Jaunt Rural Transit Needs Assessment

Stakeholder Meeting #3

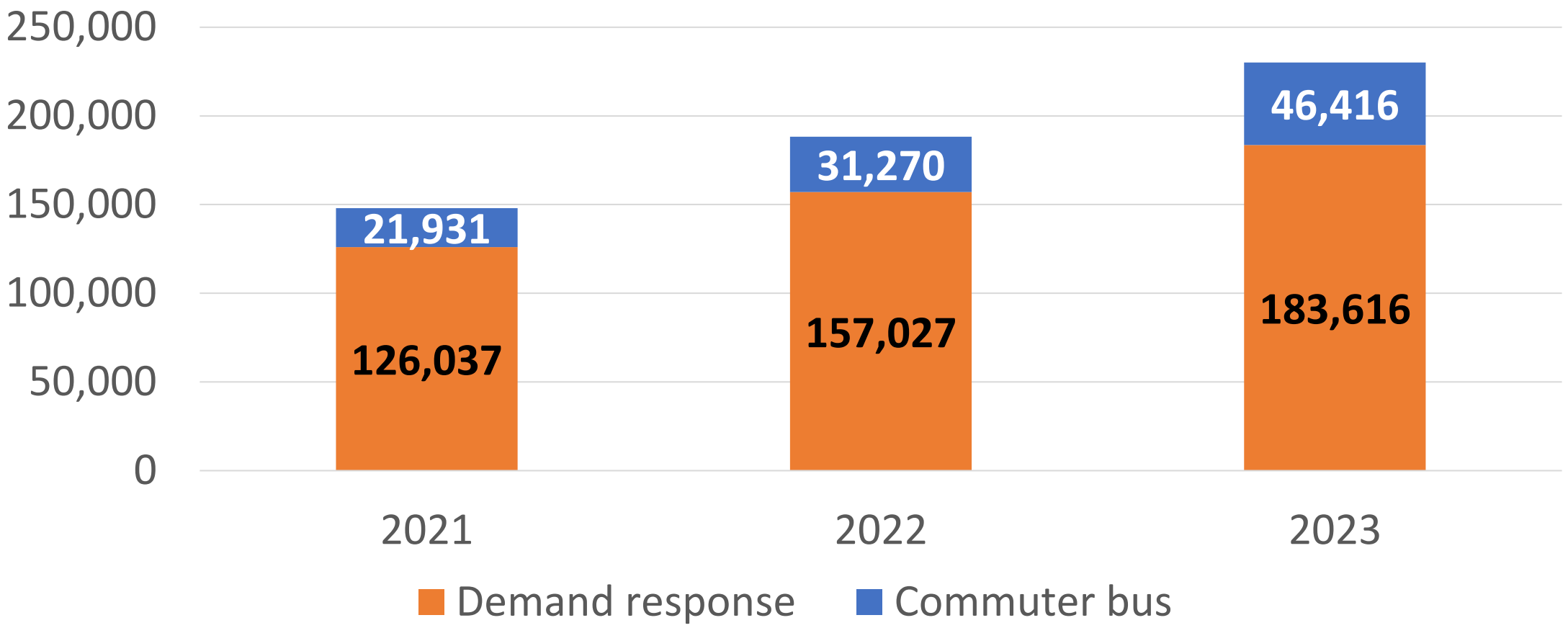
March 26, 2024

NDSU UPPER GREAT PLAINS TRANSPORTATION INSTITUTE
SMALL URBAN AND RURAL CENTER ON MOBILITY

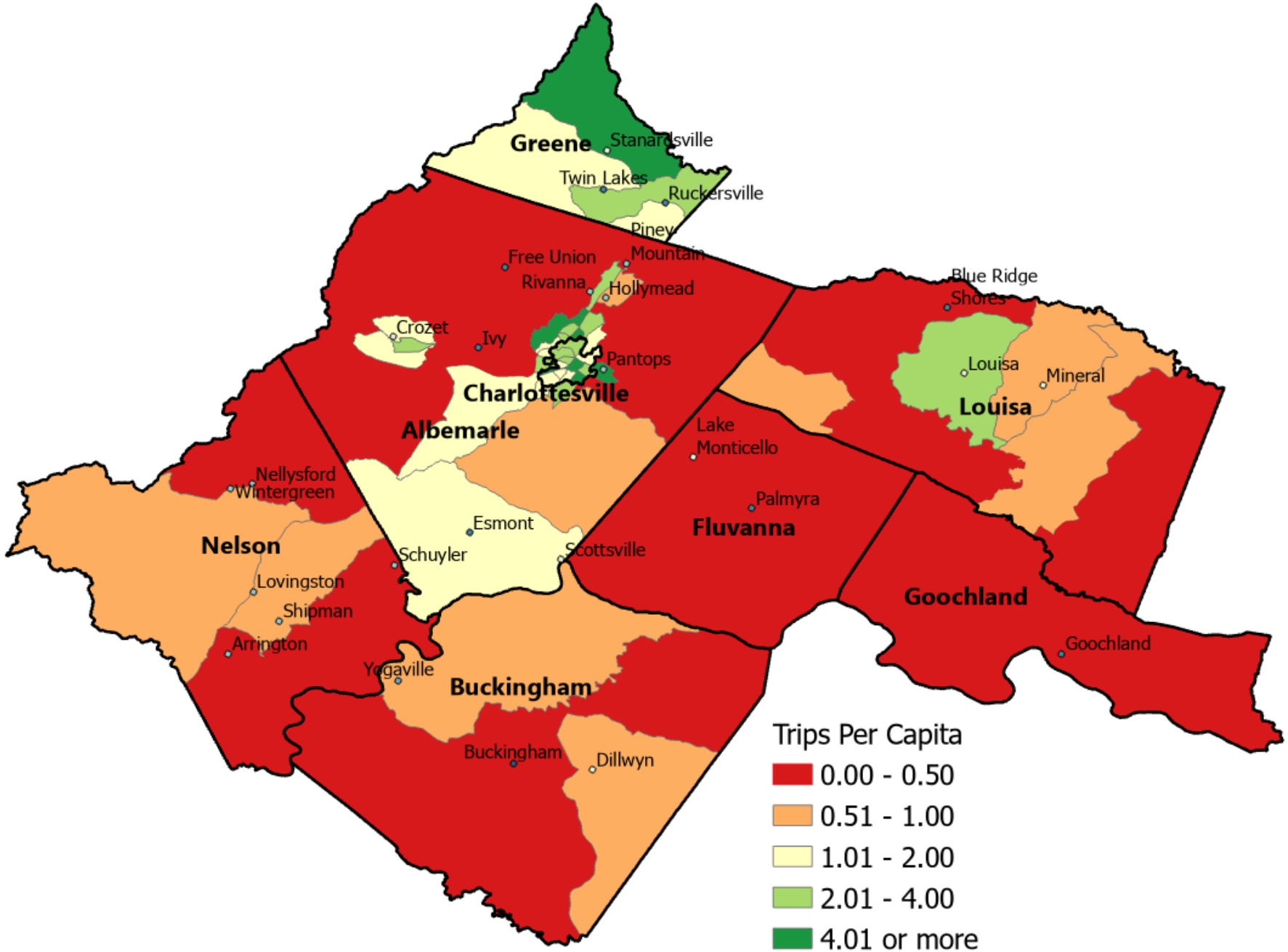
Overview

- Review of ridership data
- Identify service gaps
  - Peer analysis
  - Establish targets
  - Compare service levels to those targets
- Stakeholder survey
- Next steps

