From:	Freny Cooper
To:	CA Broadband Council
Subject:	Documents for Monterey Bay region
Date:	Thursday, October 29, 2020 1:31:26 PM
Attachments:	MBEP Broadband White Paper_Nov 2018 v5.pdf Broadband Coverage by County_Sept 2020.pdf MBEP COVID-19 Response_Broadband.pdf PastedGraphic-3.png

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Thank you for the webinar this morning. I wanted to make sure you have access to a few documents from our region:

- Broadband white paper outlining results of the research we completed with residents and businesses in 2018
- Current adoption stats (as of Sept. 2020) by level of service
- Position paper outlining recommendations at the beginning of COVID-19

Please let me know if you have any questions.

Freny Cooper
Chief Operating Officer
Monterey Bay Economic Partnership
[redacted]

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Monterey Bay
ECONOMIC PARTNERSHIP

Central Coast
Broadband Consortium

Achieving Ubiquitous Broadband Coverage in the Monterey Bay Region

November 2018

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About Monterey Bay Economic Partnership (MBEP)

Monterey Bay Economic Partnership (MBEP) is a regional nonprofit, membership organization consisting of public, private and civic entities located throughout the counties of Monterey, San Benito and Santa Cruz. Our mission is to improve the economic health and quality of life in the region.

MBEP's work is accomplished through targeted initiatives:

- Transportation: improving how we move within and between our cities
- Housing: ensuring the availability of safe and affordable housing
- Workforce development: helping regional employers to hire local talent and providing resources to enable residents to make a living wage
- Technology: supporting a thriving tech ecosystem in the region

Our core values are represented in the chart below.

MBEP's Tech Ecosystem Initiative

Our model for building a successful and healthy Tech Ecosystem is based on the following components:

MBEP acts as a catalyst and a convener for each of these components. We hold quarterly meetings with key influencers, industry leaders and policy makers who determine the direction of our Tech Ecosystem Committee. This committee has been focused on multiple tracks simultaneously:

- Promotion of start-up challenges, hackathons, competitions in the local educational institutions
- Proliferation of Tech MeetUps and AgTech MeetUps in the area
- Encouragement of technical training and curriculum in colleges and universities
- Access to broadband infrastructure, including the completion of the Sunesys fiber backbone from Soledad to Santa Cruz
- Extension of broadband service through the middle and last mile, including gigabit fiber light-ups throughout the region

About the Central Coast Broadband Consortium

The Central Coast Broadband Consortium is a 10-year old broadly based, ad hoc group of local governments and agencies, economic development, education and health organizations, community groups and private businesses. It is dedicated to improving broadband availability, access and adoption in Monterey, Santa Cruz and San Benito Counties, and has a long history of broadband development projects implemented by its members and as a group.

The top priority of the CCBC to provide resources and incentives to telecommunications service providers, including local government agencies, to build broadband infrastructure and extend it throughout Monterey, San Benito and Santa Cruz counties. The main effort of the CCBC's CASF-funded project is to create a database of existing broadband resources and assets, including accessible conduit, rights of way and wireless sites, and to work with local agencies to develop model policies that support broadband deployment.

Regional Broadband Leadership Team

Through the work of the Tech Ecosystem Committee it became apparent in 2017 that another more specialized group was needed to champion access to high-speed broadband. MBEP partnered with the Central Coast Broadband Consortium and Tellus Venture Associates on this effort and assembled the Broadband Leadership Team, composed of city managers, supervisors, ISP management, and technical staff from educational institutions. We invited representatives of cities and counties, ISPs and local policy makers.

The following is the list of participants in the Broadband Leadership Team:

- Ray Corpuz, City of Salinas
- Peggy Dolgenos, Cruzio
- John Freeman, City of San Juan Bautista
- Zach Friend, County of Santa Cruz
- Chris Frost, Cruzio
- James Hackett, Cruzio
- Matt Huffaker, City of Watsonville
- Mary Ann Leffel, MCBC
- Chip Lenno, CSUMB
- Maureen McCarty, Assemblymember Mark Stone's office
- René Mendez, City of Gonzales
- Andy Myrick, City of Salinas
- Larry Samuels, CSUMB
- Brad Smith, UCSC
- Jim Warner, UCSC
- Steve Blum, Tellus Venture Associates

The State of California previously established an arbitrary standard of 98% broadband coverage. With more recent legislation the State lowered the standard for broadband to be defined as 6 Mbps download and 1 Mbps upload speeds. Based on this modified standard, the State determined that broadband exists in all but 20,000 homes and businesses in California, whereas the previous standard determined that 300,000 homes and businesses did not have coverage. The majority of state infrastructure funding was removed by this new legislation.

