



RURAL WORKFORCE TRANSPORTATION PLAN

12/13/2023



LAKE CHAMPLAIN-LAKE GEORGE
**REGIONAL
PLANNING**



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I. Key Findings

Study Area

- Warren County
- Washington County
- Northern Saratoga County including the Town of Moreau and Village of South Glens Falls

Project Leads

- Lake Champlain-Lake George Regional Planning Board (LC-LGRP)
- Adirondack/ Glens Falls Transportation Council (A/GFTC)

Steering Committee Representation

- Warren County Planning
- Washington County Planning
- Greater Glens Falls Transit

Goals

- *Understand transportation needs and gaps* for regional workforce
- Identify ways to *connect workers to employment centers*
- Identify potential *transformative transportation projects*

Key Findings

- *Transportation needs and gaps arise from a variety of factors*, including geographic barriers, the high cost of housing and transportation, worker access to vehicles, gaps in the existing public transportation network and service, and a lack of alternatives to single-occupancy vehicle use.
- Most rural workers travel to the Glens Falls area; however *a significant number of workers travel within the region* to other rural areas or outside the region to other urban centers such as Rutland, Bennington, Saratoga Springs, and the greater capital district.
- *Employers and business leaders have faced difficulties with attracting and retaining workers* due to transportation issues; some efforts to address these issues on a piecemeal basis have met with limited success.
- *Traditional public transit systems will not be able to meet the demand of rural transportation*; alternative transportation modes and new technologies may be able to address certain gaps.
- *There is no one-size-fits-all approach* which will work for the entire region. Public-private transportation solutions could be developed to meet the specific needs of discrete locations.
- High priority areas for potential pilot programs have been identified with a focus on the *Village of Granville* and the *hamlet of Warrensburg*. Additional priority areas may also have feasible potential for solutions depending on community and employer buy-in.
- *Local land use and development decisions* do not always take into account transportation needs.

II. Introduction

A. Background

The issue of rural transportation needs has been an ongoing concern in the region. The Lake Champlain – Lake George Regional Planning Board (LCLGRP), which provides regional planning and economic development services throughout Clinton, Essex, Hamilton, Warren, and Washington Counties, identified rural workforce transportation as a key barrier to employment in the region within the *Forward Together: Economic Resiliency Plan (2021)*. Similarly, the Adirondack/Glens Falls Transportation Council (A/GFTC), which conducts transportation planning services in Warren and Washington Counties, and in the Town of Moreau (Saratoga County), has engaged in related planning efforts. Notably, the *2017 Rural Transportation Needs Assessment and Options Analysis* and the *2018 Coordinated Human Services Transportation Plan* examined rural transportation needs, though neither plan focused on workforce issues specifically.

To address this issue, the LCLGRP and A/GFTC have collaborated to develop a Rural Workforce Transportation Plan for areas within the A/GFTC Metropolitan Planning Organization (MPO).

B. Goals

- Develop a comprehensive understanding of the transportation needs and gaps which hinder workforce participation in the region.
- Identify opportunities to improve connectivity of workers to employment centers.
- Identify transformative transportation infrastructure projects.

III. Existing Conditions Summary

A. Regional Overview

The geographic focus of this plan is on the A/GFTC Planning and Programming Area, which includes all of Warren and Washington counties as well as the Town of Moreau and Village of South Glens Falls in Saratoga County. For the purposes of this plan, the term “urban core” refers to the area comprised of the city of Glens Falls, the villages of South Glens Falls, Hudson Falls, and Fort Edward, as well as some surrounding areas of the towns of Queensbury, Kingsbury, and Fort Edward. (See Map 1). The remainder of the focus area is referred to as “rural”. This definition is distinct only for the purposes of this plan and does not reflect the official urban area boundary as delineated by the US Census. Within the rural areas, hamlets and villages may be referred to as “rural population centers”.

1) Existing Transit Service

Greater Glens Falls Transit (GGFT) began operation in 1984 through a collaborative agreement among eleven contiguous municipalities centered around the Glens Falls urban area from Lake George/Bolton Landing in the north, south to the Towns of Moreau and Fort Edward (see Map 1). It operates a fleet of eighteen transit vehicles and historically carried over 350,000 riders a year. With some exceptions, year-round service operates from 6:30am through 10:00pm Monday through Friday with a more limited schedule on Saturdays, with a service span of Lake George to Moreau/Fort Edward. GGFT also operates a summer season trolley bus service between Bolton Landing/Lake George and Glens Falls from late June through Labor Day (and on weekends in spring and fall).

GGFT has periodically studied and considered various scheduled transit services to the rural area but has consistently found insufficient demand to justify the local financial support required to make them feasible. The only recent exception to this was a pilot expansion of the summer trolley route which included occasional service to Warrensburg. This service has since been discontinued.

Like all small transit operators in New York, GGFT faced a significant, ongoing drop in ridership due to the COVID-19 pandemic. Although mandated restrictions on bus capacity have been lifted, ridership has

not yet returned to historic levels. Another challenge exacerbated by the pandemic has been finding qualified drivers, especially for the summer trolley service. Despite these challenges, GGFT has nonetheless expanded access to transit in other ways. In particular, GGFT recently debuted a new mobile electronic fare payment platform to allow riders to purchase bus fare through a mobile app. This system also allows fares to be transferred electronically, which will allow bus tokens to be sent to anyone with a smartphone.

GGFT offers complementary paratransit service to individuals unable to access the fixed-route services. This service is branded as Freedom and Mobility Express (FAME). FAME is available for travel within $\frac{3}{4}$ mile of GGFT's fixed-route services and all passenger pick-ups and drop-offs must be within this area. The service is available during the fixed-route operating hours and based on the route schedule. Fares for FAME trips are double the fare on the fixed-route system.

In addition, GGFT partnered with CDPHP in 2021 to expand the '*Cycle!*' bikeshare system to the Glens Falls/Lake George area. The provision of low-cost bikeshare in the vicinity of two of the area's busiest transit hubs – Ridge Street in Glens Falls and Beach Road in Lake George – will benefit transit riders looking to make the 'first mile/last mile' connection.

In terms of other transit services, the Capital District Transportation Authority (CDTA) historically maintained an extension of the Northway Express in South Glens Falls. This provided access to Saratoga, Clifton Park, and the larger Capital District area. However, this service was discontinued in 2020 with the onset of the Covid-19 pandemic.

In February 2023, GGFT and CDTA, in conjunction with the City of Glens Falls, proposed a merger between the two transit providers. This proposal was approved by the Warren County Board of Supervisors in May 2023. Under the terms of this transition, GGFT routes will be operated by CDTA; GGFT vehicles will be incorporated into the CDTA fleet and re-branded accordingly. In addition, to accommodate CDTA operating procedures, transit operations will be shifted from "flag-down" to fixed-stop service. As of November 2023, CDTA signs in the Glens Falls urban area have begun to be installed. Further operational changes may be undertaken as the transition progresses.

B. Demographic, Economic, and Transportation Conditions

To gain a thorough understanding of the characteristics of the population in the region, a variety of statistics were analyzed. These are summarized below; for the complete analysis including data, graphs, and maps, see Appendix 1.

- **Population Density and Distribution:** Villages and hamlets contain pockets of higher-density housing, services, and employment which service the surrounding rural area. The Village of Whitehall and the hamlet of Warrensburg contain the highest densities of population in the rural study area.
- **Race and Ethnicity:** The area has low rates of racial and ethnic diversity; however, distribution of minorities is unequal, with the hamlets/villages of North Creek, Bolton Landing, Lake George, Lake Luzerne, Granville, and Greenwich having higher percentages of minorities compared to the surrounding towns.
- **Age:** The highest concentrations of working age residents can be found in Chestertown, Lake George (village), Lake Luzerne, Whitehall, Fort Ann, and Salem. Hague, Horicon, Putnam, Dresden, and northern Queensbury had the highest concentrations of senior population.
- **Education:** The highest concentration of residents with a bachelor's degree or higher can be found in the towns of Queensbury, Lake George, Moreau, Greenwich, and Cambridge. Conversely, over 15% of residents in Whitehall, Hampton, Hebron, and portions of Granville, Fort Edward, and Glens Falls lack a high school diploma.
- **Poverty Status:** The rural population centers with the highest estimated rates of poverty are Argyle, Whitehall, and Granville. The tract with the highest estimated poverty rate was located in Hebron.

In terms of employment statistics, the following factors were examined:

- Unemployment Rates: After a rise in unemployment due to the COVID-19 pandemic, the region has largely recovered and current unemployment rates are comparable to 2019 levels. The rural population centers of Salem, Argyle, Chestertown, and Bolton Landing had higher unemployment rates than the surrounding area. Conversely, the towns of Kingsbury, Lake George, Putnam, and Dresden had the highest rates of unemployment when measured by census tract.
- Work-From-Home Rates: After peaking during the Covid-19 lockdowns, work-from-home rates have declined to about 7,500 residents, which is still significantly higher than pre-2019 levels.
- Labor/Industry Profile: A comparison of jobs by sector from August 2019 and August 2022 shows a loss of jobs across almost all sectors except for Natural Resources, Mining, and Mineral Extraction. However, the overall proportion of jobs has not changed, with the top three sectors comprised of Leisure and Hospitality; Trade, Transportation and Utilities; and Education and Health Services.
- Employment Clusters: There are discrete areas in which mostly rural residents work, namely Rutland, Bennington, and Manchester within Vermont, as well as the rural portions of Warren and Washington Counties.

To gain an understanding of the movement of residents throughout the region, as well as any transportation-related barriers and burdens which may be experienced by the population, the following analyses were completed:

- Commuting Patterns: Most travel for work flows towards the urban core or the capital district. However, there are some discernable patterns of commutation within the rural areas, for example between Whitehall and Vermont. There are minor travel patterns from the urban core area to Lake George, Warrensburg, Fort Ann, Granville, and Argyle.
- Employment Inflow-Outflow: Each rural population center was analyzed to compare inflow-outflow rates, which captures how many people travel into an area, stay within the area, or travel outside the area for work.
- Commute Distance: Over 60% of rural work trips are less than 15 miles. Another 26% are for trips of 16-30 miles; altogether, this indicates that 86% of work trips originating from these hamlets and villages are less than 30 miles.
- Access to Vehicles: The Village of Cambridge, City of Glens Falls, and towns of Whitehall and Hampton have the highest rates of population without access to vehicles.
- Transportation Cost Burden (TCB): This metric quantifies transportation costs as a percentage of income of the typical household for the region. The towns of Putnam, Dresden, and Argyle have the highest TCB rank.
- Areas of concentrated disadvantage: The towns of Hebron, Whitehall, Hampton, Granville, and Fort Edward have the highest ranks when considering combined disadvantage metrics according to criteria measured by the Federal Highway Administration (FHWA).

C. [Survey and Stakeholder Input](#)

Beginning in October 2022, the Lake Champlain-Lake George Regional Planning Board and its consultant partners conducted two surveys concurrently over a two-month time period. One survey was focused on those who work in the region while the other was focused on regional employers.

The surveys were marketed online and via social media campaigns. In addition, fliers were posted throughout the region, including at local libraries, town/county offices, and at Stewart's shops. Several employers and agencies also distributed this survey to their employees/constituents via email. Over 200 employees and 26 regional employers in Warren and Washington Counties completed this survey. It is important to note that, as these respondents elected to participate, the data below has some inherent limitations when compared to a true randomized sample.

- Transit limitations. Several participants noted that existing transit services could not accommodate the specific schedules or work locations, while there was a moderate number of responses indicating a willingness to use transit if it was available.
- Ridesharing limitations. According to employers, carpooling among employees is already occurring on a regular basis. Although this allows for those without a vehicle or license to attend work, the practice is not without downsides. For example, if the carpool driver is sick, on vacation, or not scheduled that day, the other employees may be without options to get to work.
- Incentives and opportunities. The surveys indicated varying levels of success with programs to provide transportation assistance. Bus tokens and gas cards can assist workers, but only if they live close to existing transit or have access to a vehicle. Direct transportation services, such as Tech Valley Shuttle and private taxis, were also utilized by individual businesses. However, the high cost of these services (in one case estimated at \$10,000 per month) are not sustainable long-term. Discontinued programs, such as “Wheels to Work” and the “Second-Chance” program for previously incarcerated individuals, could also help fill gaps if these programs are re-instated.
- Housing. It was noted that affordable housing options are often located well outside of the areas served by transit or other transportation services. In a related issue, several large employers noted that the catchment area for their employees is outside of the A/GFTC area, which may complicate efforts to coordinate certain transportation solutions.
- Childcare. Several participants pointed out that a lack of affordable, convenient childcare compounds transportation issues.

IV. Rural Workforce Mobility Needs Analysis

To identify regional needs, the elements of a successful workforce transportation system must be clearly defined. These characteristics, or measures of success, can then be used to define the parameters of potential solutions.

It is important to note that no one program or project will fulfill every measure of success. However, identifying a range of potential solutions which work together can act as a framework to address most, if not all, elements.

A. Characteristics for Successful Rural Workforce Transportation:

- Availability and predictability: Aside from on-call positions, most jobs are scheduled at least a week in advance. For regular day-to-day commuting, workers need to have reasonable assurance that transportation services will be available when they need it, in a predictable fashion. In addition, transportation services must be available within a reasonable time before/after work (ideally no more than a 30-minute wait).
- Cost/Affordability: The link between transportation and employment can often seem to pose a “chicken or the egg” conundrum: those without the means or ability to own a vehicle find it difficult to get a job, which in turn further hampers any effort to get a vehicle. As such, any solutions proposed should take into consideration cost to the user; programs which are too expensive for the target audience to afford will be doomed to failure. Similarly, employer-focused solutions should also take financial sustainability into account.
- Technology: Many new transportation services are reliant on smartphone apps or web access. This poses a barrier to those without smartphones or who live or work in areas without reliable cell service. Options to allow scheduling via landline phone are a must to accommodate these workers. Lack of access to smartphones and internet would also require predictability in routes and times of service.
- Safety and accessibility: The employee survey indicated that 96% of respondents would be willing to walk up to a half mile to access a bus stop or carpool; a significant portion would walk up to a mile. However, many areas of the region lack dedicated sidewalks, or even wide road shoulders, which could feasibly accommodate pedestrians. These “first-mile/last-mile” issues are often related more to local transportation and land use decisions than they are to transit operations. In addition, not all workers are able to walk. Transportation service pick-up points should be located within a reasonable, safe walking distance of origin points and must accommodate accessibility from an ADA perspective.
- Flexibility: Although the daily commute can often be predicted well in advance, flexibility for emergency trips and/or errands is highly desirable. The ability to go home early or late, to deviate from the normal route to run errands, or to accommodate childcare drop offs/pickups, was cited as one of the main reasons workers choose to drive alone. Ideally, transportation services would also allow this flexibility to some extent.

B. Needs/Gaps/Barriers

With the parameters of a hypothetical system of transportation services now defined, it is important to take stock of the specific needs, gaps, and barriers which were revealed through the existing conditions analysis and the survey/stakeholder input. These also include general issues which could complicate the facilitation of programs and projects aimed at rural workforce transportation.

1) *Travel from rural areas to urban core*

The existing conditions data analysis of travel patterns indicates that the prevalent direction of travel for work trips flows towards urban core areas. This was also underscored by the results of the survey and stakeholder analysis. In particular, the existing condition analysis noted significant travel flow to the core urban area from Warrensburg, Lake George, Lake Luzerne, Whitehall, Granville, Fort Ann, Argyle, and

Greenwich. To a lesser extent, this rural-to-urban pattern also applies to the following links: Greenwich to Saratoga/Wilton, Whitehall to Fair Haven/Castleton/Rutland Vermont, Cambridge to Bennington, Warrensburg to Saratoga/Wilton, and Warrensburg to Albany.

Together, these travel corridors represent probable areas of transportation need, as there are no established transportation services which allow for these movements aside from ad hoc ridesharing and/or incentive programs set up by individual employers. It can be assumed that there is a potential for additional workers in the rural areas to find jobs in the urban core but are prevented by lack of transportation.

One major barrier to providing transportation services between rural and urban areas is the low population density and diffuse land use patterns outside of the urban core. Smaller population centers may have the potential to act as collection points for rides to the urban area, but this might not accommodate workers in the most rural areas. In addition, workforce transportation needs are inherently somewhat fluid as workers change jobs or enter or leave the workforce, which can make it difficult to engage in route planning for transportation services seeking to fill this need.

Another barrier is that these travel patterns do not conform to established programmatic service areas. For example, a significant number of workers in Whitehall and Cambridge commute to Vermont. Even if there was a public transportation agency in Washington County which could provide workforce transportation, setting up a service which crosses state boundaries represents a major (though not unsurmountable) hurdle in terms of administration.

2) *Travel within rural areas*

Commute travel pattern data from the existing condition analysis indicates that movement between rural communities is more common for rural residents; fewer residents from the urban core travel to the rural areas for work.

Although the sparse travel patterns make it difficult to identify catchment areas, the inflow-outflow information seems to indicate three types of patterns: population centers that export workers, population centers that import workers, and population centers which are more or less balanced. For example, Whitehall, Warrensburg, Granville, Greenwich, Argyle, and Cambridge “send” more workers than they “receive”, which suggests that there may be potential for transportation services tailored to the workers who live in those areas and work elsewhere. Conversely, Lake George, North Creek, Bolton Landing, and Pottersville appear to be destinations for employment. **When taken together, these patterns begin to suggest areas of probable need from a transportation perspective.**

In terms of barriers, the same issues of low population density and fluid origin points stated above also apply to transportation within rural areas. In addition, employment centers in the rural areas may be located outside of hamlet areas, which complicates efforts to identify or create shared transportation services. However, one potential mitigating factor is that the work trip distance analysis indicates that most workers travel relatively short distances – less than 30 miles. Potential transportation services could theoretically have a limited service area while still meeting the needs of many residents in and around these rural population centers.

3) *Expansion of GGFT Schedule/Service Area*

Survey responses and stakeholder outreach indicate that **evening/weekend transit services do not adequately address the needs of employees.** This is compounded by confusion regarding the services which currently exist; in some cases employers cited schedule conflicts based on outdated or inaccurate information. Previous efforts to provide night/evening service have met with mixed results; currently, evening/weekend services must balance rider demand with the lack of available drivers. There may be

potential for complementary services, such as guaranteed ride home programs or after-hours transportation, to address gaps in scheduling.

Similarly, survey and stakeholder outreach indicated gaps in transit service coverage within the core urban area. Specifically, the industrial parks on Queensbury Avenue and to SUNY Adirondack (both the main campus and satellite Culinary Arts building in Glens Falls) were mentioned.

One major barrier is the ongoing driver shortage at GGFT. Currently, large scale route and schedule expansions are unlikely unless this issue can be addressed. In addition, previous attempts at route and schedule expansion may indicate that merely providing service may not result in transit usage without additional support. As such, long-term transit planning efforts should also take into account the need for robust, ongoing efforts to attract and retain riders. This includes not only the transit provider but also employers and related economic development/planning agencies.

4) *Vehicle Access and Affordability*

Lack of consistent access to vehicles is one of the most difficult gaps in rural transportation to address. This can include not having a car at all; having only infrequent access to a vehicle; lacking resources to maintain, insure, and fuel a vehicle; and/or the inability to drive.

According to the existing conditions analysis, lack of access to a vehicle affects up to 15% of working age residents in certain rural areas. Individuals and households without vehicles are sometimes located far from community centers or hamlets, making access even more difficult. In addition, many towns were noted to have an especially high Transportation Cost Burden by the Justice40 parameters set by FHWA.

Lack of vehicle access is an issue can affect almost anyone without warning, in the case of a car crash, financial difficulties, or changes in the household due to death or divorce. For those looking to learn to drive, driver's education courses may not be accessible either. As such, vehicle access represents a distinct gap facing the region.

Obviously, the cost of vehicle purchase and maintenance are the largest burdens in this case. Some programs exist to address these issues on an individual basis; see section V.F for more information. Although providing vehicles to workers and families is a beneficial goal (and often results in reduced burden on human service agencies as a whole), it cannot address large-scale gaps on a regional basis.

Although ridesharing is often suggested as a solution to this issue, stakeholder input indicated it can cause problems for both employees and employers if the rideshare driver is unavailable due to sickness or vacation. In that case, employees may face lost wages and employers must deal with multiple absences. Potential solutions should take into account the need for consistent scheduling and access to rides as well as addressing the root financial or logistical needs for those seeking to gain access to a vehicle.

Another potential long-term solution would be to increase the number of jobs located within walking distance of the rural population centers, thereby reducing the need for a vehicle during the daily commute. Local land-use planning efforts, such as proactive zoning changes and/or integrating workforce transportation and transit considerations into the site plan review process, would help ensure that future development does not further compound existing transportation problems.

