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### Anthracite Outdoor Adventure Area (AOAA) Corridor Analysis

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# A.O.A.A. Research

05. 02. 2018

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Bucknell University  
Geography 326: Thinking Space  
Professor Vanessa Massaro

## Overview

Bucknell University in Lewisburg, PA and the Anthracite Outdoor Adventure Area (A.O.A.A.) of Shamokin, PA have partnered together with Professor Vanessa Massaro's Geography class, Thinking Space, to spatially analyze how the A.O.A.A. can address some of their areal concerns. These aerial concerns include the transportation routes of A.O.A.A. visitors, accommodation alternatives, identifying ways to increase interaction between A.O.A.A. visitors and Shamokin, PA businesses, and enhancing business activities through potential expansion of commercial zones in Shamokin, PA. The data for this research came from project member Logan McGinn's attendance at the A.O.A.A.'s event, "Showdown in Shamokin", April 13th- April 15th 2018, collaboration with Dave Porzi, the Director of Operations at A.O.A.A., Kathy Jeremiah the Grants Manager and Anthracite Outdoor Adventure Area Project Coordinator at Northumberland County and Shaunna Barnhart, the Director of the Place Studies Program with the Center for Sustainability and the Environment at Bucknell, site visits, Susquehanna Visitors Bureau data, data collected from visitors to the A.O.A.A. and benchmarking.

The main motivation for this research is the perceived economic opportunity that is provided to the Shamokin area because of the creation of A.O.A.A. and an argument for increased visitor accommodations for A.O.A.A. visitors because of the potential for their increased economic expenditures in the area. What we sought to do in this project was highlight different findings within supporting information to help develop and create more immediate solutions to problems. We sought to create detailed documentation, mapping and data that would support more opportunities for overnight accommodation for visitors to the A.O.A.A. and the surrounding area. Our maps illustrate travel to the area, commercial mapping and potential accommodation mapping. The exponential growth of A.O.A.A. that has been seen so far illustrates the necessity to rethink commercial zoning in the future, and although there are plans for hotels and future investors, we argue to maximize economic and social benefit to the Northumberland county area, it is necessary to address those challenges and create short-term solutions to bring as much economic prosperity as possible. The results of this analysis and research will be presented visually through ArcGIS maps in conjunction with a written proposal to explain our consolidated research, results and potential actions steps moving

forward. Additionally, data was used from previous visitors to visually illustrate where visitors are coming from and how they are travelling to the A.O.A.A. This information shows where it is most efficient and ideal to place the areal specifications to get the most traffic and to be most convenient for Shamokin locals and A.O.A.A. visitors.

## Goals

1. Better understand the A.O.A.A. and how it relates to the surrounding area
2. Visually depict where people are travelling from and how they're getting to the A.O.A.A. during different times of year
3. Research possible solutions to A.O.A.A. obstacles including: understanding visitor transportation routes, parking alternatives, overnight accommodations, better integration between visitors, Shamokin residents, and the A.O.A.A. and visually depict the expansion of the commercial zone of Shamokin.
4. Create maps and a proposal that A.O.A.A. can share with potential investors and people interested in a summary of this information.

## Goals Explained

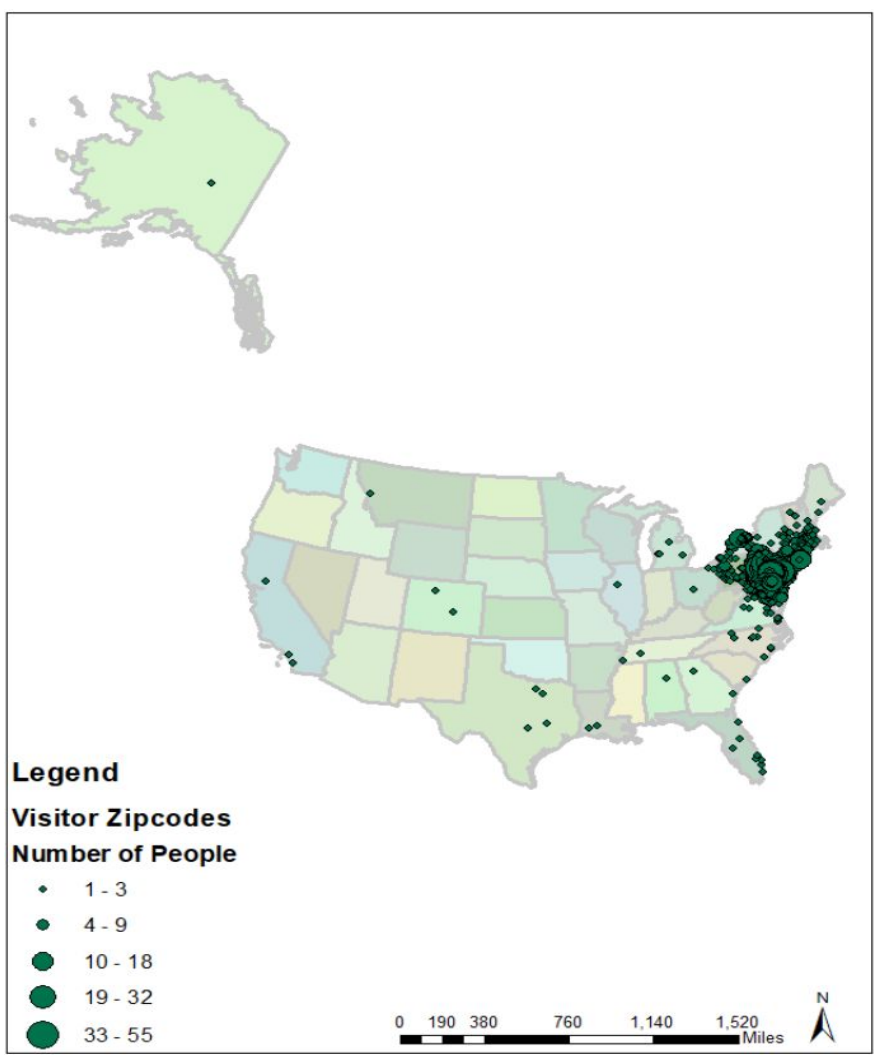
Our goal is to create visualizations that show the corridors that visitors to the A.O.A.A. are traveling through to get to the A.O.A.A. With these results, we can analyze the best potential locations for new infrastructure such as hotels, gas stations and restaurants since the areas with the most traffic will produce the most customers. Our main data source was the information given by A.O.A.A. owner, Dave Porzi, containing number of client visits in addition to their home zipcodes. As this information was private client information, we did our best to only use the data absolutely necessary to complete the project and removed all other given information. Furthermore, we used PASDA's municipality boundary map to outline townships to better analyze where traffic is entering en route to A.O.A.A.

Currently, we are aware of a spatial problem that makes it difficult for us to precisely map out new locations for lodging, gas stations, restaurants and parking. For example, it is not very difficult to plot a possible gas station within a small space, however, the majority of A.O.A.A. users are traveling in U-haul friendly trucks

