Attachment 1

County of Santa Clara

Digital Equity Strategy: Initial Analysis and Report

County of Santa Clara, California | August 30, 2022

TECHNOLOGY
SERVICES AND SOLUTIONS

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1 Executive summary

The purpose of this report is to identify the sources of digital inequity within the County of Santa Clara. This data underlies the development of a countywide digital equity strategic masterplan. The following key challenges have been identified:

- **The digital divide in the county primarily impacts low-income households and older residents:**
    a. Households with an annual income of $35,000 or less are the least likely to subscribe to internet service.
    b. Residents who are 65 years and older are the least likely to own a computer and usually possess low to no technology literacy. This can be a barrier to broadband adoption and contributes to the digital inequity in the county.
- **Low rates of broadband adoption and ownership of computing devices are concentrated in certain parts of the county:**
    a. Data suggests that several areas lack broadband internet subscriptions as well as a low percentage of ownership of computing devices. This is particularly true in East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy).

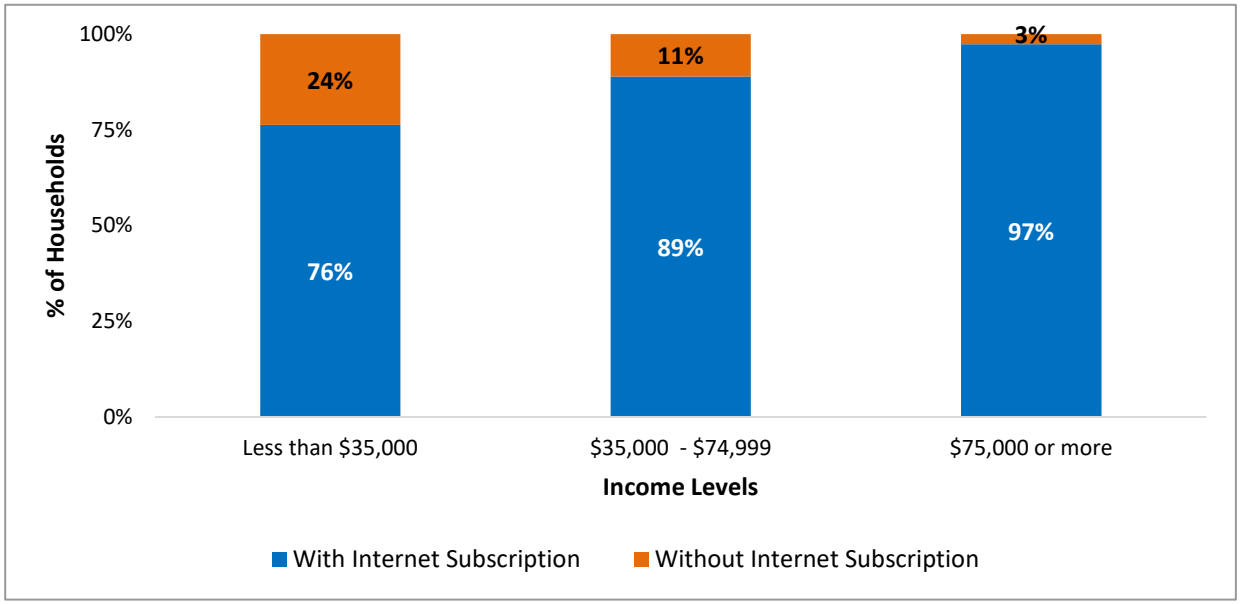
1.1 Broadband adoption gaps in certain populations

Data from the American Community Survey[1] (ACS) reveal that disparities in broadband adoption disproportionately affect two key communities: low-income households and older adults. Broadband adoption is defined as a subscription to a high-speed internet connection, such as cable, fiber optics, DSL and satellite internet service. The Federal Communications Commission's (FCC) current benchmark speeds for broadband are 25 Mbps download and 3 Mbps upload for the unserved population, and 100 Mbps download and 20 Mbps upload for the underserved population.

As shown in Figure 1 below, 24% of households with an annual income of less than $35,000 have no internet subscription. Of the 635,314 total households in the county, 43,186 households do not subscribe to internet services.

[1] The American Community Survey (ACS) is an ongoing survey that provides information about the nation's population such as demographic, social and economic data on a yearly basis.

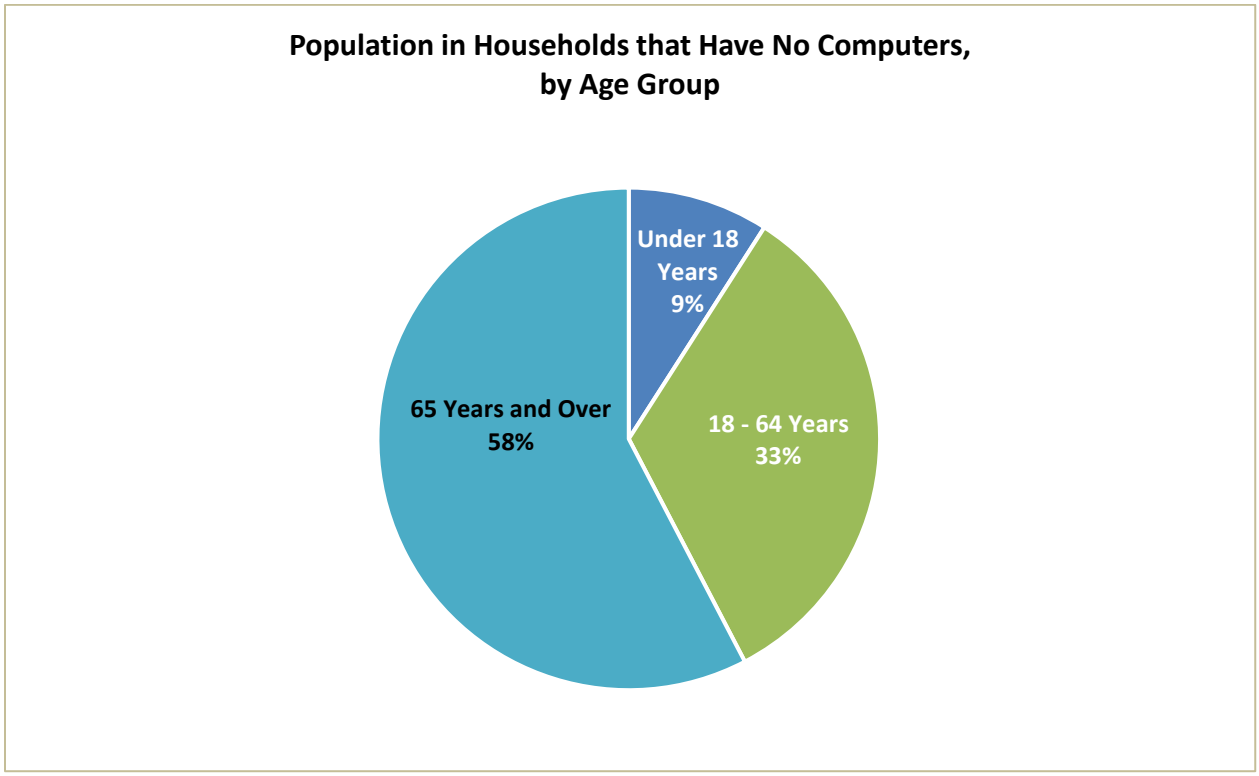
Figure 1: Internet Subscription by Income Levels [2]



[2] U.S. Census Bureau, "Household Income in the Last 12 Months (In 2020 Inflation-Adjusted Dollars) by Presence and Type of Internet Subscription in Household", 2016 – 2020 American Community Survey 5-Year Estimates, https://data.census.gov/cedsci/table?q=Santa%20Clara%20County,%20California%20B28004&t=Telephone,%20Computer,%20and%20Internet%20Access&tid=ACSDT5Y2020.B28004 (accessed July 20, 2022).

Data from the ACS also reveal that computer ownership is the lowest amongst residents aged 65 years and older. This age group accounts for 58% of the population in households that do not own a computer, as shown in Figure 2 below. This equates to 20,258 residents of the total 35,142 that do not own a computer.

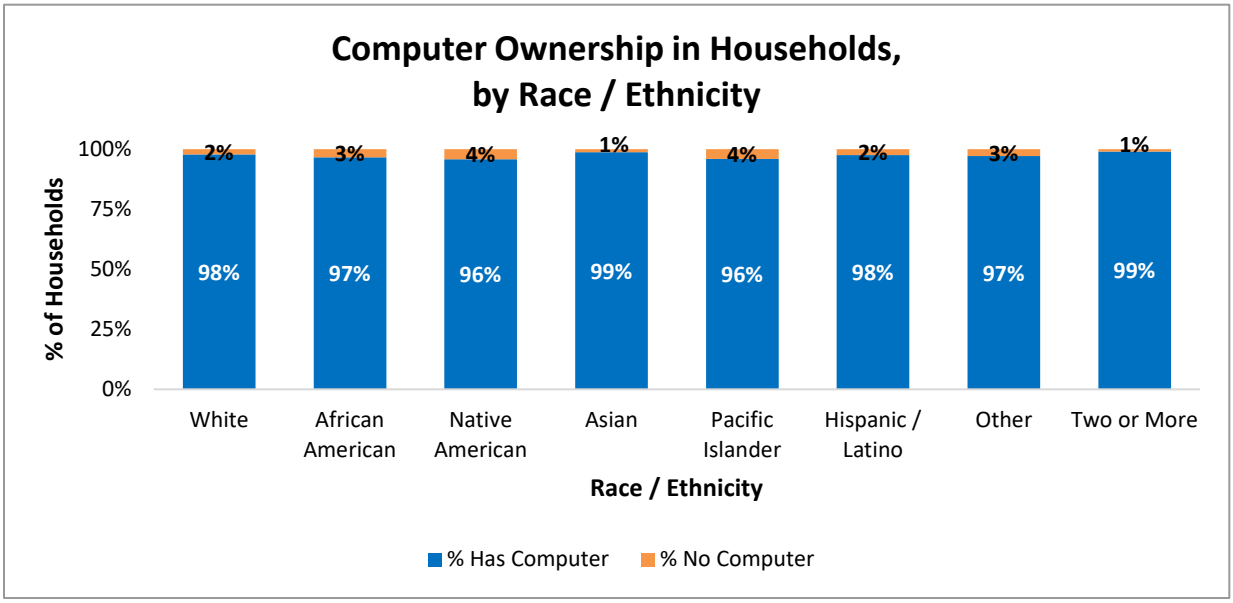
Figure 2: Population in Households without Computers, by Age Group[3]



[3] U.S. Census Bureau, "Age by Presence of a Computer and Types of Internet Subscription in Household", 2016 – 2020 American Community Survey 5-Year Estimates, https://data.census.gov/cedsci/table?q=Santa%20Clara%20County,%20California%20computer&t=Telephone,%20Computer,%20and%20Internet%20Access&tid=ACSDT5Y2020.B28005 (accessed July 20, 2022)

As evidenced in Figure 3, the data does not show a significant difference in computer ownership between various races and ethnic groups. In the county, the average computer ownership is 97% across all households.

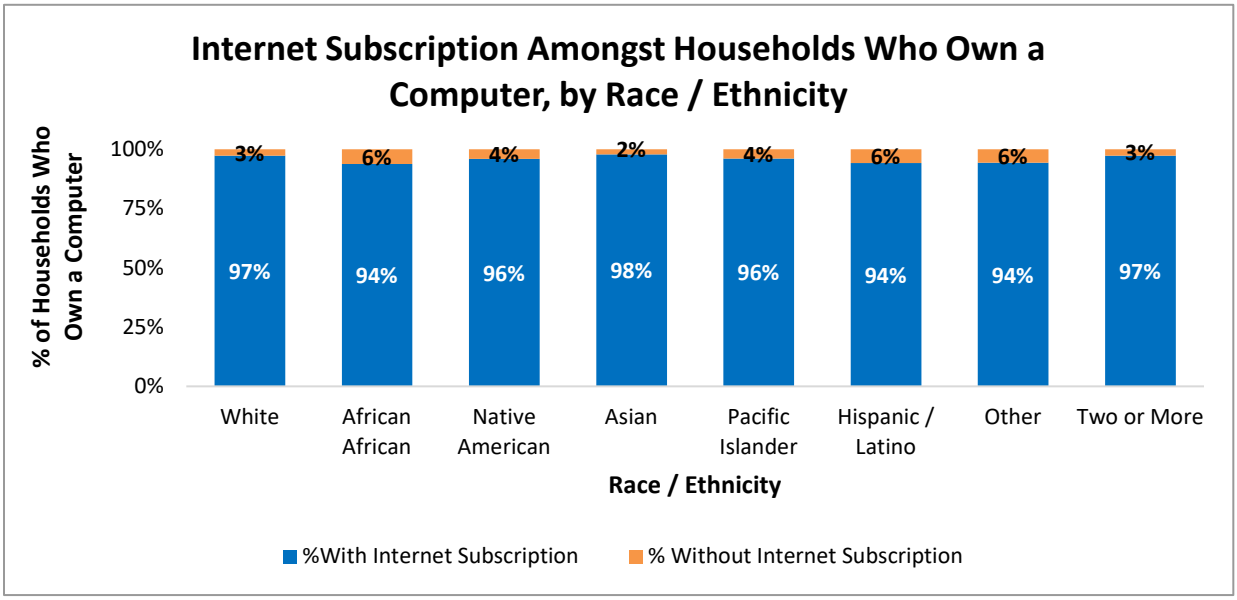
Figure 3: Computer Ownership in Households, by Race/Ethnicity (ACS 2020)[4]



As evidenced in Figure 4, the data also shows that 96% of the households that own a computer, also have internet subscription. As in Figure 3 above, this data also does not show a significant difference in internet subscription between various races and ethnic groups.

[4] U.S. Census Bureau, "Census Bureau's API for American Community Survey – Tables B28005, B28003, B28009B, B28009C, B28009D, B28009E, B28009F, B28009G, B28009H, B28009I", 2016 – 2020 American Community Survey, https://www.census.gov/data/developers/data-sets.html (accessed July 20, 2022)

Figure 4: Internet Subscription Amongst Households Who Own a Computer, by Race/Ethnicity (ACS 2020)



1.2 Broadband adoption gaps in certain geographic areas

ACS data suggests that the areas with the highest rates of households without an internet connection[5] are found in East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy).

I. Internet Access

The data shows that of the 635,314 total households in the county, 32,536 households do not have internet access within the county. This is representative of 5% of the total households in the county. Of the 32,536 households without internet access, 9,381 households are located in East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy). Internet access is defined as the use of or connection to the internet, regardless of whether a member of the household pays for the service.

Table 1 displays the total number of households without internet access by area, while Figure 5 displays the distribution of the households without internet access by census tract.[6]

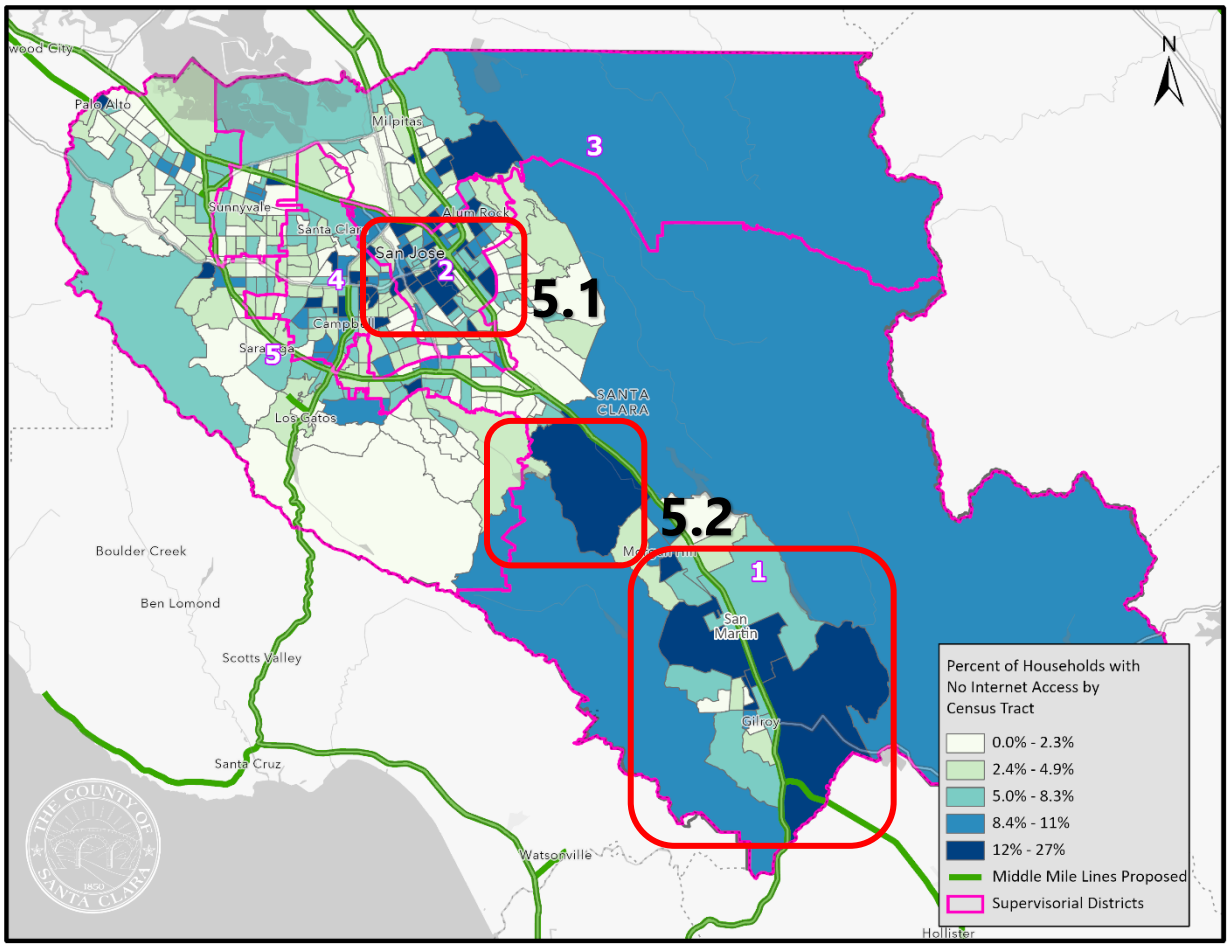
[5] ACS data do not differentiate between broadband and non-broadband internet speeds. (The FCC's current benchmark for broadband is 25 Mbps download and 3 Mbps upload, or "25/3.") ACS data also do not differentiate between households that lack a subscription because service is not available and households that lack a subscription because they choose not to adopt service that is available. Issues related to broadband access will be discussed in subsequent project deliverables.

[6] Census tracts are defined as small, relatively permanent statistical subdivisions of a county. These can be updated prior to each decennial census.

Table 1: Number of Households without Internet Access in East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy) (ACS 2020)

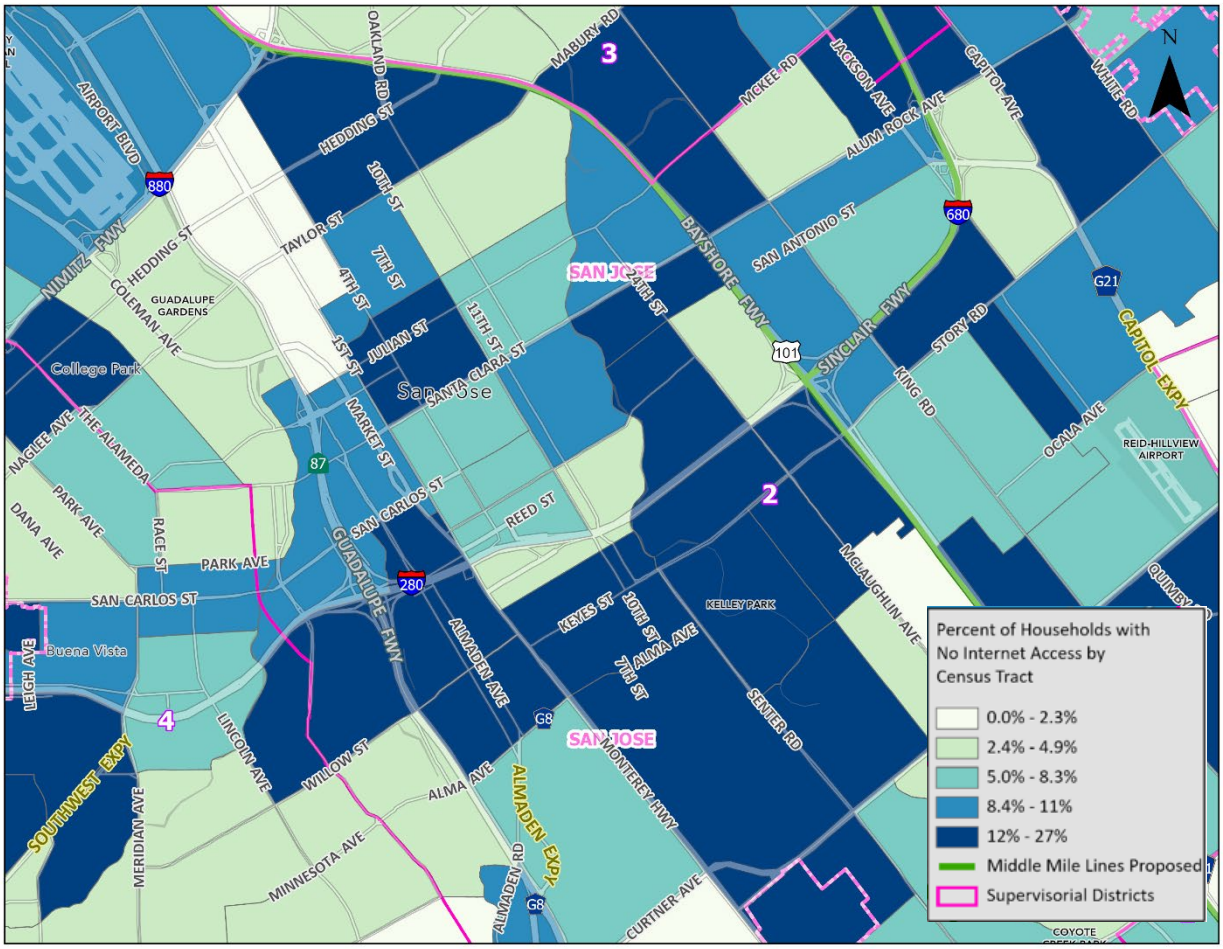
Area	Total Households	Total Households without Internet Access	% Of Households without Internet Access
East San Jose	78,864	7,282	9.2%
South San Jose	454	48	10.6%
South County	34,566	2,051	5.9%
Total	**113,884**	**9,381**	**8.2%**

Figure 5: Distribution of Households without Internet Access by Census Tract (ACS 2020)



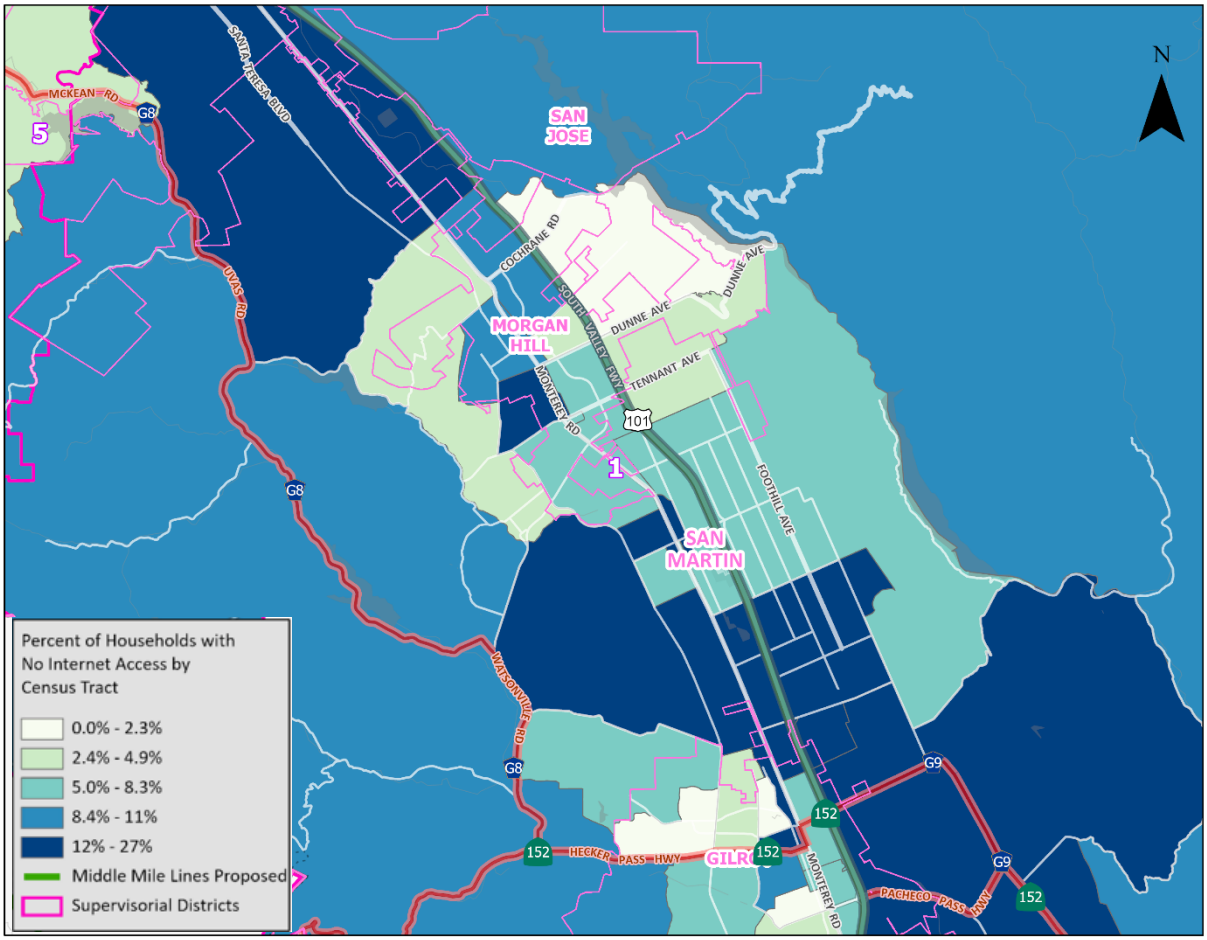
The map in Figure 5.1 displays, at the street level, the distribution of households in East San Jose that do not have internet access.