5) *Housing and Childcare*

Although these issues do not necessarily constitute transportation challenges, the lack of affordable housing and childcare options can complicate or prevent access to employment. In some cases, an employment center may be accessible from a transportation perspective, but the transit or work schedule might not allow for childcare drop-offs/pickups. Similarly, if housing costs are not in line with wages, those with limited transportation options might be forced to choose between a roof over their

heads or a job. Local land use decisions may also fail to take the housing-transit connection into account, leaving transportation operators in a reactive, rather than proactive, role.

These concerns may fall outside of the scope of achievable solutions identified in this plan. However, it is crucial to note the interconnected nature of the issues. Without considering housing and childcare needs, even a perfectly balanced array of transportation solutions will fail to meet the needs of vulnerable populations.

6) *Coordination gaps*

The issues related to transportation and employment in the rural areas are further complicated by a lack of coordination among relevant agencies and constituents. Bringing together the interests of economic development, public transit, transportation, employment services, education, planning, local municipalities, and vulnerable populations is no small task. Indeed, this is not an issue unique to the region; across the U.S., the field of mobility management continues to grow and evolve in recognition of the importance of providing coordination to identify and implement potential solutions.

As mentioned previously, administration and funding can constitute a barrier to increased coordination. Government agencies are limited to specific geographic areas of influence; as such, the potential for projects and programs often ends at the border, leaving few options for workers and employers that span more than one municipality, region, or state.

C. *Opportunities:*

Although the list of transportation needs and barriers can seem overwhelming, there are also several promising opportunities within the region.

1) *Merger of Transit Providers*

In February 2023, GGFT and CDTA, in conjunction with the City of Glens Falls, proposed a merger between the two transit providers. This proposal was approved by the Warren County Board of Supervisors in May 2023.

Although it is too soon to predict how transit service may change in the A/GFTC region as a result of this merger, there is a possibility of an eventual increase in the available resources for transit marketing, technological innovation, and new service modalities. Specifically, CDTA will be undertaking a Transit Development Plan, which could take into account the merger and identify opportunities for service efficiencies. In addition, the merger will raise awareness of transit issues in general, which can build support and engagement in the community.

A merger may also result in stronger transit connections between the Glens Falls area and the greater capital district. Although this may not directly benefit rural residents, it represents a step forward for connectivity within the region as a whole.

2) *Funding Availability*

Recent expansion of transportation funding has increased financial opportunities through FTA and FHWA. Through the Bipartisan Infrastructure Law, many established transit programs have seen increased funding allocations. In addition, new programs such as FTA's Helping Obtain Prosperity for Everyone (HOPE) are creating additional opportunities specifically for rural transit access. "Cross-cutting" projects which are targeted towards not only workforce issues, but increased mobility of seniors, low-income individuals/families, or the disabled communities, would likely be very competitive.

3) *Technological Advances*

Ongoing development and advances in data and technology have increased the availability of innovative transit solutions. This includes vendor-based programs and platforms, which reduce the need for small transit organizations to take on the burden of complicated, expensive technology. This, in turn, creates

opportunities for dynamic routing/scheduling, which can make more efficient use of limited resources such as vehicles and drivers. Systems which rely on smaller vehicles also reduce the need for CDL drivers.

4) *Collaboration and Innovation*

Stakeholder input revealed that some employers are willing to explore collaborative and innovative solutions to transportation issues. This creates potential for private or public-private partnerships; not only do pooled resources usually stretch farther, but successful collaboration can increase the likelihood of obtaining grant funding under certain circumstances.

D. *Geographic priority areas*

Although the needs, barriers, and opportunities listed above apply to the whole region, certain areas are more affected than others. In addition, the specific combination of factors in each location may influence the viability of potential transportation solutions.

1. **Granville:** This Village has a very high Transportation Cost Burden as well as high percentages in terms of lack of vehicle access and low educational attainment. However, Granville is also home to several large employers and has a dense population center. At one point the Village was able to maintain a limited local transit service, which could indicate the potential for success for future efforts. There is also a fair amount of reciprocity in terms of workers traveling to and from Whitehall, which could indicate potential for services shared between the two villages.
2. **Warrensburg:** In terms of access to vehicles, educational attainment, transportation cost burden, worker outflow, population, and stakeholder input, Warrensburg represents a good candidate for workforce transportation programs. As with Whitehall, there have been numerous efforts to establish transportation services in Warrensburg in the last decade. GGFT has successfully expanded the seasonal trolley service to the hamlet in the past; however, this is not a year-round solution. There have also been efforts to establish a private livery/transit hybrid service, which never came to fruition. Warrensburg faces a specific challenge in that the worker outflow is relatively diffuse, with workers traveling not only to the core urban area but to Lake George, Bolton, and Chestertown. The hamlet also has significant worker inflow, which suggests that residents in the surrounding area would require travel into Warrensburg. Services in this area might also call for the inclusion of **Bolton Landing and/or Lake George**; if so, the high number of seasonal positions should be taken into account.
3. **Whitehall:** The Village of Whitehall stands out in terms of having a high working age population, low educational attainment, high numbers of limited access to vehicles, overall economic disadvantage, high worker outflow, dense population, and stakeholder input. Historically, this area was the focus of a pilot program which expanded GGFT routes along Route 4 to the Village of Whitehall. Fixed route transit did not prove to be viable in the long term and the pilot was terminated over a decade ago. However, this underscores the regional need for transportation solutions focused on this area. As stated previously, plans for future transit or transportation services should integrate cross-border travel into Vermont.
4. **Lake Luzerne:** With a high transportation disadvantage, high TCB, and relatively high percentage of working age population, this hamlet is also relatively isolated from the rest of the county, which could limit potential transportation solutions. Additional analysis which includes Corinth and possibly Greenfield may be warranted.
5. **Pottersville/North Creek/Chestertown:** These three hamlets have high transportation cost burdens; North Creek in particular also has a relatively high percentage of individuals without access to a vehicle. In addition, there is a minor, but discernable, pattern of reciprocity for work trips between the three hamlets, which might indicate the potential for services in this area. The heavy reliance on seasonal jobs may pose an additional layer of complication.

6. **Greenwich/Cambridge/Salem:** These three population centers are relatively isolated from the rest of the County. Despite their proximity to each other, there is not a significant discernable pattern of commutation between the three. However, there is some overlap among the outflow destinations. For example, both Salem and Greenwich send workers to the core urban area and Saratoga, while both Salem and Cambridge send workers to Bennington and Greenwich. There may be potential for certain service modes to strengthen these linkages, thereby increasing opportunities for workers in southern Washington County.
7. **Fort Ann and Argyle:** Although these Villages are not in proximity to one another, they share characteristic inflow/outflow patterns. In both cases, there is a strong outflow towards the core urban area, as well as a discernable inflow in the other direction. Depending on the service mode (such as commuter lines) there may be opportunities to strengthen these linkages in both directions.

V. Summary of Potential Transportation Options

CASE STUDIES

Name: [GMT MyRide](#)

Service Type: Checkpoint/Flex Route

Location: Montpelier, VT

Cost: Currently free; \$1.00 or less after 6/1/2023

Schedule: Monday-Friday 7:00 AM – 6:00 PM;

Saturday 8:00 AM to 6:00 PM

Access: via dedicated app or phone call center

On demand: Yes

In-advance/recurring: Yes

Name: [Clinton County Rural Zone Service](#)

Service Type: Zone service

Location: Clinton County, NY

Cost: \$10 per trip

Schedule: Tues/Thurs/Sat or Mon/Wed/Fri, depending on zone

Access: phone call center

On demand: No

In-advance/recurring: Yes

Name: [Tech Valley Shuttle](#)

Service Type: Vanpool

Location: Upstate NY

Cost: varies

Schedule: varies

Access: Through employer

On demand: No

In-advance/recurring: Yes

Name: [On-the-Go](#)

Service Type: Advance Reservation

Location: 20-mile radius of Glens Falls, NY

Cost: by donation

Schedule: Mon-Fri, 8:30 – 4:00

Access: phone call center

On demand: No

In-advance/recurring: Yes

Name: [CDTA Flex](#)

Service Type: Real-time Scheduling

Location: Clifton Park/Halfmoon, Mechanicville, and Albany/Colonie

Cost: \$1.50 per trip

Schedule: Mon - Sat 6:00a – 10:45p (7:00a - 8:00p in Saratoga County)

Sunday 10:00AM - 6:00PM

Access: dedicated app or phone call center

On demand: Yes

In-advance/recurring: No

There are a wide variety of potential transportation service models and initiatives which could be considered. This report includes as many options as could be identified. Relevant examples have been provided where possible; in particular, initiatives from within rural areas in New York State have been highlighted, since these solutions are more likely to be feasible in the A/GFTC region.

A. Fixed-route service:

This refers to transit service provided on a repetitive, fixed schedule basis along a specific route with vehicles stopping to pick up and deliver passengers to specific locations. Each fixed route service trip serves the same origins and destinations. In general, the population density for effective fixed-route service is 2,000 people per square mile, or 3 people per acre. GGFT operated fixed-route services in the urban core area with a combination of fixed stop locations and flag-down service.

- Fixed-route commuter services or shuttles allow for fixed-route transit to origin or destination clusters which may not otherwise meet density thresholds, such as industrial parks, college campuses, or isolated hamlets. These services are generally operated 1-2 times in the morning and evening. Although this may accommodate workers with traditional 9-5 schedules, it does not support off-peak shift work.

B. Flexible-route service:

This refers to transit service within a determined area which may deviate from set routes or points. Options include:

- Route Deviation: the vehicle may deviate from the scheduled route to stop at locations within a defined distance (for example, $\frac{3}{4}$ mile or 2 blocks) of the route. When this is done, the bus must return to the route where it deviated to continue service. Flexible routes are appropriate in areas where there is some clustering of origins and destinations, but not a high enough population density to support fixed route services. This service can support employment trips provided both origin and destination are located within the service area; however, timing may be less predictable than with fixed-route service.
- Checkpoint Service: a hybrid service in which vehicles serve designated stops at scheduled times but operate in demand-responsive mode between stops. Spontaneous travelers use the service by boarding and disembarking from buses at the designated checkpoint stops without advance reservation. Riders may access a demand-responsive service outside of checkpoints with advance reservation. There is no designated route between checkpoints. Since sufficient time must be built into the schedule to allow for the deviations between checkpoints, the overall running times between checkpoints are longer than they would be on a fixed route, but checkpoint stops are predictable. This service model can support employment trips provided both origin and

CASE STUDIES

Name: [BRATS](#)

Service Type: Microtransit

Location: Baldwin County, Alabama

Cost: \$2.00-\$5.00, depending on mileage

Schedule: Monday-Friday 7:00 AM – 4:30 PM

Access: via dedicated App or phone call center

On demand: Yes

In-advance/recurring: Yes

Name: [511NY \(A/GFTC Portal\)](#)

Service Type: Ridesharing

Location: Capital District, NY

Cost: Free

Schedule: N/A

Access: web portal

On demand: No

In-advance/recurring: Yes

Name: [Getthere](#)

Service Type: Commuter incentives/assistance

Location: Broome, Chenango, Otsego, Tioga Counties

Cost: Free

Schedule: N/A

Access: Web or phone referral

On demand: No

In-advance/recurring: No

Name: [Wheels to Work](#)

Service Type: Commuter incentives/assistance

Location: Otsego County

Cost: Varies

Schedule: N/A

Access: Email or phone application

On demand: No

In-advance/recurring: No

Name: [Volunteer Transportation Center](#)

Service Type: Volunteer driver program

Location: Jefferson, Lewis, St. Lawrence Counties

Cost: Free

Schedule: N/A

Access: Email or phone application

On demand: No

In-advance/recurring: No

destination are located within the service area; however, timing may be less predictable than with fixed-route service.

- **Zone Service:** provides limited transit access over a large area that could not otherwise support service. Zone service can assign fixed-route, demand-response, or other type of service to certain zones on certain days. Zone service is ideal for trips dedicated to occasional appointments or shopping but is not usually able to accommodate employment trips due to decreased frequency of the service.

C. Demand Response:

In this system, vehicles do not operate over a fixed route or on a fixed schedule; passengers must request a trip by contacting the transit agency or using a website or phone app.

- **Subscription/Vanpool:** passengers request repetitive rides on an ongoing basis. This works well for clustered origins or destinations and low daily frequency of demand (1-2 trips a day), making it a good option for employment trips. Vanpool services may also qualify for tax benefits for commuters. However, this service usually does not accommodate flexibility in terms of emergencies or schedule deviations.
- **Advance Reservation:** allows requests with a requirement for advance notice (3-72 hours is a common range). This can accommodate low-density origins and destinations in areas of low demand.
- **Real-time Scheduling:** operates similar to a taxi or ride-hailing service. Works best with high density areas and short trip distances. Allows for flexibility for emergencies or schedule deviations; however, trip timing may be unpredictable.

D. Microtransit/Mobility on Demand:

Similar to demand response service, microtransit is operated with smaller vehicles and may be contracted through a vendor. Mobile technology provides dynamic routing and curb-to-curb or corner-to-corner service; vehicles are usually vans or minivans, which can be operated without a CDL license. Many microtransit vendors will work directly with employers or on a subscription basis. For community-wide service, a “mix-and-match” approach can offer a variety of demand response types.

E. Ridesharing:

Also known as carpooling, this option encourages employees to share rides to work. This often occurs on an ad-hoc basis; however, employers or other agencies can opt to proactively facilitate this activity. The drawback to this approach is that employees who are dependent on the service may be unable to get to work if the driver is sick, on vacation, or otherwise unable to drive. In addition, jobs with flexible scheduling, such as retail and service positions, can make it difficult to arrange rides consistently.

Ridesharing can also occur with employees of different businesses. This can be facilitated through individual coordination or with ridematching services such as 511NY. The A/GFTC area already has a dedicated rideshare portal, which also includes information regarding transit, traffic conditions, and park-and-ride lots.

F. [Commuter Incentives:](#)

This option includes direct or indirect subsidies to employees to reduce the cost of commuting and/or promote transit use. This can include a wide range of initiatives such as providing gas cards, ridesharing incentives, bus passes, car sharing, guaranteed ride home programs, or related perks. This can provide additional support to transportation-insecure employees who may face occasional issues getting to work. Since these initiatives may not provide direct transportation services, they are most useful as supplements to other programs.

- “Wheels to Work” Program: A transportation assistance program designed to support income eligible households in acquiring safe, reliable transportation so adults may get to and from work. The program helps low-income adults by coordinating the purchase of affordable/used vehicles, offering financial assistance for vehicle repairs, and general financial management skills. In some cases, these types of programs are offered exclusively to families with children. Although Warren County had a Wheels to Work Program, it was discontinued about ten years ago.

G. [Volunteer Driver programs:](#)

These systems rely on the services of volunteers to provide transportation which is scheduled in advance. In most cases, volunteers drive their own vehicles and are reimbursed for mileage. For this type of system to succeed, there must be an agency which provides oversight of the drivers, facilitates scheduling, and manages the funding sources and reimbursement process. Finding volunteers to participate is often difficult, especially with regards to trips on weekends and after business hours. This type of service is most useful to provide occasional trips to medical appointments or shopping, rather than regularly-scheduled work trips. However, in theory it could be useful for occasional work-related trips, as long as the rides can be scheduled in advance.

H. [Transportation Service Option Comparison](#)

Given the wide range of service modes and program options, this plan attempts to provide additional clarity regarding which options are most applicable for workforce transportation. Table 4 below summarizes the factors which determine the feasibility and applicability of the various options. This includes:

- Minimum required population density (high, medium, or low)
- Whether the service is appropriate to public (municipal), private, or public-private operation
- What type of trip demand is accommodated
- Whether the service accommodates variable origin and destination points
- The timing predictability
- Whether the service can accommodate schedule flexibility
- Overall determination of applicability for workforce transportation (high, medium, low)

Service/Initiative	Min. Density	Public or Private	Trip demand	Origin Variable	Destination Variable	Timing predictable	Schedule Flexibility	Applicability for work trips
Fixed Route	High	Public	Continuous	No	No	Yes	Varies	High*
Fixed Route Commuter	Varies	Public	Commuter	No	No	Yes	No	High
Flexible Route Transit								
Route Deviation	Medium	Public	Continuous	Yes	No	Varies	Varies	Medium
Checkpoint Service	Medium	Public	Continuous	Yes	Yes	Yes	Varies	Medium
Zone Service	Low	Public	Limited	No	No	Yes	Varies	Low
Demand-Response Transit								
Subscription/Vanpool	Low	Both	Commuter	Yes	No	Yes	No	High
Advanced Reservation	Low	Public	Reserved	Yes	Yes	Yes	No	High
Real-time Scheduling	High	Public	On-demand	Yes	Yes	No	Yes	Medium
Microtransit	Varies	Both	Varies	Yes	Varies	Varies	Varies	High**
Ridesharing	N/A	Both	Commuter	Yes	No	Yes	Varies	High
Commuter incentives	N/A	Both	N/A	N/A	N/A	N/A	N/A	Medium
“Wheels to Work”	N/A	Public	N/A	N/A	N/A	N/A	N/A	Medium
Volunteer Drivers	Low	Both	Reserved	Yes	Yes	Varies	Varies	Low
* High applicability to urban core only; low applicability to rural areas								
** Vendor-based microtransit options may or may not be viable; additional analysis needed to determine								

Based on the above factors, the most applicable transportation service options for the rural areas within the A/GFTC region include:

- Fixed-route Commuter
- Subscription/Vanpool
- Advanced Reservation
- Microtransit
- Ridesharing
- Commuter Incentives

Additional detailed analysis would be required to determine the viability of these options within specific priority areas of the A/GFTC region.

1) *Options for Implementation/Operation*

There are a number of public and private options to establish and operate transportation services. Some considerations include:

- **Public agencies:** In addition to transit operators, there are several public organizations which could potentially operate or manage transportation services. Indeed, some agencies already offer transportation service to specific groups such as seniors, veterans, and the disabled. A public operational model offers a number of benefits, including access to federal and state grants and broad applicability to the public at large. There may be opportunities to coordinate and collaborate with existing human service transportation providers as well. However, there may be geographic or other limitations which may pose difficulties to establish services that extend outside of the region. Service modalities which are more suited to public administration include fixed-route/commuter service, demand response/microtransit, and commuter incentives such as Wheels to Work.
- **Private organizations:** Businesses, chambers of commerce, or similar private organizations can also operate transportation services. In terms of benefits, private operational models are often nimbler and more flexible than public agencies, which means services can be set up and respond to changes in demand more quickly. However, access to grant funding is limited. In addition, employer-based transportation services only benefit the workers at that specific company rather than the region at large. Service modalities which are more suited to private operation include vanpool, vendor-based microtransit, enhanced ridesharing, and commuter incentives such as gas cards, transportation stipends, or bus tokens.

- **Public-private partnerships:** This option can tap into the strengths of both public and private organizations, allowing for a wide array of service modes. However, this requires a significant amount of coordination to maintain communication and collaboration. One option to foster this type of organizational structure would be a Transportation Management Association (see sidebar). The creation of an agency dedicated specifically to providing transportation oversight, management, and coordination could focus regional efforts and reduce inefficiencies.

VI. Next Steps/Priorities

Spotlight on TMAs

A Transportation Management Association (TMA) is a public/private entity which is formed to address transportation issues in a region. This could be funded by a combination of public and private sources and may be housed in an existing agency such as a municipality, the Regional Planning Board, the MPO, an EDC, a business association, or within a non-profit organization. Examples of TMA activities could include:

- Organizing vanpool services
- Operating transportation call centers
- Providing mobility management services for existing agencies
- Holding the contract for vendor-provided services
- Public outreach, education, advocacy, and marketing
- Coordinating Guaranteed-Ride-Home services or other commuter incentives
- Develop pilot programs
- Access grant funding not otherwise available to public or private agencies

1) Improve coordination and identify opportunities for collaboration and implementation.

For decades, various public and private agencies have attempted to increase coordination and expand transportation options, whether directed towards workforce issues, human service transportation, or public transit in general. However, these efforts have been hampered by legal limitations on authority, lack of resources or funding, or competing priorities. Given the opportunities afforded by the proposed transit merger, increased funding for transportation, and a renewed focus on economic development, the time is ripe to identify a champion to carry forth the priorities of the region. This could take the form of a staff position within an existing agency or a dedicated institution such as a Transportation Management Association (see sidebar).

Regardless of the administrative details, a key priority of this coordination should be to maintain momentum and continue to keep communication channels open, especially between the transit agencies, the business community, and the various public entities involved.

2) Identify location(s) for priority pilot projects and pursue needed analysis/collaboration for implementation.

As noted in section IV, there are several possible transportation options which may prove viable in the region, pending additional detailed analysis. This plan also identified priority locations based on various demographic, economic, and geographic factors. However,

one factor which has not been accounted for is buy-in from the local municipal and business community. This participation will be crucial to take the next step in analysis and potential project/program development. Reaching out to these stakeholders to determine the level of interest should occur prior to developing a scope of work for implementation.