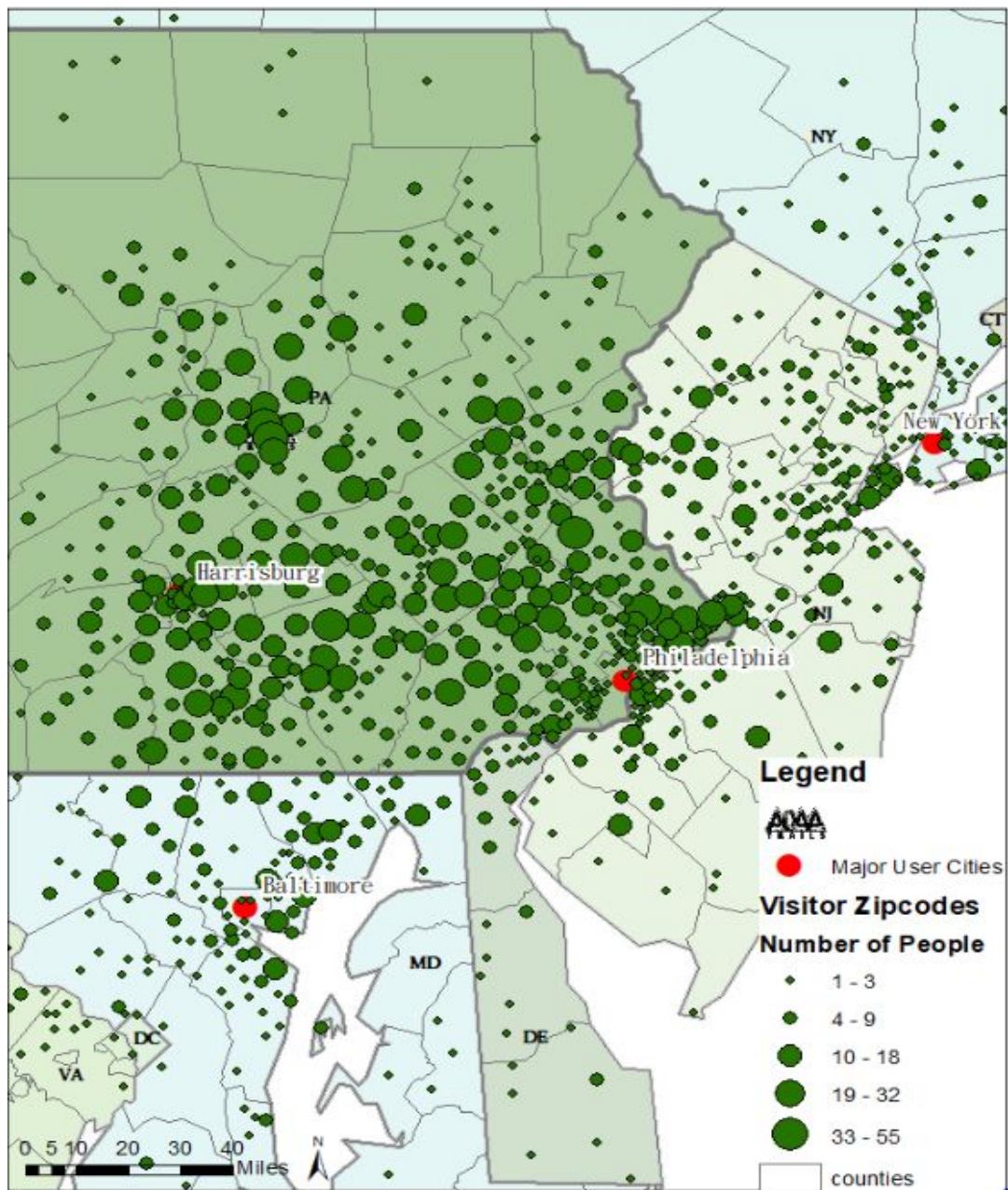
and RV's. To meet the needs of these visitors, available space is vital in our spatial approach. Through this project we will show what we believe is the best way to make site locations making sure to highlight general areas so as not to offend anyone whose property is at a specific parcel location.

## Specifications

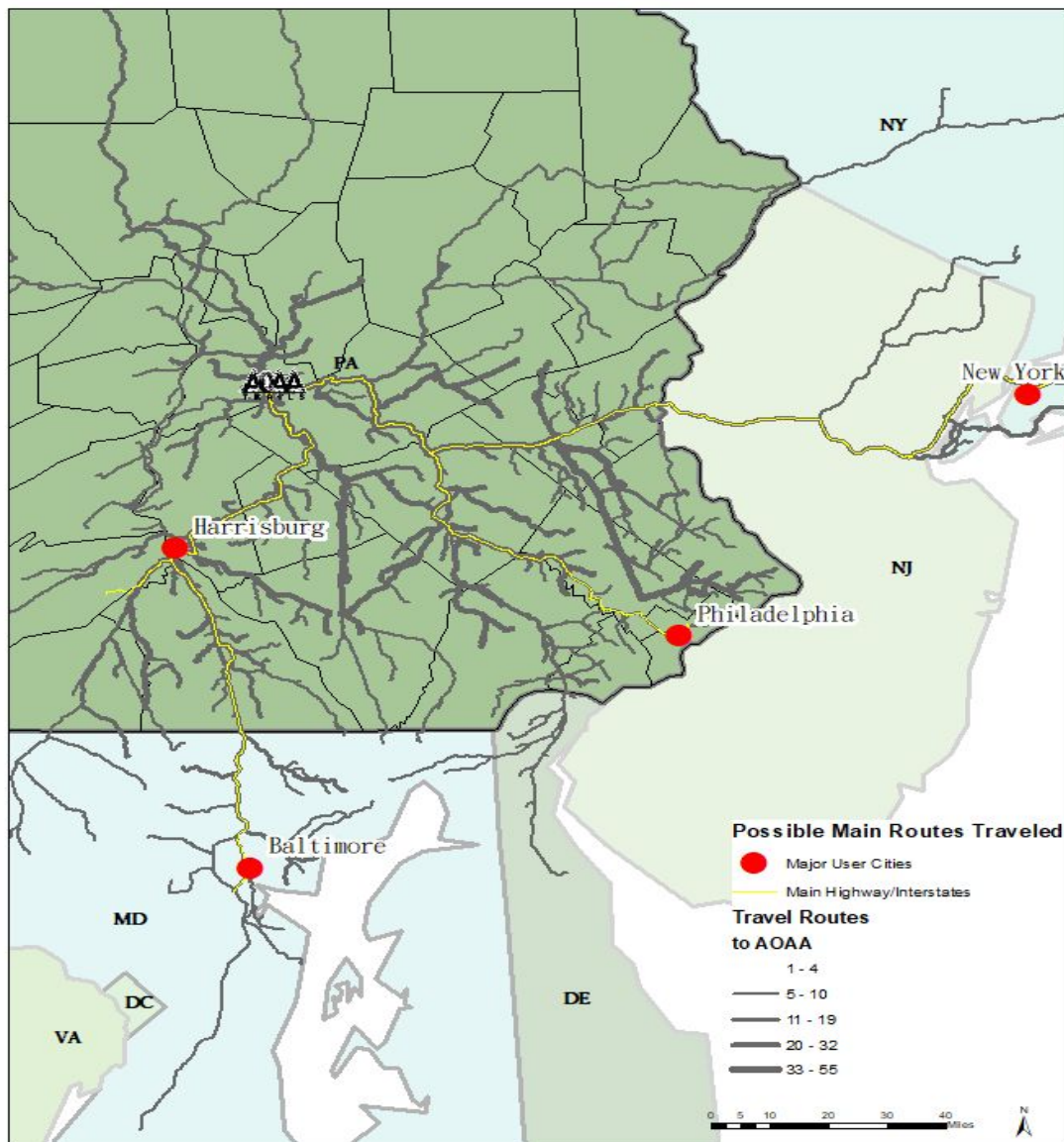
### Maps



**Figure 1.** A.O.A.A visitor home zip codes in addition to the number of people travelling to A.O.A.A from those zipcodes.

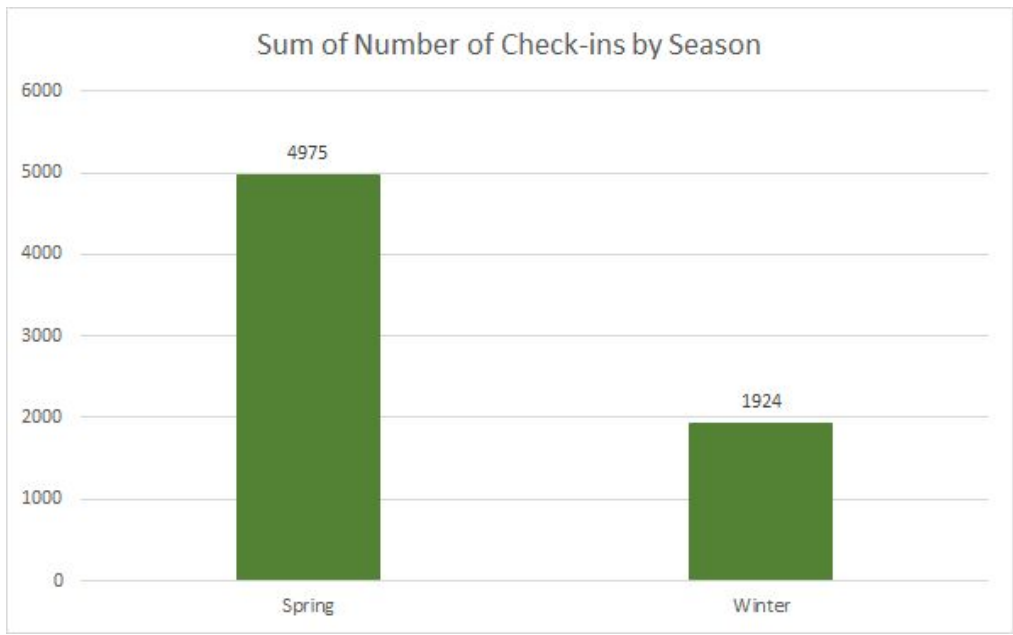


**Figure 2.** This map is a more in depth view of the visitor departing locations. This data was taken from visitors home zip codes provided by Dave Porzi.

