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Michigan Teacher Mobility by Geographic Location and Locale

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Contents

Introduction

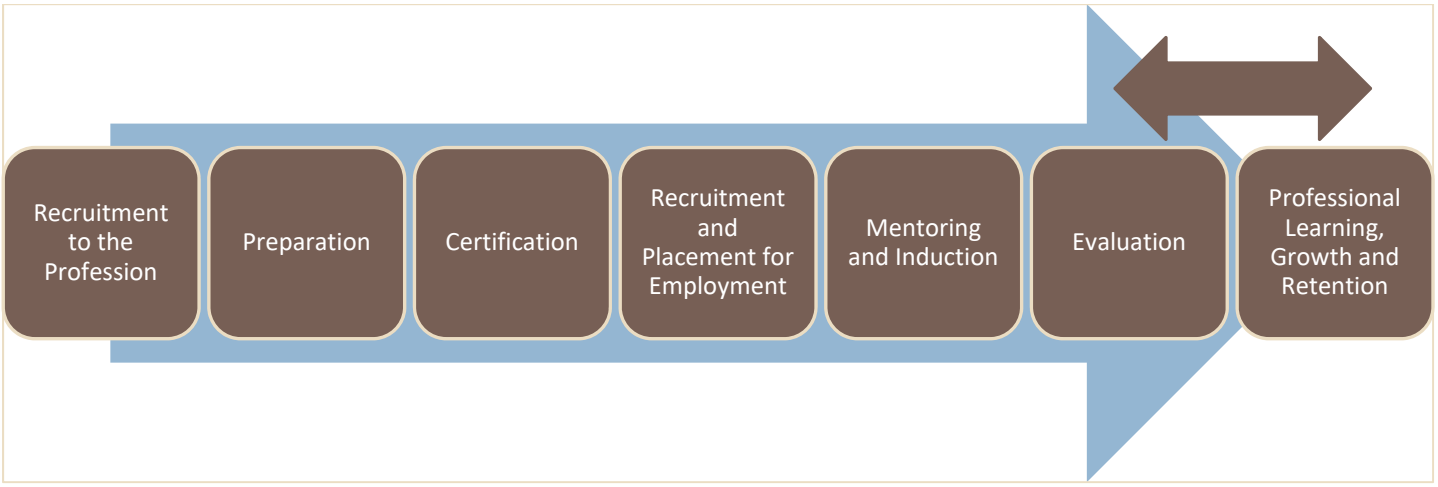
The purpose of this brief is to build on the discussion of teacher mobility in Michigan by examining teacher mobility patterns by locale (urban, suburban, rural or town) and by geographical location as defined by prosperity region.

A healthy and vibrant educator workforce is an important component of high-functioning education systems. The state of Michigan has identified an effective education workforce as one of the four focus areas in Michigan's Top 10 in 10 Strategic Plan.

This white paper is part of a series designed to leverage the rich data sources available through the Michigan Department of Education (MDE) and the Center for Educational Performance and Information (CEPI) to present information pertaining to pressing workforce issues. This work is intended to support internal and external stakeholders in making informed decisions regarding educator recruitment, preparation, credentialing, hiring, professional development, and retention.

The educator pipeline may be conceptualized in many ways. Figure 1 is a representation of Michigan's teacher pipeline, useful to understanding the analyses in this brief.

Figure 1. Michigan teacher pipeline



Teacher Mobility

Teacher turnover has been increasingly identified as a factor in the staffing cycle of schools and school districts. Carver-Thomas and Darling-Hammond (2017) define teacher turnover as any movement or departure from schools or the teaching profession. As reports of teacher shortage have grown in recent years, research has shown that teacher turnover is a key driver in creating vacancies.

In addition to disrupting school culture and student learning, the cost of teacher turnover is high. The National Commission on Teaching and America's Future (2007) cited the cost to a district for recruiting, hiring, processing, and training new teachers to be anywhere from $4,000 - $18,000 per teacher leaver. Carver-Thomas and Darling-Hammond (2017) place the figure for an urban teacher leaving a district even higher, as high as $20,000. Given that turnover tends to be greatest in high minority and high poverty schools (e.g. Haynes, 2014), these high turnover costs are disparately experienced by schools that are already under-resourced.

While many policies focus on recruitment to address shortages, research shows the need to understand turnover and to develop specific recommendations to address problems caused and associated with turnover. Research by Ingersoll and May (2016) and the Consortium on Chicago School Research (CCSR) show that the high turnover rates in high minority and high-poverty schools are created in part as teachers shuffle from high-minority to low-minority and from high-poverty to low-poverty schools. CCSR further reported that many schools turn over half of their teaching staff every three years (Haynes, 2014).

Earlier analyses (e.g. Robinson and Lloyd, 2017; Stackhouse, 2018) have demonstrated that the patterns observed nationally are also evident within Michigan and have highlighted differences in turnover rates by school type and by race/ethnicity. In particular:

- There is a higher turnover rate for Michigan teachers than overall nationwide.
- Both nationally and in Michigan, teacher rates of movers and leavers (see "Key Terms" section below) were higher for public charter schools than for traditional public schools.
- Michigan's rates of public charter movers and leavers are higher than national rates.
- Both nationally and in Michigan, there are significant differences in the turnover rates depending on teacher race/ethnicity. The differences are greater in Michigan than they are nationally. This particularly applies to mobility: mobility rates in Michigan are higher for all racial groups, and mobility for Black/African American teachers is extremely high when compared to both the national rate and to the mobility rates for teachers of other races within Michigan.

Prior work, however, does not address geographic/regional or locale (i.e. city, rural) characteristics that have been found to influence turnover in the literature, and that may contribute to the patterns that have already been observed. Michigan's educational system serves a considerable rural constituency in addition to several urban centers and their surrounding suburbs and towns. Students and schools in these various contexts face very different opportunities and challenges and policy solutions may need be customized to local context. This white paper contributes to the understanding of mobility patterns in Michigan by disaggregating the data by locale in addition to other indicators to further investigate the impact of school type and regional context.

The factors included in this analysis are:

- Locale (city, suburb, town, or rural)
- School type (Public School Academy (PSA)/Local Education Authority (LEA)) in conjunction with locale
- Prosperity region (geographical designations created by Michigan's Governor in 2014)

Data maps are also used to provide a more granular understanding of mobility patterns within regions.

Key Terms and Data Considerations

This brief uses data from the MDE and partner agency CEPI. The source data are housed in the following systems:

- **Educational Entity Master (EEM)**. The EEM contains information for public schools, nonpublic schools, intermediate school districts, and higher education institution systems in the state of Michigan, including school/facility name, authorized grade levels, addresses, and latitude/longitude information.
- **Registry of Educational Personnel (REP)**. The REP contains assignment information for all public and some nonpublic school employees in Michigan.
    - Mobility data come from a dataset derived from the REP and include any Michigan teacher with a teaching assignment in a Michigan public school in the year under consideration.

Locale

Locale information is available in the EEM, but is originally obtained from a National Center for Educational Statistics (NCES) file. The NCES locale code is a geographical indicator that links to elements in NCES administrative data systems. It is coded into 12 categories based on population and proximity to urbanized areas and principal cities. The urbanized and principal city frameworks are derived from urban and rural definitions developed by the US Census Bureau.[1]

Table 1. Locale descriptions, NCES

Locale Name	Locale Description
City: Large	Territory inside an urbanized area and inside a principal city with population of 250,000 or more.
City: Midsize	Territory inside an urbanized area and inside a principal city with population less than 250,000 and greater than or equal to 100,000.
City: Small	Territory inside an urbanized area and inside a principal city with population less than 100,000.
Suburb: Large	Suburb: Large
Suburb: Midsize	Territory outside a principal city and inside an urbanized area with population less than 250,000 and greater than or equal to 100,000.
Suburb: Small	Territory outside a principal city and inside an urbanized area with population less than 100, 000.
Town: Fringe	Territory inside an urban cluster that is less than or equal to 10 miles from an urbanized area.
Town: Distant	Territory inside an urban cluster that is more than 10 miles and less than or equal to 35 miles from an urbanized area.
Town: Remote	Territory inside an urban cluster that is more than 35 miles from an urbanized area.
Rural: Fringe	Census-defined rural territory that is less than or equal to 5 miles from an urbanized area, as well as rural territory that is less than or equal to 2.5 miles from an urban cluster.
Rural: Distant	Census-defined rural territory that is more than 5 miles but less than or equal to 25 miles from an urbanized area, as well as rural territory that is more than 2.5 miles but less than or equal to 10 miles from an urban cluster.
Rural: Remote	Census-defined rural territory that is more than 25 miles from an urbanized area and is also more than 10 miles from an urban cluster.

To simplify analysis, only the larger designations are used (City, Suburb, Town and Rural)[2]. The schools used in the analysis are Local Education Authority (LEA) and Public School Academies (PSA) schools with "Open-Active" status in the EEM in 2016-2017. PSAs are equivalent to public charter schools in other states, while LEA schools belong to an LEA district, equivalent to traditional local public schools. In the text of the report, "urban" will at times be used to describe schools with entity type "city," to align with the language in research around urban schools.

[1] Detailed explanation of the NCES locale codes and associated census designations (e.g., the current definitions of urban, rural and principal city can be found in the NCES Education Demographic and Geographic Estimates Program (EDGE) Locale Boundaries User's Manual https://nces.ed.gov/programs/edge/docs/NCES_LOCALE_USERSMANUAL_2016012.pdf

[2] In the analysis file for 2016-2017, there were 64 missing locale information in the EEM. These were manually coded. For LEA schools missing locale code, the locale code of the corresponding school district was used. For PSA schools, using Tableau software, all schools within each locale type were mapped. Then PSAs with missing locale codes were assigned locale based on the boundaries established by their surrounding schools.

Table 2. Number of LEA and PSA schools by Locale in the Three-Year Analysis File[3]

Locale	LEA School	PSA School	Total
Rural	840	52	892
Suburb	1093	120	1213
Town	414	14	428
City	562	185	747
Total	**2909**	**371**	**3280**

Key Terms

Much of the standard terminology used to define teacher turnover comes from the NCES Schools and Staffing Survey (SASS) and Teacher Follow-up Survey (TFS). The following key terms are adapted from Carver-Thomas and Darling-Hammond (2017) based on the TFS terminology.

Key Terms

- **Teacher turnover**: Teacher turnover refers to all teacher movement out of schools or out of the profession. This term encompasses both teacher mobility and teacher attrition, defined below.
- **Teacher mobility**: Teacher mobility describes the movement of teachers between schools. TFS identifies "movers" as teachers who taught in one school one year and a different school the next year. While the TFS survey captures movers who move across state lines, the MDE does not have data on teachers who move to other states. For this reason, these teachers are considered leavers in the Michigan data (Robinson and Lloyd, 2017).
- **Teacher attrition**: Teacher attrition generally describes teachers leaving the profession. In the MDE data, "leavers" our teachers that are staffed in a Michigan public school in one year, but not staffed in that Michigan public school the following year. These teachers may or may not return to the workforce in future years. The attrition rate captures the percentage of teachers classified as leavers in any given year.
- **Teacher stability**: Teachers that stay in the same building from one year to the next are classified as "stayers". The stability rate captures the percentage of teachers classified as stayers in any given year.
- **Base year**: The base year is the first of the two school years that were used to calculate teacher mobility, attrition, and stability.