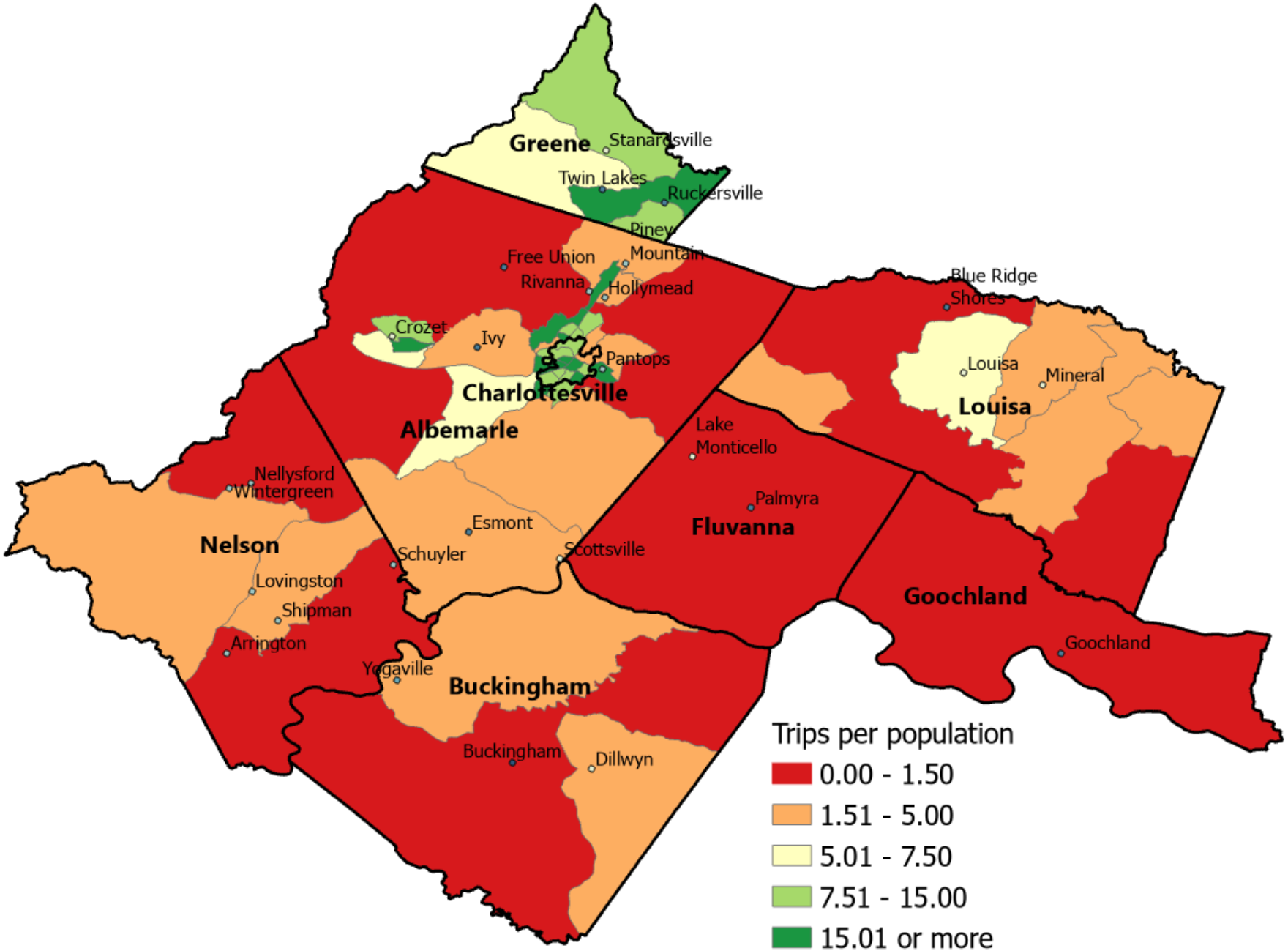
Total Ridership, FY 2021-2023



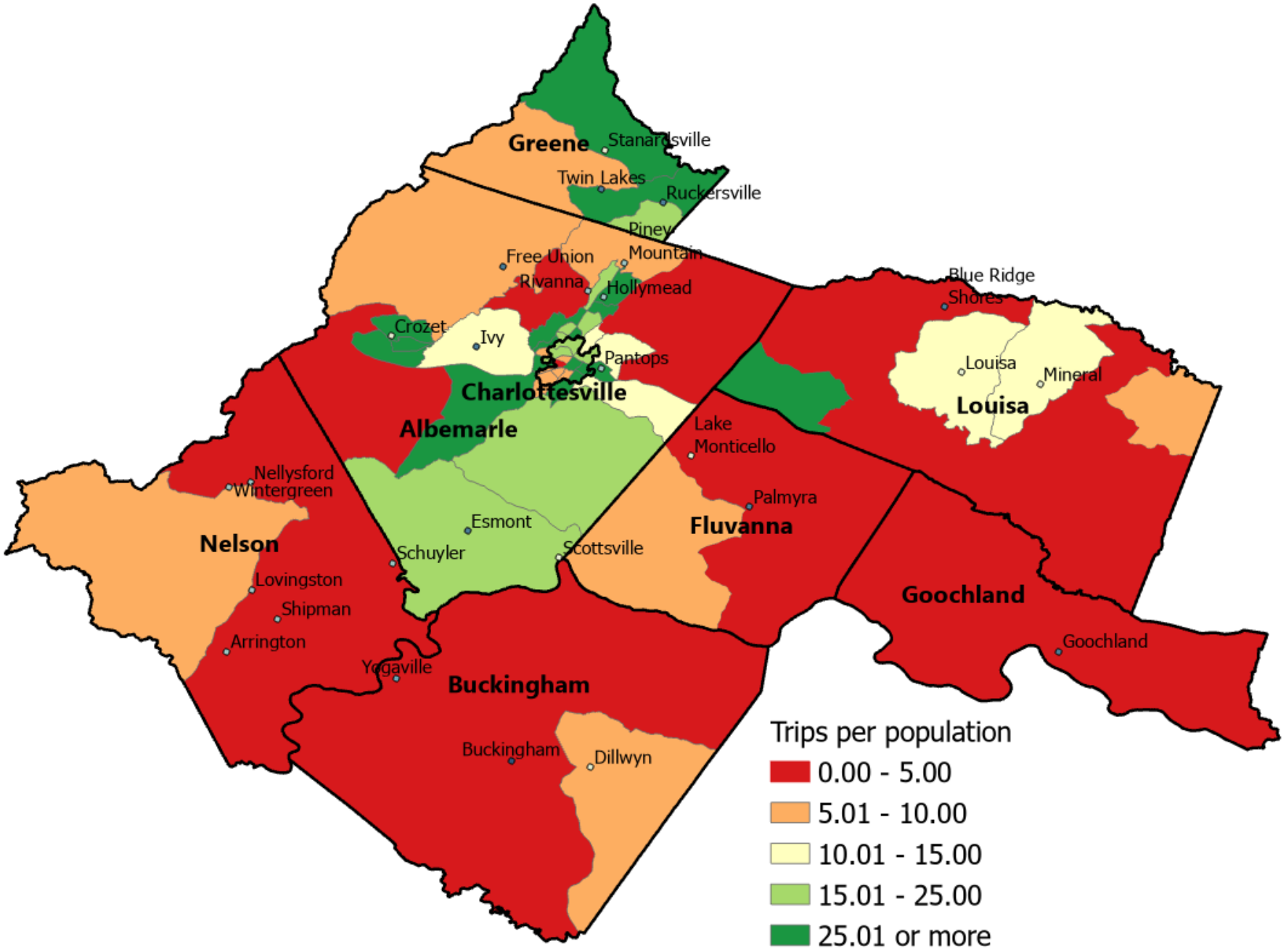
Total trips per capita, FY 2023



Total trips per population aged 65+ or 18-64 with a disability



Total trips per population in poverty



Identifying Service Gap

- Peer analysis
  - Comparisons from previous research of rural transit in Upper Midwest/Great Plains
  - Comparisons to rural systems in North Carolina
- Mobility gap
- Ridership models
- Establish ridership targets
- Compare current ridership to targets

Rural Comparisons: Statewide Averages 2017-2021

	Trips per capita	Trips per population aged 65 or older or 18-64 with a disability	Trips per population living in poverty
North Dakota	1.2	6.3	12.4
South Dakota	1.9	9.4	14.2
Montana	1.6	6.9	12.3
Wyoming*	0.7	3.8	6.8
Nebraska	0.6	3.1	6.9
Minnesota	1.6	7.5	17.8

*Excluding the University of Wyoming and South Teton Area Rapid Transit

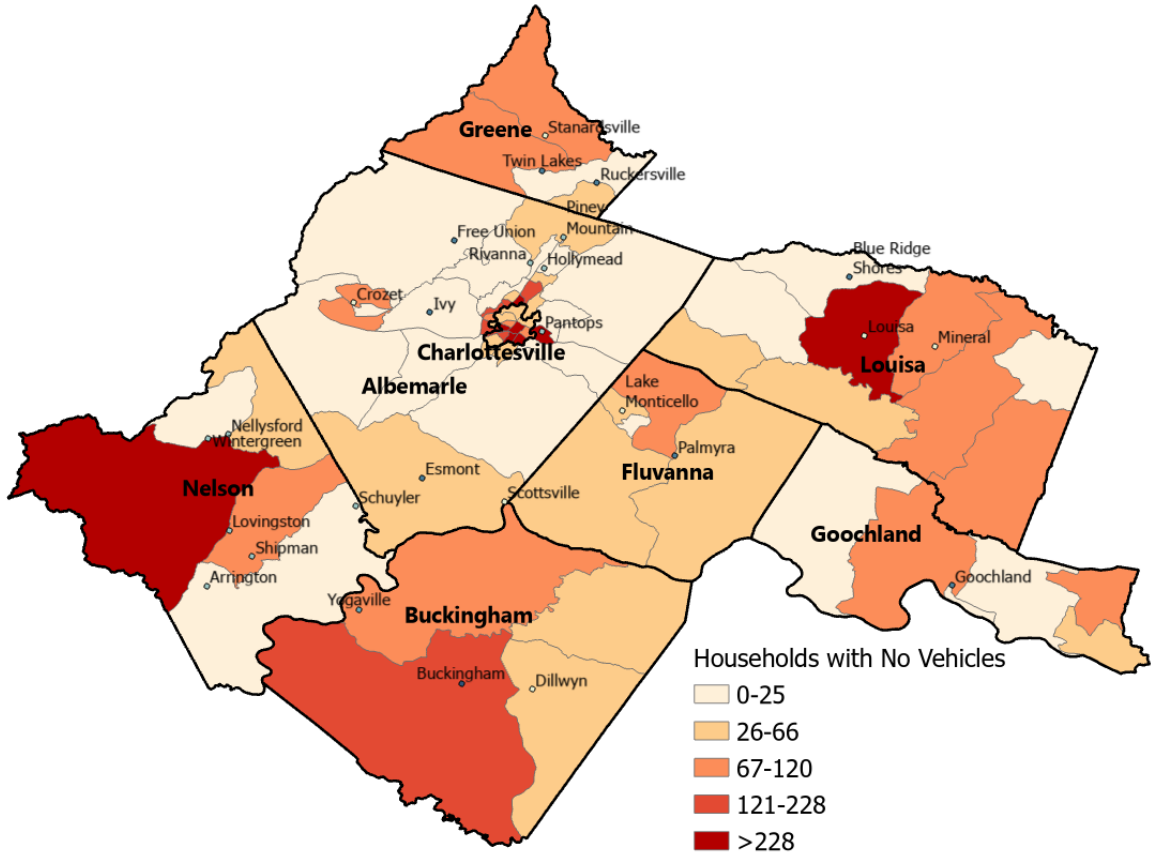
Rural Per Capita Ridership in North Carolina, 2017-2022 Average

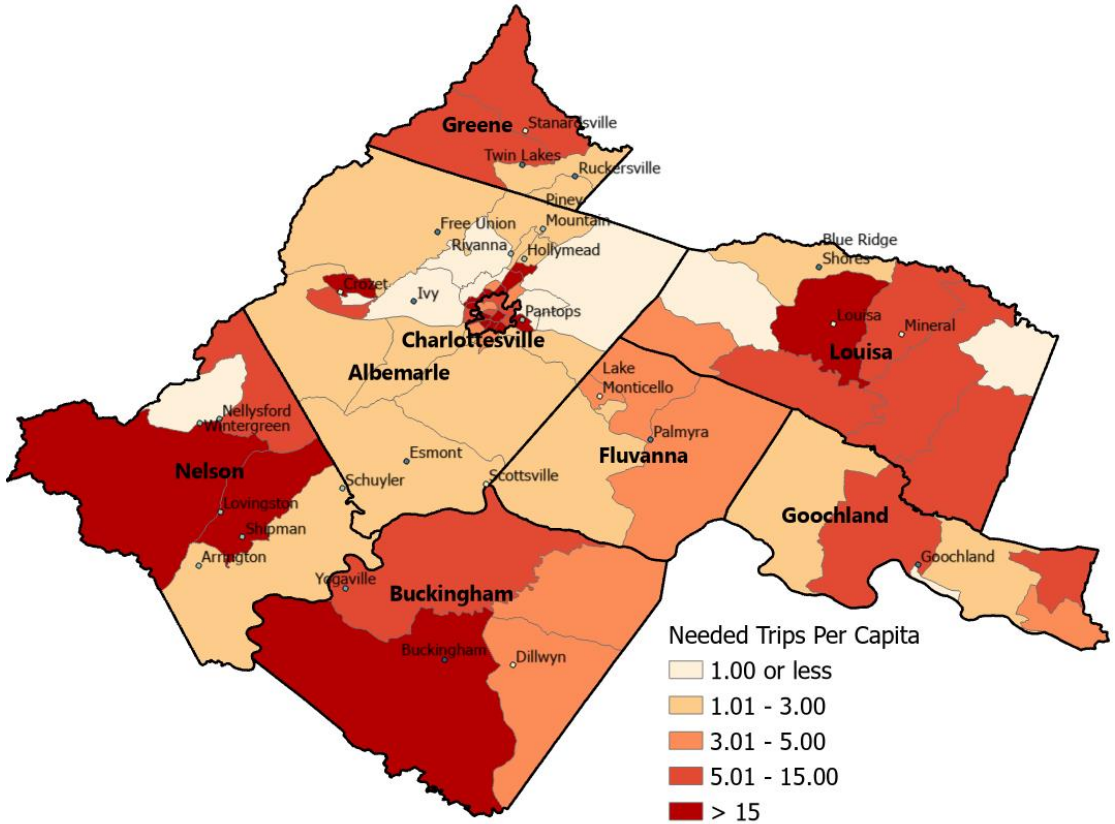
	Trips per capita	Trips per population aged 65 or older or 18-64 with a disability	Trips per population living in poverty
10th percentile	0.6	2.0	4.1
25th percentile	0.9	3.2	5.5
Median	1.3	4.3	8.0
75th percentile	1.8	5.2	10.3
90th percentile	2.5	8.0	19.5

Mobility Gap

- Number of trips not taken because of a lack of access to a vehicle.
- Estimated as the difference in trip rates between households with no vehicles and those with one vehicle.
- The needed number of trips could be estimated by multiplying this mobility gap times the number of households with no vehicles.
- This method overestimates the demand for transit, but we can assume transit could cover a certain percentage of this gap.

