# PRELIMINARY REPORT OF THE SACRAMENTO COALITION FOR DIGITAL INCLUSION

Sacramento Coalition for Digital Inclusion

September 2019

# Contents

# Executive Summary

The Sacramento Coalition for Digital Inclusion (SCDI) consists of more than 40 organizations and is led by a steering committee comprising the Sacramento Public Library, Valley Vision, Social Venture Partners of Sacramento, and the City of Sacramento's Office of Innovation and Economic Development. SCDI is focused on creating more opportunities for digital equity in the Greater Sacramento Region.

In all sectors of the economy, digital technologies are creating a dramatic shift in the way we learn, work, and communicate. As civic, economic, and cultural institutions move forward with the productivity gains and increased outputs that digital technologies bring to their day-to-day work, all populations must be able to share in those gains in a meaningful way. Through a variety of historic, financial and technical factors, there are significant sectors of our region's populations that are being left behind.

According to a report by The Brookings Institution, *Charting a Course to the Sacramento Region's Future Economic Prosperity*, a digital skills workforce is critical to the future of Sacramento's economy. Specifically, 72 percent of jobs, including 82 percent of middle-skill jobs that pay above the national living wage but don't require a bachelor's degree, require medium or high digital skills. However, the share of people of color in these jobs in Sacramento is lower than the national average.

## Barriers to Digital Inclusion

Exclusion from the digital world usually results from three different barriers. Individuals either do not have sufficiently powerful enough hardware to accomplish their digital task, sufficient internet connection opportunities to engage in the online world, or sufficient skills to meet their digital needs. These barriers — hardware, internet access and skills — must all be removed in concert for any digital inclusion activity to create meaningful change in a person's life. Moreover, removing these barriers is critical to creating an inclusive economy.

Those without access to a barrier-free digital experiences often are left behind in today's on-line society. They face challenges related to their civic, economic and cultural lives. Communicating with distant relatives, looking for a job, searching for housing, accessing health information and telehealth services, utilizing civic services, completing school assignments — all of these are tasks that, in the modern world, are near impossible without adequate connectivity, computing hardware and digital skills.

## Community Engagement

SCDI facilitated four community workshops in Sacramento County to collect community feedback and direct service provider insights on digital equity needs within the County. The workshops were held between July and August 2019 at the following locations:

1. Martin Luther King Jr. Library, 7340 24th St. Bypass, Sacramento, CA 95822
2. North Sacramento - Hagginwood Library, 2109 Del Paso Blvd., Sacramento, CA 95815
3. Walnut Grove Library, 14177 Market St., Walnut Grove, CA 95690
4. Oak Park Community Center, 3425 Martin Luther King Jr. Blvd., Sacramento CA 95817

Approximately 30 community partners and members participated in the workshops, representing varying organizations and communities.

# SCDI Report Findings and Recommendations

The emerging themes that translated throughout the community workshops included:

1. Digital inequity disrupts one's social, economic, and democratic life;
2. There are digital equity deserts in Sacramento County;
3. Digital skills are critical thinking skills;
4. Handheld devices are limited resources for meaningful access; and,
5. The highest priority in rural areas is access to the internet.

Combining community input from the workshops, local data, and national best practices, this preliminary report provides an overview of the issues surrounding digital inclusion, the data to inform the findings, and recommendations as treatments for the issues. SCDI's recommendations to local and regional policymakers in the report are to:

1. Increase the availability of digital skills training focused specifically on K-12 youth across a full spectrum of skills development;
2. Increase the availability of free and low-cost computing devices through surplus refurbishing and discounted new device programs;
3. Increase access to public computing labs and adoption of affordable home broadband subscription plans; and,
4. Invest in organizational infrastructure and capacity to coordinate, track, and measure progress toward regional digital equity goals.

The SCDI Steering Committee invites community leaders and residents to help identify resources and capacity to support implementation of these recommendations. To get involved, please contact the Steering Committee at digitalinclusionsac@gmail.com or visit https://digitalinclusionsac.org/ for more information.

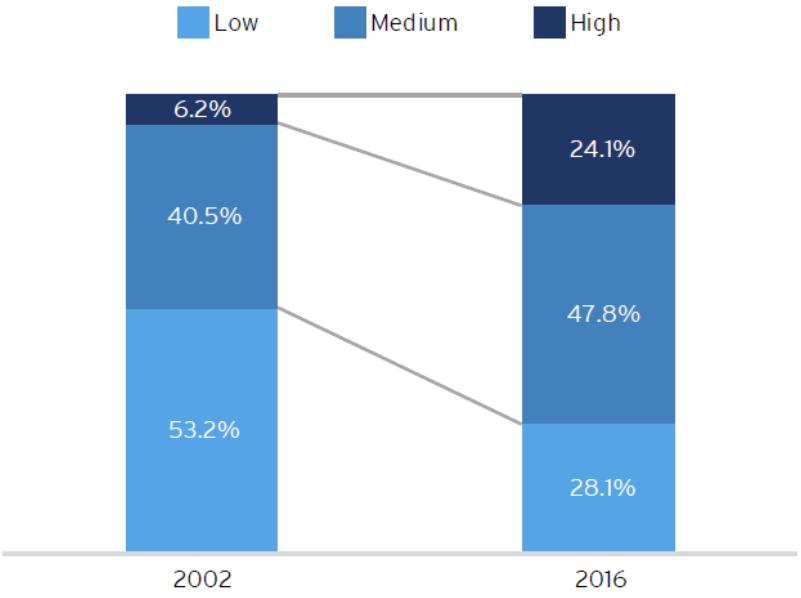
# 1. Introduction to SCDI

The Sacramento Coalition for Digital Inclusion (SCDI) consists of more than 40 organizations and uses a steering committee run by The Sacramento Public Library, The City of Sacramento, Valley Vision and Social Venture Partners Sacramento. The Coalition is focused on creating more opportunities for digital equity in the Greater Sacramento Region. To this end, the SCDI led a series of workshops on the topic of digital inclusion in our region.

This report contains the findings of those conversations, as well as observations garnered from the study of other efforts by metropolitan areas of similar size. This report also draws heavily from the market assessment conducted by The Brookings Institution and documented in the report *Charting a Course to the Sacramento Region's Future Economic Prosperity*. The assessment found that the Sacramento region has a persistent and increasing Digital Divide, as manifested in disparities in broadband access and adoption, educational attainment by race, and lack of basic digital literacy skills, as well as a shortage of more advanced digital skills needed in the workforce. These skills are increasingly required for the middle-skills jobs of today and tomorrow.

**Close to three-quarters of occupations in the region now require high or medium levels of digital skills**

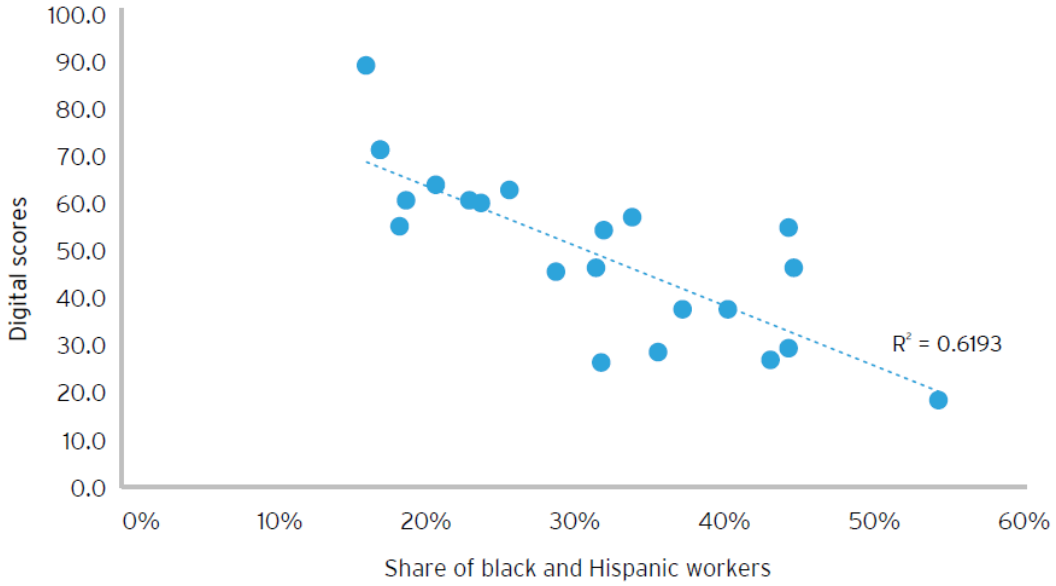
Share of occupations by digital skill level, Sacramento region




**Source: The Brookings Institution**

**Black and Hispanic workers are underrepresented in medium and high digital occupations**

Digital scores vs. share of Black and Hispanic workers by occupation groups (Sacramento region, 2016)

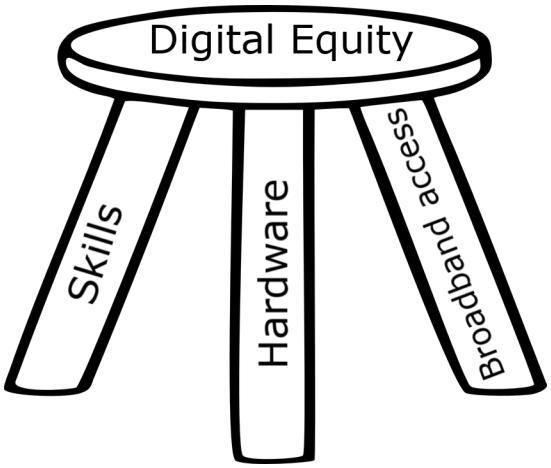



**Source: The Brookings Institution**

Combining community input, local data, and national best practices, the SCDI presents this report to provide an overview of the issues surrounding digital inclusion, the data to inform the findings, and recommendations as treatments for the issues.

For the purpose of this report, Digital Equity is defined as having 1) access to reliable broadband internet connection; 2) a functional computing device; and, 3) digital skills to support social participation, education and work.

# 2. Description of the Issue




Exclusion from the digital world usually results from three different barriers. Users either do not have sufficiently powerful hardware to accomplish their digital task, sufficient internet connection opportunities to engage in the online world, or sufficient skills to meet their digital needs. These barriers — hardware, internet access and skills — must all be removed *in concert* for any digital inclusion activity to create meaningful change in a person's life. Moreover, removing these barriers is critical to creating an inclusive economy.

Those without access to a barrier-free digital experiences often are left behind in today's on-line society. They face challenges related to their civic, economic and cultural lives. Communicating with distant relatives, looking for a job, searching for housing, accessing health information and telehealth services, utilizing civic services, completing school assignments — all of these are tasks that, in the modern world, are near impossible without adequate connectivity, computing hardware and digital skills.

In all sectors of the economy, digital technologies are creating a dramatic shift in the way we learn, work and communicate. As civic, economic and cultural institutions move forward with the productivity gains and increased outputs that digital technologies bring to their day-to-day work, there is a social responsibility to ensure that all populations are able to share in those gains in a meaningful way. Through a variety of historic, financial and technical factors, there are significant sectors of our region's populations that are being left behind.

# 3. National Best Practices

Digital inclusion is an increasingly important topic in communities across the country. Many local jurisdictions have created dedicated staff positions focused exclusively on addressing the digital divide and creating digital equity. A national organization, the National Digital Inclusion Alliance (NDIA), has organized to provide research, frameworks and collaboration opportunities to help address digital inclusion trends and needs. The SCDI has met with Angela Siefer, the executive director of the NDIA, to consult on the strategy and development of this report.

Local best practices to advance digital inclusion from across the nation include the cities below.

## San Francisco

In 2017, the City and County of San Francisco created the SF Digital Equity Initiative. Staff estimate that approximately 100,000 San Francisco residents lack Internet access at home. The initiative published a Digital Equity Playbook in April 2018 to assist agencies implementing digital inclusion programs.

## San José Digital Inclusion Fund

The City of San José created a Digital Inclusion Fund supported by fees paid by telecommunications companies from the siting of small-cell 5G infrastructure. The City and the California Emerging Technology Fund (CETF) have committed to raising additional private funding. The Digital Inclusion Fund is expected to connect 50,000 San José households to broadband while supporting digital skills development.

## Kansas City Coalition for Digital Inclusion

The Kansas City Coalition for Digital Inclusion is a group of public, private and nonprofit partners working to advance digital inclusion in Kansas City, Missouri. Their strategic focus areas include broadening participation, connecting people, overcoming barriers and raising awareness.

# Louisville

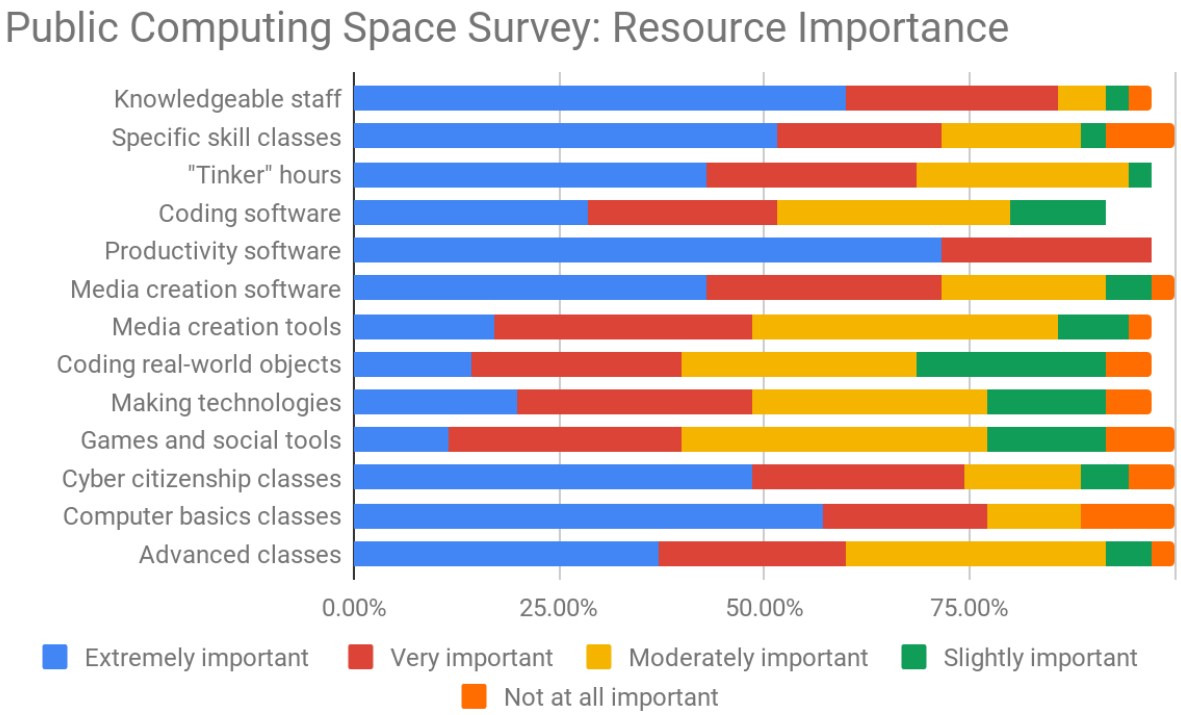
OFFICE OF
CIVIC INNOVATION
AND TECHNOLOGY

The City of Louisville's Office of Performance Improvement & Innovation Team leads a citywide effort to address digital inequity in collaboration with community partners. The Team published a Digital Inclusion Plan that recommends ways to remove barriers to digital access, skills development, and hardware with an emphasis on jobs and education.

# 4. Research on Local Needs

The SCDI distributed two surveys to workshop participants and community partners to assess the importance and local needs around public computing spaces and digital skills. Within the first survey, participants identified productivity software, such as Microsoft Word and Excel (71%); knowledgeable staff available during the hours of operation (60%), and basic computer classes (57%) as extremely important resources. This feedback also reflects recurring themes/sentiments from dialogue in the community workshops.

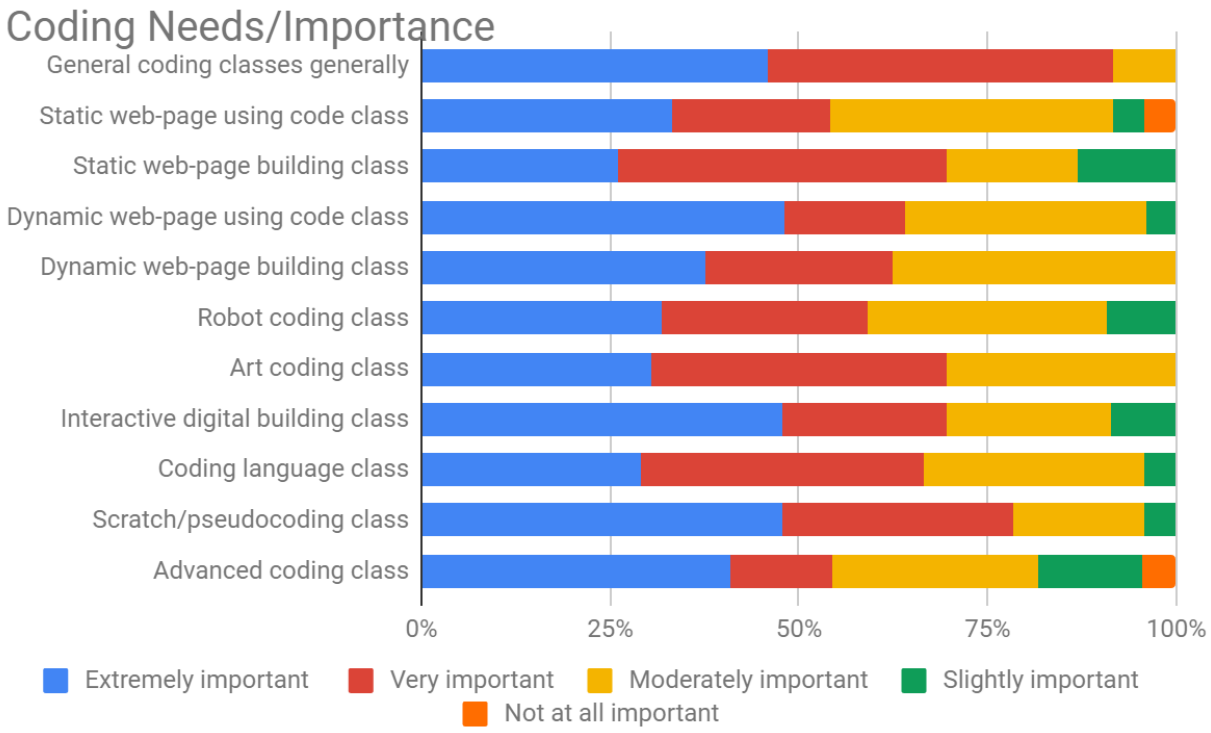
Additional important resources identified include cyber citizenship classes, specific digital skills classes, media creation software, "tinker" hours for drop-in projects and experimentation, and advanced classes such as coding. Below is a table on the public computing spaces survey responses.