For this paper **three-year mobility, attrition and stability rates**[4] were calculated over the time span 2014-2015 through 2016-2017.

[3] MiSchoolData lists 2,968 LEA schools and 376 PSA schools for the 2016-2017 school year, for a total of 3,344 schools. The 3,280 included in this white paper represent 98% of total schools. The difference is that the schools used in this paper were filtered for those with “Open/Active” status at the end of the 2016-2017 school year.

[4] Using three-year rates helps to smooth any large one-year shifts that might exist in the data. The three-year stability rate is calculated as follows, using the example of stability rate in rural locale. For all teachers in schools with "rural" locale, rate = (stayers

Results and Analysis

This section, comprising the bulk of the paper, presents information on stability (stay), mobility (move) and attrition (leave) rates for Michigan.

The information is organized in a series of questions and answers to facilitate comprehension and policy use:

Q1. How do Michigan teacher stability and turnover rates vary by locale (city, rural, town suburb)?
Q2. How do Michigan teacher stability and turnover rates vary by school type within locale (urban, rural, town, suburban)?
Q3. How do Michigan teacher stability and turnover rates vary by prosperity region?
Q4. How do stability rates vary school-by-school within larger geographical areas?

Q1. How do Michigan teacher stability and turnover rates vary by locale (city, rural, town suburban)?

Table 3 shows the average three-year stability, mobility and attrition rates across all schools by locale type. Stability rates for rural, suburban and town schools are similar, and comparable to the state average of 82.4%. The teacher stability rate in city schools is lower than rural, suburb and town schools at 75.7%. Correspondingly, the attrition and mobility rates for all locales are lower than the state rates except for city schools. City schools have experienced nearly 11% teacher attrition over the three years targeted and a 13.4% mobility rate.

Table 3. Average Michigan Teacher Three-year Stability (stay), Mobility (move) and Attrition (leave) Rates Across All Schools by Locale Type

Locale	Average Three-Year Stability Rate	Average Three-Year Mobility Rate	Average Three-Year Attrition Rate
Rural	83.9%	8.5%	7.5%
Suburb	84.6%	8.5%	6.9%
Town	84.5%	7.9%	7.6%
City	75.7%	13.4%	10.9%
State of Michigan	**82.4%**	**9.6%**	**8.1%**

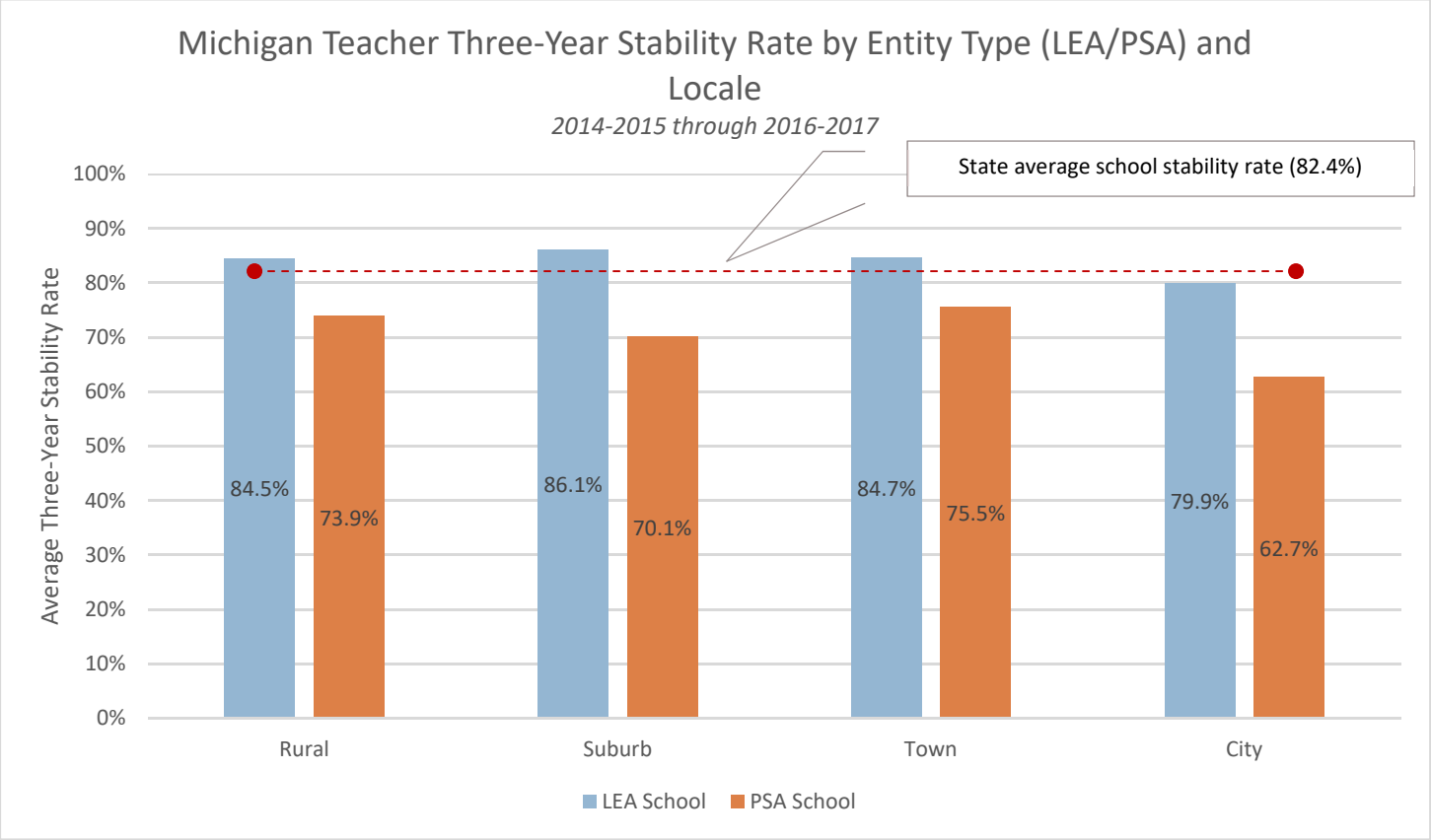
Q2. How do Michigan teacher stability and turnover rates vary by school type within locale (urban, rural, town, suburban)?

Building on the data in Table 3, analysis in a previous mobility white paper (Robinson & Lloyd, 2017) and National Center for Education Statistics research[5] identifying higher mobility/lower stability rates for public charter schools than for traditional schools, Figure 1 shows three-year average stability rates, broken down by both locale and school type. The red line depicts the average per school stability rate for all of Michigan (82.4%) as a point of reference for the other rates.

2014-2015 + stayers 2015-2016 + stayers 2016-2017)/(Total number stayers all three years + Total number leavers all three years + Total number movers all three years).

[5] U.S. Department of Education, National Center for Education Statistics, Teacher Follow-up Survey (TFS), "Current and Former Teacher Data Files," 2012-13; Teacher Attrition and Mobility: Results from the 2008-09 Teacher Follow-up Survey, U.S. Department of Education, National Center for Education Statistics (NCES 2010-353). http://nces.ed.gov/surveys/sass

Figure 1. Michigan Teacher Three-Year Stability Rate by Entity Type (LEA/PSA) and Locale (2014-2015 through 2016-2017)

