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RURALMATTERS

The magazine of the Rural Community Assistance Partnership

The *Rural Research* Issue

**Bridging the Urban-Rural Divide
through Regional Economic Connectivity**

**Analyzing Recent Trends in Rural
Diversity and Integration**

**The Pandemic's Lasting Effects on Small
Water Utilities and Their Customers**

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Welcome to a special issue of Rural Matters, focused on a number of research projects that the Rural Community Assistance Partnership (RCAP) has been working on over the past year. Research and data are such an important part of our work, helping us measure impact, better align programs and services, and raising issues of importance to rural and tribal communities across the country through unique and often under-appreciated approaches. Not only do research and data set the stage for better understanding issues, but they also lead to advocacy opportunities that can create systemic change for communities. The data leads to a story, that if told correctly, can lead to fundamental change. That is the goal of our work – to raise the voices of the communities we serve at RCAP and to help us better advocate on their behalf.

In this issue of Rural Matters, you will start to get a feel for the depth and breadth of research being done at RCAP, in some cases led by RCAP, and in others, alongside some very important partners. We are launching a new report on urban-rural economic connectivity alongside the National League of Cities, highlighting the importance of urban and rural communities working collaboratively, instead of competitively, to better drive economic growth in an equitable fashion. In partnership with the Pacific Institute, we built on the survey we did of rural and tribal water and wastewater systems on the impacts of the COVID-19 pandemic, to better highlight and raise advocacy priorities around those impacts across the country. This issue also highlights the second of two reports on water/wastewater regionalization, focused on policy implications for incentivizing more regional approaches that create sustainable and more resilient water and wastewater systems. We also look into the question of growing diversity in the U.S. and particularly in rural areas, and how that is related to integration, hoping to start a conversation on this important topic. Finally, we are showcasing some important new research on the indirect impact of a job in rural areas compared with the impact of that same job in a more urban area. We also recently published our Annual Report for FY2020, available at <https://2020report.rcap.org/>, which highlights RCAP's overall impact on the communities we serve.

These projects are critical to raising issues important to the communities we serve, and to helping those communities to find solutions that lead to more equitable and sustainable economic growth and access to safe drinking water and sanitary wastewater. This issue is unique in its focus on research and data, but complements the stories you usually read in Rural Matters by helping to show the connection between data and stories. I hope you enjoy these stories as much as I have.

A handwritten signature in dark ink, appearing to read 'Nathan Ohle'. The signature is fluid and cursive, with a large 'N' and 'O'.

Nathan Ohle
RCAP CEO



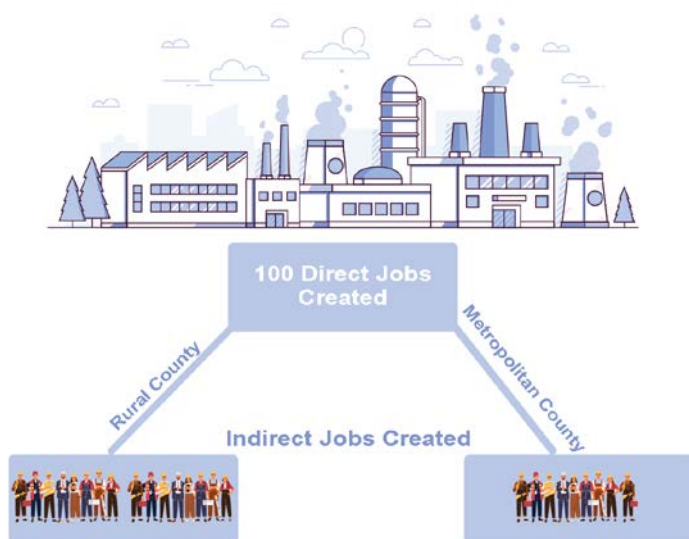
Impacts of a Single Job in Rural and Urban Counties

Eric LaRose and Laura Landes, RCAP

Is bigger always better? Not necessarily. Rural economic development must be viewed through a different lens than urban economic development. Too often, the conversation surrounding local economic development centers on “scale,” as measured by the raw number of jobs created by investment, because more jobs are thought to bring more economic opportunity. State and local leaders fiercely compete for large factories or warehouses hosting thousands of jobs, while frequently ignoring smaller businesses. Because large establishments must usually locate in an area with many preexisting workers, they are unlikely to consider moving to thinly populated rural areas. As a result, existing economic development strategies, frequently focused on scale alone, often neglect such communities.

In contrast to the notion of scale, “impact” refers to the benefits to a community resulting from a *single* job created or a *single* dollar of investment. In other words, impact, unlike scale, adjusts for the fact that because rural areas have much smaller populations than urban ones, equivalently sized investments can have disparate benefits. For example, a new family-owned business in a town of 500 people will likely bring more benefits to its community than a new big-box store in a metropolitan area of 5,000,000, even though the scale of the latter project is many times larger.

Understanding and communicating the difference between impact and scale is crucial for promoting rural economic



development, but very little research has been done on the topic. To remedy that, and to highlight an area which warrants more attention, we performed a statistical analysis to quantify the impacts of a single job in rural versus urban areas.

Analyzing the Impact of a Single Job


In this analysis, RCAP defines the *impact* of a single job as the number of indirect jobs created by that single new job. When new jobs are created, subsequent ripple effects tend to create additional indirect jobs in two ways. First, supplier jobs must spring up to provide goods and services used in production by these new businesses. For instance, if a new automobile plant opens in a community, an additional tire plant might be built to provide tires to the automaker. Second, additional indirect jobs arise because of the spending power and income of workers at new businesses. As an example, a new restaurant might open across the street from the automobile plant to serve workers during their lunch breaks. Undoubtedly, the impacts of economic development projects extend far beyond indirect jobs created. Nevertheless, this measure is an easy-to-quantify starting point for measuring impact and is likely to be highly correlated with more difficult-to-measure qualitative factors.