By combining the results of the geographic priority analysis and the transit option analysis, two possible locations for different pilot projects have been identified. These represent the locations with the most pressing needs while also creating the greatest opportunities for successful implementation of the identified modalities.

- Village of Granville: Employer-based Microtransit or Vanpool

As stated previously, the Village of Granville contains several large employers, imports a significant number of employees from other areas of the region, and is in itself a dense population center. In addition, the demographic and economic data provide strong evidence of the need for additional

transportation services. These qualities, when combined, create a ripe opportunity for an employer-based microtransit or vanpool service pilot project.

In terms of next steps for implementation, a lead agency would need to be identified, such as the Regional Planning Board or another organization (see item 1 above). The lead agency should begin by canvassing large employers to determine the level of interest. Next, a Request for Information (RFI) could be developed in partnership with relevant stakeholders such as A/GFTC and CDTA. Pending the results of the RFI, funding could then be identified and sought through appropriate channels and/or public-private partnerships. A contract with the vendor would then be held by the lead agency to provide the proposed transit service. This service model is becoming more and more common throughout the US as more vendor-based transportation providers are established.

- Warrensburg/Central Warren County: Community-based Microtransit/Mobility Management

The central portion of Warren County, centered roughly around Warrensburg but extending east to Bolton Landing and south to Lake George, also represents an area of opportunity. As stated previously, the demographic and economic conditions in this area speak to a clear need for additional transportation services in general, and specifically regarding workforce transportation. In addition, municipal leaders and community stakeholders in Bolton Landing and Warrensburg have repeatedly sought out opportunities for expanded transit service, which might indicate a high level of community buy-in.

In terms of implementation, this area will be more complicated to address; the lack of large employers and the high number of seasonal jobs may make it difficult to identify year-round service hubs. Currently, the overwhelming majority of employees in Warrensburg and Bolton Landing travel south to the core urban area for work, though there is some “cross-pollination” between Warrensburg and Bolton Landing. Lake George Village currently has year-round transit service to Glens Falls, so theoretically potential workers from Warrensburg and Bolton Landing could use this existing service, if they had means to access it. However, previous and ongoing trolley service to these communities does not address the need for year-round employment transportation. In addition, while the scheduling of the trollies provides some support for a south-to-north commute (i.e., workers from Glens Falls and Lake George traveling to Bolton Landing), the reverse is not necessarily the case.

To address these needs, a thorough service planning analysis will be necessary. This should involve the lead agency, community stakeholders, CDTA, and large employers at a minimum. It may be possible to support a significant number of workers simply by providing a robust and ongoing rideshare system to complement year-round transit in Lake George. Or it might also be beneficial to craft an RFI for a community-based microtransit service which could provide rides to/from Glens Falls or Lake George in the morning/evening commute, while also providing local rides for general transportation needs in Warrensburg and Bolton Landing during the day. In either case, a dedicated service planning analysis would be needed to identify opportunities and solutions.

3) *Explore opportunities to improve transit service with the CDTA/GGFT merger.*

The merger of CDTA and GGFT will not result in immediate changes to the established transit service in the region. In the short term, CDTA will be undertaking a Transit Development Plan beginning in spring 2023. As part of that effort, the needs of the A/GFTC region should be included so that any future service changes take local needs into consideration. Ultimately, the merger may create opportunities for improved inter-regional connections as well as more expansive marketing/education and newer technologies such as real-time transit service mapping.

4) *Support the re-establishment of the Wheels-to-Work program in Warren County and explore expansion to Washington County.*

Even with adequate transit options to rural areas, there will always be gaps due to lack of private vehicles. The Wheels-to-Work program is an effective way to help residents to purchase and maintain their own vehicle. This results in direct benefits to the resident and their family, as well as benefits to public agencies in terms of deferred assistance. As of early 2023, Warren County has already expressed interest in re-establishing this program. This effort should be supported. In addition, there may be opportunities to derive helpful “lessons learned” which could be applied to determine whether a similar program would be viable in Washington County.

5) *Strengthen the land use and transit connection.*

An ongoing issue within the urban and urban-adjacent areas in the region is the lack of coordination between local land use decisions and public transportation. In particular, local planning boards, zoning boards, and other municipal officials often fail to consider public transit in the land use planning and decision-making process. This disconnect often leaves the transit operator in a reactionary position, striving to accommodate the expansion of housing, retail, and employment development in areas which may be difficult or impossible to service. Another common issue is that transit provisions such as bus shelters, bike racks, and pedestrian connections are left out of development proposals, even within the areas serviced by transit routes. The lack of “first-mile/last-mile” links is a barrier to increased transit ridership. Without comfortable, convenient facilities and easy pedestrian connections, there is little incentive for residents and employees to choose transit over other transportation options. Although this affects the urban core area more than the rural areas, supporting a strong transit service through sound land use planning benefits the region as a whole.

To that end, it is recommended that outreach and training for local land use boards and municipal officials be developed. This could include educational websites, fact sheets, and/or training modules. Where possible, certification for education credits should be provided to fulfill requirements for planning and zoning board training. This effort could be led by MPO, RPB, or County planning staff or consultants in partnership with CDTA.

APPENDIX A: EXISTING CONDITIONS ANALYSIS

I. Existing Conditions

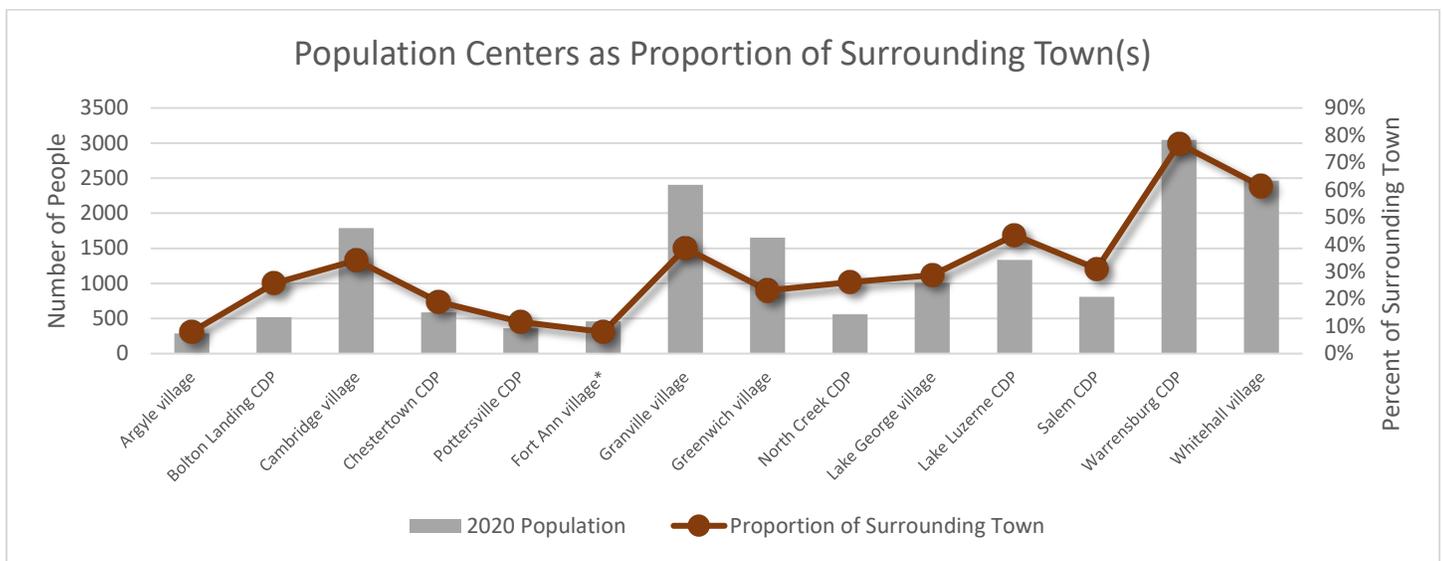
A. Demographic Profile

1. Population Density and Distribution

Although the urban core is the main center of population within the region, there are several villages and hamlets which contain pockets of higher-density housing, services, and employment. For the purposes of GIS mapping, these areas are delineated either by Village boundaries or as Census Designated Places (CDPs) in the case of hamlets and are referred to as ‘population centers’ for the purposes of this plan. (See Map 2). These population centers range from settlements of just a few hundred people to several thousand residents. Since these areas contain a higher concentration of housing, services, and employment, they have been included alongside the surrounding areas for comparison purposes where data allows.

It is important to note that despite having higher population density, not all rural population centers contain the majority of residents in the surrounding towns. For example, the residents of the Village of Argyle, Village of Fort Ann, and hamlet of Pottersville make up only about 10% of the population of the surrounding town¹. Conversely, Village of Whitehall and hamlet of Warrensburg each contain over 50% of the population of their respective towns. (See Figure 1.) This may be relevant to future efforts regarding service planning for potential transportation services, as certain population centers are more suited to act as “hubs” for the rural areas.

Figure 1



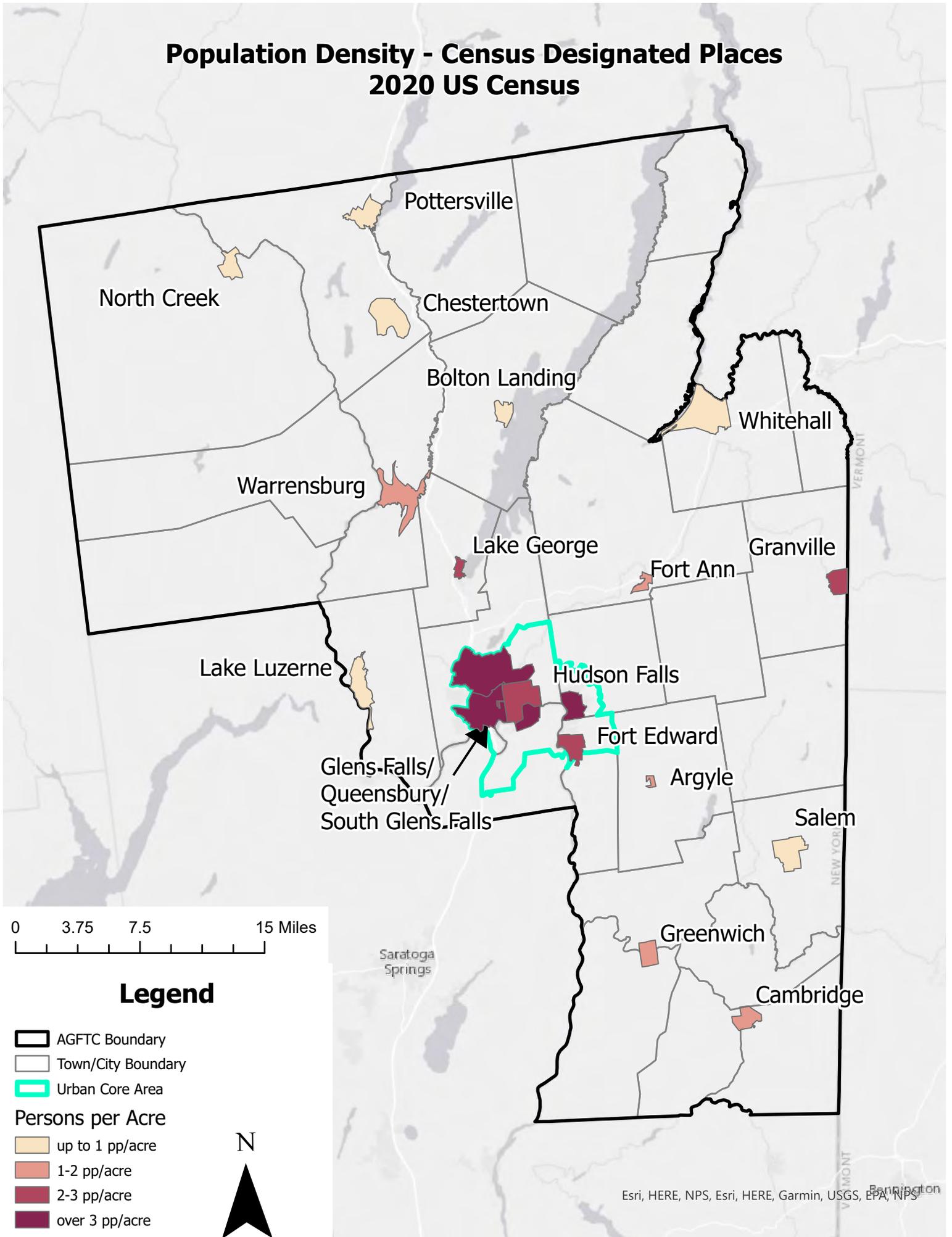
2. Race and Ethnicity

Overall, the A/GFTC area has low rates of racial and ethnic diversity, with approximately 90% of residents identifying as white only. The largest racial minorities are Black and Asian. However, the distribution of minorities throughout the region is unequal (See Table 1). In some cases, namely North Creek, Bolton Landing, Lake George, Lake Luzerne, Granville, and Greenwich, the percentage of minorities in the population centers is higher than the surrounding town(s) as a whole. However, in the case of Salem, Chestertown, and Fort Ann², the reverse is true. Pottersville, Whitehall, Warrensburg, Argyle and Cambridge have minority populations about on par with the surrounding towns. See Map 3.

¹ This may also be a factor of the limited geographic delineation in the smaller villages, which do not encompass some surrounding areas of higher-density housing.

² The inmate population in Fort Ann was included in the 2020 census, which inflates the minority population beyond what is typical for the region as a whole.

Population Density - Census Designated Places 2020 US Census



0 3.75 7.5 15 Miles

Legend

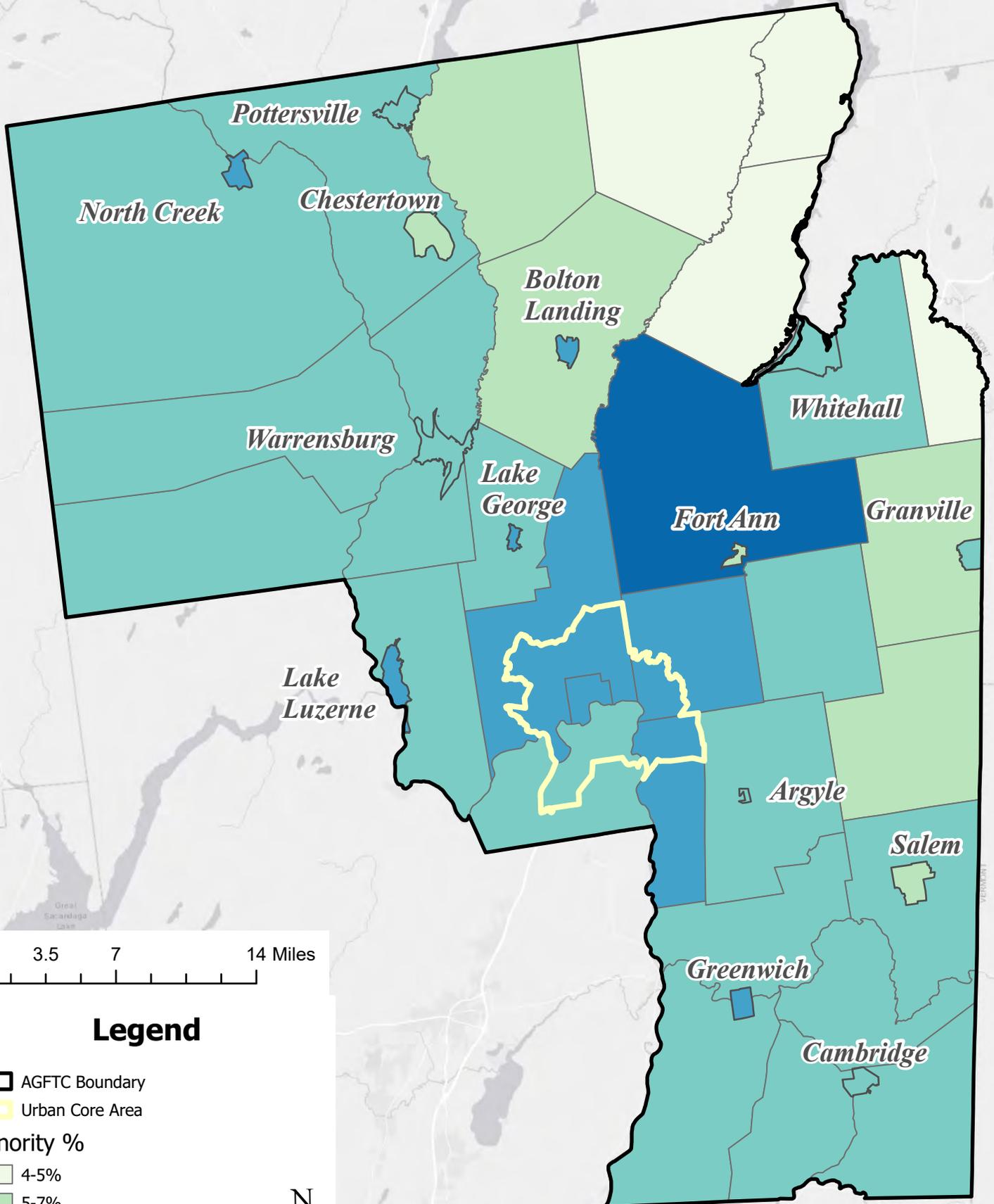
- AGFTC Boundary
- Town/City Boundary
- Urban Core Area

Persons per Acre

- up to 1 pp/acre
- 1-2 pp/acre
- 2-3 pp/acre
- over 3 pp/acre



Minority Population % Villages/CDPs vs. Towns 2020 US Census



Legend

- AGFTC Boundary
- Urban Core Area
- Minority %**
- 4-5%
- 5-7%
- 7-9%
- 9-13%
- 34% (Incl. correctional facility)



Location	White	Hispanic	Non-white	More than 1 race
A/GFTC Towns and City*	87-96%	1-4%	4-13%	2-6%
Urban Core Only	89%	3%	11%	5%
Rural Population Centers Only	88-95%	1-5%	5-12%	5-6%

*Excluding correctional facilities

3. *Age*

Since this plan is focused on workforce issues, two age cohorts have been included for analysis. The first includes residents aged 18-65, which represents the majority of potential employees. The distribution of population aged 18-65 can be seen in Map 4. In terms of rural population centers, the highest concentrations of working age residents can be found in Chestertown, Lake George (village), Lake Luzerne, Whitehall, Fort Ann, and Salem as well as within the Urban Core Area. In the rural areas, the towns of Bolton, Lake Luzerne, Moreau, Kingsbury, Hebron, and Fort Ann² have higher concentrations of working-age residents.

Senior population, or those aged 65 and older, was also analyzed (see Map 5). Areas with a higher concentration of seniors may also benefit from the addition of transportation services. Hague, Horicon, Putnam, Dresden, and northern Queensbury had the highest concentrations of senior population.

4. *Education*

To gain a better understanding of education levels throughout the region, two data sets were mapped on the census tract level. First, the percentage of residents with a bachelor’s degree or higher was analyzed in Map 6. The highest concentrations can be found in the towns of Queensbury, Lake George, Moreau, Greenwich, and Cambridge.