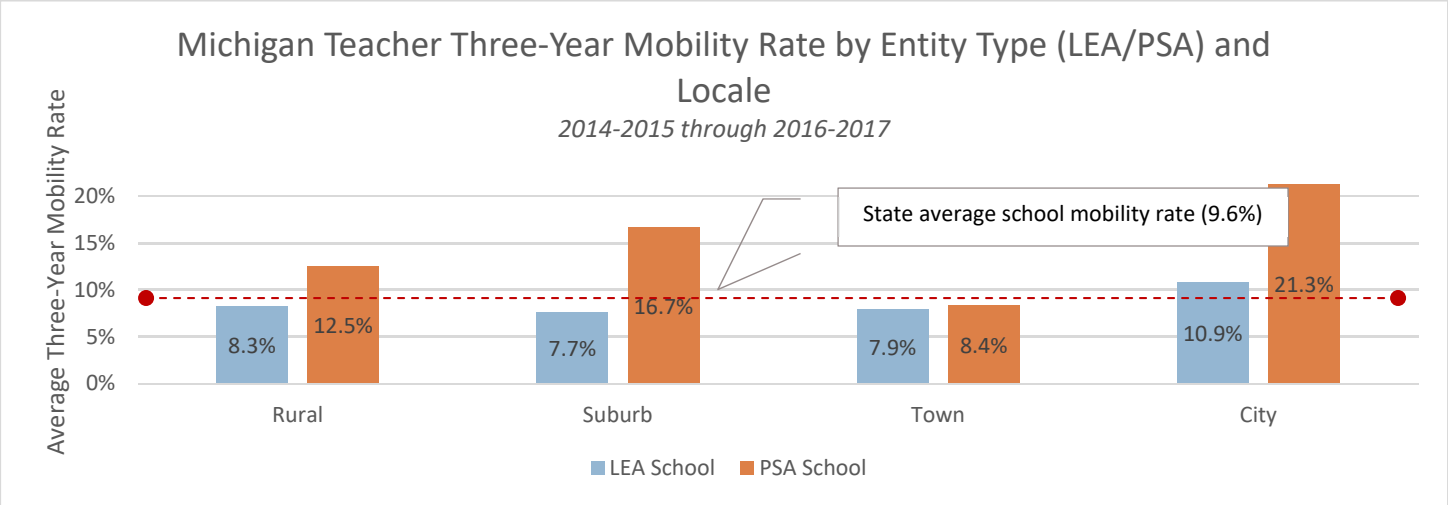


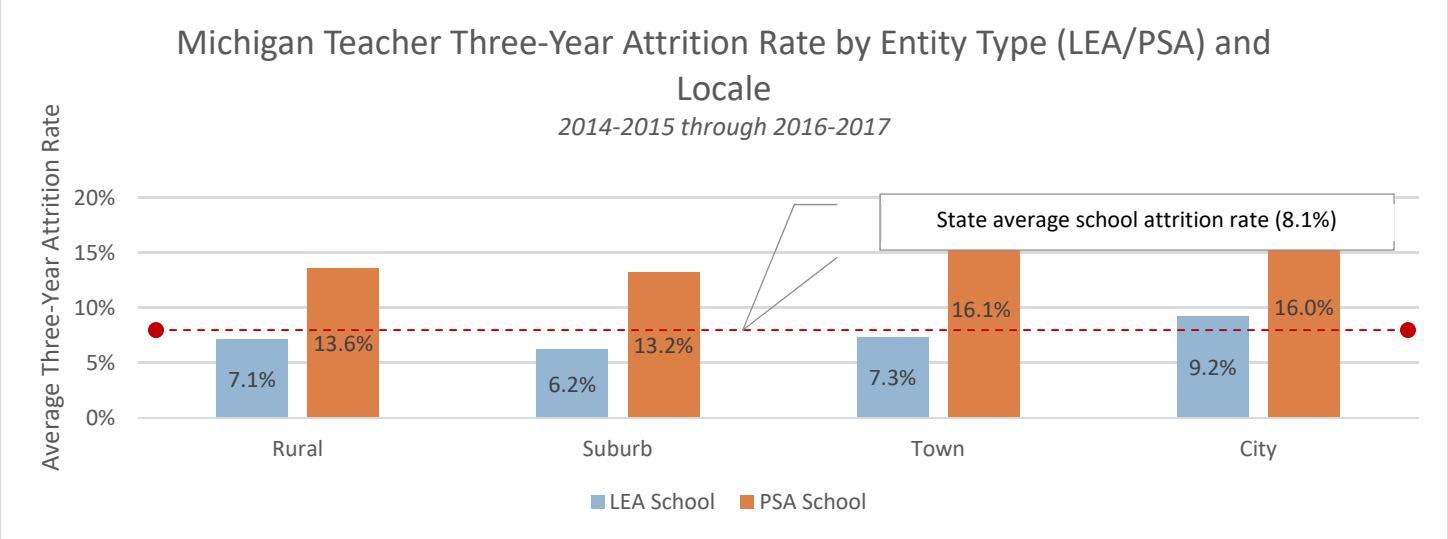
- As shown in Table 3, city schools experienced lower stability than other locales over the three-year period, but Figure 1 additionally indicates that the variation by school type is a larger factor. Within each locale type, PSA schools were much less stable than their LEA counterparts. Urban PSA schools experienced a stability rate of 62.7% compared to 79.9% stability in urban LEA schools.
- Rural and suburban PSAs also had lower stability rates than corresponding LEAs, with an approximately 11% difference between rural PSA and LEA schools and a 16% difference between suburban PSA and LEA schools.
- Suburban LEA schools had the highest average three-year teacher stability rates and city PSA schools the lowest.

Urban (City) schools experienced lower stability than other schools, but the variation by school type is a larger factor. Urban PSA schools experienced a stability rate of 62.7% compared to 79.9% stability in urban LEA schools.

Figure 2 shows the mobility (move) and attrition (leave) rates by locale and entity type. As previously established, rates of both mobility and attrition were higher for PSA schools than for LEA schools for all locales (though with only a slight difference in mobility within towns). The mobility rate in urban LEAs was only slightly higher than the state mobility rate of 9.6%, but in urban PSAs was more than 20%. PSA mobility in the suburban context and attrition in the town and urban contexts were also high, exceeding 16%.

Figure 2. Michigan Teacher Three-Year Mobility (Move) and Attrition (Leave) Rates by Entity Type (LEA/PSA) and Locale (2014-2015 through 2016-2017)





Q3. How do Michigan teacher stability rates vary by prosperity region?

Prosperity regions are geographical designations created by Governor Snyder in 2014 to allow for the development of coordinated strategies for economic growth. They have been added to MDE entity data and are used here as a convenient way to look at regional patterns of stability, mobility and attrition.

Figure 3 shows average three-year stability rates for each of the 10 prosperity regions (region map in Appendix) within Michigan. The red line approximates the state three-year rate (82.4%) for all region schools combined. Most regions had stability rates close to the state rate and similar to one another, ranging from 83.2% to 84.5%. The Southwest and Detroit Metro prosperity regions had lower stability rates at 81.7% and 79.9%, respectively.

Figure 3. Average Three-year School Stability (Stay) Rate by Prosperity Region (2014-2105 through 2016-2017)[6].

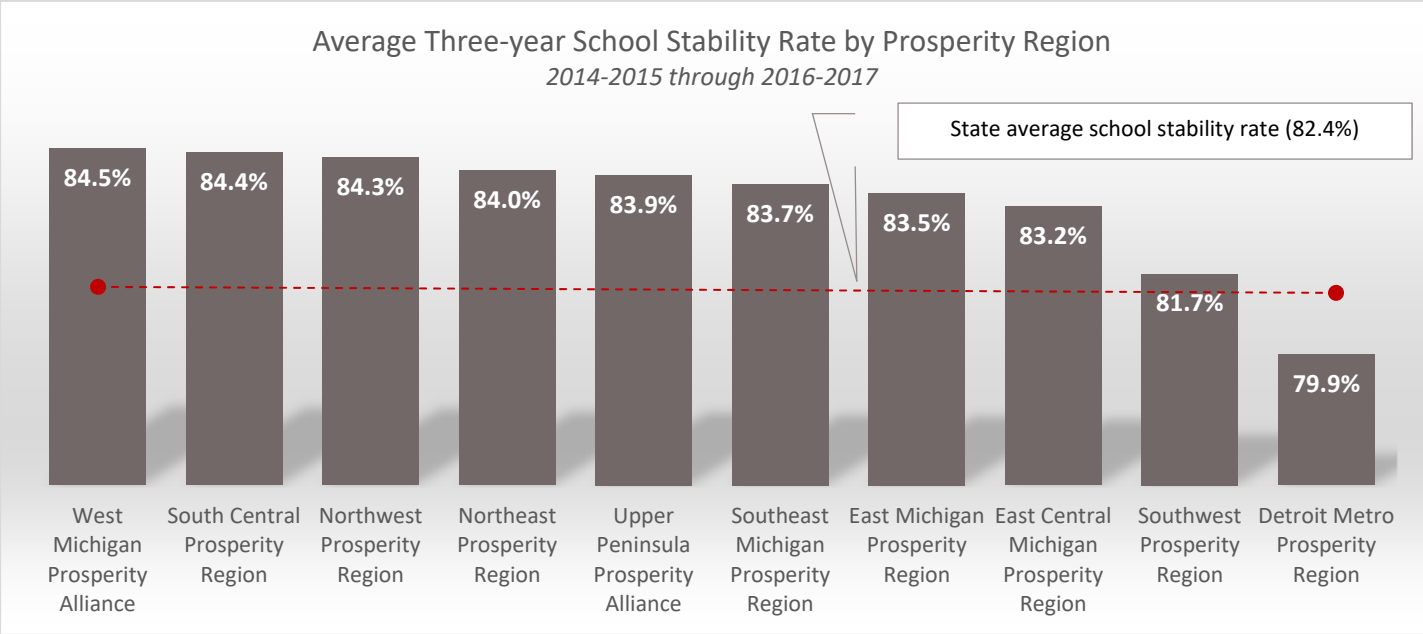


Table 4 shows numerical stability rates by prosperity region in addition to mobility and attrition rates, arranged in descending order by stability. Mobility and attrition rates do not follow the same pattern as stability. In general, both do increase as one moves down the table (decreasing stability), but there are a few anomalies. The mobility rate is lower but attrition rate higher for the Northwest prosperity region and the Upper Peninsula Prosperity Alliance while mobility is the greater contributor to lower stability in the Detroit Metro prosperity region by almost 3 percentage points.

[6] A map of prosperity regions can be found in the Appendix.

Table 4. Average Three-year School Stability (Stay), Mobility (Move) and Attrition (Leave) Rates by Prosperity Region (2014-2015 through 2016-2017)

Prosperity Region Name	Average Three-Year Stability Rate	Average Three-Year Mobility Rate	Average Three-Year Attrition Rate
West Michigan Prosperity Alliance	84.5%	8.2%	7.3%
South Central Prosperity Region	84.4%	8.4%	7.2%
Northwest Prosperity Region	84.3%	7.2%	8.5%
Northeast Prosperity Region	84.0%	8.4%	7.6%
Upper Peninsula Prosperity Alliance	83.9%	8.1%	8.0%
Southeast Michigan Prosperity Region	83.7%	8.7%	7.6%
East Michigan Prosperity Region	83.5%	8.7%	7.8%
East Central Michigan Prosperity Region	83.2%	9.2%	7.6%
Southwest Prosperity Region	81.7%	9.9%	8.4%
Detroit Metro Prosperity Region	79.9%	11.3%	8.8%
State of Michigan	**82.4%**	**9.6%**	**8.1%**

Figure 4 further breaks down the geographic information by school type. A noteworthy take away from this figure is that the LEA school stability rates did not vary substantially from region to region; there is a 3% difference between the lowest (Southwest, 83%) and the highest (West Michigan, 86%). The PSA school rates, however, are much lower in almost every region and demonstrate more variability from region to region. The largest differences between LEA and PSA schools, approximately 20%, are in the Detroit Metro and Northeast prosperity regions. A far greater percentage of Detroit area teachers teach in PSA schools compared to other regions (see Table 5); this likely increases the practical impact of greater PSA mobility in Detroit.

LEA school stability rates did not vary substantially from region to region; there is only a 3% difference between the lowest (Southwest) and the highest (West Michigan). Again, however, the PSA school rates are much lower in almost every region.