The Tech Ecosystem Committee agreed that California standards of 6 Mbps download and 1 Mbps upload were woefully inadequate for current users' needs in our region. The Broadband Leadership Team was conceived to establish new regional standards and take action in providing true high-speed coverage for all areas including underserved communities.

Current Broadband Standards

The definition of "broadband" varies widely depending on which entity is doing the evaluation. See below for a list of standards.

	Download	**Upload**
California legislature (CPUC) as of 2018	6 Mbps	1 Mbps
FCC and USDA (baseline for broadband)*	25 Mbps	3 Mbps
FCC (above baseline for broadband)	100 Mbps	20 Mbps
California average **reported** speeds as of December 2016	250 Mbps	20 Mbps
FCC (definition of gigabit service)	1,000 Mbps	500 Mbps

*Note: 2018 FCC Broadband Deployment Report proposes to maintain the 25 Mbps/3 Mbps standard.

Assessment: Broadband Coverage in the Monterey Bay Region Today

In 2017 the region made a major leap forward with the completion of the Sunesys project. This provides a fiber backbone from Soledad to Santa Cruz, terminating at UC Santa Cruz. Local ISPs can now leverage this high-speed fiber infrastructure to offer gigabit service. Gigabit service is not pervasive throughout the region because funding is needed for building middle and last mile infrastructure. Some ISPs, such as Cruzio, have developed a business model to bring this premium service to both businesses and residential customers. As of mid-2018 Cruzio has lit up both downtown Santa Cruz and Watsonville with gigabit service.

While larger ISPs have the financial ability to fund new broadband infrastructure, it can be very difficult for smaller ISPs to obtain outside funding (such as State grants) to develop additional broadband infrastructure. One of the largest barriers to obtaining this outside funding incumbent providers' service claims in census blocks in the region. The primary broadband providers are AT&T, Comcast and Charter Communications, with Frontier Communications providing some service in small areas in the north and south of the region. AT&T's last mile infrastructure is largely based on copper, and therefore is mostly limited to speeds of 25 Mbps download and 3 Mbps upload. Comcast is able to provide higher speeds due to its infrastructure, but speeds and performance fluctuate significantly based on time of day and the number of users online at a specific time. Smaller ISPs, such as Cruzio or Surfnet, cannot receive state or federal funding to build modern infrastructure