To quantify impacts of jobs in each county, we use data from the Economic Policy Institute, a think tank, on the estimated number of indirect jobs created by each 100 direct jobs in each industry. This number varies widely across industries. It tends to be higher in more agricultural- and manufacturing-oriented industries, and lower in more service-oriented industries. We then use

Census Bureau data on employment in each industry within a county to calculate the number of indirect jobs created by each 100 direct “average” jobs in a county, where the average job differs across counties depending on each county’s industry composition (that is, what types of jobs make up a county’s economy). For instance, the typical job in a county dominated by agriculture looks quite different than the typical job in a county whose economy is dominated by retail. Once we obtain a county-level measure of job impacts, we classify counties as being either in a metropolitan area, in a micropolitan area (centered on an urban area of between 10,000 and 50,000 residents), or rural (neither metropolitan nor micropolitan). (In the full report, we consider alternate definitions of county rurality and obtain similar results.) Additionally, we collect county-level data on economic and demographic factors such as poverty, income, and education. More details on the data sources and statistical analysis described are provided in RCAP’s in-depth report.

A Single Rural Job Can Make a Bigger Difference

Using a statistical regression analysis, we find significant differences in the impact of a single job in rural versus urban (metropolitan) counties. Particularly, after accounting for state-specific factors and the variables mentioned above, we find that **each 100 direct jobs in a rural county creates an additional 16 indirect jobs compared to a metropolitan county** in the same state with roughly equivalent economic and demographic characteristics. In micropolitan counties, each 100 direct jobs creates an additional 9 indirect jobs compared to a similar metropolitan county. **In percentage terms, our results thus suggest that the impact of a single job is roughly 5 percent larger in micropolitan counties and 8 percent larger in rural counties than in metropolitan counties.** Importantly, we also find that the degree of rurality matters – the more rural an area, the bigger impact a new job has.

While our analysis opens many opportunities for future research, we hope that these numbers provide a useful starting point for shifting the economic development conversation away from scale and toward impact – a development which is essential for understanding rural communities and the incredible benefits which can come from investing in them. 

[Click for Full Report](#)

Bridging the Urban-Rural Divide through Regional Economic Connectivity

Nathan Ohle, RCAP

The outcomes of economic recovery efforts in our nation differ vastly depending on where an individual or family lives. The urban-rural divide has only been deepened by the COVID-19 pandemic, with negative consequences for regional and national economic sustainability. Economic development strategies of the past have promoted competition and division between urban and rural areas - pitting urban and rural areas against each other has ultimately led to further isolation from one another.

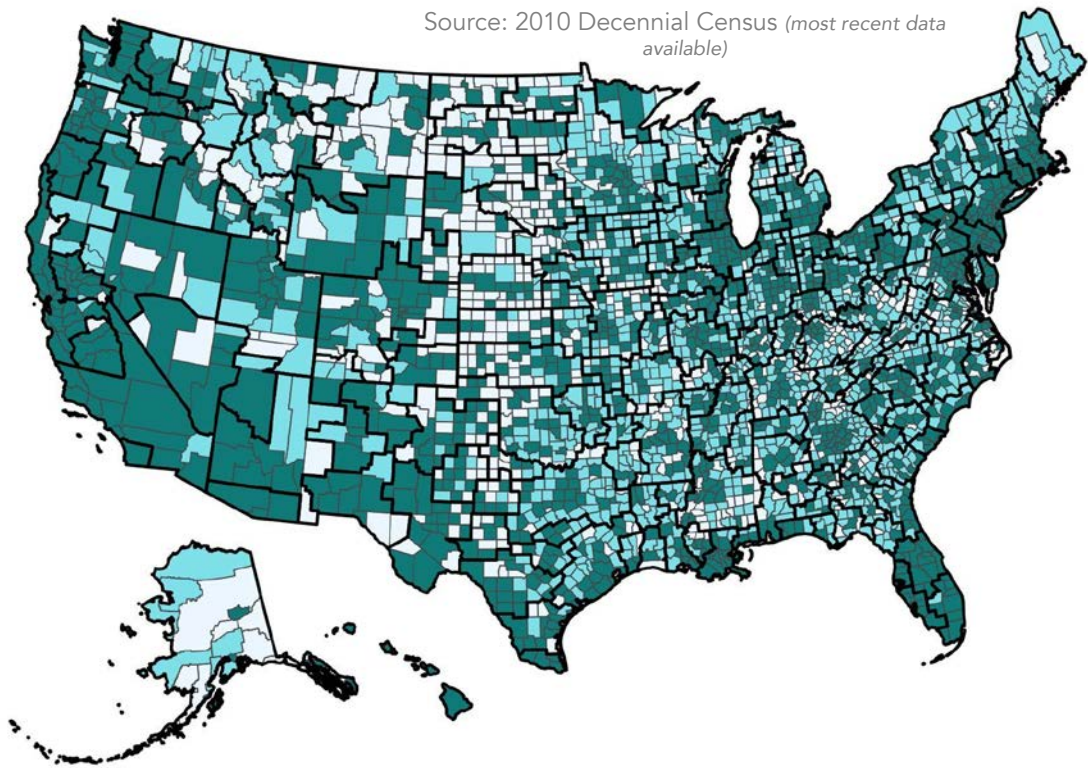
The good news is that there are emerging trends in **fostering collaboration over competition between urban and rural areas** of the country. **Regional approaches and strategies are helping to bridge the divide** between rural and urban - where communities of all sizes can benefit from shared resources.

