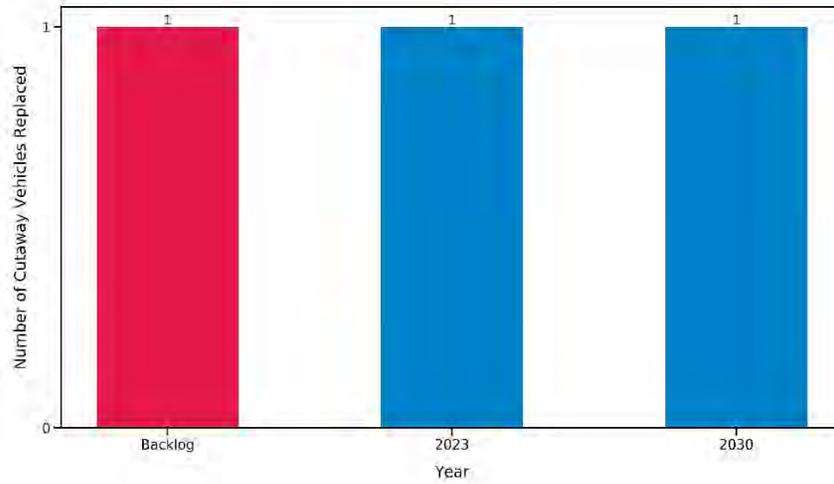
Number of Revenue Vehicles by Vehicle Type

Percentage of Revenue Vehicles

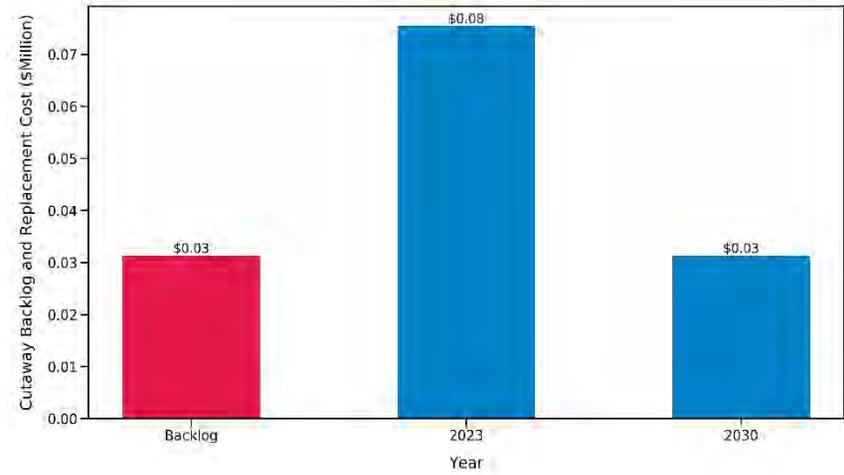


Backlog and Projected Replacement of Revenue Vehicles

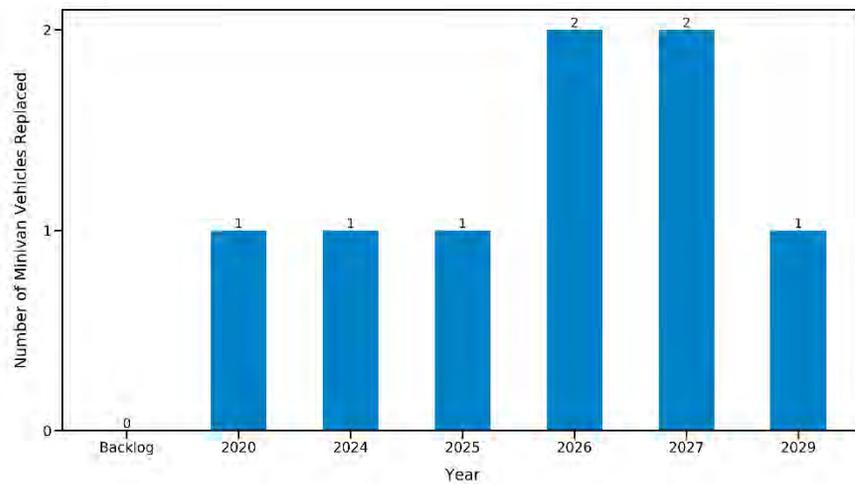
Backlog and Projected Replacement Costs for Revenue Vehicles



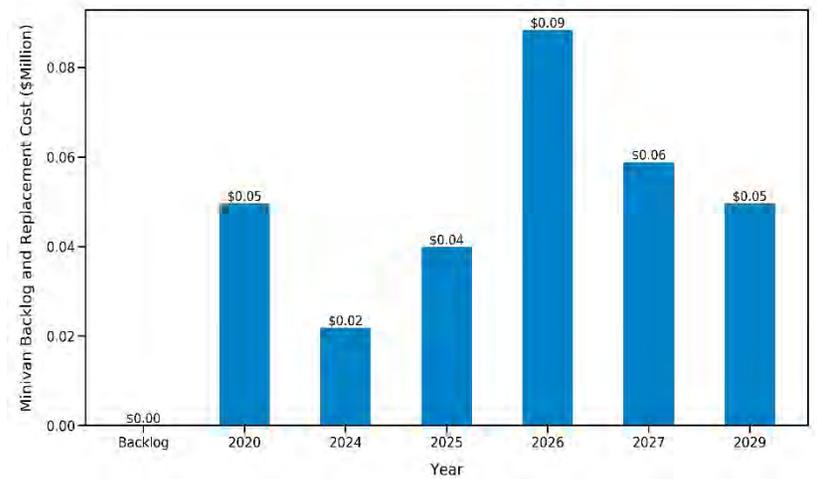
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Spirit Lake Tribe

Counties: Benson, and Ramsey.

Service provided: Demand-response for the general public, Flexible route, and Human service transportation (for clients of human service programs).

2018 Service Data

Total trips: 12,607

Vehicles: 5

Vehicle miles: 204,645

Vehicle hours: 9,446

Operating expense: \$380,047

Facilities:

Maintenance: We do not have a maintenance facility so all the maintenance on our vehicles is done in Devils Lake with Marketplace Ford Garage.

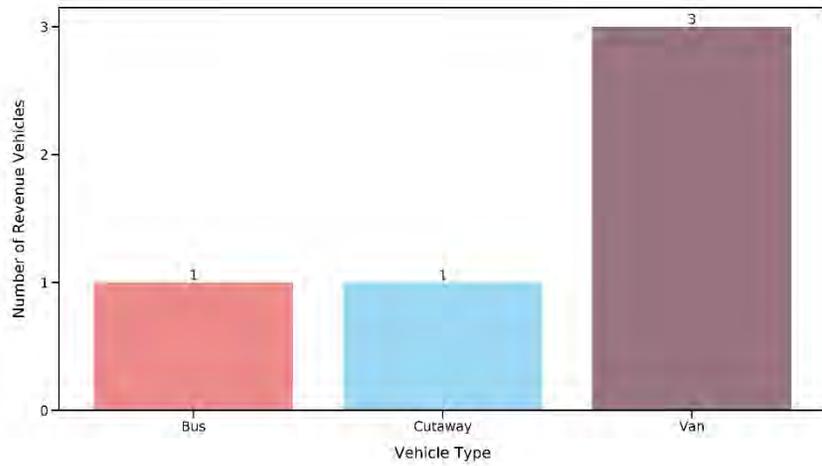
Storage: We do not have a storage facility for our vehicles.

Administrative: We do have an administrative facility/office that is owned by the Spirit Lake Tribe. The administrative office houses the Transportation Coordinator and the dispatcher. All the administrative tasks for transportation are performed at this location.

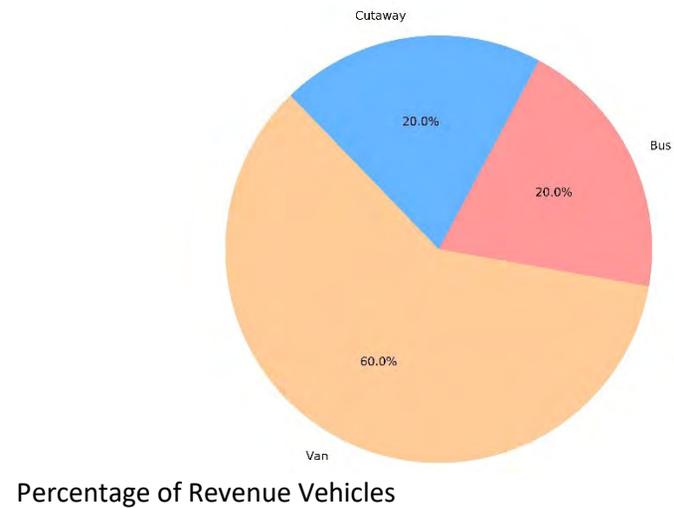
Needed upgrades: We are in need of an administrative transportation facility that would include a maintenance facility and storage facility for transportation.

Challenges: Our transportation program does not currently provide services for medical appointments for our community members who have medical appointments out of town, for example in Grand Forks, Fargo and Jamestown. I would like to expand transportation services to include services for out of town medical appointments but the main challenge would be the added cost for fuel, driver time and vehicle maintenance.

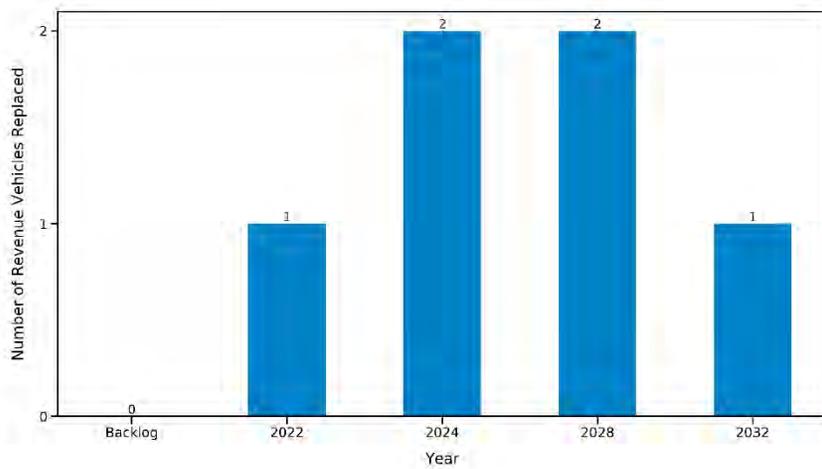
State of Good Repair Information:



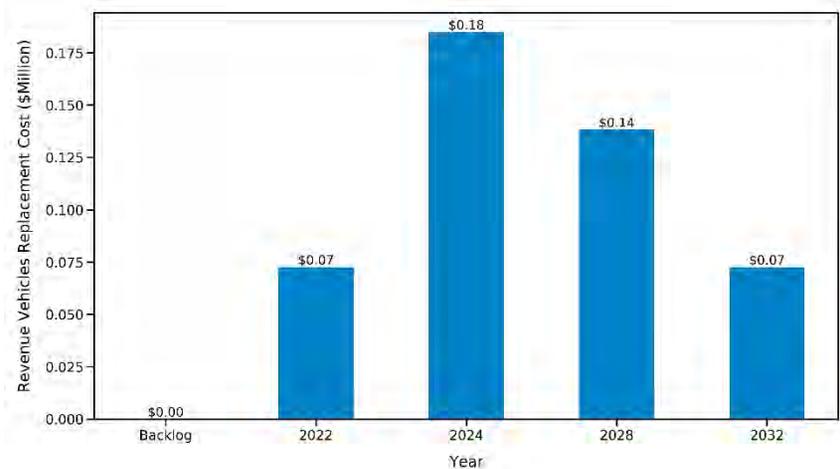
Number of Revenue Vehicles by Vehicle Type



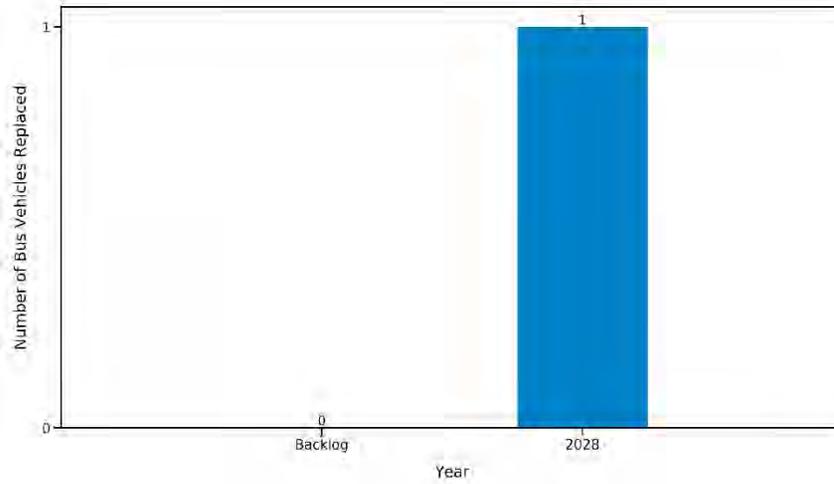
Percentage of Revenue Vehicles



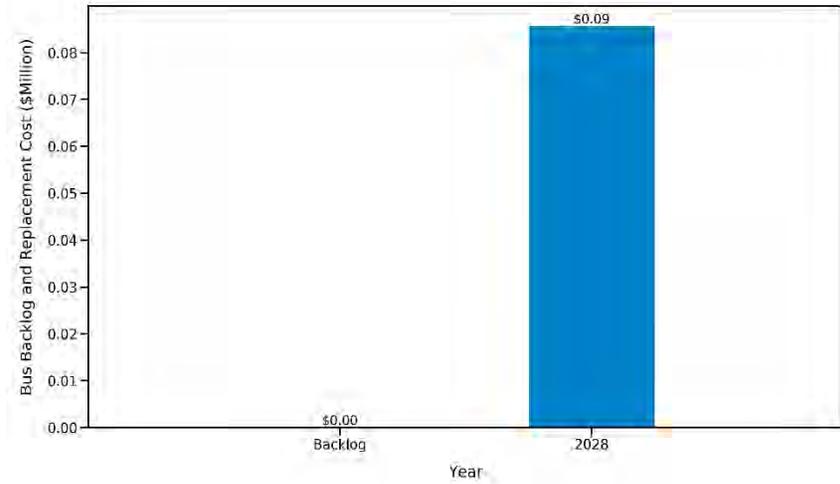
Backlog and Projected Replacement of Revenue Vehicles