Figure 4. Average Three-year School Stability (Stay) Rate by Prosperity Region and Entity Type (2014-2015) through 2016-2017)

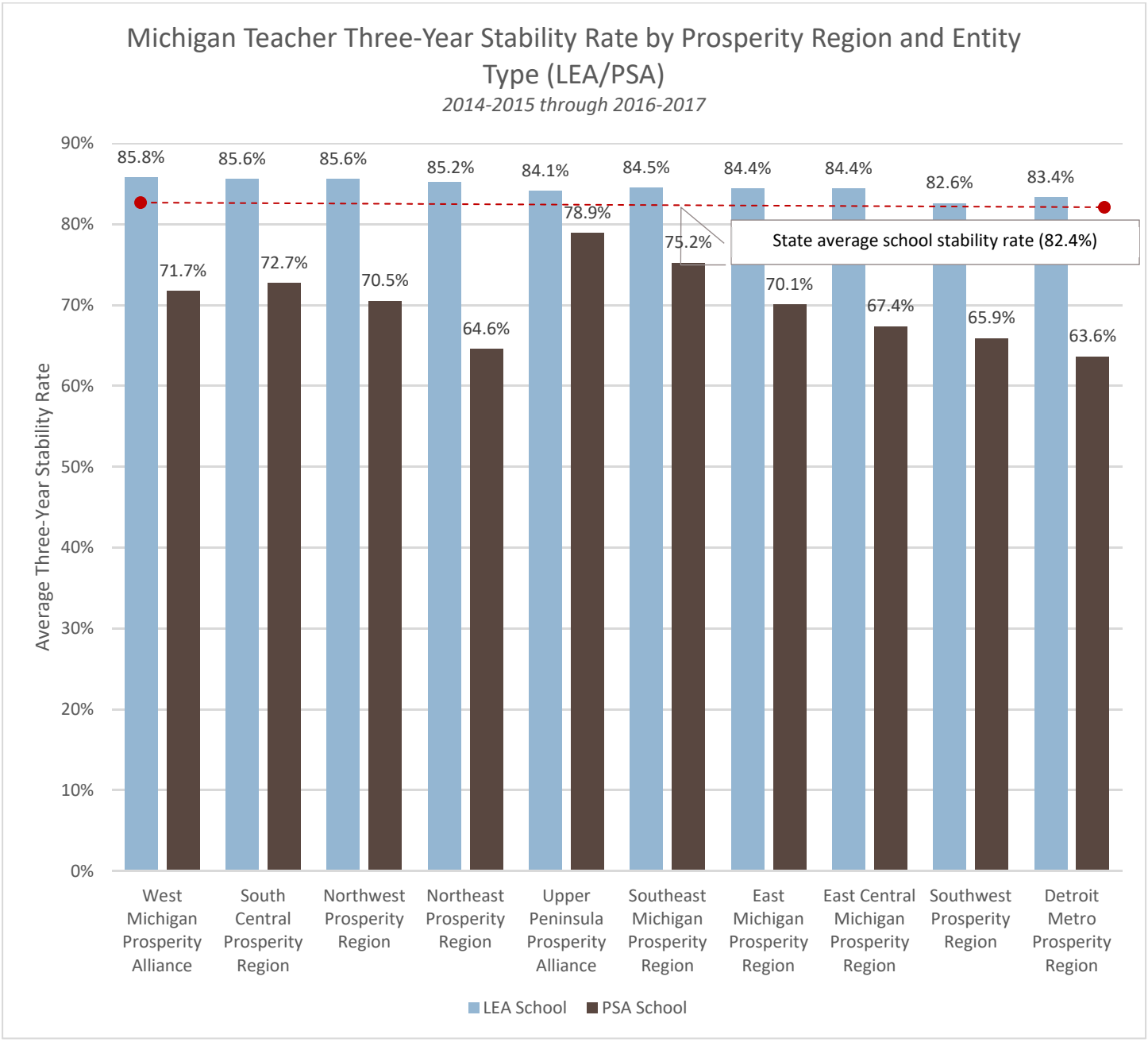


Table 5. Percentage of Teachers in LEA and PSA Schools by Prosperity Region

Prosperity Region Name	LEA School	PSA School
West Michigan Prosperity Alliance	90.3%	9.7%
South Central Prosperity Region	91.6%	8.4%
Northwest Prosperity Region	89.0%	11.0%
Northeast Prosperity Region	97.2%	2.8%
Upper Peninsula Prosperity Alliance	94.3%	5.7%
Southeast Michigan Prosperity Region	92.3%	7.7%
East Michigan Prosperity Region	92.5%	7.5%
East Central Michigan Prosperity Region	94.5%	5.5%
Southwest Prosperity Region	95.3%	4.7%
Detroit Metro Prosperity Region	85.4%	14.6%

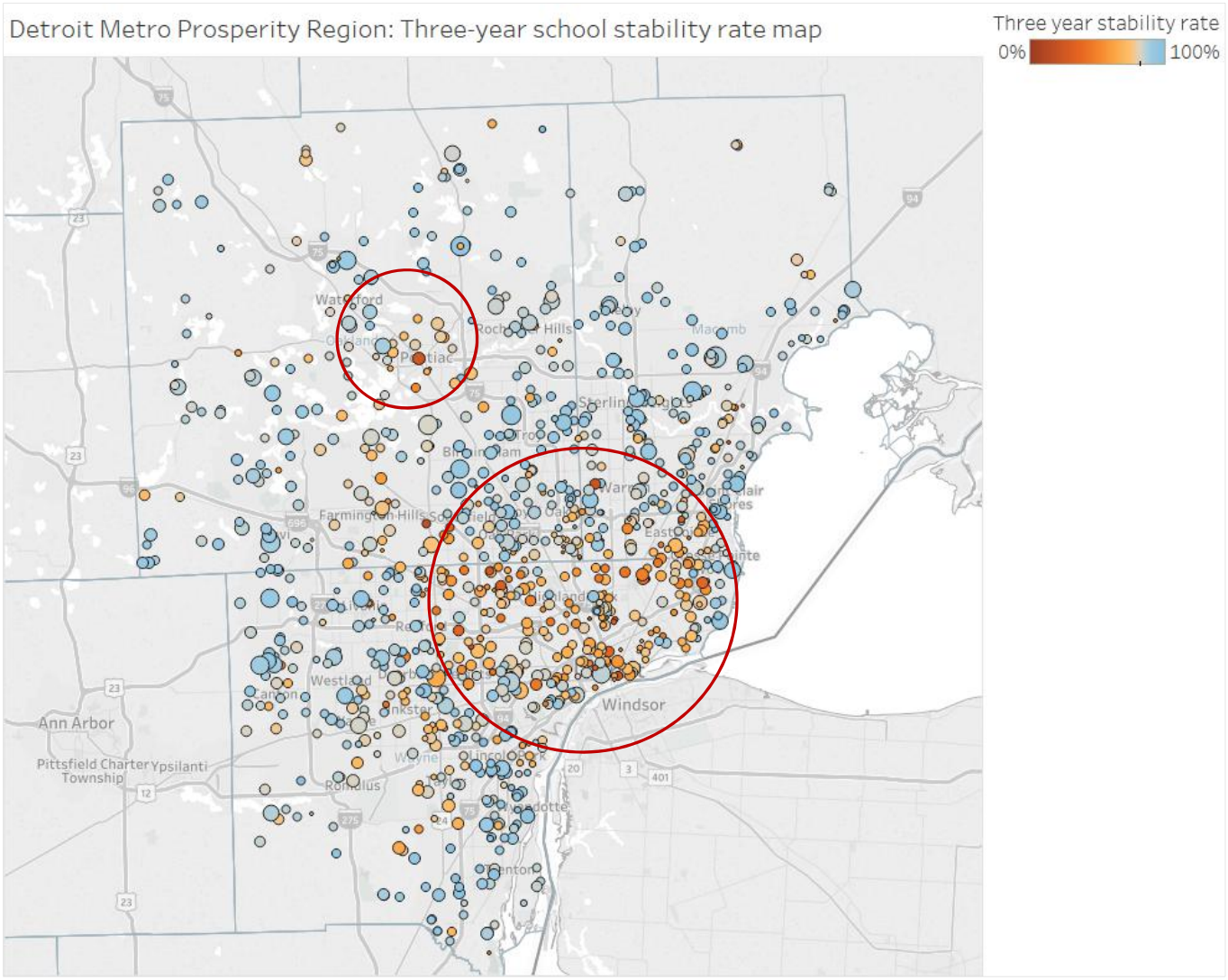
Q4. How do stability rates vary school-by-school within larger geographical areas?

Mapping facilitates data analysis that goes beyond aggregate values (e.g. averages by locale or region) to allow one to identify patterns one might not uncover by other methods. This section of the paper shows school-level three-year stability rates. To generate the maps, each school's geographic information (latitude and longitude) was obtained from the EEM. Then the Geographic Information System (GIS) component of the software Tableau was used to map the variables. For these maps, the color scale was manually centered at the state average stability rate (82.4%). Darker orange indicates schools with a low stability rate and blue indicates schools with a high stability rate related to the state average.

Figure 5 is a sample prosperity region map for the Detroit Metro region. Within the region, there are a wide range of stability rates, showing that teacher stability varies considerably by school. There are lower stability schools scattered throughout the region, but there are pockets of very low stability within the greater Detroit and Pontiac areas.

The other prosperity region maps show similar patterns on a smaller scale. In those regions with urban areas, stability tends to be much lower in those schools. But all regions have some schools with lower than state average stability rates that could benefit from greater investigation into causes. **All prosperity region stability maps can be found in the Appendix.**

Figure 6. Three-year school stability rate map, Detroit Metro Prosperity Region



Summary of Findings

The key findings from this analysis are that:

1.) Statewide, urban schools of higher teacher mobility and attrition than schools in other locales.
2.) School type (LEA/PSA) also matters when looking at stability. In fact, the differences in mobility and attrition are greater between school types than they are between locales. Specifically, PSA schools in Michigan show lower rates of stability and higher rates of turnover across locale types and across geographic regions. The differences between school types is greatest in urban schools, and greater in Detroit and the Northeast prosperity regions than in other regions.

    a. The mobility rate in urban LEAs was only slightly higher than the state mobility rate of 9.6%, but in urban PSAs was more than 20%.
    b. Rural and suburban PSAs also had lower stability rates than corresponding LEAs, with an approximately 11% difference in rate for rural schools and a 16% difference for suburban schools.

c. In the prosperity region with lowest stability rate (Detroit), while the LEA stability rate was on par with the state stability rate for the years analyzed, the PSA stability rate was 20 percentage points lower (64%).

3.) The maps show higher mobility rates in the areas we know to have higher rates of poverty and minority students. In Michigan, cities also have higher proportions of PSAs, which, as shown, have higher rates of turnover regardless of region or locale.
4.) Though research has indicated difficulties around teacher shortage for rural areas nationwide, this analysis of turnover did not yield evidence that turnover is a consistent factor in creating rural vacancies in Michigan. Recruitment is possibly a larger factor in rural areas.
5.) These findings are generally consistent with national research.

Policy Implications and Next Steps

Many schools and districts have reported vacancies that impact their ability to serve students. Often these vacancies result from teacher turnover, and in some cases (e.g. with very short notice in the middle of the school year) pose significant hardships for districts. Given the high cost of teacher turnover, its contributions to vacancy and shortage, and its impact on school culture and student outcomes, it is important to continue to gain insight into patterns of mobility and the specific reasons for high mobility where it occurs. Although this white paper does not attempt to determine causes for differential mobility rates, national research has linked school conditions typically found in cities with higher turnover rates in these areas. Schools serving higher percentages of lower-income students and students of color have been found to have higher teacher turnover rates.

Research suggests that dissatisfaction with the teaching experience or school environment is a key reason for many teacher departures. While the current analysis does not differentiate between voluntary and involuntary turnover, Carver-Thomas and Darling-Hammond (2017) found that fully 66% of teachers leaving or moving voluntarily have done so for reasons of dissatisfaction. For sake of comparison, 22% of voluntary turnover is attributed to financial reasons. There is some evidence that nationally the percentage of teachers prepared via alternative certification pathways is higher in urban communities and communities with higher proportions of students of color.[7] Nationwide, teachers who receive their preparation through alternative routes have been found to have higher turnover rates than traditionally certified teachers (Carver-Thomas, 2018). The proliferation of PSAs in Michigan, the communities in which PSAs tend to be most prevalent, and organizational factors in PSAs (including lower average salary) all are theorized to contribute to the high rates of turnover we observe within Michigan cities.