Just as urban centers drive regional demand for rural products and contribute to jobs and value creation in rural

Figure 1

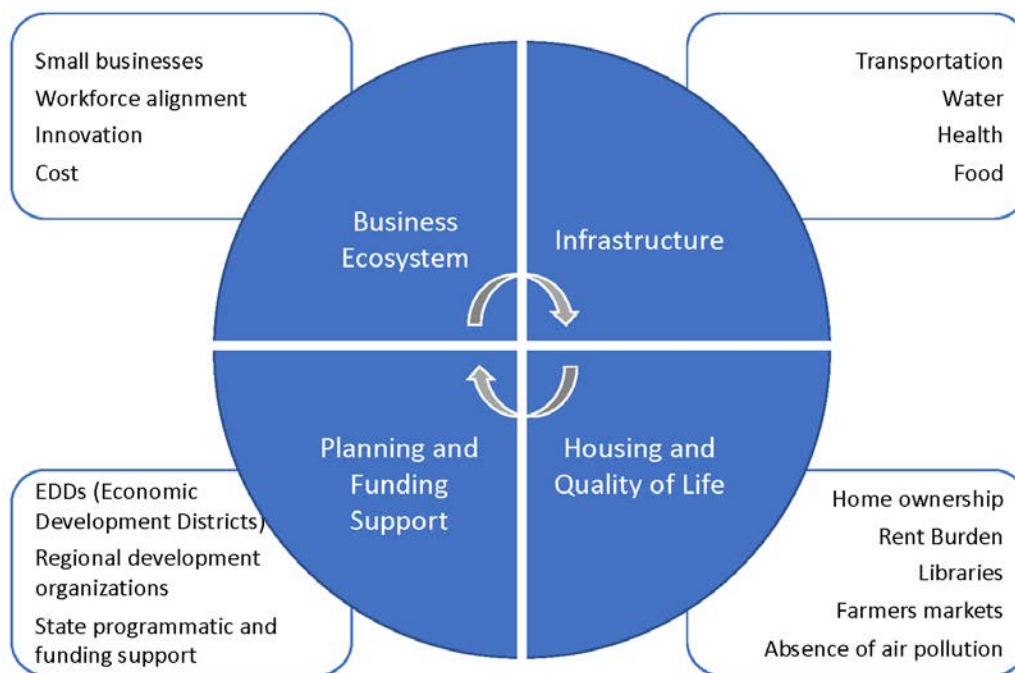
This research uses U.S. Census Bureau definitions of rurality. We put counties into three categories based on the percentage of their population that the Census classifies as “rural.”

U.S. Counties by Urban-Rural Classification with Outlines of Economic Area Borders



URBAN COUNTIES	MIXED URBAN-RURAL COUNTIES	RURAL COUNTIES
Definition: Have more than 50% of their population living in an <u>urbanized</u> Census block.	Definition: Have 50 to 99% of their population living in a <u>rural</u> Census block.	Definition: Have 100% of their population living in a <u>rural</u> Census block.
Prevalence: 40% of counties in our sample	Prevalence: 38% of counties in our sample	Prevalence: 22% of counties in our sample
Average 2016 Population: 17,234	Average 2016 Population: 3,687	Average 2016 Population: 1,252
Average % of jobs that are connected: 45% (the lowest of all county types)	Average % of jobs that are connected: 52%	Average % of jobs that are connected: 58% (the highest of all three county types)

Figure 2



communities, rural areas provide substantial economic benefit to urban areas. For example, in Minnesota, every \$1 billion increase in rural manufacturing output produces a 16% increase in urban jobs, significant additional business-to-business transactions, and statewide consumer spending and investment. Integrated urban and rural areas can boost each other's economies, with ripple effects of that success felt throughout the region and state.

Better Understanding the Implications of Urban-Rural Connectivity

The future of economic development and long-term growth is to strengthen urban-rural connectivity. This approach has been adopted in some regions, but largely unexplored at a greater scale. To explore the opportunities for structured and economically driven urban-rural linkages, RCAP and the National League of Cities (NLC) conducted research to discover the practical implications of urban-rural connectivity and disseminate the economic development tools needed to support regional efforts that create economically meaningful linkages between urban and rural areas. The research will be available on both RCAP's and NLC's websites once the data is published.

Our research showed that urban and rural areas perform better and boost each other's economies when they participate in their regional economies. In fact, urban,

mixed urban-rural and rural areas in the United States are interdependent, and policymakers can develop those connections to improve residents' lives (see Figure 1). Our research also sought to identify the factors that different types of communities need to help them connect.

With support from the U.S. Economic Development Administration and the Robert Wood Johnson Foundation, RCAP and NLC worked to fill this knowledge gap through a study of economic connectivity between urban and rural localities in regions. We identified factors that support local engagement in regional economies, how these factors vary for urban and rural places, and whether the benefits of economic connectivity are equitably distributed among places and people within regions. In this study, an urban or rural community is "connected" if the economic specializations driving the broader *regional* economy also have a strong presence *locally*. The study identifies the factors that support local participation in regional industry clusters and assesses the distribution of benefits to places and people when localities participate in those clusters.

Main Drivers of Economic Connectivity

Four overarching factors were found to drive local economic connectivity to regional economies:

- business ecosystems,
- infrastructure,

- planning support and funding, and
- quality of life.

The factors which we used in our analysis are subcategories of those four factors (see Figure 2). We found that local assets' relationships with regional connectivity vary for different types of counties in the U.S., including urban, mixed urban-rural and rural counties. Health and transportation infrastructures are associated with economic connectivity for all county types. For urban communities, factors associated with connectivity include strong small business presence, a workforce aligned with industry needs, reasonable cost of doing business, and participation in regional planning. These same factors as well as drinking water safety are related to connectivity for mixed urban-rural communities. For rural communities, workforce alignment and innovation relate positively to economic connectivity. These mixed results indicate that policymakers and practitioners seeking to increase economic connectivity between urban and rural counties should carefully choose factors that will generate the most beneficial, widely felt outcomes.


In addition, to assess whether the benefits of economic connectivity are equitably distributed in regions, we analyzed employment outcomes and found that connectivity is associated with reduced disparities between geographies and racial groups in regions. This finding shows that connectivity can be a strategy to achieve geographically equitable development and, thus, to strengthen regions overall. The research also showed that the most distressed counties show the most positive association between connectivity and household income, and that there was a positive relationship between connectivity and converging racial economic outcomes at the regional level.