Public Computing Space survey participants also were asked whether it is more important for the space to offer more open hours or formal instructional times. Survey responses show that community members valued open hours (48%) more than formal instructional time (33%), while 18% found both resources equally important.

With regard to digital skills, SCDI delivered a Coding Needs survey focusing particularly on coding service importance. Participants identified dynamic web-page building classes using coding, interactive digital building classes, and scratch/pseudocoding classes as extremely important services (48% of participants). The survey also captured participant feedback on coding/digital skill development target populations, methods, outcomes and equipment. Participants shared equal value in targeting skill development programs to youth versus adults and self-guided learning opportunities versus formal instruction. Alternatively, participants showed a preference for

programming that provided digital skill development opportunities that worked toward certification versus programs that focus on building digital skill confidence.



# 5. Community Engagement Themes

SCDI facilitated four community workshops in Sacramento County to collect community feedback and direct service provider insights on digital equity needs within the County. The workshops were held between July and August 2019 at the following locations:

1. Martin Luther King Jr. Library, Sacramento City District 8
2. North Sacramento Hagginwood Library, Sacramento City District 3
3. Walnut Grove Library, County District 5
4. Oak Park Community Center, Sacramento City District 5

Approximately 30 community partners and members participated in the workshops, representing varying organizations and communities within the County. SCDI shared background information on the history of the coalition, preliminary research that guided the development of coalition's efforts, and proposed three strategies to achieve digital equity in our region. The strategies discussed focused on the need for public computing spaces, access to computing devices, and opportunities to develop skills to address the varying indicators of digital inclusion. The emerging themes that translated throughout all of the workshops included:

A. Digital inequity disrupts one's social, economic, and democratic life.
B. There are digital equity deserts in Sacramento County.
C. Digital skills are critical thinking skills.
D. Handheld devices are limited resources for meaningful access.
E. The highest priority in rural areas is access to the internet.

# A. Digital inequity disrupts one's social, economic, and democratic life


A woman at the North Sacramento workshop has been trying to learn Photoshop and photo editing skills. She wants to do digital photography, but has not had the correct learning opportunity. A staff member with Sacramento Employment Training Agency repeatedly stresses to her clients that résumés created on a smartphone are often inferior to those composed on a full PC. A resident of the Delta continues to run, to his dissatisfaction, his work email from an @frontier.com email address because he cannot figure out how to migrate his email from one service to another.

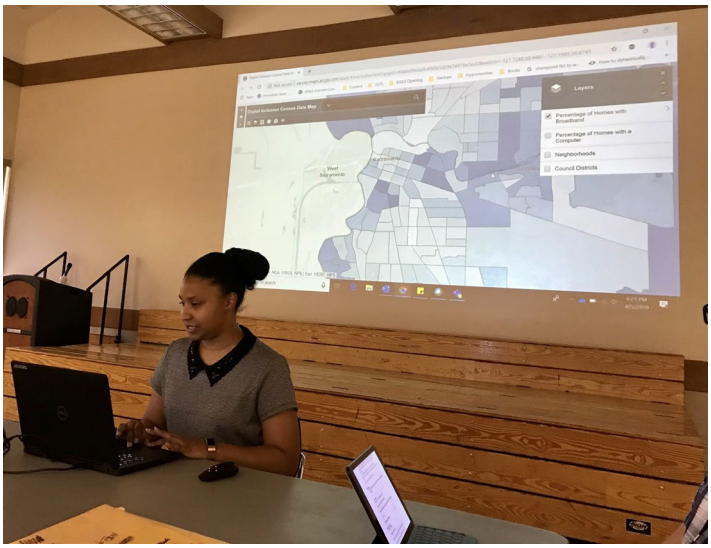
These instances, drawn from our workshops, illustrate how skills, hardware and connectivity inequities create digital divisions in the lives of Sacramento community members. The recommended actions proposed in this report seek to address issues like the ones described above, in an inclusive and comprehensive fashion.

# B. There are digital equity deserts in Sacramento County

A person experiencing homelessness in the Del Paso Heights area has his own phone and computer, but he is offline after 9 p.m. because the batteries for all his devices are dead by the late evening. A resident of the Delta is confounded how rural regions of Alaska have better connectivity than he does, so close to the most technologically advanced state's capital. Children in the Oak Park area spend hundreds of hours online at the local library because that is where the connection to the internet, and therefore the rest of the world, is available to them. Nearly 25 percent of students at Sacramento City College are using mobile devices for homework.

Digital equity deserts exist within Sacramento County. They can be caused by issues like lack of power, lack of internet access or lack of meaningful scaffolds to skills, as described by workshop participants. These deserts are in some cases defined by geographic issues, and in others, follow a person around regardless of their location. True solutions to the issues of digital equity deserts consider the logistics of not only a particular geographic region, but also historical factors related to the particular populations that live in a given region.

## C. Digital skills are critical thinking skills



A workshop participant said that his Hispanic parents have a cultural preference to physically working hard and learning traditional academic skills over digital learning. A digital skill instructor highlighted how learning digital skills is foundational to any professional task. A North Sacramento resident said that without proper motivation in sight, youths will not engage with any skill learning.

Digital Skills, and the learning opportunities they create, translate to all facets of life. The SCDI's recommendations and the opportunities those recommendations create aim at bridging the digital divide, but also work to create meaningful learning and critical thinking opportunities for residents of our region. Critical thinking — analyzing information, combining disparate pieces of information to develop conclusions and breaking complex tasks down into discrete actions — is a digital skill. Activities that teach digital skills also teach this larger life, and employability, skill of critical thinking.

## D. Handheld devices are limited resources for meaningful access

Although mobile broadband access through handheld devices provides many valuable resources, input activities, especially related to employment and government resources, have many limitations. Due to the small screen and keyboard sizes of handheld devices, completing job applications poses many challenges for users. An employee from the Sacramento Employment and Training Agency shared that 16- to 24-year-olds looking for employment do not recognize the limitations of handheld devices until they begin applying for jobs on their device. Additionally, typing an essay or completing government forms/applications poses the same problems.

## E. The highest priority in rural areas is access to the internet

Lack of adequate broadband infrastructure is a well-documented issue in the Sacramento region. In rural areas of the region, impacts of the lack of high-speed internet are felt from two perspectives. Residents experience the aforementioned disruptions to social, economic and democratic life related to lack of access. From a business standpoint, the lack of broadband coverage inhibits the use of agricultural technologies (AgTech) that can help farmers and other rural businesses increase resource efficiencies and productivity. The Brookings market assessment identified the intersection of agriculture, food, science and technology as a high potential cluster for economic growth. Access to adequate broadband infrastructure is a key component of unleashing the potential for rural economic growth

# 6. Recommendations

## A. Skill Increase

### 7.5K Technology Challenge

According to the The Brookings Institution's Sacramento market assessment, the Sacramento region's mean digital occupation score is second highest among American Middleweight communities. Additionally, many of the hardest-to-fill positions in the region require high digital skills, skills that are improved through basic exposure to computer science. With decreasing national internal migration trends, the Sacramento region should prioritize educational pathways to fill these positions locally. Just 1.5 percent of Americans moved to a different state in 2017, down from 2.9 percent in 1990 (McKinsey Global Institute 2019). The McKinsey Global Institute *Future of Work in America* report recommended that communities in the mixed middle segment (Sacramento was identified as a mixed middle, stable city) need to accelerate economic growth and focus on entrepreneurship and skills development. Targeting communities in our region that have little exposure to technology and digital-skill development opportunities can strengthen our workforce to meet local employment needs, actively including the diverse populations that comprise our community.

The recommendation of the SCDI is to focus on skill acquisition of the K-12 population across a variety of technology skills. Specifically, we propose that the coalition offer out-of-school learning opportunities for K-12 students that focus on Code, Digital Media Creation and Digital Literacy. These learning opportunities will target identified at-need communities. We recommend that our region engage 7,500[1] students in these kinds of out-of-school technology learning opportunities. We propose that those 7,500 students come from census tracts where broadband adoption is less than 82% (California's state-wide adoption average). In the resources and maps section of this report, there are tools to help service providers geographically locate these regions.

#### Outcomes

This 7.5K technology challenge is not about teaching a mastery of a particular coding language, or a preparatory step towards a particular type of automation or industry work. Rather this effort is really about engagement and excitement for digital learning and skills. We see this challenge as a place to

[1] This 7,500 number is calculated based on these factors. In our region, there are 57,973 households without broadband subscriptions in those census tracts without an 82% adoption rate. 16.5% of California's population is school-aged (between 6 and 18). 16.5% of the 57,973 is 9565 households. To reach 80% of those households would number approximately 7,500.

build foundational tools and engagement with the basics of digital learning. From strong beginnings can come future opportunities for mastery and meaningful economic, technology-based opportunity.

The outcomes of these learning opportunities are not designed to be tied to a particular coding language, technology tool or technical mastery. Instead, the proposed outcomes center around:

- Excitement for computer science concepts
- Increase in confidence for computer science skills
- Ability to see oneself in a technical career in the future
- Confidence in ability to solve technical challenges independently

We recommend that service providers be given these outcomes as targets and that an exactly similar pre and post survey be given to providers to create assessments in their students' learning. By collectively using the same measurement tools, we can, as a region, describe with accuracy the change in attitudes and beliefs that our combined efforts have resulted in. By undertaking these learning opportunities in the statistically separated communities, we know that efforts will be maximized. Well-resourced communities often provide opportunities that are universally accessible and, even when a segment of that community suffers from the digital divide, that difference is more likely to disappear later in life. We recommend that we focus our 7.5K technology challenge in places where the digital divide is the most acute because that will help ensure that our efforts are, in the words of a workshop participant, 'optimized and not trivial.'

## Stretch Goals

A piece of feedback clearly communicated at several of the workshops was that a focus on skill increase ought not be confined to strictly a K-12 population. Offering opportunities to adult learners is important for many community members and stakeholders. Part of the justification for targeting that audience is that adult learners often set the example for children in the home, adult learners have active digital needs as well, and that it is 'never-too-late' to learn something new. Although the opportunities for high-affect outcomes remain the most present in children, a 'stretch' goal beyond the 7.5K technology challenge should include learning opportunities for adult learners as well.

## Digital Inclusion Week

Skill increases in technology can happen through formal instruction via a dedicated instructor. It is also worth noting that self-guided or self-paced learning can achieve the same result. Further, our identified efforts are meant to specifically engage students in out-of-school time. Other digital learning opportunities not specifically targeted in sections above (in the classroom learning, learning for seniors, self-paced instruction, college learners) have worth for our region as well.

One of the ultimate purposes of setting an instructional goal around reaching a certain number of students is that the goal can activate other organizations to help meet that ambition. Similarly,

rallying organizations behind dedicated times of a response to a community need can unite stakeholders, providers and the public in addressing the same issue. International Digital Inclusion Week is held annually in October. It is the recommendation of the coalition that this week will be identified by stakeholders, be used as a measuring post to describe the digital inclusion activities of the region and act as a rallying cry for organizations engaged in the work of creating digital equity.

# B. Hardware Increase

## Surplus Hardware Distribution

The California Department of Technology's Office of Broadband and Digital Literacy supports the California Broadband Council, which is charged with promoting broadband deployment in unserved and underserved areas of the state and broadband adoption throughout the state for the benefit of all Californians. As part of this effort, the Council established a Surplus Equipment Task Force that is focused on creating a pipeline of surplus desktop and laptop computers for distribution to families in need at no cost.

Although state law generally requires the sale of personal property at fair market value, school districts enjoy a special exemption to this rule. According to California Public Contract Code Section 10389.1:

> *The Department of General Services, if feasible and consistent with existing law, shall first offer appropriate state surplus personal property to school districts prior to offering that property to the public, except for property more appropriately suited for public safety uses. The department may offer school districts state surplus personal property at less than fair market value, if it is determined by the Director of General Services to be in the best interests of the state.*

Under the Department of General Services' implementation of this statute, eligible K-14 schools may receive surplus computing devices from the State of California at no cost. The Surplus Equipment Task Force is working to establish a program that would scale the distribution of surplus computers statewide.

In collaboration with the Task Force, SCDI has spoken with potential partners to operationalize a surplus hardware distribution program in Sacramento and identified two potential barriers to implementing such a program. First, State of California computers provided generally have had their data wiped and, therefore, do not include an operating system at the time of provision. The Coalition has yet to identify a dedicated organization that can install operating systems at the volume needed to justify creating an ongoing distribution program. Second, although computers may be provided to a school and then passed on to a refurbisher to ensure that computers are in proper working order and install an operating system, a refurbisher would need to cover the labor cost associated with this work. Similarly, while Microsoft provides discounted Windows licenses for computers that provide community benefit, that is still an additional cost. For example, a local

organization quoted a price of $30 per computer to install Windows, along with basic productivity software.

Despite these constraints, SCDI plans to pilot the provision of surplus computers during Digital Inclusion Week 2019 to begin testing various distribution approaches. For example, the use of volunteers to install the free and open-source operating system Ubuntu (a version of Linux) during a weekend "Install Fest" or "Install-a-thon" over several hours may provide a sufficient number of computers for initial distribution. An alternative to this approach may be to offer students the opportunity to install an operating system as part of a digital skills training workshop. Under this model, participants would learn to install an operating system on a computing device they could ultimately take home from the event and keep. To be sure, SCDI's intent is that any distribution program target communities with the greatest need. These communities are visualized in the computer ownership maps provided in this report.

SCDI will continue to identify potential sources of grant funding or sponsorships to cover the cost of scaling a local refurbishing and distribution program. In addition to encouraging additional public agencies beyond the State of California - and local agencies, in particular, SCDI recommends that civic leaders encourage the participation of private sector businesses in such a program, which may have more frequent hardware refresh cycles and may benefit from tax advantages associated with charitable giving. To achieve economies of scale, SCDI recommends that a single hardware pool be established from which community organizations may apply to receive refreshed devices for programmatic distribution. If successfully executed, such a program could lead to the provision of thousands of devices in the possession of those who would benefit the greatest.

# C. Broadband Increase

## Public Access Computing Labs

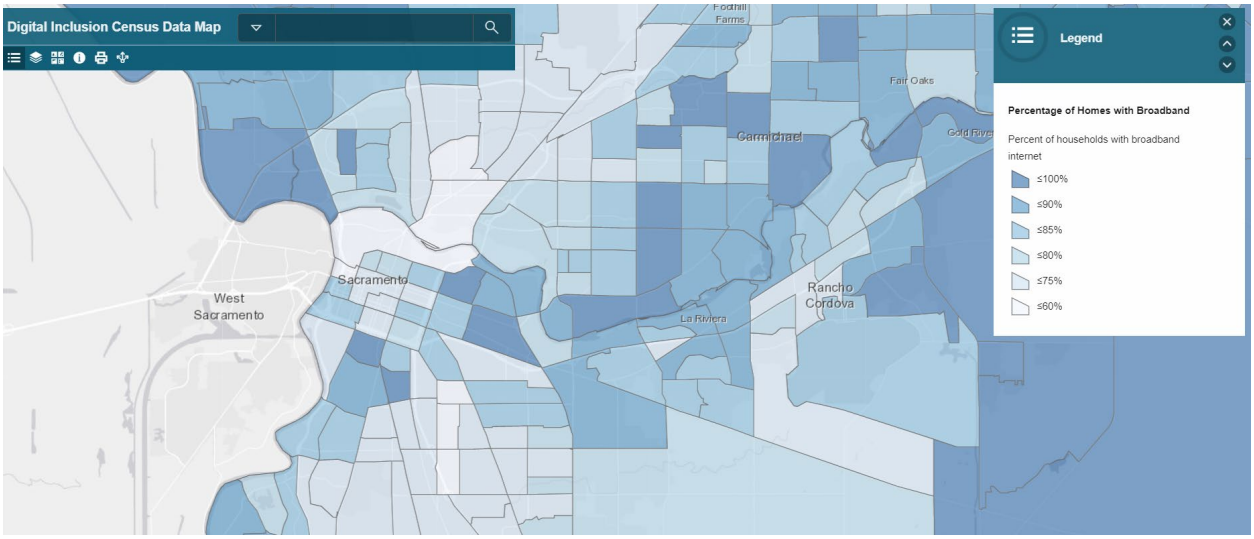
The greater Sacramento area already has public-access computer labs in some measure. They go by many names, depending on how they serve particular populations. Schools have labs and access spaces that specifically serve students, organizations like SETA have labs that are specifically designed for job seekers, and libraries have public-access computing spaces that are entirely democratic, for instance.

These spaces meet several important needs. In some capacity, they offer the location where skill instruction or hardware access can be obtained. Classroom instruction or one-on-one technology help is often best suited for an open, inclusive space, after all. A person that only needs a computer for 5 hours a week might be better served by sharing a machine in an organized fashion, like one sees in a library space. One of the greater virtues of these labs is that they make broadband internet speeds available to people. The connections are typically well managed, effective, reliable and high-speed.

It is with these facts in mind that the SCDI recommends that public internet needs can be met, in some form or fashion through the creation of these labs. Because Wi-Fi technology is cheap, expected and ubiquitous, these spaces are best served when, in addition to having public terminals that are on a network, there is also a Wi-Fi network that users can access with their own personal devices.

In examining what these spaces could look like in the Sacramento region, we took into consideration many different possibilities. Should they spaces include 3D printers? Are instructional hours or open access hours more important? Are microcomputers useful, or do most people simply expect full form PCs in these spaces? By coming to an understanding of the potential that community members see in these kinds of spaces, we can better define what will make a particular space successful and what will be a less useful effort.