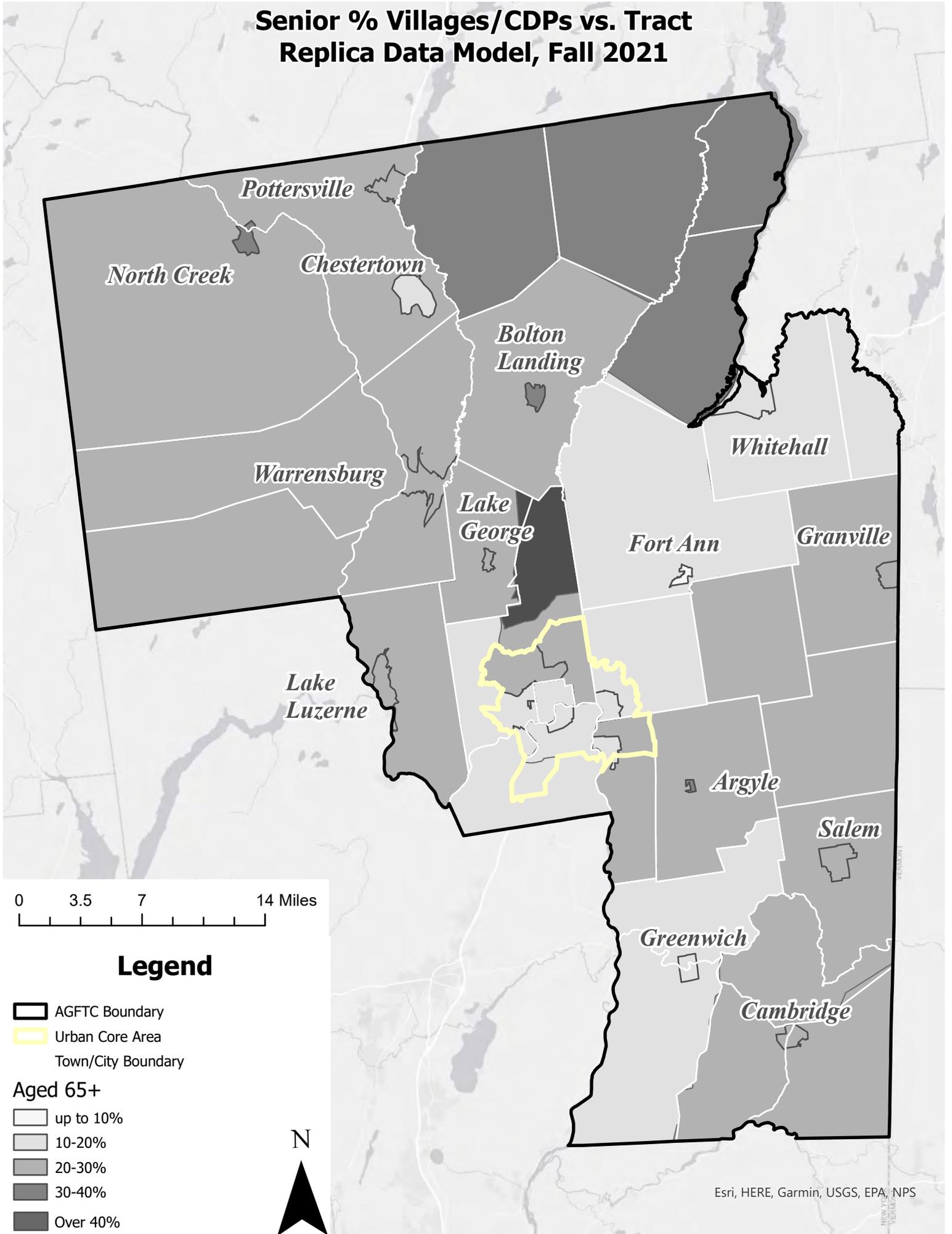
In addition, Map 7 shows the distribution of residents without a high school diploma. In conjunction with a lack of transportation choice, the lack of a high school diploma can inhibit the ability to get a job. Over 15% of residents in Whitehall, Hampton, Hebron, and portions of Granville, Fort Edward, and Glens Falls lack a high school diploma.

5. *Poverty Status*

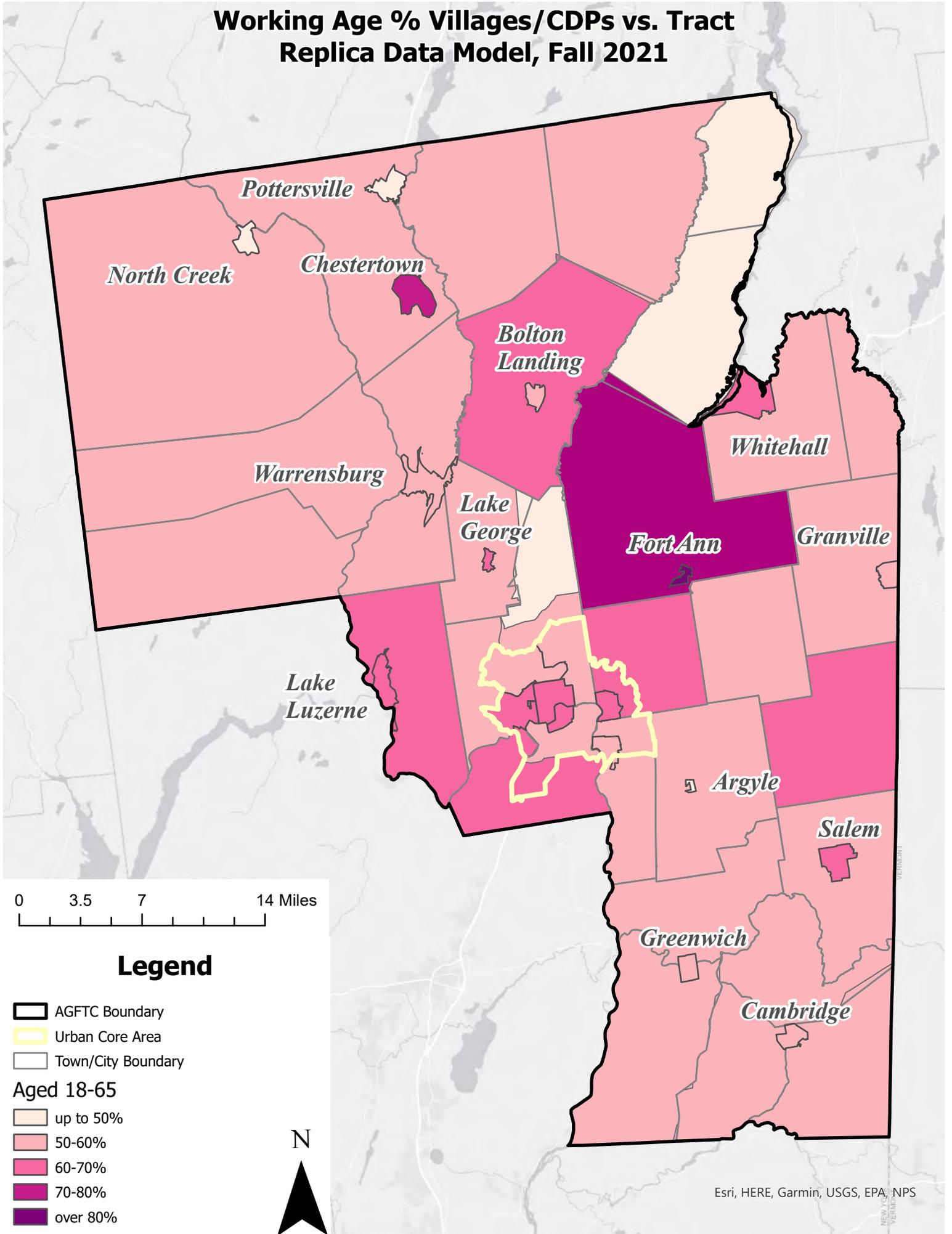
Poverty is only one aspect of economic disadvantage; however, to gain a more thorough understanding of the demographics of the region, the percentage of residents within census tracts and within population centers was mapped. (See Map 8). The rural population centers with the highest estimated rates of poverty are Argyle, Whitehall, and Granville. The tract with the highest estimated poverty rate was located in Hebron.

It is crucial to note that the margins of error for this data set vary widely. In the case of the population centers, the margin of error was nearly equal to the estimate; as such, this data should not be used in isolation. See section II.E for more information concerning economic disadvantage.

Senior % Villages/CDPs vs. Tract Replica Data Model, Fall 2021



Working Age % Villages/CDPs vs. Tract Replica Data Model, Fall 2021



0 3.5 7 14 Miles

Legend

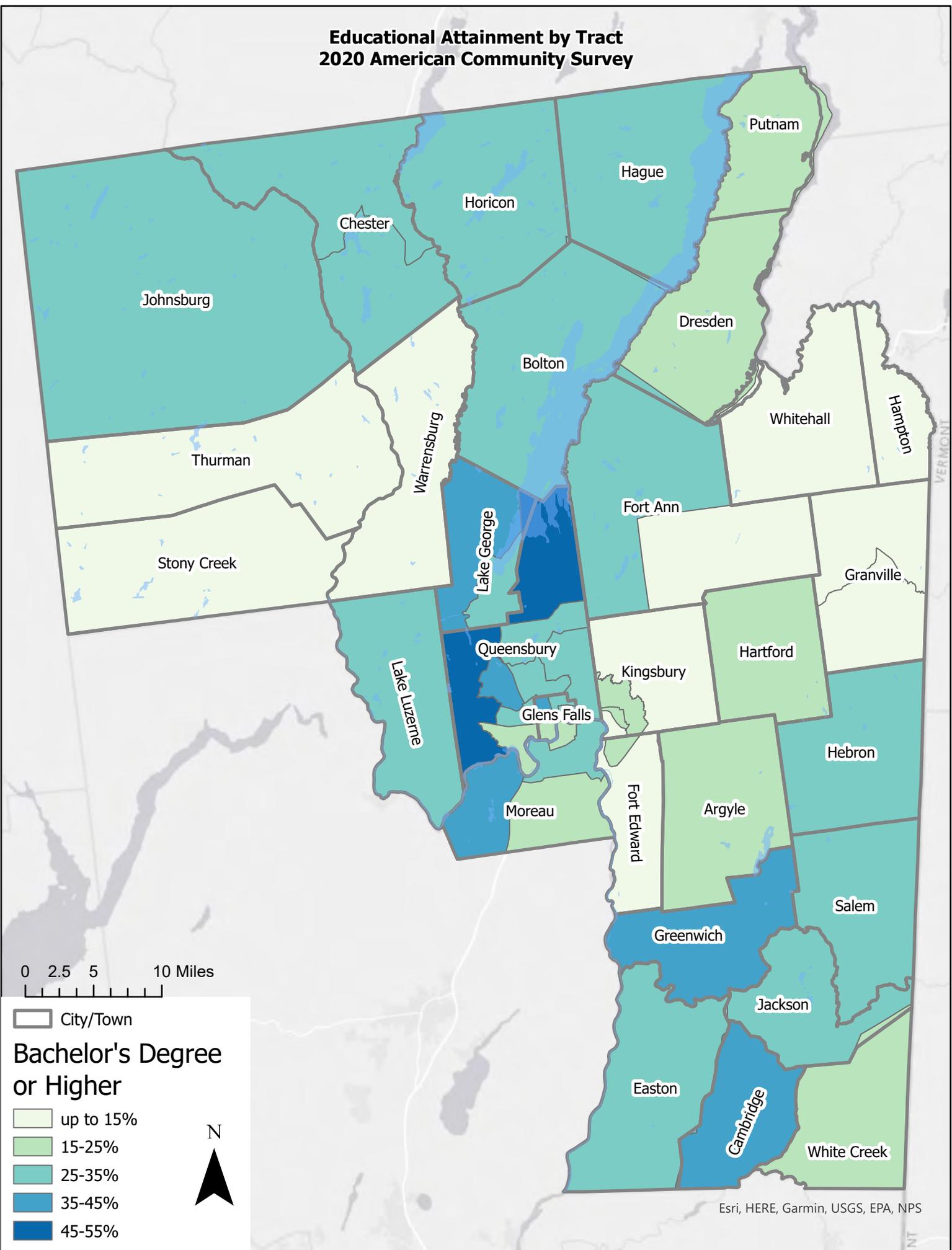
- AGFTC Boundary
- Urban Core Area
- Town/City Boundary

Aged 18-65

- up to 50%
- 50-60%
- 60-70%
- 70-80%
- over 80%

N

Educational Attainment by Tract 2020 American Community Survey



0 2.5 5 10 Miles

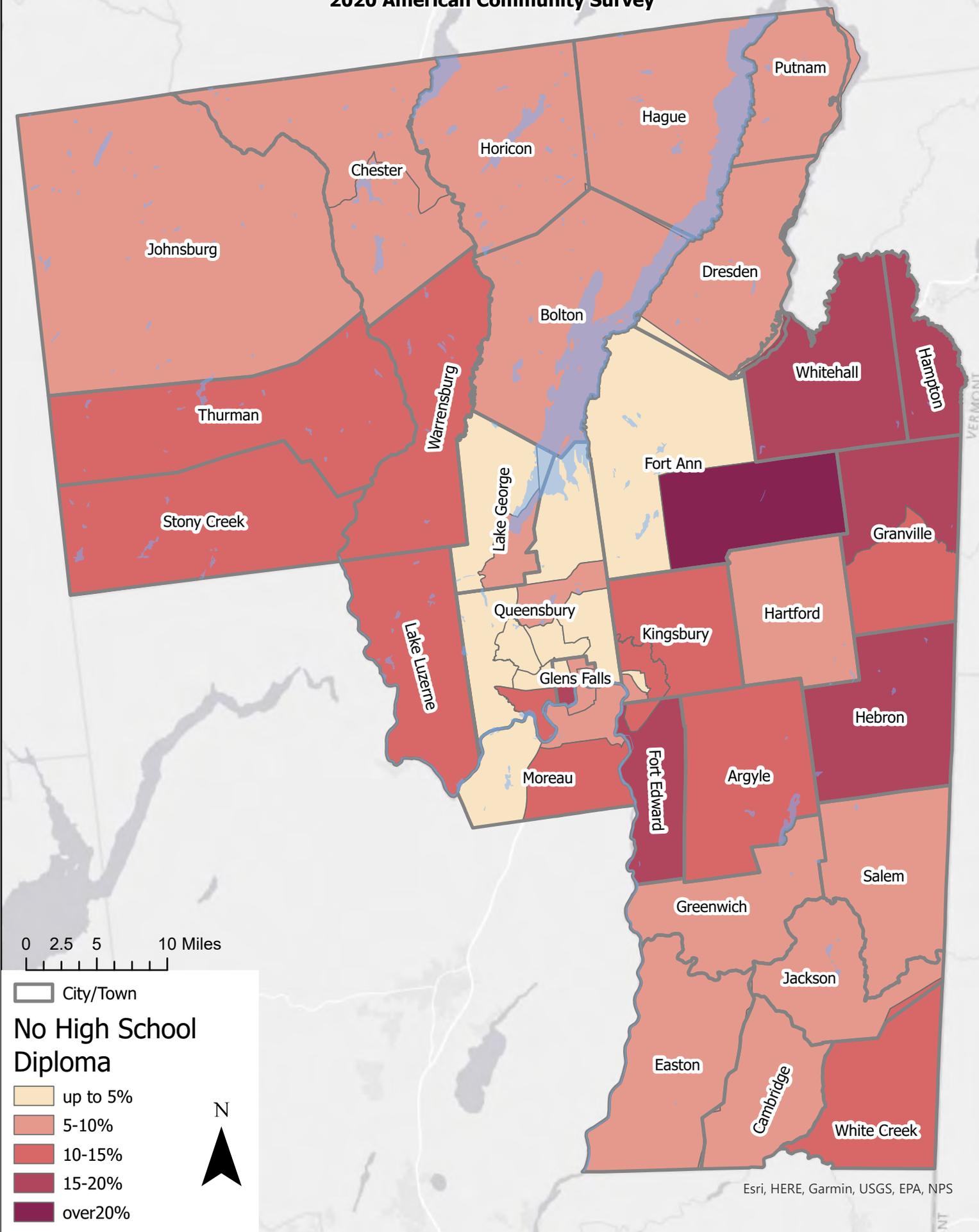
City/Town

Bachelor's Degree or Higher

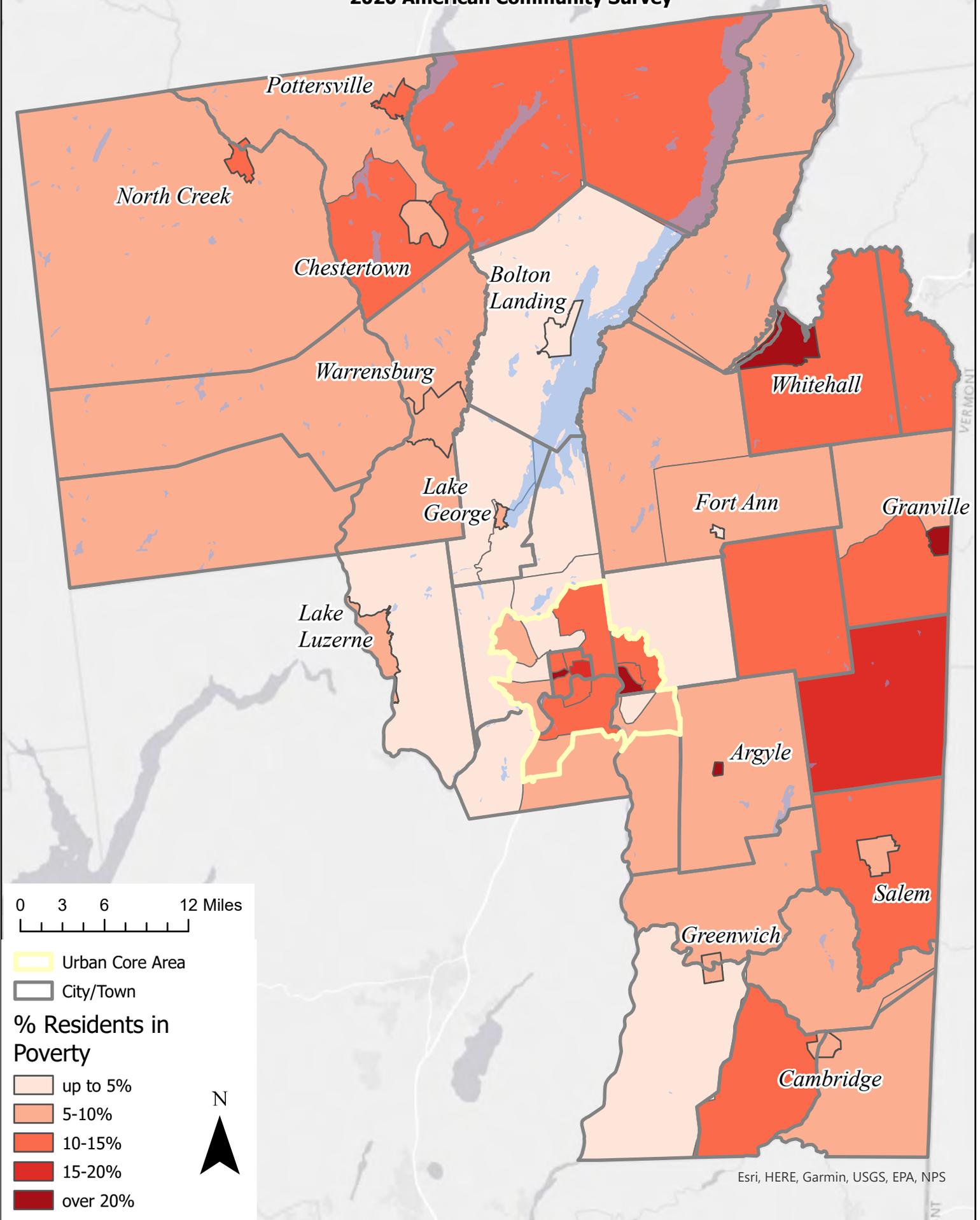
- up to 15%
- 15-25%
- 25-35%
- 35-45%
- 45-55%

N

Educational Attainment by Tract 2020 American Community Survey



Poverty Status by Village/CDP vs. Tract 2020 American Community Survey

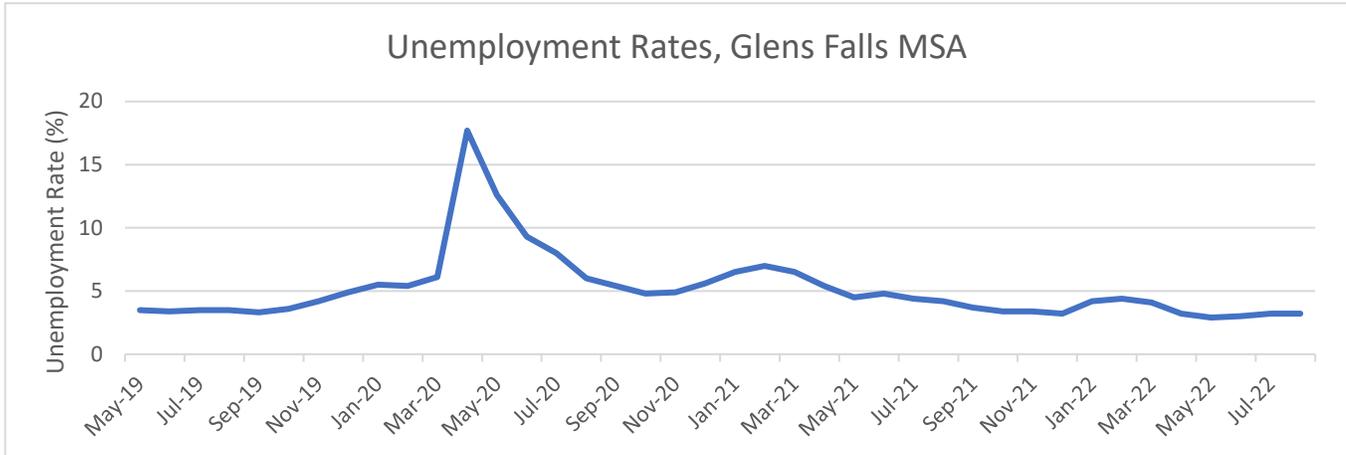


B. Employment Profile

1. Unemployment Rates

Like much of the country, the A/GFTC area experienced a rise in unemployment due to the COVID-19 pandemic. However, according to data from the NYS Department of Labor Current Employment Statistics (CES), the region has largely recovered and current unemployment rates are comparable to 2019 levels. (See Figure 2). This data set pertains to the Glens Falls Metropolitan Statistical Area, which does not include the Town of Moreau or the Village of South Glens Falls.