Strategies to Build Connectivity and Collaboration

Overall, our results show how layers of investment and government economic support can connect local economies, in turn promoting economic prosperity for

residents of urban and rural communities. To help local economic development practitioners, policymakers and leaders put these findings into practice, we offer the following four recommendations:

- **Develop an inclusive innovation ecosystem.** Invest in talent and technology development, entrepreneurship and capital. Regional intergovernmental collaborations, regional development organizations and nonprofit organizations can foster connections between communities and regional industry clusters.
- **Ensure access to broadband and digital inclusion.** Such access is critical for building a more racially and geographically diverse innovation ecosystem.
- **Align workforce skills with industry needs.** Strategies such as cluster-based training, which focuses on demand rather than supply, and community college programs help communities tap into and support regional cluster growth.
- **Enable strong regional organizations and business participation.** Regional development organizations can help localities overcome competition and perceived cultural and political divisions so they can collaborate to strengthen their shared regional infrastructure and economy.

While urban and rural communities may reflect cultural and political differences, their economies are interdependent. Regional collaboration has never been more important, particularly as U.S. communities rebuild their economies in the wake of the damaging effects of the COVID-19 pandemic. Studying regional economies through a broader frame is important for all communities but especially for those experiencing economic decline, isolation and depleted economic opportunity for their residents. By building connectivity and collaboration, we can break down silos that lead to isolation and worse economic outcomes, and drive regional growth that benefits communities of all sizes. 

[Click Here to Learn More](#)

From Research to Action - Practical Insights and Guidance on Regionalization for Policymakers and Community Leaders

Laura Landes, RCAP

Photo Credit: RCAP Solutions

At RCAP, we see regionalization as a wide spectrum of collaborative activities between neighboring water or wastewater utilities. In our many years of experience facilitating regionalization projects, we have also seen how helpful regionalization can be, especially for small, rural, and tribal communities, in building capacity and ensuring their water and wastewater systems are resilient and sustainable for the future. Building this capacity and resilience is especially important in light of the pandemic the lasting effects it has created.

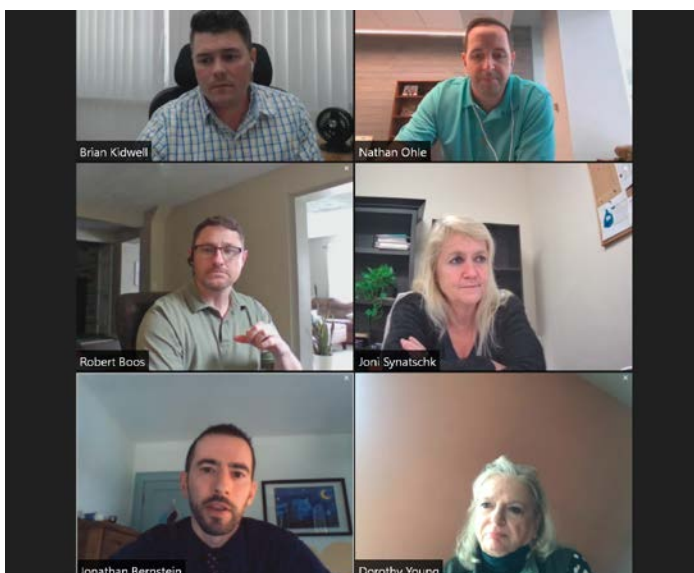
We've noticed the need for a better understanding of regionalization in small, rural, and tribal communities including the broad spectrum of activities that regionalization encompasses, how to go about it, and what to watch out for. We've also seen firsthand

how important policies can be to encourage and/or incentivize regionalization efforts. Policies at the federal, state, and local level can play a huge role in whether regionalization activities are attempted by small communities and if they are successful. These observations were inspiration for a comprehensive research effort that RCAP began in 2019. Since then, we've undertaken research concerning regionalization experiences at the community level in small, rural, and tribal communities across the nation and analyzed existing and potential policies at each level of government to develop practical findings and policy recommendations. The results of our work are a series of dynamic research reports on regionalization that we hope can be used in practical ways by both community leaders and policymakers at all levels of government.

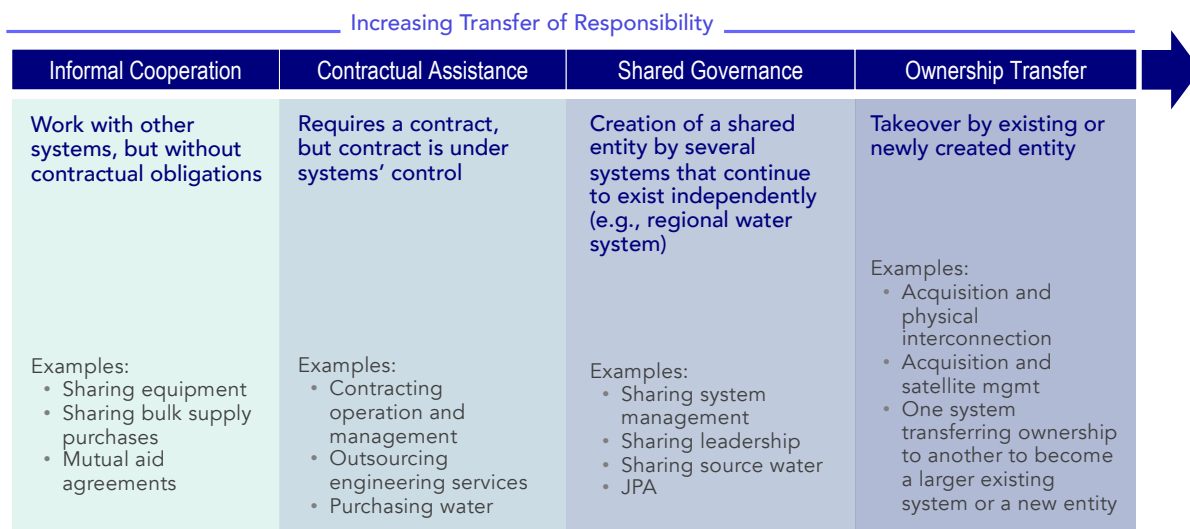


Photo Credit: RCAP Solutions

On March 11, 2020, RCAP and RCAP Solutions hosted a Regional Collaboration Summit in State College, Pennsylvania. RCAP launched the first regionalization research report, “Resiliency through Water and Wastewater System Partnerships: 10 Lessons from Community Leaders” at the summit. Other topics covered throughout the day included benefits of regionalization, barriers to regionalization and how to mitigate them, and funding options for regional projects.