Based on separate analyses (Stackhouse, 2018; Robinson and Lloyd, 2017) it is also hypothesized that the high mobility among African-American teachers and the high mobility rate for PSAs are linked, and that these are both also linked to the higher rates of turnover in urban schools.

Policy Recommendations

These data suggest some policy recommendations and many further research opportunities. Research-supported ways to mitigate turnover include:

- Ensuring rigorous student teaching requirements across programs (Auletto and Cowen, 2018)

[7] An important reason that urban centers tend to hire alternate route teachers at a higher rate is that many programs were developed specifically to meet needs in these settings and/or are located in urban centers. Additionally, some alternative route programs (Teach for America being one prominent example) are designed to be temporary. This likely contributes to the mobility patterns observed a.) among teachers prepared via alternative routes and b.) in cities. Further analysis is needed to understand the relative impact of these factors in Michigan.

- Supporting comprehensive induction programs for new teachers entering the profession (Haynes, 2014), including
    - Providing new teachers with mentors within their own fields
    - Common planning time for teachers within schools
    - Support from school leaders
- Ensuring high-quality leadership within schools
- Investigating ways to increase and differentiate teacher pay
- Providing high-quality personalized professional learning opportunities to all teachers, including job-embedded professional coaching (Haynes, 2014)
- Institutionalizing the use of survey data by administrators to improve school culture (Haynes, 2014)

There has also been some research on the teacher personality characteristics that predict retention (e.g. Bastian et. al., 2017). Most researchers in this area suggests that conscientiousness is a key predictor for retention across school types. At the local level, where many districts already incorporate personality screening in hiring practices, adapting interview protocols to accurately identify conscientiousness may be a potential avenue for increasing retention in the long term.

Future Research

Current and future research activities include inferential and qualitative investigation into the areas of:

- The relationship between salary and teacher turnover
- Regression-based studies into the school-level characteristics that predict attrition, including student achievement and student growth
- Distinction between patterns for forced vs. voluntary leavers
- The impact of state and national policy on teacher turnover, including studies to determine the extent to which school closures and reorganization may be contributing to differences in turnover rates by locale and school entity type
- The impact that teacher turnover trends are having on overall teacher supply
- In-depth qualitative research into the experiences of teachers in Michigan who have moved or left their schools, to allow for a greater infusion of teacher voice in policy-making. MDE and partner researchers should conduct surveys, interviews and/or focus groups to learn more about the perspectives of current Michigan teachers regarding their experiences
- Whether “movers” in various locations (e.g. Detroit) are moving within districts, or between districts
- Whether “movers” in various locations (e.g. Detroit) are moving from PSAs to LEAs, or any other systematic pattern
- Patterns of teacher longevity by locale and/or school type
- Stability for locale types within the prosperity regions
- Variation between teacher types: For example, are elementary teachers more likely to stay than high school teachers? Are English teachers more likely to stay than math teachers?

The underlying data and dynamic source maps created in Tableau can also be used with individual districts to highlight patterns in support of strategic staffing.

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Appendix 1: Supplemental Tables

Table A1. Number of PSA and LEA teachers (3-year total) by Locale

Locale simple	LEA School	PSA School
Rural	44,191	2,756
Suburb	90,067	8,121
Town	24,865	1,111
Urban	45,055	11,772

Table A2. Percentage of PSA and LEA teachers by Locale

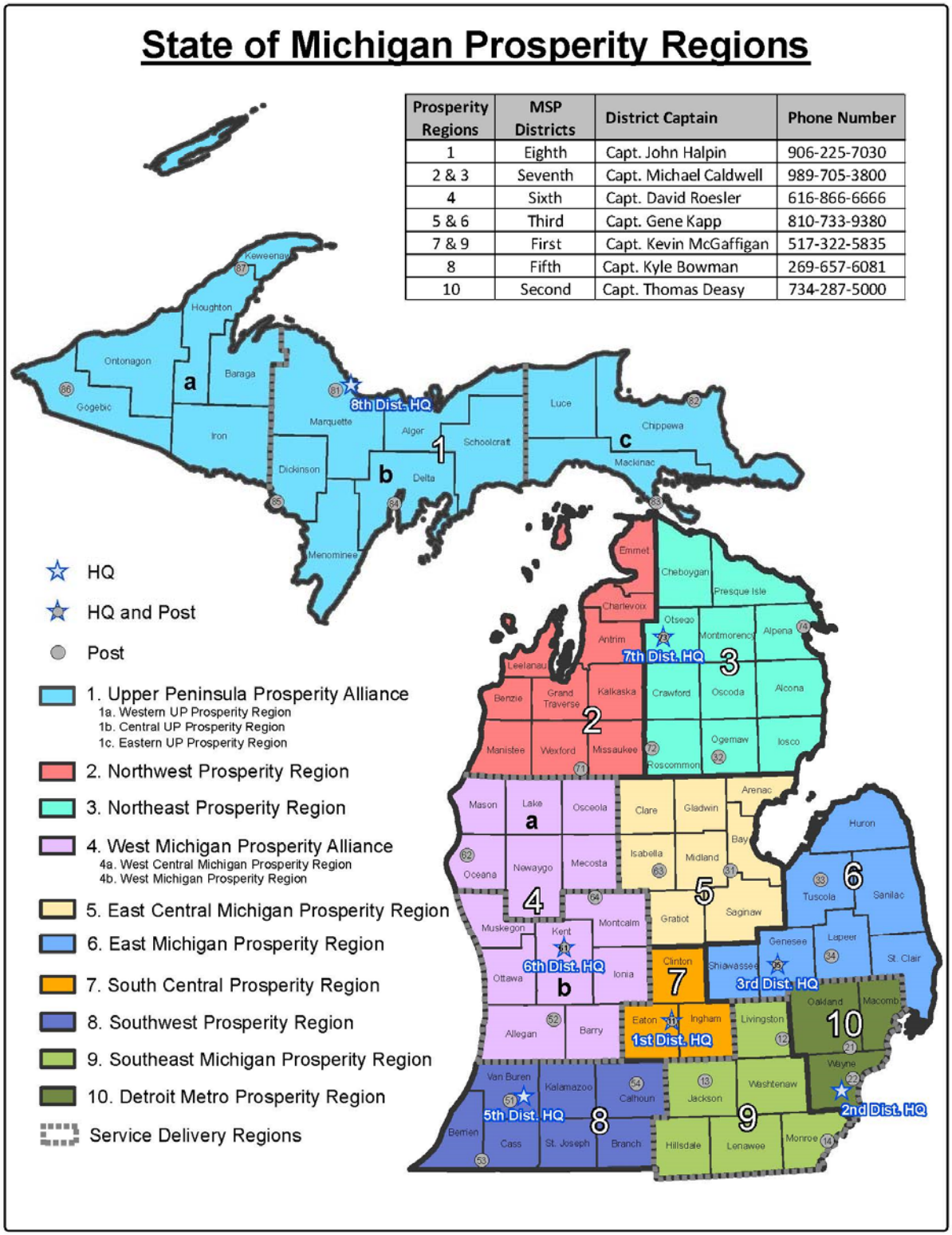
Locale simple	LEA School	PSA School
Rural	94.13%	5.87%
Suburb	91.73%	8.27%
Town	95.72%	4.28%
Urban	79.28%	20.72%

Table A3. Number of PSA and LEA teachers (3-year total) by Prosperity Region

Prosperity Region Name1	LEA School	PSA School
West Michigan Prosperity Alliance	35,120	3,775
South Central Prosperity Region	9,899	903
Northwest Prosperity Region	6,024	745
Northeast Prosperity Region	3,756	108
Upper Peninsula Prosperity Alliance	6,150	372
Southeast Michigan Prosperity Region	19,870	1,653
East Michigan Prosperity Region	17,484	1,412
East Central Michigan Prosperity Region	10,743	625
Southwest Prosperity Region	17,347	859
Detroit Metro Prosperity Region	77,785	13,308

Appendix 2: Stability maps by Prosperity Region

Figure A1. Prosperity Regions[8]



[8] Retrieved from DTMB site https://www.michigan.gov/documents/msp/Posts_450432_7.pdf August 2018

Figure A2. Three-year school stability rate map, Detroit Metro Prosperity Region

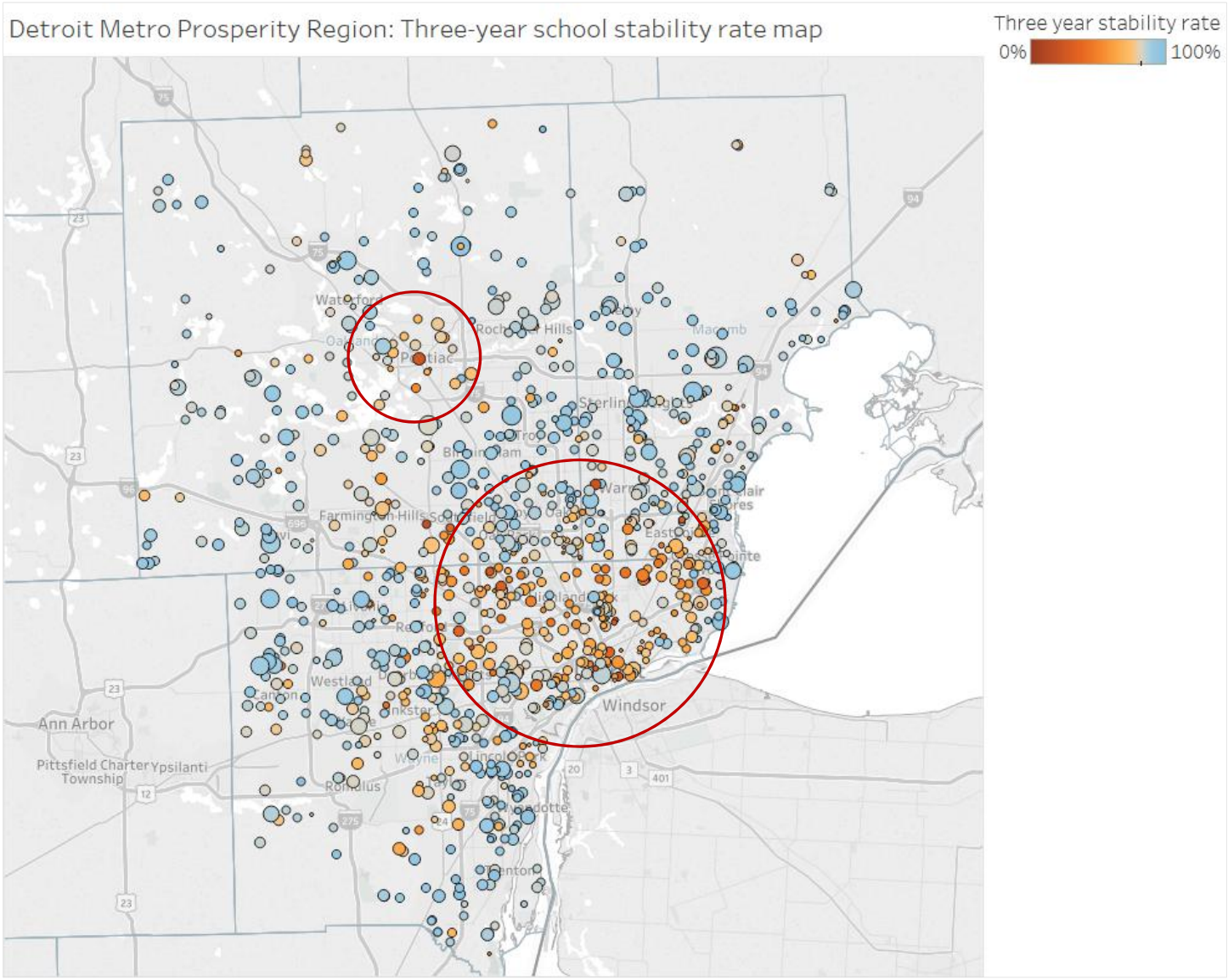


Figure A3. Three-year school stability rate map, East Central Michigan Prosperity Region