Figure 2

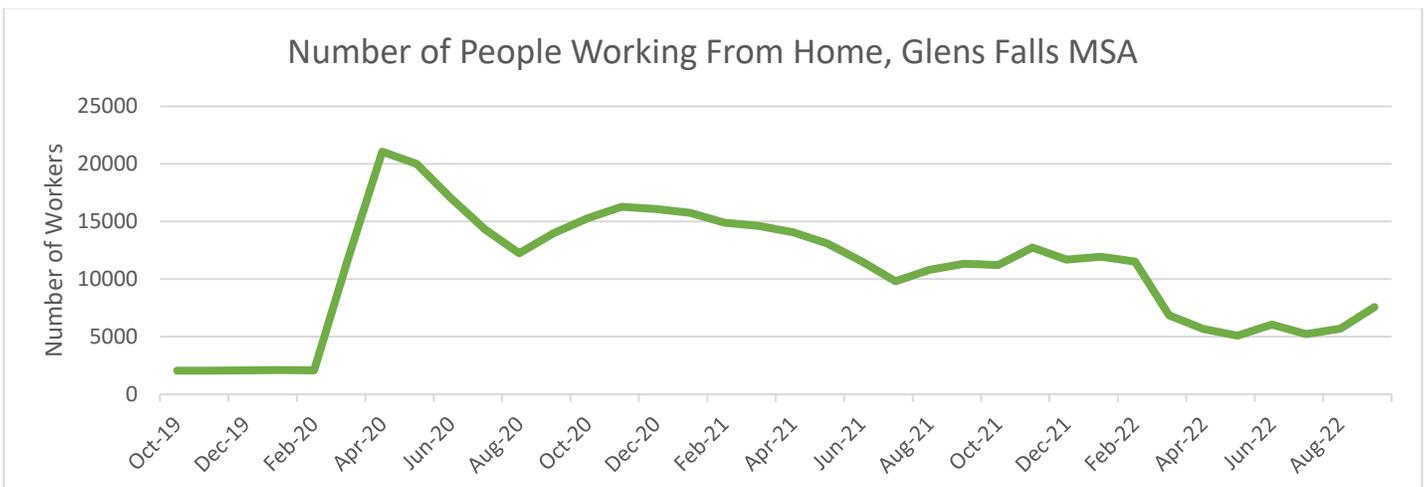


In terms of the distribution of unemployment throughout the A/GFTC area, unemployment rates were obtained through the Replica Data Model for an average day in Fall 2021 (See Map 9). These maps represent the range of unemployment rates for working age individuals within census tracts and population centers. This can be useful to determine the location of pockets of higher-unemployment areas, which could therefore influence future transportation solutions. In terms of rural population centers, Salem, Argyle, Chestertown, and Bolton Landing had higher rates than the surrounding area. Conversely, the towns of Kingsbury, Lake George, Putnam, and Dresden had the highest rates of unemployment when measured by census tract.

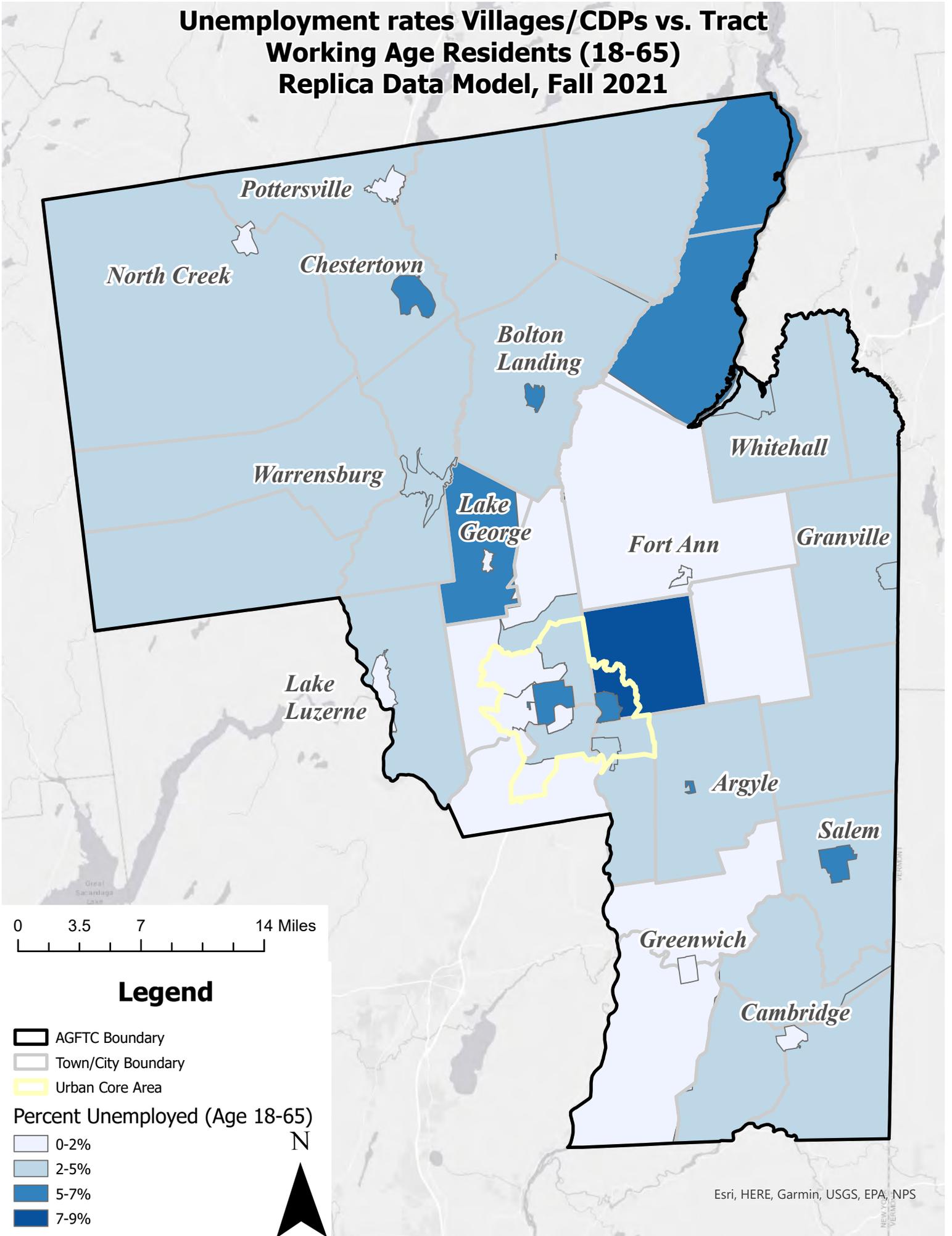
2. Work-From-Home Rates

Another major shift which was precipitated by the COVID-19 pandemic was seen in the number of people working from home. As seen in Figure 3, the number of people working from home within the Glens Falls MSA peaked in April of 2020,

Figure 3



Unemployment rates Villages/CDPs vs. Tract Working Age Residents (18-65) Replica Data Model, Fall 2021



0 3.5 7 14 Miles

Legend

- AGFTC Boundary
- Town/City Boundary
- Urban Core Area

Percent Unemployed (Age 18-65)

- 0-2%
- 2-5%
- 5-7%
- 7-9%



with over 21,000 residents staying home during the lockdowns. Since then, rates have fallen but are still significantly higher than pre-pandemic levels, with about 7,500 residents working from home all or part of the time.

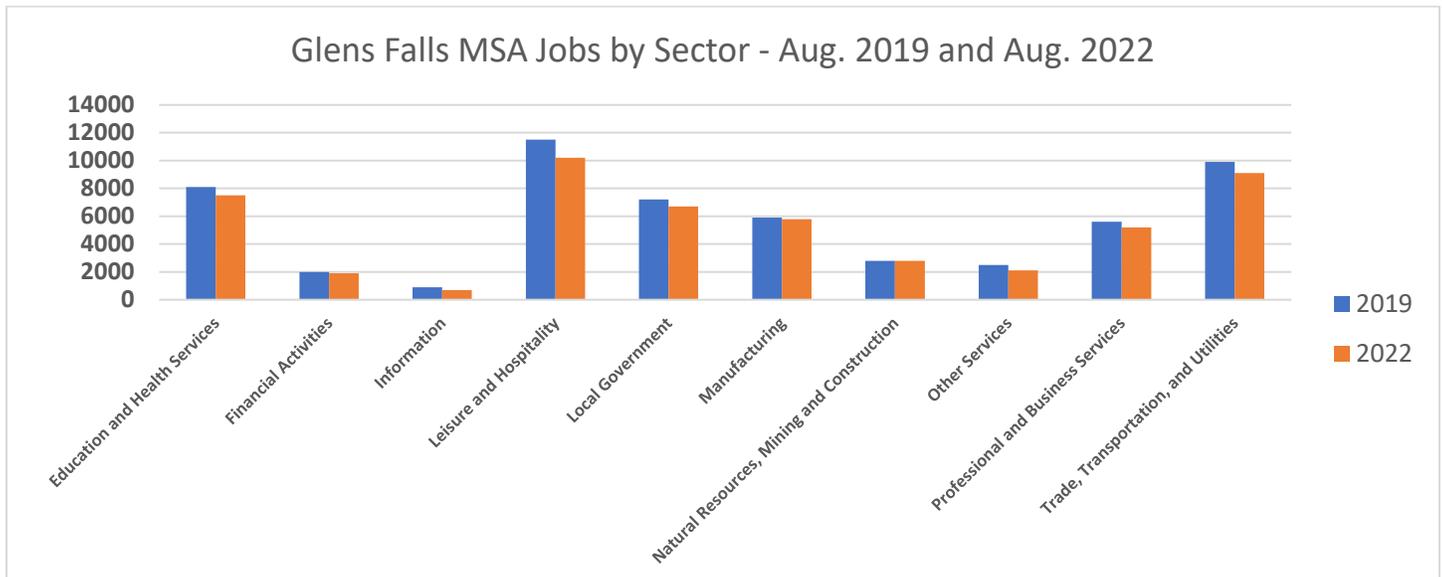
The distribution of those who work from home is unequal, as seen in Map 10. Not all jobs can be performed from home, and adequate internet service is also required. As broadband connectivity continues to expand, this may create opportunities for rural residents to obtain employment without the need for additional transportation services.

C. Labor/Industry Profile

To provide an overview of the job types located in the A/GFTC area, data from the NYS Department of Labor Current Employment Statistics (CES) was analyzed for both 2019 and 2022. The monthly estimates are based on a survey of more than 18,000 businesses in New York State. CES data reflect jobs by “place of work” and does not include the self-employed, unpaid family workers, or private household employees. This data set pertains to the Glens Falls Metropolitan Statistical Area, which does not include the Town of Moreau or the Village of South Glens Falls. This data is not seasonally adjusted.

A comparison of jobs by sector from August 2019 and August 2022 shows a loss of jobs across almost all sectors except for Natural Resources, Mining, and Mineral Extraction (See Figure 4). However, the overall proportion of jobs has not changed, with the top three sectors comprised of Leisure and Hospitality; Trade, Transportation and Utilities; and Education and Health Services.

Figure 4

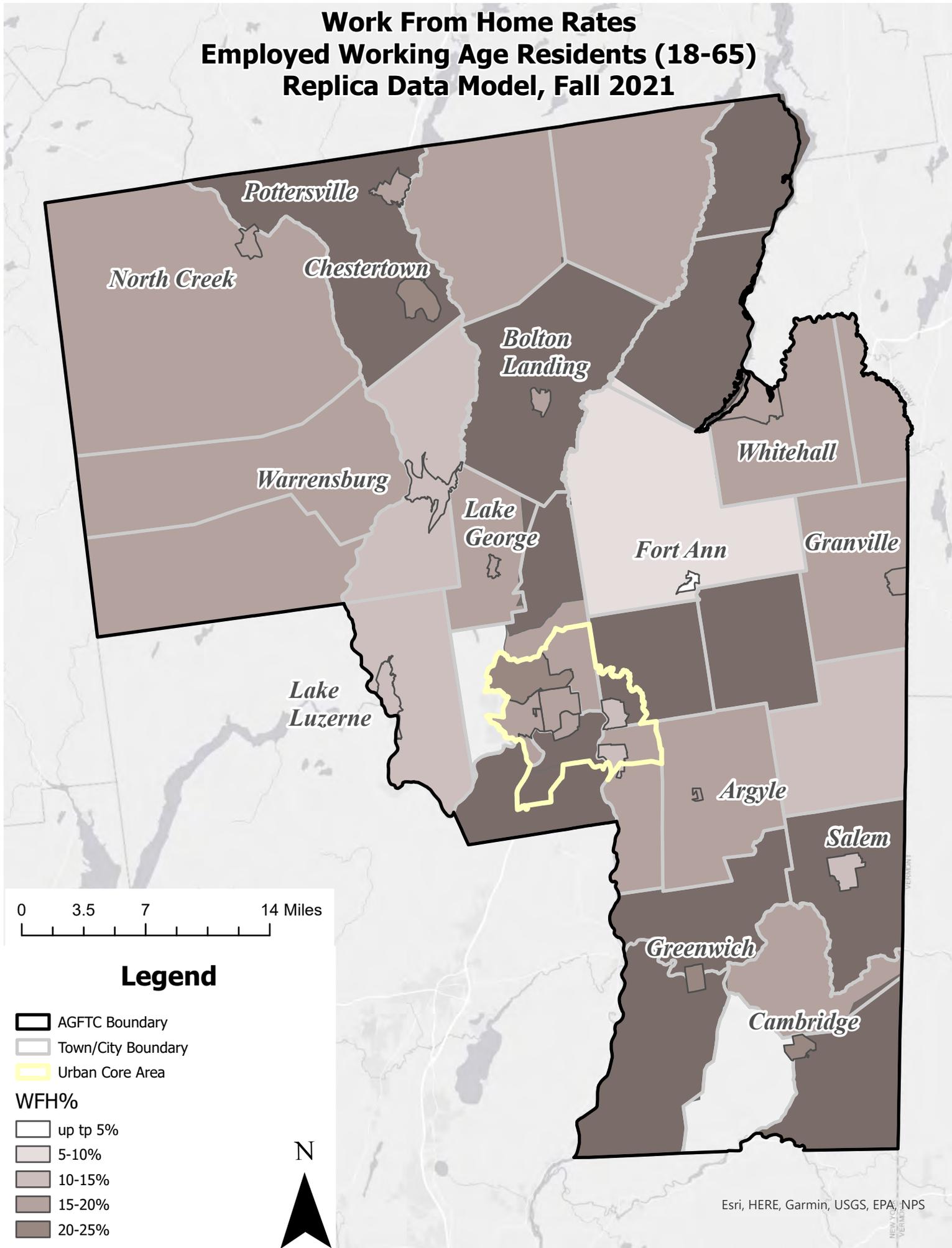


1. Employment Clusters

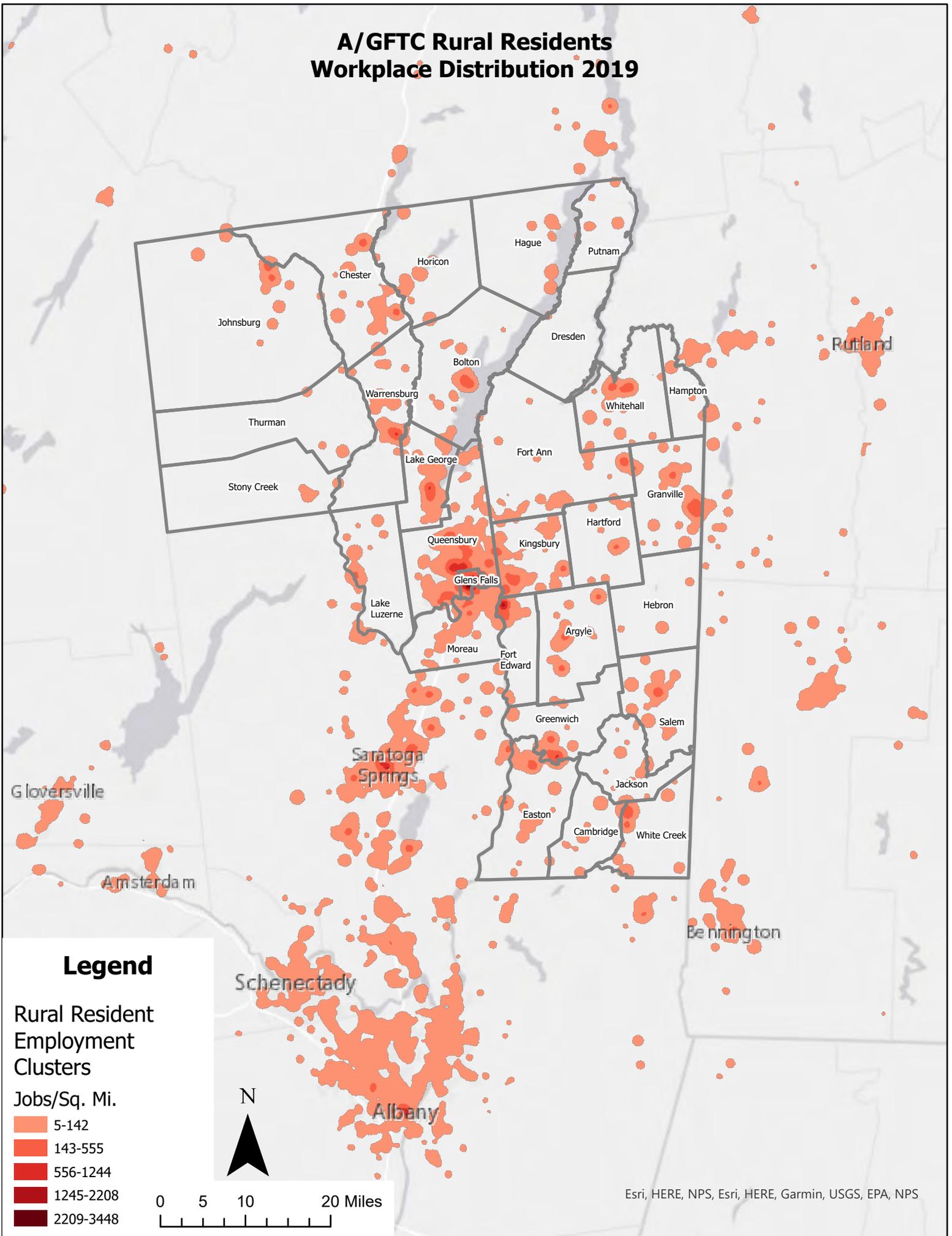
To provide context for where the residents of the A/GFTC area work, the US Census OnTheMap platform was used to generate heatmaps of employment locations on a broad scale. This analysis was done both for the residents living in the urban core area (Map 11) as well as the residents of the rural area (Map 12).

As indicated in the maps, there is a significant overlap with regards to the urban core area itself as well as locations outside the A/GFTC region, particularly Saratoga Springs and the Albany/Schenectady metro area. However, there are discrete areas in which mostly rural residents work, namely Rutland, Bennington, and Manchester within Vermont, as well as the rural portions of Warren and Washington Counties. In addition, the distribution of rural workers throughout the rural areas is much more prevalent than urban workers. This suggests that there are significant numbers of residents traveling within the rural areas for work. As such, proposed transportation solutions should take these travel patterns into account.