On May 13, 2021, RCAP held a virtual event to highlight state policy strategies to encourage and incentivize regionalization. The panel included Brian Kidwell (California State Water Resource Control Board, Safe and Affordable Funding for Equity and Resilience, Northern Engagement Unit), Robert Boos (PENNVEST, Deputy Executive Director for Project Management, Pennsylvania Infrastructure Investment Authority), Joni Synatschke (Florida Rural Water Association, representing FlaWARN and former State Program Administrator for Drinking Water at FL Department of Environmental Protection), Jonathan Bernstein (Assistant Chief, Office of Financial Assistance, Division of Environmental and Financial Assistance, Ohio EPA), and Dorothy Young (Texas Water Infrastructure Coordination Committee (TWICC) and Texas Commission on Environmental Quality (TCEQ), Water Supply Division), moderated by RCAP CEO Nathan Ohle. The event also included an overview of the second regionalization report, “Regionalization: RCAP’s Recommendations for Water and Wastewater Policy” with a focus on RCAP’s recommendations for state governments.



Graphic adapted by RCAP and RCAC from U.S. Environmental Protection Agency resources

Regionalization can range from a very informal handshake agreement or mutual aid agreement to help one's neighbor in an emergency or share heavy equipment to more formal partnerships such as the formation of a joint powers authority to develop a new water source or a full physical and/or managerial consolidation.


In March 2020, RCAP published the first research report in this series – Resiliency through Water and Wastewater System Partnerships: 10 Lessons from Community Leaders. This is the first research effort on regionalization that we are aware of focused specifically on small, rural, and tribal communities and their efforts to collaborate. We interviewed community and utility leaders who had experience with different forms of regionalization, with varying degrees of success, and came away with 10 lessons we believe would be helpful to any small community considering regionalization. We included tangible examples for each lesson from our interviews to provide context, as well as key questions for leaders to ask themselves and those they are working with as they go through the process.

**Click Here for
Community-Focused
Regionalization Research**

In May 2021, RCAP published the second research report in the series – Regionalization: RCAP's Recommendations for Water and Wastewater Policy. This is a compilation of 22 recommendations for different levels of government that would encourage and facilitate more water and wastewater regionalization, especially for small systems. We gathered data on state policies that encourage regionalization for both drinking water and wastewater systems (available

with relevant links in Appendix A to the report). We also compiled data on regionalization projects worked on by RCAP technical assistance providers (TAPs) in the past several years including information on outcomes, incentives, and funding sources. These projects were reviewed for whether the communities successfully formed partnerships. These complementary datasets allowed us to consider which policies, in which states, have been especially impactful in regionalization projects based on RCAP's experience.

**Click Here for
Policy-Focused
Regionalization Research**

As a national organization, we are committed to empowering communities with the tools they need to thrive, just as much as we are dedicated to generating awareness for the issues they face at the policy level. That's why we are proud of this research that offers two very different but equally important pieces of research. We hope one will make the nitty-gritty of the regionalization planning and implementation process smoother and less intimidating for small communities, and the other will inspire policymakers and implementers to prioritize those communities and the benefits that regionalization can offer them. 

Analyzing Recent Trends in Rural Diversity and Integration

Eric LaRose, RCAP

In recent years, much attention has been paid to America's growing racial diversity. According to Census data, the share of the U.S. population that is white decreased by 15 percentage points between the 1990 Census and the most recent 5-year American Community Survey (ACS) conducted from 2015-2019. Specifically, the 2015-2019 ACS found that white non-Hispanics constituted 61% of the country's total population, down from 76% in 1990.

A large amount of academic research has identified the benefits of diversity. For instance, students in more diverse classrooms tend to perform better and have stronger teamwork and problem-solving skills.¹ But for communities to fully experience the benefits of increased diversity, it is likely that integration also needs to increase, meaning that increased diversity is seen at the neighborhood level. In this article, we analyze trends in both diversity and integration within rural counties.

The Difference Between Diversity and Integration

First, a few definitions. Rural counties are those that are not metropolitan (centered on urban areas with 50,000

or more residents) or micropolitan (centered on urban areas with 10,000 to 50,000 residents). Diversity, for the purposes of this article, is defined as the percentage of a county's population that is non-white. Integration refers to the extent that the racial composition of neighborhoods within a county mirrors that of the broader county. Integration can be measured with the dissimilarity index, which compares the racial composition of every Census Block Group (a neighborhood of about 500 to 3,000 residents) in a county to the racial composition of the entire county. The index ranges from 0 to 100, with a score of 100 signifying complete segregation – no white residents living in the same neighborhood as a non-white resident. On the other end, a score of 0 indicates complete integration—the racial composition of every neighborhood in a county parallels the racial makeup of the county as a whole. Thus, counties can be relatively diverse but not very integrated, or vice versa.