The recommendation of the coalition is that the region develop three more of these lab spaces in the next 24 months. These spaces should have designs, hours and programs that fit the specific needs of the community in which they are situated. An examination of the Digital Inclusion Census map located on the SCDI webpage can help in the designs of where these additional locations be placed.




Our previous community surveys and interactions (outlined in the Research on Local Needs section) indicate good starting points of technology, services and amenities to consider.

## Beyond Public Spaces

It should be noted that there are two underlying issues for which public computing spaces are a poor solution.

One came out of the experiences of several of our workshop participants who are experiencing homelessness in the North Sacramento area. Participants noted that access to power was of particular importance. Part of their needs for internet technologies are being met well by existing

infrastructure and programs. They had cell phones or devices that could provide them a connection that they felt happy about. The issue, though, is that these devices don't hold enough energy to meet their needs at the scale that their needs exist. Cell phones that function as hotspots run out of electricity. Personal computing devices run out of battery early into the evening. They have tried to meet these problems through a variety of solutions - portable battery packs, solar-charged batteries and the like. But ultimately, what would serve them the best, and the most effectively in the medium term, is if there were publically available outlets that could be accessed outside of business hours. Further, because it is just not one person with a demand for power (and stored power on multiple devices), efficaciously designed power-outlet access is important. One person will frequently bring in more than one device, and utilize all the outlets at a given space for all their devices. This kind of power demand should be considered as public spaces are designed. That power-users are not coming into the space with a 1-person-1-device ratio should be factored into considerations about outlets and power. Additionally, sometimes an openly accessible outlet is almost as useful as a fully staffed computer space at certain times of the day.

The other special case to be considered comes from the Delta. Unlike the residents of North Sacramento, there are many in the Delta that are unable to buy effective internet access that is reliable, fast and reasonably priced. The scope of what the coalition is considering presently does not include specific contracts to bring access to specific regions, but it is the recommendation of the coalition that a feasibility study be conducted on the ability of government agencies to provide wired connections, a mesh wireless network, or a large-area wireless network to the Delta regions. This feasibility study should examine the logistics of wireless access in the Delta, catalog current issues related to internet access and test possible solutions.

## Broadband Access and Broadband Adoption

As mentioned in the *Beyond Public Spaces* section of this report, there are communities in the Sacramento region where the ability to purchase high-speed internet is not a feasible possibility. Additionally, there are segments of our population for whom broadband is accessible, but there are hurdles to successful adoption of this technology because of other issues to access — specifically reliable access to electricity.

But there is another type of barrier to digital equity relating to broadband speeds that should be addressed — broadband adoption that is stalled or prevented because of financial constraints. The long-term remedy for this would be better economic options. The short-term solution is for coalition members to function as a 'go-between' and use 'opportunity cards' to help at-need families take advantage of broadband speeds at reduced prices through the private sector.

## Opportunity Cards

Looking to provide someone with the gift of the Internet? Partner like you can help connect households to the Internet by purchasing Opportunity Cards that can be used toward the cost of paying for Internet Essentials service. Opportunity Cards can be purchased in increments of $30, $60, 90 and $120.


To order Opportunity cards, please go to this site

Programs, like Comcast's opportunity cards, provide such a remedy. A recommendation of the committee is that such an opportunity be investigated and that ideas around utilizing these types of programs be made convenient and accessible to on-the-ground service providers. Additionally, it would be valuable for coalition members to have an intake and follow-up procedures for those who sign up for these services, so that outcomes of broadband adoption could be measured and understood.

# D. Coalition Infrastructure and Capacity


## Current Coalition Infrastructure

Currently, the Sacramento Coalition for Digital Inclusion is an alliance of organizations, institutions and entities that are aligned in bridging the digital divide for the Greater Sacramento Region. This coalition is currently being led by a steering committee, which is driving efforts forward by deciding on the priorities and order of business for the coalition.

As a steering committee, we currently are providing 10 hours a week of in-kind support in an effort to see the coalition take official roots. The steering committee is offering capacity with regard to planning, coordinating, strategizing and executing for the coalition.

The steering committee has developed capacity for the coalition by:

- Establishing a vision and mission
- Setting the framework for action

## Desired Future State

A desired short-term future state would be to identify a revenue or funding stream that could support in funding personnel to dedicate time and expertise to the coalition. The focus of this individual would be to build capacity by:

- Further researching best practices regarding organizational structure and operating mechanisms
- Assuring technical assistance is being met
- Developing and providing leadership in this realm
- Arranging resources for mobilization at both community and regional level

Once this capacity is met, the coalition could begin to expand by developing a framework and model for change. As this framework is generated, strategic and action plans will guide the coalition's efforts with regards to implementation.

The coalition is recommended to be housed as part of some organization, entity or institution in order to ensure sustainability as implementation occurs. The nature of where the coalition lives in the future will be a result of implementation and funding streams. In looking at best practices across the nation, the operating bodies of these coalitions vary.

Operating Bodies:

- Kansas City - Collaborative with Executive and Steering Council
- Charlotte - Knights Foundation
- San Francisco - City of San Francisco

# 7. Resources

**Digital Inclusion Census Data Map,** *The Sacramento Coalition of Digital Inclusion*
This map that shows household computer ownership and broadband subscriptions within varying neighborhoods and census tracts to illustrate the varying broadband adoption and access needs of our community. Data for this tool was pulled from the U.S. Census Bureau 2010 American Community Survey.
https://saccity.maps.arcgis.com/apps/View/index.html?appid=90abd5fecb3b4f65b1d29e14976e1e20

Additional resources are available below.

**Broadband Adoption Gap Analysis, California Advanced Services Fund Adoption Account,**
*Selena Huang, Ava Tran, & Carlos Jennings*
The purpose of this Adoption Gap Analysis is to identify a baseline for demographic barriers to broadband adoption and provide information to support important program and regulatory decisions related to the California Advanced Services Fund (CASF) Broadband Adoption Account (Adoption Account). Based on the results of the Adoption Gap Analysis, staff has produced the following: 1) an updated online California Interactive Broadband Map (http://www.broadbandmap.ca.gov/) to include adoption rates and various demographic data at the census tract, block group or block level, 2) a list of the top ten low income and low adoption communities that should be of focus for adoption work, and 3) a map highlighting all census tracts in California with low adoption rates (< 50%) and low income (those with a median household income <$51,500). The purpose of identifying these communities and providing access to these maps is to aid decision makers, stakeholders and potential applicants in determining areas with the greatest need and where CASF Broadband Adoption funds might have the greatest impact.
https://www.cpuc.ca.gov/uploadedFiles/CPUCWebsite/Content/UtilitiesIndustries/Communications/Reports_and_Presentations/CDVideoBB/BAGapAnalysis.pdf

**Case for Support: The Foundational Research Bias for the School2Home Program Design, Recent Findings and Current Policies that Support Action**
This report provides the research foundation for the design of School2Home. The overall School2Home comprehensive approach is delineated and the 10 Core Components are described along with the evidence for each. The report highlights recent far-reaching reforms in state and federal education policy and illustrates how School2Home supports these changes in policy and practice. It concludes by discussing and documenting how new education policy and the growing body of research on educating college-and-career-ready students argue for additional investments in School2Home. School2Home informs a path forward for education leaders from the public, private and philanthropic sectors to work together to prepare a new generation of California workers.
https://d3n8a8pro7vhmx.cloudfront.net/cetf/pages/149/attachments/original/1519087809/CaseForSupport.pdf?1519087809

**Charting a Course to the Sacramento Region's Future Economic Prosperity**
*The Brookings Institution*

In late 2017, Valley Vision led a partnership with Greater Sacramento Economic Council, Sacramento Metro Chamber, Sacramento Region Business Association, and Sacramento Area Council of Governments to collaborate with the Brookings Institution to conduct a market assessment of the six-county Sacramento region. The study examined the economic drivers of successful economies in regions and benchmarked Sacramento against national markets with similar characteristics. The report highlights a number of troubling trends, as well as bright spots and opportunities that could strengthen the City's economy. It presented a call to action that all residents must participate in, and benefit from, economic activity if the City is to grow and thrive in the years to come.
https://www.brookings.edu/research/charting-a-course-to-the-sacramento-regions-future-economic-prosperity/

**Closing the Digital Divide: A Historic and Economic Justification for Government**
*Hon. Lloyd Levine (ret.) & Matthew P.H. Taylor*
Access to high-speed Internet is essential for full and consequential participation in the civic, economic, and education systems of modern life. According to the Annual Broadband Adoption Survey, approximately 30% of Californians continue to lack "meaningful internet access" at home, creating a Digital Divide that is worse among already disadvantaged communities. As recent efforts have made access to the necessary broadband infrastructure near ubiquitous, this indicates alternative barriers to expanding the adoption of broadband technology. We explore the economic benefits of broadband adoption and historical precedence of government investment in utility infrastructure and adoption, arguing that government support for broadband must move beyond infrastructure deployment to further household adoption. We develop a framework for thinking about broadband adoption, applying it to the case of California to generate policy recommendations.
https://spp.ucr.edu/sites/g/files/rcwecm1611/files/2019-04/closing_digital_divide.pdf

**Digital Inclusion Playbook,** *Charlotte Digital Inclusion Alliance*
http://www.charlottedigitalinclusionalliance.org/playbook.html

**Digital Inclusion Summit Report January 2015**, *Kansas City Coalition for Digital Inclusion*
http://digitalinclusionkc.org/sites/default/files/DigitalInclusionReport_Jan2015.pdf

**Equipping Future Nonprofit Professionals With Digital Literacies for the 21st Century**
*Jimmy A. Young*
Digital technologies now permeate the professional interaction, access, and distribution of information. Future nonprofit professionals must obtain the necessary skills and knowledge to leverage the power of digital technologies in an ethical and appropriate manner. The challenge for educators and their students moving into the professional realm involves the disruption of traditional forms of professional training through digital technologies. This paper demonstrates how technology is utilized to equip students with digital literacies through the evaluation of a course that included digital technologies. The course focused on communication, marketing, and digital activism in the nonprofit and voluntary sector. Data were gathered over four semesters, and findings indicate that through participation in the course students experienced growth in digital literacies across all domains. Educators can help prepare future professionals by equipping them with the necessary digital literacies to ensure they become compe-

tent professionals.
https://js.sagamorepub.com/jnel/article/view/8309

**Technology Policy Institute,** *John B. Horrigan, PhD*
Using an original survey of participants in a low-income broadband program operated by Comcast, it identifies why certain formerly-unconnected low-income households subscribed and examines the effects of being digitally included. The sample of respondents comes from subscribers to the Comcast Internet Essentials (IE) program, which was established in 2011 as a voluntary condition of Comcast's acquisition of NBCUniversal. The large number of households (over 1.5 million) who have subscribed presents a valuable research opportunity for learning more about the benefits of home broadband adoption.
https://techpolicyinstitute.org/wp-content/uploads/2019/08/Horrigan_Reaching-the-Unconnected.pdf

**San Francisco Digital Equity Playbook,** *San Francisco Committee on Information Technology*
The San Francisco Digital Equity Playbook is aimed at agencies who serve vulnerable populations most at-risk of being digitally excluded. It consists of a collection of ideas, or "plays," for these organizations to better understand their clients' digital needs, help them get connected, and build their digital skills.
https://sfcoit.org/sites/default/files/2018-04/Digital%20Equity%20Playbook%20v1.pdf

**San José Launches Digital Inclusion Fund to Close the Digital Divide,** *City of San José Press Release*
http://www.sanjoseca.gov/DocumentCenter/View/82743

**Student Technology Needs and Digital Skills,** *Lan Hoang*
Sacramento City College student and faculty surveys on student technology needs and digital skills.
https://dms.scc.losrios.edu/alfresco/d/d/workspace/SpacesStore/51d70008-3750-4e71-833e-288c96ad8860/1.Student%20Technology%20Needs%20and%20Digital%20Skills__Survey%20Result%20Report.pdf

# 8. Acknowledgements

This report reflects the input of many individuals and organizations. Valuable contributions came from the individuals listed below:

- Ryan Malhoski, GIS Specialist, City of Sacramento
- Linda Beymer, Library Communications Analyst, Sacramento Public Library
- Naty Kasloff, Visual Communications Specialist, Sacramento Public Library

This report is an independent work product and the views expressed are those of the Coalition and do not necessarily represent those of the individual Coalition members or their employers.

# Appendix A: Computer Ownership and Broadband Adoption Maps

The following maps are based on 2013-2017 American Community Survey (ACS) five-year estimate data at the census tract level. For readability and to support policymakers, the maps are provided by Sacramento City Council and County Board of Supervisor district.

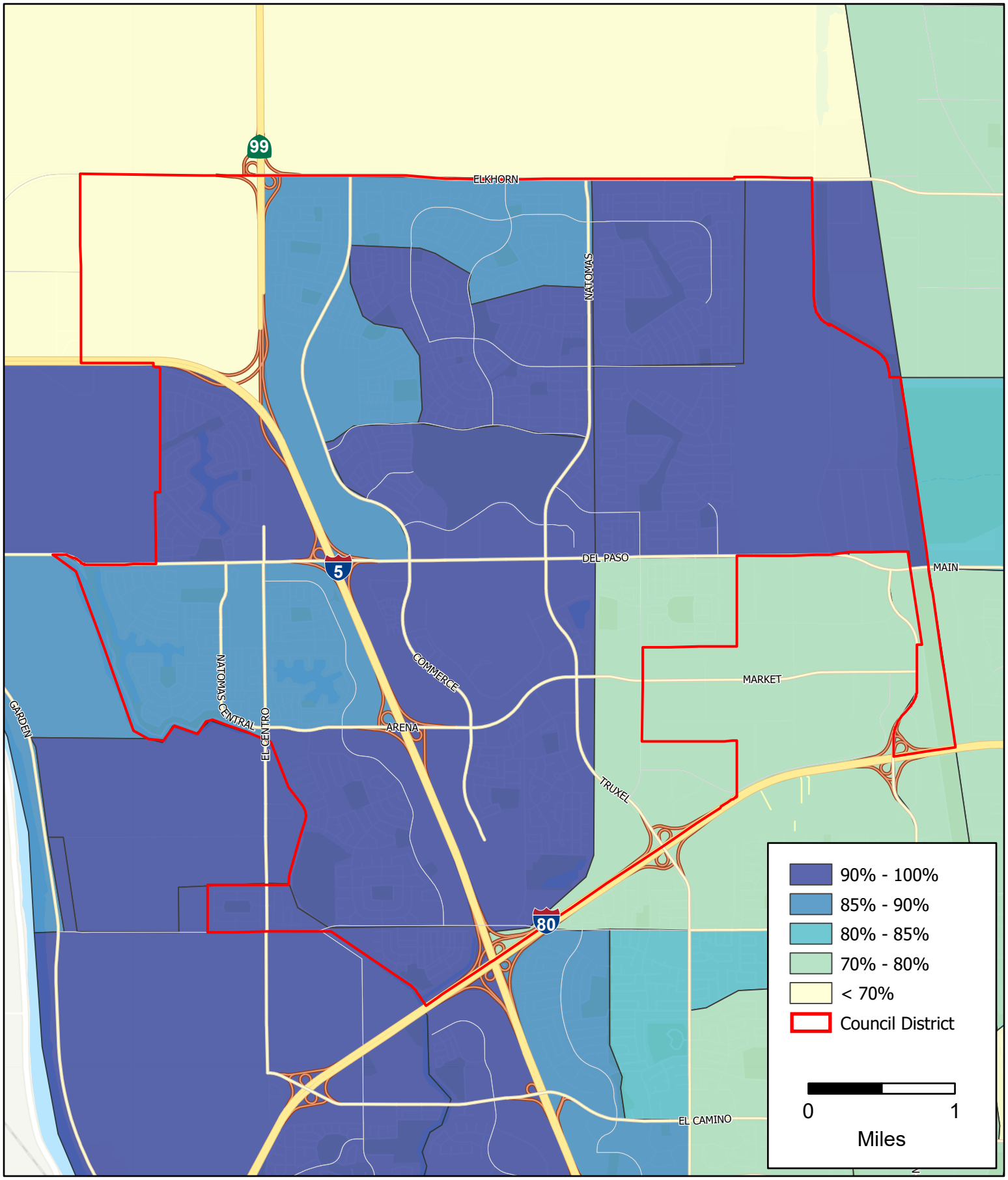
The computer ownership maps measure the percent of households that have one or more desktop or laptop computers.

The broadband adoption maps measure the percent of households that have a broadband subscription. The U.S. Census Bureau defines a broadband subscription as "any service that is capable of delivering faster speeds than 'dial up.'" This definition is inclusive of cable, fiber optic, digital subscriber line (DSL), satellite, and cellular data subscription plans. However, the definition does not specify a minimum upload or download speed.