Figure 5.1: Distribution of Households without Internet Access by Census Tract – East San Jose (ACS 2020)



The map in Figure 5.2 displays, at the street level, the distribution of households in South San Jose and South County that do not have internet access.

Figure 5.2: Distribution of Households without Internet Access by Census Tract – South San Jose and South County (ACS 2020)



II. Internet Subscription

The data shows that of the 635,314 total households in the county, 43,186 households are without an internet subscription. This is representative of 7% of the total households in the county. Of the 43,186 households without internet subscription, 11,254 are households located in East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy). [7] "Internet subscription" means a member of the household pays for the internet service.

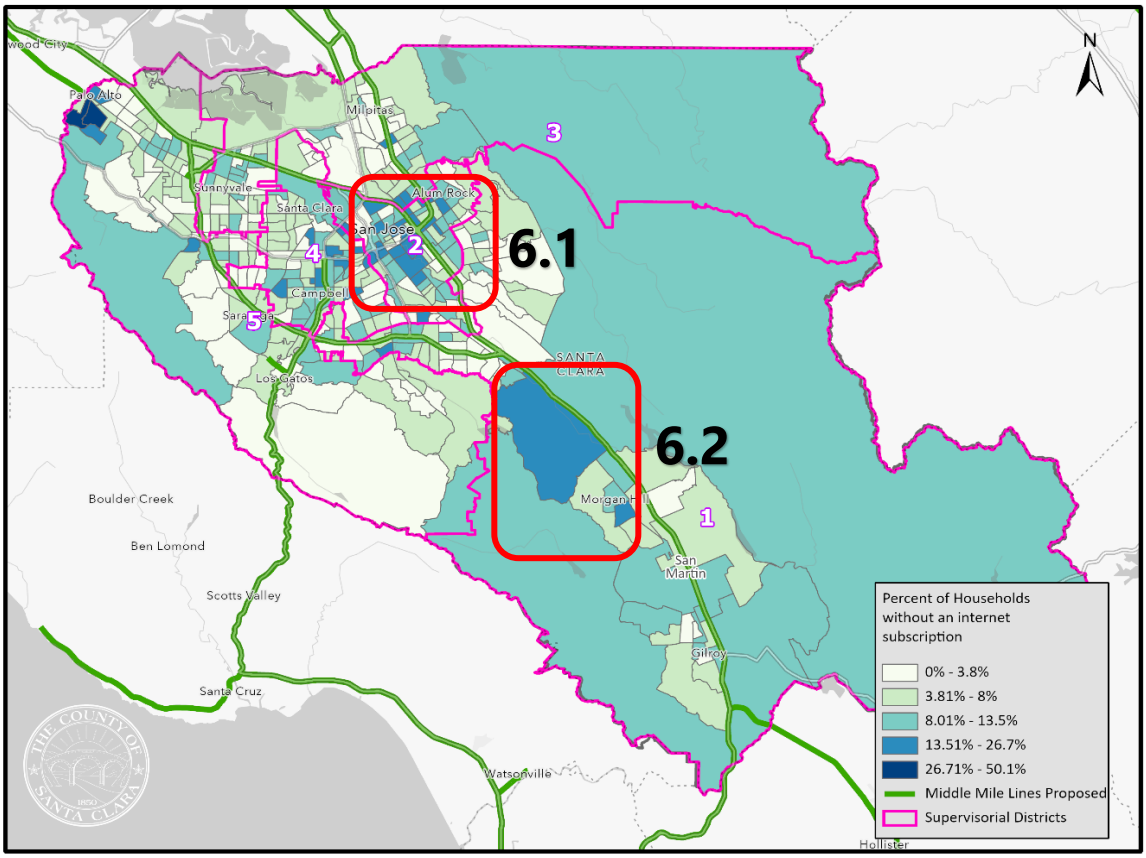
Table 2 displays the total number of households without internet subscription by area, while Figure 6 displays the distribution of those households by census tract.

Table 2: Number of Households without an Internet Subscription in East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy) (ACS 2020)

Area	Total Households	Total Households without Internet Subscription	% Of Households without Internet Subscription
East San Jose	78,864	8,647	11.0%
South San Jose	454	86	18.9%
South County	34,566	2,521	7.3%
Total	**113,884**	**11,254**	**9.9%**

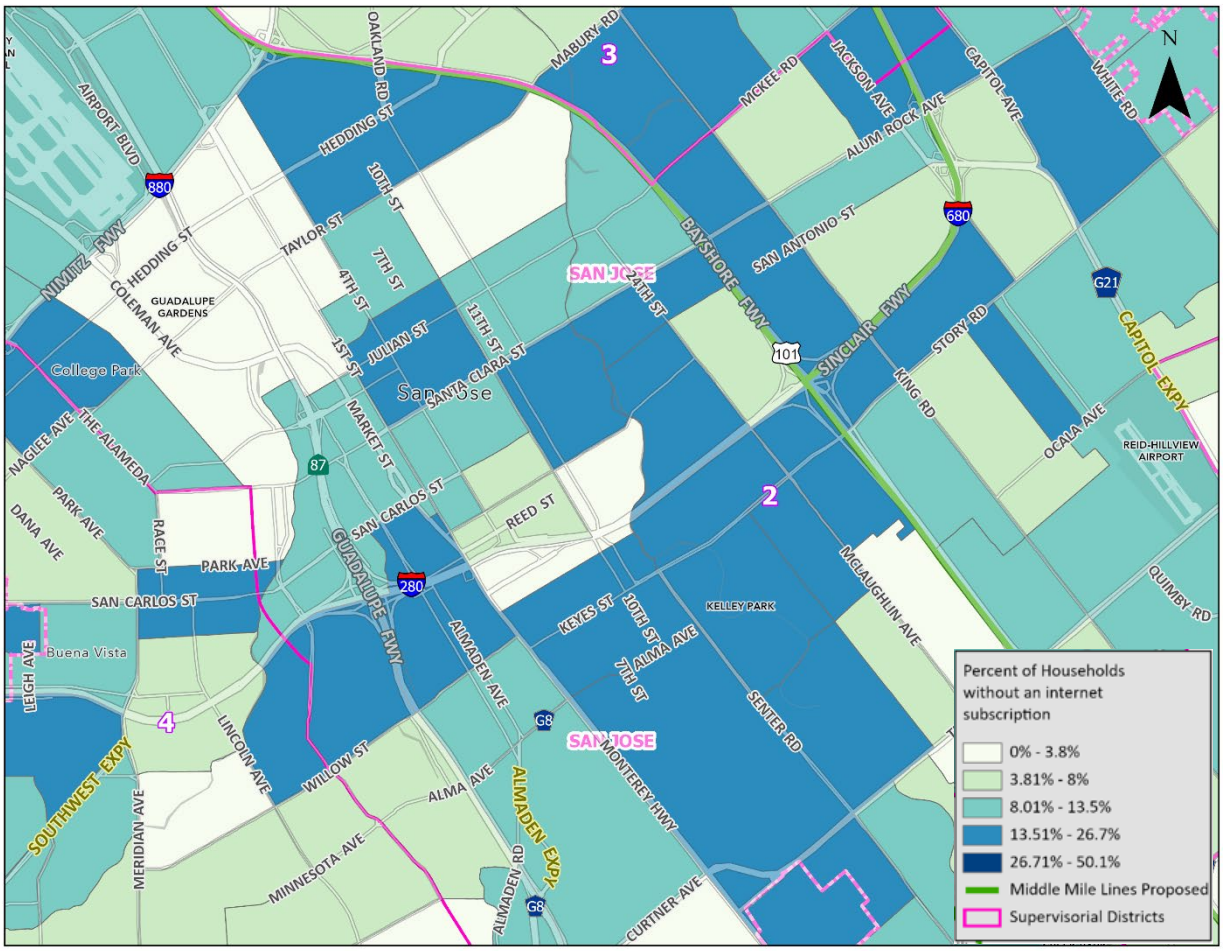
[7] There is also an area of Palo Alto where 26% – 50% of households do not have an internet subscription. This area is the Stanford University campus. We assume that this is a data reporting issue.

Figure 6: Distribution of Households without an Internet Subscription by Census Tract (ACS 2020)



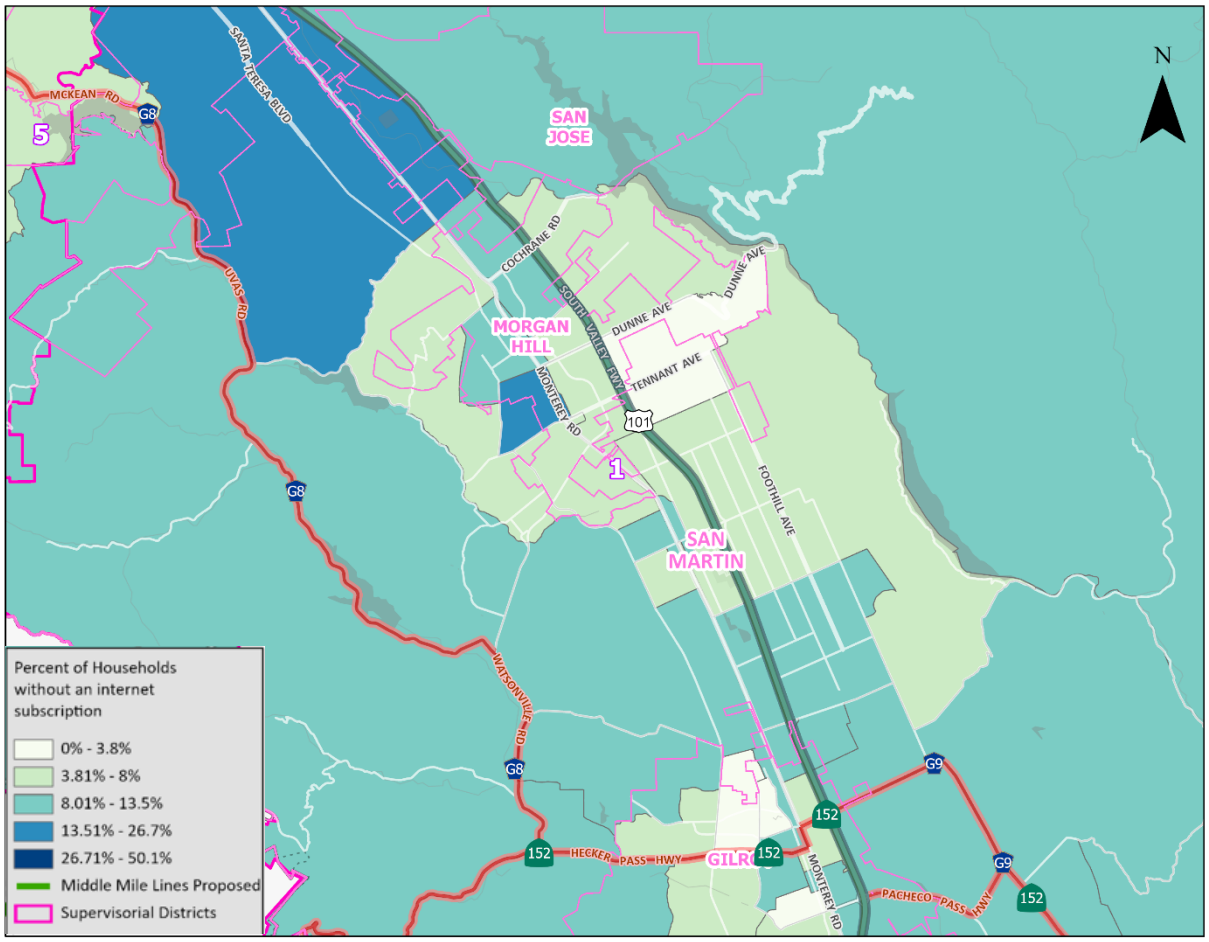
The map in Figure 6.1 displays the street-level view of the distribution of households in East San Jose that do not have internet subscription.

Figure 6.1: Distribution of Households without an Internet Subscription by Census Tract – East San Jose (ACS 2020)



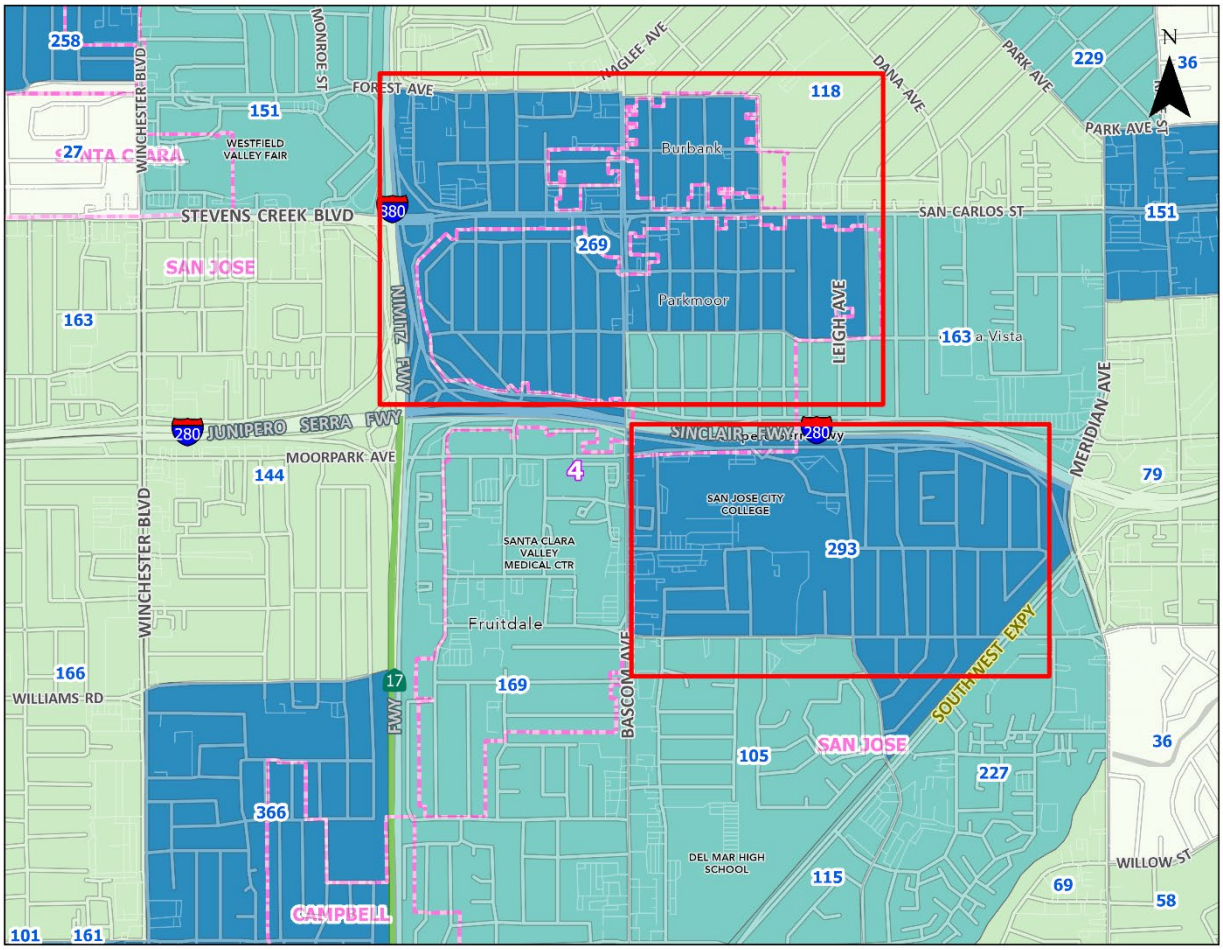
The map in Figure 6.2 displays the street-level view of the distribution of households in South San Jose and South County that do not have internet subscription.

Figure 6.2: Distribution of Households without an Internet Subscription by Census Tract – South San Jose and South County (ACS 2020)



The neighborhoods of Parkmoor, Burbank and Buenavista are located near the 280/17 interchange. The neighborhoods of Parkmoor and Burbank have 269 households (of the total 1,867) that do not have internet subscription. About 293 households (of the total 1,665) in Buenavista do not subscribe to internet services.

Figure 6.3: Distribution of Households without an Internet Subscription by Census Tract – 280/17 Interchange (ACS 2020)



II. Broadband Internet Subscription and Income Levels

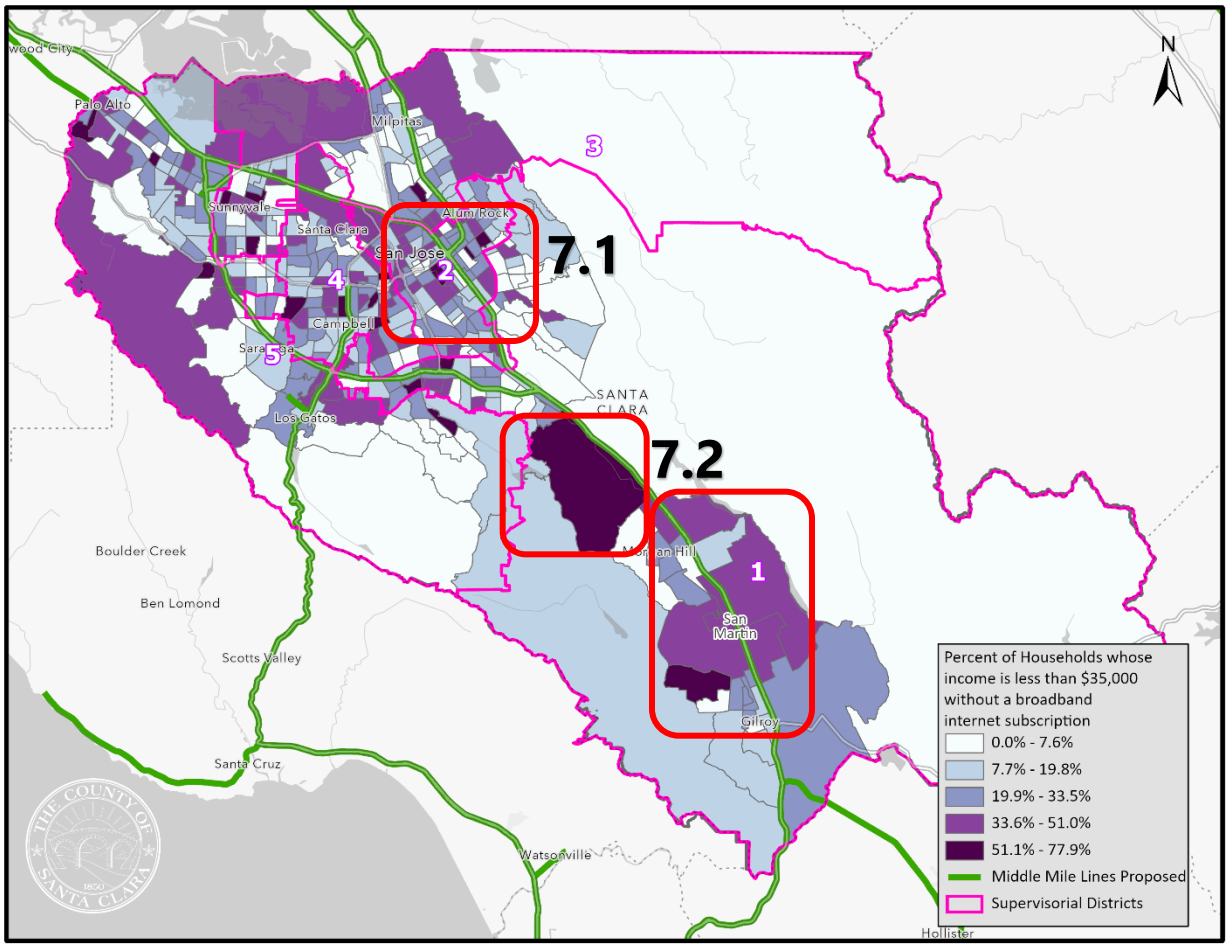
There are 19,896 households of the total 635,314 households in the county who have annual household incomes of less than $35,000 and do not have broadband internet subscription. This makes up 3% of the total households in the county. The map below (Figure 7) shows that these households are concentrated in the areas of East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy). These areas make up 30% (5,874 households) of the total 19,896 households.

Table 3 displays the total number of households with annual income less than $35,000 and without broadband internet subscription by area, while Figure 7 displays the distribution of those households by census tract.