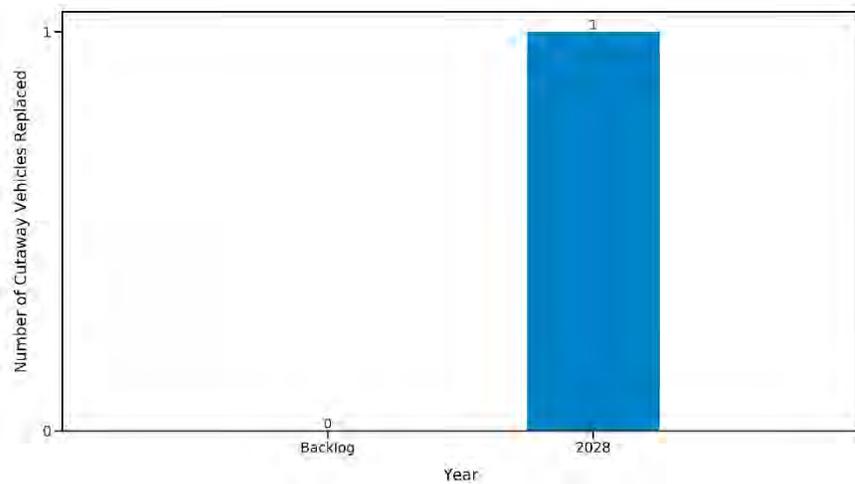
Backlog and Projected Replacement Costs for Revenue Vehicles



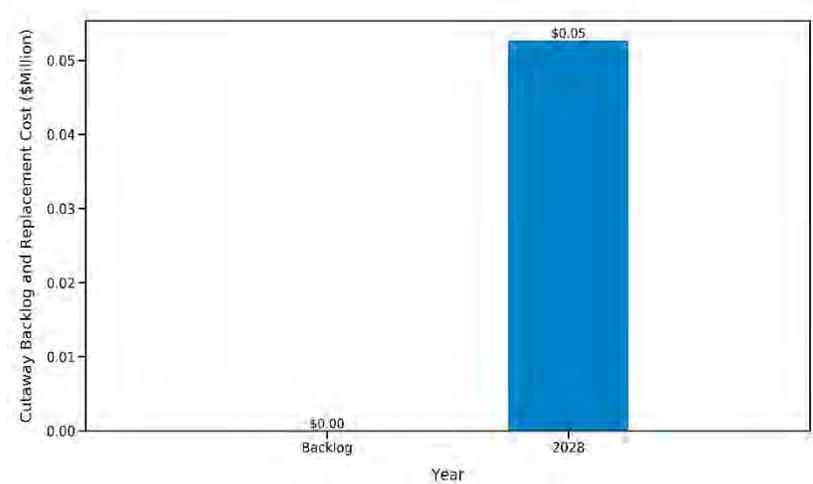
Backlog and Projected Replacement of Buses



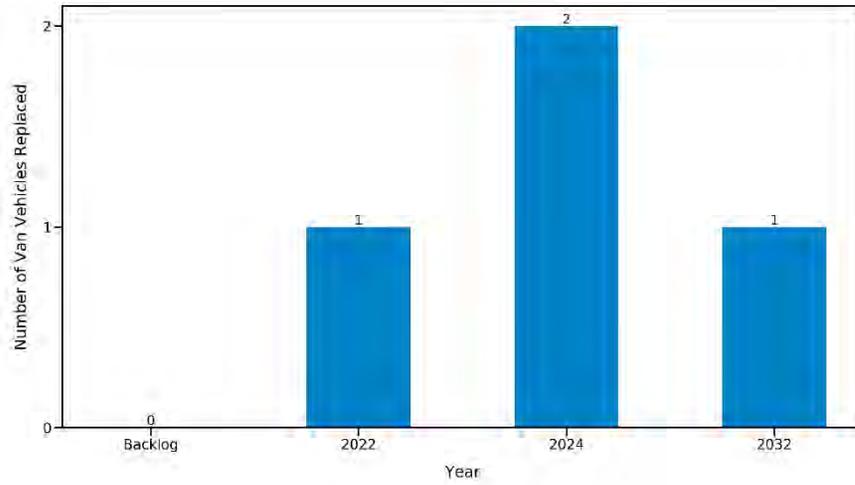
Backlog and Projected Replacement Costs for Buses



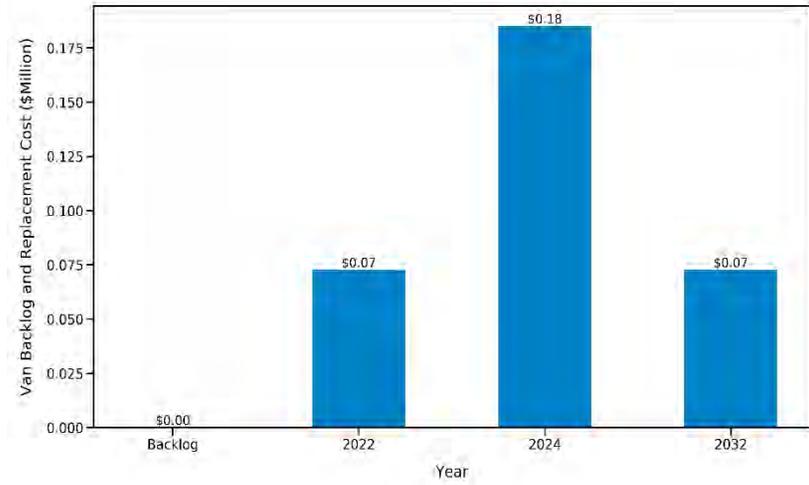
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Vans



Backlog and Projected Replacement Costs for Vans

Agency Name: Standing Rock Public Transportation

Counties: Burleigh, Morton, and Sioux.

Service provided: Demand-response for the general public.

2018 Service Data

Total trips: 18,748

Vehicles: 15

Vehicle miles: 224,372

Vehicle hours: 9,870

Operating expense: \$1,139,202

Facilities:

Maintenance: Standing Rock Public Transit Center, 7,000 sq. ft., secure locked fence and parking lot, fueling station, 6 offices, waiting room, wash bay, 3 mechanic bays that can also be used for vehicle storage for 8 vehicles. Security camera system on interior and exterior.

Storage: Vehicle storage for 8 vehicles, chain link fence around entire facility and parking lot.

Administrative: 6 offices, 1 waiting room.

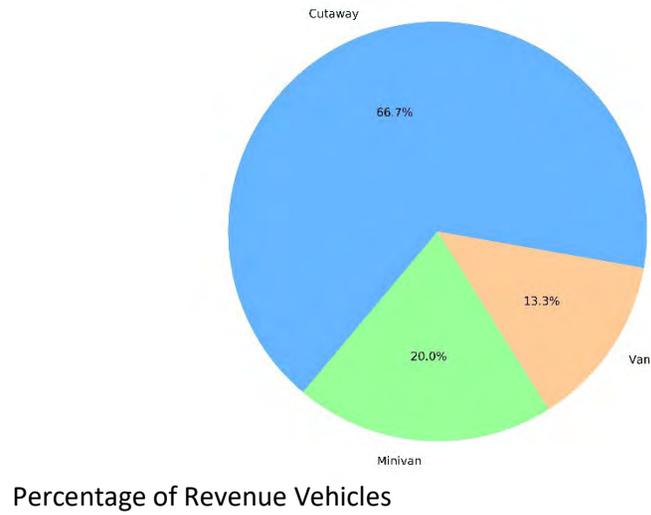
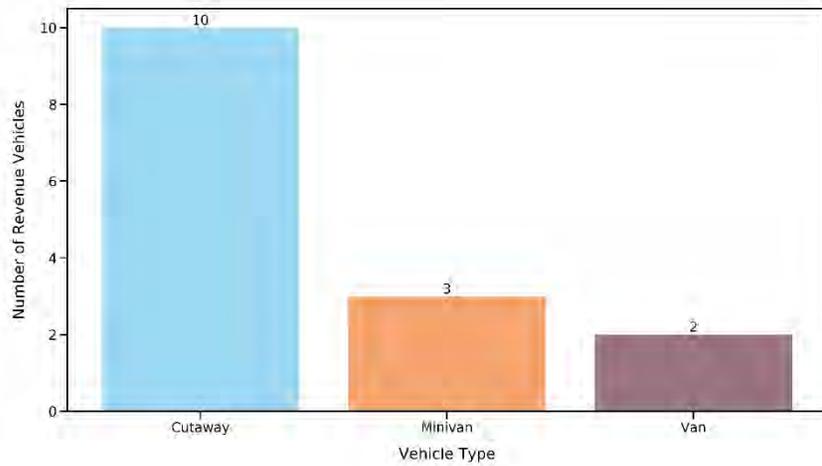
Needed upgrades: Expanded parking lot, bus port/shelter, handicapped accessible vestibule, 1 office and 1 meeting room addition.

Challenges: Matching funds.

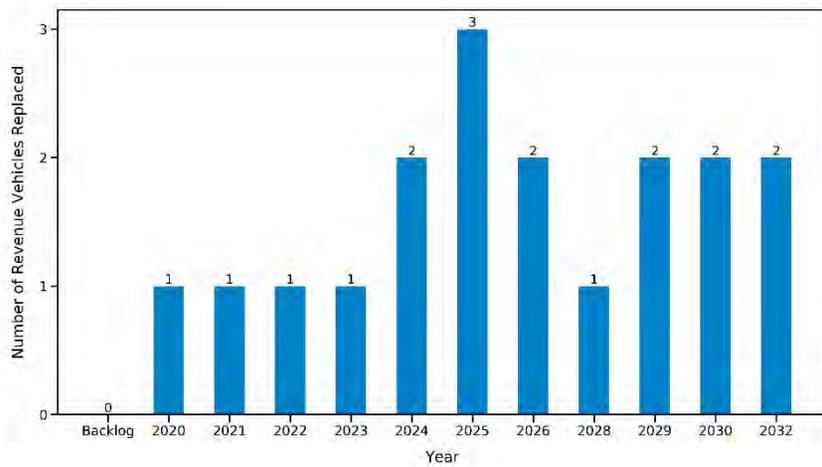
Staffing needs: Mobility Coordinator, 2 full-time drivers, and 1 full-time mechanic.

Meeting needs of residents: We are meeting capacity on most of our routes. This requires larger vehicles and more CDL trained drivers.

State of Good Repair Information:

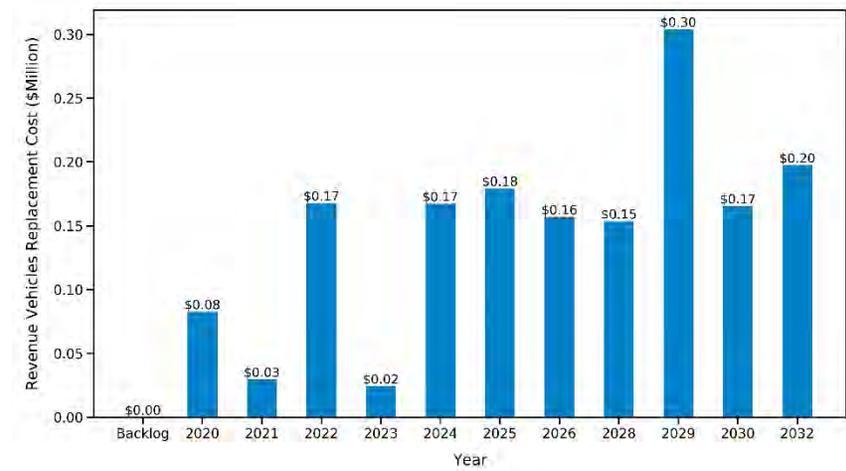


Number of Revenue Vehicles by Vehicle Type

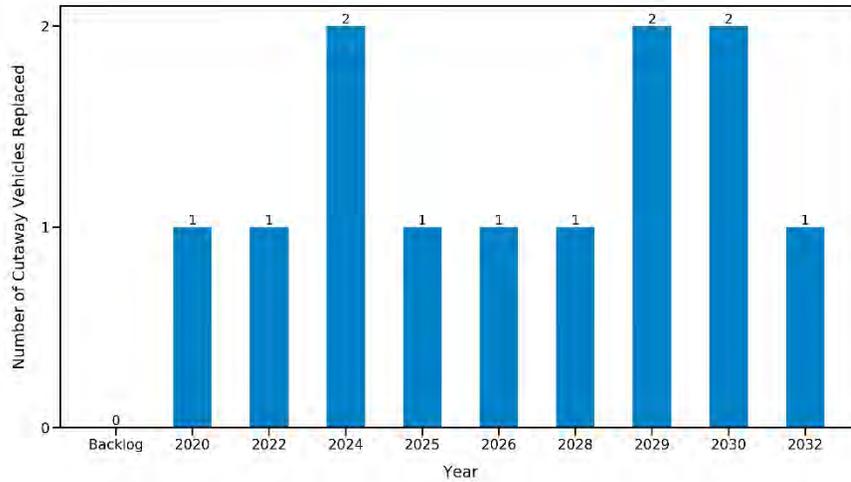


Backlog and Projected Replacement of Revenue Vehicles

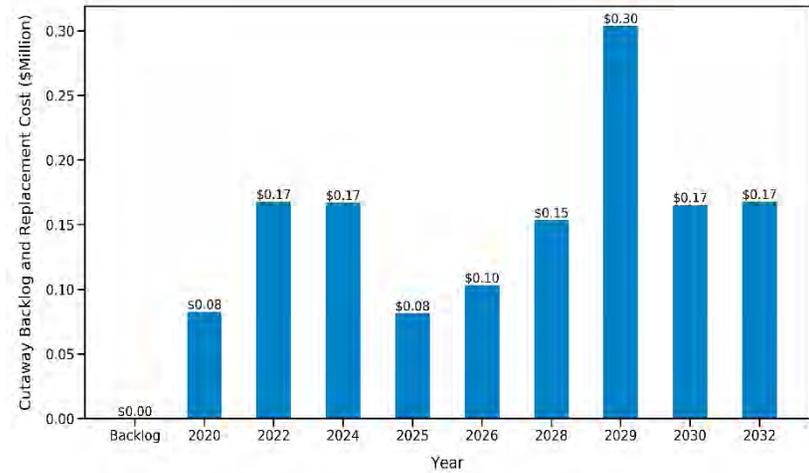
Percentage of Revenue Vehicles



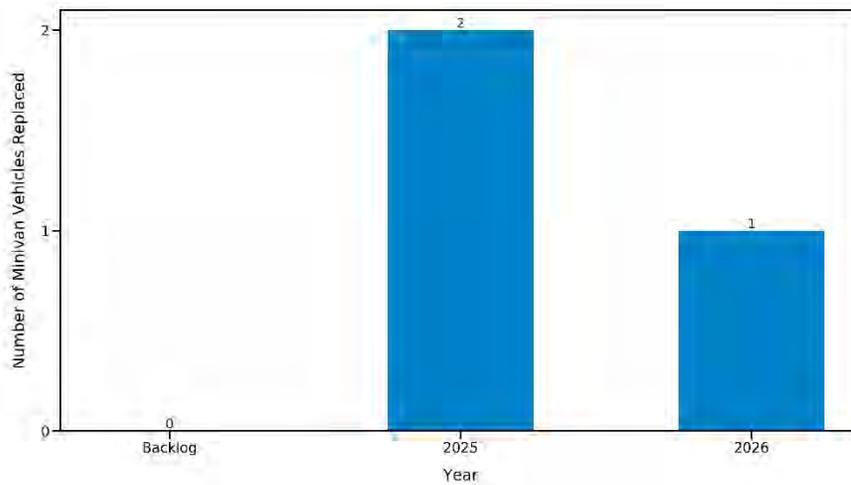
Backlog and Projected Replacement Costs for Revenue Vehicles