Households with No Vehicles and Trips Needed Per Capita Based on the Mobility Gap Estimation

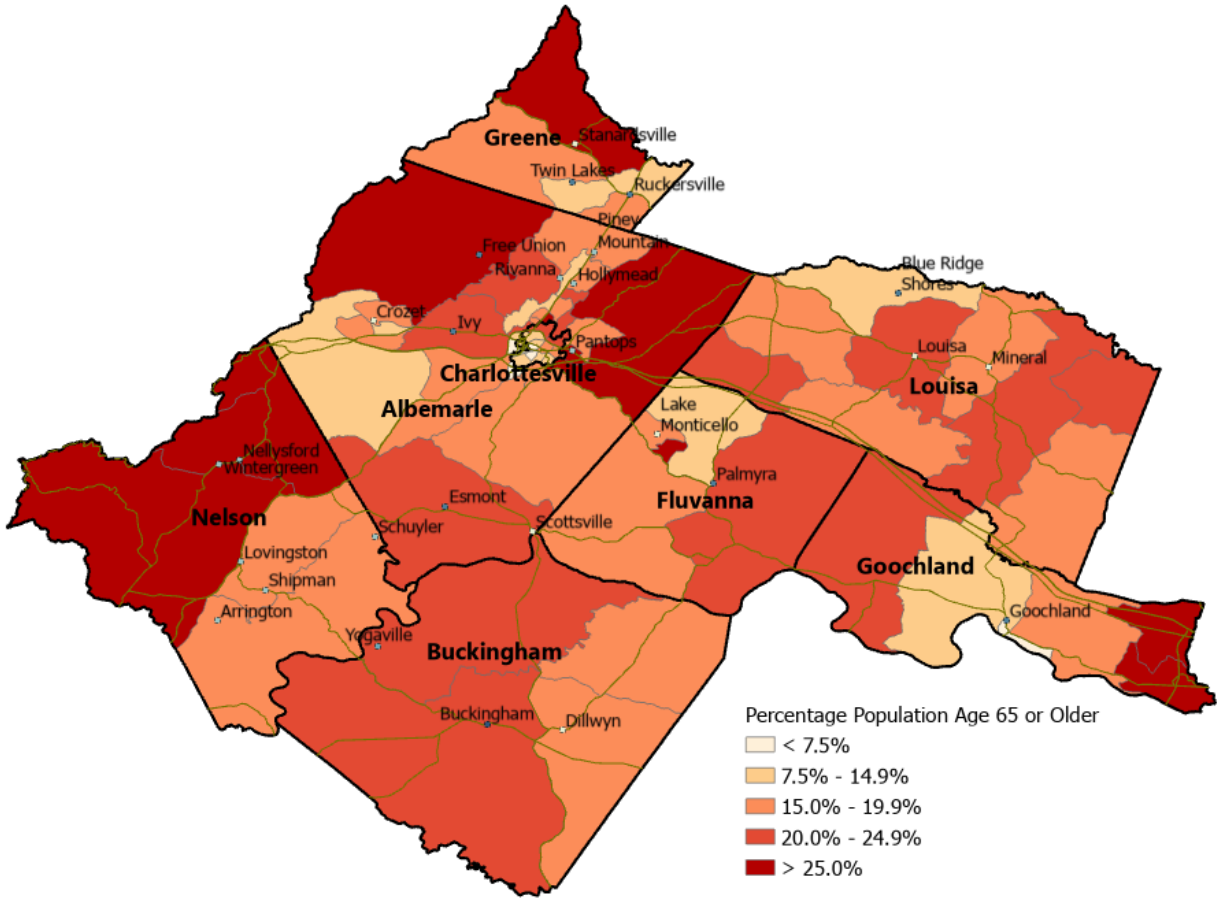


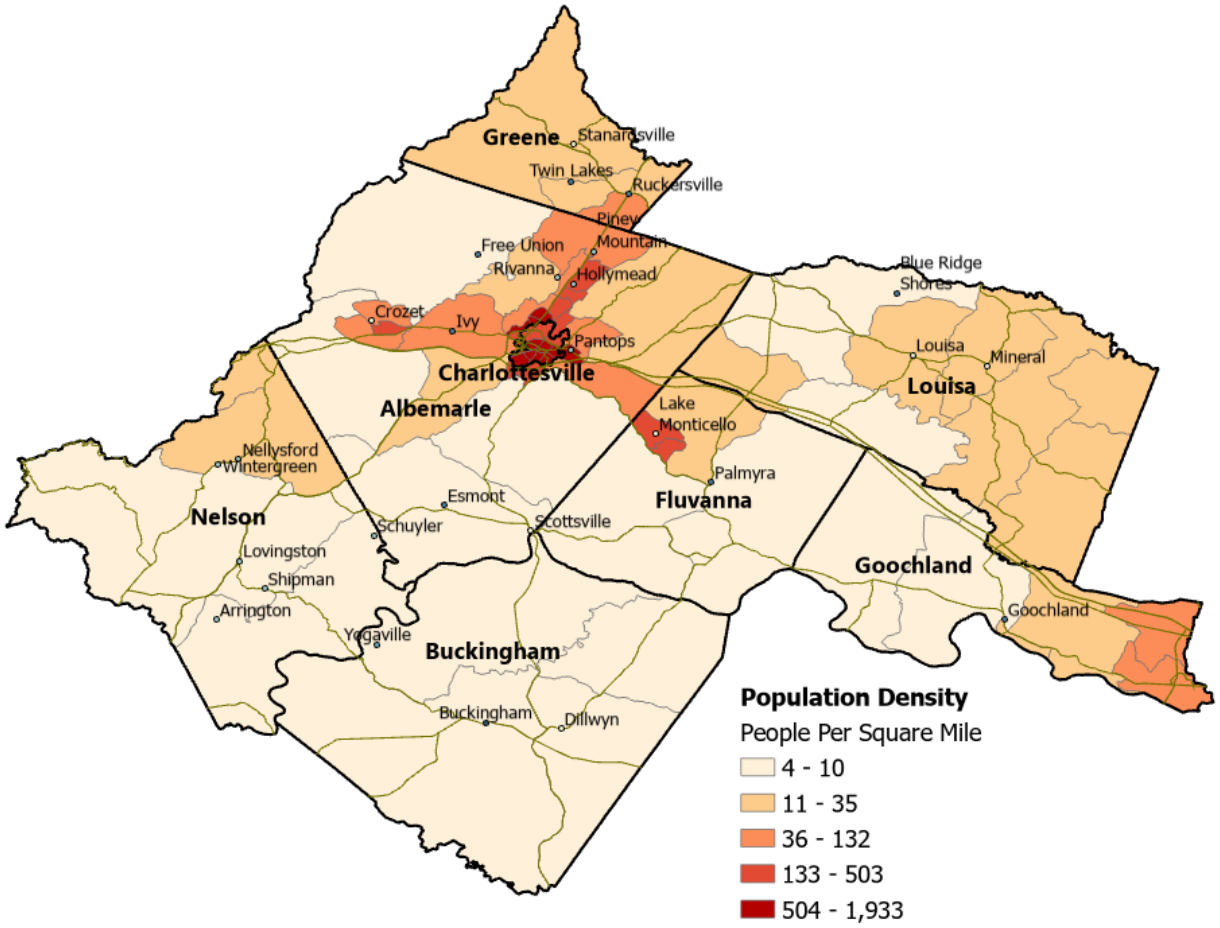


Ridership Models

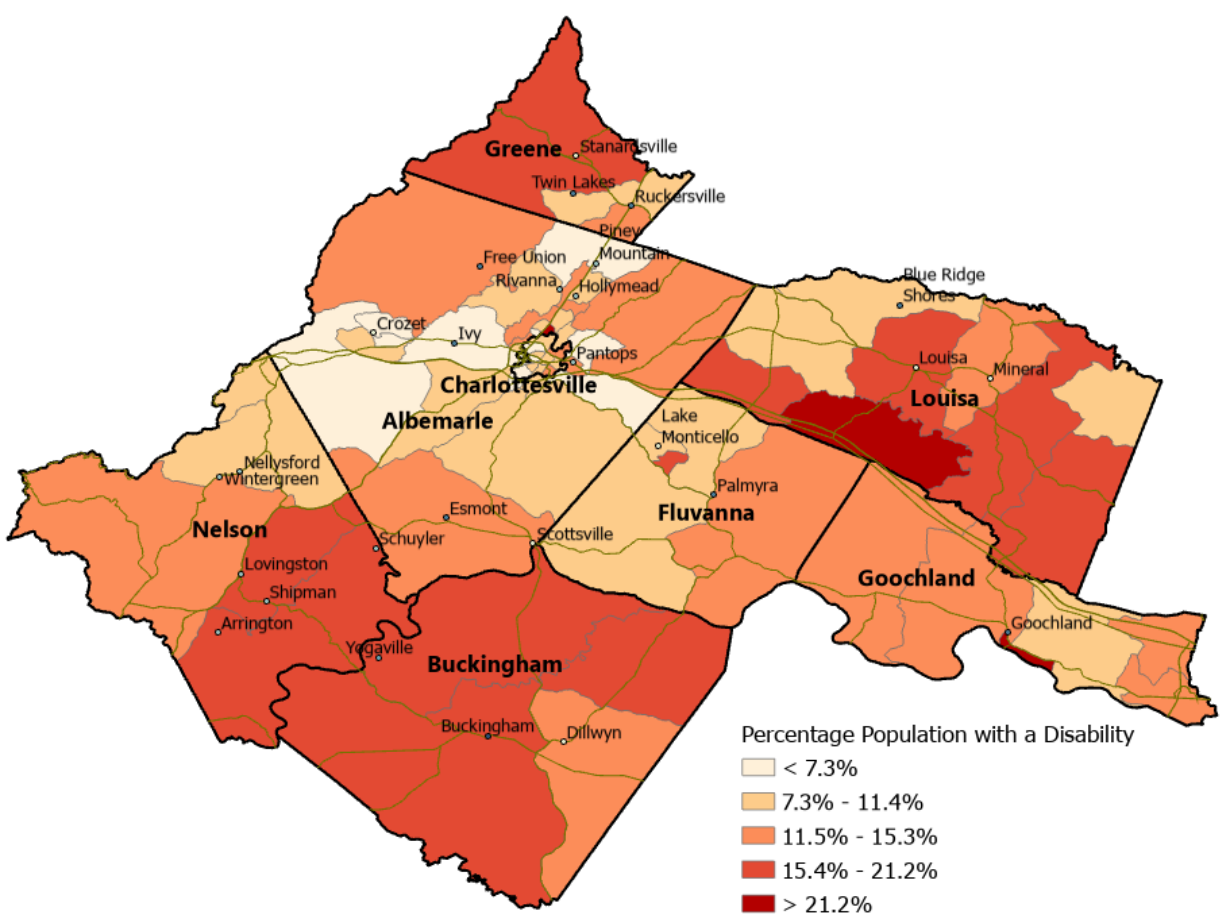
- TCRP Report 161 – Methods for Forecasting Demand and Quantifying Need for Rural Passenger Transportation (Vanasse Hangen Brustlin et al., 2013)
  - Non-program Demand (trips per year) = (2.20 × Population Age 60+) + (5.21 × Mobility Limited Population age 18-64) + (1.52 × Residents of Household Having No Vehicle)
- Estimating Ridership of Rural Demand–Response Transit Services for the General Public. *Transportation Research Record*, 2647(1). (Mattson 2017)
  - First model based on population and demographics
  - Second model based on population, service span, advance reservation requirements, fare level