Table 3: Number of Households with Income Less Than $35,000 and without Broadband Internet Subscription in East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy) (ACS 2020)

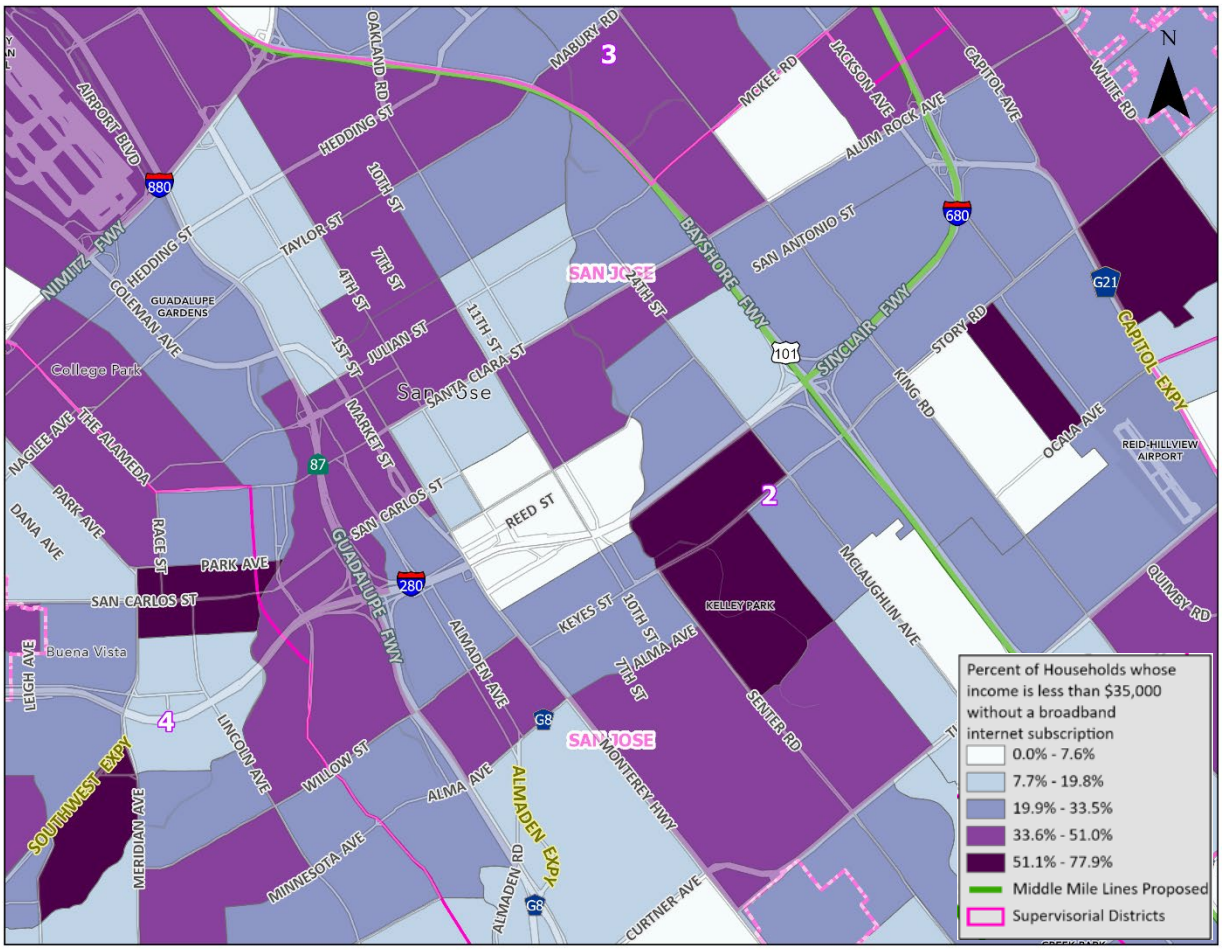
Area	Total Households	Total Households with Income Less than $35K and without Broadband Internet Subscription	% Of Households with Income Less than $35K and without Broadband Internet Subscription
East San Jose	78,864	4,882	6.2%
South San Jose	454	31	6.8%
South County	34,566	961	2.8%
Total	**113,884**	**5,874**	**5.2%**

Figure 7: Distribution of Households with Income Less Than $35,000 and without a Broadband Internet Subscription by Census Tract (ACS 2020)



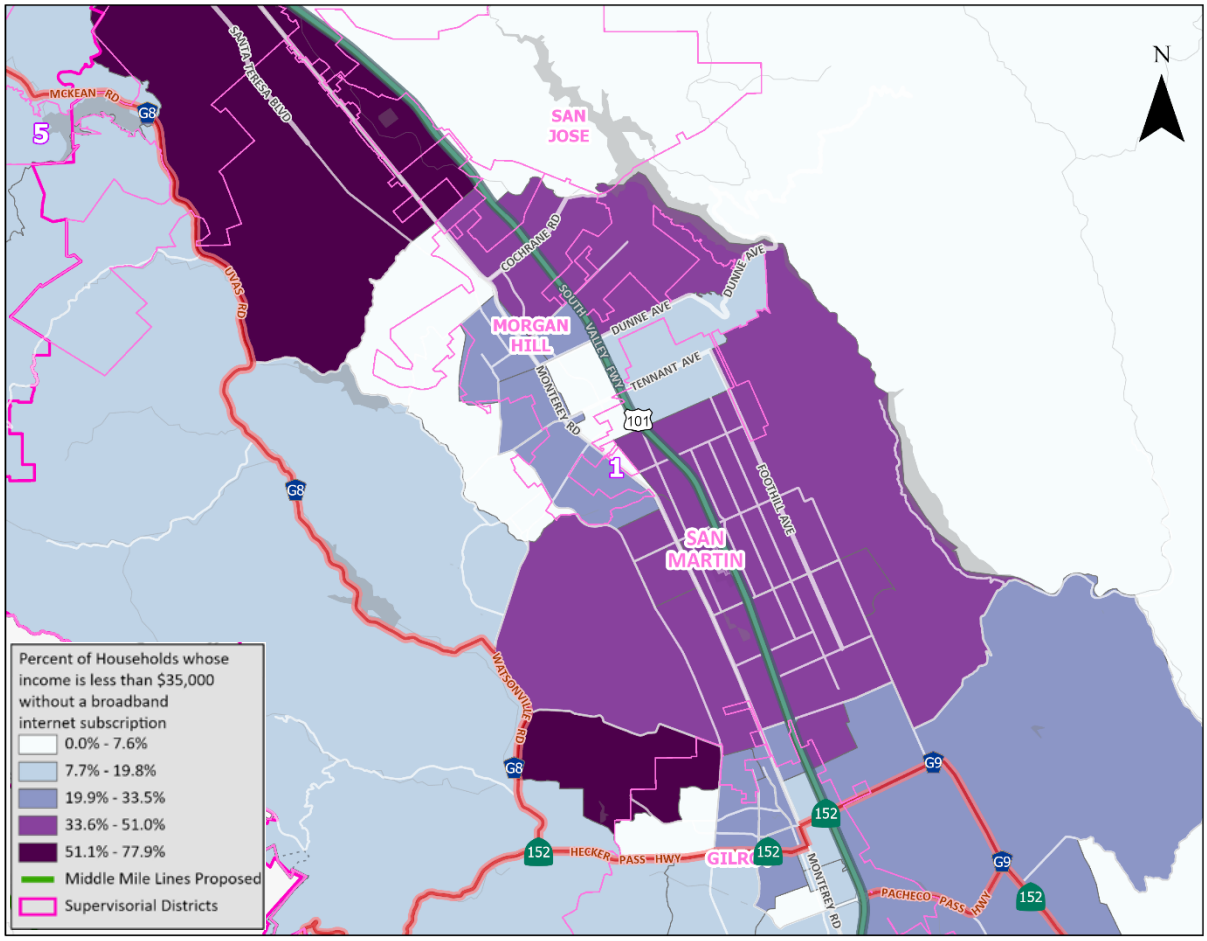
The map in Figure 7.1 displays the street-level view of the distribution of households in East San Jose that have an annual household income of less than $35,000 and do not have broadband internet subscription.

Figure 7.1: Distribution of Households with Income Less Than $35,000 and without a Broadband Internet Subscription by Census Tract – East San Jose (ACS 2020)



The map in Figure 7.2 displays the street level view of the distribution of households in South San Jose and South County that have an annual household income of less than $35,000 and do not have broadband internet subscription.

Figure 7.2: Distribution of Households with Income Less Than $35,000 and without a Broadband Internet Subscription by Census Tract – South San Jose and South County (ACS 2020)



III. Households that Have No Computing Devices

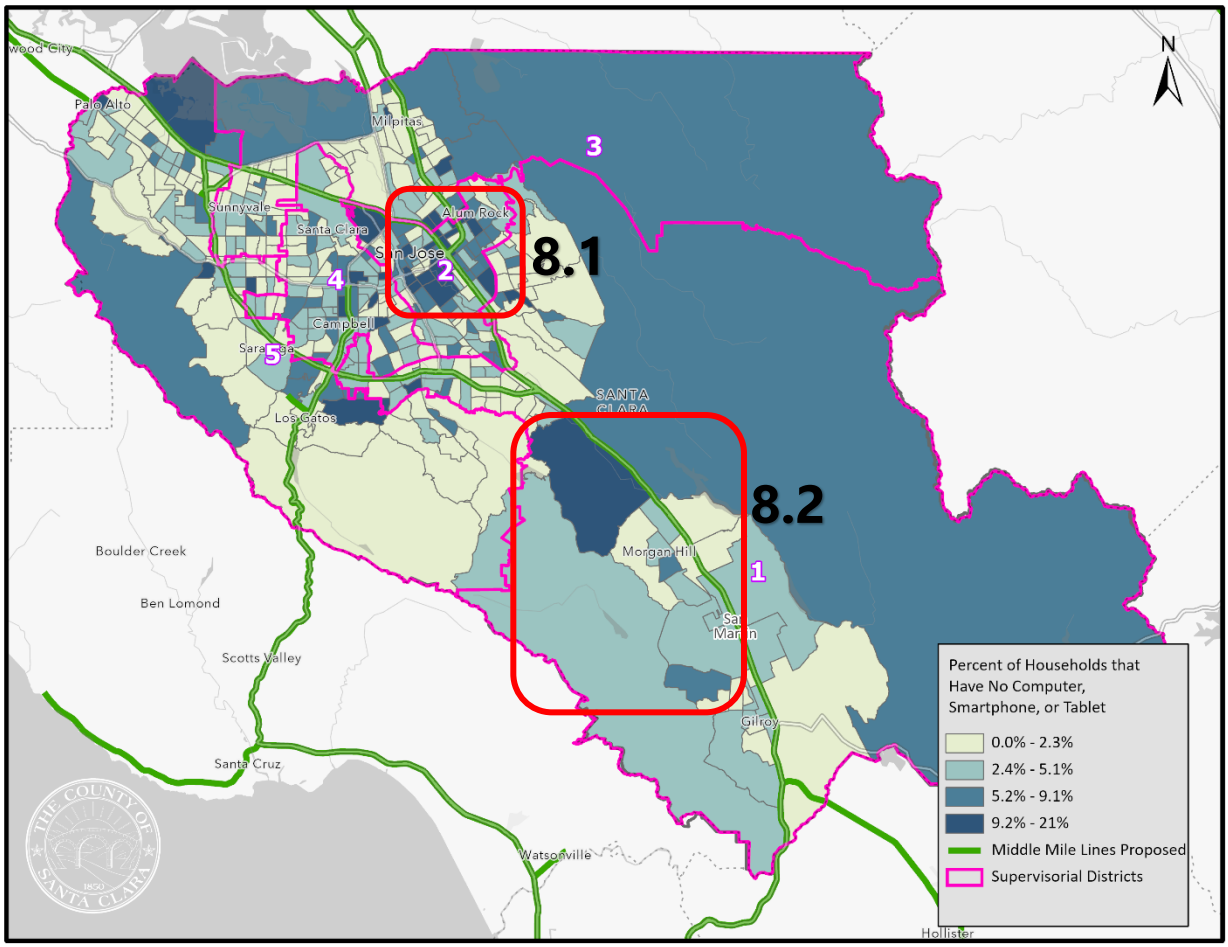
Of the total 635,314 households in the county, 21,778 of them do not own a computing device. The data in the map below (Figure 8) shows that the highest concentration of households without a computing device are in the areas of East San Jose, South San Jose and South County (Morgan Hill and San Martin). These areas have a total of 6,201 households that do not own a computing device. Computing devices include desktops, laptops, smartphones and tablets.

Table 4 displays the total number of households without a computing device by area, while Figure 8 displays the distribution of those households by census tract.

Table 4: Number of Households without a Computing Device in East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy) (ACS 2020)

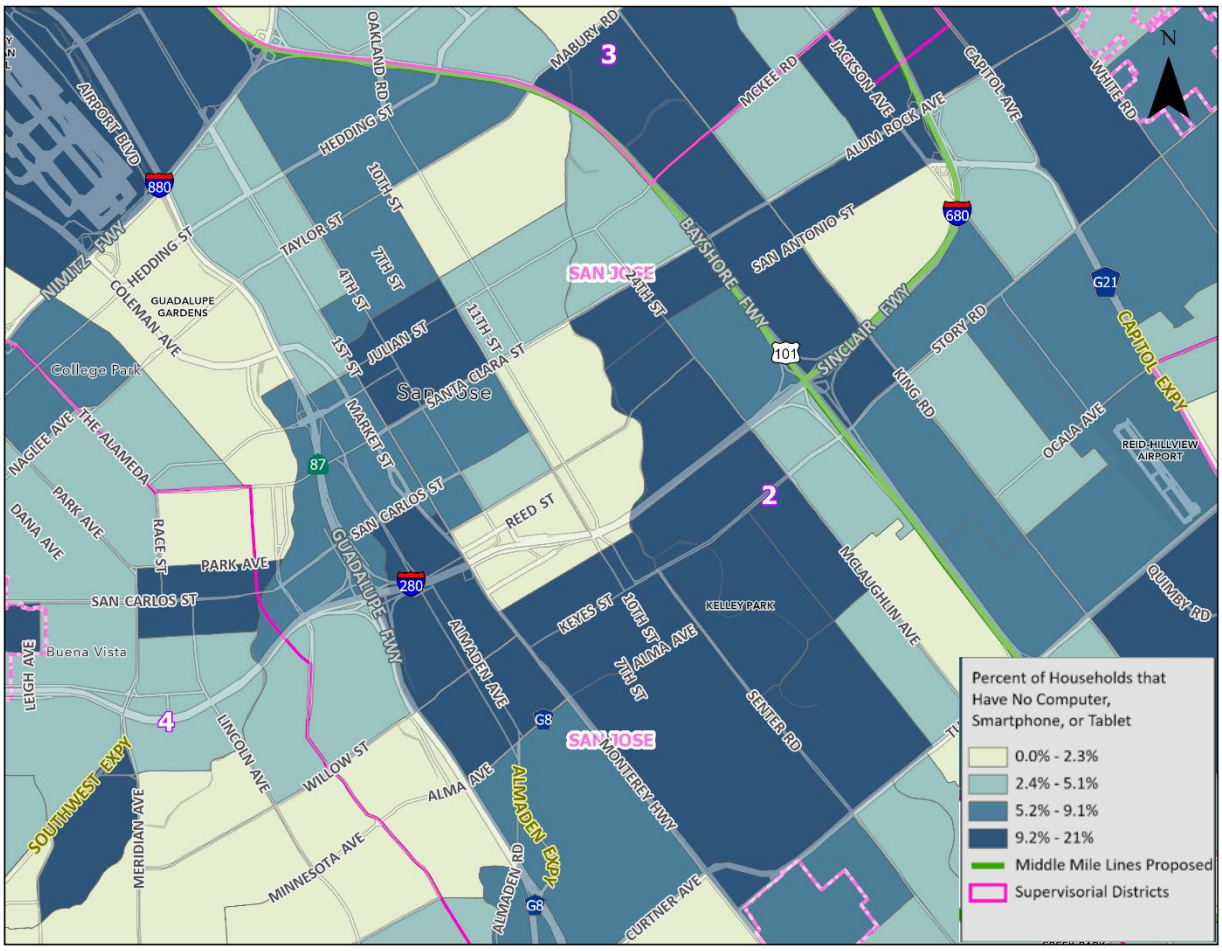
Area	Total Households	Total Households without a Computing Device	% Of Households without a Computing Device
East San Jose	78,864	5,191	6.6%
South San Jose	454	45	9.9%
South County	34,566	965	2.8%
Total	**113,884**	**6,201**	**5.4%**

Figure 8: Distribution of Households without a Computer, Smartphone or Tablet by Census Tract (ACS 2020)



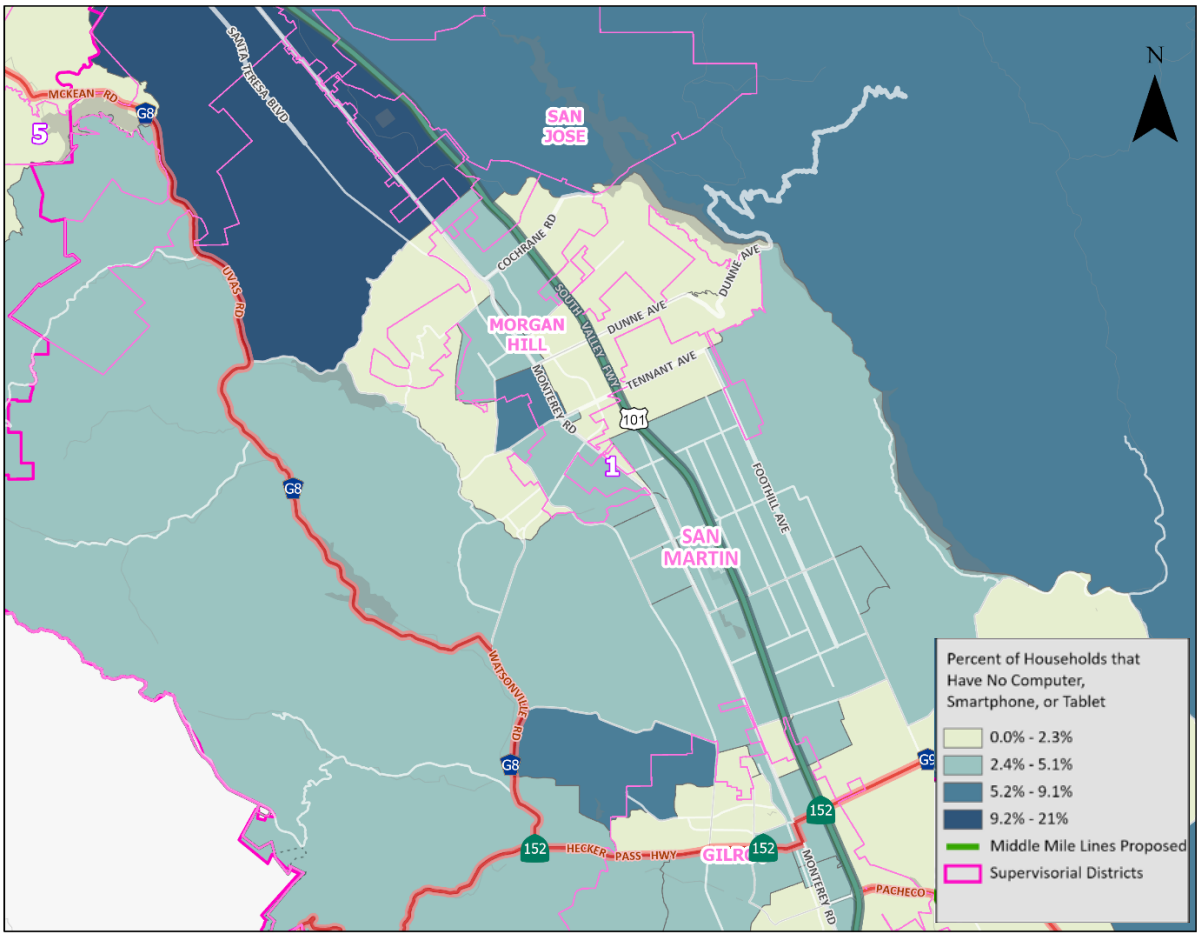
The map in Figure 8.1 displays the street-level view of the distribution of households in East San Jose that do not own a computer, smartphone or tablet.

Figure 8.1: Distribution of Households without a Computer, Smartphone or Tablet by Census Tract – East San Jose (ACS 2020)



The map in Figure 8.2 displays the street level view of the distribution of households in South San Jose and South County that do not own a computer, smartphone or tablet.