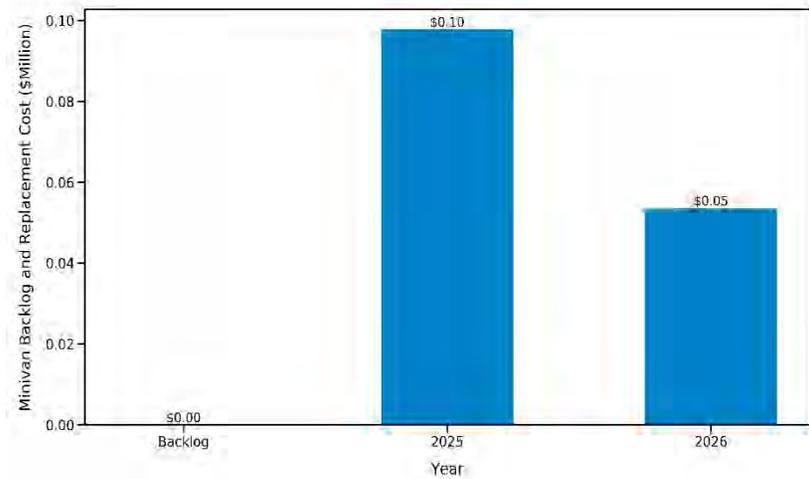
Backlog and Projected Replacement of Cutaways



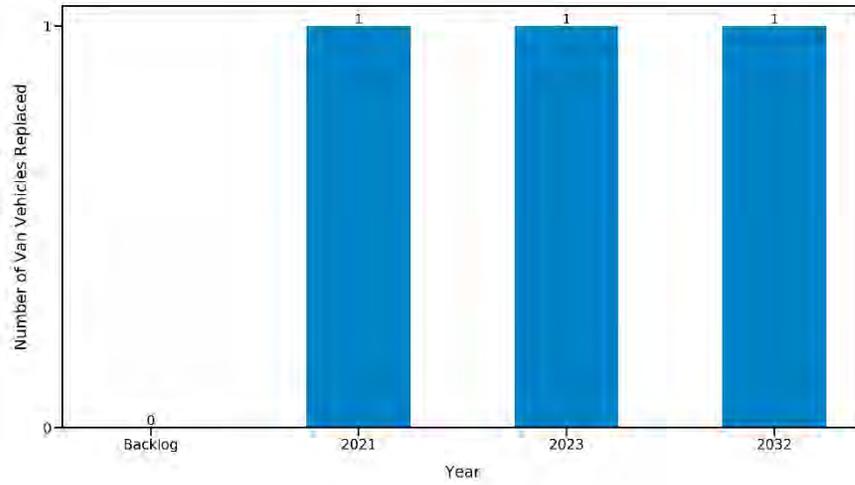
Backlog and Projected Replacement Costs for Cutaways



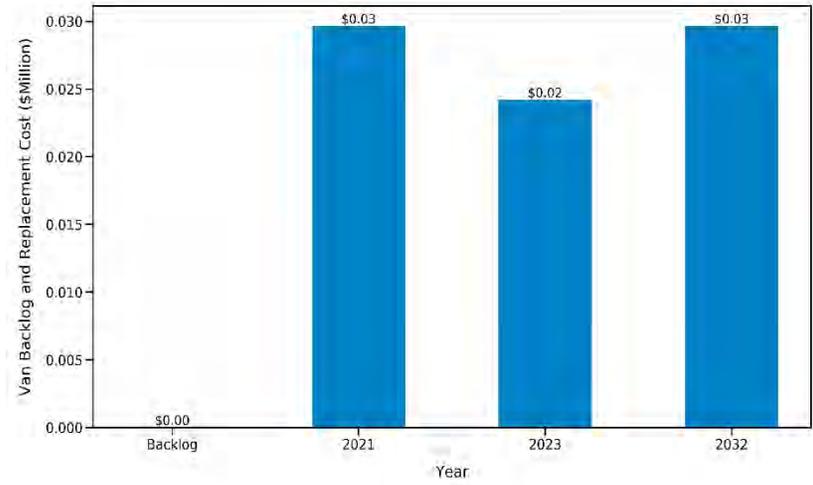
Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans



Backlog and Projected Replacement of Vans



Backlog and Projected Replacement Costs for Vans

Agency Name: Stark County Council on Aging / Elder Care

Counties: Stark

Service provided: Demand-response for the general public.

2018 Service Data

Total trips: 35,892

Vehicles: 12

Vehicle miles: 158,868

Vehicle hours: 15,599

Operating expense: \$911,945

Facilities:

Maintenance: We contract out for this service.

Storage: We have a garage at our facility.

Administrative: We have offices at our facility.

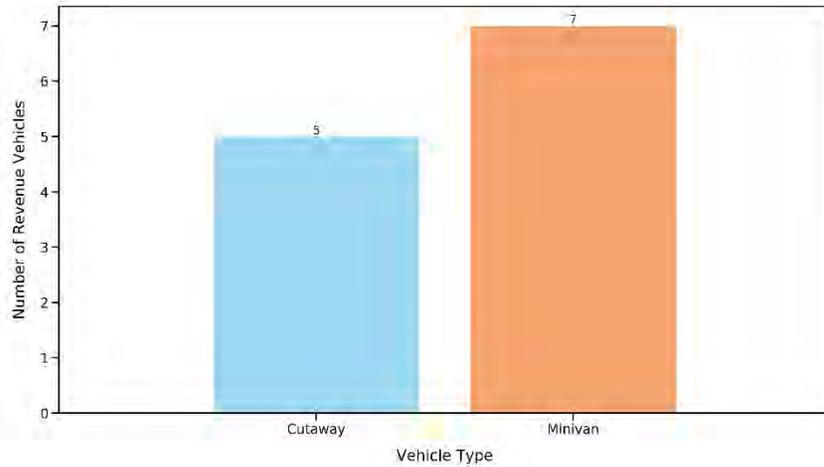
Needed upgrades: We need a larger garage as we will run out of garage space for the number of vehicles, we have this year. We also need additional office space because as we continue to grow more office personnel will be needed.

Challenges: We have been getting more requests to extend our hours of operation, but do not feel we have enough to actually make it efficient.

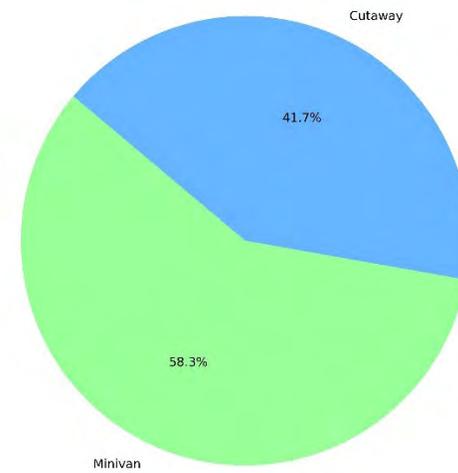
Staffing needs: We currently have the staffing we need to complete most of our rides; however, we have recently grown and have not been able to negotiate all of our rides due to the need of more drivers and vehicles. We expect the need to add additional staff and vehicles within the next year or so.

Other comments: We have been growing as our rides have increased 18% from 2018 to 2019. Some of the issues we find are hiring and maintaining qualified staff, and congestion and traffic in Dickinson has been making rides take longer costing the agency more money. Our biggest funding challenge lies with our inability to compete with the oil field service salaries in the areas. This allows us to lose needed staff.

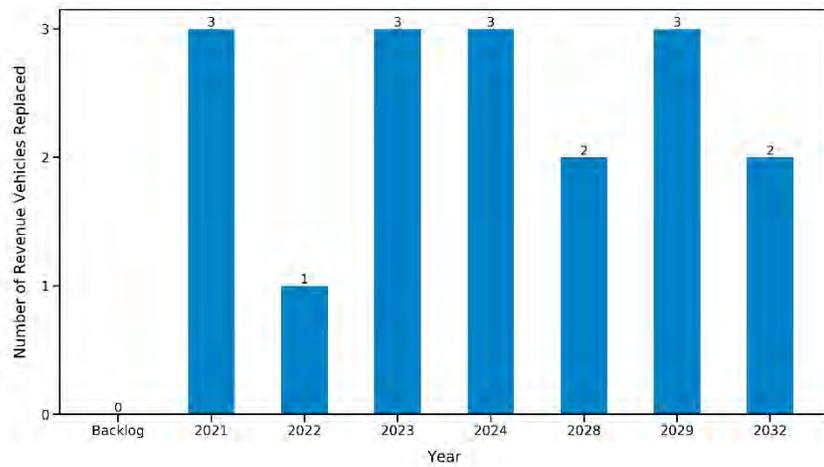
State of Good Repair Information:



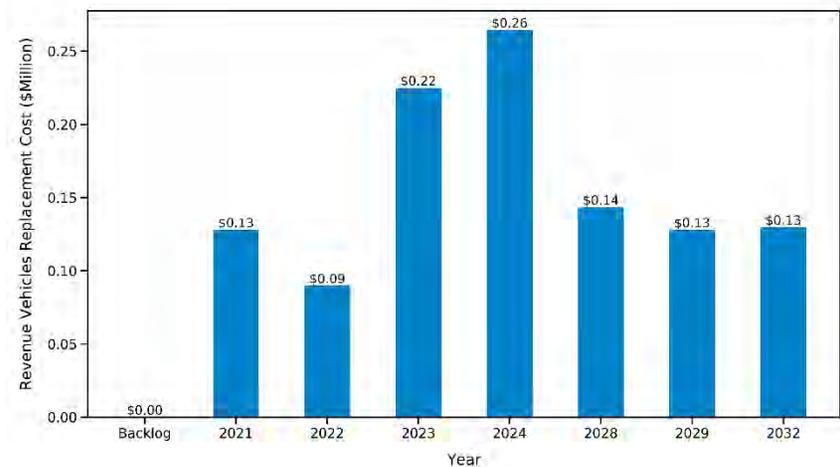
Number of Revenue Vehicles by Vehicle Type



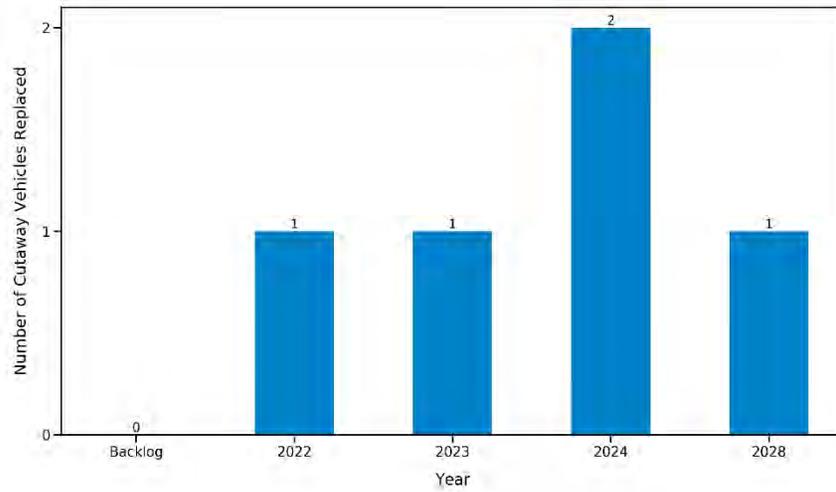
Percentage of Revenue Vehicles



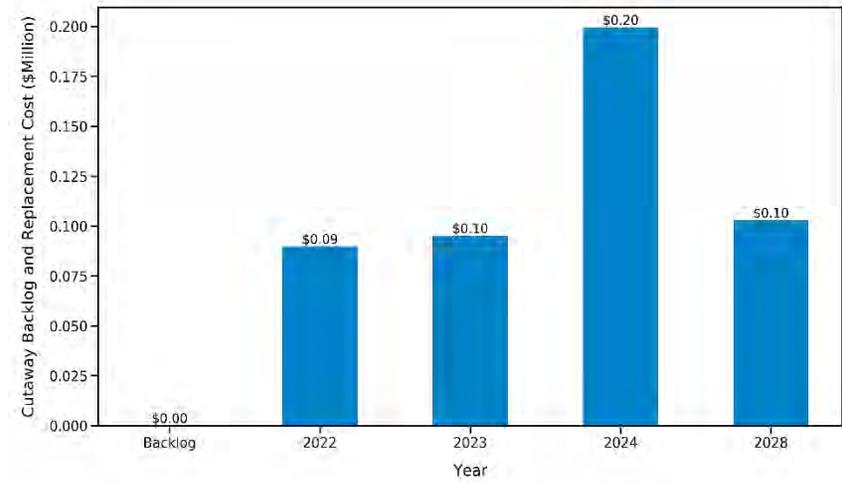
Backlog and Projected Replacement of Revenue Vehicles



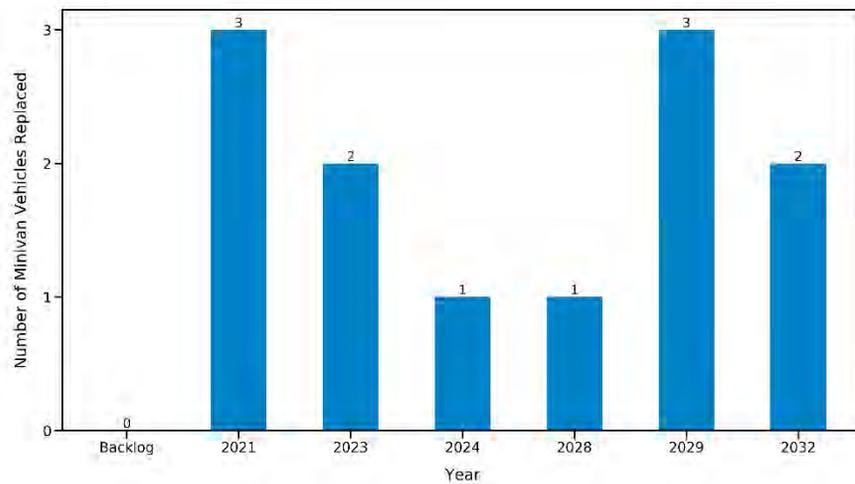
Backlog and Projected Replacement Costs for Revenue Vehicles