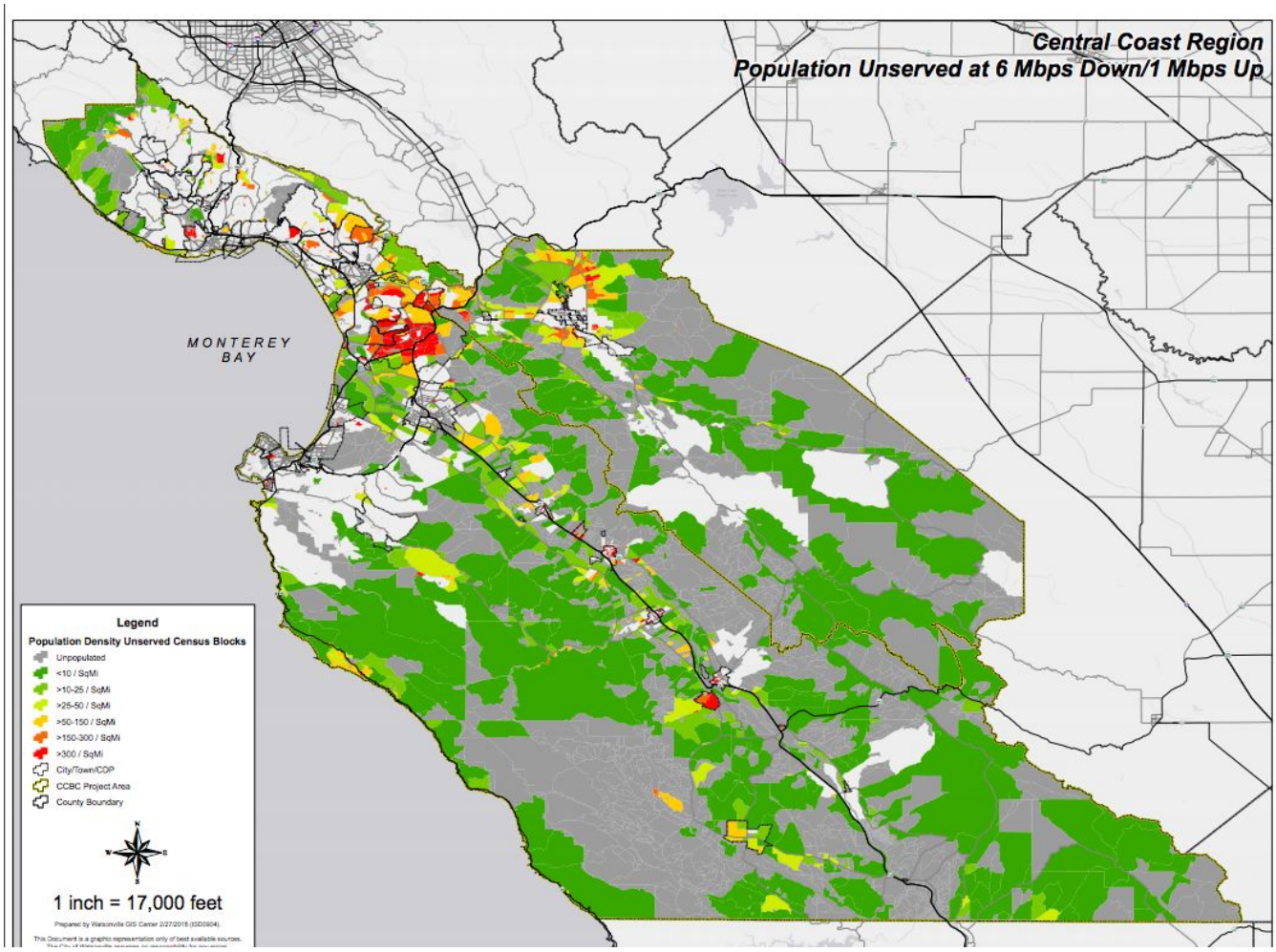
in the areas covered by AT&T, Comcast and Charter. Overall lack of competition gives these providers no incentive to improve speeds and service beyond what is offered, even though users' needs may be drastically different.

The following is a full list of ISPs in the region:

- AT&T
- CENIC
- Charter
- Comcast
- Cruzio
- Etheric
- Frontier Communications
- HughesNet (satellite)
- Pinnacles Telephone Company
- Razzolink
- RedShift
- SoMoCo (wireless)
- Sonic.net
- Suddenlink
- Surfnet
- Verizon
- Viasat (satellite)

ISPs offer broadband through wireline, mobile, fixed wireless, and satellite service. The latest CPUC reports show coverage as of December 2016 for primary wireline service only (not wireless or satellite). The coverage maps show reported (not actual) speeds from ISPs for residential customers only. Commercial use data is incomplete. However, it should be noted that if even one resident in a particular census block has service and others do not, the CPUC will consider that census block "served." A designated "served" census block is not eligible for CPUC grants to upgrade infrastructure and increase speeds. As a result the coverage maps represent a best case scenario, not a realistic view.

Unserved and Underserved Census Blocks as of December 2016
(at speeds of 6 Mbps down/1 Mbps up)



Based on the California legislature standard of 6 download and 1 upload shown above, much of the region is still currently unserved.

Goals

The ultimate goal of the Broadband Leadership Team is to encourage ISPs to offer upgraded service that meets users' requirements. This can be accomplished by:

- Encouraging competition among ISPs
- Advocating for improved policies and enforcement
- Improving middle mile infrastructure so that ISPs can fully offer upgraded service

Desired Outcomes

Ideally, the Broadband Leadership Team would like to produce the following results:

- Proliferation of high-speed broadband as defined by our region's needs, not based on federal or state standards

- Broadband infrastructure and service levels matched to the needs of residents and businesses in our region
- ISP compliance with the needs of the region based on data gathered from users and new regional standards
- Delivery of draft policy language to decision makers in the region to serve as a model for their jurisdictions
- Creation of a common set of policies that will streamline the processes across the region
- Increased competition among incumbents and new carriers resulting in an improved customer experience

Ways to accomplish these outcomes include:

- Growing middle-mile fiber
- Having public agencies participate in the market to promote upgraded infrastructure
- Applying political and economic pressure on incumbents
- Gaining capital or public subsidies to stimulate upgrades
- Regulating common carrier (least desirable)

Strategies

Research: The first step for the Broadband Leadership was to gather data from users, both residents and businesses. We conducted two surveys to assess existing coverage, needs and use cases. The survey addressed both speeds and applications for broadband. In addition, we used data from a survey conducted by the County of Santa Cruz to further bolster our assumptions and conclusions about broadband requirements.