Figure 8.2: Distribution of Households That Have No Computer, Smartphone or Tablet by Census Tract – South San Jose and South County (ACS 2020)

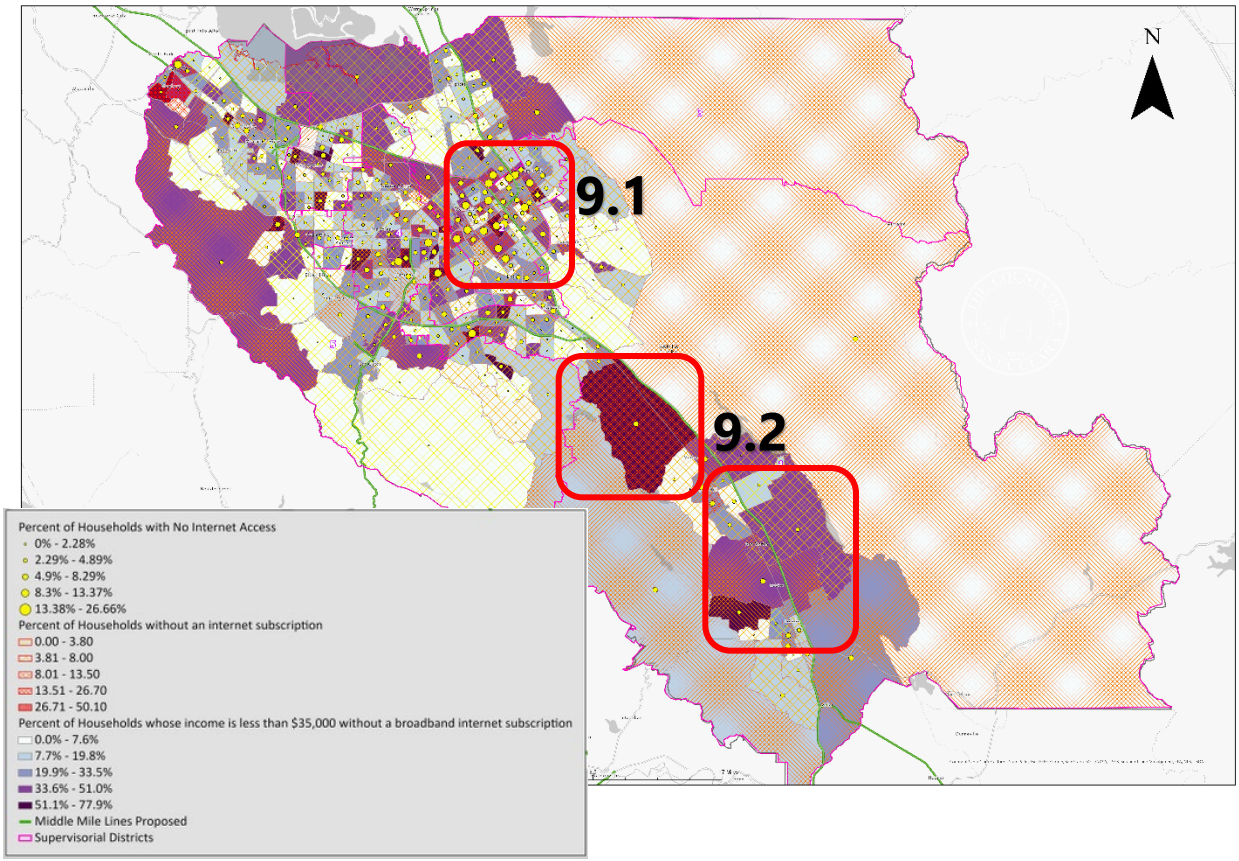


IV. Digital Divide

Internet access continues to be an essential link for meaningful connectivity to education, healthcare, jobs and various aspects of civic and social life. The recent pandemic highlighted the impact of the digital divide, particularly with distance learning, access to reliable sources for health information and government measures and sustaining income by having access to job application sites and engaging in remote work. The maps below (Figures 9, 9.1 and 9.2) show that the most impacted areas in the county are in East San Jose, South San Jose and South County (Morgan Hill, San Martin and Gilroy), which are common for the following indicators:

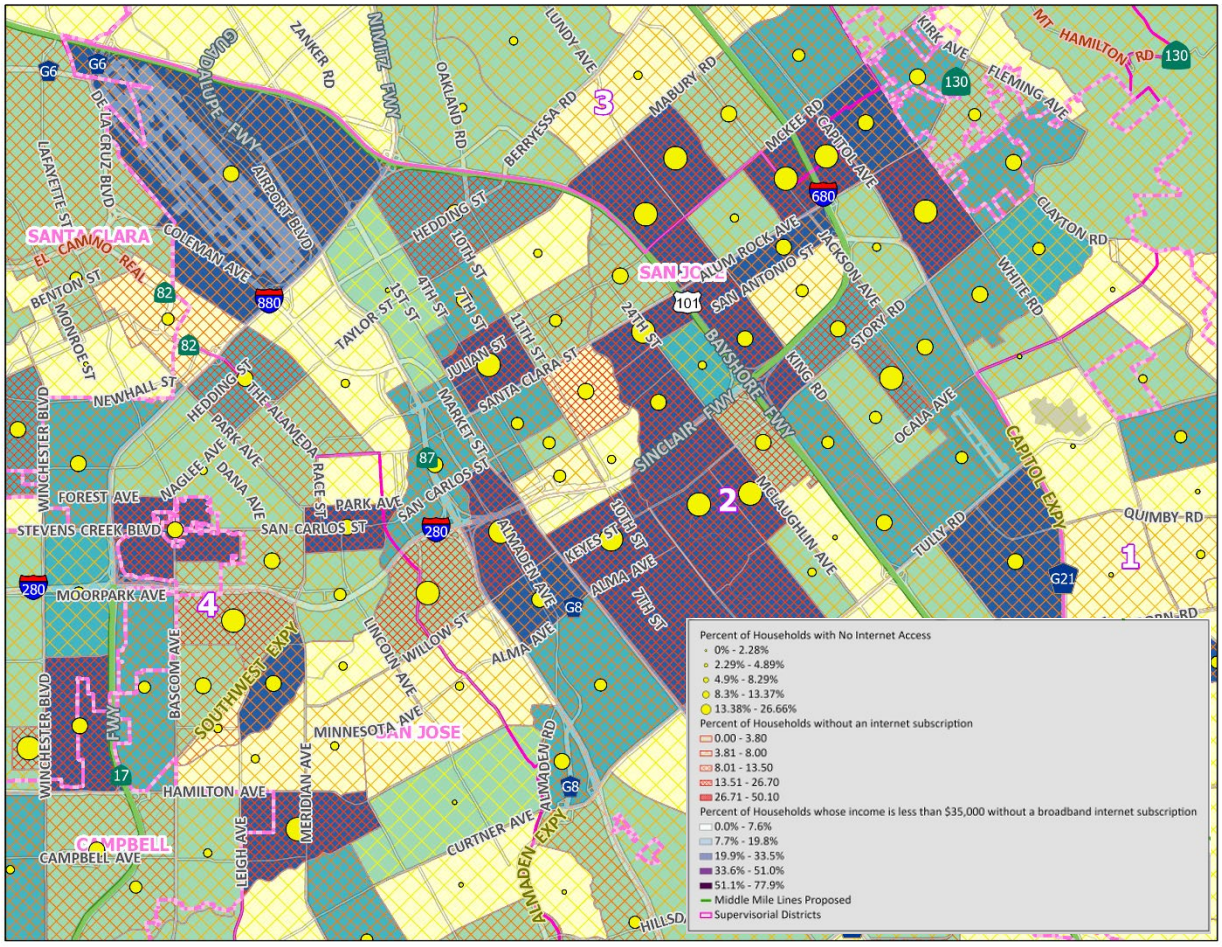
- Households with no internet access
- Households with an annual income less than $35,000 and without a broadband internet subscription
- Households without a computer, smartphone or tablet

Figure 9: Digital Divide - Most Impacted Areas in the County of Santa Clara by Census Tract



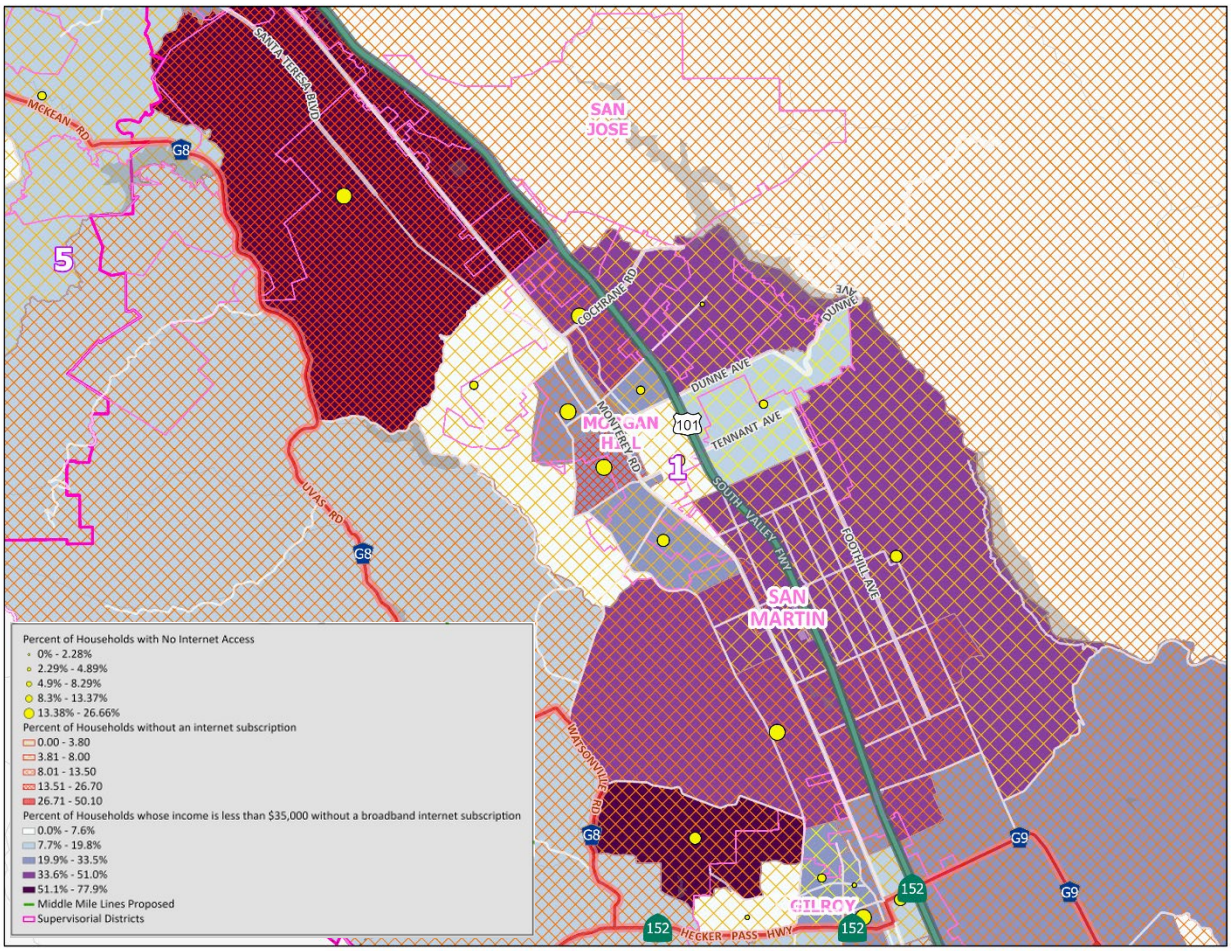
The map in Figure 9.1 displays, at the street level, the distribution of households in East San Jose that are most impacted by the digital divide.

Figure 9.1: Digital Divide – Most Impacted Areas in County of Santa Clara by Census Tract – East San Jose



The map in Figure 9.2 displays, at the street level, the distribution of households in South San Jose and South County that are most impacted by the digital divide.

Figure 9.2: Digital Divide – Most Impacted Areas in County of Santa Clara by Census Tract – South San Jose and South County

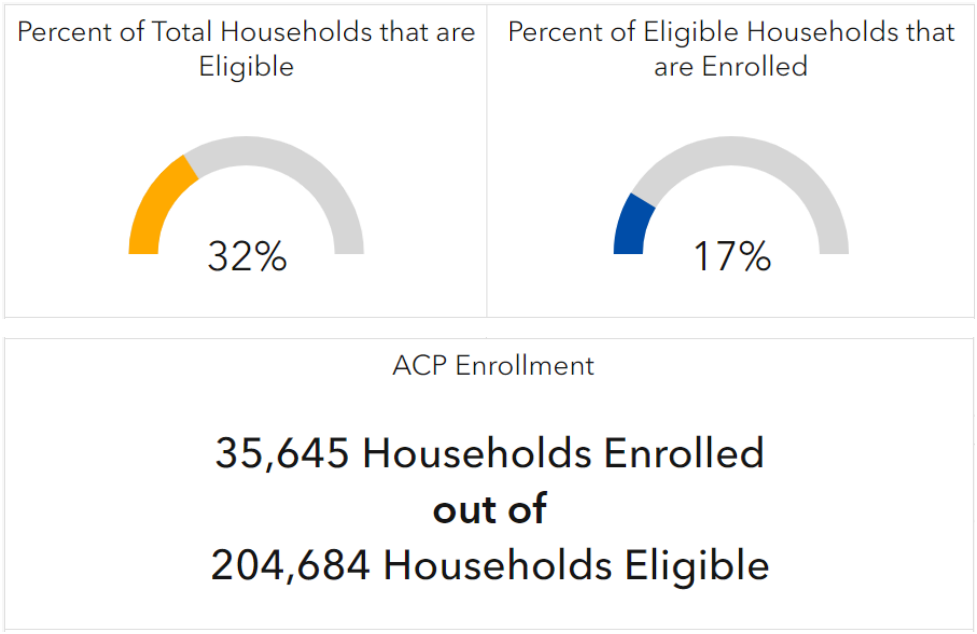


V. Affordable Connectivity Program

The federal Affordable Connectivity Program (ACP), which provides eligible households with a $30 per month subsidy for internet services[8], is designed to help close the broadband adoption gap for low-income households. However, the program is generally considered to be significantly under-enrolled[9] nationwide due to eligible residents' lack of knowledge, trust or ability to apply.[10]

Based on the California ACP Enrollment dashboard, the county has an estimated 204,684 ACP-eligible households (of the 635,314 total households). While the county's enrollment has increased over time[11] (as shown in Figure 11), according to the statewide enrollment data as of 08/15/2022 (https://www.arcgis.com/apps/dashboards/a9378620990f4879a561f2bbc965541e) only 17% (35,645 households) of eligible households are enrolled.[12]

Figure 10: ACP Eligible and Enrolled Households[11]



[8] The Affordable Connectivity Program (ACP) was established by Congress in 2021 to replace the pandemic-related Emergency Broadband Benefit (EBB) and implemented by the Federal Communications Commission (FCC) in 2022. The FCC and Universal Service Administrative Company (USAC) track and publish county-level enrollment data for the ACP.

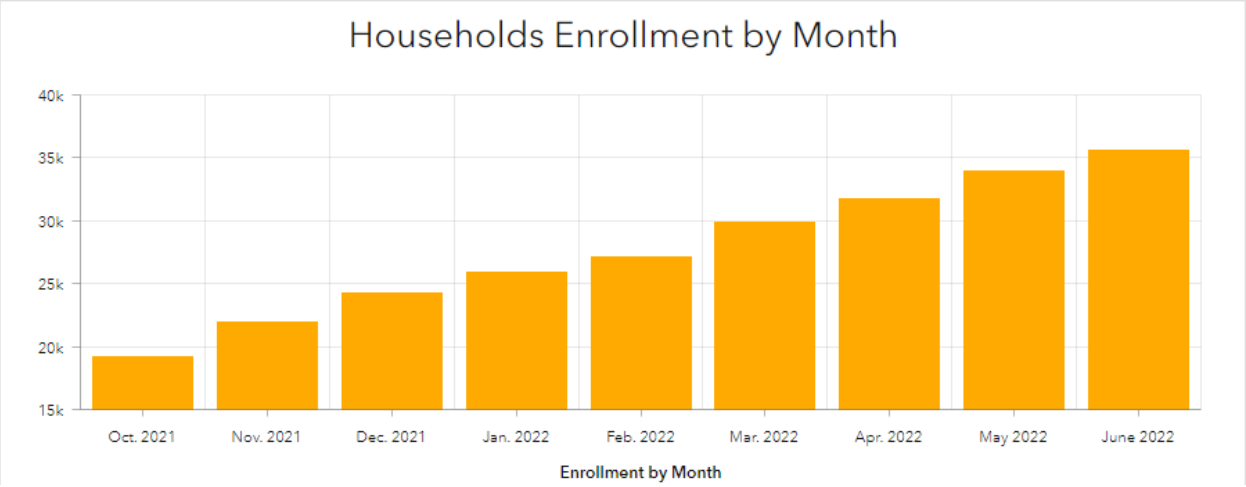
[9] The White House estimates that roughly 48 million households qualify for the ACP, while currently USAC reports just over 12 million currently registered households. https://www.whitehouse.gov/briefing-room/statements-releases/2022/05/09/fact-sheet-president-biden-and-vice-president-harris-reduce-high-speed-internet-costs-for-millions-of-americans/ (accessed June 6, 2022).

[10] A 2019 survey of low-income households in California found that 73 percent of respondents who did not have a home internet connection were unaware of available subsidies for broadband subscriptions. Conducted by the Berkeley IGS Poll on behalf of the California Emerging Technology Fund. "Internet Connectivity and the "Digital Divide" in California – 2019." https://www.cetfund.org/wp-content/uploads/2019/08/005_003_002_CETF_2019_002_IGS_Poll_CA_Digital_Divide_ppt.pdf (accessed May 8, 2022).

[11] As tracked by USAC and the FCC.

[12] California Affordable Connectivity Program (ACP) Enrollment; https://www.arcgis.com/apps/dashboards/a9378620990f4879a561f2bbc965541e (accessed July 25, 2022). USAC reports County Enrollment Information Quarterly. In the interim, June County information is an approximation using USAC Enrollment by zip code data.

Figure 11: ACP Household Enrollment, by Month[13]



[13]California Affordable Connectivity Program (ACP) Enrollment; https://www.arcgis.com/apps/dashboards/a9378620990f4879a561f2bbc965541e (accessed July 25, 2022). USAC reports County Enrollment Information Quarterly. In the interim, June County information is an approximation using USAC Enrollment by zip code data.

1.3 Steps to address digital equity issues

When the pandemic put new pressures on students, connectivity initiatives by County of Santa Clara agencies helped fill gaps for many households. Beyond that direct approach to meeting residents' needs, a key element of the county's approach to reducing the digital divide was the creation of the Digital Equity Consortium (DEC)—a multi-agency effort to ensure features of digital inclusion were woven into various aspects of county services.

The DEC also promotes the county's needs in ongoing discussions at the state level regarding potential solutions to these problems. For example, the DEC filed a series of comments to the California Public Utilities Commission (CPUC) that contributed to the CPUC's revision of its proposal for a statewide technical assistance fund, development of a last-mile funding program and statewide plans for open access middle-mile infrastructure routes through the county. (See Appendix A for more details.)

1.4 Community-based organizations and public sector entities engaged in digital equity efforts

Many stakeholders in the county and region have dedicated resources to addressing residents' broadband access and digital equity needs, including programs to:

- **Deploy wireless networks and bring broadband services to underserved neighborhoods** (Eastside Union High School; Santa Clara County Office of Education/Joint Venture Silicon Valley).
- **Conduct device distribution programs** (San Jose Digital Partnership, San Jose Library and Vietnamese American Service Center).
- **Organize and host digital literacy classes** (San Jose Digital Partnership, San Jose Library and Vietnamese American Service Center/International Children Assistance Network).
- **Educate low-income households regarding affordability programs and assist with enrollment** (Vietnamese American Service Center/International Children Assistance Network, Santa Clara County Office of Education, Older Adults Technology Services, San and José Digital Partnership).
- **Study and gather data regarding the gaps in broadband access and digital literacy** in specific populations such as older adults, low-income communities and families with school-aged children (Santa Clara County Office of Education, Joint Venture Silicon Valley, Silicon Valley Community Foundation, Older Adults Technology Services and Santa Clara County Department on Aging and Adult Services).

- **Create opportunities for telehealth services and data collection** regarding patient access to these services (Santa Clara Valley Medical Center and Vietnamese American Service Center).

- **Coordinate with ISPs (internet service providers)** to understand and collaborate on network planning, low-income service offerings, and state and federal funding opportunities (Santa Clara Valley Office of Education, Eastside Union High School and City of San Jose).

- **Investigate opportunities to invest in networks** in high-cost areas or areas with low return on investment to support public policy goals for broadband deployment (Joint Venture Silicon Valley and City of San Jose).

Details on interviews conducted for this study, as well as research into additional community-based initiatives, are included in Appendix B. During the course of this project, the project team also conducted extensive conversations with representatives of the ISPs active in the county.

1.5 State and federal funding programs that target broadband

A range of state and federal broadband funding programs are either currently available or are in the planning process.[14] [15]

Notably, the CPUC has reserved $36 million in the Federal Funding Last Mile Account (out of $2 billion statewide over three years) for projects located within the County of Santa Clara; funding will be competitively awarded by the CPUC.

In addition, a range of infrastructure, digital equity and broadband adoption funds have been developed, with some opportunity for the county and its partners. For most of these programs, rules and further information will become available in the next 12 to 24 months.

1.6 Next steps in the county's digital equity planning

A recently completed companion report, *Digital Equity Strategy: Policy and Process Recommendations*, offers suggestions for permitting and right-of-way policies to support the

[14] Most of the broadband funding opportunities at both the state and federal levels have not yet been designed; they will roll out over the next 18 to 36 months. The County of Santa Clara may be eligible for many of these grant opportunities depending on how the rules develop. The project team is analyzing the current opportunities and will continue to analyze emerging program rules as the state and federal governments develop them. Recommendations for maximizing opportunities will be presented in the final project report.

[15] A range of funding programs is described in detail in Section **Error! Reference source not found.** and Appendix C.

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county's efforts to promote new broadband infrastructure projects in unserved and underserved areas of the county.

Additional analyses and reports in development include:

- **Broadband demographics analysis** (anticipated delivery: July 2022): Understand where broadband is still needed.
- **Infrastructure options analysis** (anticipated delivery: August 2022): Evaluate costs for recommended infrastructure solutions.
- **Digital equity solutions analysis** (anticipated delivery: September 2022): Consider options for addressing affordability, access to devices, digital literacy and technical support.
- **Digital equity master plan** (anticipated delivery: October 2022): Weave together all previous reports into a comprehensive strategy to pursue funding and implement programs.

Table 5: Sample CPUC broadband funding programs[16]

Program	Description	Status/Deadlines	Applicants/Eligibility
Adoption Account (California Advanced Services Fund, CASF) $20 million distributed FY22-23 https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-adoption-account	Surcharge-funded program for "digital inclusion" and "broadband access" projects	Applications due by July 1 and January 1 each year until funds are exhausted	Broad scope of eligible applicants including local governments County could be its own applicant or coordinate with other agencies or nonprofits
Infrastructure Account (CASF) $24.8 million distributed FY22-23 https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-infrastructure-grant	Surcharge-funded program for last-mile infrastructure deployment projects	Application window is closed while staff considers rule changes (expected within the next two months)	Pending rules changes
Consortia Account (CASF) $10.7 million distributed FY22-23 Grants capped at $200,000 per year; can seek multiple-year funding https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-consortia-account	Surcharge-funded program to support regional broadband consortia in "facilitat[ing] broadband deployment" and assist infrastructure applicants with project development and the application process	Applications due by July 15 for both newly formed and existing consortia; a new grant window will open next fiscal year, likely on June 1, 2023	An eligible consortium includes broad scope of community entities including local and regional governments. The County of Santa Clara is one of three California counties not currently part of a regional consortium, but can apply for funding to create a consortium that covers the county and boundaries of other adjoining counties (San Mateo County is also currently not part of a regional

[16] Federal funds for digital equity programs may be available through the state, but these programs are not active and requirements are not known as of publication. These programs will be covered in a future report.

Program	Description	Status/Deadlines	Applicants/Eligibility
			consortium)
Local Technical Assistance $50 million distributed until funds are exhausted Grants capped at $1 million per year; streamlined review for requests of $500,000 or less https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/local-agency-technical-assistance	Grant-funded program to reimburse pre-project costs related to the development of broadband infrastructure projects	Application window opened in July 2022; applications will be accepted on a rolling basis	Local governments and tribal governments that will provide service to unserved areas County can apply for funding to support a project where it is a partner or lead agency, and the local agency or partner will provide service directly
Loan Loss Reserve Fund $750 million allocated for the Fund https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/loan-loss-reserve-fund	Grant-funded program for costs related to the financing of broadband infrastructure projects by local governments, tribal governments, and nonprofits	Application window has not opened; rules and application processes are pending further action by the CPUC (expected 4Q 2022)	Local governments, tribal governments and nonprofits County can apply for these funds only to support the financing for its own infrastructure project
Federal Funding Last Mile Account $2 billion statewide over three years *The CPUC has reserved $36 million for projects in the County of Santa Clara* https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/last-mile-federal-funding-account	Grant-funded program for last-mile infrastructure deployment projects in areas deemed by the CPUC to be "priority unserved"	Application window has not opened, pending further action by the CPUC (expected within the next two months), including identification of "priority unserved areas"	Broad scope of eligible applicants, including local governments County can apply for funding if it will directly offer service on the funded network, or can partner with a service provider or other government agency to build and provide service

Appendix A: Previous and ongoing digital equity efforts by the County of Santa Clara

Digital equity was a focus of various efforts in the Bay Area even before the Covid-19 pandemic moved everyday activities online and made gaps in broadband access more pronounced.

As the pandemic exposed and exacerbated inequities regarding broadband access and adoption, the county sought to become more involved in developing solutions. One such effort was a digital inclusion report developed by the Santa Clara County Digital Inclusion Workgroup—a partnership between the Santa Clara County Senior Care Commission and the County Department of Aging and Adult Services—which focused on barriers to connectivity faced by seniors.

The county also established the Digital Equity Consortium (DEC), a multi-agency effort to ensure features of digital inclusion were woven into various aspects of county services and to promote the county's needs in ongoing discussions at the state level regarding potential solutions to these problems. The DEC filed a series of comments to the California Public Utilities Commission (CPUC) that contributed to the CPUC's revision of its proposal for a statewide technical assistance fund, development of a last-mile funding program, and statewide plans for open access middle-mile infrastructure routes through the county.

The following sections present a brief overview of these comments and details on the county's broadband master plan.