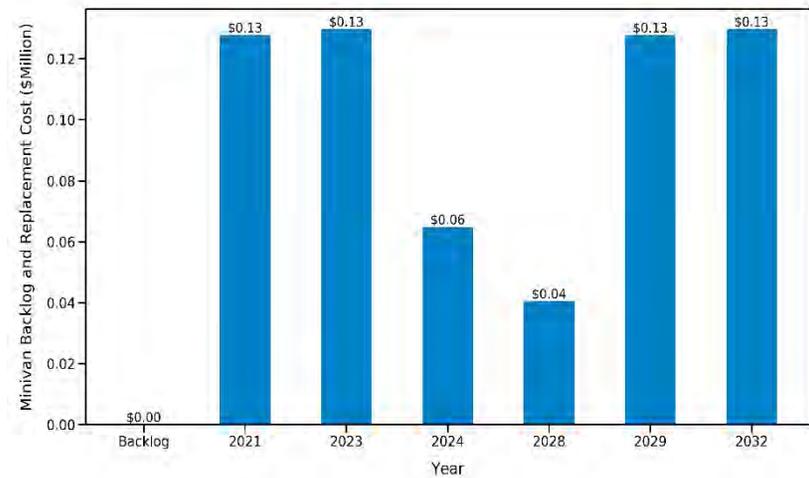
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: Trenton Indian Service Area Aging Program

Counties: Williams

Service provided:

2018 Service Data

Total trips: 2,254

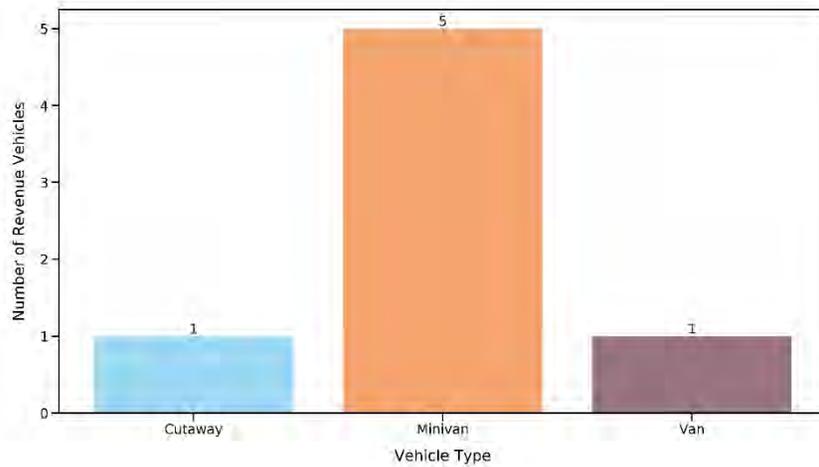
Vehicles: 7

Vehicle miles: 46,154

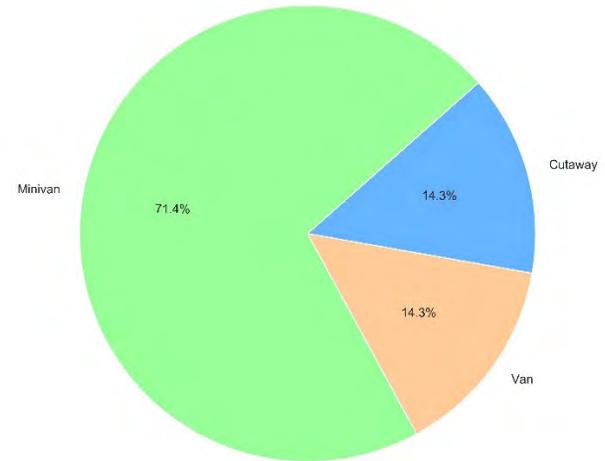
Vehicle hours: 959

Operating expense: \$59,683

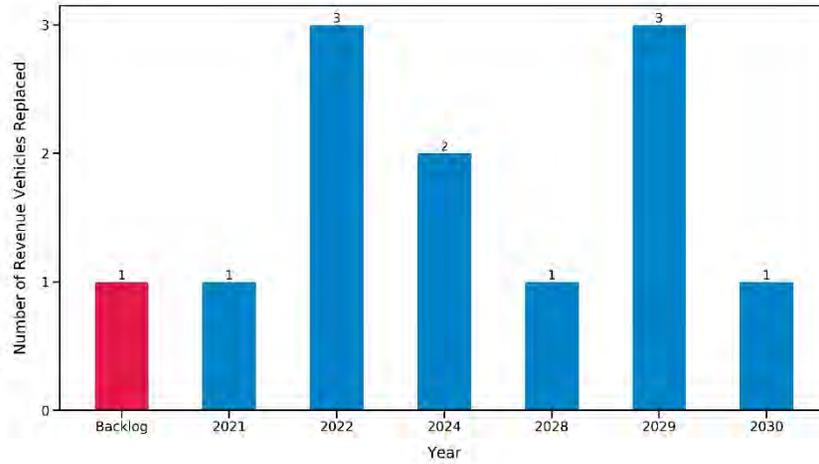
State of Good Repair Information:



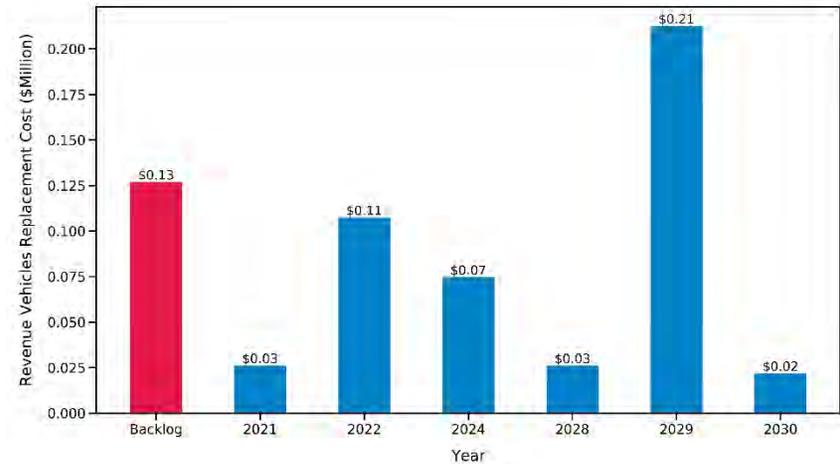
Number of Revenue Vehicles by Vehicle Type



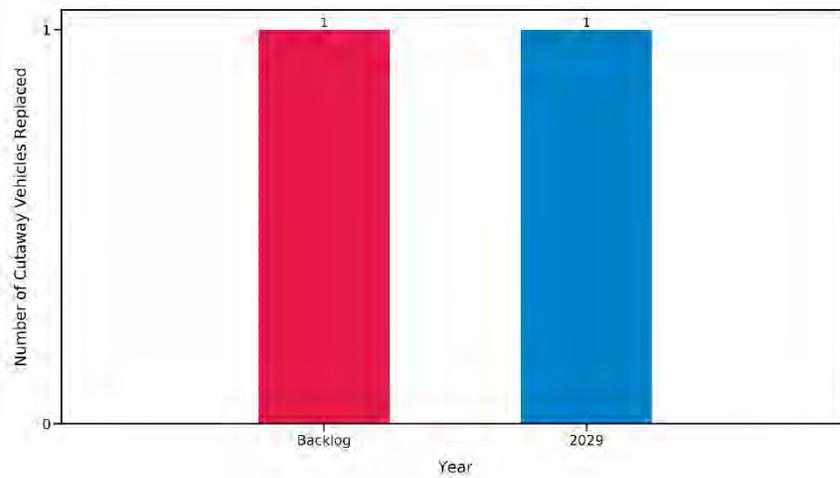
Percentage of Revenue Vehicles



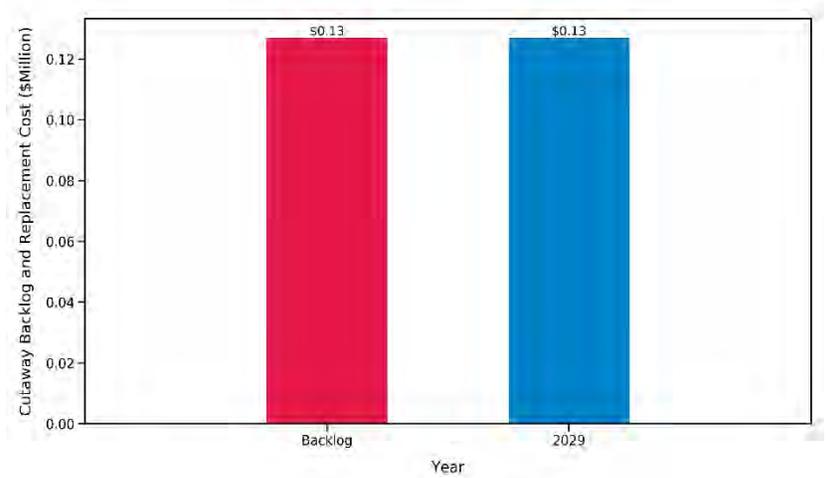
Backlog and Projected Replacement of Revenue Vehicles



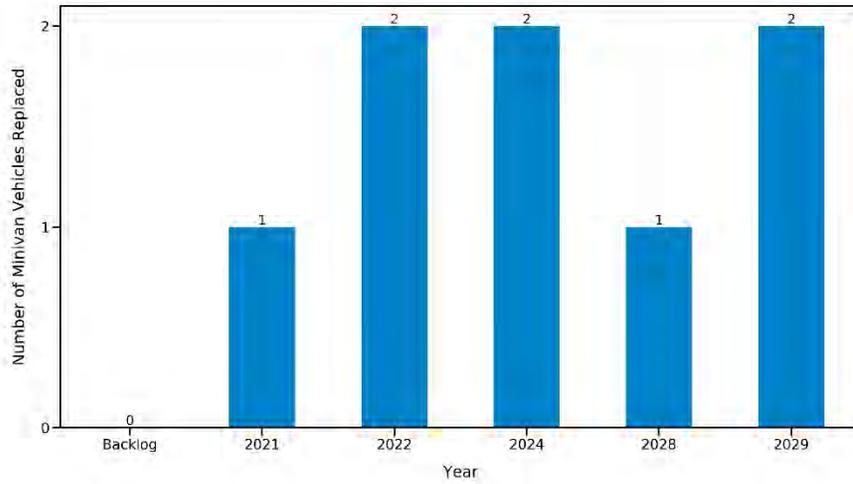
Backlog and Projected Replacement Costs for Revenue Vehicles



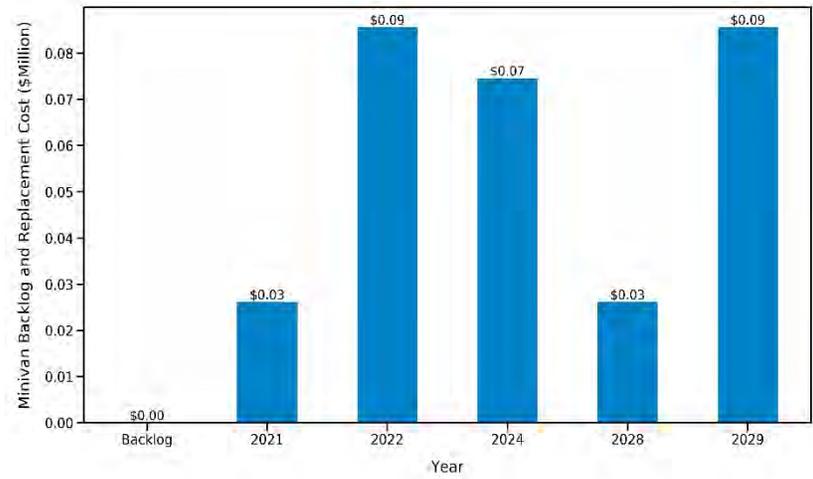
Backlog and Projected Replacement of Cutaways



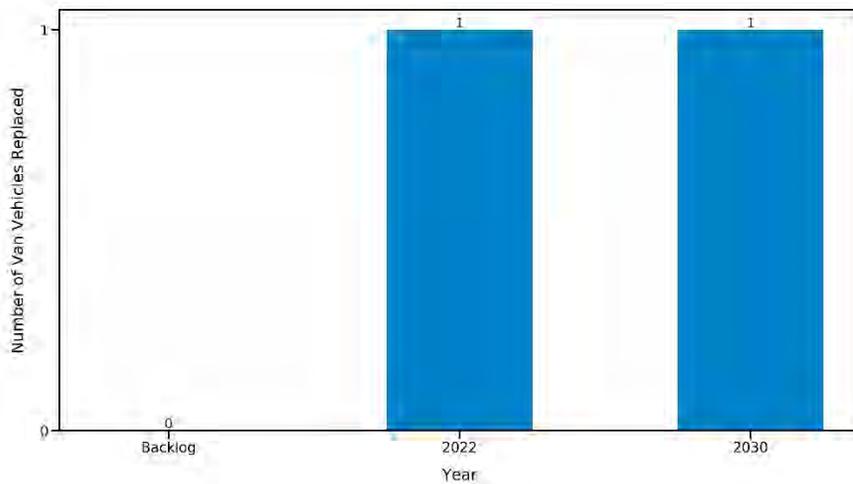
Backlog and Projected Replacement Costs for Cutaways



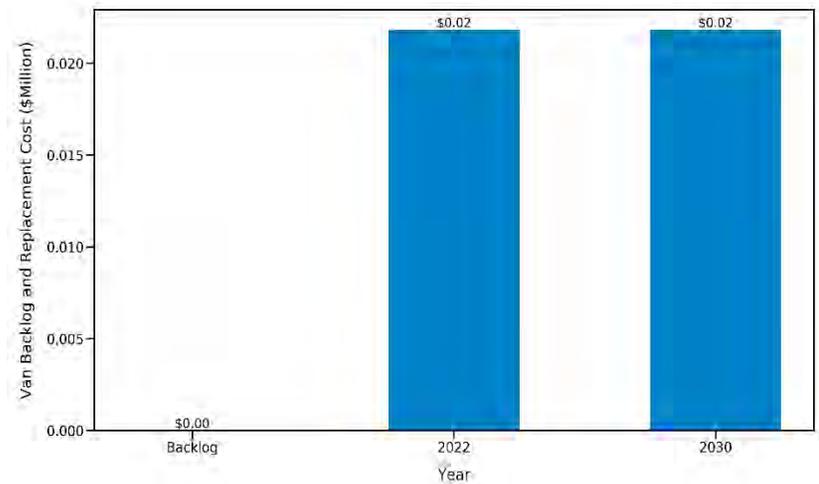
Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans



Backlog and Projected Replacement of Vans



Backlog and Projected Replacement Costs for Vans

Agency Name: Turtle Mountain Band of Chippewa Indian

Counties: Rolette

Service provided:

2018 Service Data

Total trips: 6,010

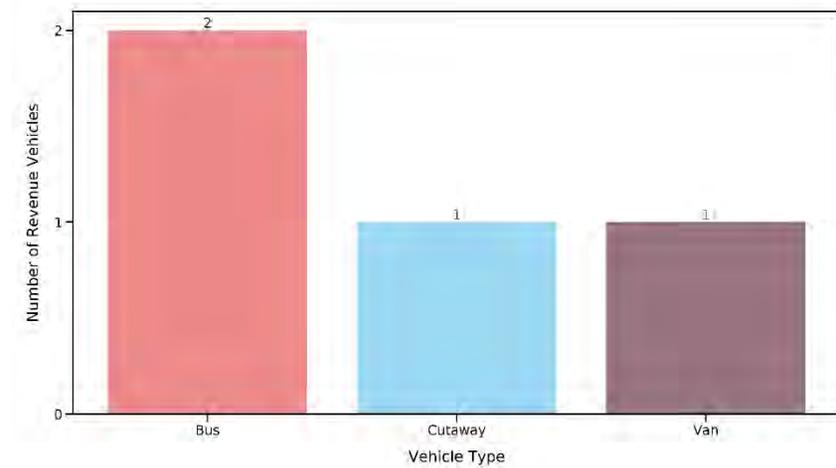
Vehicles: 4

Vehicle miles: 101,925

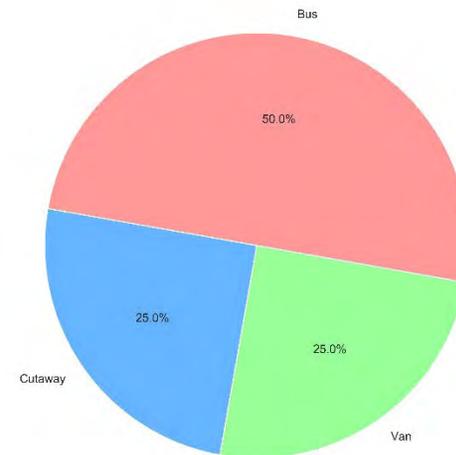
Vehicle hours: 7,250

Operating expense: \$260,441

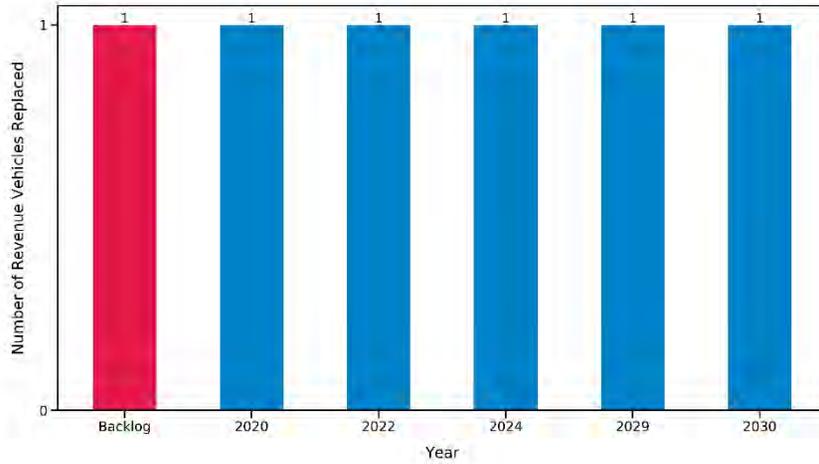
State of Good Repair Information:



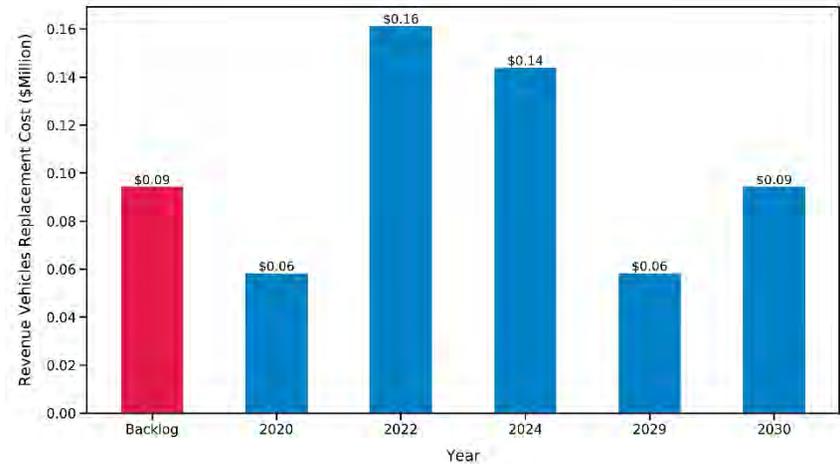
Number of Revenue Vehicles by Vehicle Type



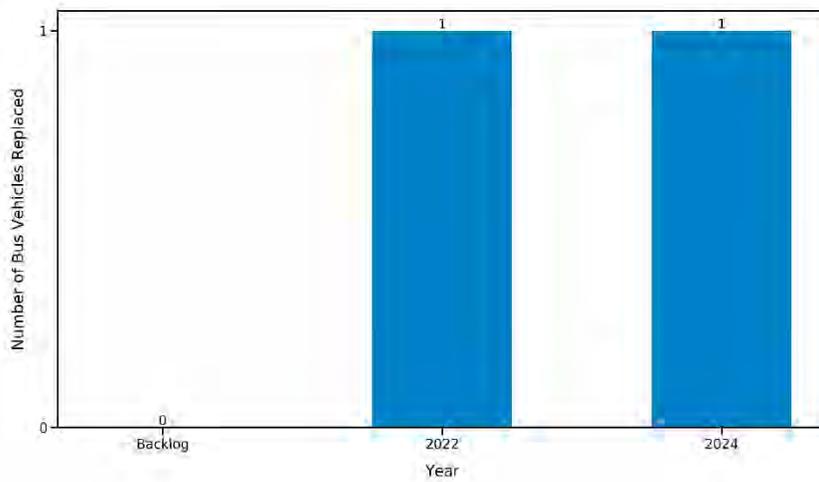
Percentage of Revenue Vehicles



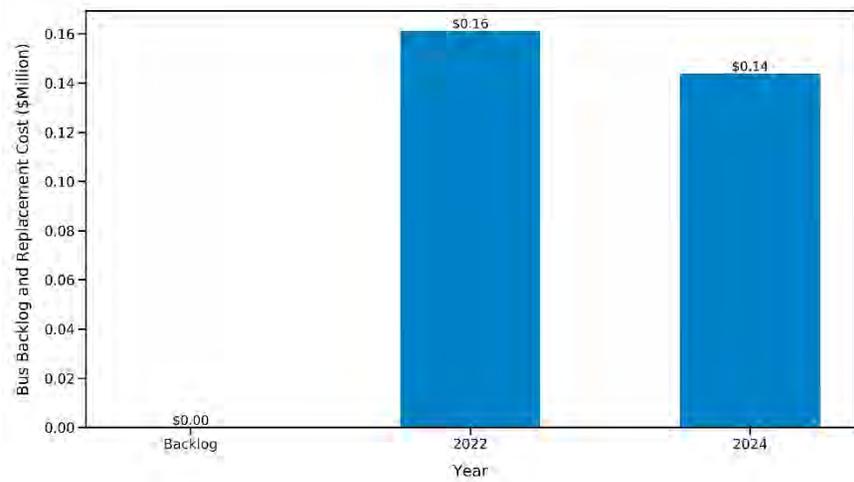
Backlog and Projected Replacement of Revenue Vehicles



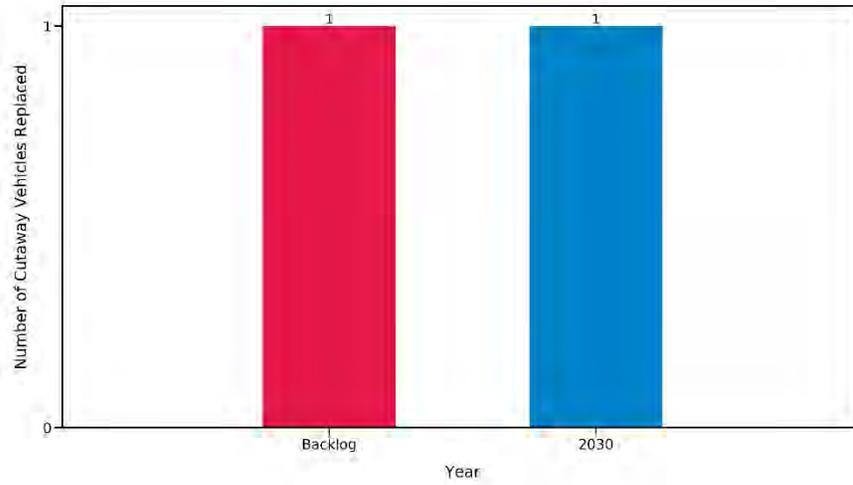
Backlog and Projected Replacement Costs for Revenue Vehicles



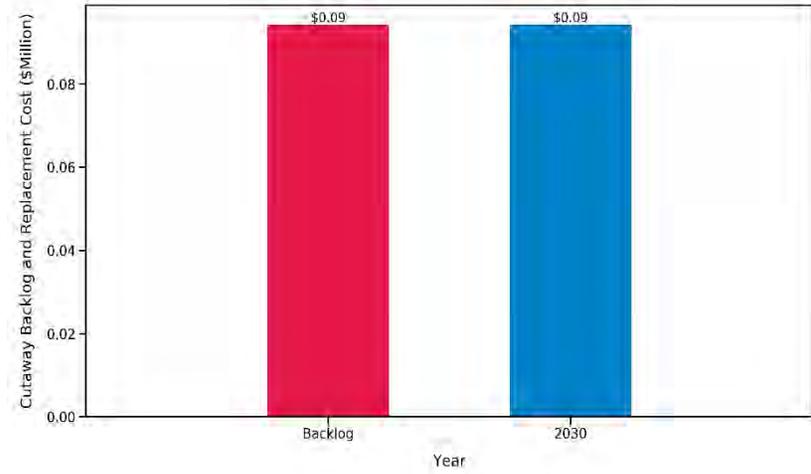
Backlog and Projected Replacement of Buses



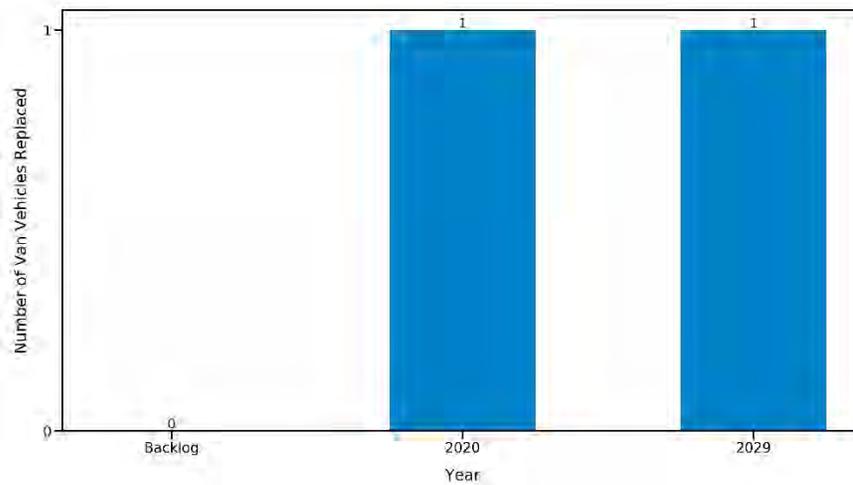
Backlog and Projected Replacement Costs for Buses



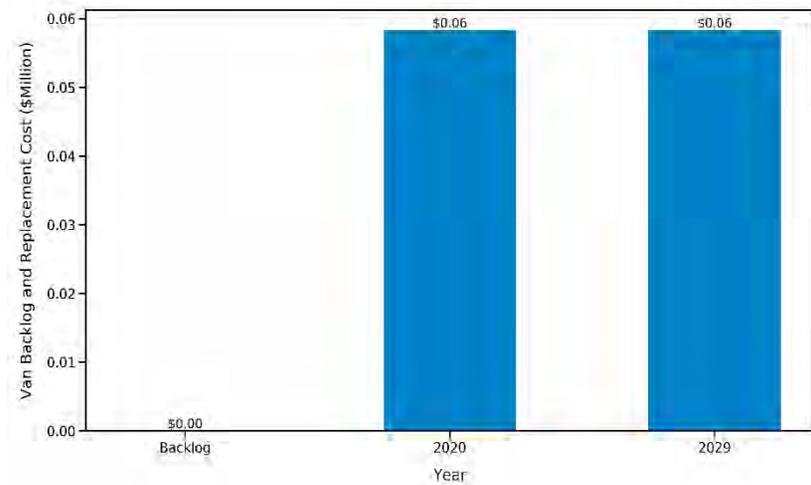
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Vans



Backlog and Projected Replacement Costs for Vans

Agency Name: Walsh County Transportation Program

Counties: Grand Forks, Pembina, and Walsh.

Service provided: Demand-response for the general public, Flexible route, and Human service transportation (for clients of human service programs).

2018 Service Data

Total trips: 4,649

Vehicles: 4

Vehicle miles: 48,723

Vehicle hours: 2,894

Operating expense: \$201,053

Facilities:

Maintenance:

Storage: Rent a large pole barn.

Administrative: Rent office space.

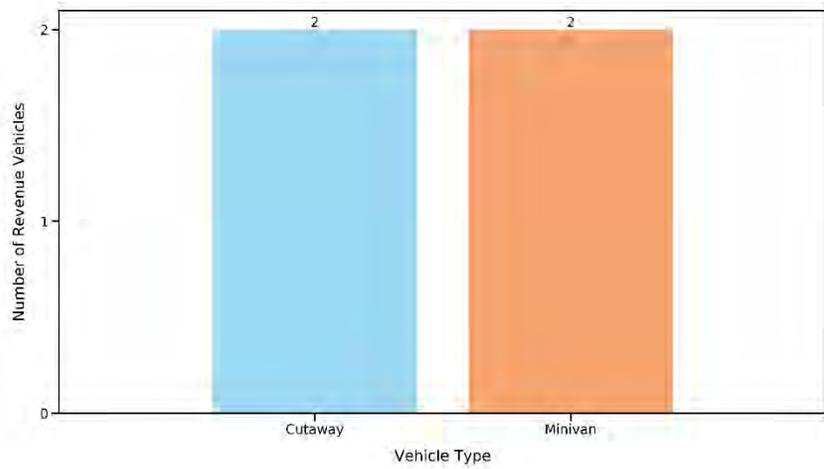
Needed upgrades:

Challenges: Staff, and money.