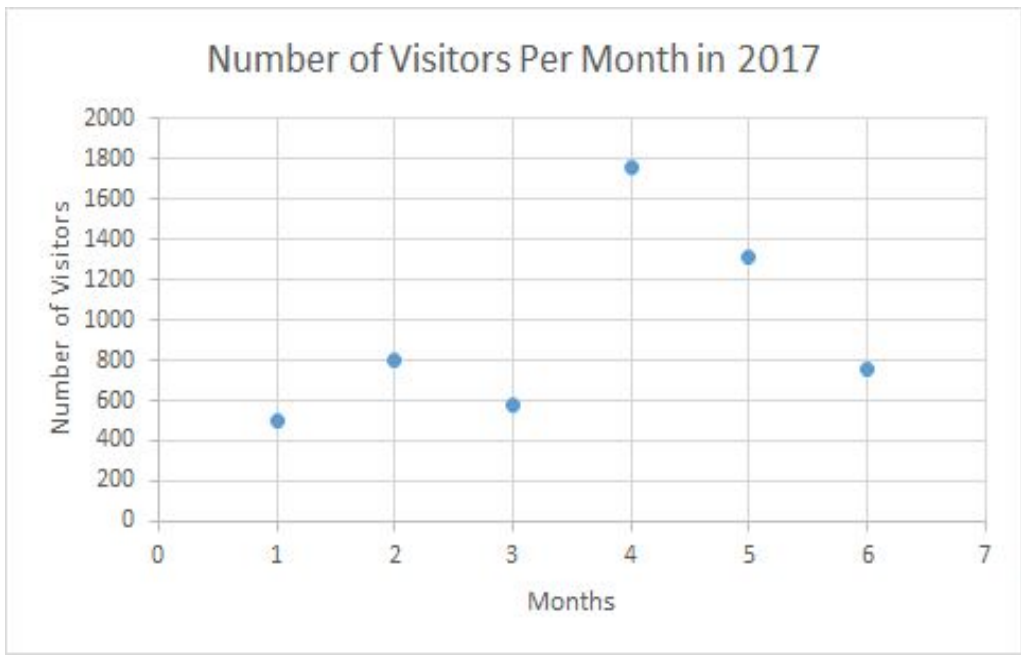


**Figure 3.** The main routes travelled by the visitors of A.O.A.A. as well as the concentration of people taking those roads.

The gray lines depict the routes these visitors are most likely taking as well as the main highways and interstates along the route, highlighted in yellow. This visual tells us that the majority of A.O.A.A. visitors are coming from Baltimore, Harrisburg, New York, and Philadelphia so it is not necessary to focus on visitors coming from the western part of Pennsylvania because they are insignificant compared to the number of visitors entering the state from the eastern border.



**Figure 4.** This graph depicts the sum of individuals arriving during the Spring and Winter Seasons.



**Figure 5.** Total Visitors in the months of January- June 2017. Month "1" being January.



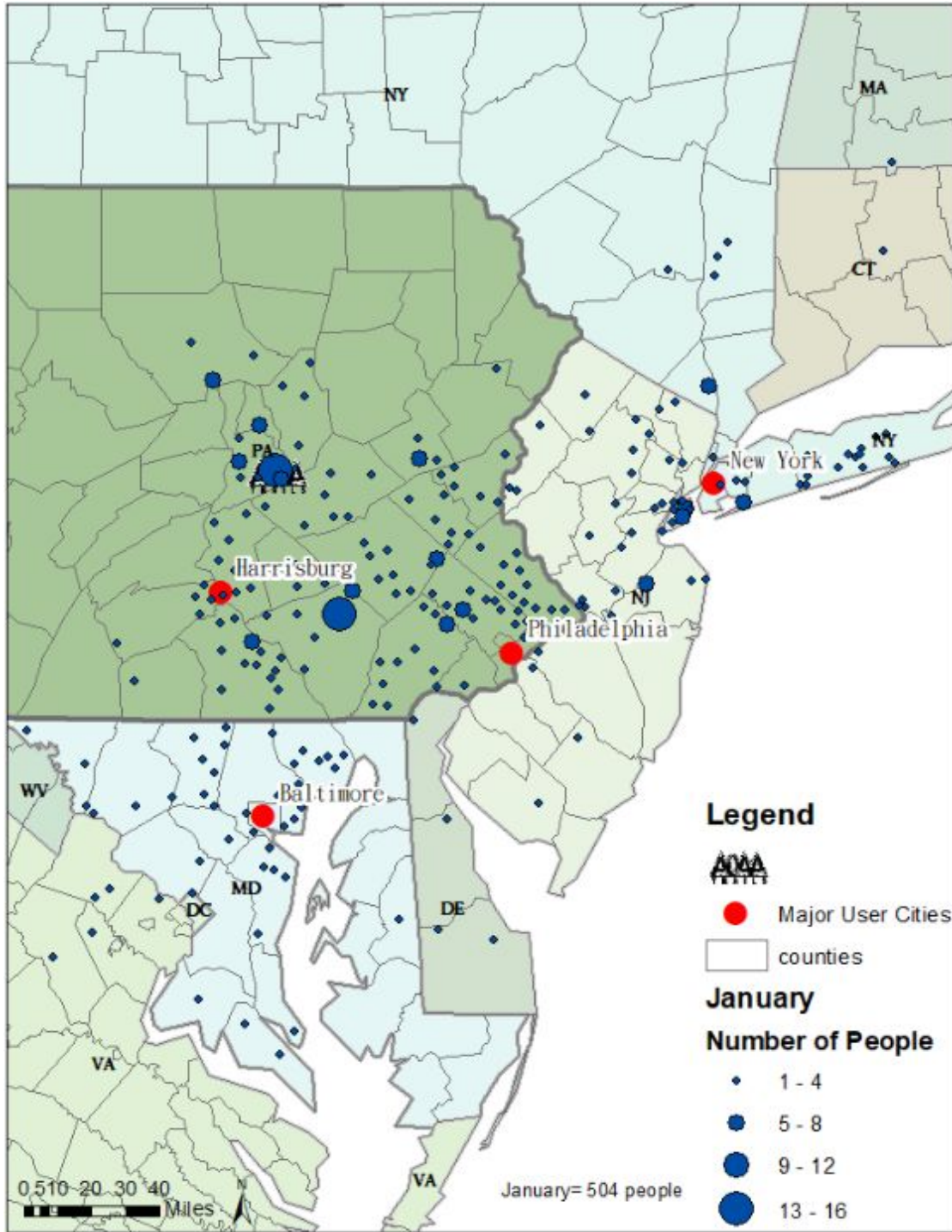


Figure 6. Number of people and travelling to AOA during the month of January.