Comments filed with the CPUC

Docket R.20-08-021 (California Advanced Services Fund)

September 30, 2021, comments on Local Technical Assistance Grant Program

The DEC submitted comments in response to a ruling issued by the CPUC requesting comments on the guidelines and design of a Local Agency Technical Assistance Fund using $50 million of California's allocated Coronavirus State Fiscal Recovery Fund monies. CPUC staff proposed that this Assistance Fund will support efforts by local governments and tribal governments to plan and develop broadband network deployment projects, including the costs of outside consulting, environmental studies, network design and engineering study expenses. The Staff proposed a limit on grants of up to $150,000. The DEC supported the establishment of the fund but advocated that the Staff revise the proposal to accommodate the needs and goals of larger and more diverse counties like Santa Clara. The DEC proposed revisions to increase the per-grant funding cap based on the number of unserved households in the area up to $1 million per year per local agency. The DEC also proposed that the program increase flexibility regarding the types

of reimbursable expenses and the coordination necessary to support projects that involve more than one local jurisdiction.

On February 24, 2022, the CPUC adopted a Final Decision and rules for the Local Agency Technical Assistance Fund. The CPUC followed the DEC's comments in several respects. The Final Decision broadens reimbursable expenses to include additional staff time, among other pre-planning activities. The Proposed Decision also increases the cap on funding from $150,000 to $500,000 per year per local agency for ministerial review and up to $1 million for full Commission review and cites DEC comments, in part, in support of that change. At this time, there is no specific date set for the fund to begin accepting applications, but CPUC staff will issue additional guidelines and updates that set a date for this process to begin.

Docket R.20-09-001 (Broadband for All)

September 3, 2021, and October 1, 2021, comments on Middle-Mile Infrastructure Funding

The DEC responded to a request for comment by the CPUC on issues related to the implementation of Senate Bill 156, which directs several state agencies to coordinate work on a state-funded and -operated open access middle-mile network.[17] The DEC provided input and feedback on the CPUC's proposed list of identified locations for the deployment of specific segments of this network. The DEC emphasized the geographic and demographic diversity of the area and the importance of state-funded deployment to the areas within the county that remain unserved due to lack of interest by market participants. The DEC also commented on criteria for identifying additional priority areas for middle-mile deployment, including affordability, service quality, public safety and competition, as well as the importance of consultation with local entities in proposed project areas. The DEC provided specific details and support for a proposed project in South County that would connect San Jose to Gilroy and extend into Santa Cruz County along Highway 101. The DEC also supported a project between Gilroy and Hollister, but proposed revisions to the route so that the facility would run along Highway 152. Finally, the county noted that the existing middle-mile facilities running from San Jose to Santa Cruz along Highway 17 were not affordable and urged the Commission to create a state-operated network using the county's right-of-way routes. The county was not alone in representing the needs of the local area. A local broadband provider serving South County, South Valley Internet, also submitted comments on this program and is monitoring the progress of this funding program.

[17] Comments by the County of Santa Clara Digital Equity Consortium, September 3, 2021, https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M454/K876/454876393.PDF (accessed May 4, 2022).

In supplemental comments on the middle-mile network development, submitted on October 1, 2021,[18] the DEC continued to emphasize the importance of collaboration and consultation with local entities within proposed project areas and the value of a state-funded network to support public safety and reduce costs for last-mile providers and public agencies. The DEC also discussed the options available for structuring ownership and access arrangements to this facility and urged the CPUC to identify unserved locations where the market cannot support viable commercial projects for these types of facilities and services.

The CPUC's work on project design and funding for a state-owned and -operated middle-mile network is ongoing in collaboration with the Department of Technology and the designated third-party administrator, GoldenStateNet. On November 17, 2021, Governor Newsom announced a list of 18 initial projects to begin work on an open access middle-mile network.[19] This list was developed, in part, based on the recommendations by the CPUC which were, in turn, supported by the public comment of parties like the county. This initial list of middle-mile network routes, and the updates that have followed over the past few years,[20] reflect the county's comments regarding the need for more robust middle-mile facilities serving the south of the County of Santa Clara and have specifically designated resources to build these routes.

October 29, 2021, and November 30, 2021, comments on Last-Mile Infrastructure Funding

These comments responded to a CPUC ruling that requested feedback on a different part of the implementation of SB 156. The California Legislature directed the CPUC to distribute $2 billion in federal funding from the American Rescue Plan Act and state General Fund dollars ("Federal Funding Account"). This funding will be part of the CPUC's existing California Advanced Services Fund and is directed to go toward projects that deploy last-mile broadband facilities to expand access in unserved and underserved areas of the state. The DEC provided detailed comments on CPUC's Staff Proposal for the funding criteria, guidelines, and application process.[21] The DEC emphasized the importance of this funding to support last-mile applications in unserved

[18] Comments by the County of Santa Clara Digital Equity Consortium, October 1, 2021, https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M411/K463/411463305.PDF (accessed May 4, 2022).
[19] "Governor Gavin Newsom Announces Initial Broadband Projects to Help Bridge Digital Divide," News Release, November 17, 2021, https://www.gov.ca.gov/2021/11/17/governor-newsom-announces-initial-broadband-projects-to-help-bridge-digital-divide/ (accessed May 4, 2022).
[20] Letter from the CPUC to the Department of Technology with initial middle mile route proposals, including south County of Santa Clara, November 16, 2021, https://cdt.ca.gov/wp-content/uploads/2021/11/Broadband-Middle-Mile-Initiative-Phase-1-CPUC-Transmittal-Letter.pdf (accessed May 4, 2022); the updated routes diverge from the initial CPUC proposal, but still confirms routes in the south County to Santa Cruz and along Highways 152 and 156, https://cdt.ca.gov/wp-content/uploads/2022/03/MMBI-CDT-Project-Approval-to-TPA-20220301-ADA.pdf (accessed May 4, 2022).
[21] Comments of the Santa Clara Digital Equity Consortium, October 29, 2021, at https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M420/K091/420091914.PDF (accessed May 4, 2022).

communities throughout the county, especially in areas south of San Jose and in the Santa Cruz mountains. The DEC also urged the CPUC to ensure that these projects require funding recipients to provide robust low-cost and affordable services, high levels of network resiliency and performance, and a demonstration of strong connections and outreach methods to the local communities. South Valley Internet also submitted comments on this last-mile program.

In supplemental comments, the DEC provided comment on a narrow, but important, issue related to the apportionment of the federal funding.[22] The state statute requires the CPUC to distribute these funds through a process that apportions the money equally between the urban and rural counties in the state after each county receives the same flat up-front distribution as an initial payment. Within the urban and rural categories, money is then distributed based on the number of unserved households within that county. In consideration of the diverse composition of the County of Santa Clara, the DEC comments that the CPUC's proposal to look at county-wide aggregated data would disadvantage rural, unserved areas of a county that may be identified as "urban" and served under its methodology. The DEC urged the Commission to revise its proposals for the funding allocation and, instead, identify the areas within each county that would meet a definition of "rural" or a definition of "urban," and to apportion money to the counties based on this more granular urban/rural analysis within each county.

As discussed in more detail in Appendix C, the CPUC adopted its Final Decision on the Federal Funding last-mile account on April 21, 2022.[23] This program will dedicate $2 billion to fund last-mile broadband infrastructure projects throughout California. The CPUC designated the County of Santa Clara as an "urban county" and allocated almost $36 million toward projects within the county to extend last-mile broadband facilities to unserved and underserved areas. While the Final Decision does not reflect some of the county's comments and proposals for this program, the CPUC explicitly noted its intent to prioritize applications from local public agencies and urged these agencies to participate.

[22] Comments by County of Santa Clara, November 30, 21, https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M427/K993/427993233.PDF (accessed May 4, 2022).
[23] California Public Utilities Commission, Docket R.20-09-001, Decision Adopting Federal Funding Account Rules, April 21, 2022, https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022).

Appendix B: Regional digital equity stakeholders and programs

A variety of stakeholders in the county, including community-based organizations and county and other public sector entities, are currently implementing solutions to overcome barriers to broadband adoption—or are well-positioned to do so. Given the data indicating broadband adoption gaps in different geographic areas and among different population groups in the county, these stakeholders may be key partners in the county's strategic approach to digital equity. The Santa Clara Office of Education (SCCOE) and the City of San Jose, for example, connected thousands of students to technology sufficient for online learning during the Covid-19 pandemic.

Analysis conducted during preparation of this study included engagement with stakeholders to gather data about gaps in online participation and existing programs to address them. An overview of those meetings follows, along with a more comprehensive list of other organizations and efforts within the county that could inform future aspects of the comprehensive digital equity strategy.

County of Santa Clara Digital Equity Consortium

The DEC is composed of high-level public officials committed to developing solutions to digital equity issues facing county residents. Representatives of the DEC include County Technology Services and Solutions, the County Department of Roads and Airports, the County of Santa Clara Office of Education, San Jose Public Libraries, the County Social Services Agency, the County Health and Human Services Agency, the County of Santa Clara Health System, and the Office of Cultural Competency.

The DEC's focus is to coordinate efforts across the county in support of comprehensive action in pursuit of digital equity.

Silicon Valley Community Foundation

Silicon Valley Community Foundation (SVCF) has provided grant support to community-based organizations to help close the digital divide and funded a study by New America describing its impacts on low-income communities during the Covid-19 pandemic.

Based on project interviews with participants, the study found:

- 85% of interviewed parents reported lack of access to computing devices sufficient for their families' needs.
- 71% of interviewed parents reported insufficient internet speeds.

SVCF asserts in its report that:

"One major takeaway from this study is that the current system of internet access is not serving low-income families. For decades, the economic model of internet access in the United States has been to rely on private sector providers, such as AT&T, Comcast and Frontier, to deliver access and offer affordable plans. More recently, those same providers have invested billions of dollars laying fiber networks to speed up service, but nearly all investments have been in high-income communities."

Joint Venture Silicon Valley

Joint Venture Silicon Valley (JVSV) has been engaged in several projects impacting digital equity, including its work with the Santa Clara County Office of Education to develop connectivity strategies for students.

The organization has several ongoing initiatives related to internet access, including a community broadband project working with the Los Altos Hills Community Fiber project to connect households to fiber broadband infrastructure. This project is a small-scale example of a community-based broadband initiative that directly involved households in the development, planning, and financing of a fiber broadband deployment project.

JVSV's Wireless Communications Initiative is also working with the Santa Clara County Office of Education to support the development of CBRS networks and uses school sites to extend wireless networks into neighborhoods, as described in its white paper "Broadband Networks for Addressing Distance Learning and Homework Gap Challenges."

East Side Union High School District

East Side Union High School District (ESUHSD) developed a solution using a public community Wi-Fi network to provide broadband access for nearly 70% of students. The school was able to utilize a $113 million technology bond to fund technology for students; $8 million of that bond funding was dedicated to developing the community Wi-Fi project, which focused on improving connectivity for surrounding neighborhoods as well as students.[24]

Highlights of this project include:

- Developing a public-private partnership with SmartWave Technologies for network construction and engineering, resulting in a combination of mesh networks and Wi-Fi

[24] More information about ESUHSD's work can be found here: https://sanjosespotlight.com/san-jose-school-districts-push-for-digital-equity (accessed May 4, 2022).

- Project utilized City of San Jose-owned fiber-serving streetlights, with the City providing permitting and right-of-way access. The City also provided data backhaul by routing through its equipment and back to the school site

    - This effort demonstrates that to achieve maximum benefits digital equity projects require community-wide engagement: beyond relying on a service provider to identify and rectify needs, stakeholders at every level must collaborate to achieve a broader community benefit.

- The school system also relied on a program run by the City of San Jose that worked with Sprint to provide students with both phones and hotspots to augment their home connections to the internet, and partnered with AT&T to provide an additional 8,000 hotspots for students, resulting in 11,000 student connections throughout the city

- While this project developed a solution to a specific problem and had readily available funding to achieve its goals, it demonstrates the opportunity that creative public-private partnerships represent

Balanced Access

Balanced Access [25] is a nonprofit, community-based organization founded by the CEO and executives of South Valley Internet to develop funding support for building infrastructure to serve families in Morgan Hill, Gilroy, and other parts of the south of County of Santa Clara. The organization is currently fundraising to provide 100 Mbps service to more than 1,000 students in Aromas.

Santa Clara County Social Services Agency, Department of Aging and Adult Services

The County of Santa Clara has a significant older population: in eight years, a quarter of the county's population will be over 65. As with every other segment of the community, seniors were negatively impacted by the pandemic, and the county needed to rapidly develop tools to serve people who often lacked a means of connecting with virtual services. In spite of the challenges the Department of Aging and Adult Services (DAAS) faced, staff indicated that they would like to explore more ways to deliver virtual service to their clients.

DAAS worked extensively over the course of the pandemic to ensure that the County of Santa Clara's senior population did not get further left behind by lockdowns and the abrupt shift to online services by most businesses and government agencies. Prior to the pandemic, DAAS in partnership with community-based organizations had in place activities to mitigate social

[25] https://balancedaccess.org/about/ (accessed May 4, 2022).

isolation for seniors, such as congregate meals sites for seniors to dine in community. However, the important practices that needed to be put in place to mitigate the spread of Covid-19 to vulnerable populations (including seniors) also exacerbated their social isolation. County staff developed recommendations to facilitate better engagement with a population who experience significant digital literacy deficiencies, lack technical understanding for operating internet-enabled computing devices, and also are on fixed incomes and may find internet subscriptions beyond their limited financial resources.

In response to the challenges faced by the County of Santa Clara seniors, the county developed a 2021 report titled "Promoting Digital Inclusion for Older Adults in Santa Clara County"—one of the earliest efforts by the county to quantify digital inclusion gaps. DAAS' focus on digital inclusion is consistent with by the goals outlined in the Master Plan for Aging developed by the California Department of Aging.

While there have been various solutions to connect older adults, DAAS indicated that an organized and comprehensive strategy is needed. The Digital Inclusion Workgroup (authors of the 2021 report mentioned above) was created to help achieve this level or coordination among stakeholders and inform the county's efforts.

DAAS also suggested there may be opportunities to improve the 211 system for providing support for the community. Improvements could be focused on more efficiently or effectively connect individuals with services or support that they need, as well as a cross-system approach to service delivery. With United Way of Silicon Valley merging with its counterpart in San Francisco, there is a need for a local provider to aggregate the services encompassed by 211.

DAAS is also interested in exploring the value a grant program to support seniors access to internet services. The City of San Jose currently has a grant program that is designed to connect seniors to low-cost internet service. Currently, the program provides $150 per person towards internet connectivity, a device, and digital literacy training. More information and research would be needed to determine the efficacy of such a program, as well as the appropriate value of a grant and how to fund such a program to ensure sustainability. Device donations are also another area to explore to ensure seniors not only have access to internet service but also a device to access to the internet on. However, DAAS staff have found that iPads can be difficult to use for those who do not have the digital literacy to set up an Apple ID, and they recommend prioritizing other internet-enabled devices that may be easier to use as part of these distribution programs.

Santa Clara County Social Services Agency, Department of Employment and Benefit Services (DEBS)

The county has recently initiated outreach to eligible households via DEBS. Through this effort, the county is notifying clients of their eligibility for a broadband subsidy and referring them to the Federal ACP application site for more information and to sign up for the benefit.

Older Adults Technology Services/Senior Planet

Older Adults Technology Services (OATS)/Senior Planet[26] is a nationwide program that provides digital literacy training for older adults. Classes range from "What is Bitcoin" to "How to Send an E-mail." OATS' local representatives currently work in Palo Alto, but they were interested in finding creative ways to expand their programming countywide.

Providing technology support and interventions requires a lot of capacity, which can be hard for older adult community centers and organizations. OATS has an advantage in this area because it has two full-time employees working on a curriculum.

OATS offers a diverse array of programs for older adults, all of which are free:

- Community discussion groups
- Tech training and support
- National program in partnership with Verizon; every Friday a few Verizon employees provide tech support
- Hotline for internet related questions
- Provided some iPads
- Work with Aging Connected which is a senior program specifically supporting eligible elderly populations register for ACP and other affordable internet connection programs.

These programs are offered both online and in person. OATS relies on partners to provide meeting space, and it indicated that a partnership with the county to use county facilities may enable it to provide broader service in the region. Currently, there are some gaps in services OATS can deliver; a partnership with the county could help improve its overall service to the community.

OATS also echoed the Department of Aging and Adult Services' recommendation that the county allocate $750 per person to provide seniors with a device, internet connection, and digital literacy training.

[26] https://seniorplanet.org/about/who-is-oats/ (accessed May 4, 2022).

County Health System[27]

The county's Health System provides an important safety net for comprehensive medical care, services, and programs to residents throughout the county. The Health System includes Santa Clara Valley Medical Center (SCVMC) and Clinics, O'Connor Hospital and Clinics, and Saint Louise Regional Center and Clinics, that collectively include 11 outpatient Health Centers and three hospitals.[28] SCVMC interacts with thousands of residents in the County of Santa Clara each day and has a vital role to play through healthcare services (including through telehealth and other virtual visits), and information and referral support in the county's efforts to expand access to affordable and robust broadband services and increase digital equity throughout the region.

During discussions with the SCVMC team, they expressed an interest in serving at the most basic level as a critical information and referral service and a community hub. They recognized the vital role broadband access plays toward innovative and effective health care for all county residents. Therefore, they see the need to ensure that the county's most vulnerable populations receive information about broadband affordability programs, such as the ACP, as well as resources for digital literacy and device distribution programs. On the other hand, SCVMC also noted that it is looking for county agencies and community stakeholders to refer its patients to so that they can take advantage of existing resources for broadband affordability, digital literacy, and access services.

In a more holistic approach to digital equity, SCVMC is currently considering revisions to its EpicCare Electronic Health Record system to incorporate the concepts of broadband access and digital literacy as part of its "social determinants of health" analysis. In general, a social determinant of health analysis looks at several different societal and economic variables such as economic stability, access to quality education, access to health care, neighborhood health and safety, and social and community connections to determine the health of an individual, a patient population, and the entire community.[29]

SCVMC notes that, by looking at digital access as part of the health of the community, and by developing systems to collect data on the "broadband health" of county residents, SCVMC could create valuable information and data for other county digital equity and inclusion initiatives. As health systems, including SCVMC, continue to expand telemedicine, online patient portals, and remote doctor's visits, failure to support vulnerable populations in accessing these resources could result in health care disparities due to the digital divide. Instead, tailored information from

[27] The County of Santa Clara Health System includes Behavioral Health Services, Public Health Department, SCVMC, O'Connor Hospital, St. Louise Regional Hospital and Emergency Medical Services, https://health.sccgov.org/home (accessed May 4, 2022).
[28] https://www.scvmc.org/home (accessed May 6, 2022).
[29] Sieck, C.J., Sheon, A., Ancker, J.S. et al., "Digital inclusion as a social determinant of health," npj Digital Medicine 4, 52, March 17, 2021, https://doi.org/10.1038/s41746-021-00413-8 (accessed June 6, 2022).

health systems about who is accessing such resources (and, conversely, who is not) can help inform policy decisions about how to build programs that target the right level of broadband access and digital literacy to support successful healthcare delivery.

As SCVMC continues to expand online and video health care services, it recognizes that it will be critical for all residents of the county to have reliable access to high-speed broadband services. For example, SCVMC noted that over 200,000 patients utilized some type of virtual visit with a SCVMC provider in the past year. Yet only slightly over 22,000 patients used the video function for these services, while 185,000 used voice-only phone capabilities.

At this time, SCVMC does not have sufficient data to make a finding of causation or even correlation between broadband access in the county and the success of telemedicine and online health care visits. But it is clear that use of innovative remote health care capabilities requires sufficient broadband access by both the patient and the provider. SCVMC is currently conducting focused patient and provider surveys, building data gathering capabilities into its electronic record-keeping system, and considering innovative ways to provide access to on-line health care services, such as device lending systems or setting up remote locations at anchor institutions such as libraries, schools, and other clinics to provide private areas where a patient can conduct a remote visit.

County Roads and Airports Department

The County Roads and Airports Department plays an important role in the deployment of telecommunications infrastructure in the county. By facilitating access to the county's rights-of-way that are often major pathways for broadband assets, the department helps to expand internet access.

Roads and Airports has some fiber on county expressways providing connectivity to the network of county-operated traffic signals and cameras; however, the fiber is more than 20 years old and buried at relatively shallow depths, making it unideal for further usage. AT&T and Verizon have both expressed interest in using Roads and Airports' streetlights for small cell and 5G deployments, but providers are generally disinterested in using the infrastructure to provide broadband. The county's general receptiveness to use of utilizing public facilities for deploying data transmission infrastructure is generally considered a best practice but marrying this to a 5G or wireless infrastructure deployment often raises concerns from community members who are wary of radio frequency emissions.

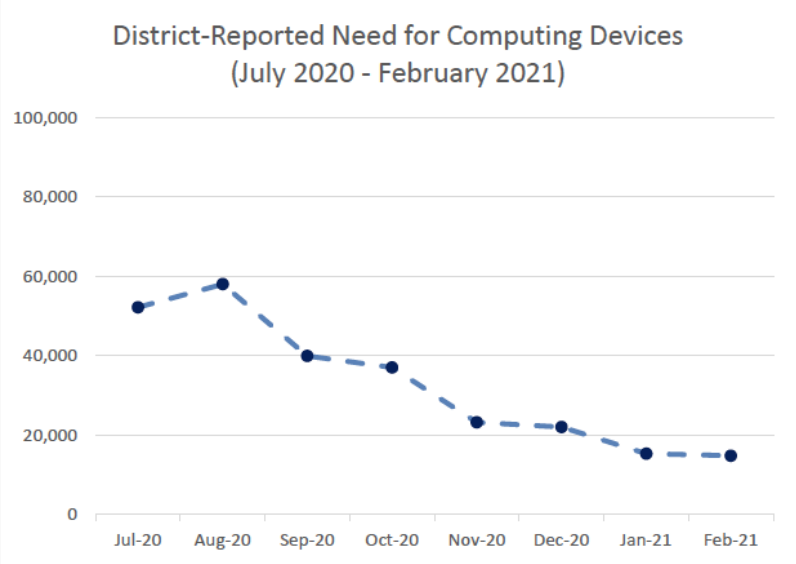
Roads and Airports has acknowledged that internet service providers currently actively utilize the county expressway system to provide service to multiple adjacent communities but do so in accordance with their business strategies. Most of these areas adjacent to expressways are already served by ISPs, but there may be some low-investment areas where ISPs have not found

a business case for expansion; these areas might be candidates for publicly funded infrastructure projects.

Santa Clara County Office of Education

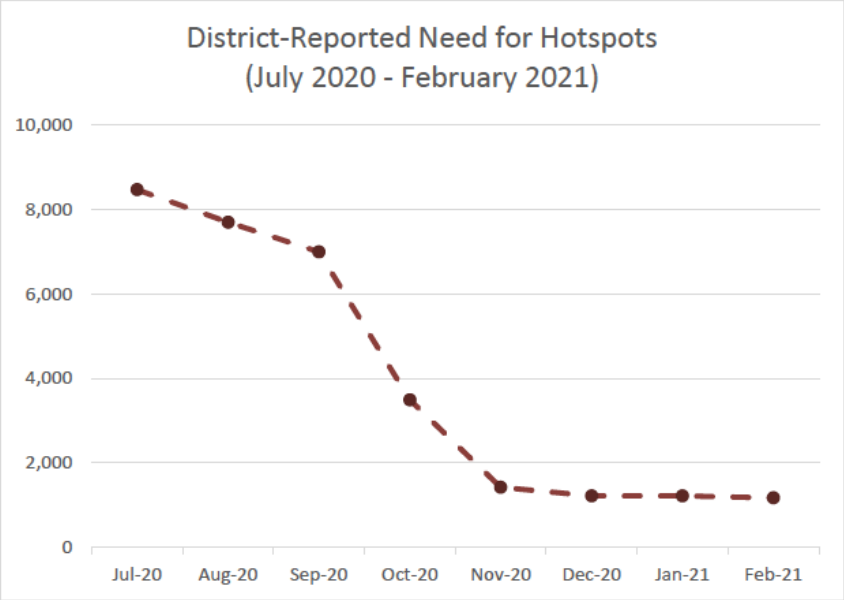
SCCOE has done extensive work to connect its students as a direct response to Covid-19. Since 2020 SCCOE spent $14.5 million to deliver 20,800 computing devices, 14,200 hotspots, and 16,000 internet connections to its students. As a result, according to the SCCOE, some connectivity and device needs of most students were largely met as of 2021, as illustrated in Figure 13 and Figure 14.