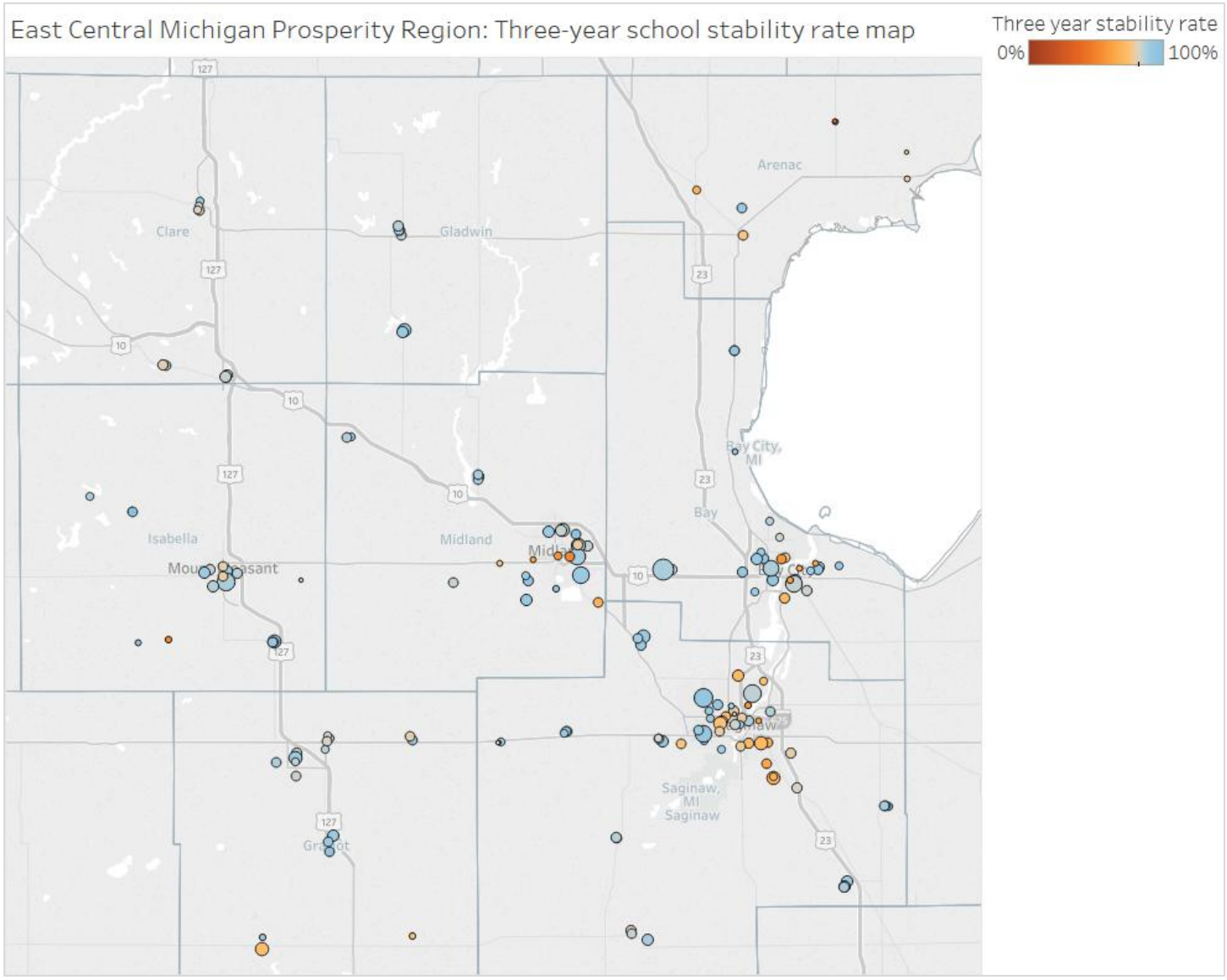


Figure A4. Three-year school stability rate map, East Michigan Prosperity Region

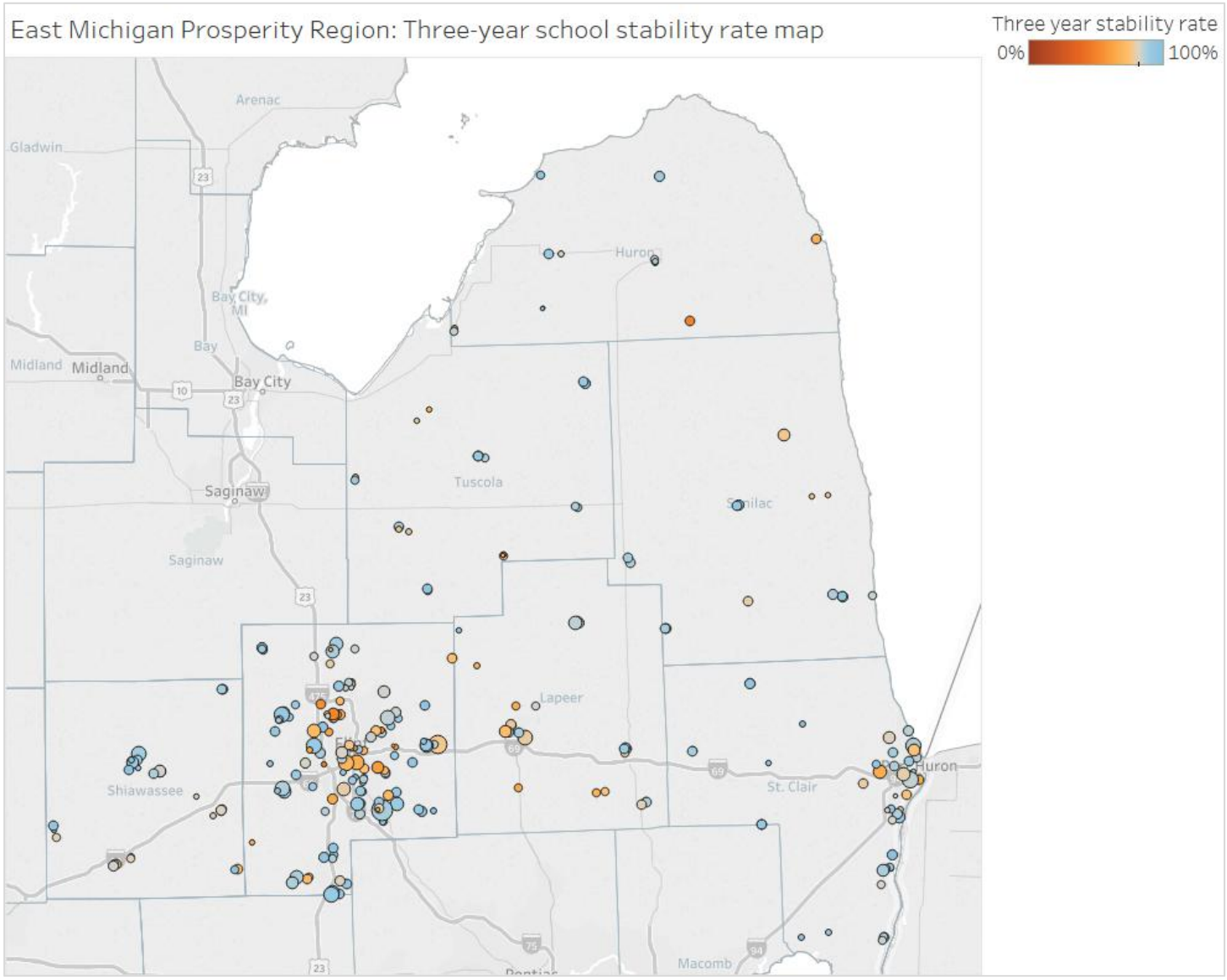


Figure A5. Three-year school stability rate map, Northeast Prosperity Region

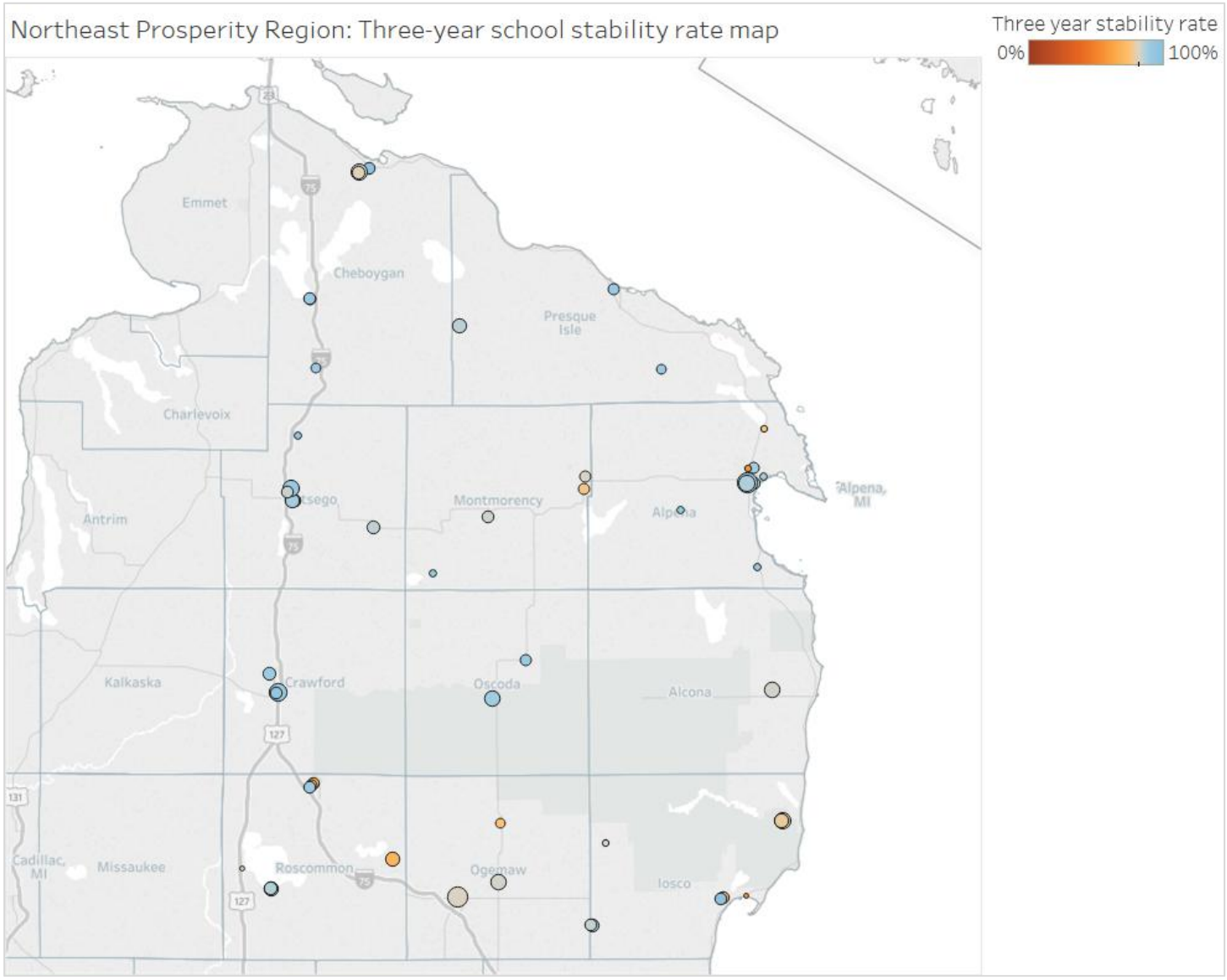


Figure A6. Three-year school stability rate map, Northwest Prosperity Region