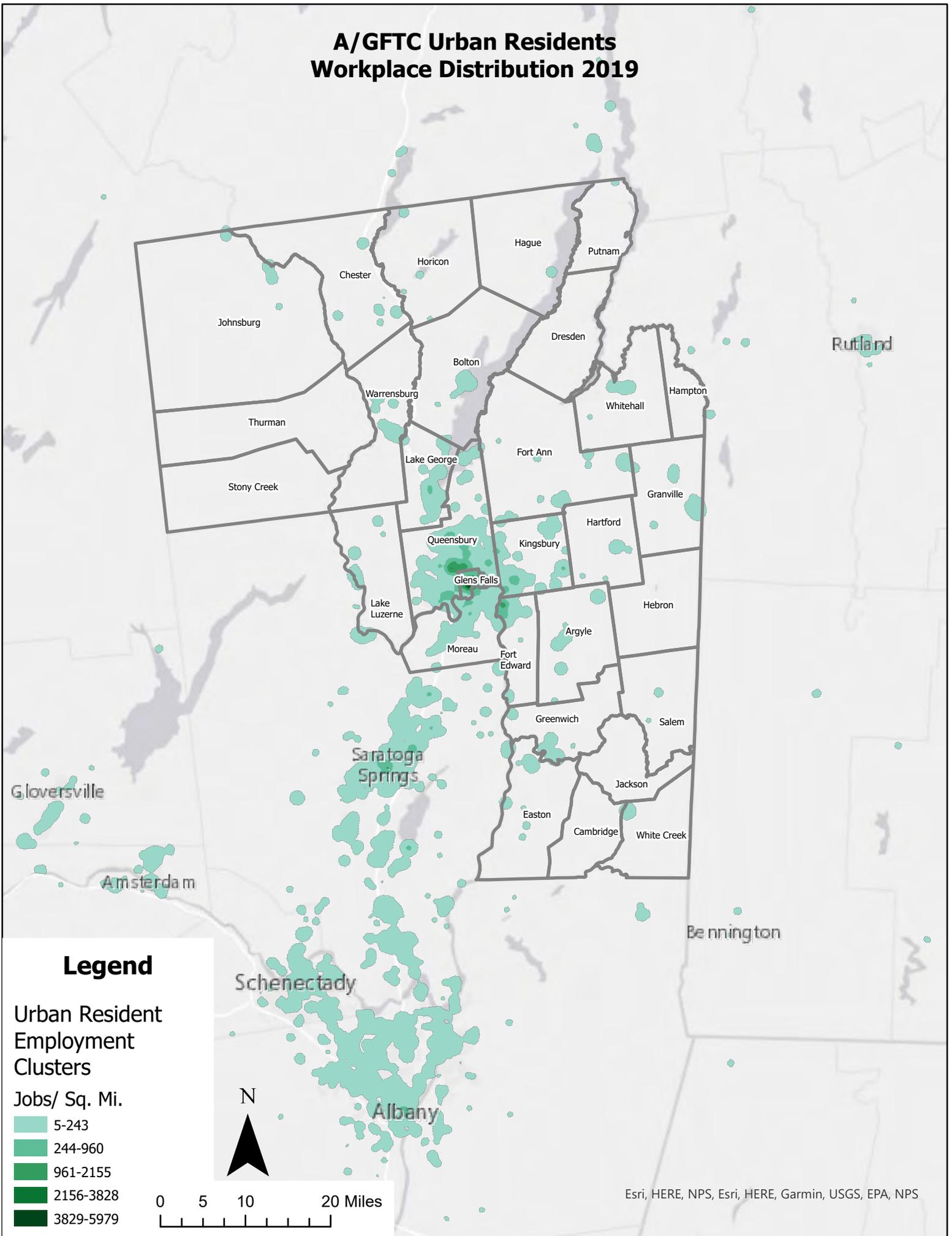
Work From Home Rates Employed Working Age Residents (18-65) Replica Data Model, Fall 2021



A/GFTC Rural Residents Workplace Distribution 2019



A/GFTC Urban Residents Workplace Distribution 2019



2. Large Employers

Table 2 contains a list of large employers in the region, including businesses employing over 250 people for Warren County and over 100 for Washington County. Employers with multiple locations (Hannaford, Price Chopper, Warren/Washington Care Centers) are not included.

Table 2: Large Employers

Name	Description	Employees	Location	County	Urban or Rural	On GGFT Line?
West Mountain	Skiing Centers & Resorts	500-999	Queensbury	Warren	Rural	No
Gore Mtn. Ski Resort	Skiing Centers & Resorts	250-499	North Creek	Warren	Rural	No
Sagamore Resort & Golf Course*	Hotels & Motels	1000-4999	Bolton Landing	Warren	Rural	Yes*
SUNY Adirondack	Community College	250-499	Queensbury	Warren	Urban	Yes
Glens Falls Middle & High School*	Schools	250-499	Glens Falls	Warren	Urban	Yes
Queensbury Central School*	Schools	250-499	Queensbury	Warren	Urban	No
Travelers (Listed as CNA)	Insurance	500-999	Glens Falls	Warren	Urban	Yes
Glens Falls Hospital	Hospital/Health Services	1000-4999	Glens Falls	Warren	Urban	Yes
Arrow Financial Corp	Holding Companies (bank)	250-499	Glens Falls	Warren	Urban	Yes
C R Bard Inc	Med. Equip. Manufacture	500-999	Queensbury	Warren	Urban	Yes
Angiodynamics	Med. Equip. Manufacture	500-999	Queensbury	Warren	Urban	No
Finch Paper LLC	Paper-Manufacturer	500-999	Glens Falls	Warren	Urban	Yes
Prospect Child & Family Ctr	Non-Profit Organizations	250-499	Queensbury	Warren	Urban	No
Gracenote Co	Newspapers (publishers/Mfrs)	250-499	Queensbury	Warren	Urban	Yes
Warren County Personnel	Government Offices-County	500-999	Lake George	Warren	Rural	Yes
Walmart Supercenter	Department Stores	250-499	Queensbury	Warren	Urban	Yes
Lake George Steamboat Co	Boats-Rental & Charter	250-499	Lake George	Warren	Rural	Yes
Six Flags Great Escape & Lodge	Amusement & Theme Parks	250-499	Lake George	Warren	Urban	Yes
Fort Hudson Health System	Residential Care Homes	500-999	Fort Edward	Washington	Urban	Yes
Hollingsworth & Vose Co	Paper-Manufacturer	100-249	Greenwich	Washington	Rural	No
Monahan-Loughlin Inc	Sheet Metal Fabricators	100-249	Hudson Falls	Washington	Urban	Yes
Great Meadow Correctional	Government Offices-State	500-999	Comstock	Washington	Rural	No
Washington County Offices***	Government Offices-County	250-499	Fort Edward	Washington	Urban	Yes
Price Chopper	Grocers-Retail	100-249	Granville	Washington	Rural	No
St-Gobain Corp	Building Materials	100-249	Granville	Washington	Rural	No
Irving Consumer Products Inc	Exporters (Wholesale)	250-499	Fort Edward	Washington	Urban	Yes
Argyle Central School	Schools	100-249	Argyle	Washington	Rural	No
Cambridge Central School	Schools	100-249	Cambridge	Washington	Rural	No
Fort Ann Central School	Schools	100-249	Fort Ann	Washington	Rural	No
Fort Edward Central School	Schools	100-249	Fort Edward	Washington	Urban	Yes
Hartford Central School	Schools	100-249	Hartford	Washington	Rural	No
Hudson Falls Middle/Senior High	Schools	250-499	Hudson Falls	Washington	Urban	No
Salem Central School	Schools	250-499	Salem	Washington	Rural	No
Telescope Furniture	Manufacturing	250-499***	Granville	Washington	Rural	No
Adirondack Scenic	Design & Fabrication	100-249***	Argyle	Washington	Rural	No
Fort Miller Group	Manufacturing	250-499***	Greenwich	Washington	Rural	No
Rozell Industries	Construction	100-249***	Kingsbury	Washington	Rural	No
Morcon	Manufacturing	100-249***	Eagle Bridge	Washington	Rural	No
Essity (Listed as SCA)	Manufacturing	100-249***	Greenwich	Washington	Rural	No
Commonwealth Plywood	Manufacturing	100-249***	Whitehall	Washington	Rural	No
Cambridge Valley Machining	Manufacturing	100-249***	Cambridge	Washington	Rural	No

Source: NYSDOL, Washington County Planning & Economic Development

Notes:

* indicates seasonal transit access only

** indicates multiple co-located NYSDOL listings consolidated

*** indicates estimated number of employees as determined by Washington County Planning & Economic Development

D. Transportation Profile

1. Commuting Patterns

A key element in identifying potential transportation solutions is to understand the movements of residents from home to their place of work. To accomplish this, the US Census OnTheMap platform was used to identify the movements of residents from home to work, based on 2019 labor data. Given the rise in work-from-home rates as seen above, it is likely that some of the movements of residents to work have changed. However, in the absence of more recent data, the information from 2019 can be used to analyze broad patterns.

The result of this analysis can be seen in Map 13 and 14. Map 13 depicts the direction and volume of movement between residents of the rural population centers to their places of employment. This reveals some interesting patterns. For example, residents of the Village of Whitehall travel to Vermont in about equal numbers as to the core urban area. Workers in North Creek tend to bypass Warrensburg in favor of Glens Falls, while more residents of Greenwich work in the Saratoga area than anywhere else.

Conversely, Map 14 suggests that the majority of urban core workers who leave the area for employment travel to the Saratoga area, followed by Albany/Colonie. However, there are some minor movements from the urban core to the rural areas, namely Lake George, Warrensburg, Fort Ann, Granville, and Argyle.

2. Inflow-Outflow

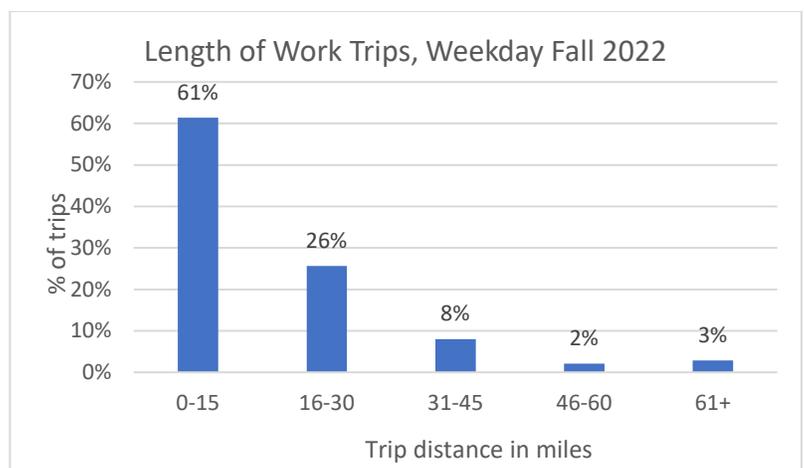
In addition to commuting patterns from one area to another, the overall inflow-outflow rates for the rural population centers were analyzed based on US Census LEHD data. This captures how many people travel into an area, stay within the area, or travel outside the area for work. Map 15 shows the estimated number of workers for each location. It is important to note that not all workers are captured in this data set, as the boundaries of each CDP or Village may not capture all residents who live within the developed areas. It is likely that the number of residents who work near their home is higher than indicated based on anecdotal experience. Despite the limitations of the data source, this can provide insight to which areas are more likely to need transportation services which originate in the population center.

3. Commute Distance

To gain an understanding of the average distance traveled by rural residents for work trips, the Weekday Fall 2022 Replica model was utilized. By isolating trips which originated in the rural population centers of the region and filtering for “trip purpose = work” the data was analyzed to see how far these residents travel on an average weekday for work purposes. It should be noted that this includes not only the morning/evening commute, but also any trips taken during the day for work purposes, such as field visits, off-site meetings, etc.

The data indicates that, for residents of the rural population centers, over 60% of work trips are less than 15 miles (see figure 5). Another 26% are for trips of 16-30 miles; altogether, this indicates that 86% of work trips originating from these hamlets and villages are less than 30 miles.

Figure 5 - Work Trip Length

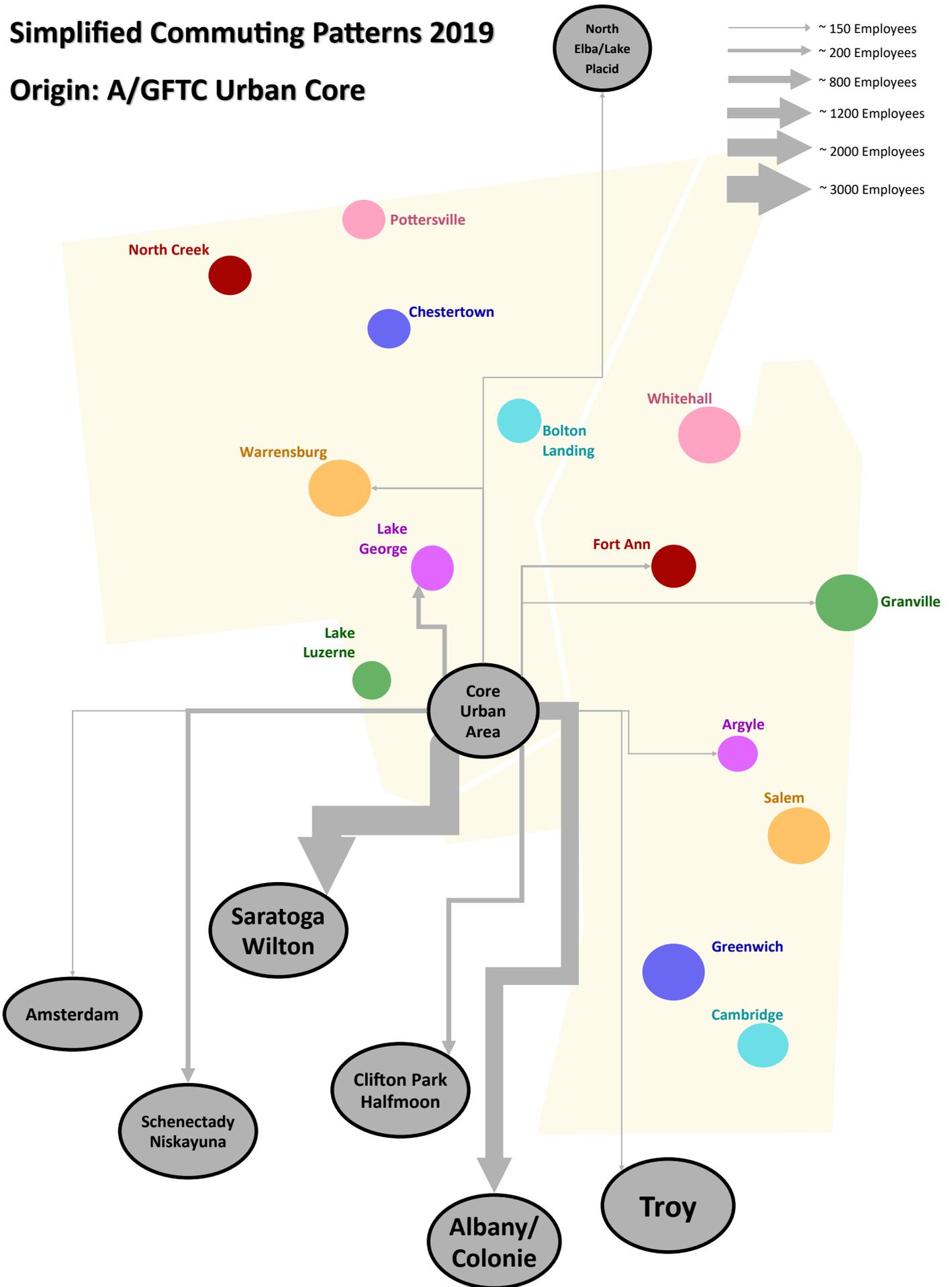


4. Access to Vehicles

In areas with little or no transit service, having access to a vehicle can be the main factor in getting and keeping a job, especially for industry sectors which cannot accommodate working from home. The percentage of working age residents who do not have access to a vehicle can be seen on Map 15. The Village of Cambridge and the City of Glens Falls have high rates of residents without access to vehicles. However, both areas have significant pedestrian infrastructure; in the

Simplified Commuting Patterns 2019

Origin: A/GFTC Urban Core



Inflow-Outflow Rural Population Centers

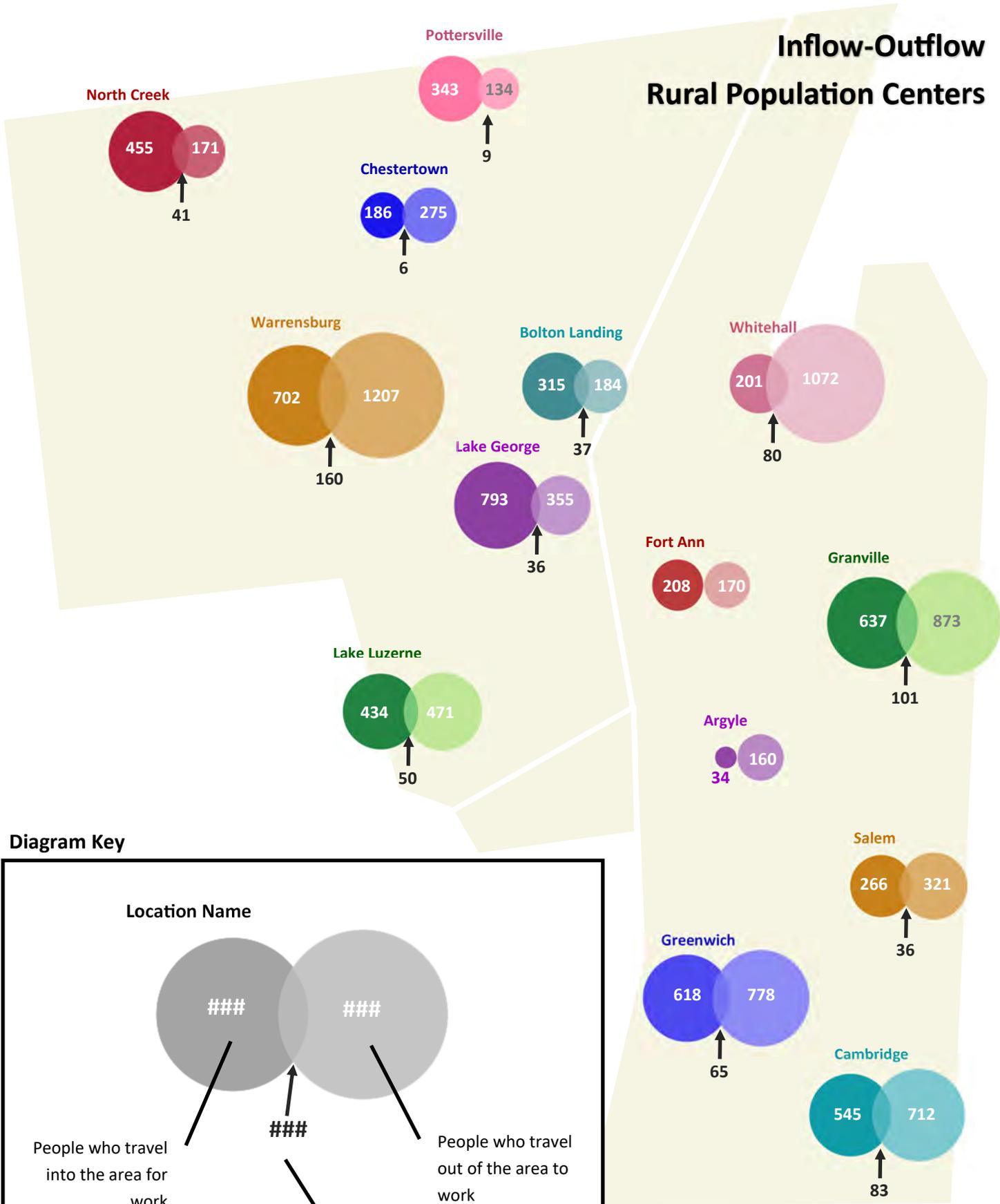
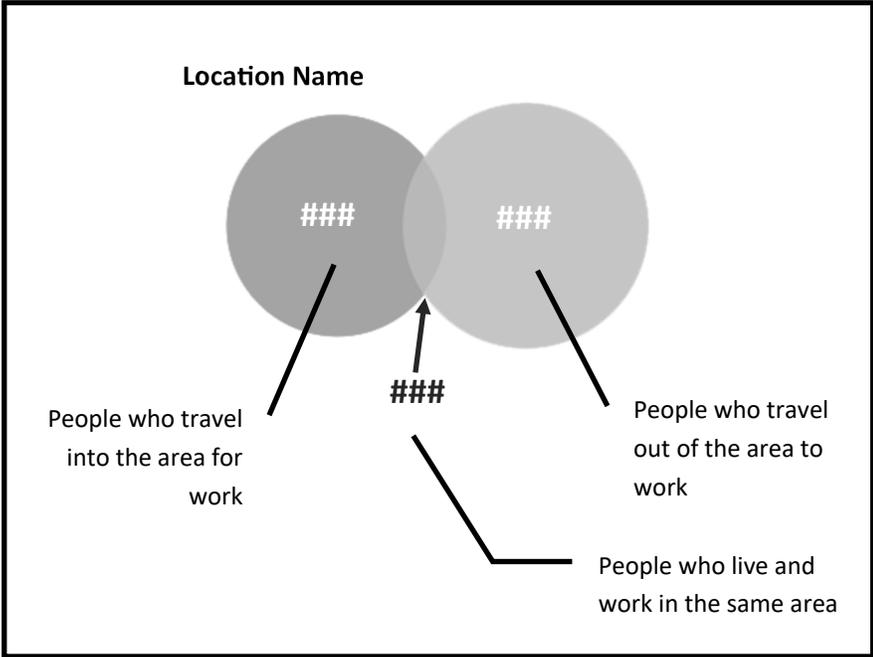
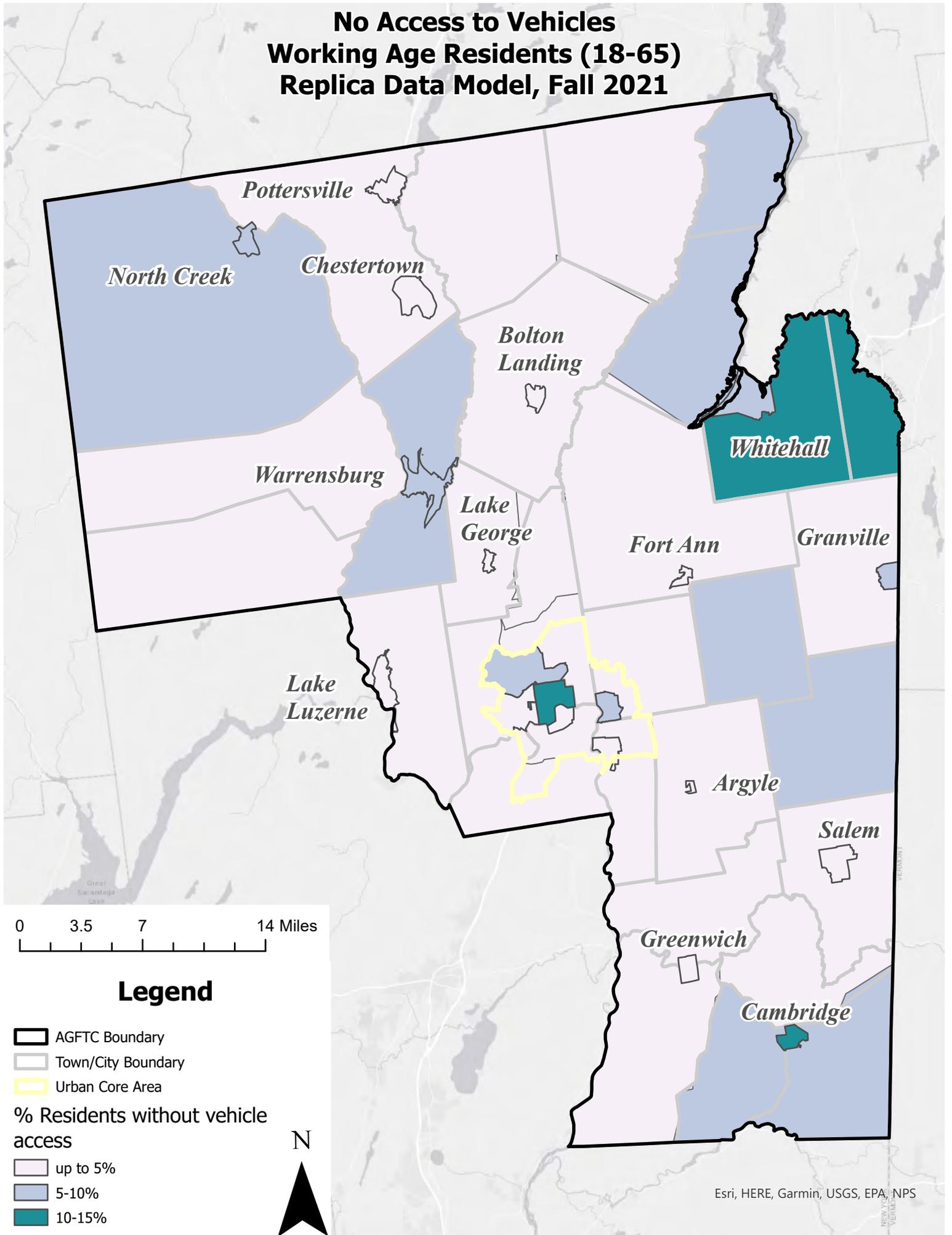