City of SACRAMENTO

# Percent of Households with One or more Computers

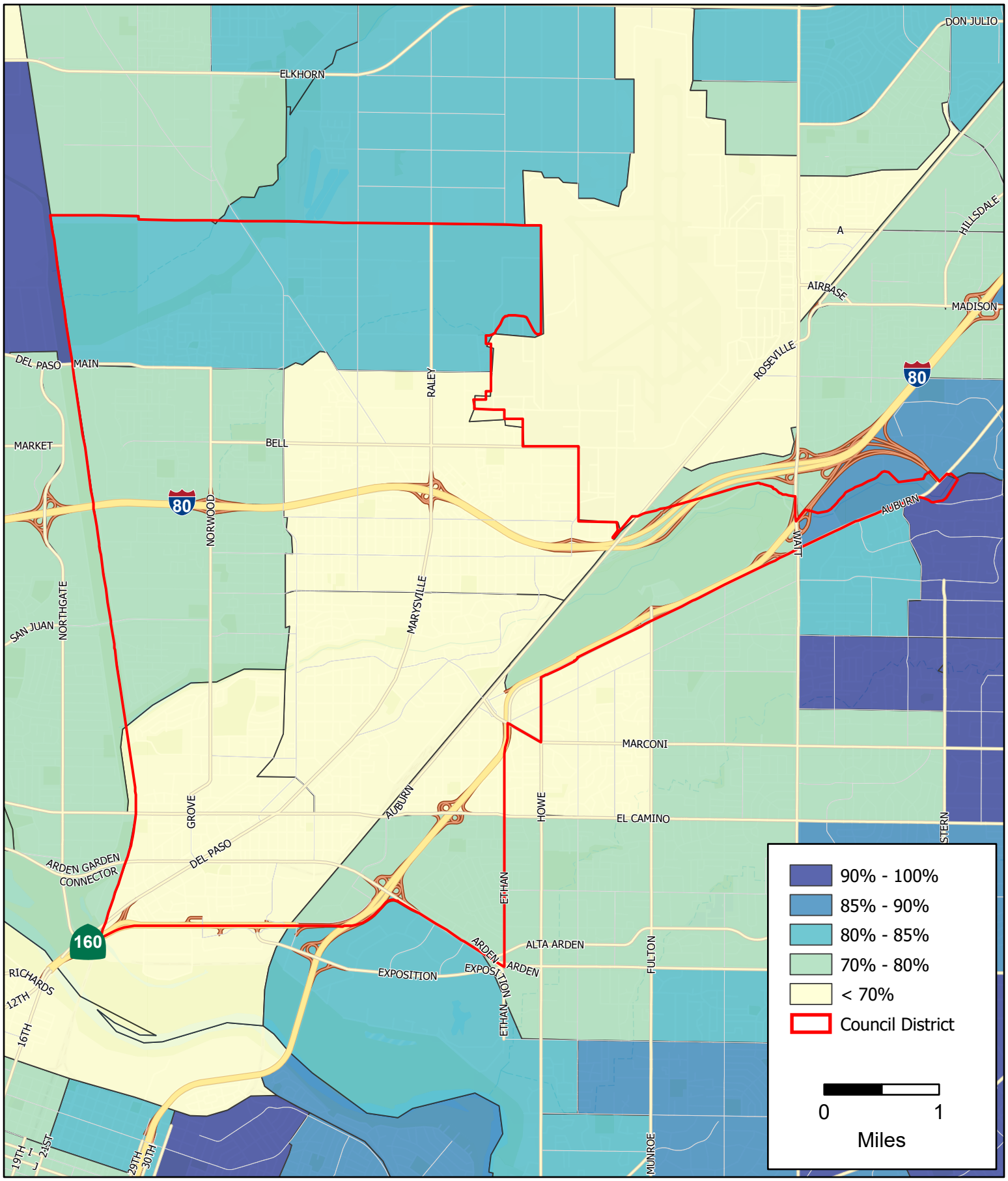
## Sacramento Council District 1



City of SACRAMENTO

# Percent of Households with One or more Computers

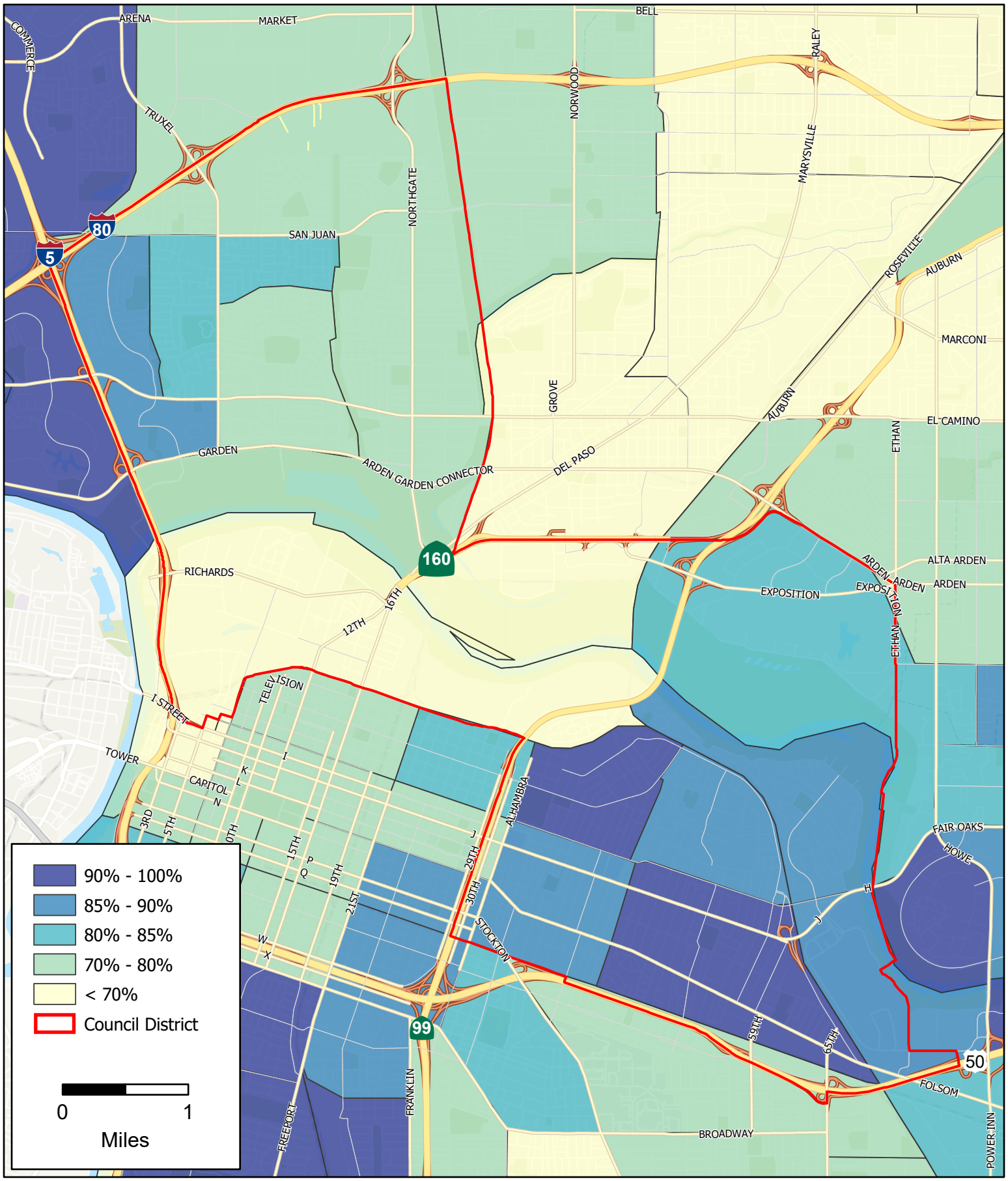
## Sacramento Council District 2



City of SACRAMENTO

# Percent of Households with One or more Computers

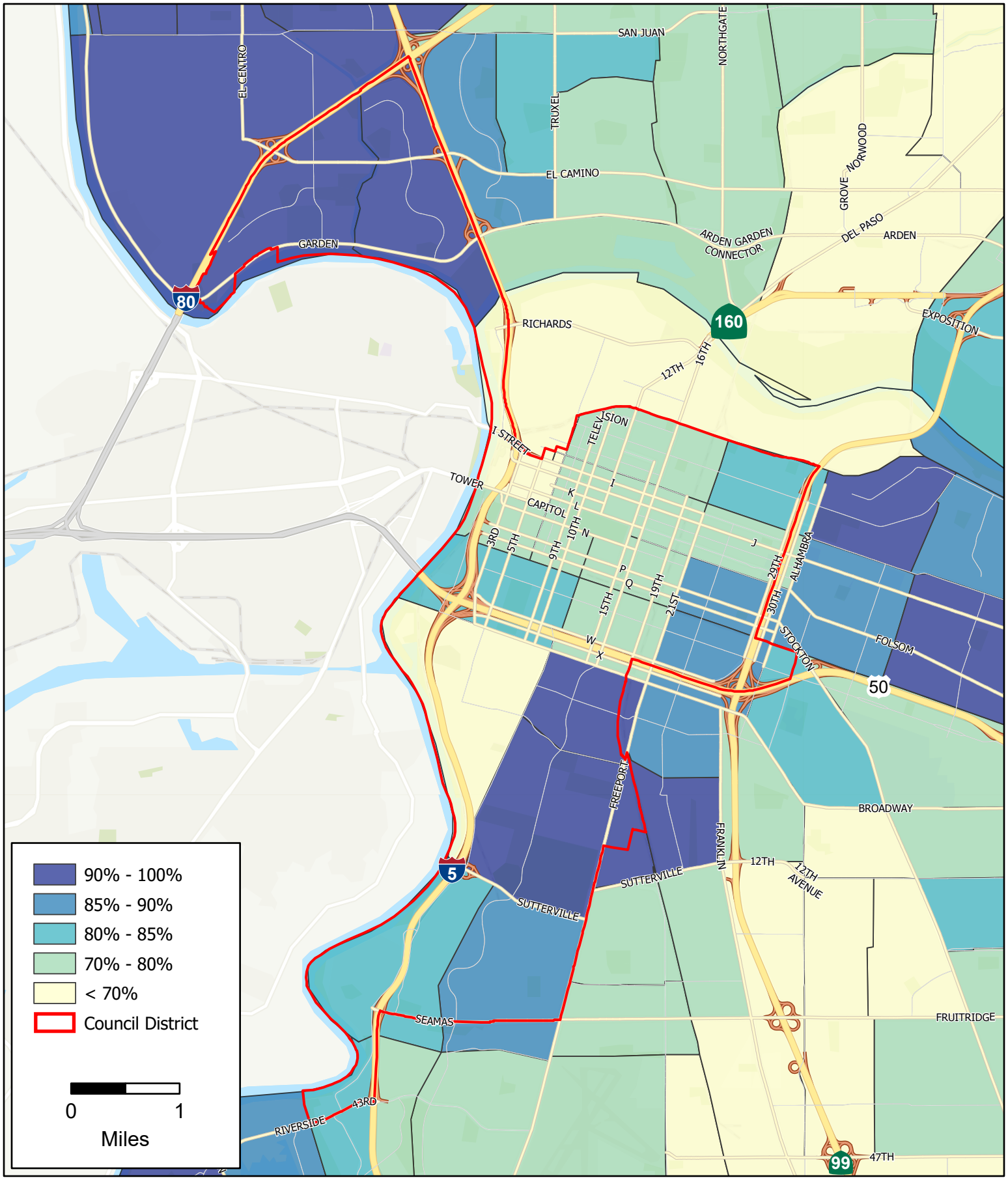
## Sacramento Council District 3



City of SACRAMENTO

# Percent of Households with One or more Computers

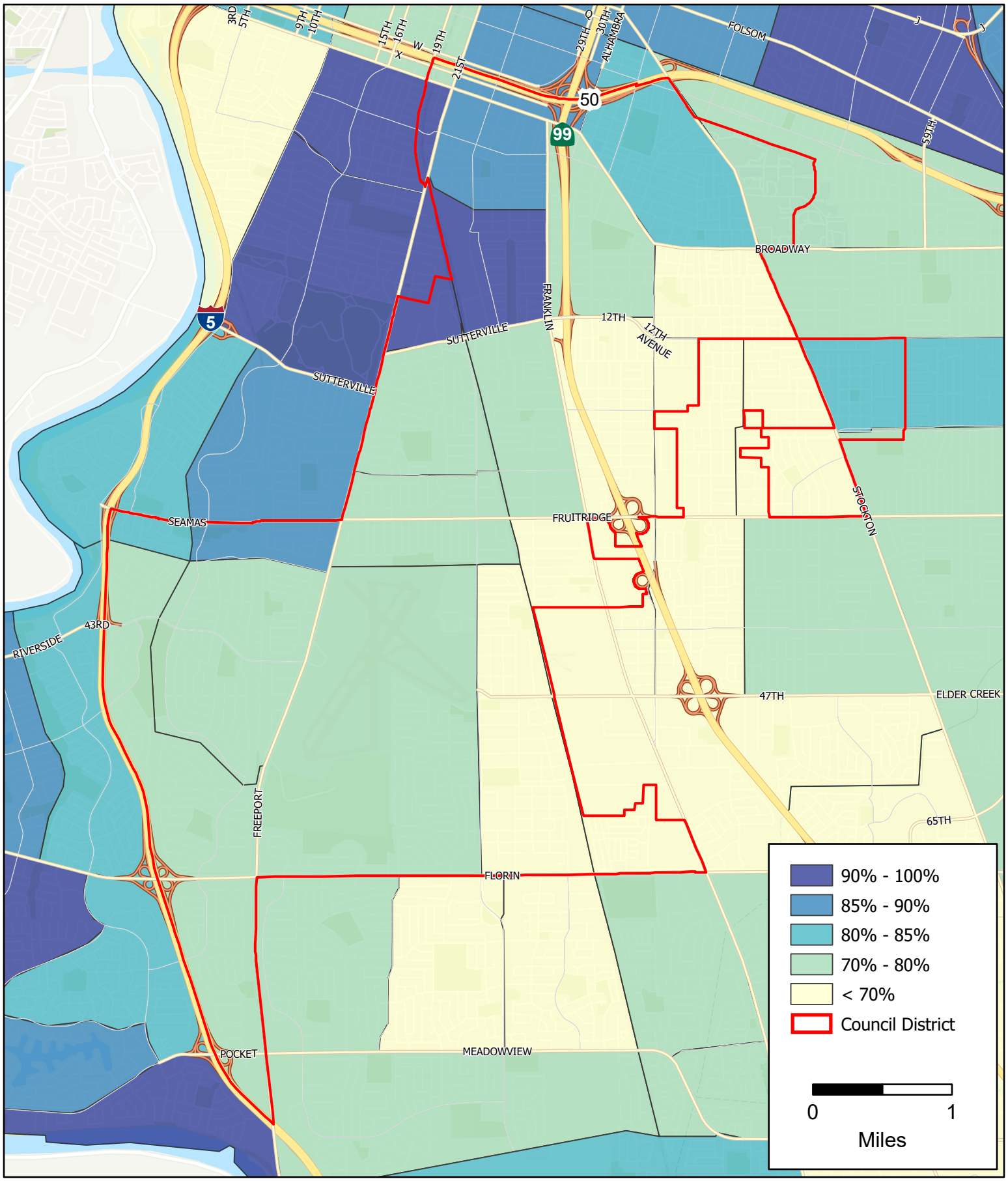
## Sacramento Council District 4



City of SACRAMENTO

# Percent of Households with One or more Computers

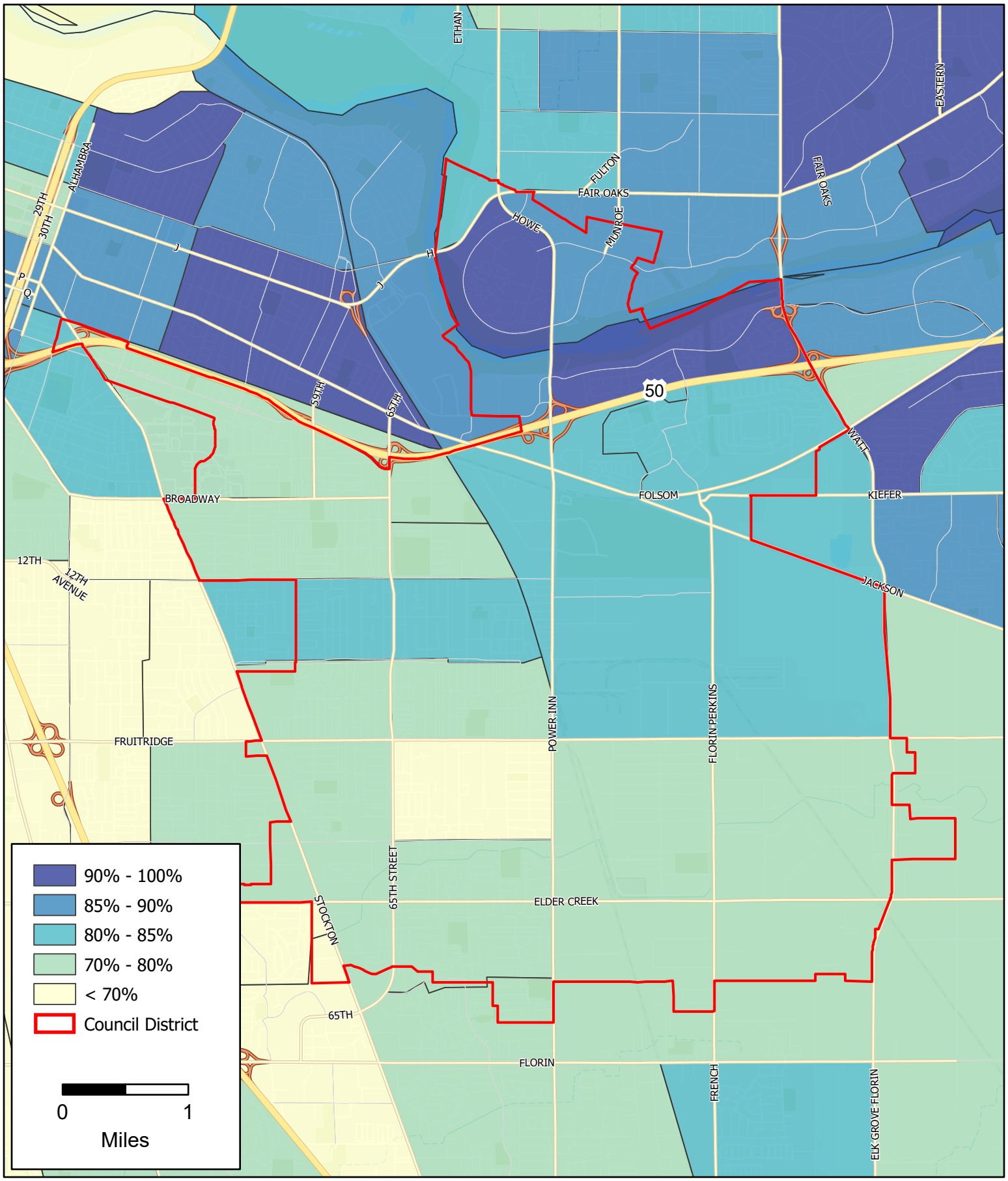