For an example of diversity versus integration, we can look at rural Lyman County in South Dakota. At the county level, it is fairly diverse, with a population roughly

Figure 1
Diversity by County Type

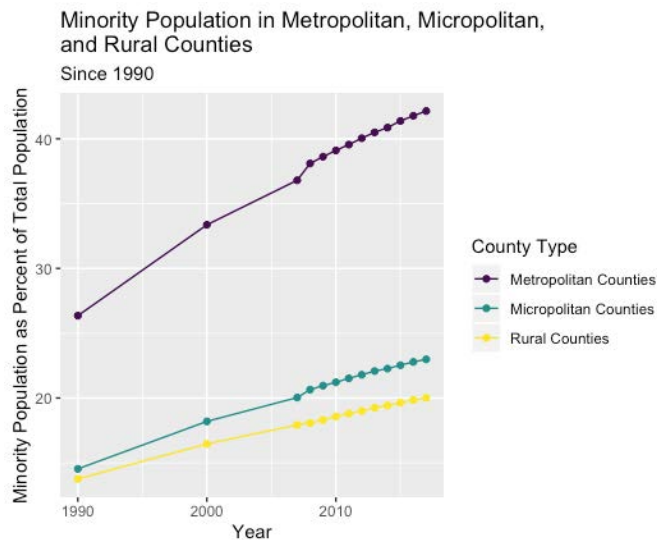
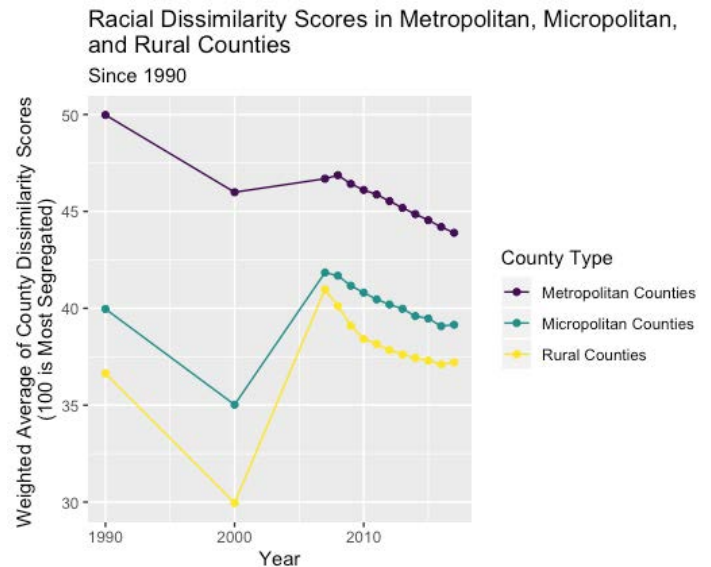


Figure 2
Integration by County Type



Data come from the 1990 Census, 2000 Census, and 5-year ACS covering the period from 2005-2009 through 2015-2019. In Figure 1 and Figure 2, each 5-year ACS is labeled with the year corresponding to the midpoint of the 5-year period. For example, the data point labeled 2010 is data from the 2008-2012 ACS.

55% white and 40% American Indian. But when we take a deeper look, virtually all of the county's American Indian population lives on the Lower Brule Indian Reservation, while virtually all of the county's white population lives in areas outside the reservation. This means that county residents live in neighborhoods made up almost entirely of one race. Despite its diversity, Lyman County is currently the most segregated county in the United States.

Diversity and Integration in Rural Counties

In percentage terms, America's increasing diversity has played out roughly equally in rural and urban areas. Rural counties saw the non-white share of the population increase from 13.8% to 20.0% over this period, a nearly 45% increase from 1990. The populations with the greatest increase nationally are Hispanic and/or multi-racial. We might expect that as counties become more diverse, they usually become more integrated. In fact, research has shown that in many places, diversity comes with less integration, because larger non-white populations make it easier for racial groups to end up clustered in certain neighborhoods.²

Figure 1 shows the diversity across metropolitan, micropolitan, and rural counties since 1990; Figure 2 shows a population-weighted average of the dissimilarity indices among these county types. All three county types have become substantially more diverse but, unlike

metropolitan and micropolitan counties, rural counties are slightly less integrated on average in 2015-2019 than in 1990. This trend likely reflects the fact that most rural counties had very small minority populations in 1990, so more racially segregated neighborhoods were able to form as these minority populations grew. In contrast, metropolitan areas on average already had sizable minority populations in 1990.

County-level rather than aggregate data provide further support for these trends. Among metropolitan counties, there is a statistically significant positive relationship between changes in integration and diversity since 1990. That is, urban counties have tended to grow simultaneously more diverse and more integrated. In contrast, there is essentially no relationship between changes in integration and diversity for rural counties since 1990.