Diagram Key



No Access to Vehicles Working Age Residents (18-65) Replica Data Model, Fall 2021



0 3.5 7 14 Miles

Legend

-  AGFTC Boundary
-  Town/City Boundary
-  Urban Core Area

% Residents without vehicle access

-  up to 5%
-  5-10%
-  10-15%



case of Glens Falls, there is also access to public transit. The towns of Whitehall and Hampton also have high rates of residents without access to vehicles. In these very rural areas, which lack transit and infrastructure for cyclists and pedestrians, the lack of vehicle access can represent a significant barrier towards employment. However, it is also important to note that these areas also have a large and well-established Amish population, which has also begun to spread to the southern portions of the county. This may be skewing the statistics, as the lack of vehicles does not present a burden to this particular community group.

Another consideration is that the adequacy of access cannot be measured by the number of vehicles alone. Even if a household has a car, there is no guarantee that every working age person has the ability to use the car to get to work on a consistent basis. In these cases, transportation services may be necessary to facilitate employment.

5. *Transportation Cost Burden*

Although adequate access to vehicles is often the most important consideration for workforce transportation in rural areas, there are other transportation factors which influence an individual's ability to get and keep a job. These can include the cost of gas, vehicle maintenance, and insurance. Collectively, the FHWA has consolidated these factors into the Transportation Cost Burden (TCB), which quantifies transportation costs as a percentage of income of the typical household for the region. This, in turn, is one consideration when measuring Transportation Disadvantage, as discussed in greater detail in section E below.

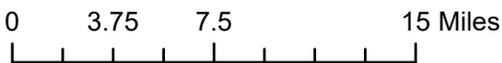
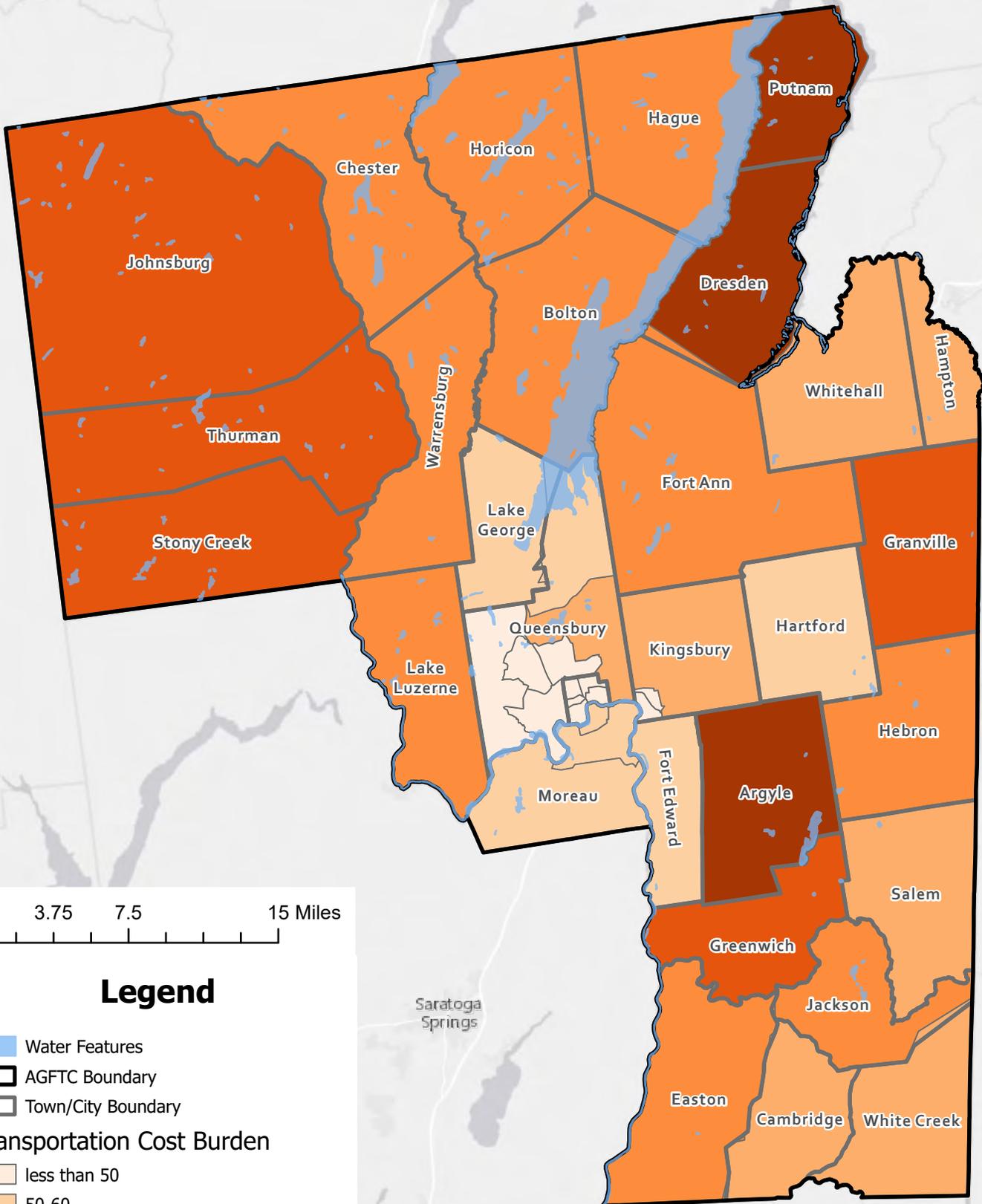
The FHWA has provided this information in GIS form to facilitate analyses such as the Rural Workforce Transportation Plan. Map 16 illustrates the Transportation Cost Burden by census tract. It is important to note that the metric being shown is the percentile of the TCB compared to other tracts in New York State; a score above 50 is therefore considered to be disadvantaged. As seen in Map 16, much of the A/GFTC region is above the 50th percentile for TCB, with the towns of Putnam, Dresden, and Argyle having the highest rank.

E. *Areas of concentrated disadvantage*

As stated above, the FHWA has developed a comprehensive dataset to support the Justice40 Initiative. Justice40 is an opportunity to address gaps in transportation infrastructure and public services by striving to allocate at least 40% of the benefits from federal investments to disadvantaged communities. This takes into consideration the following:

- **Transportation access disadvantage** identifies communities and places that spend more, and take longer, to get where they need to go. In addition to the TCB, this category includes excessive travel time to work, walkability, transit access, and access to vehicles. All tracts which meet the definition of this category are located in the rural areas of the A/GFTC region. See Table 3 below for more detail.
- **Health disadvantage** identifies communities based on variables associated with adverse health outcomes, disability, as well as environmental exposures. This includes the proportion of senior age residents, lack of health insurance, and disability statistics. Twenty-five tracts meet the definition of disadvantage in this category, with the most impacted towns including Johnsbury, Thurman, Stony Creek, Lake Luzerne, Whitehall, and Hampton.
- **Environmental disadvantage** identifies communities with disproportionately high levels of certain air pollutants and high potential presence of lead-based paint in housing units. There are no tracts within the A/GFTC region that are considered disadvantaged in this category.
- **Economic disadvantage** identifies areas and populations with high poverty, low wealth, lack of local jobs, low homeownership, low educational attainment, and high inequality. This also includes housing cost burden as measured under HUD's Location Affordability Index. See Table 3 below for more detail concerning tracts which meet this definition.
- **Resilience disadvantage** identifies communities vulnerable to hazards caused by climate change. There are no tracts within the A/GFTC region that are considered disadvantaged in this category.

Disadvantage Indicators by Tract FHWA Justice 40



Legend

-  Water Features
-  AGFTC Boundary
-  Town/City Boundary

Transportation Cost Burden

-  less than 50
-  50-60
-  60-70
-  70-80
-  80-90
-  over 90

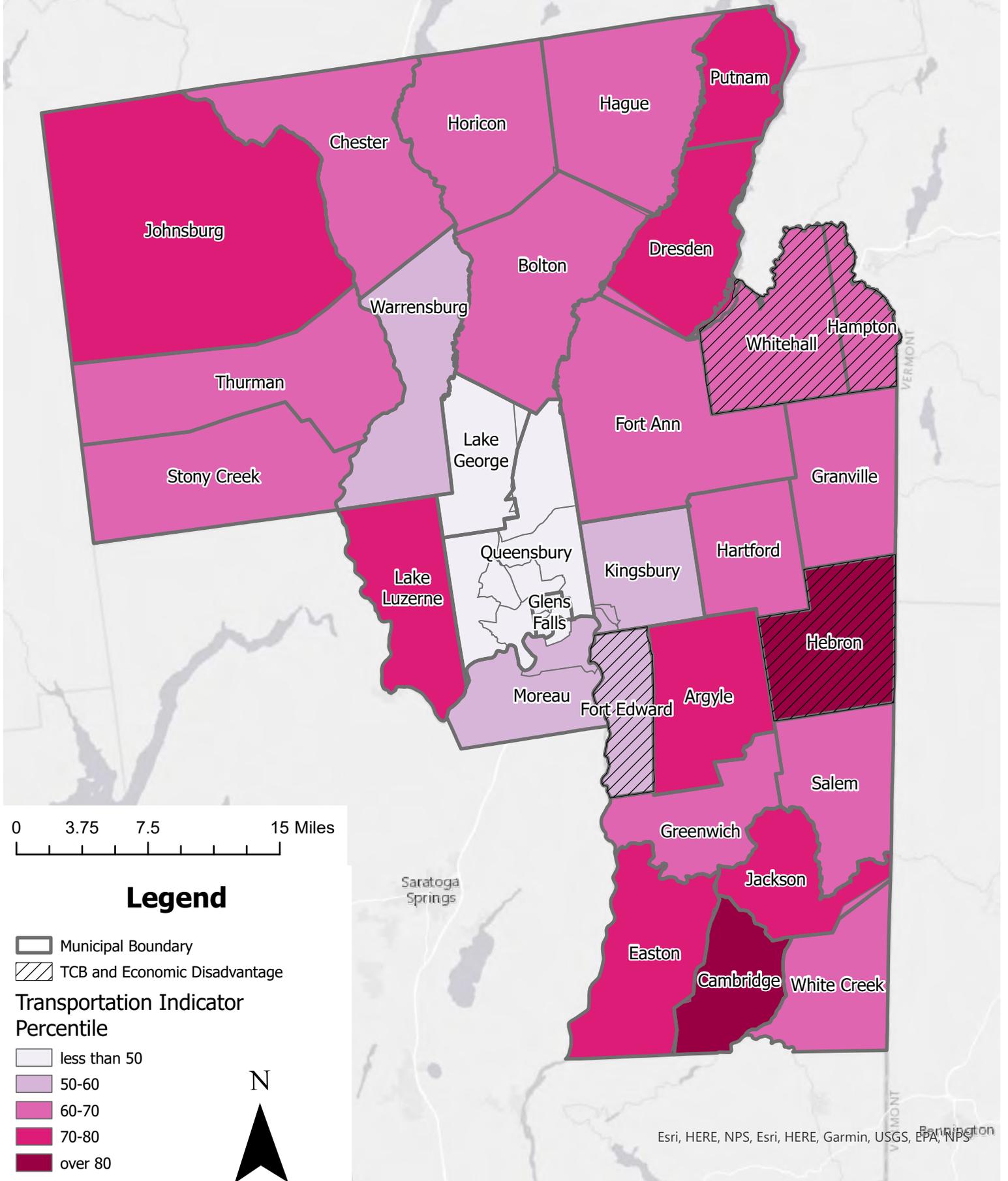


- **Equity** disadvantage identifies communities with a high percentile of persons (age 5+) who speak English "less than well." There are three tracts which are considered disadvantaged in this category. Two are located within the City of Glens Falls and the third encompasses the towns of Whitehall and Hampton. Further research indicates that the 2020 5-year American Community Survey estimates that 479 residents of this rural tract speak an "Other Indo-European Language" at home and also speak English less than well. However, the margin of error for this estimate is +/- 494. As such, it is unclear what the true scope of this population is, nor whether the lack of English proficiency poses a barrier to employment or transportation. It is recommended that further research into this community be conducted prior to establishing new transportation services, as specific language accommodations may be needed.

For the purposes of this analysis, the most critical disadvantage indicators pertain to transportation and economy. Table 3 lists the census tracts which are most adversely affected by these factors (see also Map 17). The shaded rows highlight the tracts which have scores above 50 for Transportation Indicator Disadvantage, Transportation Cost Burden, and Economic Indicator Disadvantage. These include the towns of Hebron, Whitehall, Hampton, Granville, and Fort Edward. Combined, these factors indicate that residents of these areas face the most significant barriers to workforce transportation. However, all municipalities listed in Table 3 should be considered priorities for expanding transportation access to the workforce.

Table 3 – Transportation and Economic Indicator Disadvantage Areas					
Tract	County	Town	Transportation Pctl	TCB Pctl.	Economic Pctl.
Census Tract 860	Washington	Hebron	85.39	76.20	57.42
Census Tract 930	Washington	Cambridge	80.63	65.66	27.71
Census Tract 870	Washington	Argyle	77.31	91.66	43.38
Census Tract 740	Warren	Johnsburg	74.76	87.52	38.01
Census Tract 710	Warren	Lake Luzerne	74.66	72.83	41.53
Census Tract 910	Washington	Jackson	73.08	75.96	33.40
Census Tract 940	Washington	Easton	72.88	79.37	22.69
Census Tract 820.02	Washington	Putnam/Dresden	70.97	90.02	49.02
Census Tract 760	Warren	Horicon/Hague	69.57	76.29	33.06
Census Tract 735	Warren	Thurman/Stony Creek	69.02	85.27	35.29
Census Tract 820.01	Washington	Whitehall/Hampton	69.02	65.54	57.71
Census Tract 850	Washington	Hartford	68.88	57.68	40.13
Census Tract 780	Warren	Bolton	68.59	71.49	33.33
Census Tract 840	Washington	Granville	67.88	82.57	51.61
Census Tract 810	Washington	Fort Ann	67.51	72.80	44.08
Census Tract 890	Washington	Greenwich	67.27	84.76	34.95
Census Tract 900	Washington	Salem	66.68	63.14	34.76
Census Tract 920	Washington	White Creek	61.85	62.18	45.43
Census Tract 750	Warren	Chester	61.64	70.89	31.08
Census Tract 880	Washington	Fort Edward	59.92	58.14	54.91
Census Tract 601.01	Saratoga	Moreau	59.15	51.81	22.67
Census Tract 803	Washington	Kingsbury	57.09	66.77	43.12
Census Tract 802	Washington	Kingsbury	53.23	39.77	56.27
Census Tract 801	Washington	Kingsbury	52.46	34.49	59.84
Census Tract 601.02	Saratoga	Moreau	51.55	54.51	28.25
Census Tract 730	Warren	Warrensburg	50.32	76.41	49.37

Transportation Disadvantage Areas FHWA Justice40



APPENDIX B: STAKEHOLDER INPUT SUMMARIES

I. Survey and Stakeholder Input

Beginning in October 2022, the Lake Champlain-Lake George Regional Planning Board and its consultant partners conducted two surveys concurrently over a two-month time period. One survey was focused on those who work in the region while the other was focused on regional employers.