## Sacramento Council District 5



City of SACRAMENTO

# Percent of Households with One or more Computers

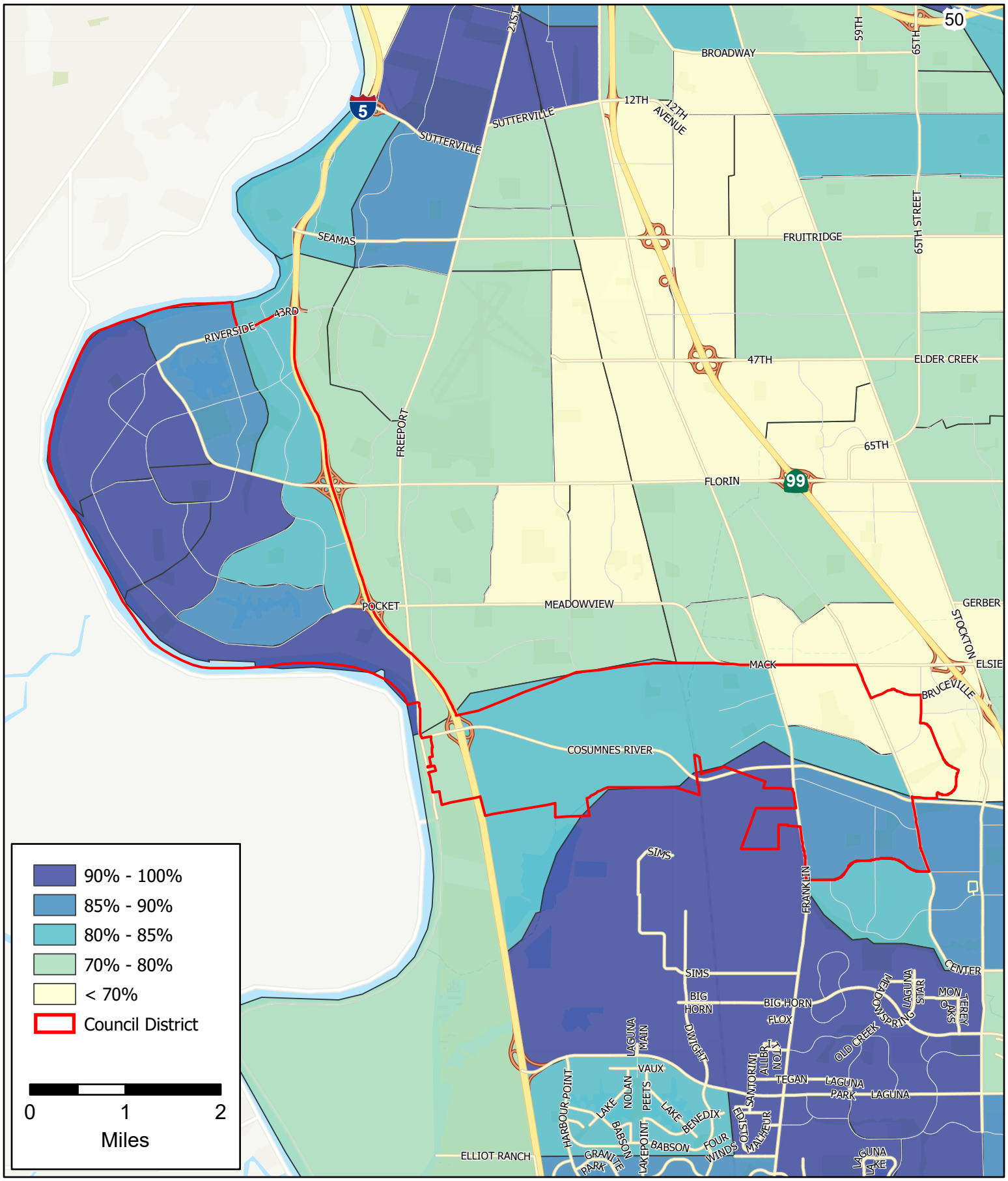
## Sacramento Council District 6



City of SACRAMENTO

# Percent of Households with One or more Computers

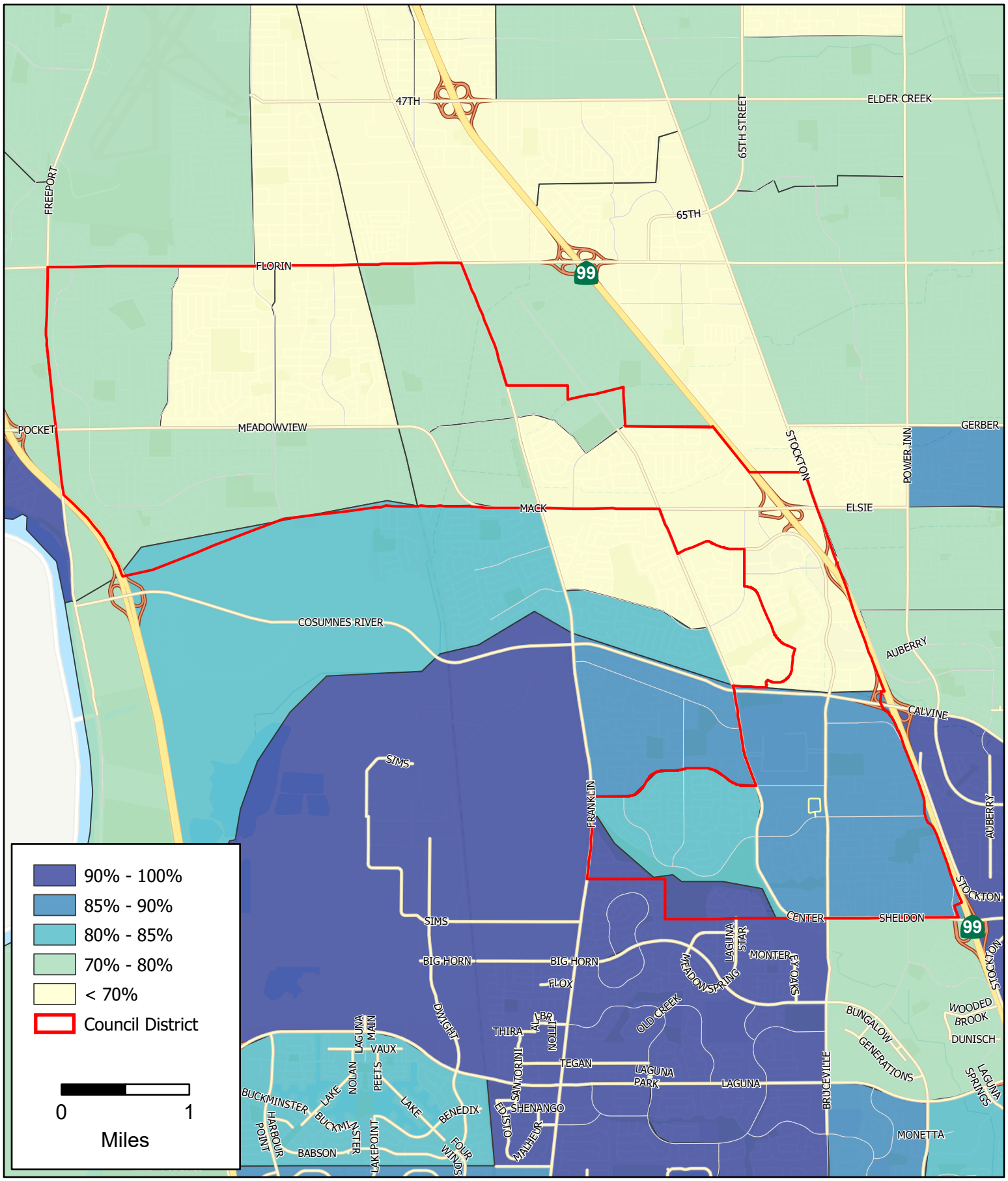
## Sacramento Council District 7



City of SACRAMENTO

# Percent of Households with One or more Computers

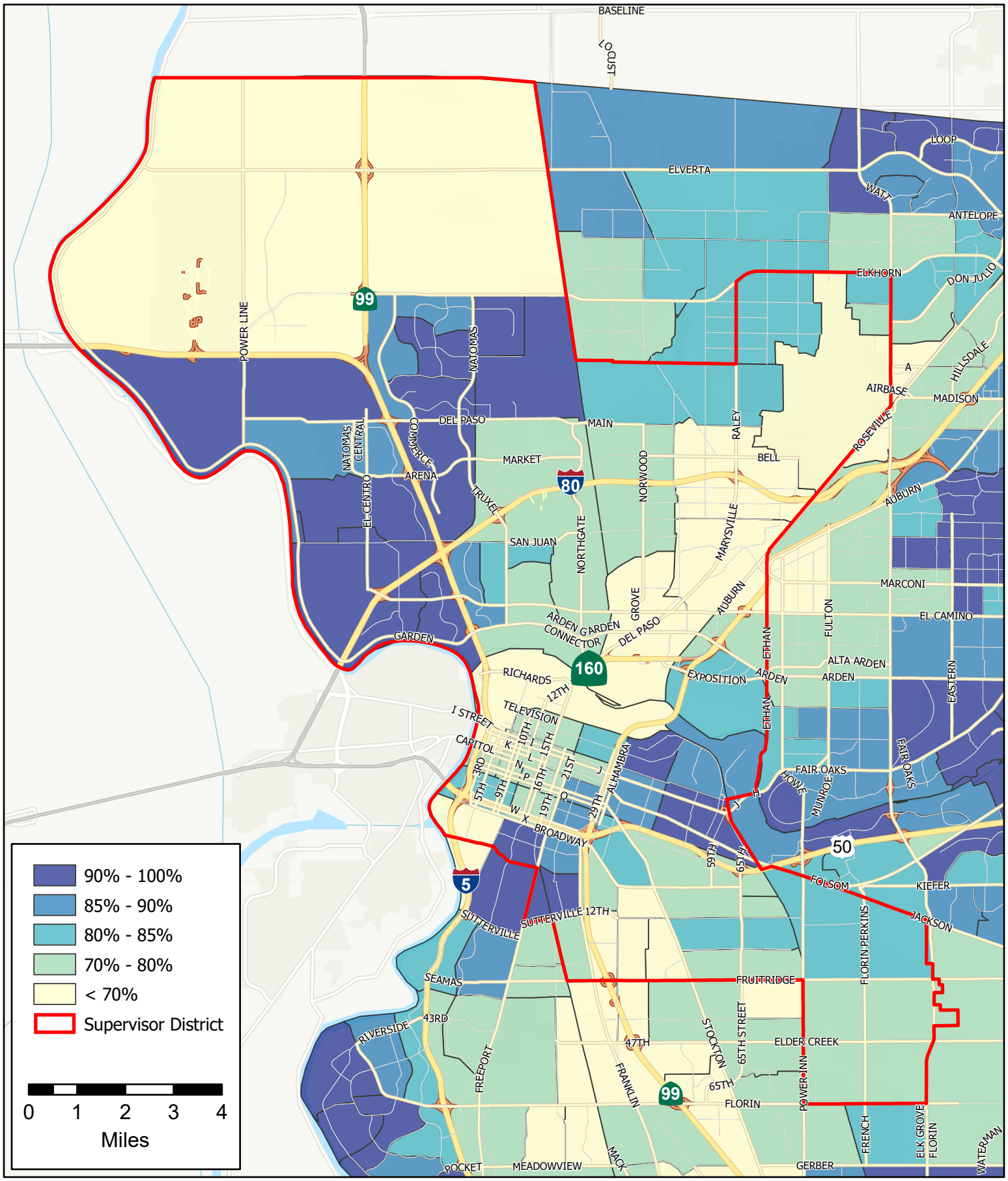
## Sacramento Council District 8



City of SACRAMENTO

# Percent of Households with One or more Computers

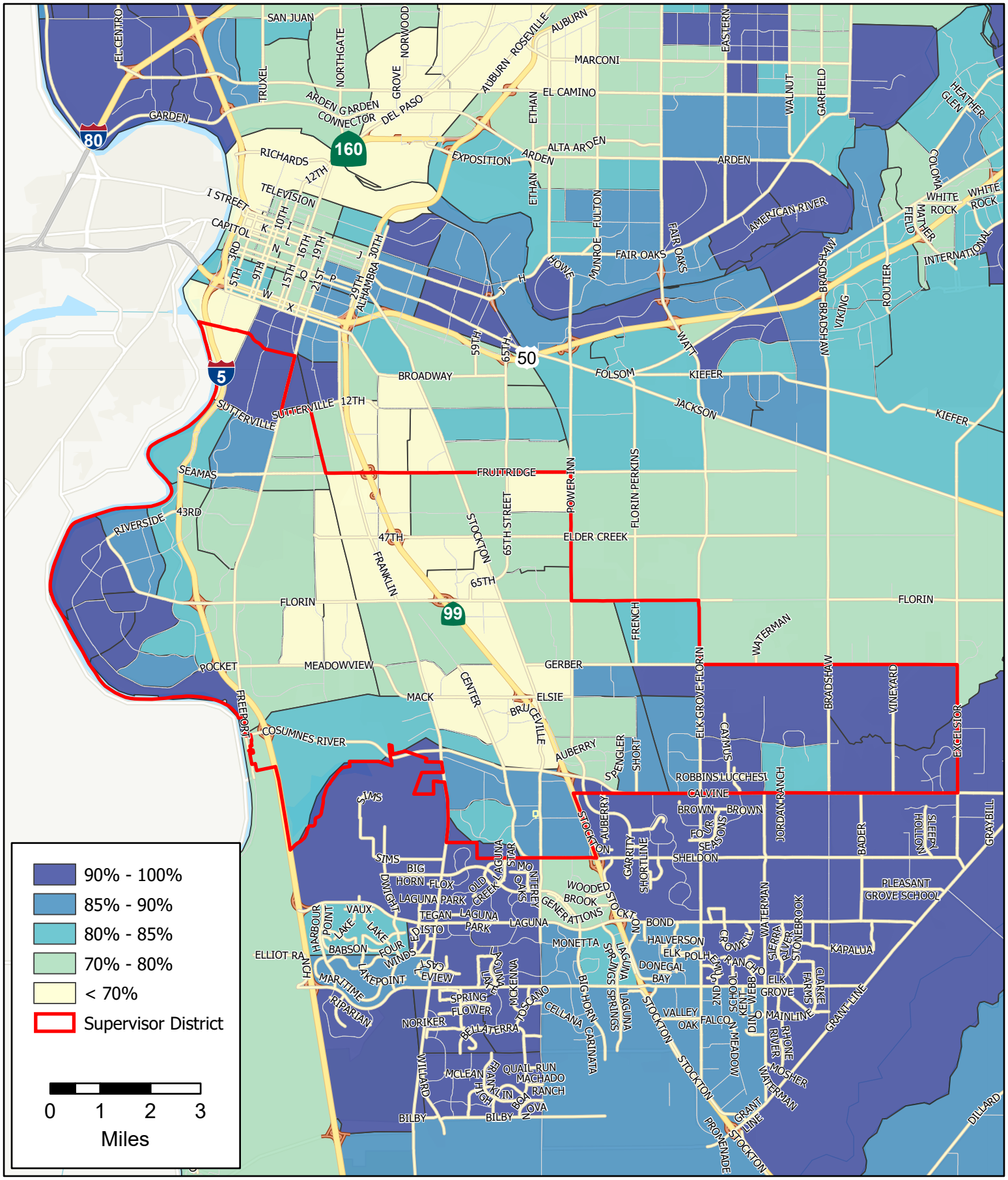
## County Supervisor District 1



City of SACRAMENTO

# Percent of Households with One or more Computers

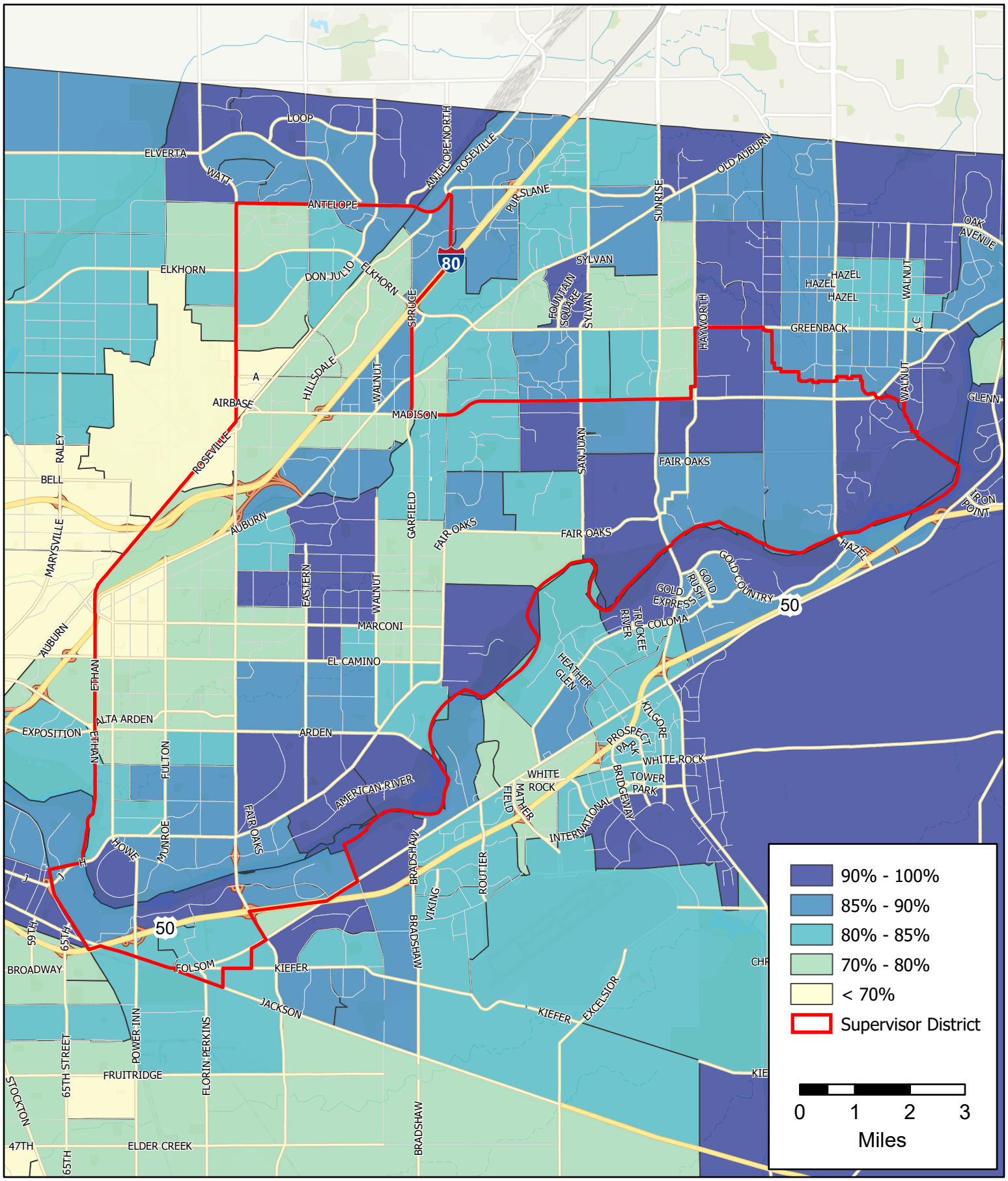