Figure 122: District-reported need for computing devices[30]



[30] SCCOE reported data.

Figure 133: District-reported need for hotspots[31]



Survey data shows the impacts of these efforts on students and families. According to the San Jose Digital Inclusion Partnership Fund Families Surveys Impact Report,[32] just under 60% of all students given computer devices found them "extremely helpful for completing school assignments," [33] while approximately an additional quarter found the devices "helpful." Additionally, roughly 63% of parents said those devices were "extremely helpful" or "helpful" for checking their children's report cards and learning about school activities.

SCCOE's method of utilizing various funding mechanisms and leveraging community relationships to forge stronger partnerships offers a model for a comprehensive approach to connecting the unconnected and reorganizing operations to better serve a virtual community.

Highlights from its work include:

- A CBRS pilot project in one district
- Through its efforts it has learned the imperative of working directly with families to truly understand their needs. Frequently, a device is not a solution; if there are multiple children in the household and also poor connectivity, one laptop will not solve all issues.

[31] SCCOE reported data.
[32] As received from the SCCOE.
[33] Report obtained via County of Santa Clara Office of Education. Authored by County of Santa Clara Office of Education, City of San José, and California Emerging Technology Fund in 2021.

- Reliance on hotspots is an insufficient solution: Often these devices only provide 10-20 Mbps connectivity.
- Recommend a layered approach to serving the community by utilizing both internal teams and partnerships with external organizations to help provide technical support to students and families

In many ways, it possesses the most robust data regarding connectivity and needs among at-risk populations in the county, and its experience promoting digital inclusion for students makes it an invaluable asset to the county. SCCOE's own data collection efforts can inform the county's work gathering granular data to support programmatic and infrastructure initiatives.

Its website also provides extensive resources to promote digital equity, and its understanding of community needs makes it a vital resource as the county proceeds with its digital equity strategy.

Vietnamese American Service Center

The Vietnamese American Service Center (VASC), a new county facility under the authority of the county's Public Health Department, opened its doors in December 2021. Located in an area of the county known as Little Saigon in east San Jose, it describes itself as a "one-stop hub for the county's Health and Human Services, facilitating service delivery and client engagement in a culturally competent and language-accessible manner."[34]

VASC has proven to be a critical and popular gathering place for community members of all ages from around the county, and it is creating opportunities to engage clients about the importance of digital literacy and access. It currently provides computers and other devices for checkout or use at the facility. It has also partnered with a local community nonprofit, the International Children Assistance Network (ICAN), to provide education and outreach about digital literacy resources and affordability programs such as the Affordable Connectivity Program (ACP).[35] ICAN conducts education and enrollment support for these critical programs on site at VASC. VASC also refers its clients to ICAN's direct services for ACP information and support.

VASC hopes to continue its work with ICAN and to expand its own digital literacy classes and computer access offerings, especially as additional parts of the facility are built out to provide more programming for youth clients and more space for services. VASC also expressed interest in expanding its information and referral services to include additional affordability programs and opportunities to help clients access more robust broadband services and better devices.

VASC notes that many of its clients do not qualify for programs such as the ACP, but still struggle to afford services that provide necessary broadband connectivity for their households. Therefore,

[34] https://vasc.sccgov.org/home?msclkid=a3771eefcd5111ec877827477a7c9ea9 (accessed May 6, 2022).
[35] https://www.ican2.org/ (accessed May 6, 2022).

VASC would not only be interested in increasing its own services but working with the county to provide information and data to help expand existing affordability and subsidy programs and broaden eligibility requirements. Finally, VASC also noted that it has the resources to provide translation services and conduct surveys and focus groups to help the county better understand the broadband and digital access needs of the communities VASC serves.

San Jose Public Library

The San Jose Public Library (SJPL) has done extensive work to promote digital equity.[36] The Library system oversees the City's Digital Equity program, which includes three primary project areas: Community Wi-Fi, hotspots and computing device access, and digital literacy.

Community Wi-Fi: As noted earlier in this report, the City has partnered with ESUHSD to deploy free community Wi-Fi networks throughout high school attendance areas. This project is organized under the SJ Access program. The three active community Wi-Fi networks average between 40,000-60,000 unique logins per month. An additional three attendance area networks will be deployed for public use in summer 2022. Two more attendance area networks will be available for public use in winter 2022/2023. Additionally, to expand access to high-speed internet connections in outdoor spaces, the SJ Access program expanded access to outdoor Wi-Fi at civic buildings in 2021. This project provided 24 libraries and community centers with public wireless internet, and "wired" 7 parks through a partnership with AT&T.

Hotspots and Computing Devices: The Library offers 4,200 unfiltered and 4,000 filtered Wi-Fi hotspots, 1,500 LTE enabled Chromebooks, 600 Wi-Fi enabled Chromebooks, 120 iPads, and 35 laptops for checkout. This program is expensive to maintain—costing an estimated $1.5 million or more per year—and only offers a temporary solution for household connectivity, given that the device must be returned to the Library.

Digital Literacy: The Library has also developed curricula that could be adopted by the Santa Clara County Libraries. The Library offers digital literacy trainings that are partially funded by the City of San Jose's Digital Inclusion Fund. It offers regular multilingual courses, both synchronous and asynchronous, that cover topics such as online safety, setting up and writing email, and definitions and understanding of common digital terms (e.g., "the cloud" and "http").

The City of San Jose's work on digital literacy and equity, as well as the Library's digital literacy curriculum development and programming, pre-dated the pandemic. Still, the need to expand digital literacy programming was understood immediately at the onset of Covid, and resources were realigned to allow for a swift expansion of programming to meet the needs of the

[36] https://www.sjpl.org/equity-inclusion. For digital access resources and device programs, see, https://www.sjpl.org/sjaccess (accessed May 6, 2022). For the Digital Literacy standards and programs promoting digital literacy, see, https://www.sjpl.org/education-digital-literacy (accessed May 6, 2022).

community. Moving forward, the Library is analyzing how systems and processes can be made more efficient to allow for the scale of digital literacy programming to continue alongside the other programs offered at SJPL. The robust response to its programs has led it to begin conversations about creating a sustainability strategy that would re-orient its programming to fundamentally embrace digital inclusion.

In 2016, the City Librarian was designated by the City Manager as the "lead staff" in coordinating an Education and Digital Literacy Initiative with multiple city departments, school districts and community stakeholders. As part of this initiative, in 2020 the City adopted "Digital Literacy Quality Standards" designed to help all City agencies integrate digital literacy efforts into their work.[37] The California Emerging Technology Fund (CETF), through its role as fiscal agent and manager of the City's Digital Inclusion Grant Program, served on the Advisory Team for the Library's efforts to craft these standards. In 2020, the Library called CETF a "key partner" in this work and noted that CETF and the Digital Inclusion Grant Program will use these standards in their work on digital literacy and digital divide issues.[38]

SJPL delivered a comprehensive report to the City of San Jose highlighting its work and lessons learned, which is a guide for efforts to promote digital equity.

The Library system also administers https://www.sjpl.org/sjaccess, a multi-agency effort funded and developed by the City to expand access to high-speed internet connections in public spaces. This program lit community centers with internet in 2021, provided 24 libraries and community centers with public wireless internet, and "wired" 7 parks through a partnership with AT&T. Additionally, an outdoor Wi-Fi initiative in partnership with East Side Union High School District resulted in an estimated 40,000 logons per month.

To maximize funds available to community-based organizations, the Library has declined further grant support from the Digital Inclusion Grant Program. As of 2022, it is looking to pursue supplemental funding through philanthropy, ECF, and ARPA funds to support its San Jose Access digital literacy program.

San Jose Digital Inclusion Fund

The City of San Jose established a Digital Inclusion Fund (DIF) in 2018 to support efforts to close the digital divide for the residents of San Jose, with a focus on low-income youth as well as other

[37] "Memorandum from Jill Bourne to the Library and Early Education Commission recommending adoption of the Digital Literacy Quality Standards," March 18, 2020, https://www.sjpl.org/sites/default/files/2020-03/6C.%20DLQS%20March%202020.pdf (accessed May 8, 2022).
[38] "Memorandum from Jill Bourne to the Library and Early Education Commission recommending adoption of the Digital Literacy Quality Standards," March 18, 2020, p. 3, https://www.sjpl.org/sites/default/files/2020-03/6C.%20DLQS%20March%202020.pdf (accessed May 8, 2022).

vulnerable populations, such as the elderly and disabled. In 2019, the City launched its Digital Inclusion Grant Program, which is funded by the DIF. The goal of the grant program is a coalition of public and private agencies devoted to improving digital equity by providing grant support over a ten-year period to connect 50,000 unconnected households in San Jose by 2029 with universal device and broadband access, and to further support those households with digital literacy training.

The grant program is funded by small cell lease revenue from the City's public-private partnerships with telecommunications companies and philanthropic funding from private donors and investors. Annually, the Digital Inclusion Fund aims to disburse up to $1 million in funding for grants to community-based organizations each year. The purpose of the grant program is to digitally empower residents through digital adoption programs that provide access to affordable home broadband subscription services, access to suitable computing devices, and access to training to achieve and sustain digital skills proficiency.

The grant program and implementation are managed by CETF, including the annual grant application process. CETF tracks and manages the grant program's performance and regularly reports to the City status updates and outcomes. City staff take to the San Jose City Council reports on the grant program's performance and the annual grant award recommendations. The annual grant award recommendations are developed in consultation with CETF and the City Manager's Digital Inclusion Advisory Board—a cross-disciplinary group of public and private sector digital inclusion stakeholders and experts appointed by the City Manager.

Over the past three years, the Digital Inclusion Grant Program has built a network of community leaders known as "navigators" to facilitate digital inclusion activities implemented by grantees and partner agencies. One such model is its outreach program to facilitate eligible households' applications to the ACP in concert with ISPs' affordable internet programs—resulting in free internet subscriptions.

Grantees also provide digital literacy training, which is essential to full participation in online activities such as bill paying, applying for benefits, or simply sending an e-mail.

The DIF is seeking a regional partner to expand this service and would be interested in discussing this further with the county. The DIF has also collected extensive data on its program participants, which can inform the county's efforts moving forward.

City of San Jose

The City of San Jose has developed innovative approaches to improving digital inclusion for residents. These activities include partnering with AT&T to provide immediate access for 115,800

unconnected students and developing policies that leverage telecommunications permit fees to fund further digital inclusion efforts in the City.

Specific public policy lessons learned in San Jose will be covered in more detail in a following report, but some features of its efforts are unique to San Jose and could not be replicated by the county. For example, its use of small cell permitting fees to fund digital inclusion has been pre-empted by the FCC[39] and is not a viable strategy for new agreements by other local governments moving forward.

The City engages directly with philanthropic organizations, telecommunications companies, internet service providers, and state and Federal agencies. The City discussed the need for regional coordination and expansion of its best practices.

Other regional digital equity projects

In addition to the extensive stakeholder outreach discussed above, research conducted for this study identified other projects throughout the county and surrounding areas that expand digital literacy and broadband access for low-income and other underserved communities. These types of projects could serve as a catalyst for the county's future projects and partnerships.

San Francisco Office of Digital Equity

The Office of Digital Equity (https://sfmohcd.org/digital-equity) has been working on these issues for several years. It has developed its own Digital Equity five-year Strategic Plan (2019-2024) and Playbook (posted on its website). The Office has also coordinated work among many different city agencies, including working with the Department of Aging and Adult Services to create SF Connected, which helps seniors with digital literacy and improving connections to the community; working with the Department of Technology to implement extensive public Wi-Fi; and working with the Office of Housing and Community Development to create "Fiber to Housing" projects within some of the affordable housing developments in the city.

In addition to public agency work in this area, other organizations like the SF Tech Council, Community Technology Network, and the San Francisco Unified School District have projects bringing services to the area.[40]

[39] FCC 18-133 Declaratory Ruling and Third Report and Order, September 27, 2018, https://docs.fcc.gov/public/attachments/FCC-18-133A1.pdf (accessed May 4, 2022).

[40] SF Tech Council (serves SF older adults and adults with disabilities, https://www.sftechcouncil.org/ (accessed May 8, 2022); Community Technology Network (serves Bay Area more generally), https://www.communitytechnetwork.org/ (accessed May 8, 2022); Verizon Innovative Learning Schools, https://www.sfusd.edu/learning/resources-learning/technology-resources-families/verizon-innovative-learning-schools-vils-program-sfusd (accessed May 8, 2022).

San Mateo County

San Mateo County (https://www.smcgov.org/smc-digital-equity-portal) has an extensive public Wi-Fi network that it has been building since at least 2014. San Mateo is expanding the locations for this service and updating mapping using CARES Act funding. Further, San Mateo created a Digital Inclusion pilot initiative in 2020 that has been ongoing. This work will support public-private partnerships in offering digital literacy and other services to end users and will allow connection between students in four school districts.

San Mateo is also working on expanding the San Mateo County Labs Innovation Program (https://smclabs.io/). While not exclusively linked to broadband deployment or innovation, the invitation by this project to collaborate and form partnerships with county cities, business leaders, residents and technology companies will necessarily focus on robust broadband access as this project tackles the area's most pressing social and economic challenges.

#OaklandUndivided

The #OaklandUndivided campaign (https://www.oaklandundivided.org/) is a partnership between the city of Oakland's Office of Education and the Oakland Unified School District, as well as private funding entities Oakland Promise, Oakland Public Education Fund, and Tech Exchange. This consortium of public and private entities has raised millions of dollars to provide devices, broadband access services, and technology support to Oakland families with school-aged children.

This consortium began in response to critical gaps in broadband and device access in Oakland that were exposed at the beginning of the pandemic. However, this initiative continues to expand through new partnerships with technology and utility companies.[41] Beyond the school-based device distribution program, this effort uses local entities, such as Tech Exchange, to provide culturally-competent technology support, subsidized broadband access service, and digital literacy classes.[42] Moreover, members of the consortium work within the community to gather data on local gaps and needs and to advocate for strong digital equity and access policies at the local and state levels.[43]

Santa Clara County Housing Authority

This independent local government agency established by the County Board of Supervisors in 1967, has the potential to reach thousands of low-income county residents through its 2,700

[41] "Community Coalition Expands Vision for Closing Digital Divide in Oakland," May 7, 2022, https://www.oaklandundivided.org/news/community-coalition-expands-vision-for-closing-digital-divide-in-oakland (accessed May 9, 2022).
[42] https://www.techexchange.org/oakland-undivided-resources.html (accessed May 9, 2022).
[43] "CA Selects Oakland for Historic Investment to Close the Digital Divide," November 18, 2021, https://www.oaklandundivided.org/news/ca-selects-oakland-for-historic-investment-to-close-the-digital-divide (accessed May 9, 2022).

owned and controlled units. The Authority (https://www.scchousingauthority.org/about-SCCHA/) is already working with many local nonprofits to provide a wide variety of social and economic well-being programs to the residents of its properties.

In partnership with nonprofits, it offers adult education classes, computer access, support for people experiencing homelessness, and after-school programs. Any one of these types of activities could help to support digital equity in the county. Moreover, the county could investigate opportunities to work with the CPUC's Public Housing Account to fund inside wire and network installation in public housing buildings.

First 5 Commission

This statewide organization (www.first5kids.org) is active in the County of Santa Clara and could provide a direct connection to several education-based nonprofits, institutions, and the parents of young children who may not have resources to access robust broadband services. It also has a network of family resource centers and gathers significant geographically disaggregated data about income, education, and wellness throughout the county. Importantly, First 5 is already looking into opportunities to promote digital equity and access as an important policy matter as it makes these policy items a priority for young children and their families in its 2021-2022 Children's Policy Agenda.[44]

Community Health Partnership

This membership organization (https://chpscc.org/) serves to coordinate and represent nonprofit health centers and clinics throughout Santa Clara and San Mateo Counties. This group has direct affiliation with ten community-based organizations providing health services at 40 sites and works closely with many county partners to advocate for affordable and quality health care for disadvantaged communities in addition to telehealth policies and support. This group has filed a Motion to participate in relevant CPUC proceedings on broadband policy and could serve as a valuable partner on expanded access to telehealth services, patient portals, electronic medical records, and other health care issues as they are impacted by lack of digital equity.

South County Collaborative

This network of local community-based organizations, schools, hospitals and clinics, and public agencies comes together to serve the county's most underserved and vulnerable communities (http://southcountycollaborative.org/scc-home/). While the mission of this organization is more generally to support services to low-income communities so they can access social services, education, and community support, the network of community leaders and the framework of the Collaborative to provide support to low-income communities could serve as a vehicle for

[44] https://first5.ca.gov/pdf/commission/meetings/handouts/Commission-Handouts-2021-10-28/Item-7-Attachment-A-F5CA-2021-22-Childrens-Policy-Agenda.pdf (accessed May 8, 2022)

several programmatic efforts to expand digital access and provide affordable broadband services to these communities.

Silicon Valley Council of Nonprofits

Founded in 1996, this longstanding member of the community represents hundreds of nonprofits in the county and regularly communicates and works with these organizations that provide critical services to their clients (https://www.svcn.org/). At one time, this group worked with community technology organizations and AmeriCorps on a project called Hands on Tech to support digital literacy, device upgrades, volunteers, and general capacity building for local nonprofit organizations. This training and work supported both the internal operations of small nonprofits and work by the nonprofits to provide digital equity programs to its clients. While this project is no longer operational, it identifies the willingness of the community to work on these projects.

California Advanced Services Fund Adoption Account – County Grantees

Since 2018, at least 12 County of Santa Clara nonprofits and local agencies have received grants from the CPUC to conduct digital literacy and equity projects for their constituencies. These nonprofits are a diverse set of organizations that include education, affordable housing, social services, and community support. While many of these organizations do not have significant resources or extensive digital equity programs, they represent potential partners for outreach, education, and training to help support these communities and fill gaps in broadband access. The CPUC lists all of the grantees since 2018, including a very brief description of the project and the funding level.[45] The following County of Santa Clara organizations have received grants since 2018:

- Christian Church Homes Providence Senior Housing
- City of Sunnyvale; Latino Digital Literacy (six schools)
- EAH Inc. (affordable housing)
- Eden Housing Inc. (affordable housing)
- Everyone On/Opportunity Connect
- First Community Housing - Access for All
- Goodwill of Silicon Valley
- Sequoia Living; Town Park Towers
- Sikh Gurdwara Digital Inclusion
- San Jose Public Library Foundation/Access San Jose
- United Way ($1.4 million for a call center on referrals to affordable services/literacy)

[45] https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/approved-adoption-account-projects-ongoing-june-2021.pdf (accessed May 8, 2022)

- Vietnamese Voluntary Foundation, VIVO Computer Training

Appendix C: Federal and state funding opportunities

Since the start of the Covid-19 pandemic—which highlighted and deepened the digital divide—the federal government and the State of California have committed billions of dollars of funding to address broadband access and adoption gaps.[46] The programs described below represent opportunities for the county to seek to advance its digital equity efforts, either through direct participation or through partnerships and other initiatives that leverage county assets and resources for the benefit of third-party efforts.

Federal funding

Over the past two years, Congress allocated significant new funding for broadband programs that will be administered by the Treasury Department, the Federal Communications Commission, and the U.S. Department of Commerce's National Telecommunications and Information Administration (NTIA).[47] The most significant funding opportunities are discussed in more detail below.

Infrastructure Investment and Jobs Act

The $1 trillion Infrastructure Investment and Jobs Act (IIJA)—including $65 billion in broadband funding for extensive deployment and digital equity initiatives—was signed into law on November 15, 2021. The NTIA will implement programs that consist of $48.2 billion of the IIJA broadband funds.[48] As part of this process, NTIA is directed to use federal broadband deployment maps, which are still in development, to determine the allocation of broadband deployment funding to the states.

Using this IIJA funding, states are directed to develop a comprehensive set of grant programs to further distribute the money to subrecipients with the goal of expanding broadband access and

[46] The discussion of state and federal broadband programs is current as of the writing of this report (June 2022). Both state and federal agencies are in the process of further developing these programs and new programs are on the horizon. Broadband funding opportunities supported by federal funding from the Infrastructure Investment and Jobs Act are being designed and funding from these programs will likely roll out over the next 12 to 18 months. Much, but not all, of the federal funding will go directly to state agencies that will then further develop programs to fund projects at the local level. A significant amount of state funding is expected to go to entities directly providing service to end users. The project team is analyzing the current opportunities and will continue to analyze emerging program rules as the state and federal governments develop them. Recommendations for maximizing opportunities will be presented in the final project report

[47] American Rescue Plan Act of 2021, Public Law 117-2, Subtitle M, Section 9901, March 11, 2021, (adding Sections 602-604 for the state and Local Fiscal Recovery Funds and the Capital Projects Fund) https://www.congress.gov/bill/117th-congress/house-bill/1319/text (accessed April 13, 2022); Infrastructure Investment and Jobs Act, Public Law 117-58, Division F, 2021, https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf (accessed April 13, 2022).

[48] NTIA issued a request for comment on January 10, 2022, regarding the broadband deployment funding program, the digital equity planning grant program, and the middle-mile grant program. Notices for comment on additional digital equity and Tribal programs will be forthcoming. More information is available at https://www.ntia.gov/files/ntia/publications/iija_broadband_rfc.pdf (accessed January 27, 2022).

digital equity to benefit communities. Additionally, NTIA will administer a Digital Equity Planning and Capacity Building program through IIJA allocations that include significant requirements for the states to create opportunities for public input on digital equity.[49] NTIA released three Notices of Funding Opportunity that define and describe each program in more detail and set out a framework and timeline for states to participate, and for local entities like the county to begin their own preparation to work with the states.

Because the IIJA and NTIA place a strong emphasis on community outreach and engagement at several steps in the funding and program processes, it is likely that state agencies responsible for administering the funds (in California it will likely be the CPUC and the California Department of Technology) may release more requests for comments and spend additional time developing their own frameworks and rules.

The NTIA will administer $48.2 billion of the broadband funding through the following programs:[50]

- *Broadband Equity, Access, and Deployment (BEAD) Program:* $42.45 billion "for broadband deployment, mapping, and adoption projects"
- *Digital Equity Act Programs:* $2.75 billion "for grant programs that promote digital inclusion and equity to ensure that all individuals and communities have the skills, technology, and capacity needed to reap the full benefits of our digital economy"
- *Tribal Broadband Connectivity Program*: $2 billion to update and expand existing funding opportunities and programs
- *Enabling Middle-Mile Broadband Infrastructure Program:* $1 billion "for the construction, improvement or acquisition of middle-mile infrastructure"

Of these, BEAD and the Digital Equity Act programs represent opportunities for funding—based on the local prioritization and, potentially, a successful grant application to the competitive element of the digital equity program. The IIJA also allocates $14 billion to the Affordable Connectivity Program—a subsidy that goes directly to low-income broadband subscribers.