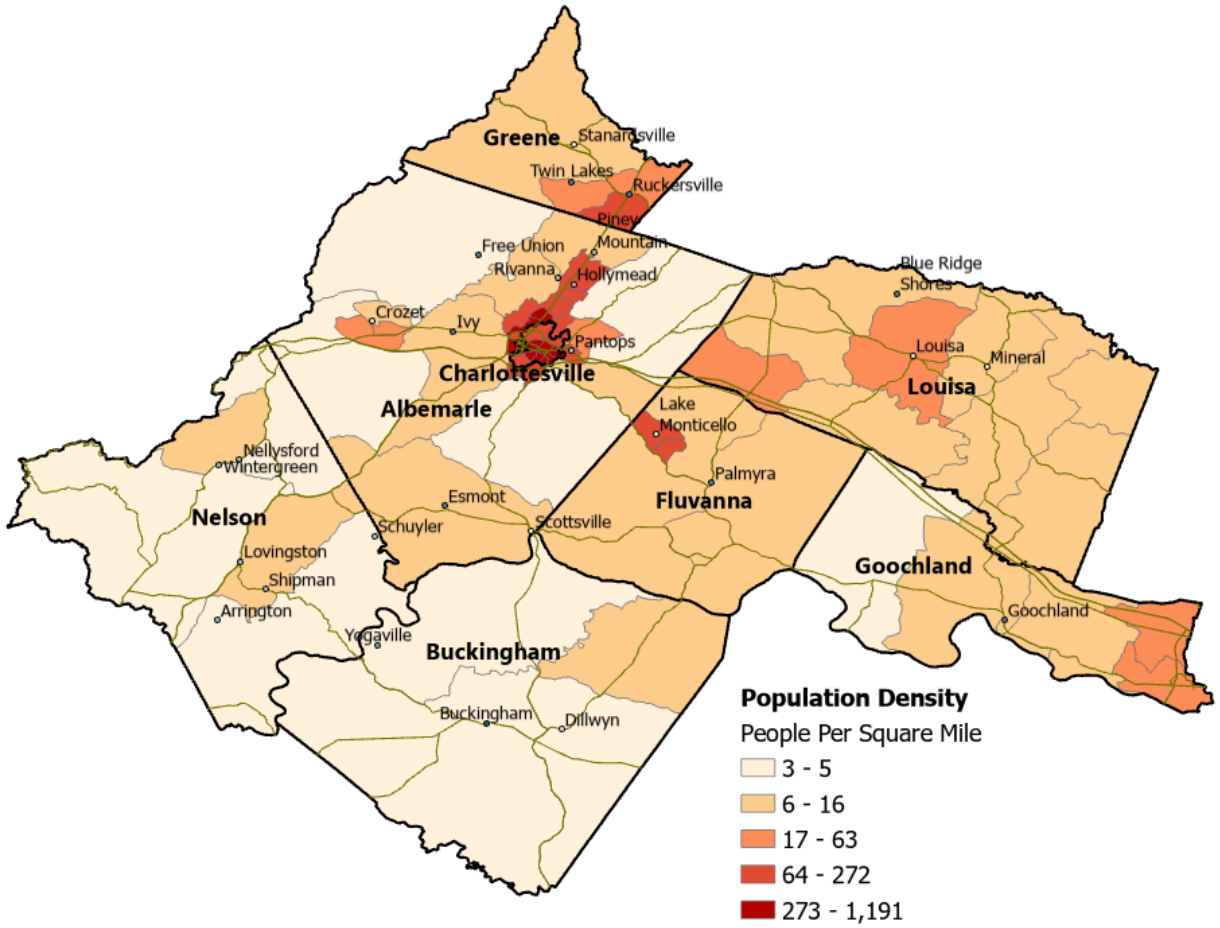
Older Adult Population



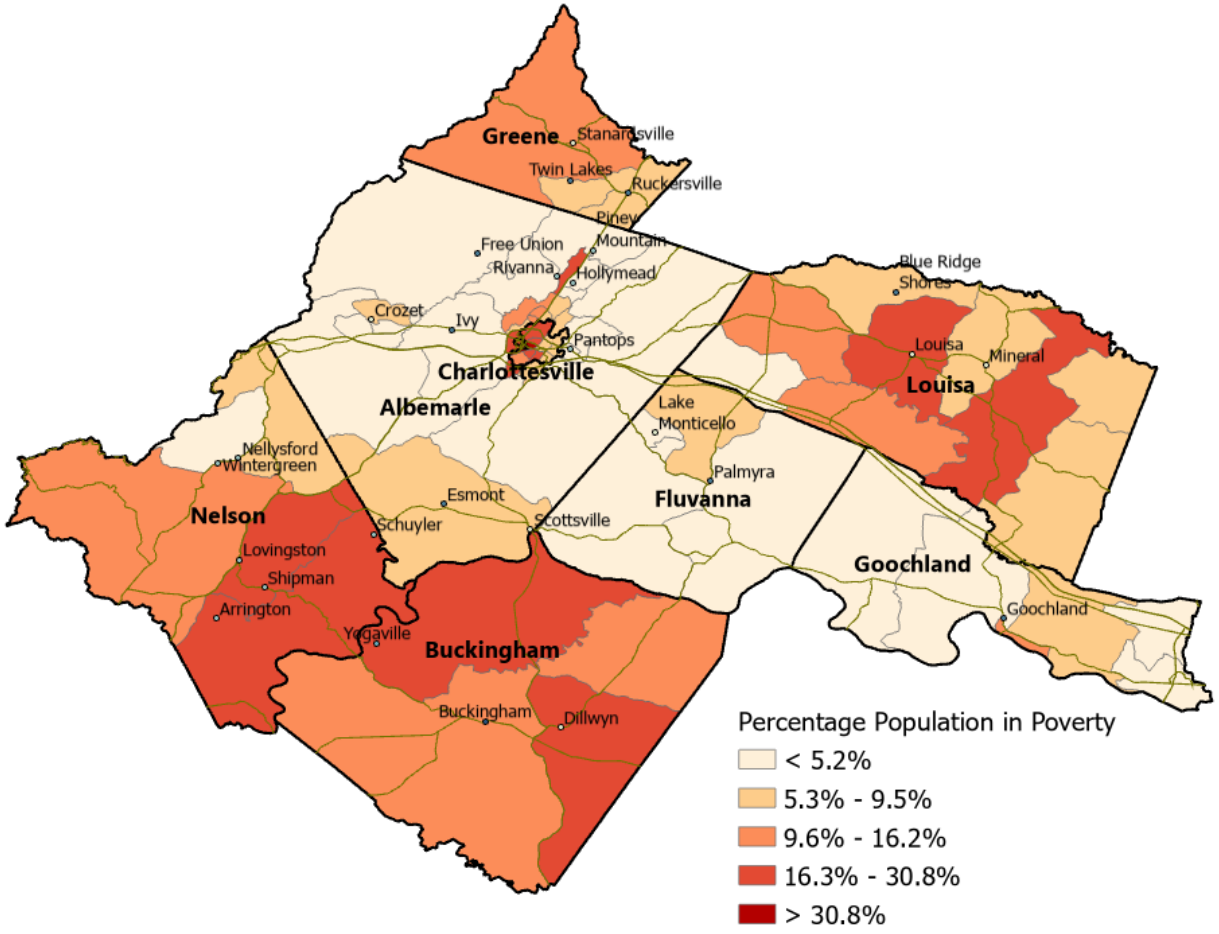


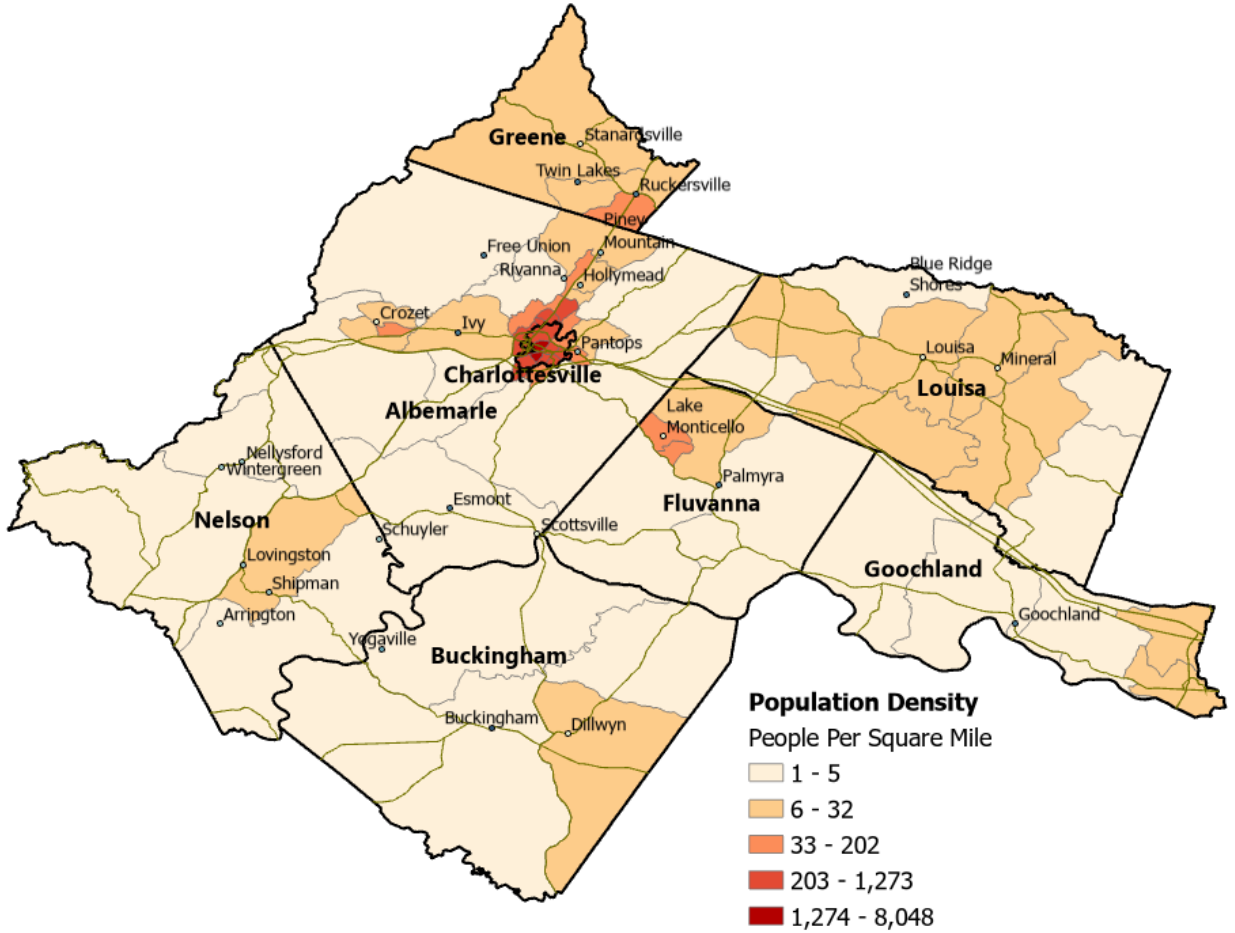
Population with a Disability





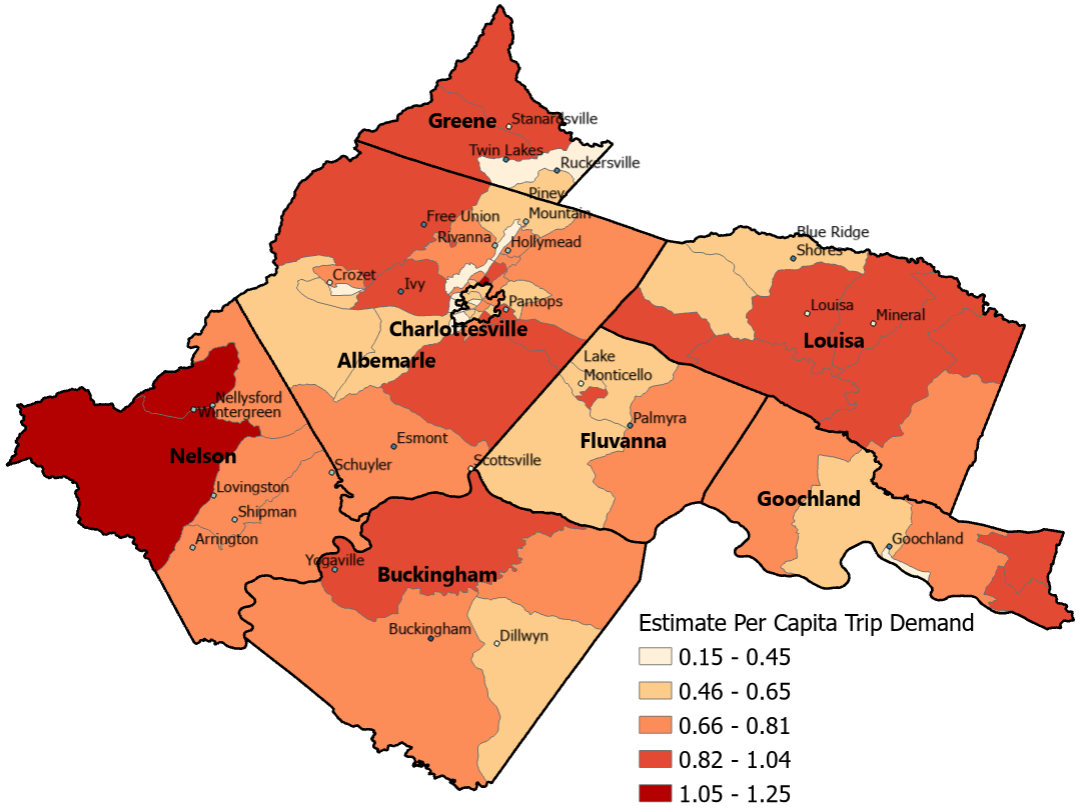
Low-Income Population



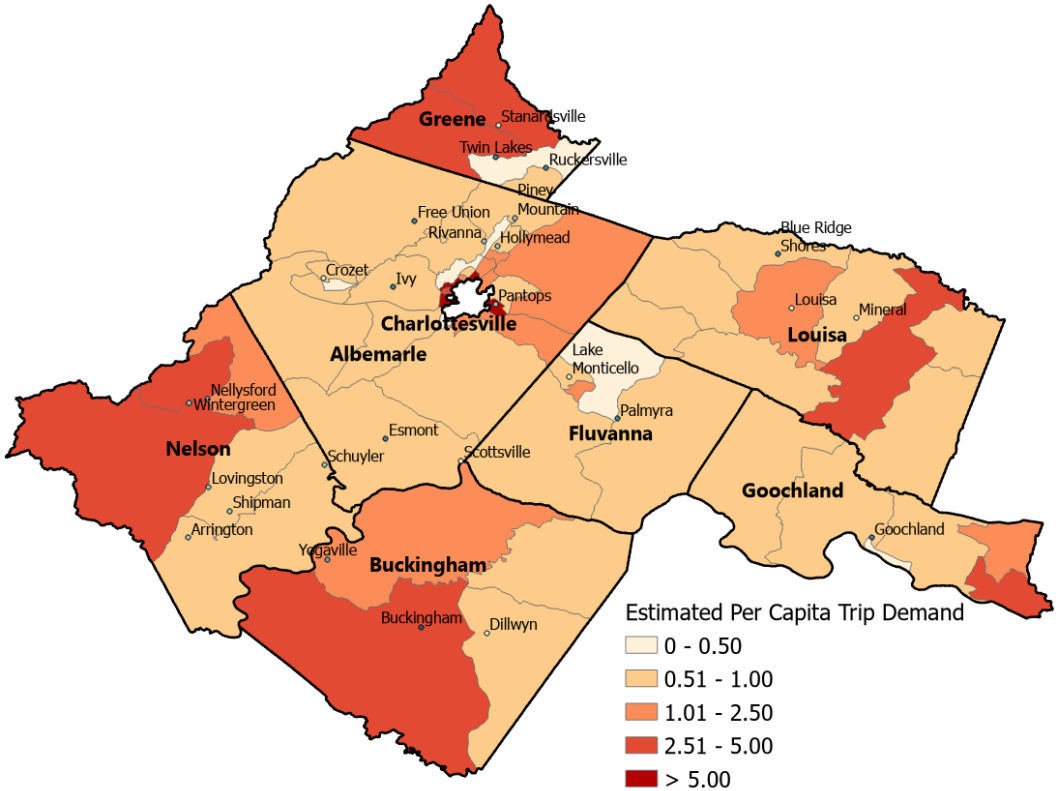