## County Supervisor District 2



City of SACRAMENTO

# Percent of Households with One or more Computers

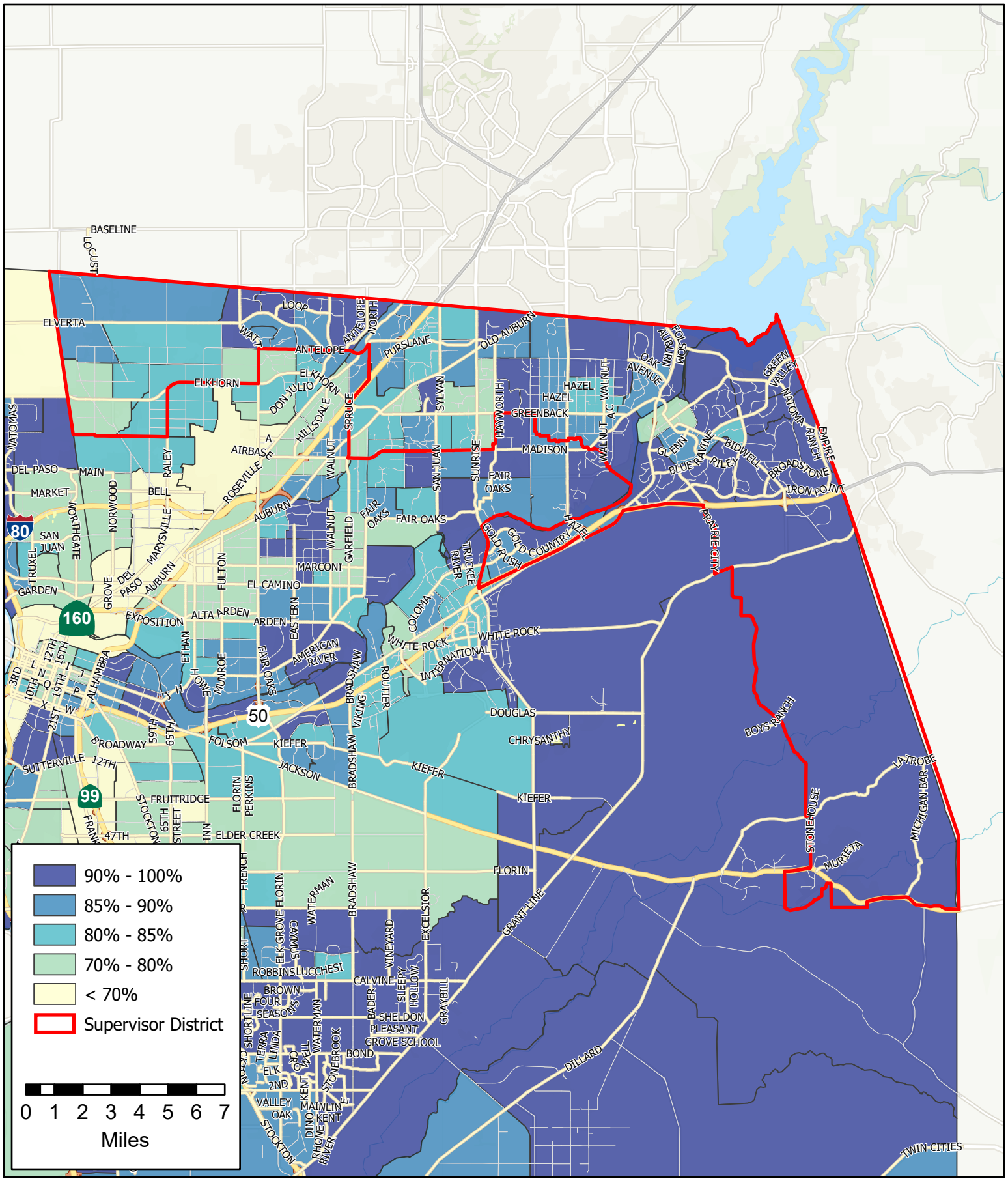
## County Supervisor District 3



City of SACRAMENTO

# Percent of Households with One or more Computers

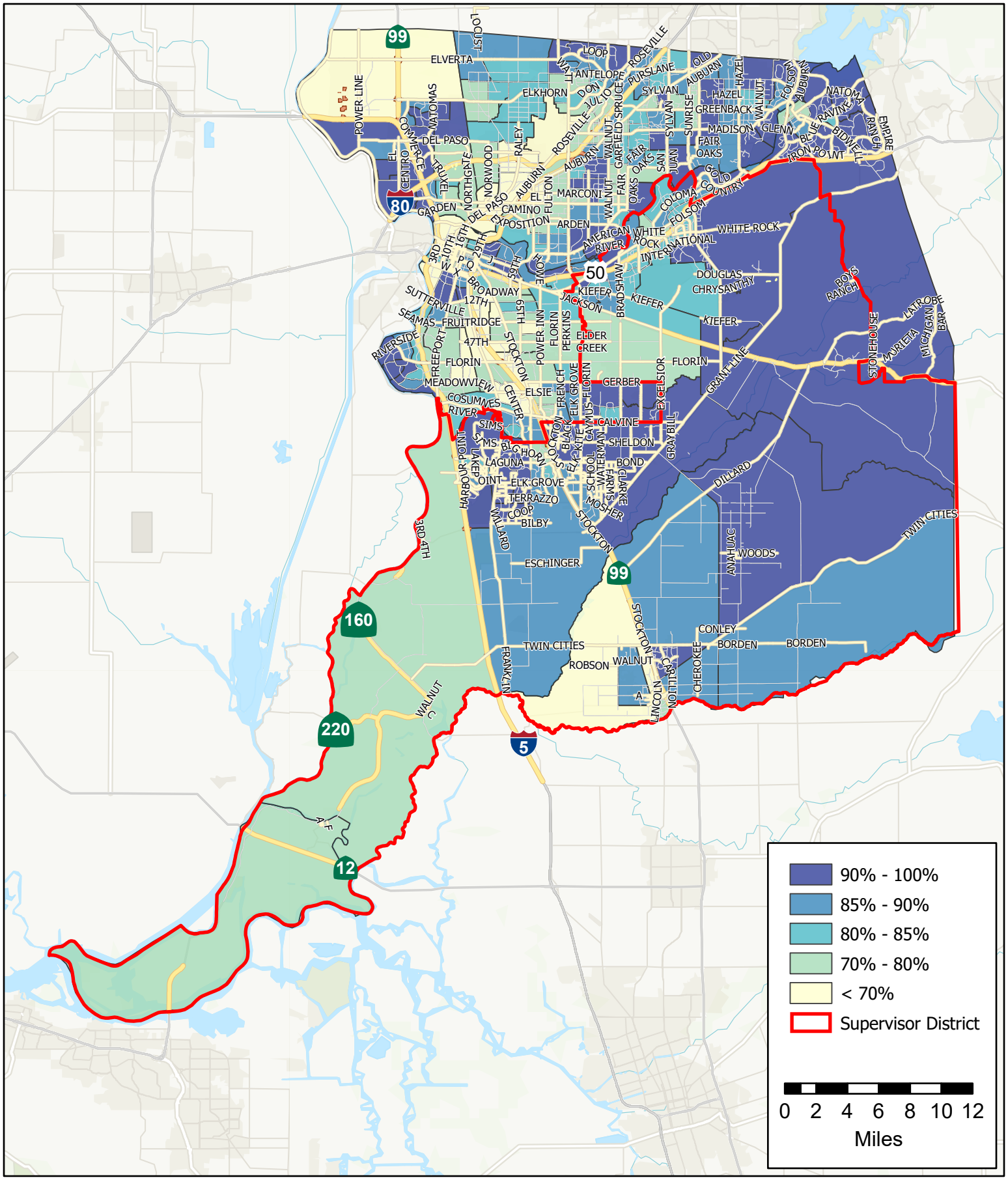
## County Supervisor District 4



City of SACRAMENTO

# Percent of Households with One or more Computers

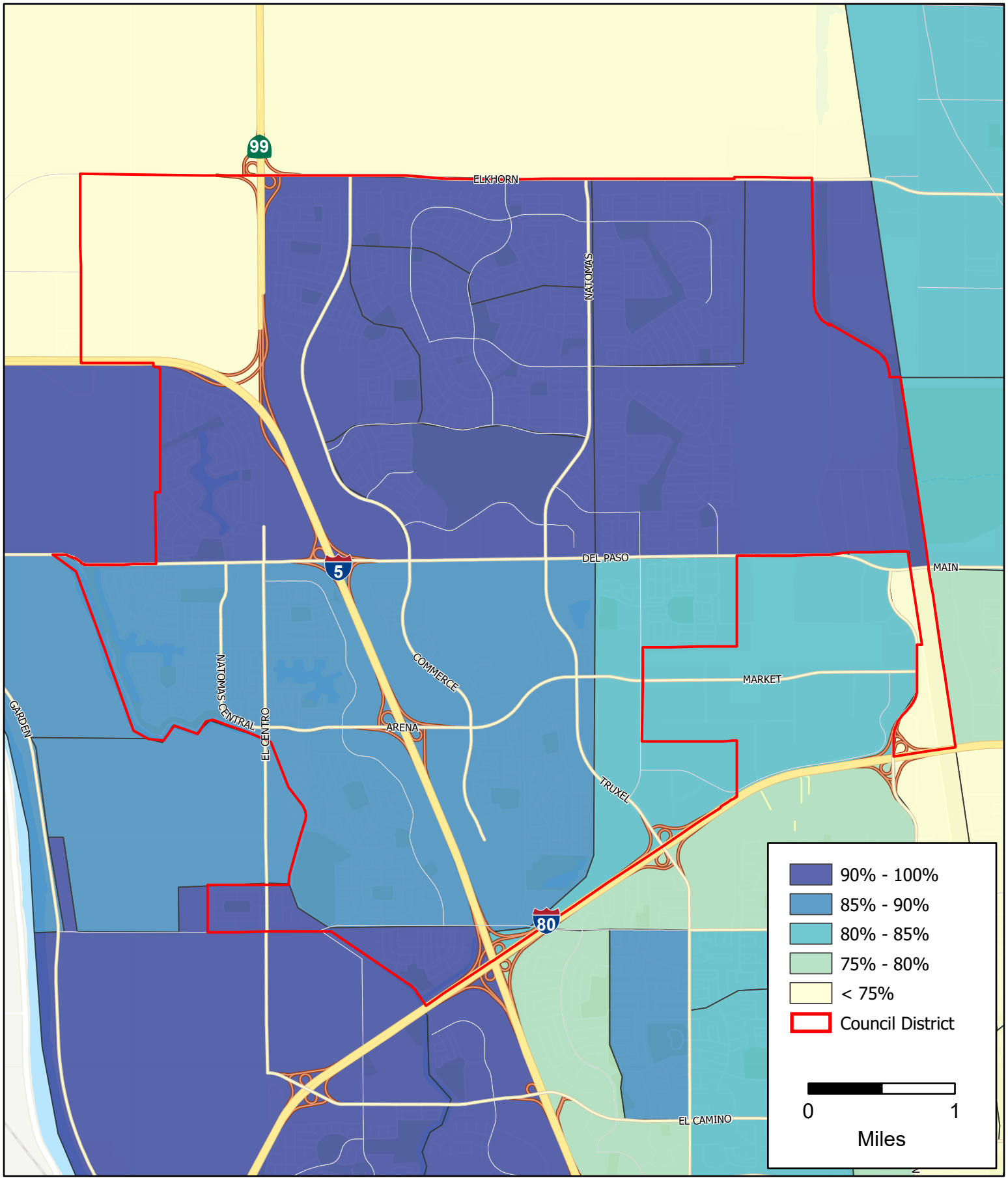
## County Supervisor District 5



City of SACRAMENTO

# Percent of Households with Broadband

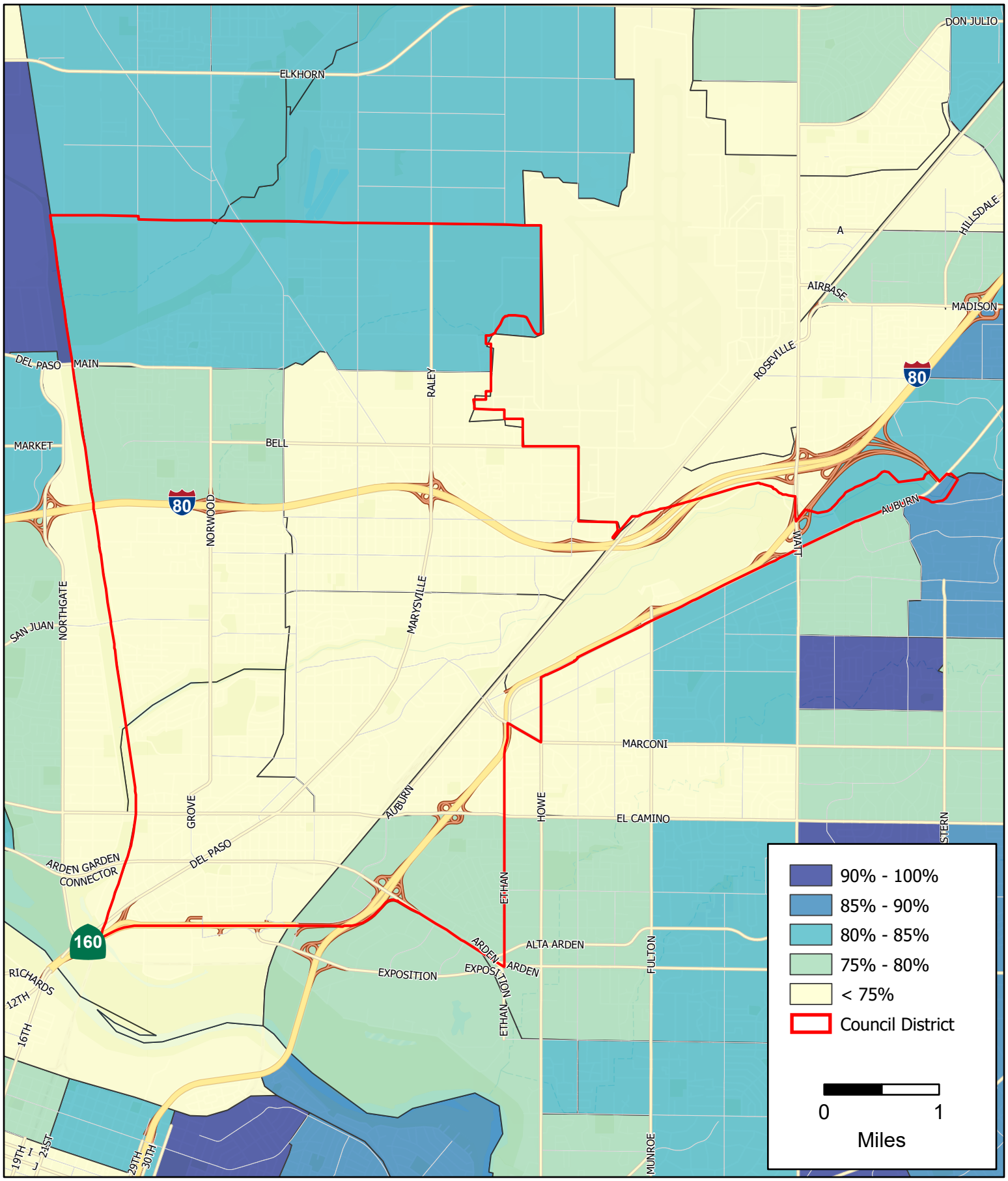
## Sacramento Council District 1



City of SACRAMENTO

# Percent of Households with Broadband

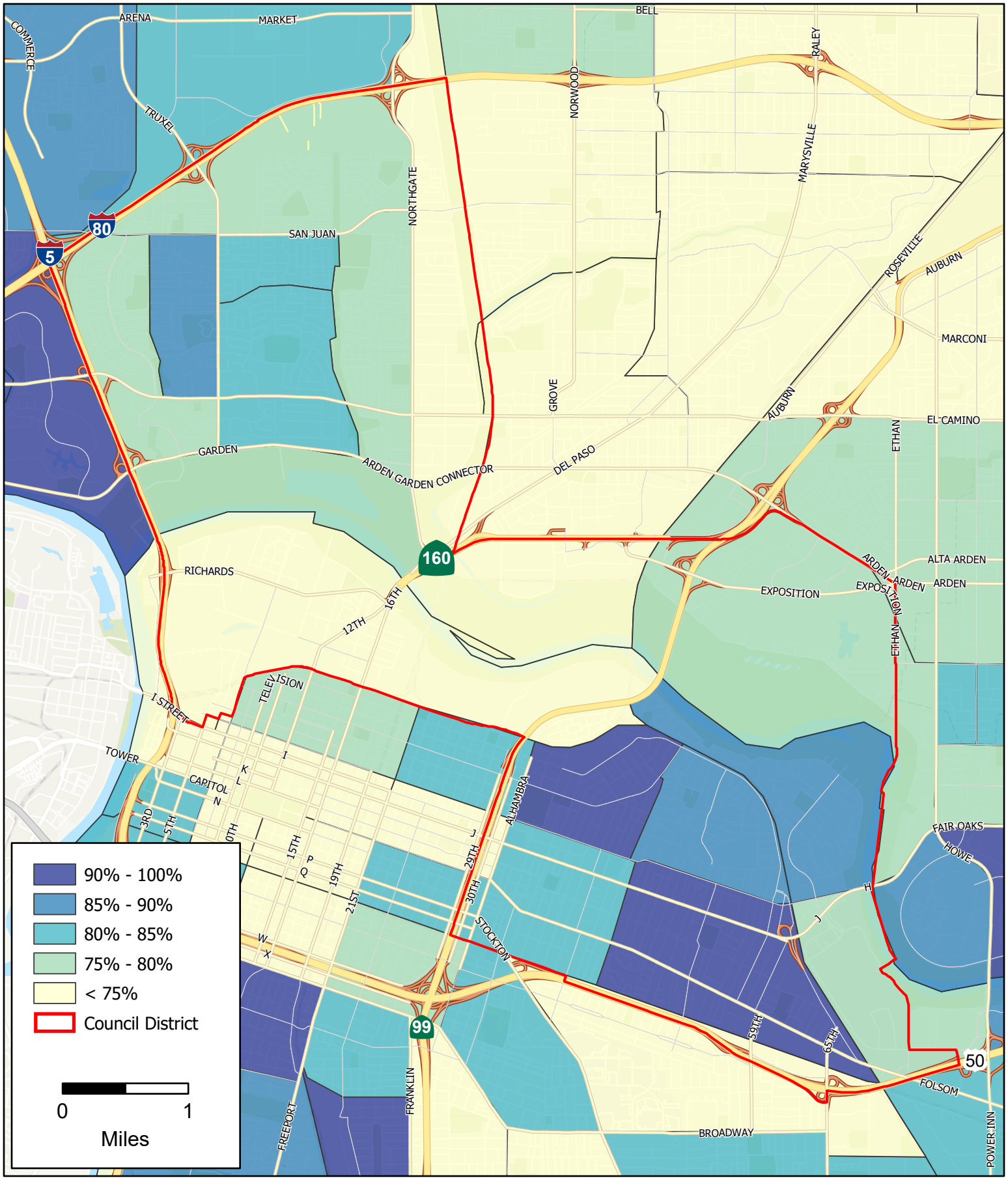