[49] The state Legislature has a bill pending that directs the California Department of Technology to begin the state's Digital Equity Plan development process in consultation with "the public, California Public Utilities Commission and the Broadband Council"—AB2750 (Bonta, 2022), https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB2750 (accessed June 2, 2022).
[50] NTIA, "Grants," https://ntia.gov/category/grants (accessed November 17, 2021).

Broadband Equity, Access, and Deployment (BEAD) Program

California will receive a minimum of $100 million in BEAD funding—representing the initial minimum distribution to each state.[51] Additional allocations will be distributed based on a state's unserved and high-cost areas as identified through updates in federal mapping programs.

NTIA reports that "the first priority for funding is for providing broadband to unserved areas (those below 25/3 Mbps), followed by underserved areas (those below 100/20 Mbps), and then serving community anchor institutions (1/1 Gbps)."[52] Funding will be sent to states, which will then make sub-grants. While states will have some discretion to tailor these BEAD-funded programs to meet state-specific and local community needs, the IIJA and NTIA have some minimum standards and funding criteria:[53]

- Funding match requirement of 25% of total project costs
- The state must fund projects in unserved areas (no service offerings at 25/3Mbps or faster) before moving on to support projects in underserved areas or to support service to Community Anchor Institutions.
- Funded projects must be complete within four years and capable of delivering **reliable** broadband service with speeds of at least 100/20 Mbps and 1 Gbps symmetrical for service to qualifying anchor institutions and 100 millisecond latency to support real-time applications. Funded projects must also meet specific outage and service quality standards.
- Fiber network designs are given priority for funding and network design must maximize interconnection points.
- All provider types must be eligible for funding, including local and county governments.
- Funded projects must address affordability through the offering of "low cost" plans that meet the minimum service standards, including but not limited to participation in the federal Affordable Connectivity Program.

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[51] Broadband USA, "Broadband Equity, Access, and Deployment (BEAD) Program," https://broadbandusa.ntia.doc.gov/resources/grant-programs/broadband-equity-access-and-deployment-bead-program (accessed April 5, 2022); See, See, NTIA Notice of Funding Opportunity ("NOFO"), Broadband Equity, Access and Deployment Program, May 13, 2022 at IV.B.4.c., (funding allocation process), https://broadbandusa.ntia.gov/broadband-equity-access-and-deployment-bead-program (accessed June 5, 2022).
[52] NTIA, "Grants," https://ntia.gov/category/grants (accessed November 17, 2021); see also, IIJA, Division F, Title I, § 60102(h)(1), https://www.congress.gov/bill/117th-congress/house-bill/3684 (accessed November 17, 2021).
[53] See, NTIA Notice of Funding Opportunity ("NOFO"), Broadband Equity, Access and Deployment Program, May 13, 2022,https://broadbandusa.ntia.gov/broadband-equity-access-and-deployment-bead-program (accessed June 5, 2022); IIJA, Division F, Title I, § 60102(h)(4), (h)(5), https://www.congress.gov/bill/117th-congress/house-bill/3684 (accessed April 5, 2022).

- Significant number of other funding requirements are set out in the NTIA guidelines, including labor standards, workforce development requirements, resiliency standards, financial and technical requirements for sub-recipients, leveraging existing assets and other funding.

This funding is directed at a wide variety of sub-grantees, including local governments; however, applicants must offer service in compliance with the standards discussed above or partner with a service provider that will operate a local entity-owned network. Further, much of the County of Santa Clara may not qualify as an "unserved" or even "underserved" eligible area for deployment funding given the advertised availability of 100 Mbps service, further limiting direct opportunities for infrastructure under this program. However, the updated maps will likely identify isolated areas within the county that will be eligible for service and the county can also submit its own data to demonstrate unserved areas within its boundaries if it disagrees with the mapping and Program determinations of the eligible areas in the county.

The statute and the NTIA's rules also allow for other applications of BEAD grants (non-deployment uses) once unserved areas are funded.[54] The statute and NTIA rules allow funding to be used for broadband planning (up to 5% of funding), connecting anchor institutions, county facilities, supporting broadband adoption efforts such as digital literacy programs, and constructing infrastructure to serve low-income families in multi-dwelling buildings.[55] Therefore, with these broader uses of the funding and the pockets of unserved areas in the county, there will likely be opportunities for the county to benefit from this funding.

The NTIA has a complicated and lengthy process for states to submit a series of documents to NTIA for review and approval. Funding starts flowing to the state for Planning Funds by the 4th quarter of 2022 and funding for subrecipient projects will be released for initial projects costs no sooner than first quarter 2024. The NTIA's published process includes the following milestones:[56]

- Letter of Intent (due July 18, 2022)
- Request for Planning Funds to develop 5 Year Action Plans (due August 15, 2022)

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[54] NTIA Notice of Funding Opportunity ("NOFO"), Broadband Equity, Access and Deployment Program, May 13, 2022, at Section IV.B.7.a.iii. https://broadbandusa.ntia.gov/broadband-equity-access-and-deployment-bead-program (accessed June 5, 2022); IIJA, Division F, Title I, § 60102(f), https://www.congress.gov/bill/117th-congress/house-bill/3684 (accessed April 5, 2022).

[55] IIJA, Division F, Title I, § 60102(d)(2), (e)(1) (f), https://www.congress.gov/bill/117th-congress/house-bill/3684 (accessed April 5, 2022); NTIA Notice of Funding Opportunity ("NOFO"), Broadband Equity, Access and Deployment Program, May 13, 2022, at Section IV.B.7.a.iii. https://broadbandusa.ntia.gov/broadband-equity-access-and-deployment-bead-program (accessed June 5, 2022).

[56] NTIA Notice of Funding Opportunity ("NOFO"), Broadband Equity, Access and Deployment Program, May 13, 2022, at Executive Summary p. 1, https://broadbandusa.ntia.gov/broadband-equity-access-and-deployment-bead-program (accessed June 5, 2022).

- Five Year Action Plans due 270 days after receipt of Planning Funds
- Initial Proposals due 180 days after final determination of BEAD funding amounts to each state
- Upon approval of Initial Proposals, states must initiate grant programs and solicit sub-grantee applications and allow for a challenge process to the identification of eligible areas within the state
- Final Proposals due after grants are awarded to sub-recipients and can be no later than 365 days after approval of the Initial Proposal

Due to the complexity of this process, and the reliance on FCC's new broadband mapping process to identify "eligible areas" for funding, it is unlikely that any funding will be available to local entities prior to the fourth quarter of 2023. However, as the schedule demonstrates, opportunities to shape this program to understand and meet the needs of the County of Santa Clara may exist as early as 4th quarter of 2022 and into early 2023.

Digital Equity Planning Grant Program

NTIA's digital equity program comprises three elements:

1. State Digital Equity Planning Grant Program ($60 million)
2. State Digital Equity Capacity Grant Program ($1.44 billion)
3. Digital Equity Competitive Grant Program ($1.25 billion)

NTIA has stated that these programs aim "to promote the meaningful adoption and use of broadband services across the targeted populations in the Act, including low-income households, aging populations, incarcerated individuals, veterans, individuals with disabilities, individuals with a language barrier, racial and ethnic minorities, and rural inhabitants."[57]

The **State Digital Equity Planning Grant Program** provides funding directed toward state broadband offices to develop digital equity plans, with required local stakeholder engagement and input. These plans serve as the framework for each state's digital equity projects that can be funded through the **State Digital Equity Capacity Grant Program and the Competitive Digital Equity Capacity Program**.[58]

[57] NTIA, "Grants," https://ntia.gov/category/grants (accessed November 17, 2021).
[58] California's Legislature has a bill under consideration that identifies the California Department of Technology (CDT) as the lead agency to develop California's Digital Equity Plan. The bill directs the CDT to consult with the public, California Broadband Council, and the CPUC to create the Plan. AB2750 (Bonta, 2022), available at https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB2750 (accessed June 2, 2022).

NTIA has recently released its rules for states to receive the Digital Equity Planning grant funding.[59] NTIA estimates that California will receive $4 million for developing its Digital Equity Plan based on the number of unserved residents within a state, the number of "covered populations" within a state, and other demographic factors.[60] NTIA requires states to include its "vision" for digital equity in its state-wide plan, as well as identify barriers to digital equity, and outline measurable objectives and methods for addressing those barriers. These methods could include digital literacy programs, public computing and broadband access programs, workforce development, and affordability and subsidy programs.

These Plans must also:[61]

- Address barriers specifically related to "covered populations" that are defined as aging individuals, incarcerated, individuals with disabilities, veterans, low-income households, racial and ethnic minority groups, rural communities, individuals with low literacy or that are limited English speaking
- Must outline its plan for significant opportunities for community engagement and public input, a needs assessment and an "asset inventory" of existing digital equity plans and current programs at the state and local levels
- Must coordinate and incorporate the BEAD 5-Year plan and this Digital Equity Planning process with each other

Like the BEAD funding discussed above, the NTIA's model provides funding to the states and expects that the states will be the primary user of the funds as it works on the state-wide plans with only a focused amount of subgrants for these planning projects. However, after development of the Digital Equity Plan, the State Digital Equity Capacity Grant funding will be distributed in annual grants to each state over five years "to implement digital equity projects and support the implementation of digital equity plans."[62] States are directed to use this money to establish programs to fund both statewide and local digital equity efforts. The Digital Equity **Competitive** Grant Program differs from the other two programs because it allows for grants

[59] NTIA Notice of Funding Opportunity, State Digital Equity Planning Grant Program, May 13, 2022 (Digital Equity Planning), https://broadbandusa.ntia.gov/resources/grant-programs/digital-equity-programs (accessed June 5, 2022).
[60] Id. at p. 13, Section II.C.2.
[61] Id. at IV.C.
[62] BroadbandUSA, "NTIA's Role in Implementing the Broadband Provisions of the 2021 Infrastructure Investment and Jobs Act," https://broadbandusa.ntia.doc.gov/news/latest-news/ntias-role-implementing-broadband-provisions-2021-infrastructure-investment-and (accessed November 17, 2021).

from the NTIA directly to local agencies, and other community organizations such as nonprofits, anchor institutions including schools, Tribal entities, and workforce programs.[63]

Funding for the Digital Equity Planning Grant and Capacity Grant programs are on a slightly simpler track than the BEAD program, but just as lengthy:[64]

- Applications by states for planning funds due July 12, 2022, and funds will be available after September 29, 2022
- Digital Equity Plans must be submitted to NTIA within a year of the state's receipt of funds.
- Digital Capacity grant window will open for states within two years of the availability of planning funding or no later than September 2024 if the Program stays on schedule.
- Digital Equity Capacity subgrants will be available after the state receives the funding.
- Digital Capacity grant window for "competitive" applicants (non-state applicants) will open within one month of the first state Capacity grants or no sooner than 4th quarter 2024, more likely into 2025

After development of the Digital Equity Plan, the State Digital Equity Capacity Grant funding will be distributed in annual grants to each state over five years "to implement digital equity projects and support the implementation of digital equity plans."[65] States are directed to use this money to establish programs to fund both statewide and local digital equity efforts. The Digital Equity **Competitive** Grant Program differs from the other two programs because it allows for grants from the NTIA directly to local agencies, and other community organizations such as nonprofits, anchor institutions including schools, Tribal entities, and workforce programs.[66]

Current and anticipated efforts in the county to address digital equity issues may qualify for funding under these federal digital equity programs, but more clarity and guidance will come as NTIA reviews and approves each state's Digital Equity Plan. In the near term, the Digital Equity

[63] BroadbandUSA, "Digital Equity Programs," https://broadbandusa.ntia.doc.gov/digital-equity-programs (accessed April 5, 2022); see also, IIJA, Division F, Title III § 60305 (Digital Equity Competitive Grant Program), https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf (accessed April 13, 2022).
[64] NTIA Notice of Funding Opportunity, State Digital Equity Planning Grant Program, May 13, 2022 (Digital Equity Planning),Executive Summary at p. 1; https://broadbandusa.ntia.gov/resources/grant-programs/digital-equity-programs (accessed June 5, 2022).
[65] BroadbandUSA, "NTIA's Role in Implementing the Broadband Provisions of the 2021 Infrastructure Investment and Jobs Act," https://broadbandusa.ntia.doc.gov/news/latest-news/ntias-role-implementing-broadband-provisions-2021-infrastructure-investment-and (accessed November 17, 2021).
[66] BroadbandUSA, "Digital Equity Programs," https://broadbandusa.ntia.doc.gov/digital-equity-programs (accessed April 5, 2022); see also, IIJA, Division F, Title III § 60305 (Digital Equity Competitive Grant Program), https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf (accessed April 13, 2022).

Planning funding will give the county an opportunity to influence the state's Plan through its participation in the process.

Middle-Mile Broadband Infrastructure Program

The NTIA will also oversee a new direct grant program related to middle-mile infrastructure expansion.[67] The two key objectives of the Middle-Mile Broadband Infrastructure Program (MMBIP) are to extend middle mile infrastructure to reduce the costs of interconnection by Last Mile providers and, therefore, incentivize Last Mile Providers to extend their own networks and to promote broadband resiliency by creating alternative and redundant network paths.[68] Grants for this program are expected to range anywhere from $5,000,000 to $100,000,000 and can fund "construction, improvement and/or acquisition of facilities and equipment" in addition to design and permitting work.[69]

If awarded funding, grantees will have to prioritize:[70]

1. Connecting resulting infrastructure to last-mile networks that will provide services to households in unserved areas with a requirement to demonstrate financial sustainability of the project

2. "Connecting non-contiguous trust lands"

3. Offering wholesale service at reasonable rates on carrier-neutral basis

4. Coordination with the state broadband office (California Department of Technology and the California Broadband Council) to ensure the project supports the state's broadband plan and priorities, especially coordinating with California's Middle Mile Broadband Infrastructure project

5. Prioritizing the connections for community anchor institutions that can deliver gigabit speeds and even designing direct connections to these institutions that are within 1,000 feet of the middle mile infrastructure.

6. Providing a 30% match of total project costs, submitting an irrevocable letter of credit for 25% of the project costs and compliance with a significant set of financial, technical and

[67] BroadbandUSA, "Enabling Middle Mile Broadband Infrastructure Program," https://broadbandusa.ntia.doc.gov/resources/grant-programs/enabling-middle-mile-broadband-infrastructure-program (accessed April 5 2022); see also, IIJA, Division F, Title IV, §§ 60401 *et seq*., https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf (accessed April 13, 2022).
[68] NTIA, Notice of Funding Opportunity, Middle Mile Grant Program, May 13, 2022, at Section I. A. https://broadbandusa.ntia.gov/resources/grant-programs/enabling-middle-mile-broadband-infrastructure-program (accessed June 5, 2022).
[69] Id. at Executive Summary, p. 2, Sections II.C., IV.I,1
[70] Id. at Section V.A.1

managerial qualifications as well as strict labor standards, workforce development requirements.

Awards are expected to be made no sooner than March 1, 2023.[71] Grantees will be expected to complete construction within five years of the award (which may be extended). Eligible entities are states and divisions of local government as well as tribal entities and territories, non-profits and cooperatives. Partnerships are encouraged.

Finally, it is important to note that a project must facilitate last mile connections in areas that lack service offerings of at least 25/3 Mbps.[72] This requirement will limit the areas within the county that would be eligible for MMBIP funding. Moreover, California's massive middle mile program may also further narrow the areas of the county that would benefit from this federal funding. Depending on their routing, projects in neighboring areas may reach into the rural areas of the county to benefit residents of Santa Clara and the service providers in these areas.

Affordable Connectivity Program

The IIJA also allocated $14.2 billion for the Affordable Connectivity Program (ACP) to be administered by the FCC.[73] This program provides $30 monthly subsidy to eligible low-income residents for broadband service. The ACP also subsidizes the cost of a "connected device" up to $100, including laptops, desktops and tablets, but not cell phones or tablets with cellular service capabilities.[74]

The ACP has broad eligibility criteria allowing households with income up to 200% of the federal poverty line or those participating in a wide variety of federal subsidy programs to enroll; only one monthly service discount and one device discount is allowed per household. Any wireline or wireless ISP can participate in the ACP and they must allow customers to apply their monthly subsidy to any current service offering.

While the ACP has significant potential to support access to robust residential broadband service for low-income households, the success of the ACP hinges on the ease of the enrollment process and strong outreach and education about the program, including in partnership with participating ISPs. The FCC has expressed strong support for the need for robust outreach and

[71] Id., Executive Summary at p. 1.
[72] Id.
[73] In the Matter of Affordable Connectivity Program WD Docket 21-450, Report and Order and Further Notice of Proposed Rulemaking (FCC 22-2), January 21, 2022, (ACP Final Rules), https://docs.fcc.gov/public/attachments/FCC-22-2A1.pdf (accessed January 27, 2022); see also, IIJA, Division F, Title V, §§ 60501 *et seq*., https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf (accessed April 13, 2022). The ACP is a follow-up program to the Emergency Broadband Benefit program, which sunset at the end of 2021. See, also, "FCC Releases Rules to Implement Affordable Connectivity Program," January 21, 2022, https://www.fcc.gov/document/fcc-releases-rules-implement-affordable-connectivity-program (accessed May 6, 2022).
[74] ACP Final Rules, paragraphs 92-118.

has developed outreach materials and created an "outreach partner" program that may also including paid outreach efforts once the FCC issues rules and opens up applications for this program.[75]

The county, along with other stakeholders and community connectors, has been conducting outreach and education efforts to support enrollment of the ACP.[76]

American Rescue Plan Act

Coronavirus Capital Projects Fund

The Treasury's Coronavirus Capital Projects Fund (CPF) is a $10 billion program authorized under the American Rescue Plan Act of 2021 that will provide flexible funding opportunities for a wide range of broadband-related projects to be administered at the state level. The program will allow funds to be use for costs that fit into one of three major categories:

- Broadband Infrastructure Projects: "[C]onstruction and deployment of broadband infrastructure designed to deliver service that reliably meets or exceeds symmetrical speeds of 100 Mbps so that communities have future-proof infrastructure to serve their long-term needs"

- Digital Connectivity Technology Projects: "[P]urchase or installation of devices and equipment, such as laptops, tablets, desktop personal computers, and public Wi-Fi equipment, to facilitate broadband internet access for communities where affordability is a barrier to broadband adoption and use." You read that right: Affordability matters. Those who can't afford to pay for services, even if available, are considered unserved.

- Multi-Purpose Community Facility Projects: "[C]onstruction or improvement of buildings designed to jointly and directly enable work, education, and health monitoring located in communities with critical need for the project"

California will receive $540,249,909 in CPF funding. The California Legislative Analyst's Office issued a report on April 6, 2022, that identified this CPF allocation as part of the funding for the CPUC's Last Mile Federal Funding Account program, discussed further below. [77]

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[75] ACP Final Rules, paragraphs 190-195; FNPRM at 271-280.

[76] See Appendix B for discussion of the current work by the Vietnamese American Service Center, the County Office of Education and the City of San José's Digital Inclusion Partnership to educate eligible residents about the ACP and provide enrollment assistance.

[77] California Legislative Analyst's Office, "Overview of Last-Mile Broadband Infrastructure Project Administration and Funding," April 6, 2022, https://lao.ca.gov/handouts/socservices/2022/Last-Mile-Broadband-Infrastructure-040622.pdf (accessed April 11, 2022); see also, Department of the Treasury, "Guidance for the Coronavirus Capital Projects Fund," September 2021, https://home.treasury.gov/system/files/136/Capital-Projects-Fund-Guidance-States-Territories-and-Freely-Associated-States.pdf.

Coronavirus State and Local Fiscal Recovery Fund

Established by the American Rescue Plan Act (ARPA), this program will distribute $350 billion in emergency funding to eligible state, local, territorial, and Tribal governments.[78] In California, the Legislature allocated over $1 billion in Fiscal Recovery Funds, plus other sources of state and federal funding to support a multi-year $2 billion last mile funding project discussed below, plus $3 billion in Fiscal Recovery Funds for the state open access middle mile project.[79]

These funds can be used in areas without access to reliable service at speeds of 100/20 Mbps, but can also be broadly invested, "in projects designed to provide service to locations with an identified need for additional broadband investment."[80]

This program will fund broadband deployments and digital inclusion strategies designed to facilitate connectivity and has been designed to enable states and localities "to identify the specific locations within their communities to be served and to otherwise design the project" to fit their needs.[81]

1. **Infrastructure projects must support 100 Mbps symmetrical speeds. Funding can also go to support projects that offer** 100/20 Mbps, but only in cases where geographical, topographical, or fiscal constraints make the higher speed offerings impractical and where the deployed infrastructure can be scaled to reach 100 Mbps symmetrical. The program also strongly suggests that projects focus on fiber deployments.

2. **Projects are encouraged to prioritize areas that do not have reliable wireline service offerings at 100/20 Mbps.** Treasury gives recipients broad discretion to determine community needs for additional broadband investment. This includes situations where an area may appear to be served by a provider with 100/20 Mbps service, but the area may have significant service quality and outage problems with the current service, or the service offerings may be unaffordable. Even in those situations, funding may be available.

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[78] Department of the Treasury, 31 CFR Part 35 (Pandemic Relief Programs), effective April 1, 2022, https://home.treasury.gov/system/files/136/SLFRF-Final-Rule.pdf (accessed January 27, 2022); see also, "Coronavirus State & Local Fiscal Recovery Funds: Overview of the Final Rule," January 2022, https://home.treasury.gov/system/files/136/SLFRF-Final-Rule-Overview.pdf (accessed April 13, 2022).

[79] California Legislative Analyst's Office, "Overview of Last-Mile Broadband Infrastructure Project Administration and Funding," April 6, 2022, https://lao.ca.gov/handouts/socservices/2022/Last-Mile-Broadband-Infrastructure-040622.pdf (accessed April 11, 2022); see also, California Department of Technology, First Report to the Legislature on the Middle-Mile Broadband Initiative, March 14, 2022, https://cdt.ca.gov/wp-content/uploads/2022/03/22692-CDT22-MMBI-Legislative-Report_FINAL.pdf (accessed April 11, 2022).

[80] Department of the Treasury, "Coronavirus State & Local Fiscal Recovery Funds: Overview of the Final Rule," page 39, https://home.treasury.gov/system/files/136/SLFRF-Final-Rule-Overview.pdf (accessed April 13, 2022).

[81] Department of the Treasury, "Coronavirus State and Local Fiscal Recovery Funds, Interim Final Rule," 31 CFR Part 35, RIN 1505-AC77, May 10, 2021, page 71, https://home.treasury.gov/system/files/136/FRF-Interim-Final-Rule.pdf; Interim Final Rules, "Interim Final Rules."

3. **Projects are encouraged to prioritize affordability as well as local broadband solutions.** After noting that the U.S. has some of the most expensive broadband service in the world,[82] the program's rules place special emphasis on ensuring that the resulting broadband service provided over the funded network is affordable. The Treasury requires that projects receiving this funding must require the service provider to participate in the federal ACP or otherwise provide "access to a broad-based affordability program" that is similar to the benefits provided under the ACP.[83] The Treasury also encourages recipients to "prioritize support for broadband networks owned, operated by, or affiliated with local governments, nonprofits, and co-operatives, given that these networks have less pressure to generate profits and a commitment to serving entire communities."[84]

4. **Projects are encouraged to prioritize last-mile connectivity.** While Treasury underscores this, states and localities are not precluded from setting their own priorities, and other initiatives that could improve affordability by investing in capacity bottlenecks such as middle-mile or data center builds could be funded.[85]

5. **Infrastructure projects are expected to meet strong labor standards.**[86] This includes project labor agreements, community benefit agreements, and wages at or above the prevailing rate with local hire provisions.