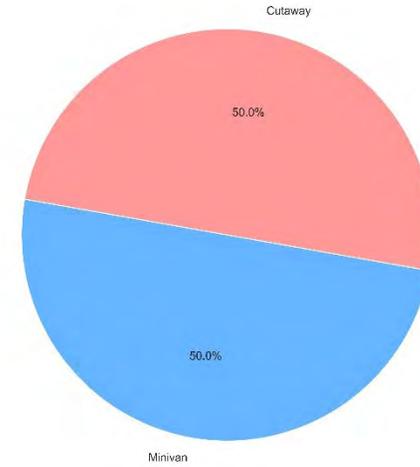
Staffing needs: One more bus driver, one more office person

Meeting needs of residents: We feel we are providing the service that's needed right. Dialysis clients we take 3 times a week, Tuesday, Thursday, Sat. There might be some that have dialysis Mon-Wed-Friday we cannot accommodate that right now.

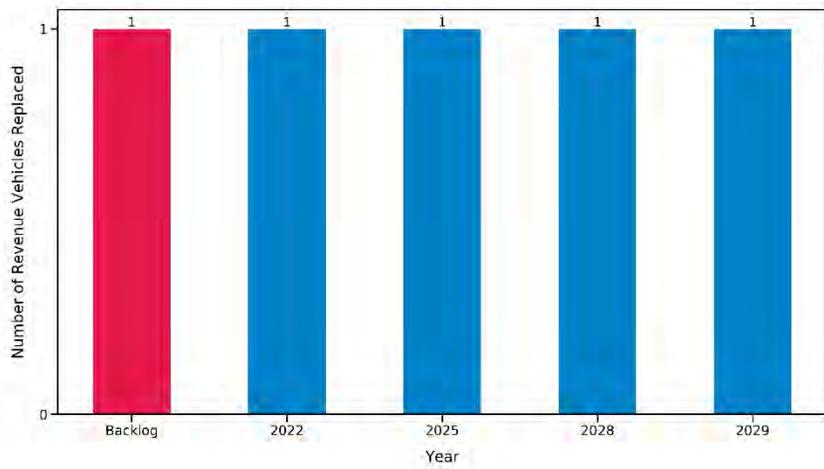
State of Goor Repair Information:



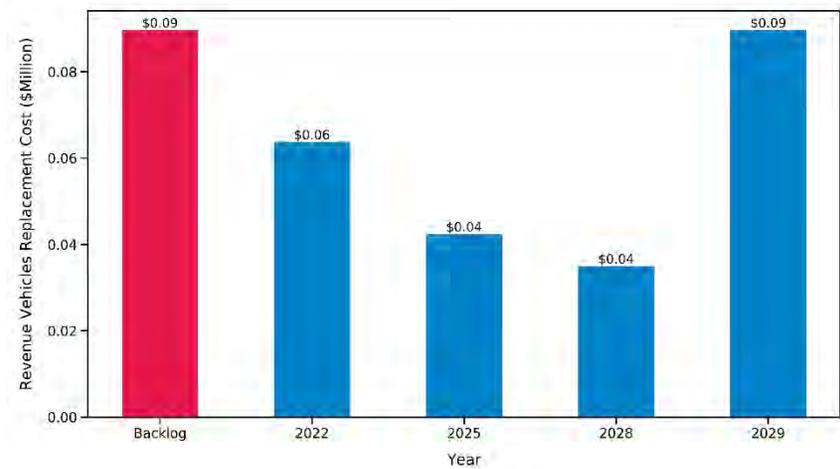
Number of Revenue Vehicles by Vehicle Type



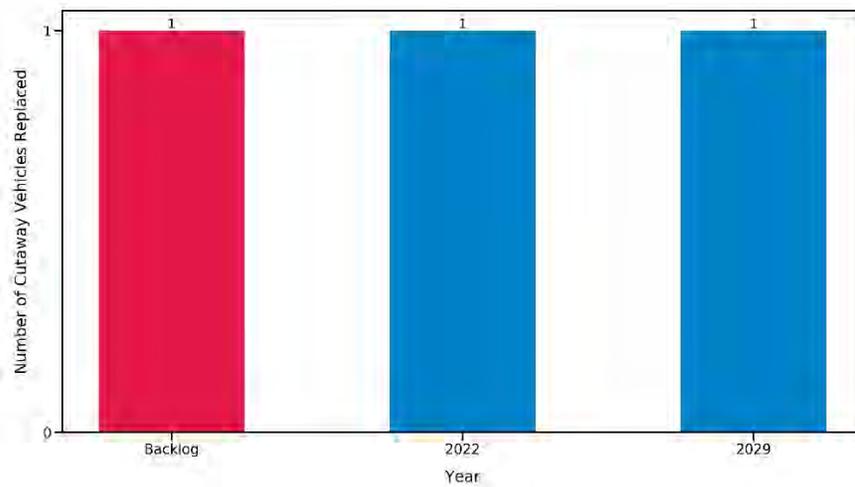
Percentage of Revenue Vehicles



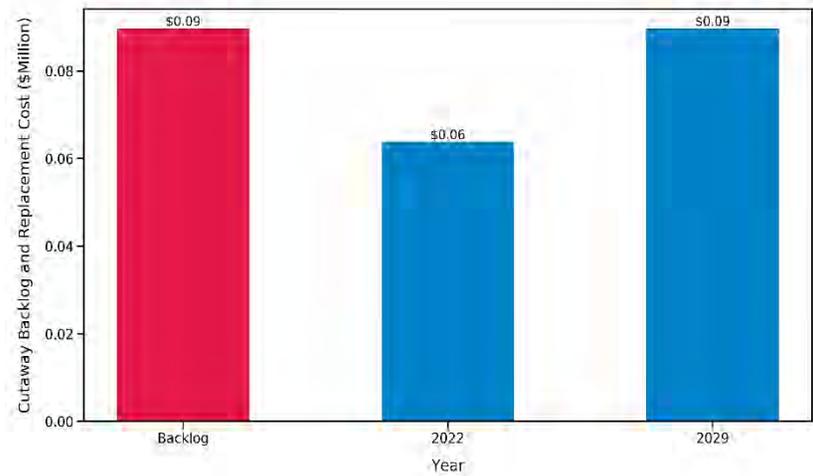
Backlog and Projected Replacement of Revenue Vehicles



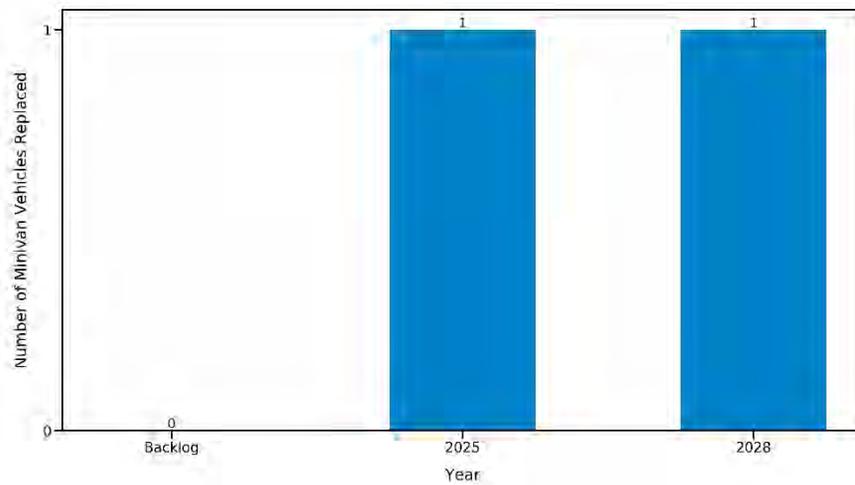
Backlog and Projected Replacement Costs for Revenue Vehicles



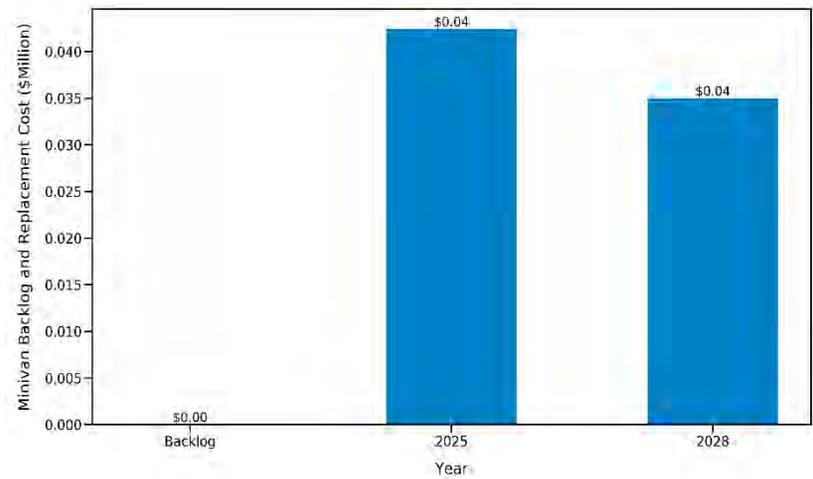
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

Agency Name: West River Transit

Counties: Burleigh, Dunn, Grant, McLean, Mercer, Morton, and Oliver.

Service provided: Demand-response for the general public, Flexible route, ADA complementary paratransit, and Veterans transportation.

2018 Service Data

Total trips: 33,019

Vehicles: 22

Vehicle miles: 165,927

Vehicle hours: 15,184

Operating expense: \$712,396

Facilities:

Maintenance: Five facilities, which perform very basic maintenance on vehicles.

Storage: Five vehicle storage.

Administrative: One facility which we rent from.

Needed upgrades: All buildings have been upgraded where needed, other than future need for additional vehicle parking, inside and outside.

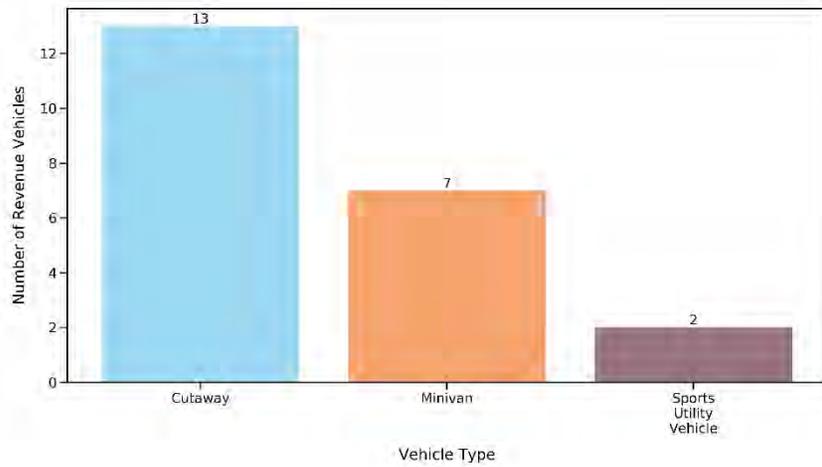
Challenges: Funding, vehicles and drivers that would be needed to expand.

Staffing needs: Future needs will be an additional dispatcher.

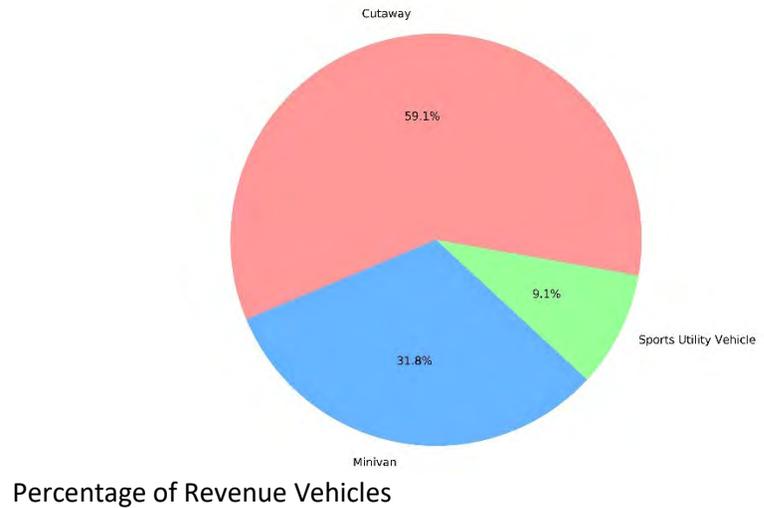
Meeting needs of residents: Currently a majority of residents are able to meet their needs of transportation.

Other comments: Challenges are finding drivers in all the areas, Vehicle maintenance needs in some of the areas, need more funding for advertising in all areas, as in tv, newspaper, radio ads, these are very expensive and reaching all areas becomes very costly.