Standards Assessment: Based on the data gathered from end users, the team determined the new definition for “high-speed broadband” in the region. It will also determine the acceptable level of coverage in the region based on the new standard of 100 down/ 20 up. We must weigh the costs of improving infrastructure and delivery to the end customer against the increased cost of service. Though 98% is the California standard, the team may decide on a different percentage of coverage for the Monterey Bay region. Population density below a certain threshold may not be considered worthwhile from a cost standpoint.

Implementation: In addition to publishing this white paper and increasing awareness around broadband coverage, the team will also formulate draft resolutions for adoption by City Councils and Board of Supervisors. Model policies for jurisdictions including deregulatory measures and definitions of the regional standard will be drafted. Following that, infrastructure upgrades with providers will be encouraged, and expectations for cost, latency and reliability will be outlined for providers.

Then the team will act as an intermediary to advocate for users' broadband needs in the region. These strategies can be supported through:

- Outreach to incumbent ISPs
- Assistance with CASF grant applications
- Outreach to residents and businesses via Action Center campaigns which will encourage policy makers to push these efforts forward

Challenges

Fiber: Achieving sufficient broadband coverage under new standards is not a foregone conclusion. One major challenge concerns infrastructure and the lack of ubiquitous independent middle-mile fiber in the region. This fiber exists in the Salinas Valley and Santa Cruz, but areas south of Soledad and east of Salinas are not covered.

Aging infrastructure: Another significant infrastructure challenge involves existing wireline infrastructure that is aging and is in serious need of upgrades. The chosen upgrade path for telephone companies' rural copper networks is low-capacity wireless infrastructure, rather than high capacity fiber due to cost concerns and return on investment. Wireless local loop, a 4G technology that is 10 Mbps down/ 1 Mbps up, costs less than other upgrades. This technology meets FCC standards and the modified California standard which supports the CASF subsidies.

Upgrade priorities for copper: Incumbent providers are upgrading from copper to fiber only in what they deem "high potential" areas. These areas demonstrate demographic characteristics including density and median income to lead providers to believe that their upgrade costs will be justified (Pebble Beach is one such example). Alternatively, incumbents will upgrade to fiber if there is competitive service in a particular census block, as in Santa Cruz, where Comcast upgraded its service due to Cruzio's introduction of fiber in the area. Rural areas − which cover a significant portion of the Monterey Bay region − realistically will not be included in these upgrade plans unless they are heavily subsidized. Public backing is critical to gaining fiber-based competitors in areas that are not considered "high potential." Fiber in downtown Santa Cruz through Cruzio proves to be an exception to this rule.

Broadband Needs for the Monterey Bay Region

Rather than relying on California or federal standards for defining high-speed broadband access, the team decided to establish broadband service standards that are based on regional needs, both for today and for the future. The group also agreed that the standards should be realistic and attainable based on cost/benefit analysis (e.g., planning for gigabit fiber throughout the region would be cost prohibitive and impractical from an infrastructure standpoint).

The first step was to assess the needs of the businesses and consumers in the Monterey Bay region. We gathered data from the Broadband Leadership Team on broadband applications and use cases. It became apparent that more research was needed for a thorough analysis. In April 2018 we created a survey to the entire region for both businesses and consumers. We received 187 responses to the business survey and 155 responses to the consumer survey.

Survey Results

The MBEP/CCBC survey covered a number of topics, including satisfaction levels with speed and service providers, use cases for high-speed broadband, willingness to pay for higher speed service and reliability, and promised versus actual speeds delivered.

The following is a brief summary of the results. A full report can be obtained from MBEP. A synopsis of major data points is highlighted in the Appendix.

Promised vs. Actual Speed: Actual speeds for businesses who answered the survey varied greatly, with over 20% reporting that they didn't know their speeds. Approximately 40% of consumers did not know their promised and actual speeds.

On a nationwide basis, as of the end of 2015, advertised download speeds varied greatly, with only one provider (TWC, which does not serve the Monterey Bay region) offering 300 Mbps download speeds. Actual speeds measured were often 25% to 50% lower than advertised.

Desired Speeds and Cost: When asked about ideal download and upload speeds, 63% of business respondents stated they would like to have 100 Mbps or higher download and 61% stated they would like to have 25 Mbps or higher upload. 69% of these businesses said they would be willing to pay $70 or more per month.