## Sacramento Council District 2



City of SACRAMENTO

# Percent of Households with Broadband

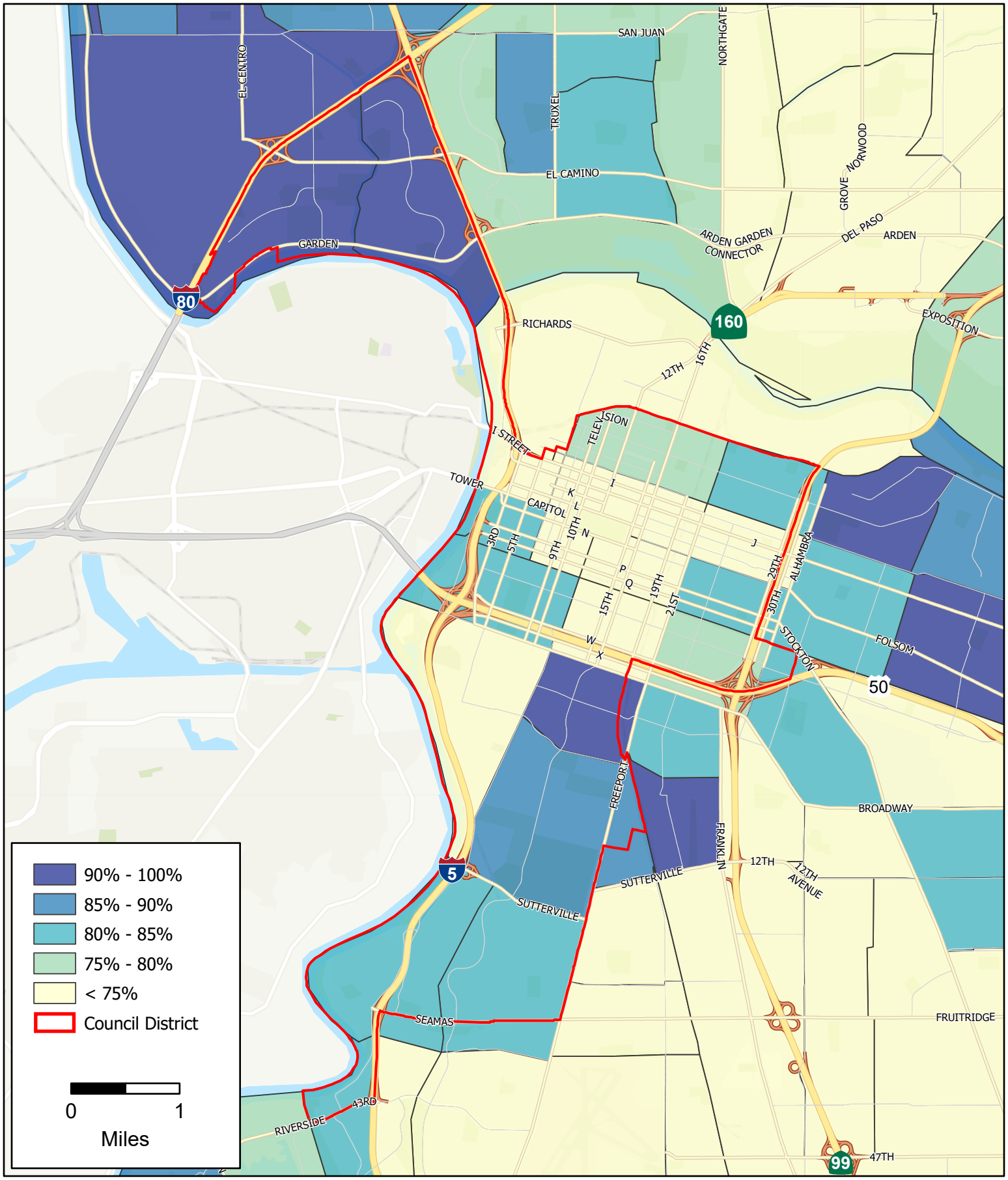
## Sacramento Council District 3



City of SACRAMENTO

# Percent of Households with Broadband

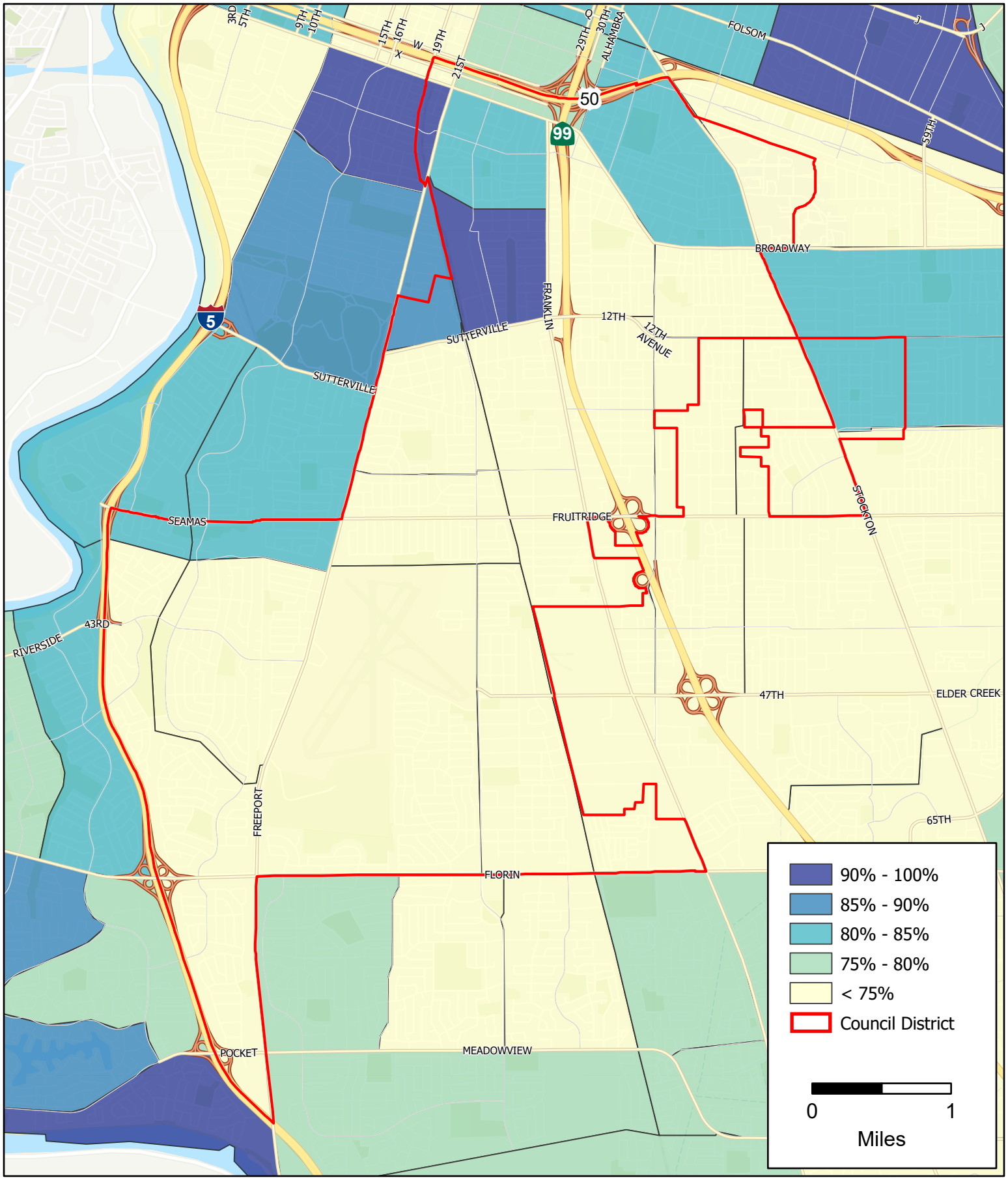
## Sacramento Council District 4



City of SACRAMENTO

# Percent of Households with Broadband

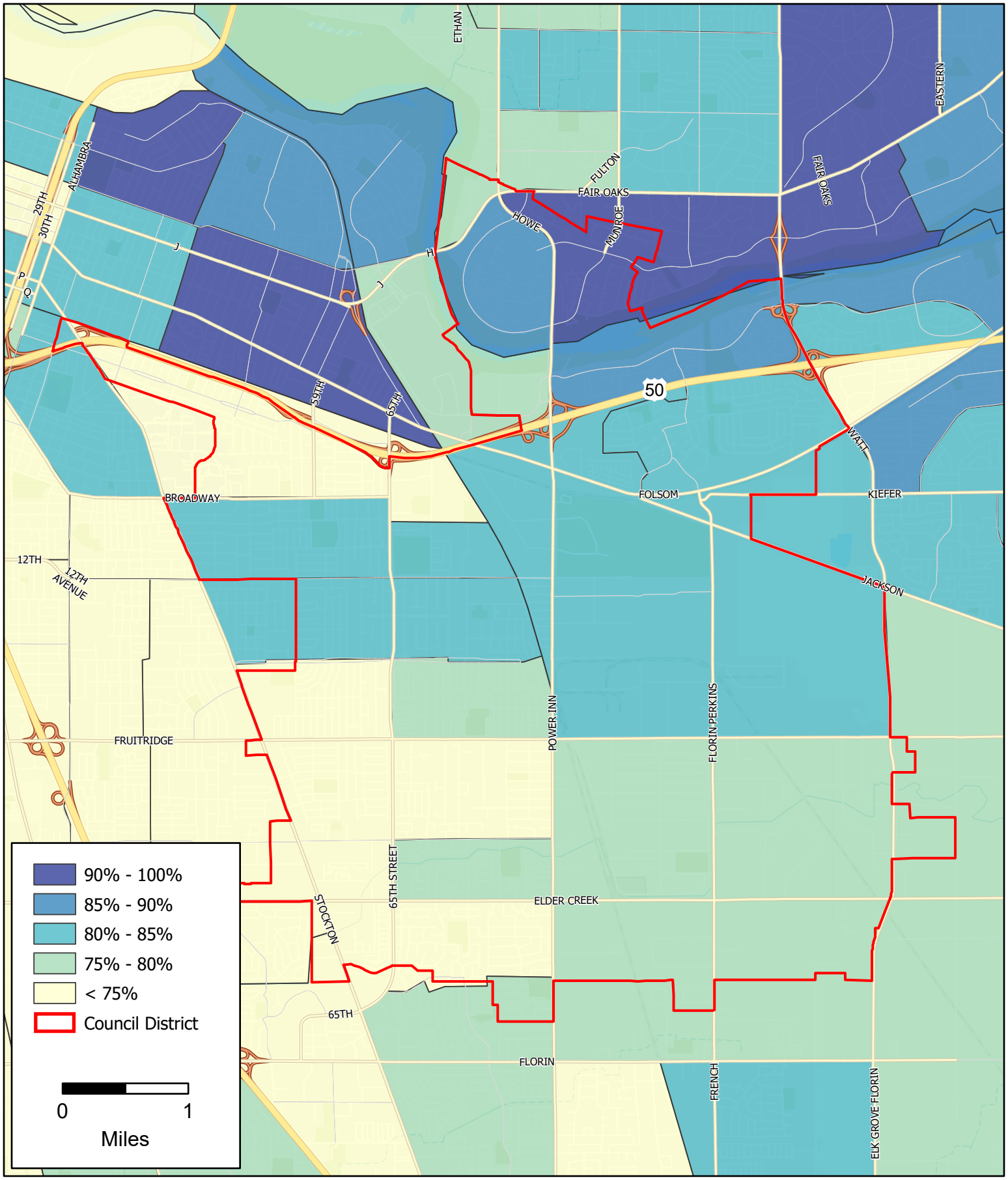
## Sacramento Council District 5



City of SACRAMENTO

# Percent of Households with Broadband

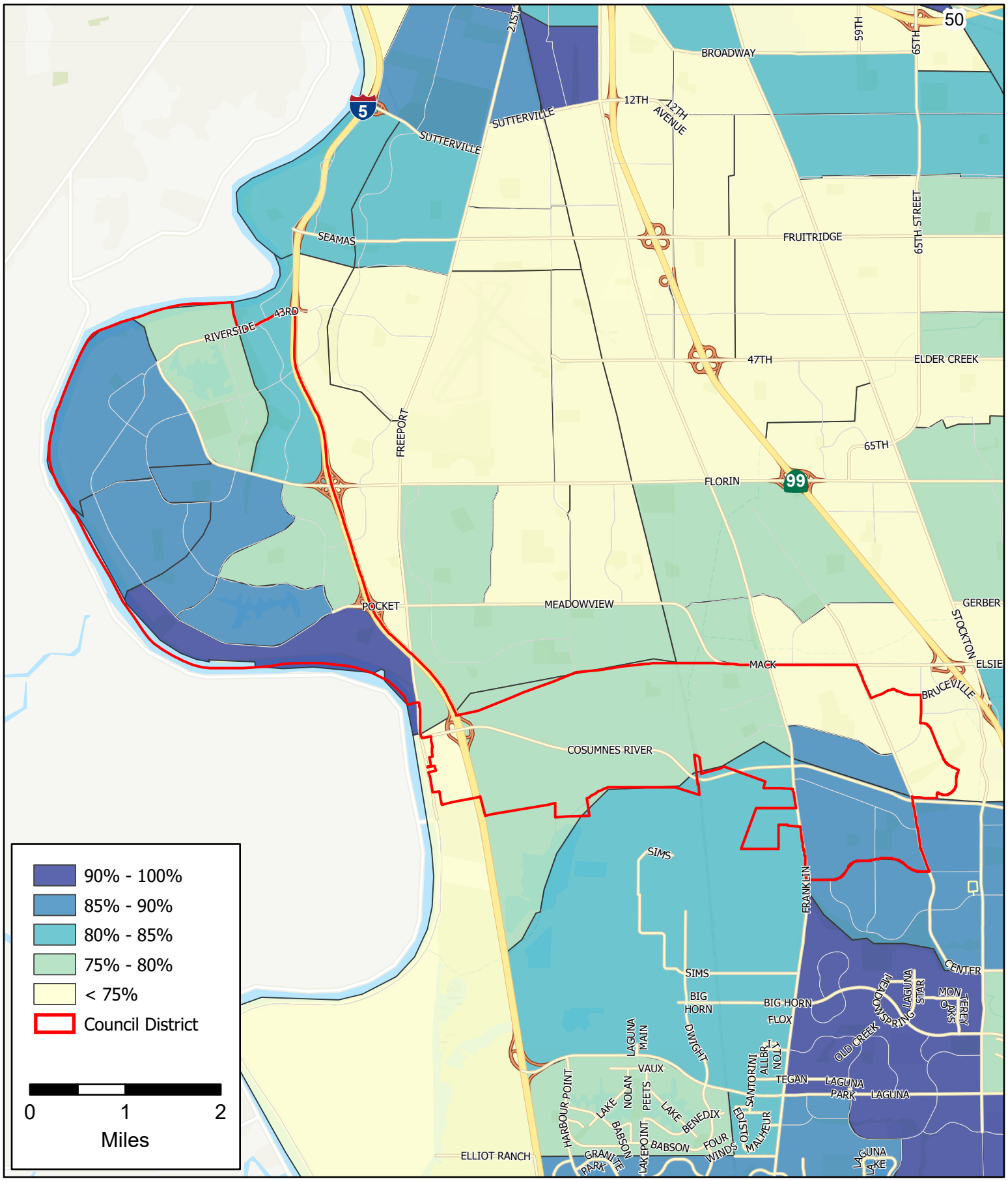
## Sacramento Council District 6



City of SACRAMENTO

# Percent of Households with Broadband

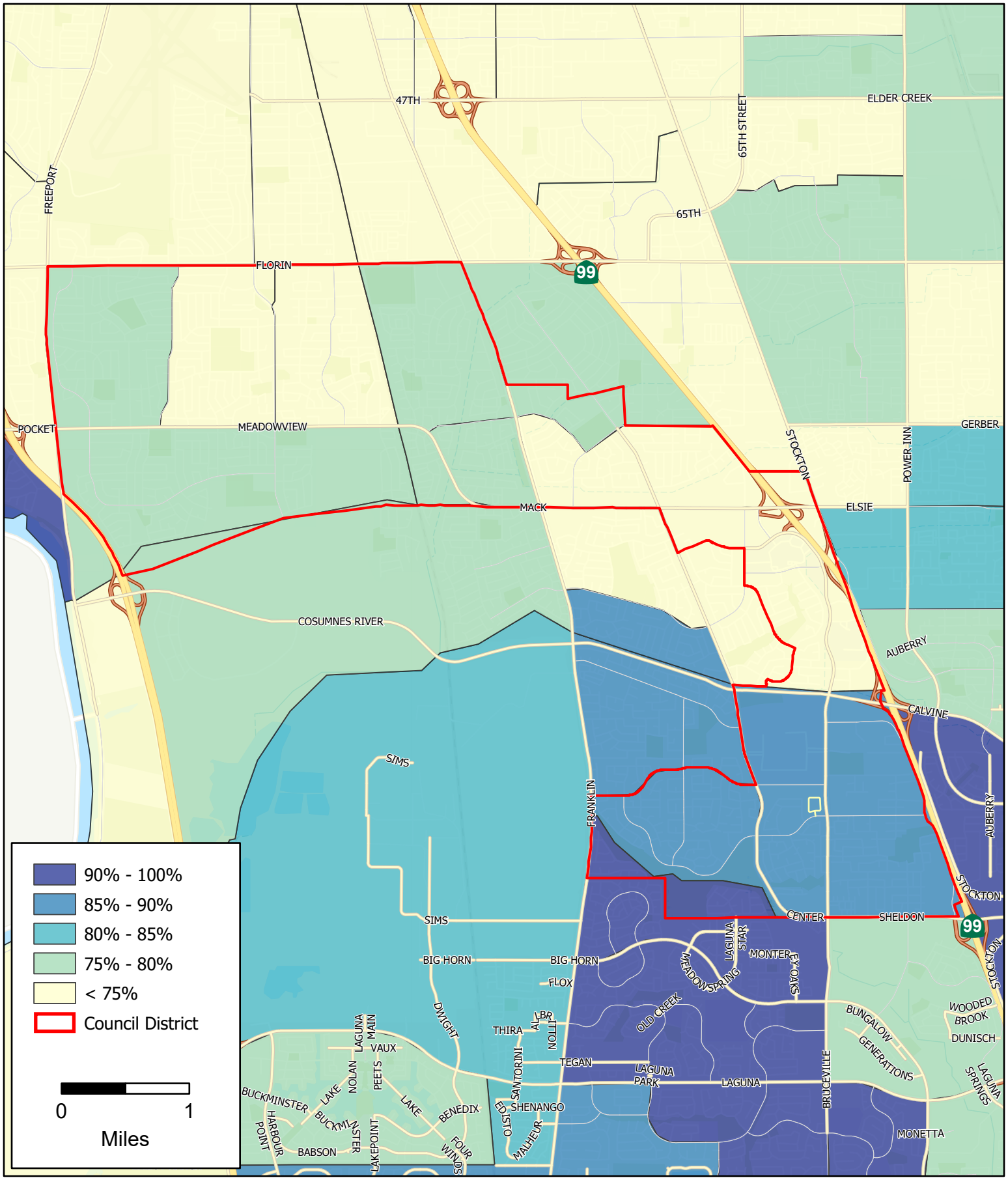
## Sacramento Council District 7



City of SACRAMENTO