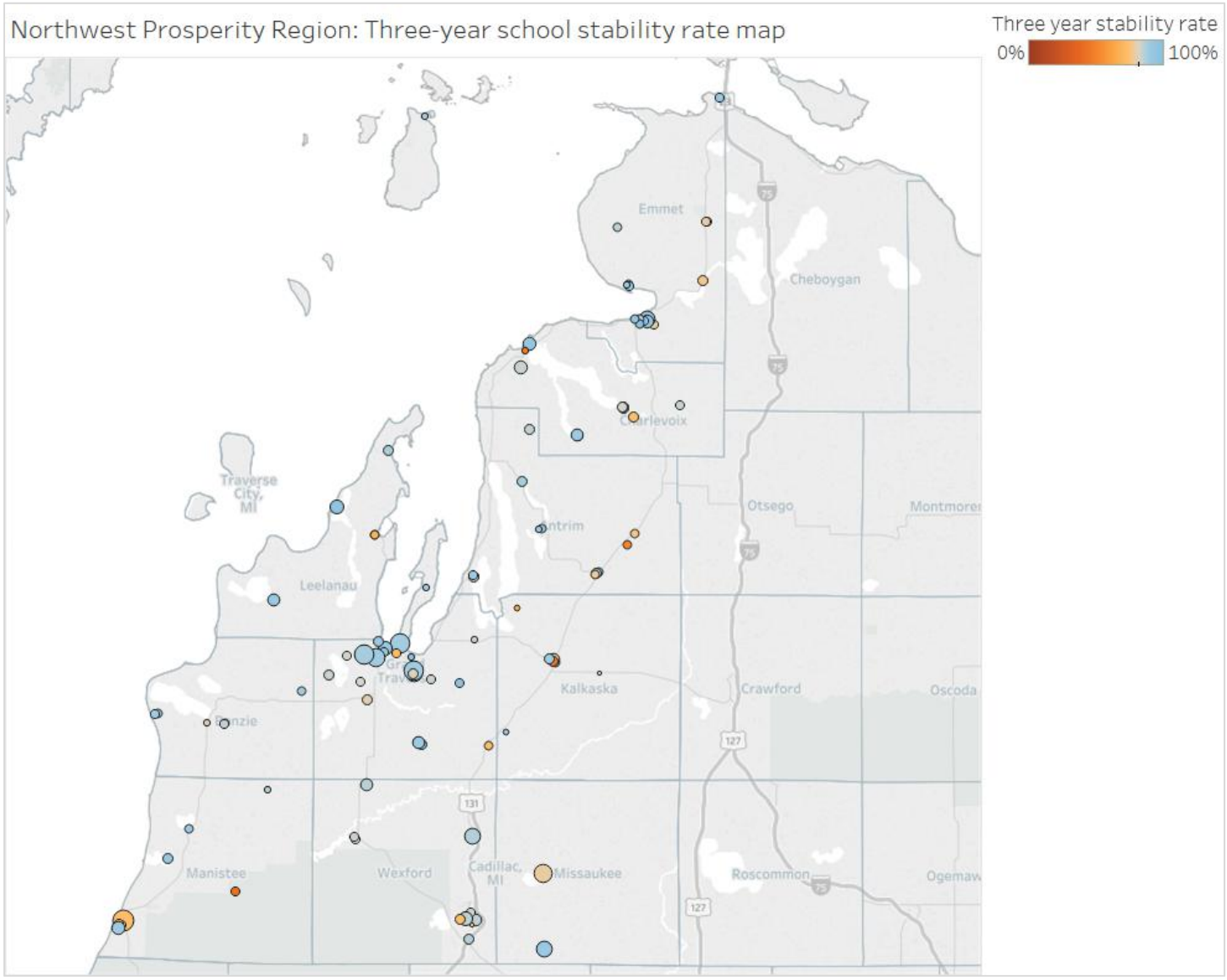


Figure A7. Three-year school stability rate map, South Central Prosperity Region

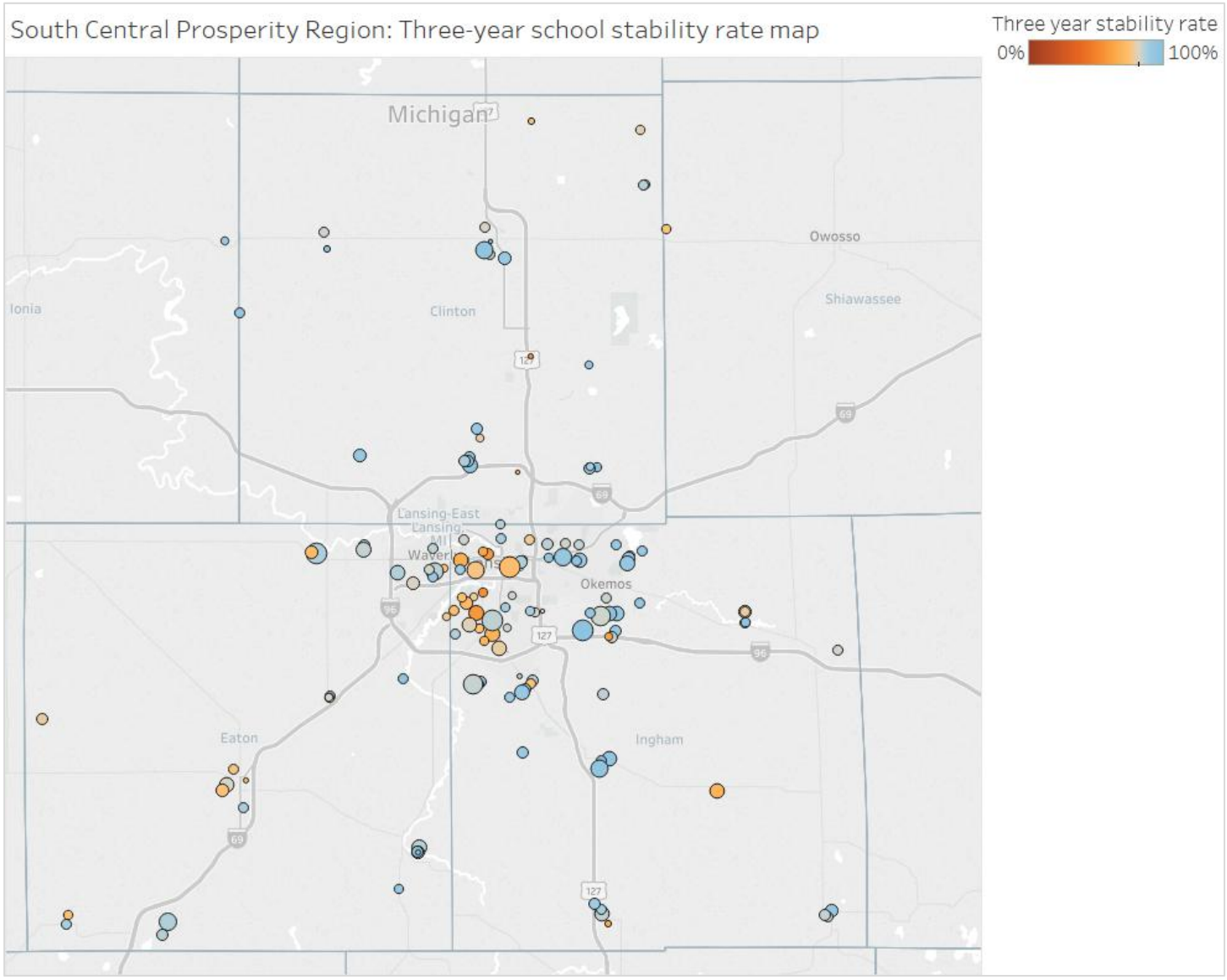


Figure A8. Three-year school stability rate map, Southeast Prosperity Region

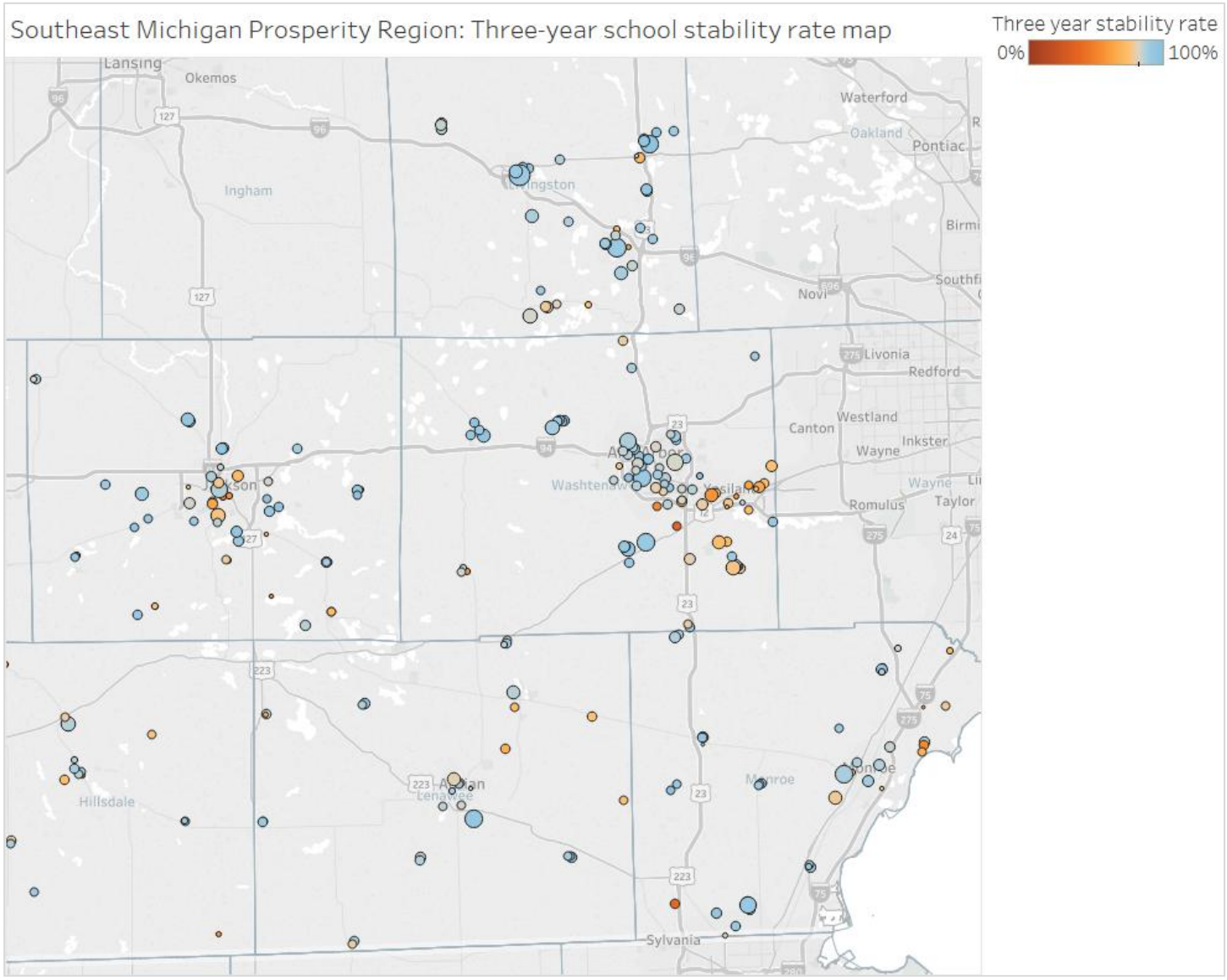