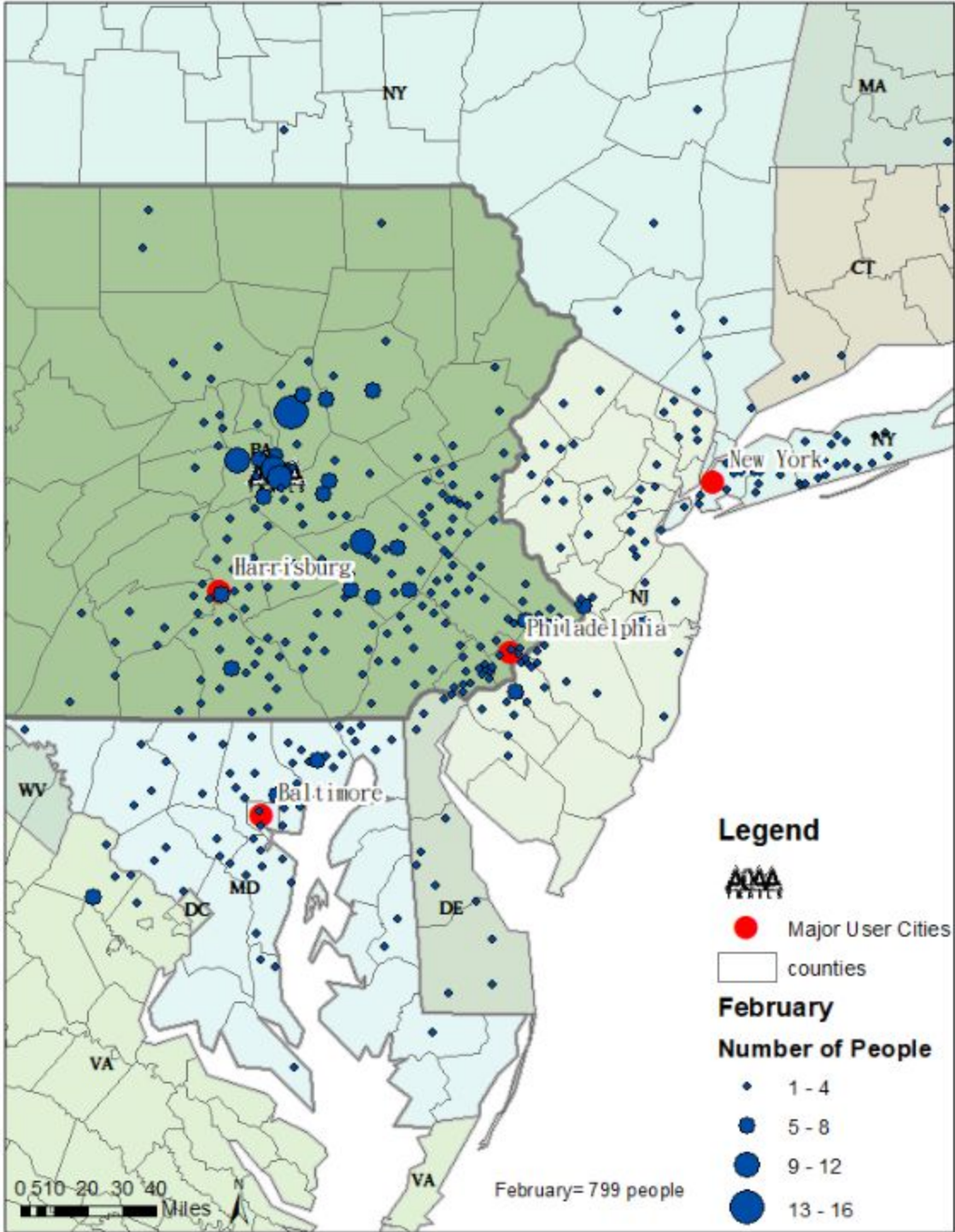


Figure 7. Number of people and travelling to AOA during the month of February.

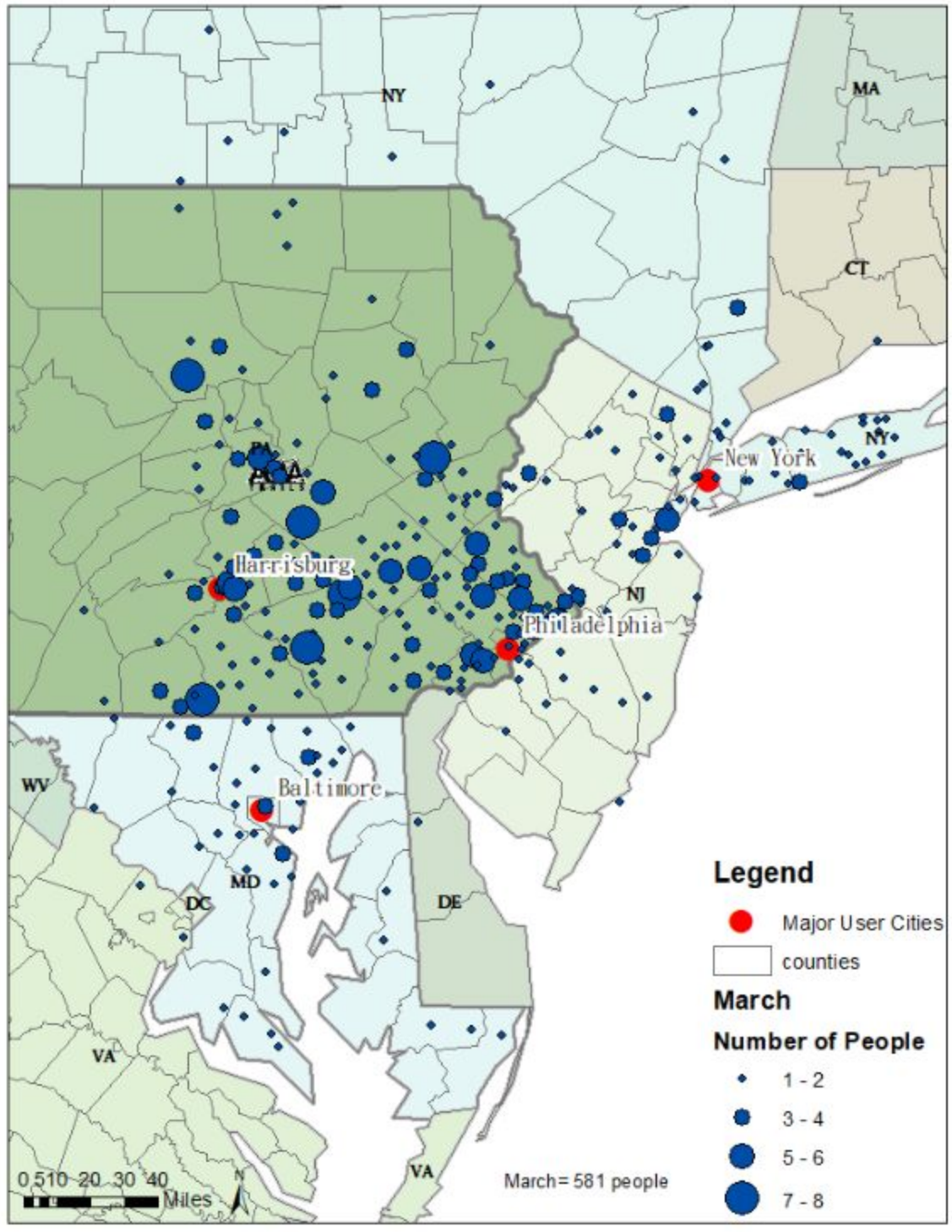
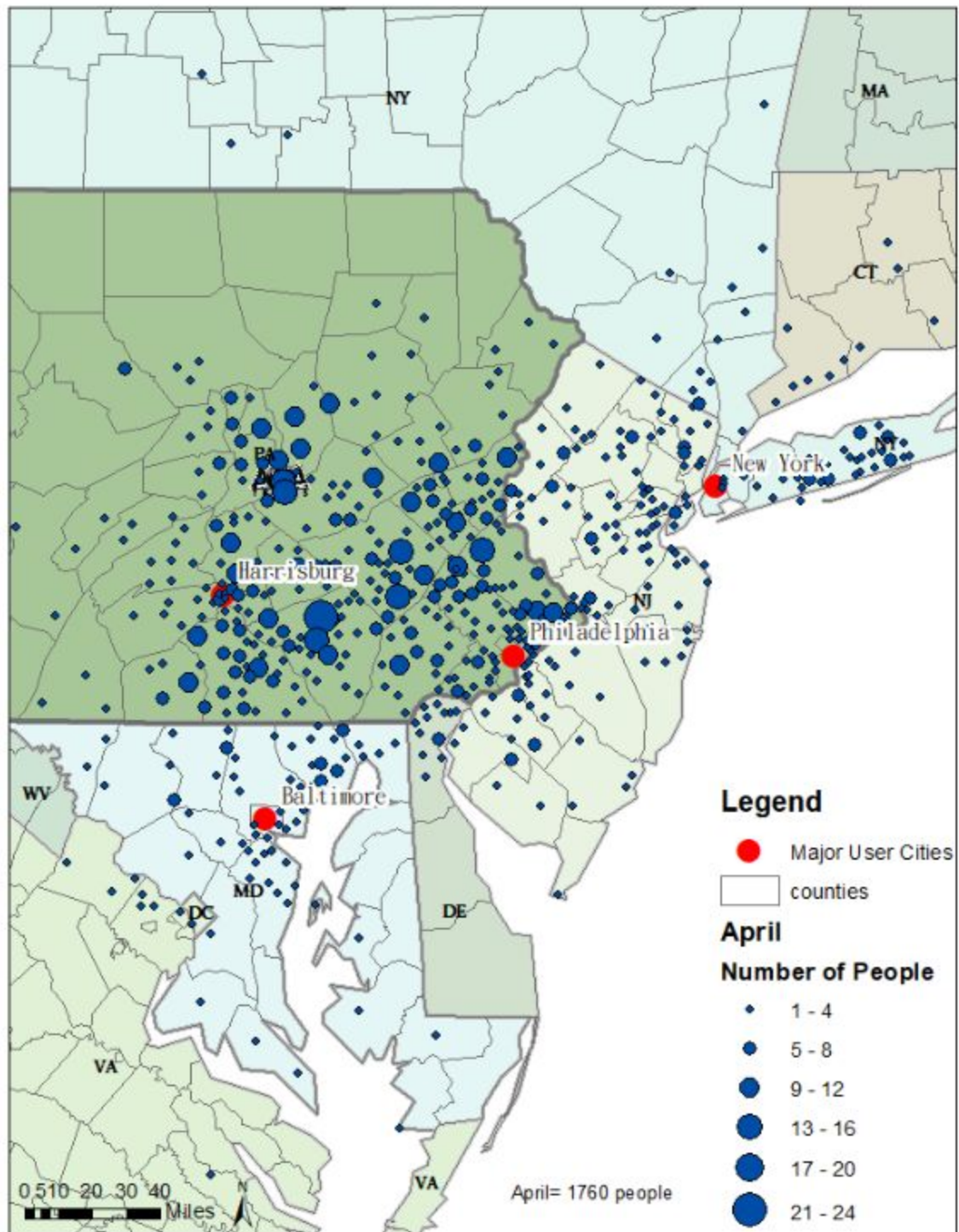