Estimated Per Capita Trip Demand Based on Demand Models

TCRP Report 161 Model

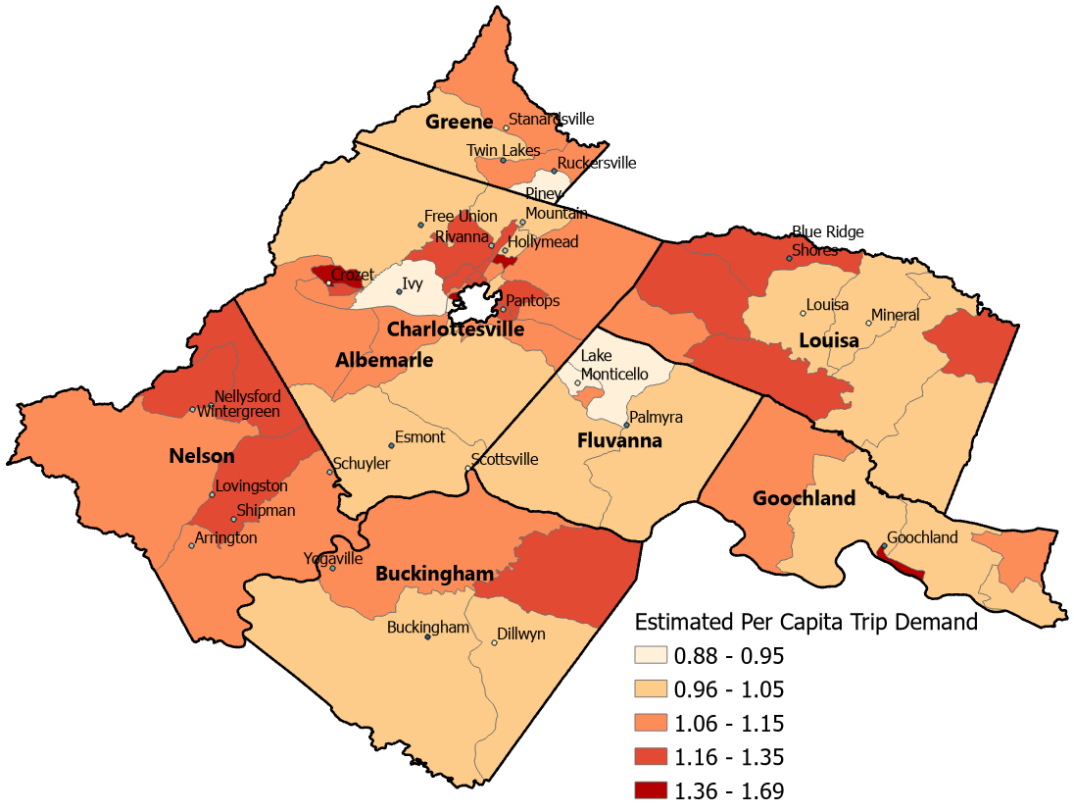


Mattson #1 Model

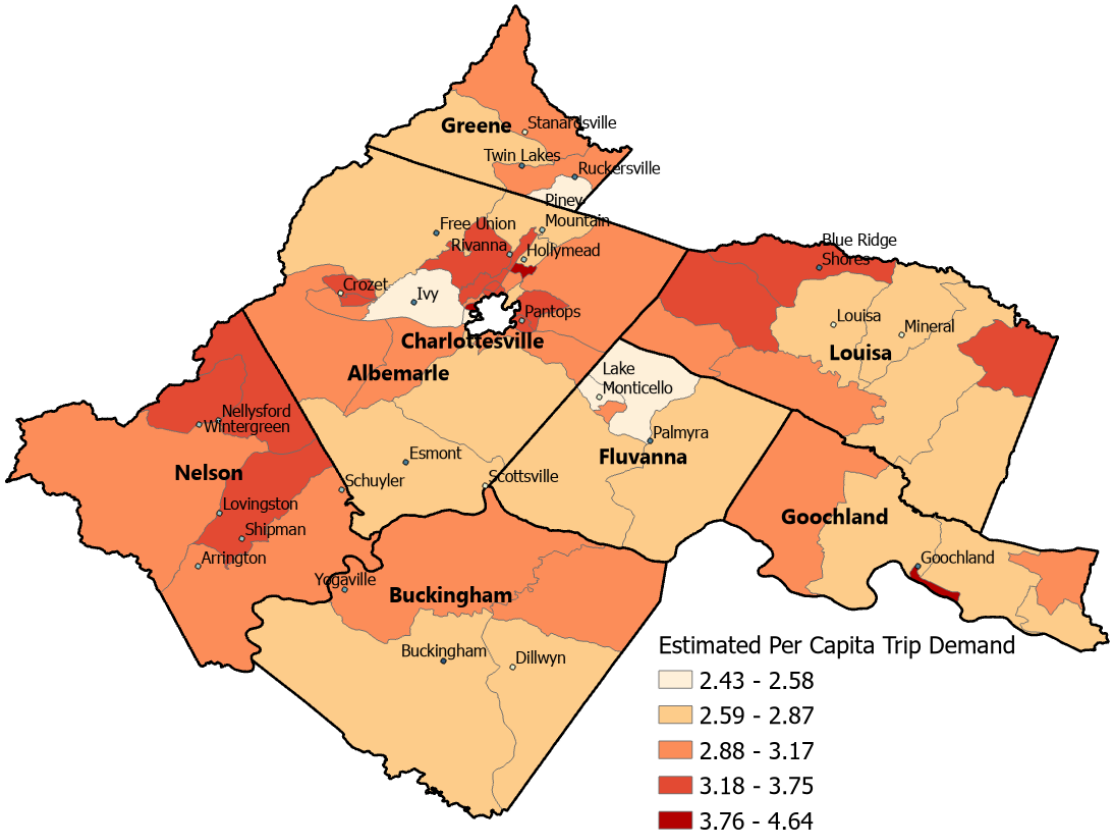


Estimated Per Capita Trip Demand Based on Demand Models

Mattson #2 Model: Assuming 5 days per week with reservations 1 day in advance