6. **Allocations from these funds can be leveraged as matches for other broadband grant opportunities.** Because these funds are considered locally administered, if an entity is already targeting a federal grant or state grant opportunity that requires matching funds, the Fiscal Recovery Funds can be leveraged for that purpose.[87] It is important that these funds are used to pay for separate expenses than the other matching funds.

State of California funding

The California Department of Technology (CDT) and the California Broadband Council are two state entities directly involved in setting California's broadband policy and programs. The

[82] "Even in areas where broadband infrastructure exists, broadband access may be out of reach for millions of Americans because it is unaffordable, as the United States has some of the highest broadband prices in the Organisation for Economic Co-operation and Development (OECD)." Interim Final Rules, page 70, U.S. Department of the Treasury.
[83] SLFRF Final Rules, Federal Register, Vol. 87, No. 18, Supplementary Information, p. 4421, January 27, 2022.
[84] SLFRF Final Rules, Federal Register, Vol. 87, No. 18, Supplementary Information, p. 4421, January 27, 2022.
[85] SLFRF Final Rules, Federal Register, Vol. 87, No. 18, Supplementary Information, p. 4418, 4420-4421, January 27, 2022.
[86] SLFRF Final Rules, Federal Register, Vol. 87, No. 18, Supplementary Information, pp. 4408-4409, 4444, January 27, 2022.
[87] SLFRF Final Rules, Federal Register, Vol. 87, No. 18, Supplementary Information, p. 4422, January 27, 2022.

Broadband Council issued its Broadband for All Action Plan in 2020.[88] This Action Plan reflects the principles and goals set out by the Governor and has served as a guidance document for many state agencies as they have carried out broadband policy and programs. CDT has been the state agency to generally oversee the state's broadband policy implementation, including the Action Plan.[89] In 2021, the Legislature tasked CDT, along with its internal Office of Broadband and Digital Literacy and the CPUC, with implementing a $3 billion spending program to expand middle-mile networks throughout the state.[90]

The CPUC has been a leader and catalyst for California's broadband access policies and programs for many years. The California LifeLine Program is a longstanding CPUC-administered program providing discounts for services to keep people connected through voice, text, and data services.[91] The CPUC also administers several public purpose programs that advance broadband policy goals including the California Advanced Services Fund and the Teleconnect Fund. These programs, and the opportunities for the county to work with these programs to improve broadband access for the most vulnerable county residents, are discussed below.

California Advanced Services Fund

This important program was created in 2007 by the CPUC to set money aside for broadband infrastructure projects in unserved areas of California. The program received Legislative codification in 2010 as Public Utilities Code Section 281, allowing a line-item surcharge on customer bills to support this program. The Legislature has declared that the goal for this Fund is to support projects that will provide broadband access to "no less than 98% of California households in each consortia region" by 2032.[92]

The CPUC and the Legislature have revised and amended the rules for this program several times since 2010, but the core of the program remains the same. Currently, the statute caps the amount that can be collected through end user surcharges to $150 million per year between 2022 and 2032.[93] The statute also earmarks $2 billion in ARPA recovery funds and other state

[88] California Broadband Council, "Broadband for All Action Plan," https://broadbandcouncil.ca.gov/wp-content/uploads/sites/68/2020/12/BB4All-Action-Plan-Final.pdf (accessed April 5, 2022).
[89] California Broadband Council, "Closing the Digital Divide," https://broadbandforall.cdt.ca.gov/ (accessed April 13, 2022).
[90] SB 156, Chapter 112 (July 20, 2021), Section 3 (adds Govt Code Sections 11549.50 et seq.); See also, California Department of Technology, "First Report to the Legislature on the Middle-Mile Broadband Initiative," March 14, 2022, https://cdt.ca.gov/wp-content/uploads/2022/03/22692-CDT22-MMBI-Legislative-Report_FINAL.pdf (accessed April 11, 2022).
[91] See, CPUC LifeLine information: https://www.cpuc.ca.gov/lifeline/ (accessed May 6, 2022).
[92] See SB 4, Chapter 671, October 8, 2021, revising Pub. Util. Code Section 281, https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PUC&sectionNum=281 (accessed March 31, 2022).
[93] Public Utilities Code Section 281(d)(4).

funding, discussed above, to support last-mile broadband infrastructure programs over the next four years.[94]

CASF is composed of several "accounts." In light of the county's priorities of addressing digital equity issues and leveraging existing infrastructure to address gaps in broadband access within the area, the following accounts are most relevant:

1. Broadband Infrastructure Grant Account[95]

This Account has been the cornerstone of the CASF program, funding hundreds of millions of dollars in last mile infrastructure deployment projects throughout the state. To be eligible for funding, projects must

- Propose to serve "unserved areas." The statute defines "unserved" as an area with no facilities based broadband provider offering at least one tier of service at 25/3 Mbps. The statute also directs the CPUC to prioritize projects in areas with service no greater than 10/1 Mbps.

- A proposed project must be capable of providing service to the area at a minimum speed of 100/20 Mbps or the speed standard set by the FCC, whichever is faster at the time of the application.

- Funding amounts are left to the discretion of the CPUC (subject only to the program budget) and there is no requirement for matching funds. Projects that demonstrate how they will leverage other funding sources, including federal funding, will be given extra consideration.

- There is no affordability standard or low-income requirement, but the Commission's rules for this program require grantees to offer a low-cost program for $15 per month providing speeds of at least 25/3 Mbps.

- There is a challenge process for incumbent and competing providers in the proposed funded service area.

While this is the largest of the CASF Accounts, and the Commission has allocated $24.8 million to this program for FY 2022-2023,[96] the program has not accepted applications for funding since

[94] Public Utilities Code Section 281(n).
[95] Public Utilities Code Section 281(f); see also, CPUC CASF Infrastructure Grant Account Information, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-infrastructure-grant (accessed May 5, 2022).
[96] California Public Utilities Commission Decision D.22-05-029 (Rulemaking 20-08-021, OIR Regarding Revisions to the California Advanced Services Fund), May 19, 2022, at p. 67.

2020. The Commission expects to issue new rules for this program and has extended the application deadline for the next round of grants to at least the third quarter 2022.[97] Meanwhile, the Commission has shifted staff resources to the implementation and administration of the Federal Funding Account for last-mile projects, discussed below.

2. Broadband Adoption Account

The Legislature created this Account to fund projects that "increase publicly available or after school broadband access and digital inclusion."[98] As discussed in Appendix B, twelve County of Santa Clara nonprofits and local agencies have received funding from this program since 2018 to provide a variety of digital literacy and inclusion services to their constituents. The CPUC has allocated $20 million for FY 2022-2023 for this program.[99] Under the rules, projects can include:[100]

- Digital literacy training programs and public education
- Free broadband access in community and public spaces (cannot be used to fund residential service)
- Community outreach and education regarding affordable plans and efforts to increase broadband access and adoption
- Subsidies for in-classroom and take home approved "computing devices" (cannot be used to fund smartphones)

Eligible applicants include a wide variety of entities including local governments, nonprofits, schools, and libraries with priority for funding going to communities with "demonstrated low broadband access."[101] The rules set a cap of 85% funding for "eligible" program costs (as specifically defined by the CPUC). The CPUC's rules contain detailed application and reporting

[97] "Letter from CPUC Executive Director," December 23, 2021, https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/casf-letter-elimination-of-rofr-and-postponent-of-the-feb-infastructure-application-deadline.pdf (accessed May 5, 2022); See also, Assigned Commissioner's Ruling (June 7, 2022), R.20-08-021, "Inviting Comment on Potential Modifications to Infrastructure Account," https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M482/K148/482148577.PDF (accessed July 5, 2022).

[98] Public Utilities Code Section 281(i)(1); See also, CPUC Adoption Account information at https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-adoption-account (accessed May 5, 2022).

[99] California Public Utilities Commission Decision D.22-05-029 (Rulemaking 20-08-021, OIR Regarding Revisions to the California Advanced Services Fund), May 19, 2022, at p. 67.

[100] Id. at pp. 3-4.

[101] The rules create a presumption that low-income communities, senior communities and communities facing socio-economic barriers to broadband adoption are communities with "demonstrated low broadband access." Id. at Appendix 2, p. 1.

requirements, including appropriate uses for the funding, requirements to track broadband subscription by program participants, and device distribution to qualifying low-income families to take home after completing digital literacy training courses.[102]

3. Rural and Urban Regional Broadband Consortia Account

The CPUC created the framework for California's network of broadband consortia by statute in 2010.[103] These consortia are tasked to facilitate deployment of broadband services through information sharing within the communities they serve, development of public/private partnerships, information gathering on broadband needs, gaps and projects to share with policy leaders, and assistance to infrastructure grant applicants located in their area.[104] Consortia are required to submit detailed work plans, audits, performance and metric reporting, and attend conferences on an annual basis.

One or two local organizations serve as the "lead" as part of the application process and operation of the consortia. Consortia are mostly made up of economic development, information technology agencies, and chambers of commerce and other business leaders throughout a broadband region. Other regional stakeholders such as nonprofits, communication industry members, public safety representatives, regional industry representatives, education policy/school districts and other local leaders can also be part of the meetings and participate in the consortium, often as a non-voting member. The CPUC has allocated $10 million for FY 2022-2023 for this program and funding is limited to $200,000 per year per consortia.[105] Only one consortium can be funded in a region, primarily drawn by county lines. Multiple counties are generally represented by a single consortium.

There are 13 active and funded consortia today; the levels of activity and the number of consortia vary over time.[106] **County of Santa Clara, San Mateo County, and the City and County of San Francisco do not currently have a representative regional consortium**. The Central Coast Broadband Consortium is the closest to the south and the North Bay-North Coast is the closest to the north.

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[102] Id. at Appendix 2, p. 6-8 (Information Required from Applicants), p. 12 (Reporting).
[103] Public Utilities Code Section 281(g); See also, CPUC Consortia Account information, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/casf-consortia-account (accessed April 28, 2022).
[104] California Public Utilities Commission Decision D.22-05-029 (Rulemaking 20-08-021, OIR Regarding Revisions to the California Advanced Services Fund), May 19, 2022, at Appendix 3 (Rural and Urban Regional Broadband Consortia Grant Account Application Requirements and Guidelines) at pp. 2-3.
[105] Id. at pp. 67, Appendix 3, pg. 1,
[106] https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/communications-division/documents/casf-adoption-and-access/consortia/main-consortia-page/casf-broadband-consortia-region-map_10122021.png (accessed April 28, 2022).

4. Broadband Public Housing Account

The Public Housing Account has always been part of the CASF program intended to bring robust broadband access to low-income consumers within public housing communities. The Legislature made significant changes to this Account in 2021, and the Commission recently issued rules for the individual grants under this Account.[107] The Commission allocated $15 million for FY 2022-2023 to this program.[108] Under the new rules, the property owner or manager is intended to be the applicant for this funding. The statute directs the CPUC to provide grants and loans to "low-income communities" for projects to install and connect wireline or wireless broadband inside wiring and building networks, including hardware and equipment associated with the network.[109] An eligible "low-income community" must demonstrate that the building does not have access to free broadband service meeting a 23/3 Mbps standard. The statute and the CPUC Rules create a broad definition of an eligible "low-income community" that includes multi-unit publicly supported housing developments owned by a state or municipal entity or owned by a non-profit that receives public funding to subsidize housing and farmworker housing.[110]

The CPUC anticipates that applicants will hire a broadband service provider to wire the building and provide services to the tenants. The rules require that the grantee property owners must ensure that all residents have access to free broadband service that provides at least 25/3Mbps during peak usage hours for five years after funding.

5. Federal Funding Account

The state Legislature allocated $2 billion of federal funding from the ARPA funds and California's General Fund to the CPUC for a new last-mile federal funding program ("Federal Funding Account Program").[111] In April, the CPUC adopted program rules that set out application requirements and minimum standards for this Program.[112]

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[107] California Public Utilities Commission Decision D.22-05-029 (Rulemaking 20-08-021, OIR Regarding Revisions to the California Advanced Services Fund), May 19, 2022, at Appendix 1 (Broadband Public Housing Account Revised Application and Guidelines).

[108] Public Utilities Code Section 281(i); See also, California Public Utilities Commission Decision D.22-05-029 (Rulemaking 20-08-021, OIR Regarding Revisions to the California Advanced Services Fund), May 19, 2022, at p. 67.

[109] California Public Utilities Commission Section 281(j).

[110] California Public Utilities Commission Decision D.22-05-029 (Rulemaking 20-08-021, OIR Regarding Revisions to the California Advanced Services Fund), May 19, 2022, at Appendix 1 (Public Housing Account) at pp. 4-5.

[111] SB 4, Chapter 671 (October 8, 2021), Section 2 (revised Public Utilities Code Section 281(n)), https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220SB4 (accessed April 13, 2022); See also California Legislative Analyst's Office, Overview of Last-Mile Broadband Infrastructure Project Administration and Funding, April 6, 2022, https://lao.ca.gov/handouts/socservices/2022/Last-Mile-Broadband-Infrastructure-040622.pdf (accessed April 28, 2022).

[112] California Public Utilities Commission, Decision D.22-04-055 (Rulemaking20-09-001, OIR Regarding Broadband Infrastructure, issued, April 21, 2022, https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022).

The CPUC's Federal Funding Account Program includes:

- A broad spectrum of eligible entities that can apply for this program, including facilities-based broadband service providers, local governments, electric utilities, nonprofits, cooperatives, and Tribal governments
- The CPUC has stated its intent to give priority to requests from local governments, nonprofits, and cooperatives, finding that these networks have less pressure to generate profits and a stronger commitment to serve entire communities.[113]
- Applicants will need to provide specific managerial, technical, and financial background to support their applications, including letters of credit and three years of audited financial statements.[114] Applicants that provide matching project funds may receive additional points as part of their application review, but matching funds will not be required.

As part of its statutory mandate, the CPUC announced the allocation of the funding for this program pursuant to a formula that identifies counties as urban or rural using 2019 broadband deployment data.[115] The CPUC will approve projects for funding in each county at levels that correspond with the amount allocated to each county. The CPUC categorized the County of Santa Clara as an urban county and allocated $36 million to fund broadband infrastructure projects located in the county.

In addition to the funding allocation, the CPUC tasked its Communications Division staff to create a list of "priority areas" for last mile funding that applicants will be required to include in their applications.[116] Although not explicit, the CPUC's Final Decision seems to suggest that there will be identified priority areas in each county. Initial funding will be limited to projects in areas that

[113] California Public Utilities Commission, D.22-04-055, R.20-09-001, Decision Adopting Federal Funding Account Rules, April 21, 2022, p. 39-40, Finding of Fact 13, https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022). This statement of intent by the CPUC matches the guidelines issued by Treasury for state programs that use the ARPA funding, Department of the Treasury, Coronavirus State and Local Fiscal Recovery Funds, Final Rule, Fed. Reg Vol. 87, No. 18 pp. 4419, 4421 (Supplementary Information).

[114] California Public Utilities Commission, D.22-04-055, R.20-09-001, Decision Adopting Federal Funding Account Rules, April 21, 2022, Appendix A, p. 20 (Rule 9.15), https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022).

[115] California Public Utilities Commission, D.22-04-055, R.20-09-001, Decision Adopting Federal Funding Account Rules, April 21, 2022, pp. 32-35 https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022).

[116] California Public Utilities Commission, D.22-04-055, Docket R.20-09-001, Decision Adopting Federal Funding Account Rules, April 21, 2022, pp. 25, Appendix A (Rule 2, Rule 9.6), https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022).

the CPUC staff identify as "priority areas." A "priority area" will have a "high density of unserved locations," defined as an area with no service available at 25/3 Mbps.[117]

Staff will also encompass a broader set of criteria to demonstrate that the priority area will make "a substantial contribution to meeting the state's broadband deployment objectives" including demographic information, identification of the area as a "disadvantaged community" and "other measures of broadband need and digital equity" to meet those criteria.[118]

The CPUC's Final Decision does not set a deadline for staff to issue this list of priority areas, but states that it anticipates that it will update the list of priority areas as broadband data become available and gives the applicants the opportunity to add or subtract to the list of priority area, or to revise the boundary of a priority area, consistent with the requirements and criteria described in the Final Decision.

Other aspects of this Program include:[119]

- Projects must be capable of offering 100 Mbps symmetrical to end users throughout the funding area except under unique circumstances as defined by the rules. Latency can be no higher than 100 milliseconds. Service offerings must offer at least 1,000 GB of data a month, with strong preference for unlimited data.

- Projects must meet affordability requirements that cap prices for five years after project completion at the rates proposed in the application. Projects must also include participation in the Affordable Connectivity Program or other analogous low-income service offering. Applicants also receive extra points for providing a longer cap on rates beyond the 5 years or offering a "low-cost" broadband plan that does not exceed a $40 rate for end users for speeds of no less than 50/20 Mbps.

- In addition to being identified as a priority area, projects can also be proposed to address areas with "unreliable" service offerings. The CPUC adopted a "rebuttable presumption" that areas with only copper facilities or cable system technology of DOCSIS 2.0 or lower will be designated as "unserved" and eligible for funding due to the unreliable nature of this network technology. Incumbent ISPs and network owners will be allowed to rebut

[117] Id.
[118] California Public Utilities Commission, D.22-04-055, R.20-09-001, Decision Adopting Federal Funding Account Rules, April 21, 2022, p. 25, Appendix A (Rule 2), https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022).
[119] California Public Utilities Commission, D.22-04-055, R.20-09-001, Decision Adopting Federal Funding Account Rules, April 21, 2022, https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022). See, generally, the Rules and Guidelines for this Program included in Appendix A.

this assumption by showing that the network in question offers reliable service to all locations of at least 25/3Mpbs.[120]

- Projects must specify fiber technology, although applicants can justify the use of different technology with additional evidence and documentation that fiber is infeasible.
- Projects must be completed within 2 years, or 18 months for projects exempt from CEQA review.

The CPUC expects that all funds will be distributed by June 30, 2023. It will accept applications two times a year on a schedule that will be developed by Commission staff. Applications will require a detailed set of 19 items that are set out in the rules for the program.[121] There is also a ministerial review process for funding requests of less than $25 million with no objections or competing applications. Interested parties may review the submitted applications and file comments objecting on the basis of an error of fact, conflict with policy, or a violation of a statutory requirement. Once granted funding, grantees will have a progressive payment schedule that requires project status reports at 10%, 35%, 60%, and 85% of project completion and final payment upon receipt of an approved completion report.

Each of these CASF programs can be a valuable funding opportunity to advance the county's broadband access and digital equity priorities. In most cases, the county can apply for funding directly, or as part of a consortium of entities. For example, as discussed above, the CPUC has stated that it will prioritize funding for public entities that plan to build out a last-mile network to provide services to its residents as part of its Federal Funding Account last mile program. In the alternative, the county could actively investigate, research, and conduct outreach to community partners to encourage them to apply for these funding opportunities to support projects that will benefit the county by increasing infrastructure and affordability of service or expand adoption for broadband service.

Other CPUC programs

Funding opportunities from the CPUC for planning and technical assistance could help the county analyze its options for infrastructure projects. The state Legislature set aside $50 million for the CPUC to create a Local Agency Technical Assistance program.[122] This program provides grants in

[120]California Public Utilities Commission, D.22-04-055, R.20-09-001, Decision Adopting Federal Funding Account Rules, April 21, 2022, p. 20, https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022).

[121] California Public Utilities Commission, D.22-04-055, R.20-09-001, Decision Adopting Federal Funding Account Rules, April 21, 2022, Appendix A, https://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=470543650 (accessed April 28, 2022).

[122] See California Public Utilities Commission, D. 22-02-026 (February 25, 2022), R.20-08-021, https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M454/K873/454873811.PDF (accessed April 12, 2022).

amounts of up to $500,000 to a local agency,[123] including cities, counties, and utility districts, for technical assistance for broadband infrastructure planning. This funding can be applied toward "costs related to the development of broadband network deployment projects to benefit unserved [and underserved] Californians."[124]

This funding is intended to cover pre-project costs and the applicant must demonstrate how the funded activities will be "reasonably expected to lead" to a project that qualifies for infrastructure funding in unserved and underserved areas. While the CPUC does not provide an exhaustive list of eligible activities, it notes that environmental review processes, needs assessments, engineering designs, market studies, business plans and similar efforts could be eligible. This program will fund projects on a reimbursement basis and in most cases will require grantees to submit a "reimbursable work product," such as a report, study, or agreement, prior to receiving payment. The CPUC has posted materials regarding this program, and the related Tribal Technical Assistance program on its website, including examples of projects.[125]

The CPUC will accept applications for this technical assistance program on a rolling basis. To the extent that the county is considering applying for federal or state funding to support broadband infrastructure projects, either on its own or through a partnership, the county could consider also applying for funding from this program to conduct necessary planning work.

The CPUC is also in the process of implementing a Loan Loss Reserve Fund of $750 million pursuant to state statute. This Fund will support local governments, tribes, and nonprofits in securing enhanced public financing to construct and operate public fiber networks.[126] This funding is designed to be used as collateral for local agencies to receive better borrowing rates and terms on financing of these projects. The Fund can also pay for the costs of debt issuance and a reserve for payment of principal and interest on debt. This Fund can serve as another tool for larger projects that the City may create through its own resources or as a partnership.

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[123] The CPUC's Rules allow applicants to request up to $1 million in funding for a project, but applicants must provide increased application documentation and receive formal approval from the Commission. D.22-02-026, Attachment 1, p. 5.

[124] California Public Utilities Commission, D. 22-02-026, February 25, 2022, R.20-08-021, at Attachment 1, p. 1, https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M454/K873/454873811.PDF (accessed April 12, 2022).

[125] See here for Tribal program, https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/california-advanced-services-fund/tribal-technical-assistance and here for local agency program (tribal entities are eligible for both programs) https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-implementation-for-california/local-agency-technical-assistance (accessed April 28, 2022).

[126] SB156 Chapter 112 (July 20, 2021), Section 8 (adds Pub. Util. Code Section 281.2); see also, CPUC Assigned Commissioner's Second Amended Scoping Memo and Ruling, Docket No. R.20-08-021, March 1, 2022, pp. 5-8, https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M455/K677/455677087.PDF (accessed April 14, 2022).

Appendix D: Methodology and limitations of data

ACS data for the relevant surveys are available on varying sampling lengths, ranging from single-year samples to three- or five-year samples. Increased sampling lengths allow for more data collection and therefore lower margins of error. However, for the purpose of time series analysis, one-year samples are often preferable to avoid repeatedly representing responses of the same population.[127] Furthermore, due to the difficulties of producing large-scale surveys during the Covid-19 pandemic, the Census Bureau has only published one-year sample estimate ACS data through 2019, and five-year estimate sample data through 2020. Therefore, the analysis above combines the two data sets; from 2015 through 2019, one-year sample estimates are used—as opposed to 2020 data, which is a five-year sample estimate.[128]

Additionally, because no 2021 ACS data are currently available, many of the figures above do not fully contextualize how the digital divide has changed during the Covid-19 pandemic—including the impacts of several influential funding sources and equity initiatives.

Lastly, the digital divide is a nuanced and intersectional issue. The groups evaluated in this report are not mutually exclusive, and the variables measured are not independent. For example, income and age, as well as income and race, are correlated. While a certain priority group may adopt broadband internet at a lower rate than others, it is possible the reason is based in financial (or other) differences between those demographics rather than the property defining the group itself. In other words, the analysis above does not reflect separate issues, but rather different lenses through which one can consider the same issue.

[127] If a data point is derived from samples over five years, prior data points from within the past five years will include many of the same individuals. This can mislead readers who assume the data is a natural time series as opposed to a more accurate moving average of sorts.

[128] Those five years include 2016 through 2020.