Figure 8. Number of people and travelling to AOA during the month of March.



**Figure 9.** Number of people and travelling to AOAA during the month of April.

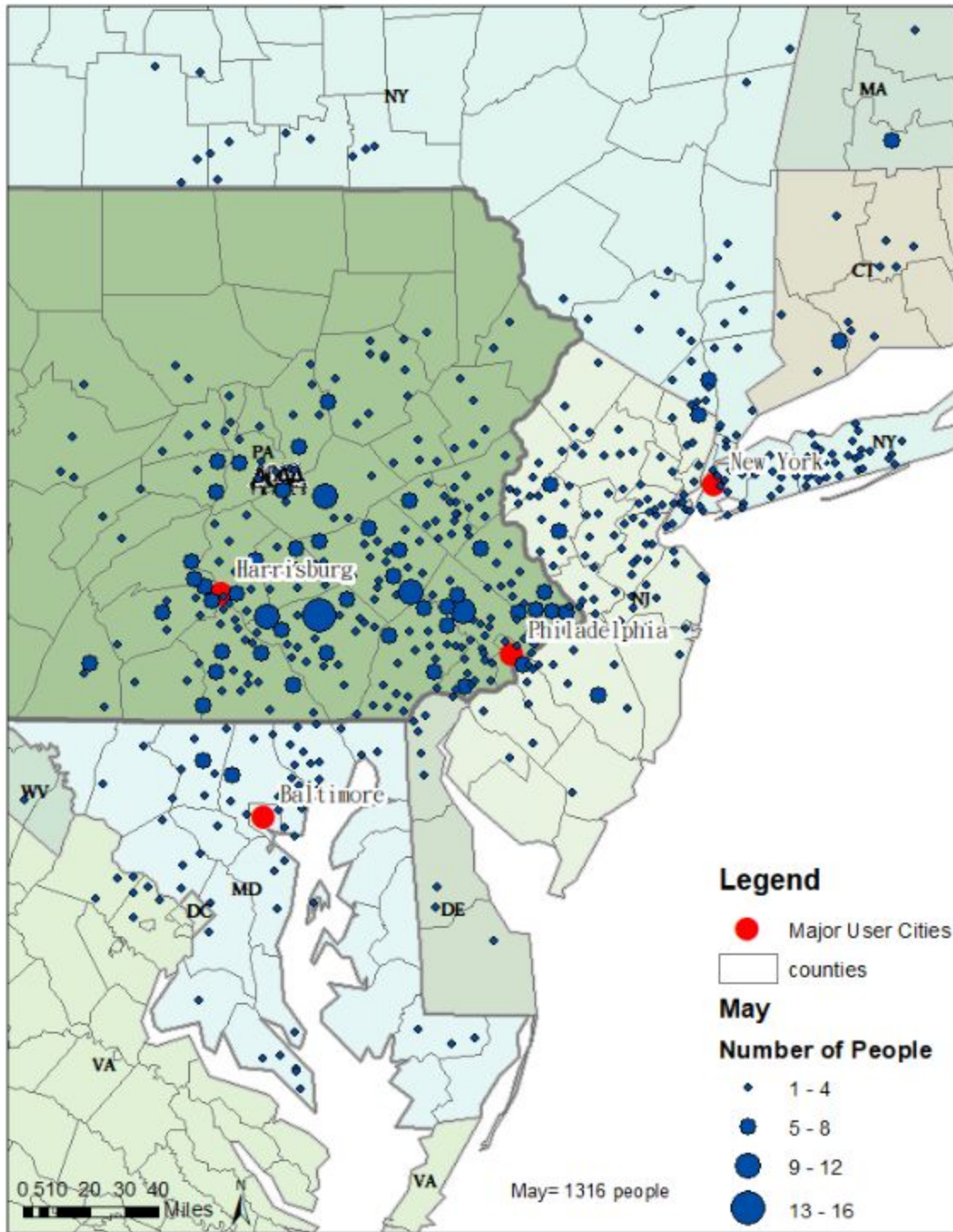


Figure 10. Number of people and travelling to AOOA during the month of May.