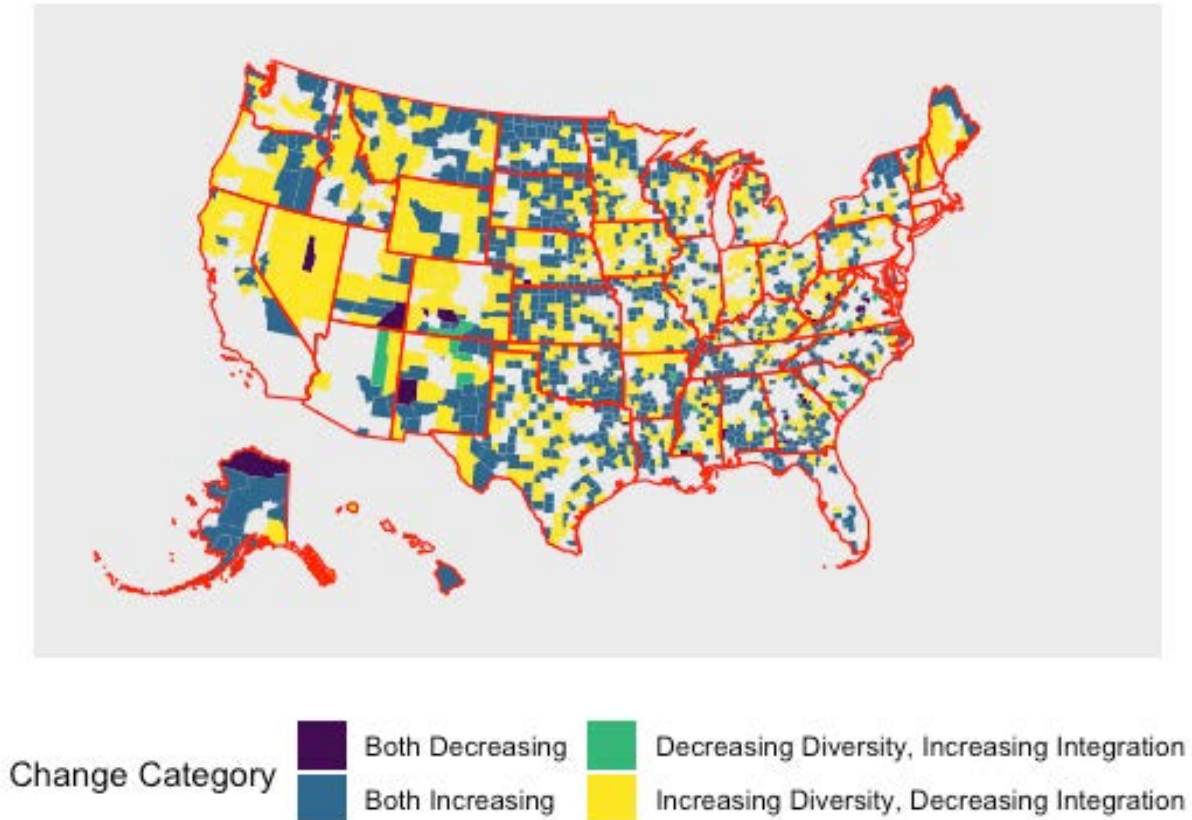
Looking for Patterns

To further investigate these findings, Figure 3 divides rural and micropolitan counties into four categories based on increasing or decreasing diversity and integration since 1990. In virtually all of the counties, diversity grew – over 95% of non-metropolitan Americans were living in counties with increasing diversity. On the other hand, this population is split almost evenly between counties that had increasing and decreasing integration over this period. Figure 3 does not reveal any obvious geographic

Figure 3

Changes in Diversity and Integration in Non-Metropolitan Counties

Changes in Diversity and Integration in Non-Metropolitan Counties, Since 1990



patterns as to which counties tend to see integration increase, instead of decrease, with increasing diversity.

Meanwhile, some patterns do exist regarding counties' racial compositions and their levels of integration. Our analysis found that in all three county types, the share of a county's minority population that is African American is significantly negatively correlated with integration, meaning that counties where more African Americans live tend to be more segregated. In contrast, counties where the minority population is predominantly Hispanic tend to be significantly more integrated. These findings are in line with existing research showing that Hispanic populations live in less segregated neighborhoods, on average, than African American populations.³

Closing Thoughts

This analysis is meant to serve as a starting point for continuing discussions around rural diversity and

integration. Importantly, our analysis shows that an increasing non-white population in a rural county does not necessarily mean that the average resident of this county is living in a more racially diverse neighborhood. We hope that future research will further investigate the drivers and impacts of increased integration as rural America continues to become more diverse. 🌊

¹ "The Importance of Diversity in the Classroom," Drexel University School of Education (Drexel University), accessed May 6, 2021, <https://drexel.edu/soe/resources/student-teaching/advice/importance-of-cultural-diversity-in-classroom/>.

² William H. Frey, "Even as metropolitan areas diversify, white Americans still live in mostly white neighborhoods." Brookings (Brookings, March 23, 2020), <https://www.brookings.edu/research/even-as-metropolitan-areas-diversify-white-americans-still-live-in-mostly-white-neighborhoods/>.

³ William H. Frey, "Neighborhood Segregation Persists for Black, Latino or Hispanic, and Asian Americans," Brookings (Brookings, April 6, 2021), <https://www.brookings.edu/research/neighborhood-segregation-persists-for-black-latino-or-hispanic-and-asian-americans/>.



The Pandemic's Lasting Effects on Small Water Utilities and Their Customers

Laura Landes, RCAP

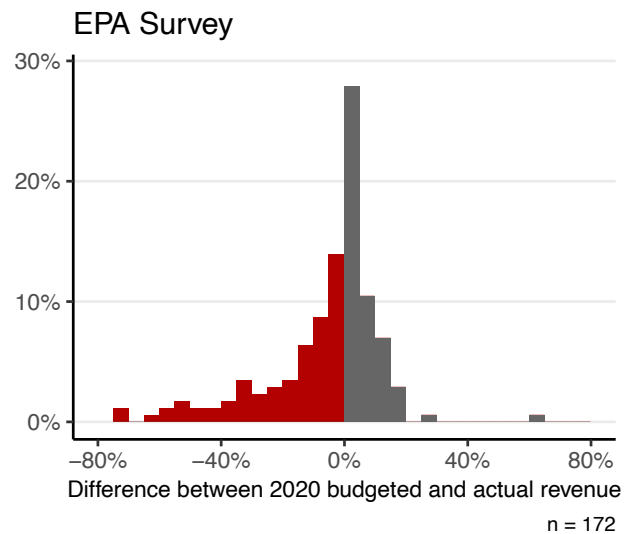
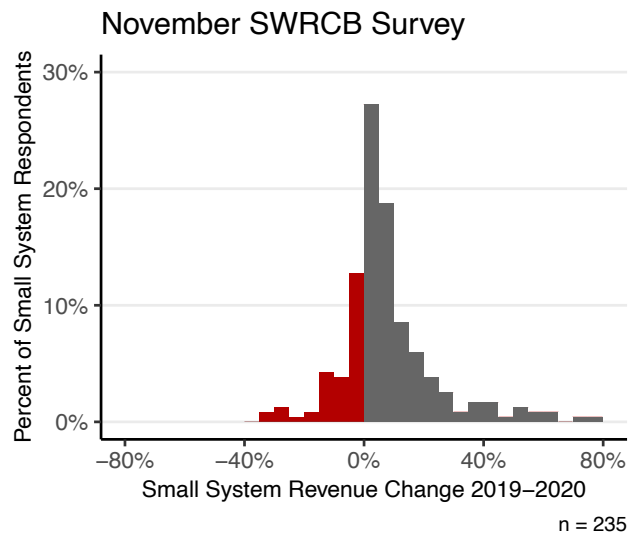
In May 2020, RCAP conducted a survey of small, rural, and tribal communities to understand the impacts of the COVID-19 pandemic on their water and wastewater systems. Specifically, we wanted to better understand the financial impacts that the pandemic, shutoff moratoria, and the related economic crisis were having on these utilities. RCAP received responses from more than 1,100 unique communities across the country and was able to use the information to highlight the need for relief directed toward rural utilities and residents.