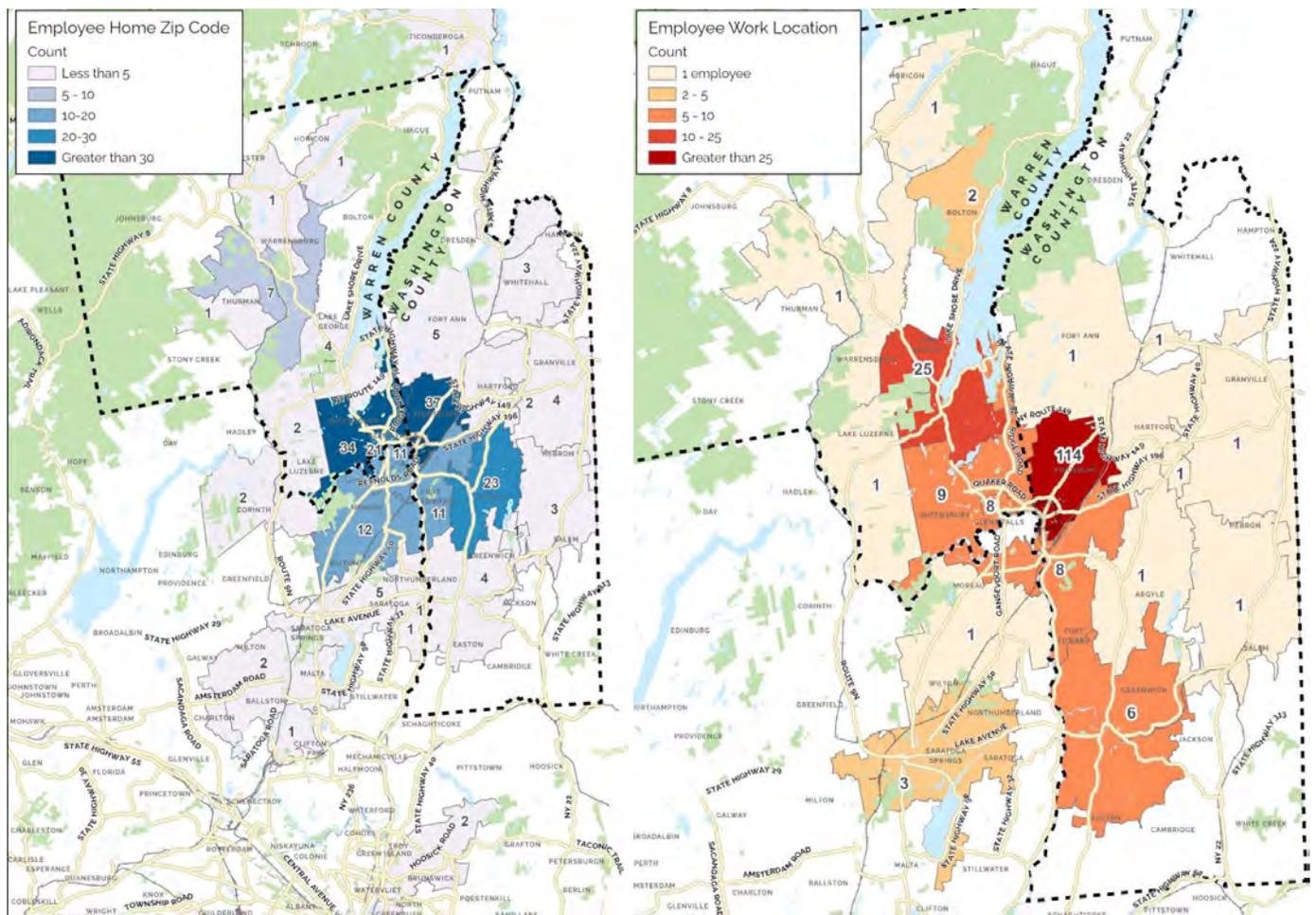
The surveys were marketed online and via social media campaigns. In addition, fliers were posted throughout the region, including at local libraries, town/county offices, and at Stewart’s shops. Several employers and agencies also distributed this survey to their employees/constituents via email. Over 200 employees and 26 regional employers in Warren and Washington Counties completed this survey. It is important to note that, as these respondents elected to participate, the data below has some inherent limitations when compared to a true randomized sample. A summary of the responses is provided below.

A. Employee Survey Summary

1. Location:

- **Home location:** Most respondents who participated in this survey lived in the vicinity of Kingsbury, Queensbury, and – to a lesser extent – Glens Falls. Moderate concentrations of employees were found south of these municipalities in Argyle, Fort Edward, and Moreau. See figure 6.
- **Work Location:** The greatest cluster of employment by zip code among survey respondents was Kingsbury (114), perhaps indicating that the distribution of the survey by a major Kingsbury employer skewed response completions towards this geography. Other notable employment hotspots were Lake George and – to a lesser extent – Queensbury, Glens Falls, Fort Edward, and Greenwich. See figure 6.

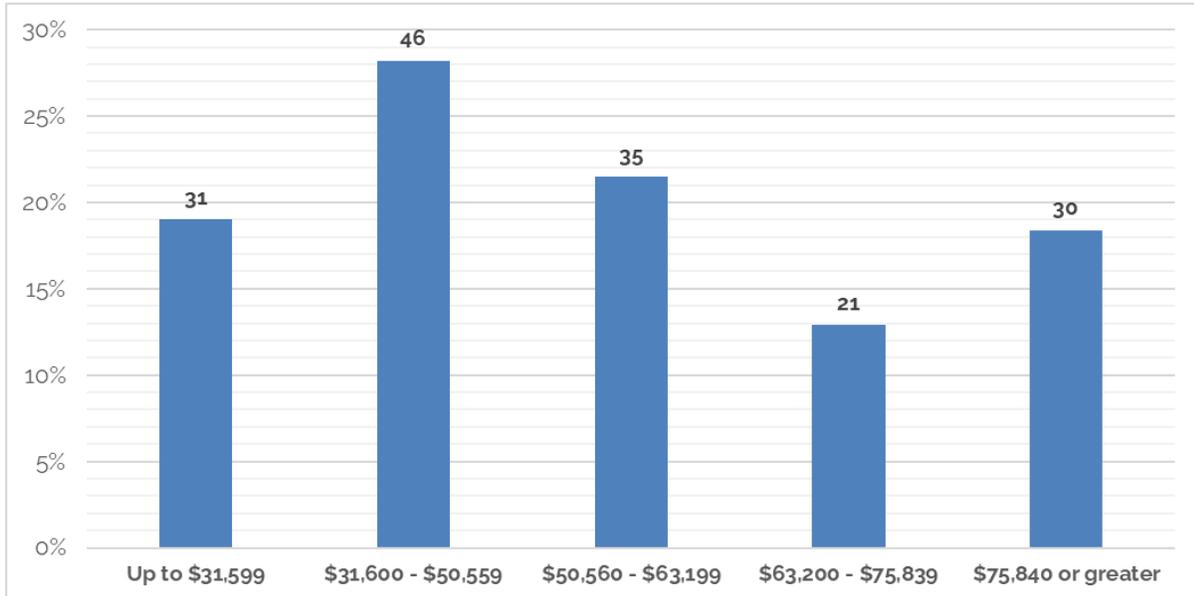
Figure 1 - Home vs. Work Location, Employee Survey



2. *Employment characteristics:*

- **Salary:** In terms of salary, the range of responses was distributed across income groups, with responses skewed more towards lower income levels. The largest share of respondents (28%) stated they earned between \$31,600 - \$50,559, followed by those earning between \$50,560 - \$63,199. (21%). Slightly more than 30% of respondents stated they earned salaries in excess of \$63,000. See Figure 7.

Figure 2 - Salary Range, Employee Survey Responses



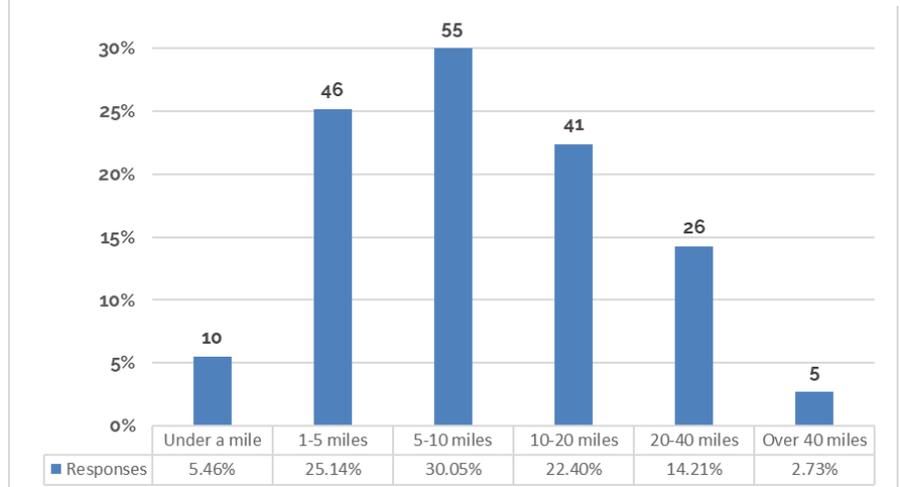
- **Work hours:** Most employees reported working weekdays. Nearly all stated their workday as beginning before 9, with most start times clustering between the hours of 7am and 8am, with the end of the day around 4pm. A notable share of respondents stated their day ends earlier, with many working from 7:30am to 2:30pm or 8:30am to 3:30pm.

3. *Commute characteristics:*

- **Mode:** The dominant mode of transportation for employees was driving alone (89%). Three percent of respondents stated they worked from home, 2% said they walked, 2% said they carpooled, 1% said they biked, and 2% chose "other." No respondents stated they used public transportation or a bus service.

- **Distance:** Over half of survey respondents said their daily commutes averaged under ten miles, with the largest share of respondents (30%) stating their commute was between five and ten miles. Less than 20% of respondents stated their daily commutes were in excess of 20 miles, with only 3% of respondents stating their commute as being greater than 40 miles. See figure 8.

Figure 3 - Commute Distance, Employee Survey Responses



- Driving alone: The most common reason for those who drove alone was the need to run errands before or after work (54%) followed by it being the fastest way to commute (50%) and the ability to get home in an emergency (40%). This could indicate that most employees don't elect to drive alone out of personal preference, but due to more practical considerations. In contrast, only 35% of respondents chose "enjoy my privacy/prefer driving alone". A quarter of respondents chose "Bus service is not available or convenient," perhaps indicating more employees would pursue this mode if it were viable.

4. *Transportation Limitations:*

- Difficulty getting to work: Most respondents (89%) stated they have not encountered difficulties in getting to work in the past year. Eleven percent of respondents, or 20 people, stated that they did. The most common difficulty was "Vehicle maintenance/not-working" (28%), followed by "lack of access to a vehicle" and "bus service not available during my work hours" – both of which were selected by an equal share of respondents (20%). Additional responses included weather, road conditions, traffic, long waits for taxi cabs, and the lack of bus service on Sundays.
- Backup transportation options: Respondents were asked to consider what they might do if they lost their primary mode of transport for three weeks. The most frequently selected response option was to rely on friends or family (54%) followed by renting a vehicle (23%). All other response options were chosen by less than 10% of employees, including walking (8%), staying at home (4%), and biking (3%). Only 2% of employees stated that they would use public transportation – perhaps an indication of limited public transportation options in the study area. Seven percent of respondents chose "other."
- Transportation requirements: 92% of employees stated that a personal vehicle is necessary to access employment opportunities.
- Commuting costs: When asked what percentage of take-home pay is spent on transportation (including gas, insurance, maintenance, registration, parking, etc.), over half of respondents stated that transportation-related accounts for less than 20%. However, 37% of respondents indicated that 21-40% of their pay goes to transportation, which might be considered a significant financial commitment.
- Willingness to walk: Most respondents (58%) stated that they would be willing to walk up to a half mile (equaling about a five-minute walk) to access a bus stop or carpool, while another 37% said that they would be willing to walk up to one mile (equaling about a ten-minute walk). Willingness to walk farther dropped off sharply after the one-mile threshold, with only 4% of respondents stating that they would be willing to walk as far as two miles and only 2% willing to walk farther than that.
- Employment limitations: When asked to assign a numeric value to the degree which transportation access had impacted their job opportunities, 3 in 4 regional employees who completed the survey selected '1', corresponding to minimal impact. However, the second largest share – 9% - selected '5' and attested in open-ended comment responses that lack of access to transportation had cost them job opportunities in the past. Eight percent of respondents selected 3, signifying some degree of hardship encountered through limited transportation access.

5. *Suggestions and further feedback*

Survey participants were asked to share any additional thoughts they might have regarding transportation options in Warren and Washington Counties; seventy took the opportunity to do so.

Responses were diverse and far-ranging, drawing attention to nuanced policy and social issues as they relate to transportation. For instance, one respondent framed the limited bus service as being less problematic for employees, who generally can afford automobiles, but an area of difficulty when one considers the number of residents in Warren and Washington County populations centers who are suffering addiction as a result of the opioid crisis and the limited bus services available to connect them with the programs they need for recovery. Another respondent pointed out a

spatial mismatch between the concentration of publicly subsidized affordable housing in Whitehall with no corresponding public transportation services to connect these residents with employment opportunities in regional hubs.

The most common criticism of the existing bus system is its limited hours of operation, with several respondents voicing the wish for its hours to be expanded to include earlier and later hours. The lack of bus service on Sundays was likewise a point of consternation.

Several respondents noted that ownership of a private vehicle is an upfront cost many in the area cannot afford and would like to see the expansion of public transit on those grounds, especially when considering the prohibitively expensive pricing of local taxi services and ride-hailing apps, such as Uber and Lyft. In addition to low-income adults, youth were singled out as another demographic group who would benefit from the expansion of this service, particular in the larger population centers, such as Glens Falls.

Commuting into and out of Glens Falls was brought up multiple times as an area where improving transportation options should be prioritized, either in the form of expanded bus service or by encouraging carpooling. One respondent ventured that the financial benefits that can accrue to workers through carpooling and vanpooling should be the subject of a public outreach campaign coupled with a corresponding policy initiative to allow for greater flexibility in working hours for employees who elect to travel with shared commutes.

B. Employer Survey Summary

1. *Business characteristics:*

- Location: The locations of the employers/businesses who completed this survey were evenly distributed across Warren and Washington Counties, with 10 in Warren County and 9 in Washington County.
- Industries represented: The businesses encompassed a variety of industries and sectors. The most well-represented industries were manufacturing and government, accounting for five employers each, followed by accommodation and food services. Industries included as an open-ended response included education (3), engineering consulting, and the Chamber of Commerce.
- Number of employees: The largest share of respondents (42%) reported that over 100 employees worked at their business location, indicating that several major regional employers were captured in this survey, accounting cumulatively a total employee count in excess of 1,500. Outsized major employers, mid-sized and smaller employers were roughly evenly represented.
- Hours of business: Most employers stated they operate eight hours a day, beginning around 7 to 8 am and ending at 4 or 5pm.

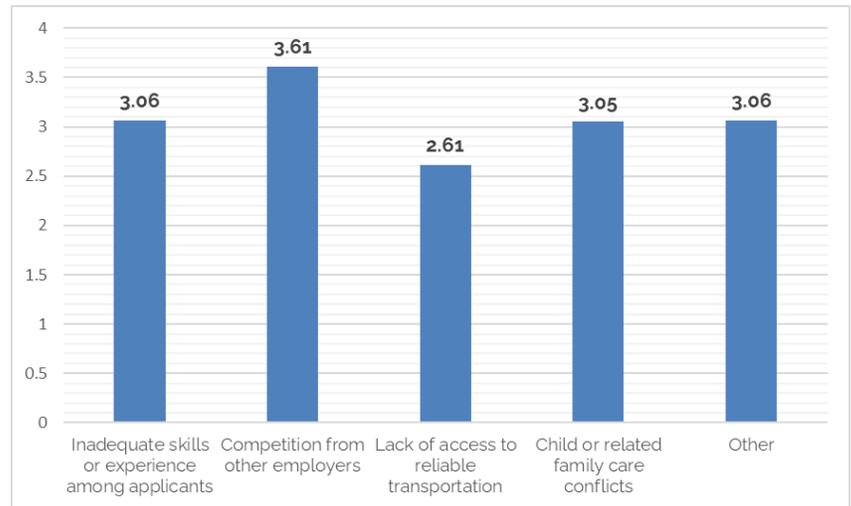
2. *Transportation characteristics:*

- Bicycle/pedestrian access: Approximately 75% of employers considered their business accessible by walking or biking – a different perspective than what emerged in employee responses, where private automobiles were largely considered to be imperative for accessing places of work.
- Transit access: Slightly more than 1 in 3 said their business was accessible by GGFT bus; this includes five of the eleven major employers (100+ employees) that participated in the survey.
- Ridesharing/bus pickups: Three major and two smaller employers promote or provide ride shares or employee bus pickups.

3. *Transportation Issues:*

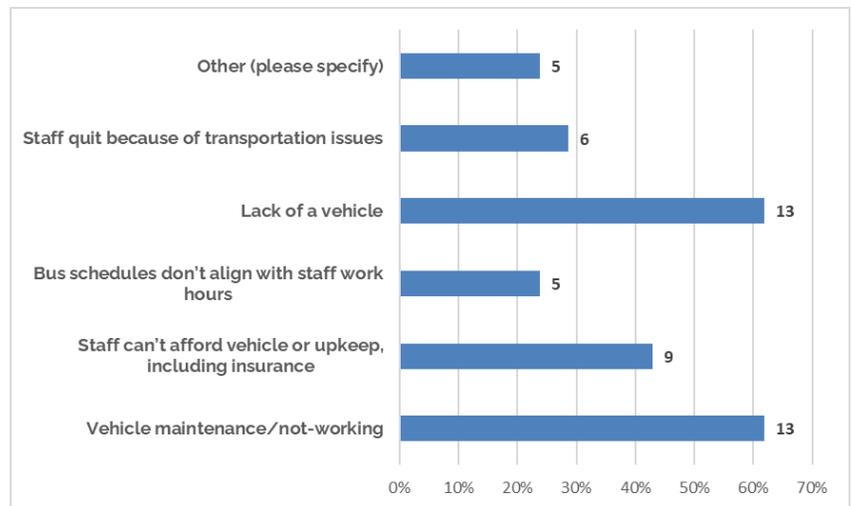
- **Transportation issue awareness:** When asked whether they were aware of other employers in their communities who face employment issues related to a lack of reliable transportation, responses from employers were evenly divided between “yes” and “no.”
- **Staff recruiting/retention:** Nearly 80% of employers reported that they experienced problems recruiting and/or retaining staff over the past year. When asked to rank the types of challenges which contribute to this difficulty from 1 (most significant factor) to 5 (less significant factor), “lack of access to reliable transportation” was the most important factor. (See figure 9.)

Figure 4 - Hiring challenges, Employer Survey Responses



- **Employee transportation issues:** Employers attested to a range of transportation difficulties experienced by staff in the past 12 months. Most commonly, lack of a vehicle and malfunctioning vehicles were an issue; 60% of employers reported as having encountered this issue. The challenges posed by vehicle dependency and the costs associated with upkeep apparent; five employers attested that staff had quit because of transportation issues and another nine had staff who couldn’t afford the necessary upkeep for their vehicles. Just over 20% of employers stated that they had employees who encountered issues with the public bus service not aligning to their work hours. Two employers, in open-ended comments, noted the difficulty posed by the lack of reliable public transportation. Another employer noted that some employees are unlicensed. Another employer stated that the central challenge is not access to transportation, but poor driving conditions in the winter weather. (See figure 10.)

Figure 5 - Employee transportation issues, Employer Responses



- **Transportation incentives/assistance:** Most employers (61%) who completed this survey said that they would be unwilling to offer incentives or assistance to employees without reliable transportation. Thirty-nine percent, however, said they would. A slightly higher share of the major employers (100+ employees) – 50% - said that they would be open to pursuing a program of this sort. However, employers were generally more receptive to the concept of an incentive program in partnership with other businesses. 57% of employers said they would be in support.

4. *Suggestions and further feedback:*

When offered to provide additional comments on transportation options in Warren and Washington County, multiple employers expressed recognition of the topic’s importance, while acknowledging the challenging logistics of offering an

affective bus service over a relatively sparsely populated region. Two employers framed this challenge as relating more to the elder population than being a workforce problem. Many were curious as to what expanded bus service would look like, noting it could be a boon to their employment efforts. Also, some expressed interest in what incentives or assistance for expanding transportation access might look like, either for the employee or the employer.

C. Stakeholder Focus Groups

In early 2023, the LCLGRP held focus group discussions with five key industry stakeholder groups, including Workforce & Human Services, Manufacturing, Retail/Tourism, Healthcare, and Government & Education. In addition, feedback was received independently from the Bolton Chamber of Commerce from a meeting in March 2023.

These stakeholder sessions allowed for a more detailed discussion among participants. By design, each discussion focused on topics pertaining to the specific participants; as such, there was not much overlap between groups. However, certain crosscutting themes arose, including:

- Transit limitations. Several participants noted that existing transit services could not accommodate the specific schedules or work locations of their employees or constituents. This affected the Retail & Tourism and Manufacturing groups in particular. It should be noted that in some cases, participants were mis-informed or unaware of current transit schedules and routes, which may point to the need for more robust outreach and marketing efforts for transit providers.
- Ridesharing limitations. According to participants, carpooling among employees is already occurring on a regular basis. Although this allows for those without a vehicle or license to attend work, the practice is not without downsides. For example, if the carpool driver is sick, on vacation, or not scheduled that day, the other employees may be without options to get to work.
- Incentives and opportunities. A number of participants indicated varying levels of success with programs to provide transportation assistance. Bus tokens and gas cards can assist workers, but only if they live close to existing transit or have access to a vehicle. Direct transportation services, such as Tech Valley Shuttle and private taxis, were also utilized by individual businesses. However, the high cost of these services (in one case estimated at \$10,000 per month) are not sustainable long-term. Discontinued programs, such as “Wheels to Work” and the “Second-Chance” program for previously incarcerated individuals, could also help fill gaps if these programs are re-instated.
- Housing. Some participants noted that affordable housing options are often located well outside of the areas served by transit or other transportation services. In a related issue, several large employers noted that the catchment area for their employees is outside of the A/GFTC area, which may complicate efforts to coordinate certain transportation solutions.
- Childcare. Several participants pointed out that a lack of affordable, convenient childcare compounds transportation issues.