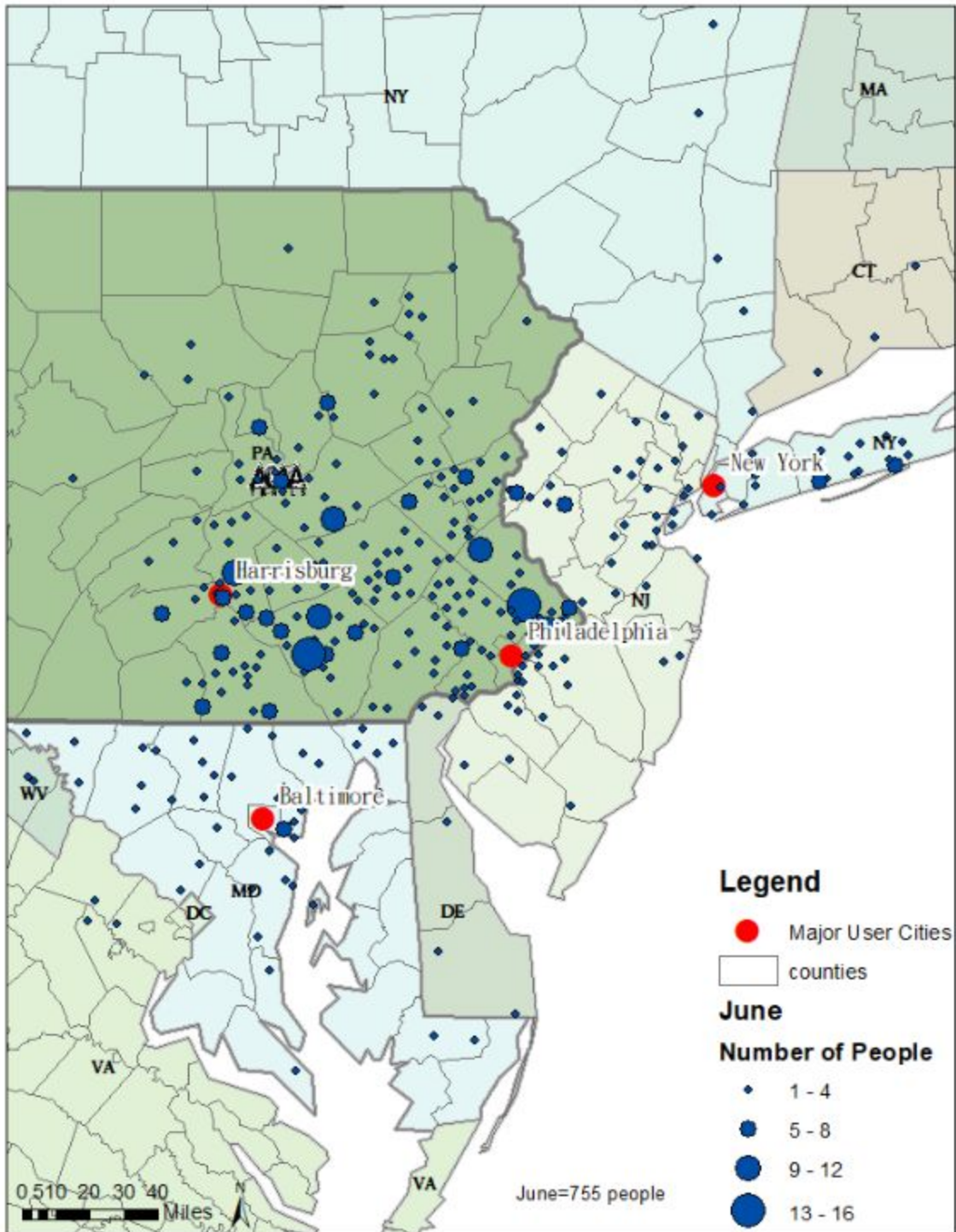


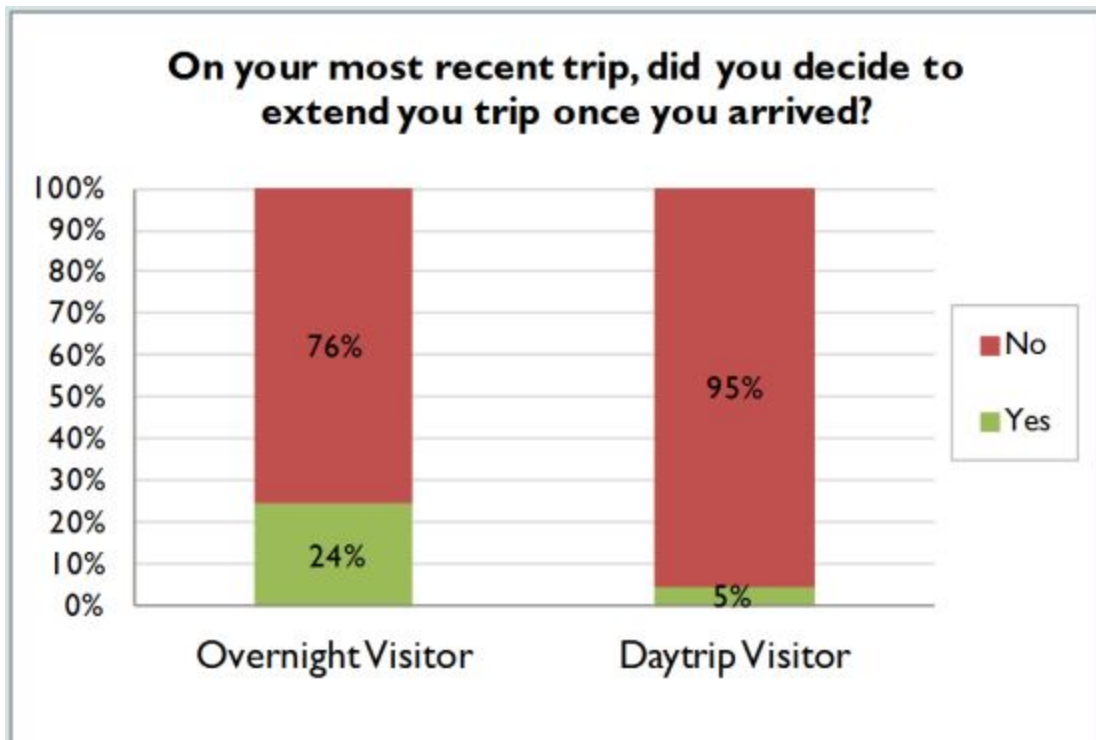
Figure 11. Number of people and travelling to AOA during the month of June.

## Potential Partnerships

Research from the Susquehanna River Valley Visitors Bureau presented in the “2013 SRV Findings Presentation” showed that of the 56% of survey takers who said they were undecided or unlikely to visit the Susquehanna River Valley, what would make them more likely to visit the Susquehanna River Valley are vacation value packages on lodging and attractions and discounts on lodging (Susquehanna River Valley Visitors Bureau 2013). Additionally, research showed that 19% of visitors prefer to visit the Susquehanna River Valley in the Spring, 44% in the Summer, 35% in the Fall and 2% in the Winter (Susquehanna River Valley Visitors Bureau 2013). The primary purpose of the 24% of surveyors most recent trip to Susquehanna River area was a day-trip/ getaway. 47% of visitors stayed overnight and of that 47%, 52% stayed 2 nights (Susquehanna River Valley Visitors Bureau 2013). Among these visitors, 58% stayed in a hotel or motel, 23% stayed with friends or family, and 11% stayed at a campground. 46% of visitors travelled with 2 people, informing us that the majority of future accommodations should be arranged for 2 people (Susquehanna River Valley Visitors Bureau 2013).

As a result of this research, our recommendation is to create partnerships with Knoebels, the Heartland Wine Trail and other adventure areas such as Rausch Creek and Reading Anthracite, to encourage people to visit while also incentivizing them with a discount. This recommendation is further backed by the research results that show that discounts of food, lodging and/ or shopping could motivate visitors to extend their trip by a day or two (Susquehanna River Valley Visitors Bureau 2013). Increased overnight tourism is in the best interest of the A.O.A.A. because Susquehanna River Valley visitors typically spend about \$200 on a day trip to the area and \$500 if they stay overnight (Susquehanna River Valley Visitors Bureau 2013). Additionally, 47% of overnight visitors brought in \$13.6 million between 2011 and 2012 while day visitors only brought in \$6.9 million during the same period of time (Susquehanna River Valley Visitors Bureau 2013). Overnight visitors brought in nearly double the income compared the day visitors. Furthermore, overnight visitors are more likely to extend their trip as noted below. By partnering with organizations and businesses such as those listed above, A.O.A.A. will have the opportunity to increase their advertising, appeal to a wider audience within different groups, bring more economic opportunity to Shamokin and Northumberland County, as well as work more effectively and productively to

increase the number of visitors. Additionally, it could be beneficial to create coupon book in conjunction with nearby organizations, businesses and companies to promote other activities to do in the area besides at the A.O.A.A.



**Figure 12.** This graph was created by the Susquehanna River Valley Visitors Bureau in their analysis of regional tourism.

Adventure areas that have excellent hotel package rates include Mine and Meadows in Pittsburgh, PA and West Virginia Hatfield-McCoy Trail. We also recommend the creation of a coupon book to promote local businesses and incentivize travel into the city of Shamokin. Logan McGinn’s discussions with rally participants show that A.O.A.A. visitors tend to plan their meals and visit ahead of time rarely, if ever, travelling into Shamokin.