# Percent of Households with Broadband

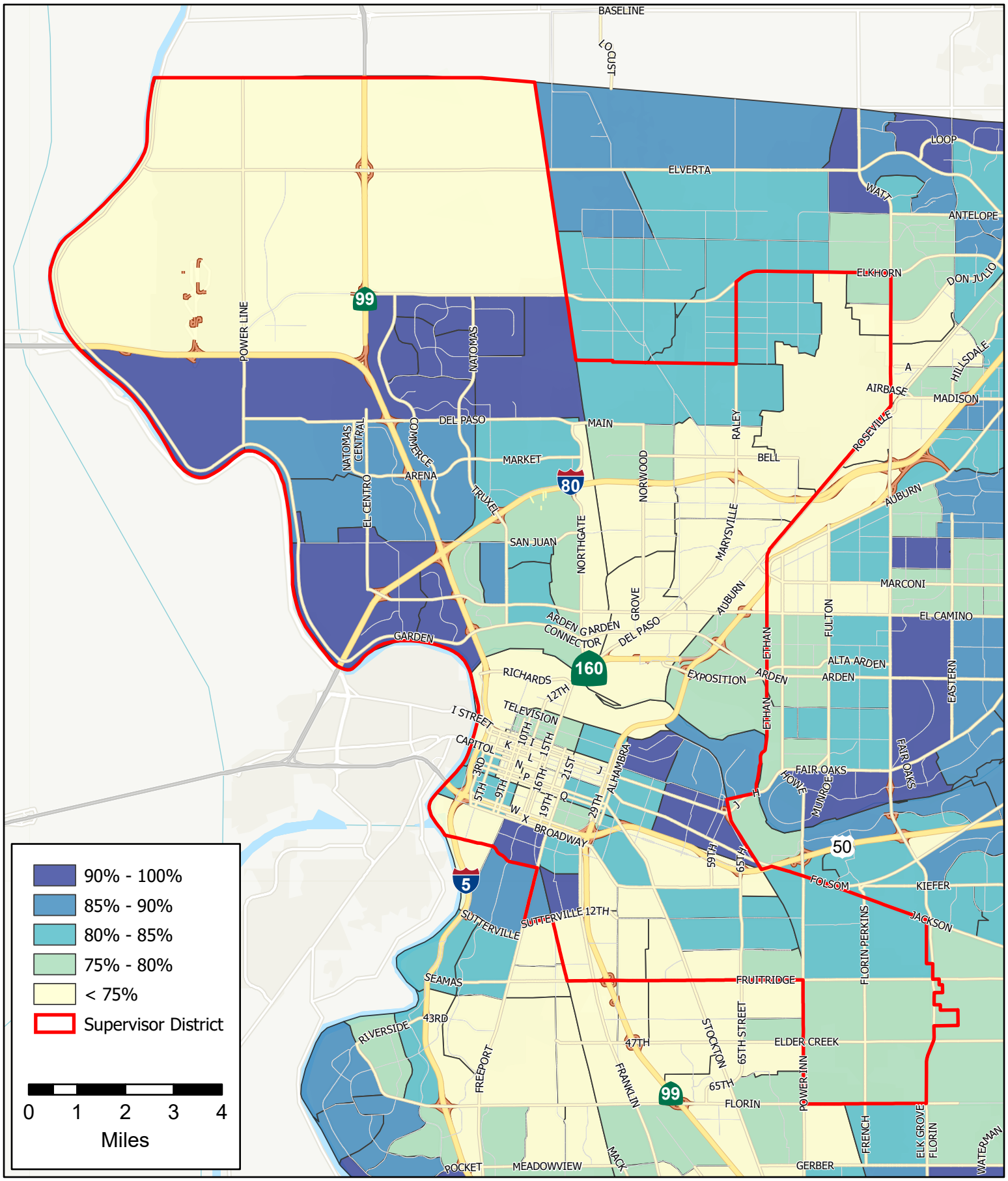
## Sacramento Council District 8



City of SACRAMENTO

# Percent of Households with Broadband

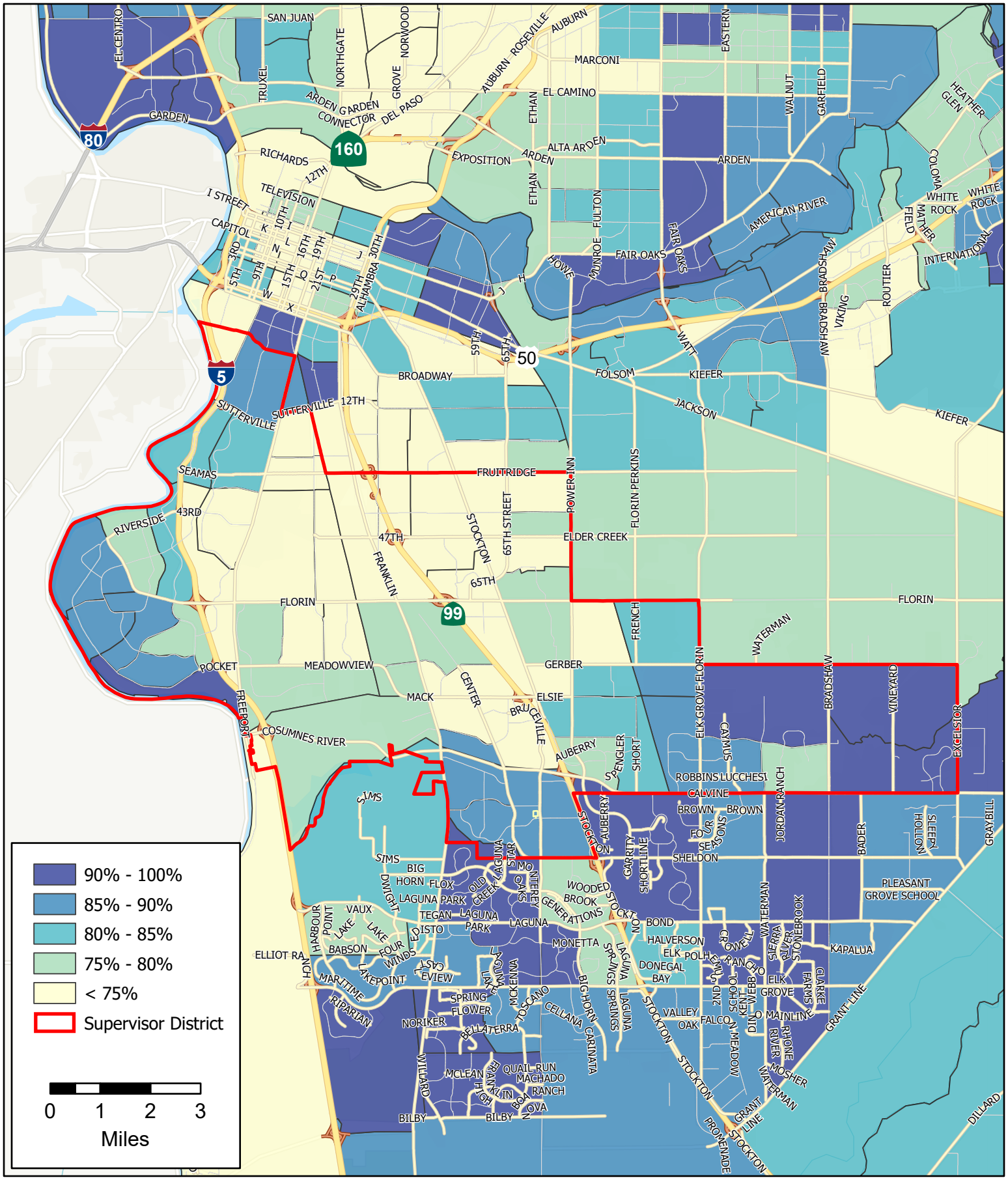
## County Supervisor District 1



City of SACRAMENTO

# Percent of Households with Broadband

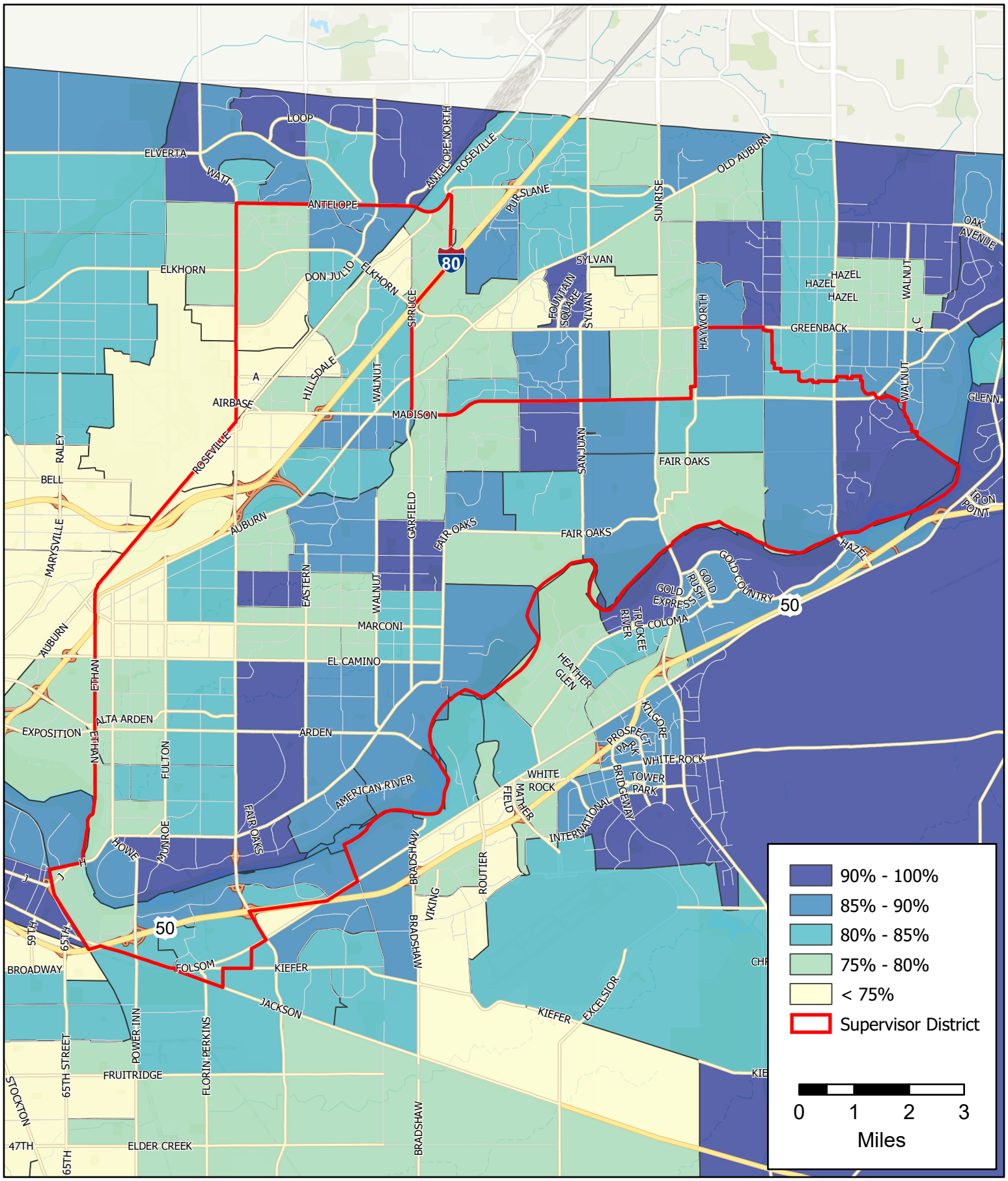
## County Supervisor District 2



City of SACRAMENTO

# Percent of Households with Broadband

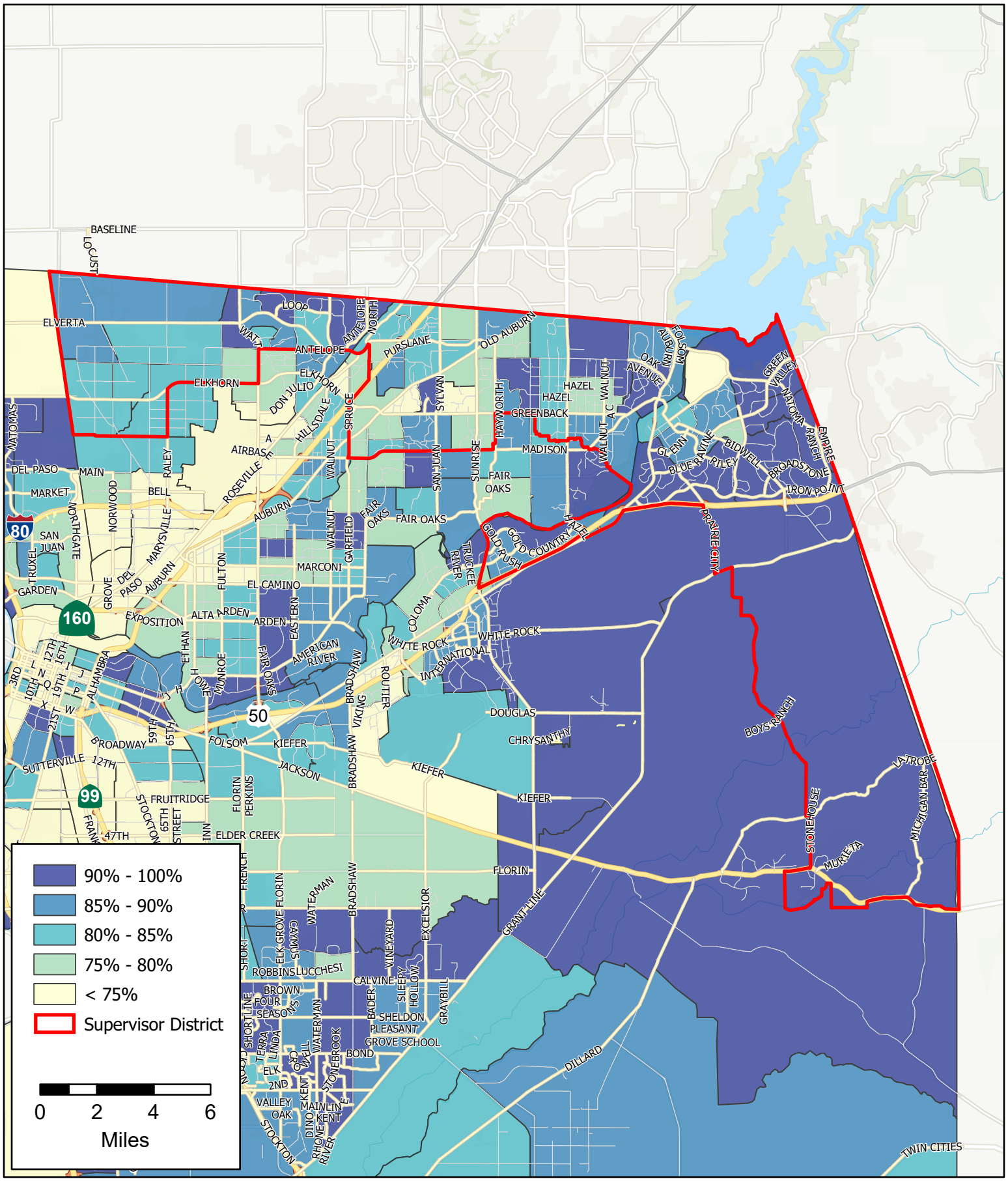
## County Supervisor District 3



City of SACRAMENTO

# Percent of Households with Broadband

## County Supervisor District 4



City of SACRAMENTO

# Percent of Households with Broadband

## County Supervisor District 5