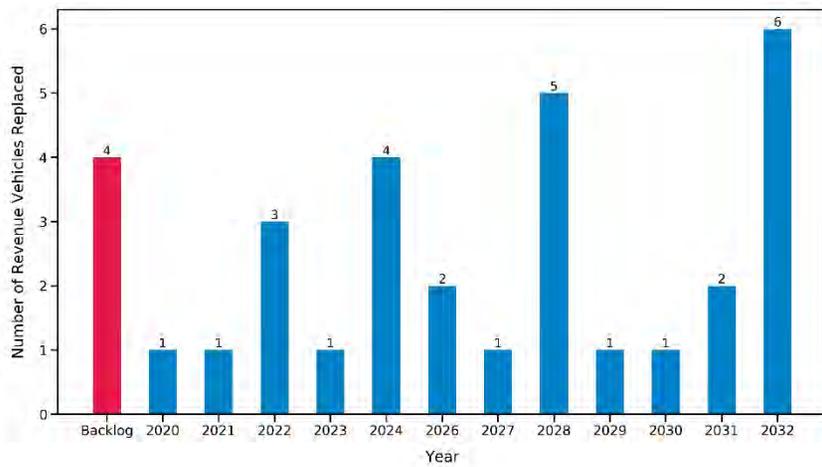
State of Good Repair Information:



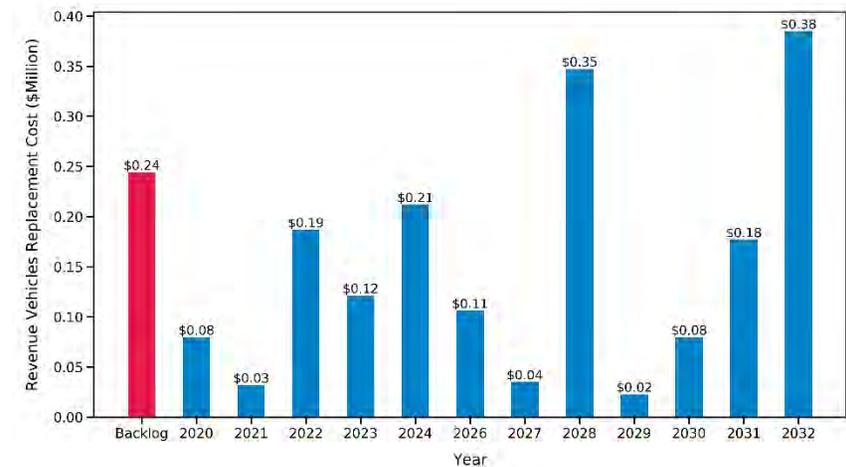
Number of Revenue Vehicles by Vehicle Type



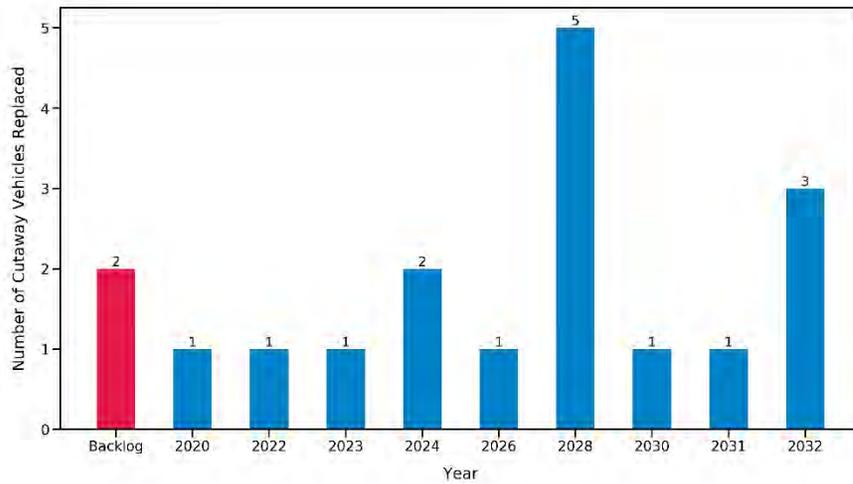
Percentage of Revenue Vehicles



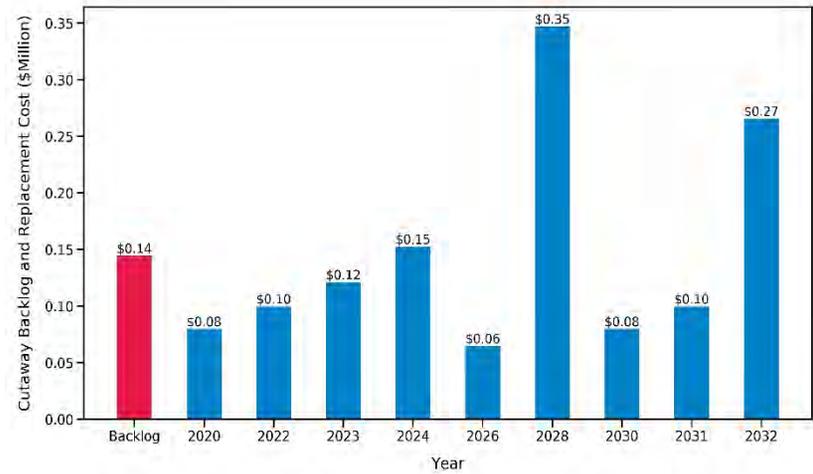
Backlog and Projected Replacement of Revenue Vehicles



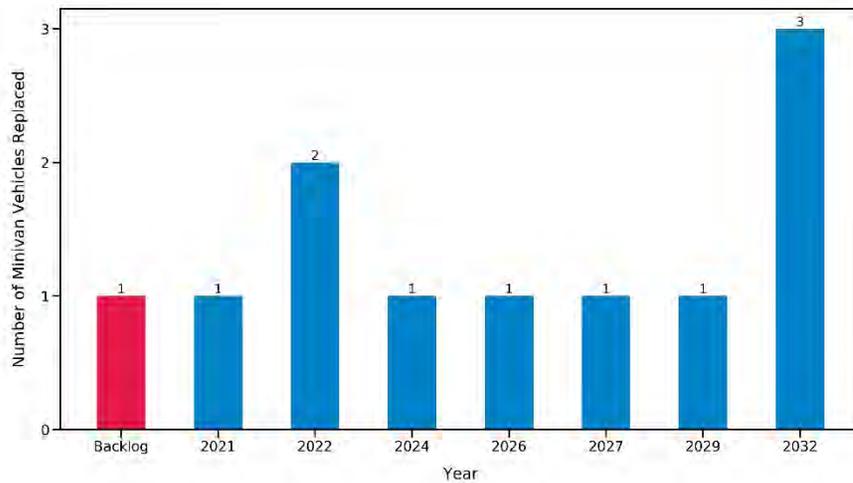
Backlog and Projected Replacement Costs for Revenue Vehicles



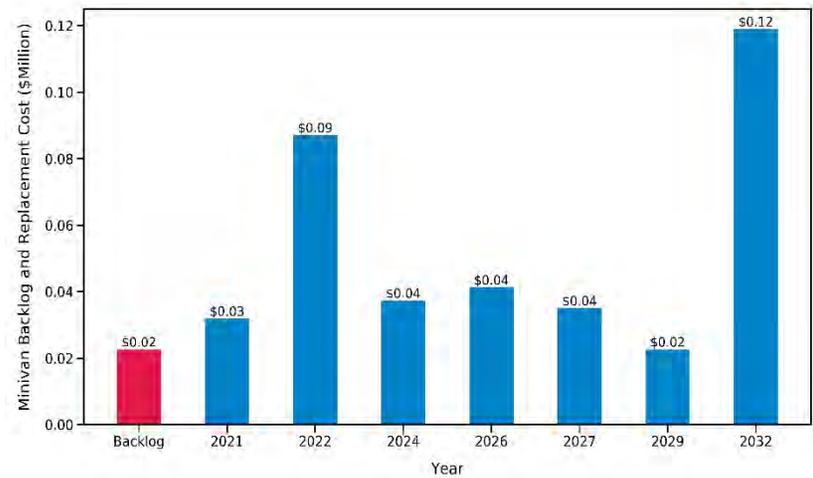
Backlog and Projected Replacement of Cutaways



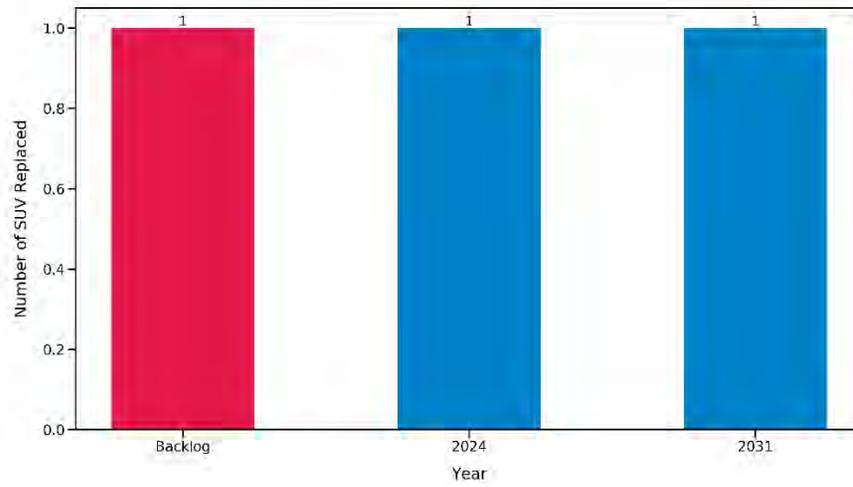
Backlog and Projected Replacement Costs for Cutaways



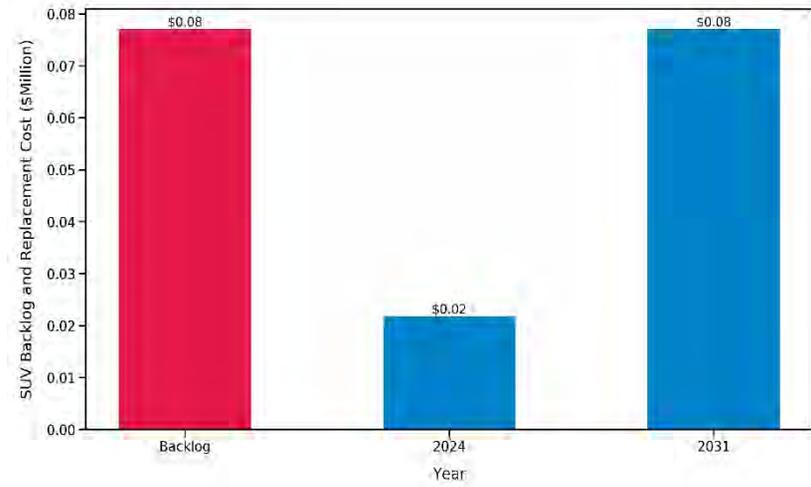
Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans



Backlog and Projected Replacement of Sports Utility Vehicles



Backlog and Projected Replacement Costs for Sports Utility Vehicles

Agency Name: Wildrose Public Transportation

Counties: Burke, Divide, and Williams.

Service provided: Demand-response for the general public, Human service transportation (for clients of human service programs), and Veterans transportation.

2018 Service Data

Total trips: 2,355

Vehicles: 2

Vehicle miles: 32,801

Vehicle hours: 1,583

Operating expense: \$71,796

Facilities:

Maintenance: We have no maintenance facility. Our maintenance for our buses is entirely outsourced.

Storage: We have one primary storage garage, capable of housing one bus. It is owned by Wildrose Senior Citizens. We also have availability for indoor parking for our other two buses.

Administrative: Business is currently conducted at an in-home office.

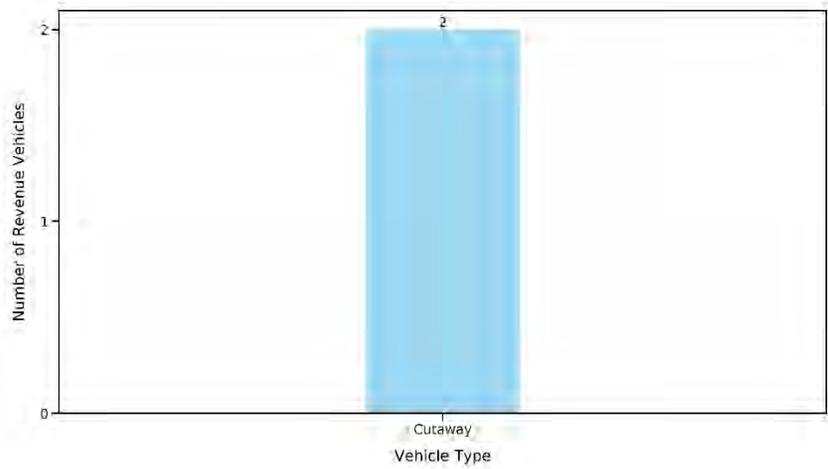
Needed upgrades: We just acquired inside parking for the bus handling the Crosby routes. Ideally, a garage and attached small office in Crosby to house this bus and manage the business would be beneficial.

Challenges: In the last two years, we have expanded Crosby routes from a monthly service to a weekly service. We continue to assess current ridership and requests for additional days as necessary.

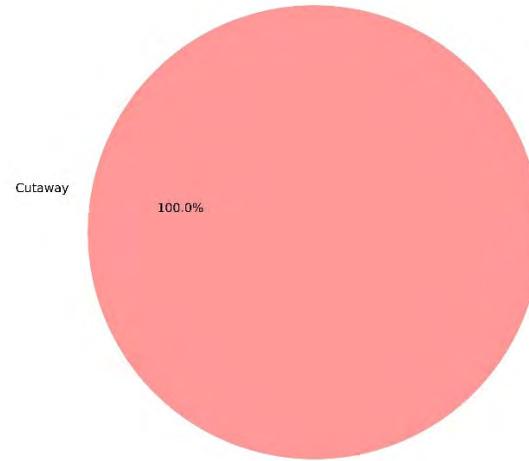
Staffing needs: We currently have two 3/4-time drivers, along with a part-time manager. I anticipate the need for a substitute driver to cover any vacation and sick days our drivers may need in the future.

Meeting needs of residents: I think we always have room for improvement, but I believe we do our best to provide the transportation needed by our communities.