## Alternative Accommodation Opportunities

Alternative accommodations are needed because data shows that A.O.A.A. visitors who come from farther distances wish there was some kind of accommodation in the nearby area. Alternative accommodation factors and decisions include placement, whether or not to build new, and determining if



repurposing an existing property is an option. Potential locations include downtown Shamokin, PA, abandoned buildings, cabins near the state park north east of Shamokin nearby Weiser State Forest, building new on property for sale and having discussions with local persons who have verbalized intentions to sell. One of our recommendations is the building of cabins near Weiser State Forest. The building of cabins in that location is close to Shamokin and A.O.A.A., in Northumberland County, satisfies requests of A.O.A.A. visitors, would promote increased visitation to the Weiser State Forest and provide alternative activities to visitors travelling to the Susquehanna River Valley with A.O.A.A. visitors who may not be interested in A.O.A.A. activities such as kayaking and hiking. The largest limitation to this suggestion is that the maps show that the majority of visitors are not coming through a corridor to the A.O.A.A. that far north, which may deter visitors from spending the night at that site because it is out of their way. Our best recommendation for an alternative and immediate solution is Airbnb. Airbnb is a technology platform that “empowers people rather than displacing them” (Airbnb Annual Report 2017). Not only do hosts keep 97 percent of the listing price, but up to 50 percent of guest spending in the U.S. occurs in the neighborhoods where they stay, fulfilling two of Northumberland County’s goals (Airbnb Annual Report 2017). Airbnb would provide the opportunity for community members to gain income and invest in their failing properties, provide an authentic visitor experience, share the economic wealth created by the presence of A.O.A.A. and overall benefit and maintain the local space. People polled at the event by project member Logan McGinn seemed to only want and need only the most basic of necessities (running water and a roof) and this could easily be provided by local homeowners through Airbnb. Airbnbs are often a fraction of the price of hotels appealing to visitors who don’t want to camp but also do not want to spend the money to stay in a hotel. It may also attract younger clients who are familiar with the application and have used it throughout their various travels.

“In less than 10 years, Airbnb’s growing rural host community has overtaken the presence of corporate hotel chains in rural America and unlike the chains, puts the economic returns of tourism growth directly into people’s pockets. Many rural areas have almost no hospitality infrastructure at all, while in others that are popular for outdoor recreation, Airbnb expands the economic pie by offering more options that make travel more accessible” (Airbnb Annual Report 2017).

The most successful alternatives that have been implemented at other adventure areas are package deals with neighboring hotels, discounts, cabins, campgrounds, however there are not immediate options for A.O.A.A. In West Virginia, fully three-fourths of active Airbnb listings are located in rural areas, while just 32.7 percent of West Virginia hotel rooms are—a 42.3 percentage point gap (Airbnb Annual Report 2017). Many Airbnb listings are located nearby West Virginia Hatfield McCoy and advertise it as the properties main attraction. No data could be found on the direct effect of Airbnb and West Virginia Hatfield McCoy. The most prevalent factors of concern in Shamokin, PA are potable water, investors, and geologic structural integrity over abandoned coal mines. Additionally, rules, regulations and cost of building and renovations are all estimated economic concerns. With the implementation of Airbnb in the short term and long term plans for more sustainable accommodations, predicted benefits include increased revenue for A.O.A.A. because visitors will be more willing and able to go to the park multiple days as well as increased revenue for the town through local businesses, specifically restaurants and bars, because they will see an increase in traffic. In summary, talking to the individuals at A.O.A.A., the issue that was brought up most frequently was the lack of accommodations in the area around the park. They were not looking forward to making the multiple hour road trip back home, and they wished there were more options for accommodations in the area. The implementation of accommodations in the area, preferably as close to the park as possible, would lead to an increase in business for A.O.A.A. and the restaurants, bars and convenience stores located in Shamokin.

## Parking Lots

More parking lots are believed to be needed in Shamokin to increase business in the city of Shamokin, PA by A.O.A.A. visitors. Incentivization for A.O.A.A. visitors to travel into Shamokin may include better advertisement of local food and businesses in Shamokin at the A.O.A.A. or bringing tents of Shamokin businesses to A.O.A.A. We believe this would promote the use of nearby space and potentially discourage short term visitation to Shamokin and more broadly Northumberland County and potentially lead to longer visits because of increased engagement with the local space. It is important to increase accessible parking in Shamokin and provide parking for cars with trailers or larger vehicles because that does not force visitors to separate from their cars, which could induce feelings of vulnerability

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within an unfamiliar space and takes control from visitors to access a space they own and know easily. If visitors do not have to separate from their cars they may be more likely to go into town and spend money. Parking would provide security for engaging in a new space.

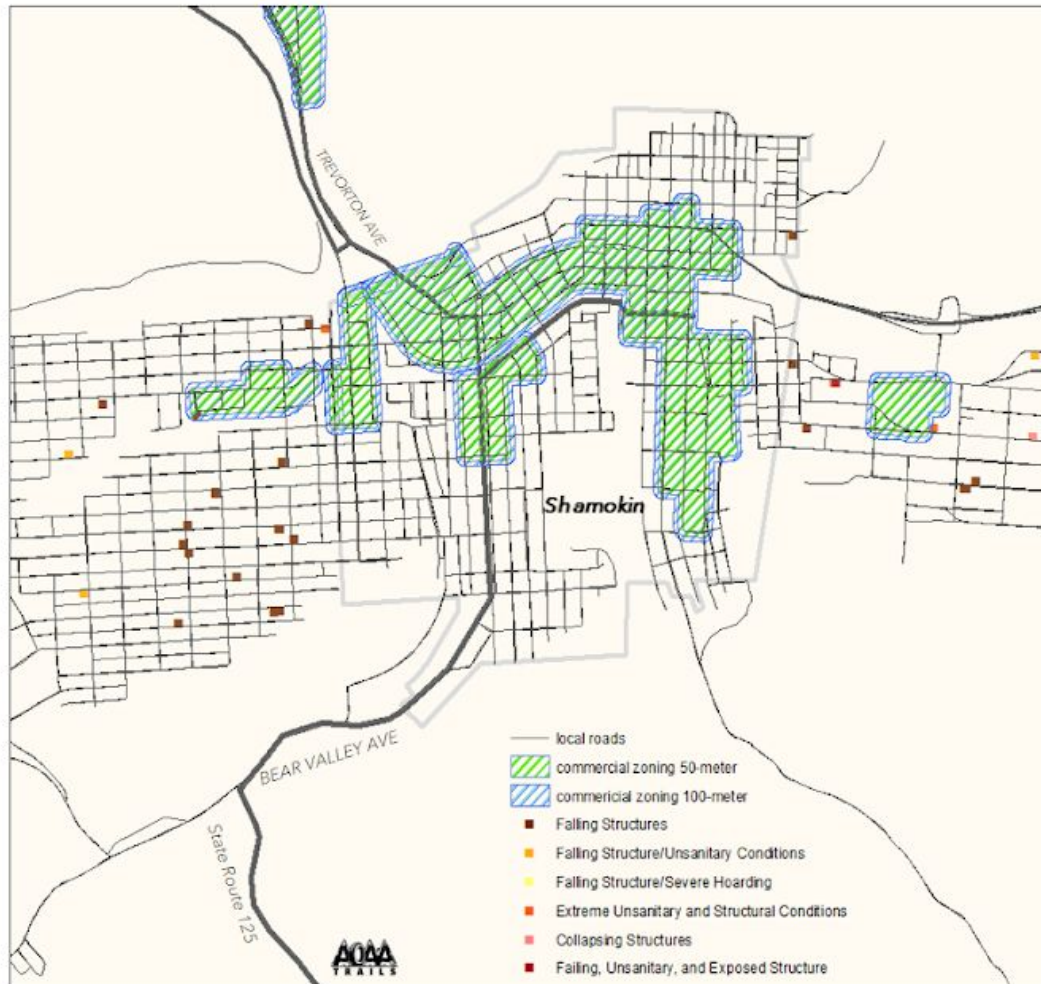
Potential solutions to this problem include utilizing eminent domain, converting diagonal parking to parallel parking or vice versa in downtown areas and creating an agreement with local businesses with parking lots. Eminent domain could provide the community with grants to eliminate unsafe and dangerous spaces while repurposing and contributing to increased economic gain within the community. However, eminent domain may upset locals and may therefore be detrimental to efforts to strengthen relations between local community members and A.O.A.A. Converting the direction of downtown parking would require town and community buy-in to support the A.O.A.A. in this way. The downside to this alternative is that townspeople might be upset that their space is being changed but it may be possible to be convince them if they will be able to see some of the economic prosperity/ opportunity. Lastly, it may be possible to create an agreement with local businesses with parking lots. By providing local businesses who agree to share their parking lots with A.O.A.A., visitors with trailers will have the ability to travel into the city and what may incentivize the local organization to participate is free advertising at A.O.A.A. and their main events. This may be especially appealing to chain companies (i.e. Weis) who already have the space and who would benefit from free advertising.