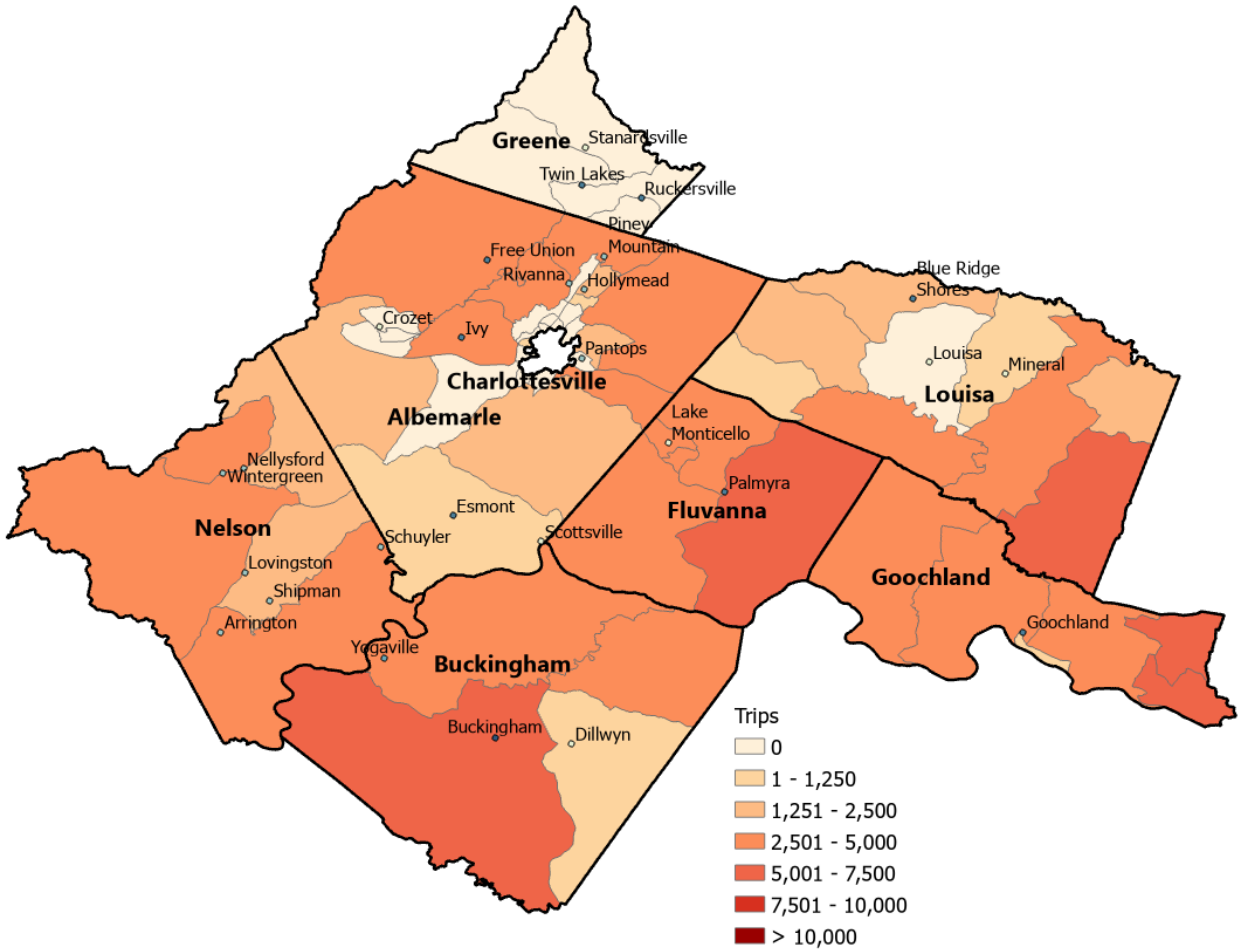
Mattson #2 Model: Assuming 6+ days per week with same-day reservations



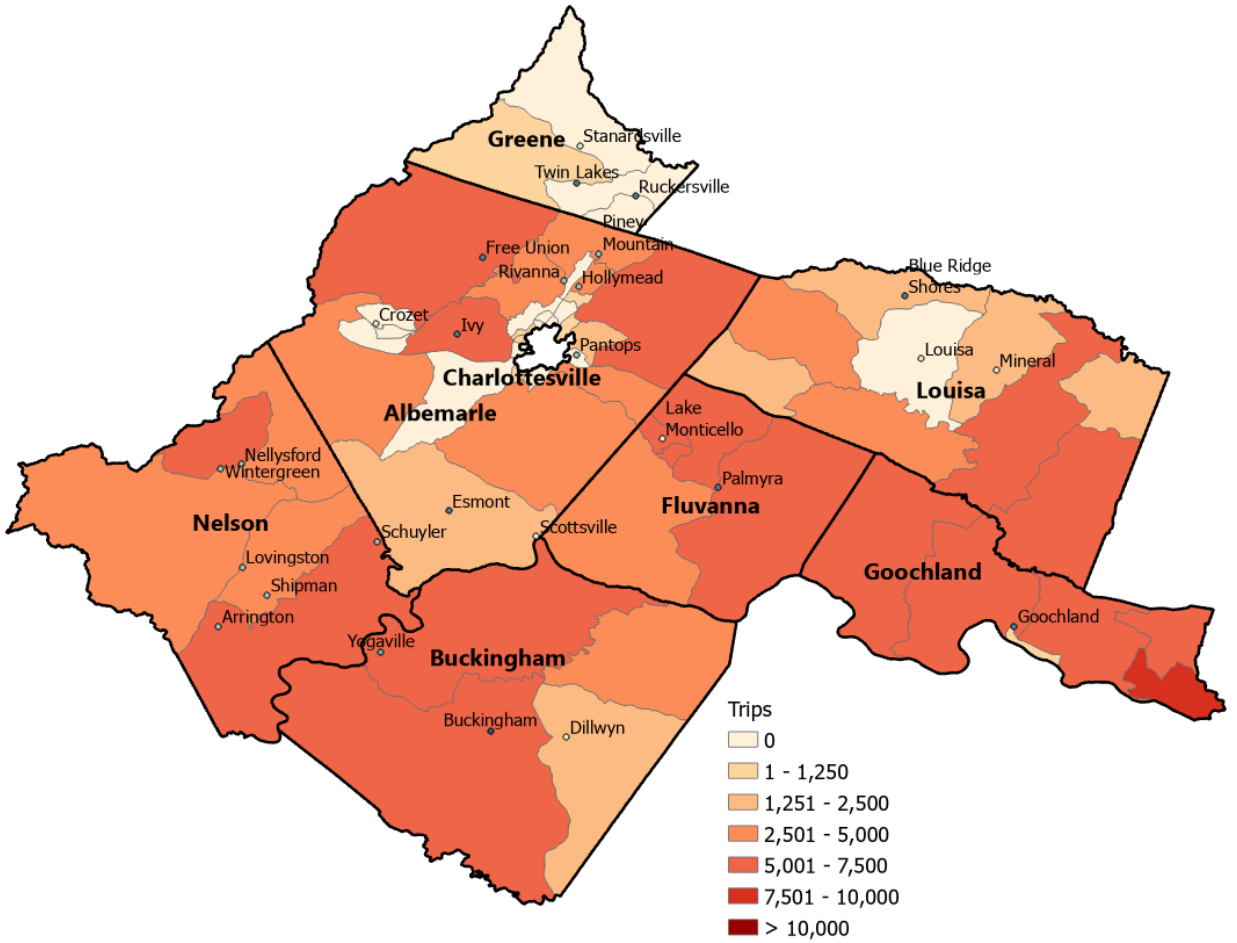
Service Targets

Goal	Trips per population aged 65 or older or 18-64 with a disability	Trips per population living in poverty
1	4.0	7.5
2	5.0	10.0
3	8.0	20.0