Figure A9. Three-year school stability rate map, Southwest Prosperity Region

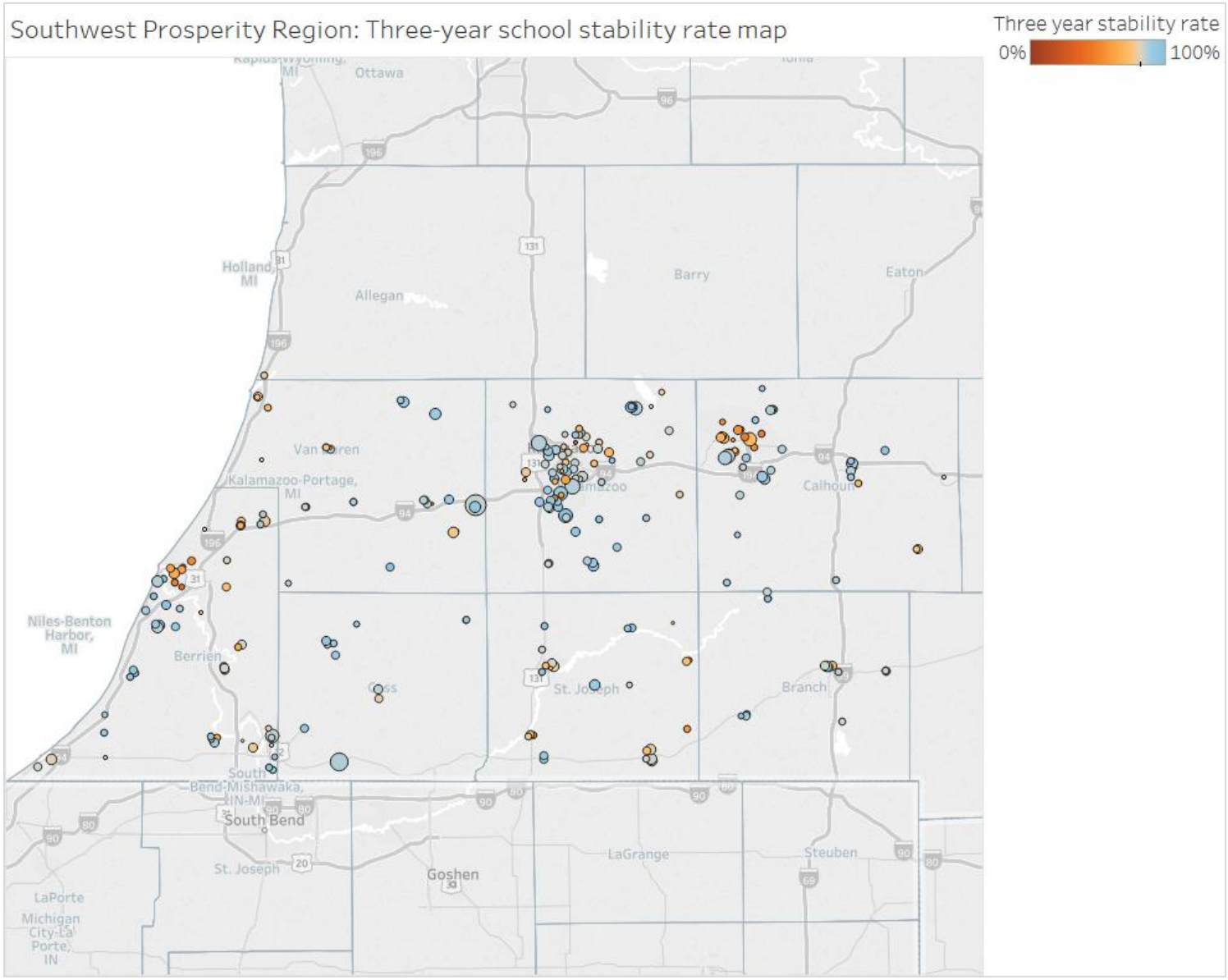


Figure A10. Three-year school stability rate map, Upper Peninsula Prosperity Alliance

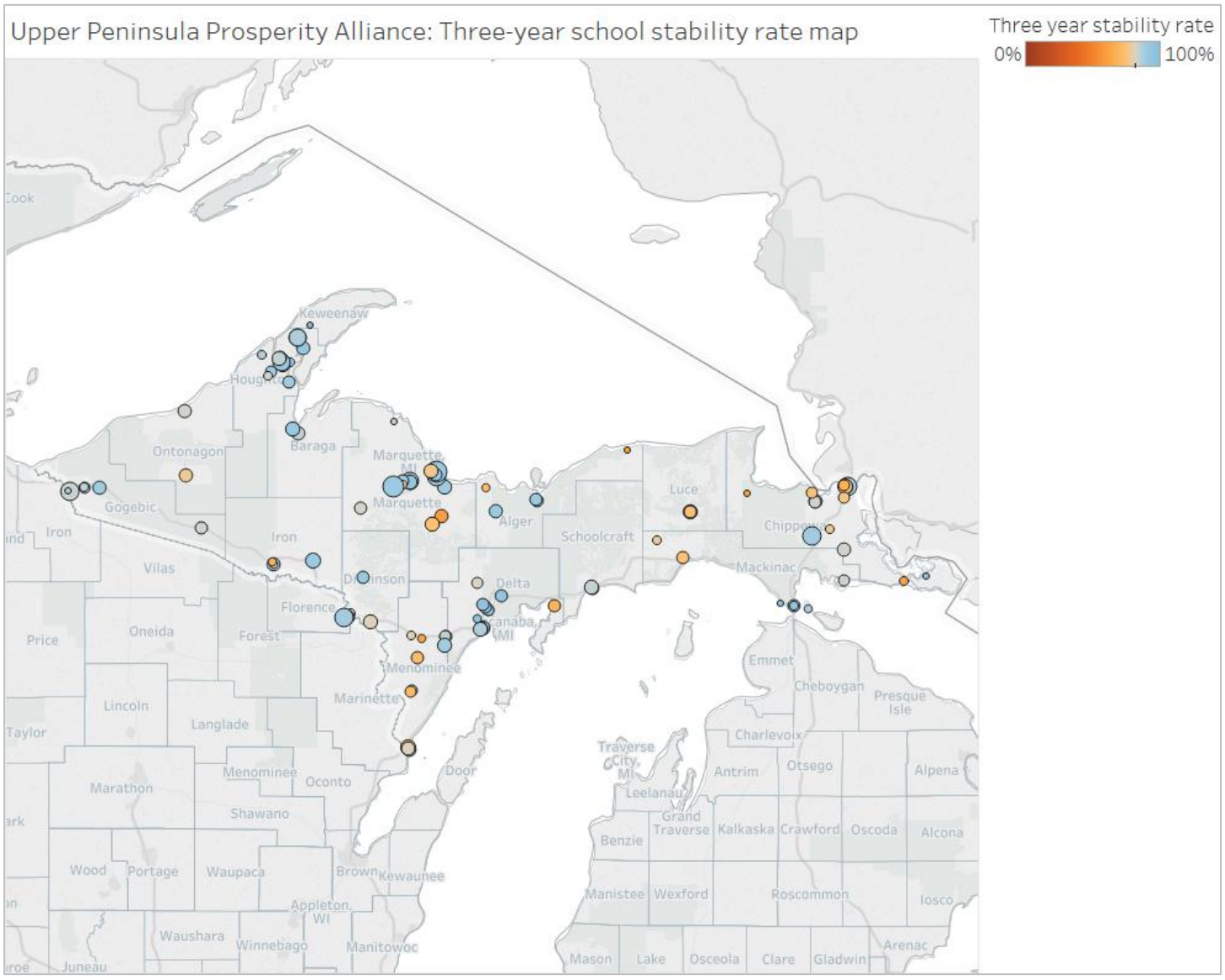


Figure A11. Three-year school stability rate map, West Michigan Prosperity Alliance