An alternative and/or short term solution to the parking problem is the implementation of ride sharing in the area. Although there are a few Lyft drivers and Uber drivers in the area, Northumberland County and A.O.A.A. could work on increasing the number of Lyft and Uber drivers or create a similar platform to Liberty Mobility Now. Originally created to transport older people to and from the hospital who could not afford the large bills, Liberty Mobility Now provides the opportunity for otherwise unemployed older members of the community to make some extra money and develop relationships with other people in the community. With the potential decrease in public transportation in the area, Northumberland County could initiate a local transportation ride sharing service through local governance by providing screenings and transportation vehicles for people to drive and transport people on either a volunteer, free but suggested fare system or

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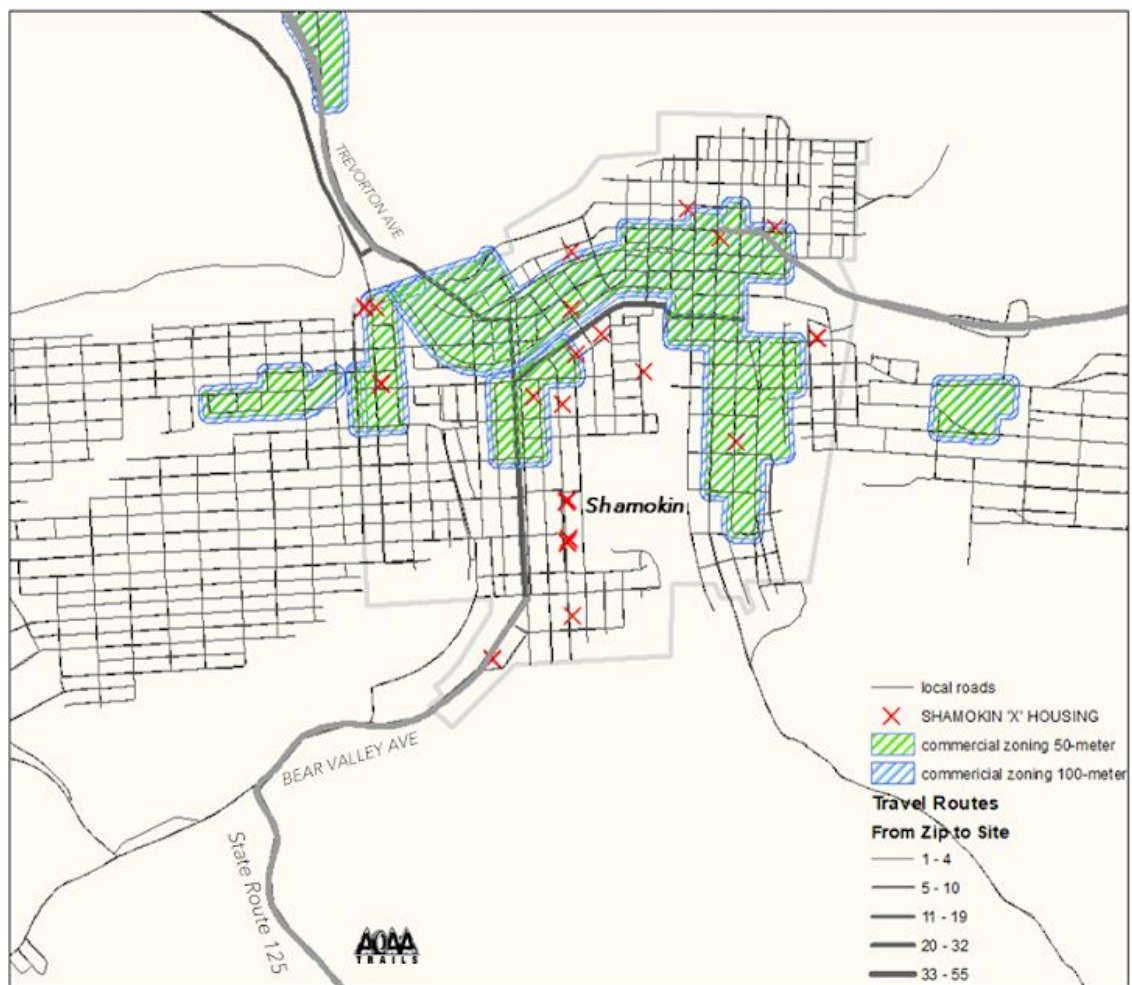
ride-by-ride system. This alternative, although few examples are available to benchmark, may solve A.O.A.A. and Shamokin's parking problem.

## Possible Expansion of Commercial Zones



**Figure 13.** Coal Township blighted housing and their proximity to the commercial zone.

This map depicts the abandoned and vacant housing in Coal Township. The brown and yellow rectangles represent failing structures, the orange rectangles represent extremely unsanitary structures, pink rectangles represent collapsing structures and red rectangles represent failing, unsanitary and exposed structures. The green shaded area represents commercial zoning in Coal Township with a 50 foot buffer, followed by a blue shaded area representing an additional buffer totalling 100 feet. Additionally the density of the amount of travellers traveling along specific corridors to get to the A.O.A.A. is illustrated by the thickness of the roads. This data was provided to us by Northumberland County.



**Figure 14.** Shamokin 'X' housing in relation to the commercial zone.

This map shows the city of Shamokin, PA. Properties labeled with an X are unsafe for emergency crews to go into in the case of emergency and are therefore deemed unsafe in general. The area shaded in green represents a 50 foot buffer commercial zone, as the blue shaded area shows an additional 50 foot boundary. The frequency at which each corridor is travelled through is represented by the thickness of the road. This map specifically illustrates the implications if the commercial zone were to be extended 50 feet and shows some houses that have been deemed unsafe and that could be knocked down and potentially repurposed for business use.

## Moving Forward

### I. Recommendations for Collecting More Data

Moving forward with this project, further research would be beneficial to the A.O.A.A. and Northumberland County. Future classes could create surveys to collect data and measure the local economy before the creation of the A.O.A.A., A.O.A.A. visitor experience, and the social and economic impacts after the A.O.A.A. was created.

- Data collection about what people are looking for (i.e. accommodations, food, attractions, etc.)
- Research economic development since the creation of A.O.A.A.
- Analysis of visitors over the span of all four seasons since the opening of the AOAA.

### II. Suggestions

In summary, our recommendation is to be open to temporary and alternative solutions that could help currently generate income for the city of Shamokin and A.O.A.A. while waiting for the coordination of outside investors. Such temporary and alternative solutions include Airbnb, cabins in partnership with Weiser State Park, the creation of coupon books and the adaption of a ride sharing service.

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Keith Ayers  
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PASDA

## References

### Airbnb Citizens

"Beyond Cities: How Airbnb Supports Rural Revitalisation." *Airbnb Citizen*, Airbnb, 10 Apr. 2018, [www.airbnbcitizen.com/beyond-cities-how-airbnb-supports-rural-revitalisation-2/](http://www.airbnbcitizen.com/beyond-cities-how-airbnb-supports-rural-revitalisation-2/).

### JeepFan.com

"Anthracite Outdoor Adventure Area – Snow Ride 2017 Page 2" *JeepFan.com*, Jeep Fan, [www.jeepfan.com/news/anthracite-outdoor-adventure-area-snow-ride-2017-page-2/](http://www.jeepfan.com/news/anthracite-outdoor-adventure-area-snow-ride-2017-page-2/).

### NPR

Schultze, M.L. "Ride Hailing In Rural America: Like Uber With A Neighborly Feel." *NPR*, NPR, 17 Apr. 2017, [www.npr.org/sections/alltechconsidered/2017/04/17/524339669/ride-hailing-in-rural-america-like-uber-with-a-neighborly-feel](http://www.npr.org/sections/alltechconsidered/2017/04/17/524339669/ride-hailing-in-rural-america-like-uber-with-a-neighborly-feel).

### Progress in Human Geography (pdf)

Woods, Michael. "Rural Geography: Blurring Boundaries and Making Connections." *Progress in Human Geography*, 12 May 2009, [journals.sagepub.com/doi/abs/10.1177/0309132508105001](http://journals.sagepub.com/doi/abs/10.1177/0309132508105001).

### Susquehanna River Valley Visitors Bureau

Susquehanna River Valley Visitors Bureau. (2013). Visitation and ROI Study.