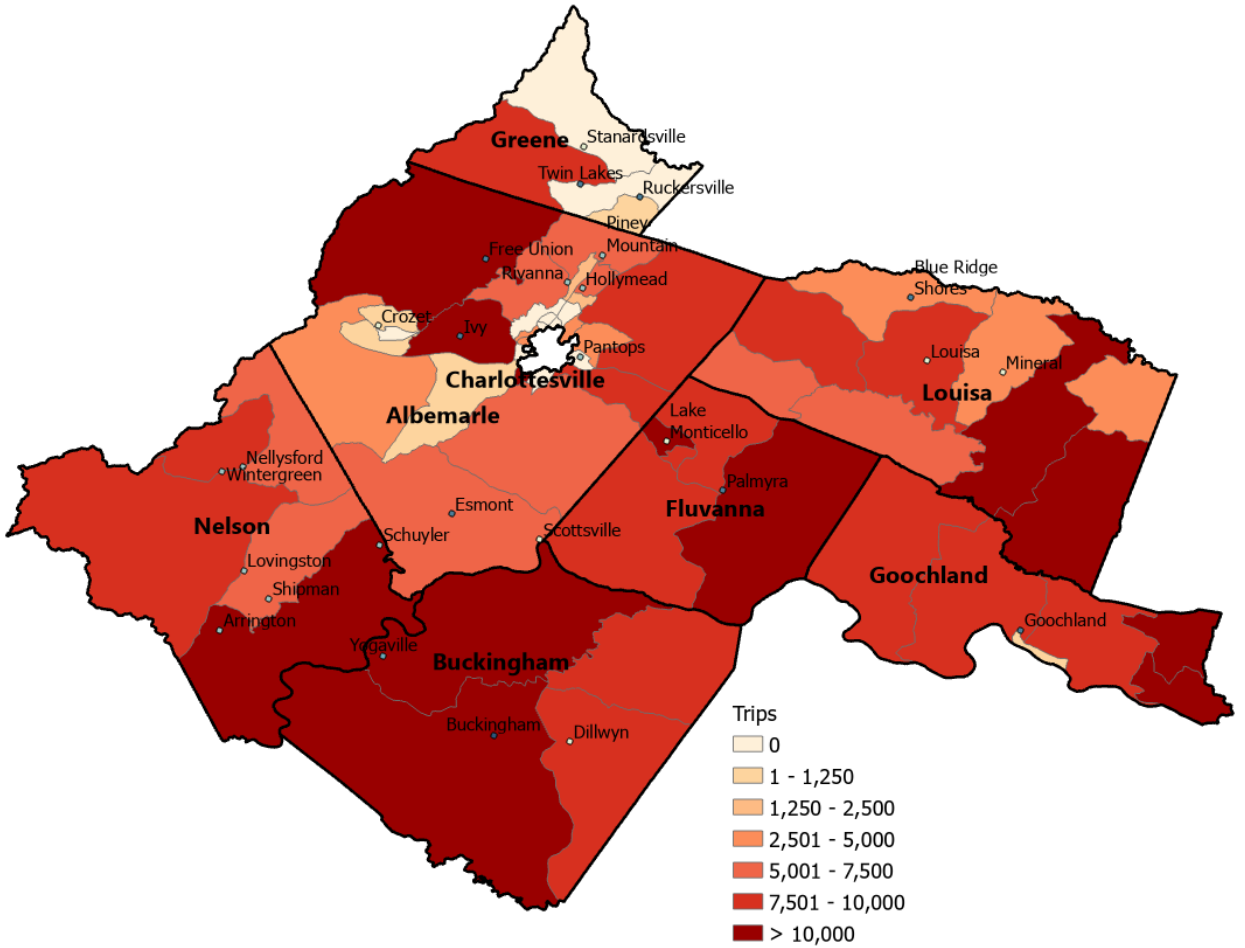
Ridership Deficit: Goal 1



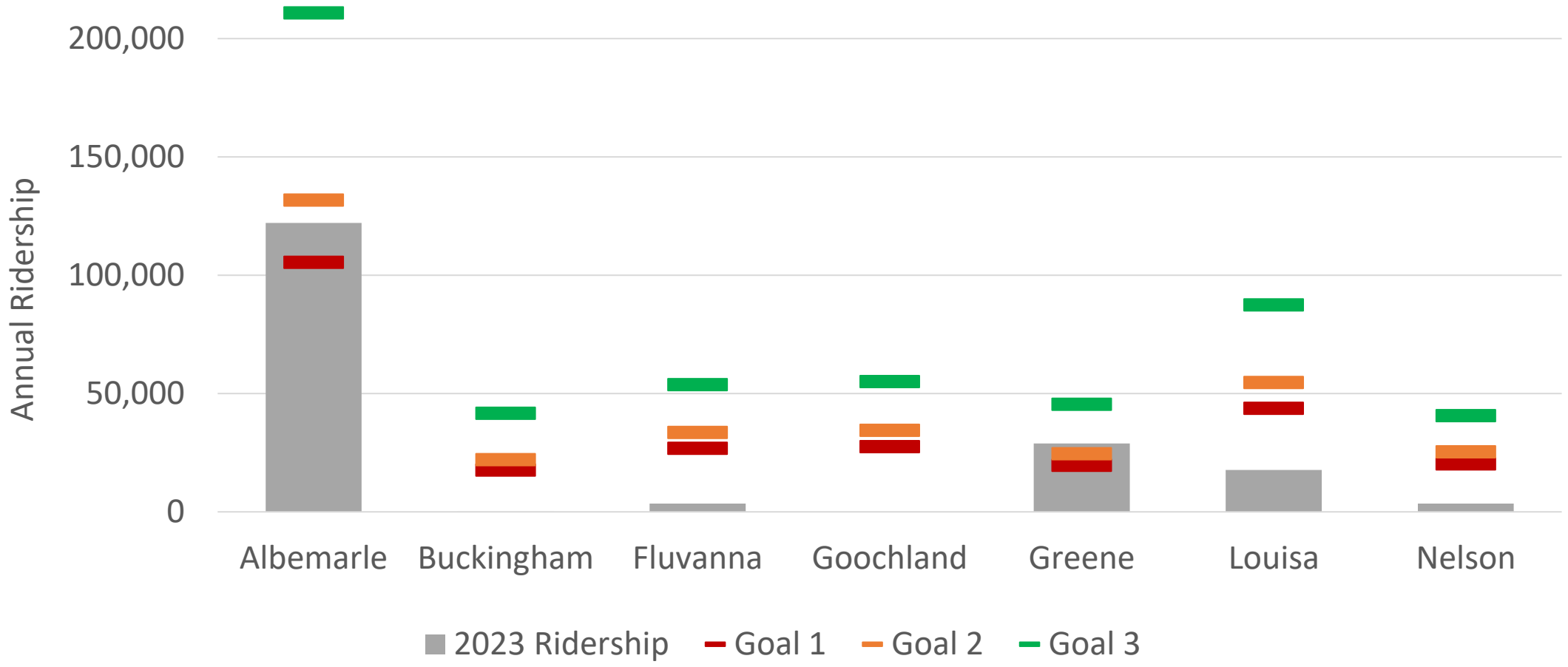
Ridership Deficit: Goal 2



Ridership Deficit: Goal 3



County-Level Ridership and Goals



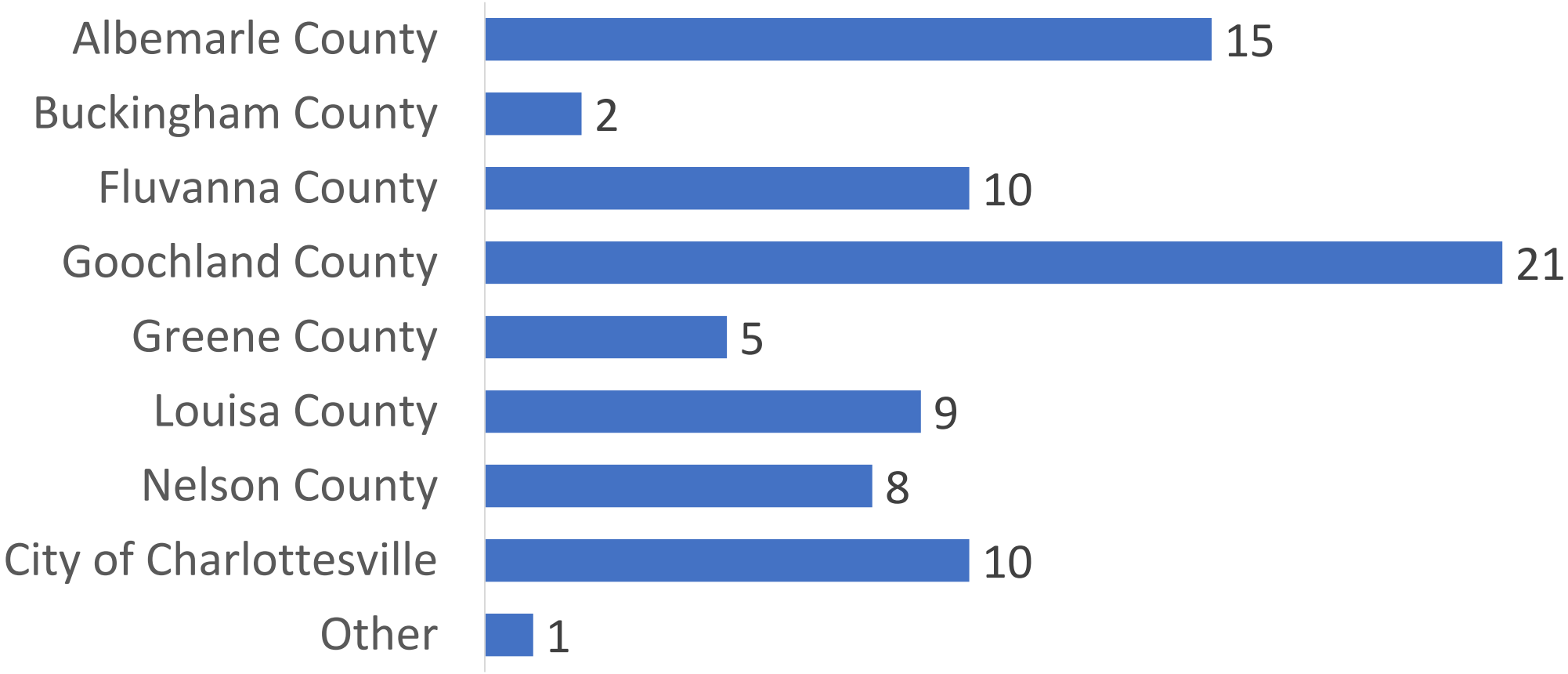
County-Level Ridership Deficits

County	Trips FY 2023	Number of trips below goal		
		Goal 1	Goal 2	Goal 3
Albemarle	122,063	0	9,737	88,817
Buckingham	99	17,589	22,011	41,561
Fluvanna	3,493	23,371	30,087	50,235
Goochland	0	27,540	34,425	55,080
Greene	28,887	0	0	16,573
Louisa	17,677	26,067	37,003	69,811
Nelson	3,462	16,846	21,923	37,154

Input from Stakeholders

- Does the data analysis match your experience?
- What are the needs in your jurisdictions?
- What are appropriate goals?
- Survey sent to 134 people
- 43 responses