[Click here for full COVID-19 Survey Information](#)

Later in 2020, RCAP had the opportunity to collaborate with the Pacific Institute to dig deeper into this ongoing

issue with a research project focused on small community water systems and the financial impact of the pandemic on those systems. This new project helped us update our understanding of the emerging impacts, use case studies to show how the pandemic is individually affecting small water systems, and collaborate to come up with policy recommendations to address these effects. The final products from this joint effort recently came out including a report titled *Customer Debt and Declining Revenues: The Financial Impacts of COVID-19 on Small Community Water Systems*.

The impact of the pandemic on small water systems is especially important to understand because these twin crises of public health and economic recession are in addition to existing and ongoing challenges accessing



financing for improvements and keeping up important maintenance activities to ensure safe water services for their customers. Technology and regulations are changing, water contamination and quantity issues become more difficult to address over time, and some customer bases in rural communities have shrunk, making it hard for utilities to pay for the investments needed to address all these other concerns.

The research found that although extensive coverage of the struggles of large system customers exists, small community water systems are also facing a water debt crisis. As the pandemic has continued, many households have faced continued and increasing difficulty in paying for basic expenses, including utilities. Extrapolating from the November 2020 survey by the California State Water Resources Control, household water debt for customers of small community water systems at that time may have been on the order of \$800 million across the United States. Importantly, the research also found that that debt disproportionately impacts communities of color and communities with high rates of poverty.

“They need it now,” said Michael Prado, Sr., Board President for Sultana Water District in California, of assistance to ratepayers who are late on their water bills. “If we don’t get relief soon, it’s going to be bad, they are going to get loans to pay” their water bills.

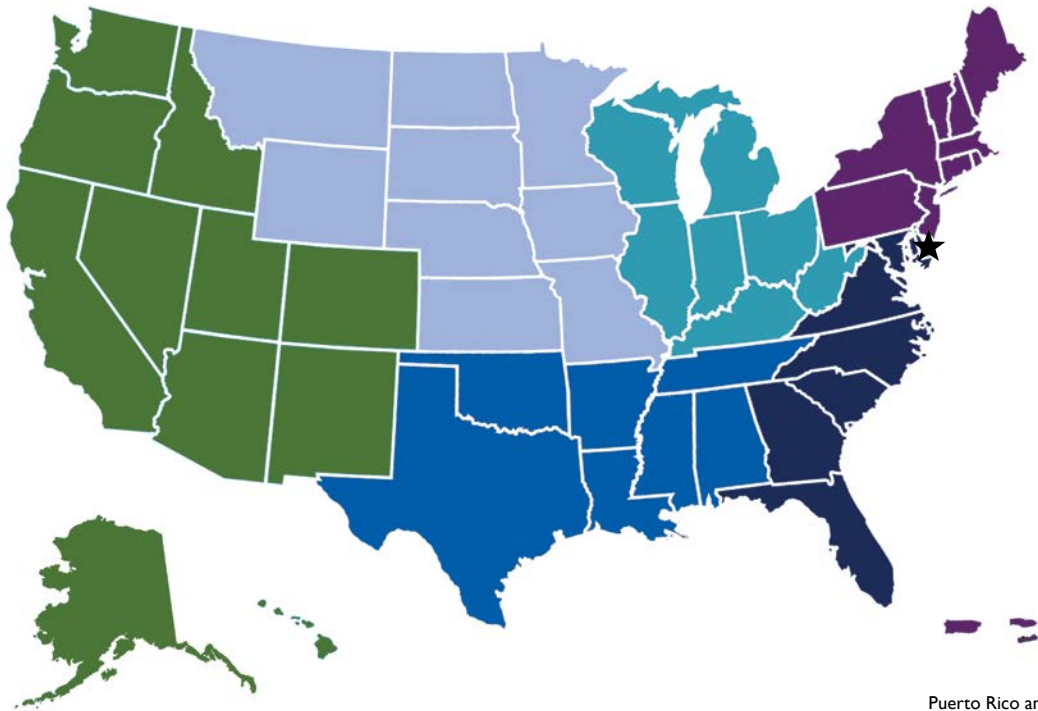
With customers unable to pay their water bills, systems have suffered from lost revenue. Surveys done more recently by the California State Water Resources Control Board and the U.S. Environmental Protection Agency

estimate \$0.5-1.5 billion dollars in lost revenue for small community water systems. This is noticeably lower than RCAP’s estimate of \$3.6 billion several months previously, which may be due to a combination of improving conditions for some utilities, access to funds from relief packages that were passed, and also refining sampling methods over time. As the report states, revenue loss has decreased overall since a peak in the early months of the pandemic. However some systems are still losing substantial revenue, and we should not forget about them. Figure 3 from the report (see above) shows revenue shortfalls at the time of the two most recent surveys. A significant number of respondents to both surveys had less revenue compared to the previous year, and the largest portion in each had between 0 and 5 percent more revenue than the previous year. The question did not account for increasing costs between one year and the next, and when systems are operating with little to no revenue, they have to make hard decisions. Often this means delaying important maintenance or major capital improvements. Communities which needed to update their water systems to improve their health and economic prospects may find themselves in a vicious cycle, unable to make changes which would vastly improve quality of life in the community. This research collaboration shows the importance and power of providing for small utilities in state and federal relief and stimulus packages. See the full slate of materials including policy recommendations, more data and figures, and in-depth case studies which provide real-life context to the need and the recommendations. [🌊](#)

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Rural Community Assistance Partnership

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