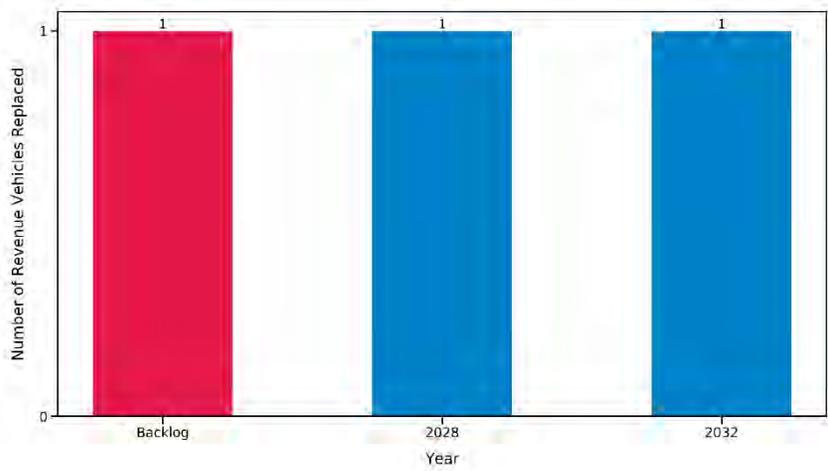
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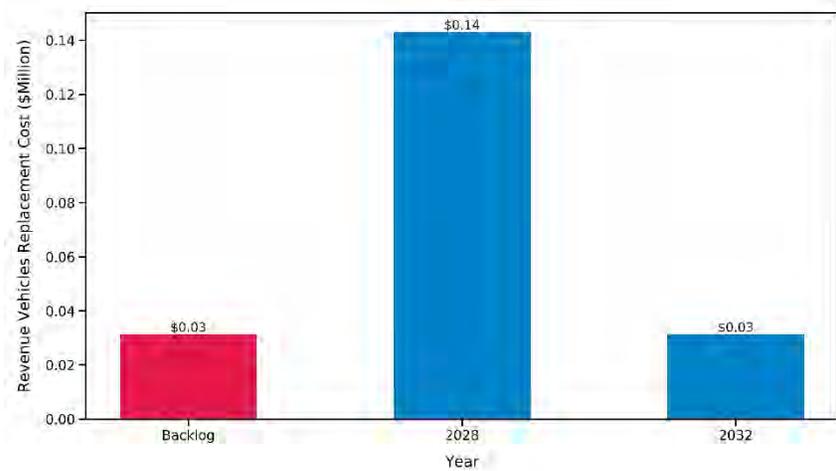
Number of Revenue Vehicles by Vehicle Type



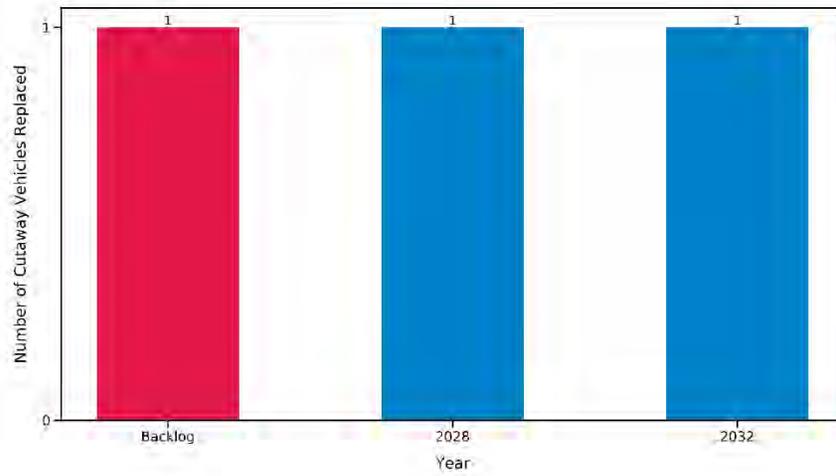
Percentage of Revenue Vehicles



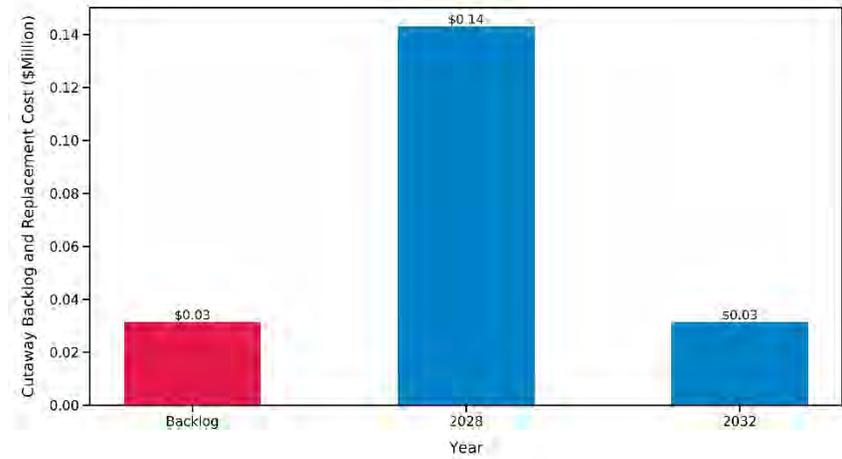
Backlog and Projected Replacement of Revenue Vehicles



Backlog and Projected Replacement Costs for Revenue Vehicles



Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Cost for Cutaways

Agency Name: Williston Council for the Aging

Counties: McKenzie, and Williams.

Service provided: Demand-response for the general public, ADA complementary paratransit, Human service transportation (for clients of human service programs), and Veterans transportation.

2018 Service Data

Total trips: 21,103

Vehicles: 14

Vehicle miles: 101,675

Vehicle hours: 6,271

Operating expense: \$424,002

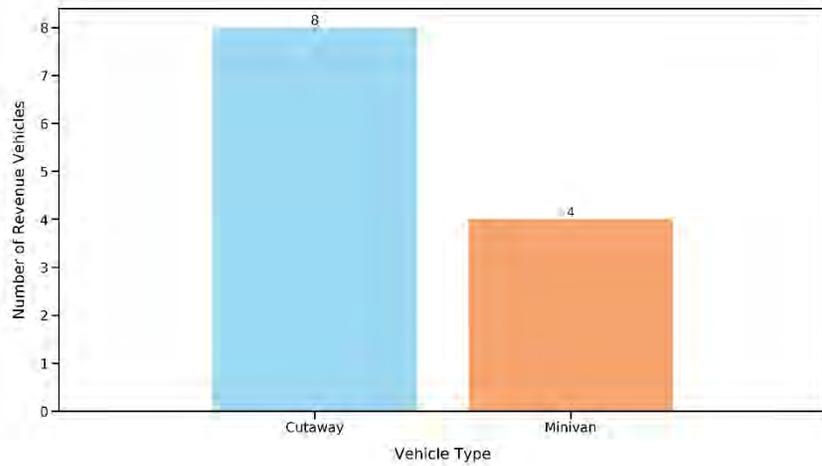
Facilities:

Maintenance: Williston Transit Facility is 4,200 square feet, includes one 19' x 30' wash bay and one 19' x 30' detailing and general maintenance bays that are also used for vehicle storage. The Watford City Transit Facility 3,120 square feet. There is one bay used for general maintenance and also for vehicle storage.

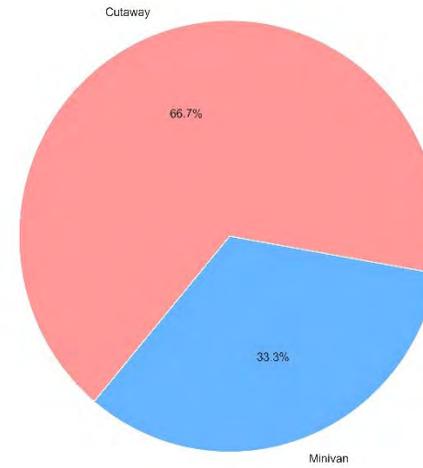
Storage: Williston Transit Facility has five 19' x 30' bays that are used for vehicle storage and 55 feet of exterior parking in paved lot. The Watford City Transit Facility has four 19' x 30' bays that are used for vehicle storage and five exterior parking spots in paved lot.

Administrative: Williston Transit Facility has 40' x 30' feet office area that is divided into one office, one dispatch center, a driver's lounge, two restrooms and a storage room. The Watford City Transit Facility has one central office area that is 20' x 30'.

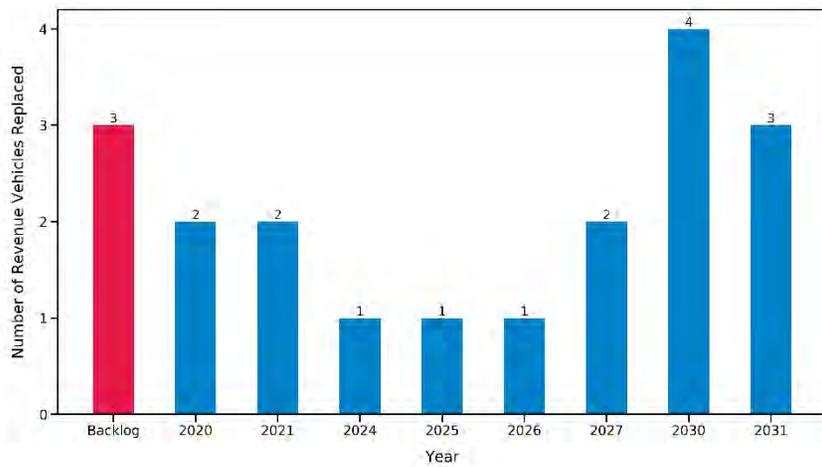
State of Good Repair Information:



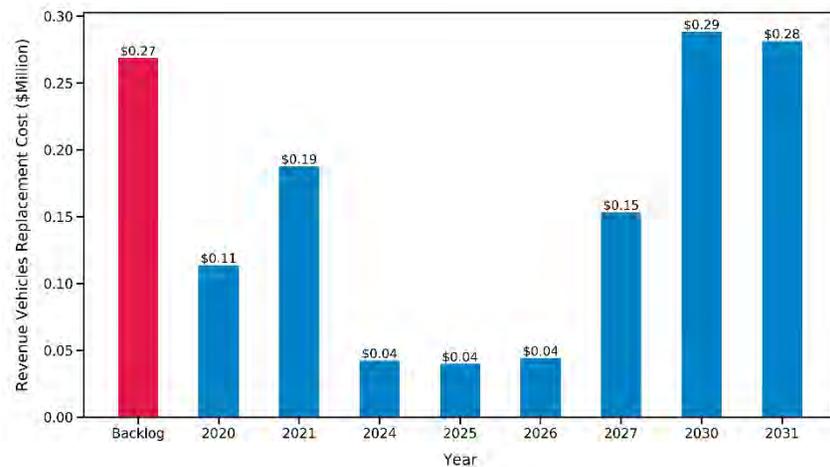
Number of Revenue Vehicles by Vehicle Type



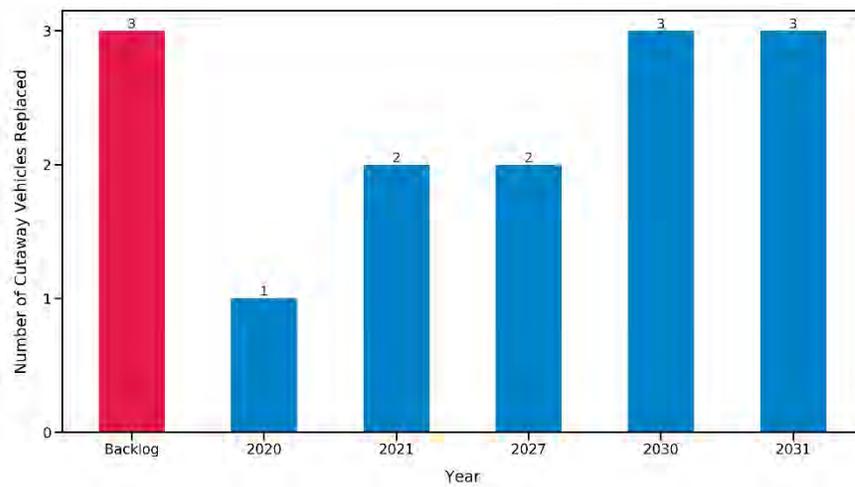
Percentage of Revenue Vehicles



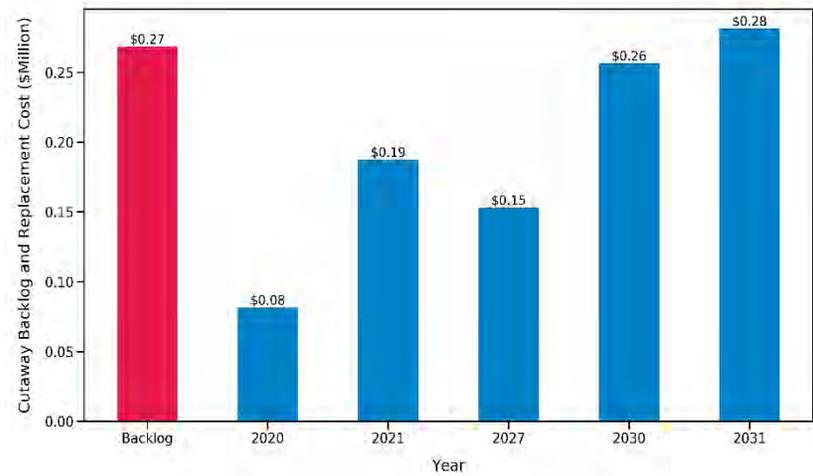
Backlog and Projected Replacement of Revenue Vehicles



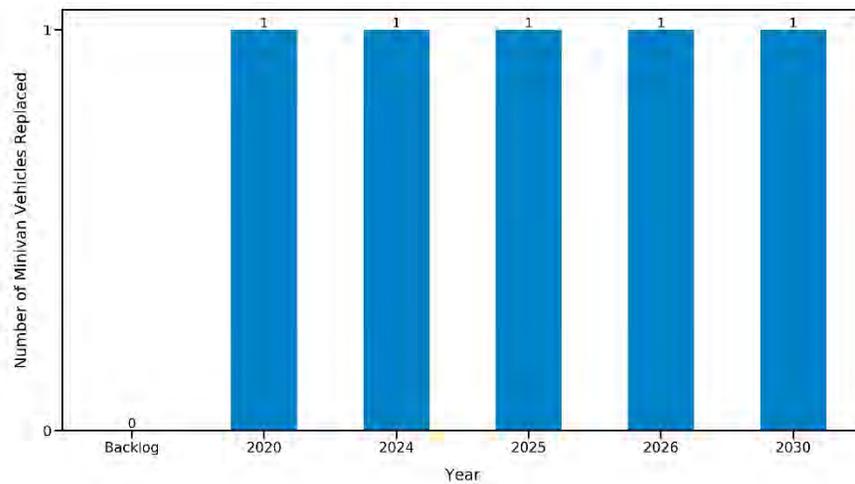
Backlog and Projected Replacement Costs for Revenue Vehicles



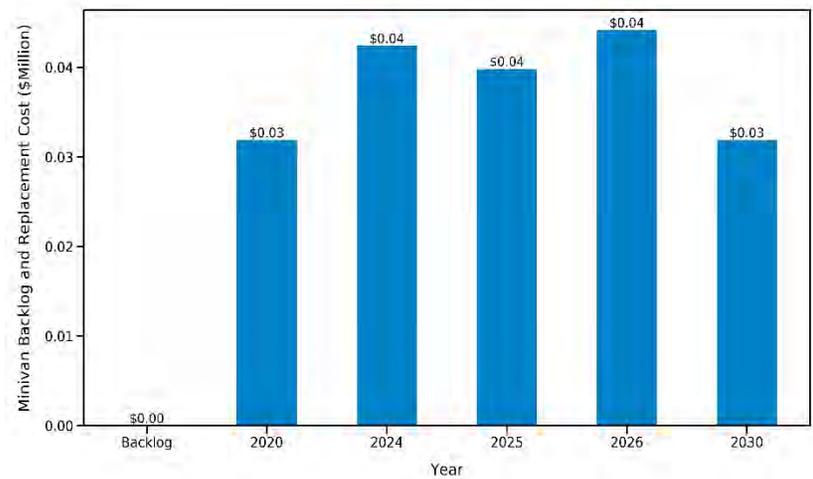
Backlog and Projected Replacement of Cutaways



Backlog and Projected Replacement Costs for Cutaways



Backlog and Projected Replacement of Minivans



Backlog and Projected Replacement Costs for Minivans