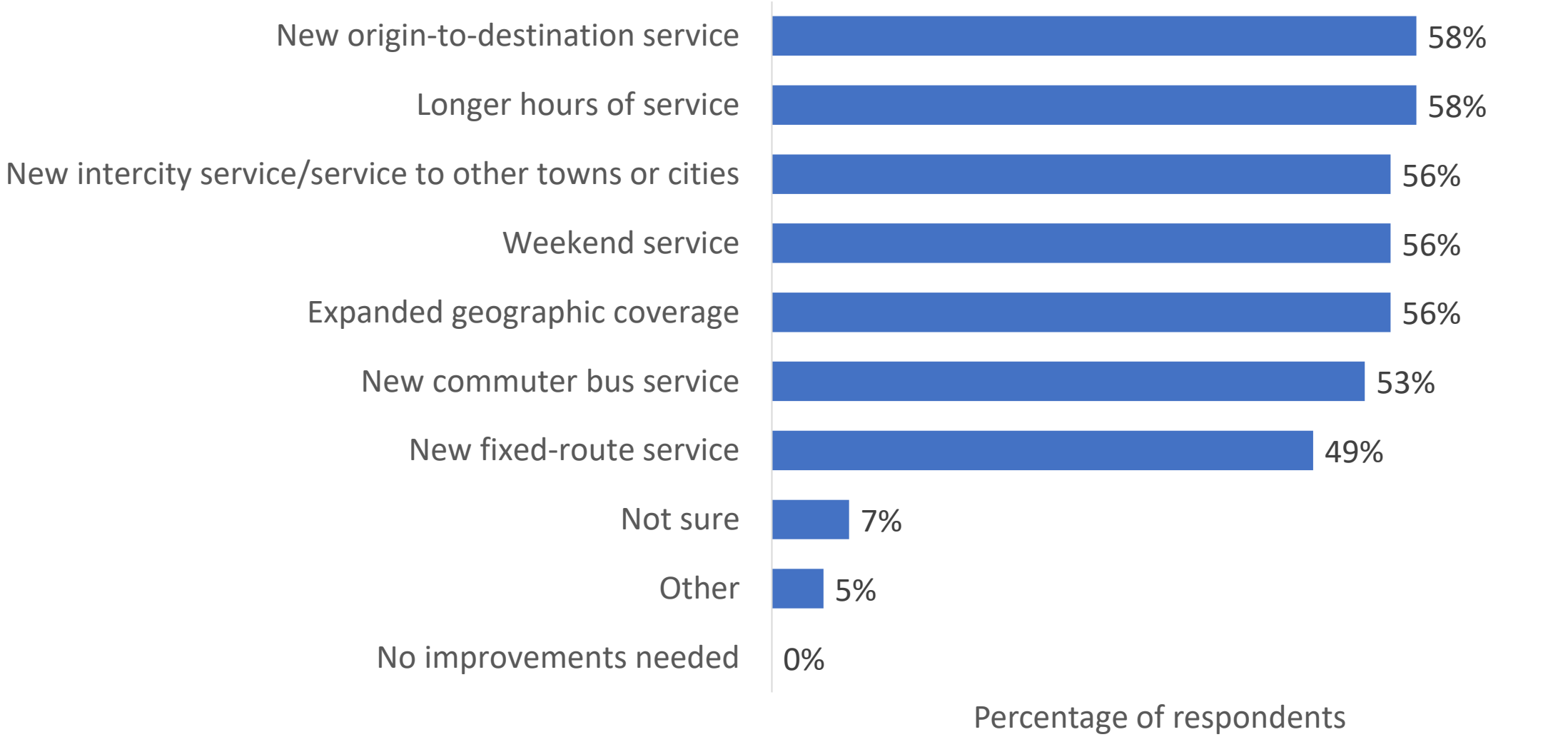
Number of Responses by County



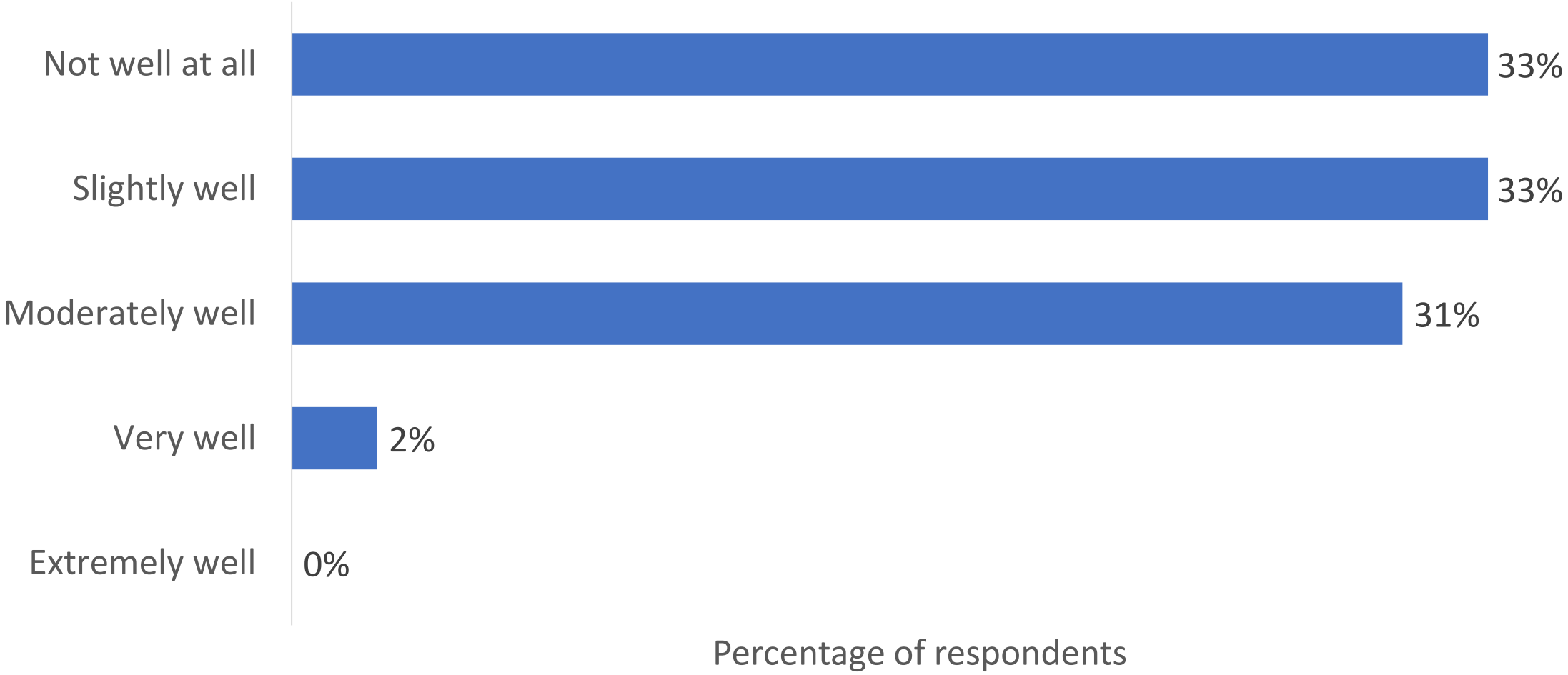
Survey Response: Service Goals

	Days per Week	Hours per Day
Urban Albemarle County	6-7	10-24
Rural Albemarle County	5-7	10-12
Buckingham County	No response	
Fluvanna County	1-6	6-10
Goochland	3-7	6-12
Greene	5-7	8-12
Louisa	2-6	8-10
Nelson	5-7	8-14
City of Charlotteville	6-7	12-18

Survey Response: Are any of the following service improvements needed in your area?



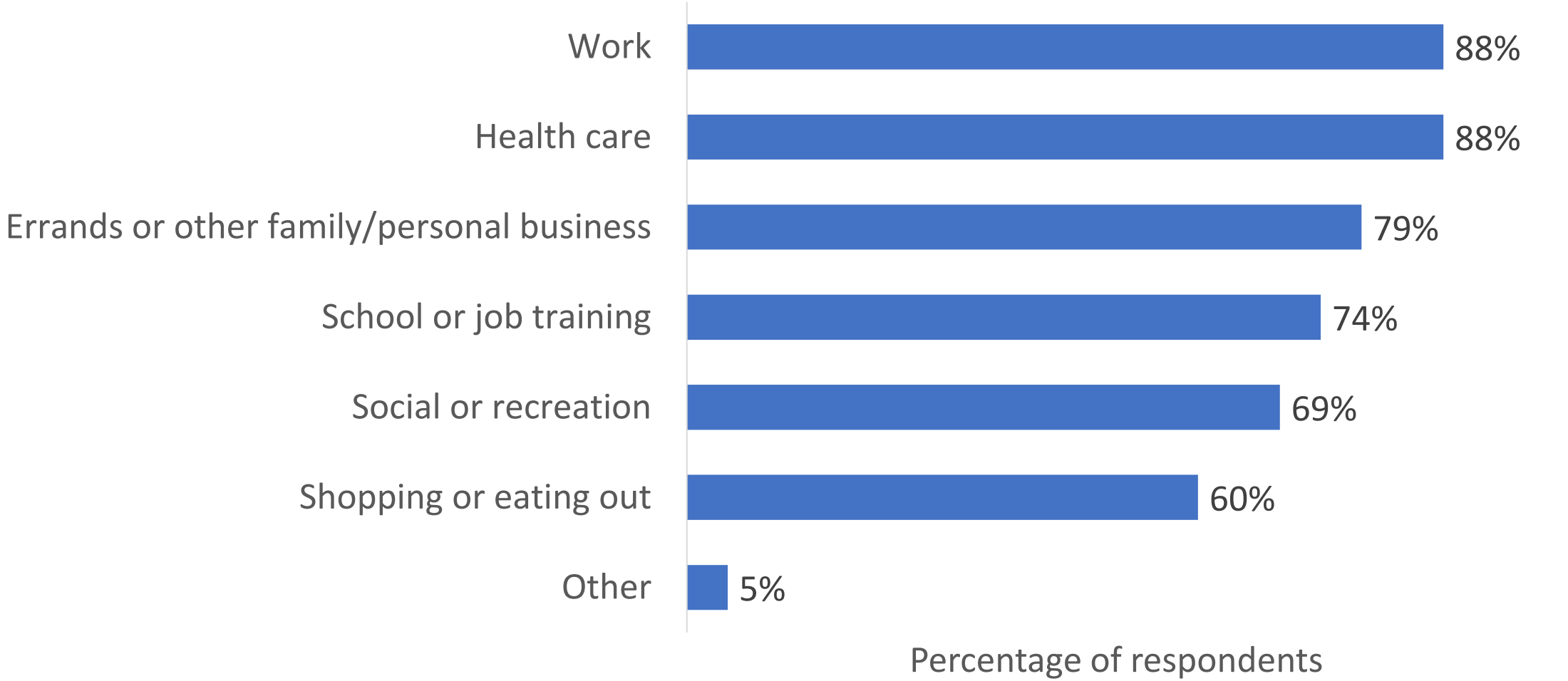
Survey Response: Overall, how well are the transportation needs of the residents in your area being met?



Survey Response: Overall, how well are the transportation needs of the residents in your area being met?

	Extremely well	Very well	Moderately well	Slightly well	Not well at all
Albemarle County	0%	7%	53%	33%	7%
Buckingham County	0%	0%	0%	100%	0%
Fluvanna County	0%	0%	33%	44%	22%
Goochland County	0%	0%	10%	29%	62%
Greene County	0%	0%	60%	20%	20%
Louisa County	0%	0%	33%	33%	33%
Nelson County	0%	0%	38%	50%	13%
City of Charlottesville	0%	0%	50%	40%	10%

Survey Response: What types of trips do you see a need for in your area?



Ridership Goals and Deficits

Based on population data, demographics, and a peer analysis of other rural transit systems, the research team identified ridership goals for Jaunt. There are three levels of goals. The first goal is a basic level of service to meet the most basic needs, the second is a ridership level of an average or slightly above average rural agency, and the third goal would provide a ridership level on par with higher performing rural transit systems (roughly in the 90th percentile among peers). The table below shows the current level of ridership for each county in FY 2023 and the additional number of trips needed per year to meet each of the goals.

County	Trips FY 2023	Number of trips below goal		
		Goal 1	Goal 2	Goal 3
Albemarle	122,063	0	9,737	88,817
Buckingham	99	17,589	22,011	41,561
Fluvanna	3,493	23,371	30,087	50,235
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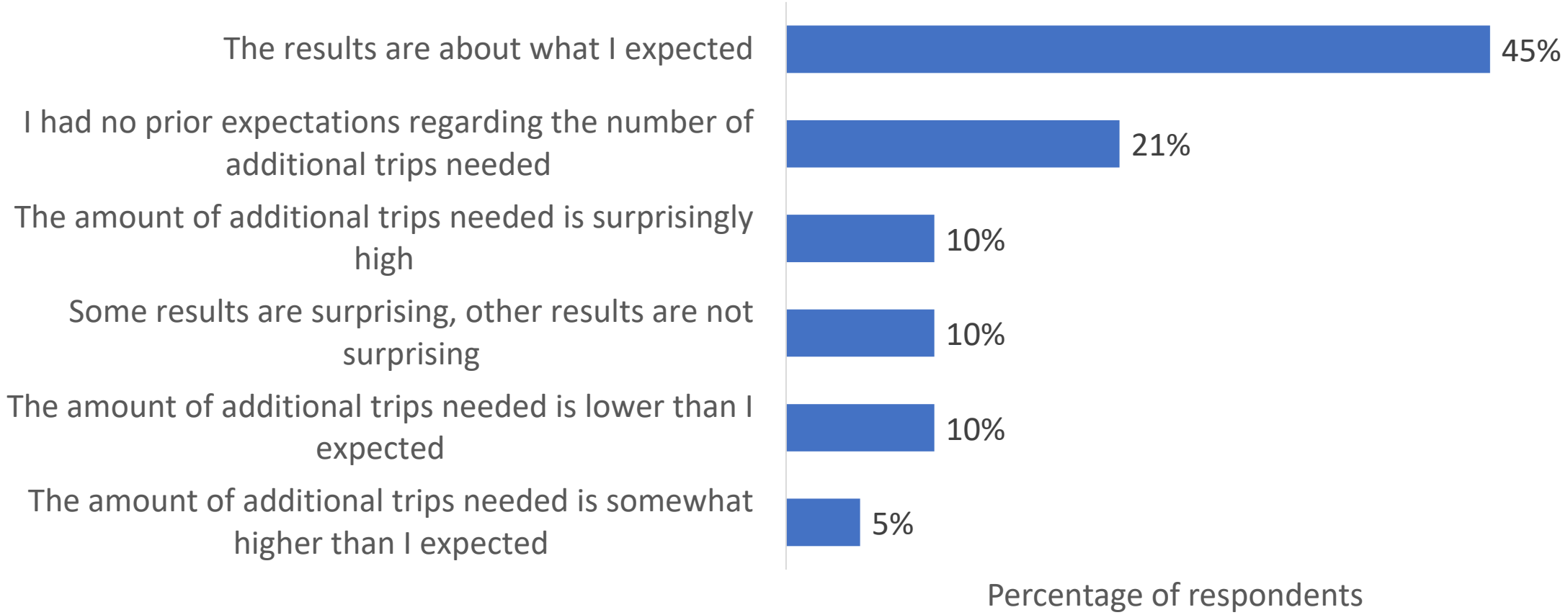
Survey Response: Are these results surprising to you?



Survey Comments

- No service in Goochland County
- Large senior population in Goochland that needs service
- Lack of service in Nelson County
- Fluvanna and Louisa have very limited transportation services and people in need have a difficult time finding rides to needed services like medical appointments
- Need to provide service to other cities/counties
- More trips to Charlottesville

Survey Comments

- Need for weekend/Sunday service
- Need for medical trips
- A doctor’s appointment takes an entire day
- Service is confusing, inconvenient, not ideal for the riders’ needs (not daily)
- Services need to be consistent and reliable for people to think of transit as an option
- Micro-transit has been shown to work and should be expanded and made permanent

Comments on how to improve service and meet goals

- Micro-transit / on-demand service
- Commuter bus
- Better marketing
- Longer hours
- Better scheduling / more convenient
- A demand-response service that serves the four senior centers
- More frequent trips to/from medical appointments

Areas Identified in the Transit Development Plan in Need of Improvement

1. Buckingham County with specific requests for New Canton
2. Nelson County
3. Greene County
4. Charlottesville –Crozet –Waynesboro
5. Rural areas (all areas outside of Charlottesville)
6. Weekend Crozet Service
7. Weekend Greene County Service
8. Madison Heights
9. Lynchburg
10. Buckingham to Charlottesville
11. Louisa

Service Improvements Proposed in the Transit Development Plan

1. App-based demand response with a focus on Albemarle County
2. Monticello microtransit
3. US 29 service expansion to complement microtransit
4. Fluvanna Circulator Additional Service
5. Stoney Creek / Nelson County additional service
6. Streamline Crozet CONNECT
7. Streamline Buckingham CONNECT
8. New Louisa Circulator Flex Route

Next Steps

- Recommendations
- Propose potential service options
- Conduct cost analysis
- Send draft report to review
- Final meeting in June
- Complete final report by June 30

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Thank you!

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