50% of respondents in the consumer survey stated that they would like to have download speeds of 100 Mbps or more. 66% of consumers said they were willing to pay $40 to $99 a month for their ideal speeds.

Satisfaction with Current Service: In the MBEP survey, 52% of businesses and consumers reported that they were very or somewhat satisfied with their internet speeds and service.

Primary Uses: Business respondents primarily require high-speed broadband for data and file transfer as well as web browsing, whereas consumers cited video streaming, web browsing and email as the primary uses.

Based on the survey results, the following matrix of acceptable speeds was established by audience for review by the Broadband Leadership Team.

	6 down/ 1 up CA legislature min	**25 down/ 3 up** FCC/USDA baseline	**100 down/20up** FCC "above baseline"	**250 down/20 up** CA avg max	**1000 down/ 500 up** FCC "Gigabit"
MBEP consumer					
MBEP business					
MBEP combined					
North county					
South county					
Monterey					
San Benito					
Santa Cruz					

Santa Cruz County conducted a broadband survey in spring of 2018 as well. Their data provided some information on price sensitivity of existing customers. 42% of the residential respondents in the Santa Cruz County survey reported that they would be willing to pay more for service that suits their needs regardless of what price they are currently paying. Of those who stated that they would pay more, 71% reported that they would be willing to pay up to $50 more per month. 70% of all respondents currently pay less than $100 per month.

CASF Grants

The California Advanced Services Fund (CASF) provides a variety of grants for broadband infrastructure development and adoption. Over $300 million is offered for infrastructure, and $20 million is allocated for adoption.

- **Infrastructure funding:** grant funds are available to build and upgrade infrastructure in areas that are unserved by existing broadband providers. "Unserved" is defined as an area in which not wireless or wireline providers offer service at advertised speeds of 6 Mbps download and 1 Mbps upload.
- **Rural and urban regional broadband consortia:** CASF allocated several million dollars for seven regional consortia to promote ubiquitous broadband and advance broadband adoption in unserved and underserved areas.
- **Broadband adoption:** Grants in the amount of $20 million are available to increase publicly available broadband access and digital literacy training programs.

Adoption money is highly competitive, and not really aimed at expanding access. The new infrastructure program is still being developed, but once the new rules are written,

we may be able to apply for grants for projects. Finding the right partners will depend at least partly on the process that the CPUC develops (the last Surfnet application spent nearly three years in review, and then was rejected). That's not a viable model for most ISPs. When we have the new rules, we should try to figure out how to match the regional opportunities with the money with the right ISPs.

Regional Success Stories

Sunesys

The Sunesys project is a 91-mile fiber optic cable infrastructure installed from Soledad to UC Santa Cruz. This effort was initiated by UC Santa Cruz, which needs high bandwidth for big data projects including work in genomics and astronomy. Local ISPs can connect from this backbone to leverage the high-speed broadband access; this infrastructure does not deliver service to the end user. The CPUC provided over $10 million in grants for this project. The fiber backbone was completed in 2017.

Cruzio

Cruzio is a local ISP located in Santa Cruz. In 2017 it initiated the Santa Cruz Fiber project, in which it leverages the Sunesys backbone to provide gigabit service to Santa Cruz and Watsonville. Cruzio financed the last mile improvements to make this happen. Watsonville Community Plaza got service in February 2018, and businesses are getting lit up in summer of 2018. Cruzio is able to offer a $49 per month plan for this service.

Surfnet Paradise Road

A $343,000 grant from CASF was used for Surfnet to provide service to close to 300 homes on Paradise Road in the mouth of Salinas Valley. 100 Mbps service was provided to the area. Surfnet was the first provider to offer high-speed fiber to homes in Monterey County.

Pinnacles Telephone Company

The CPUC provided a CASF grant to Pinnacles to upgrade DSL service in an area of San Benito County that is difficult to serve. The $195,000 grant upgraded the infrastructure to provide better service to approximately 40 homes.

Charter Communications

Charter Communications owns cable franchises in several communities in the region, including Watsonville and Hollister where it offers full digital service, including Internet access. However, it refused to upgrade its analog systems in the Salinas Valley and northern California, despite many requests over many years from local communities. In 2015, with support from the Central Coast Broadband Consortium, the City of Gonzales and the County of Monterey asked the California Public Utilities Commission to require Charter to upgrade its legacy systems, as a condition of approval for its acquisition of Time Warner Cable. The request was granted, and digital upgrades are underway.

Watsonville Municipal Fiber
CASF funds were also used to upgrade municipal dark fiber and conduit systems in Watsonville.

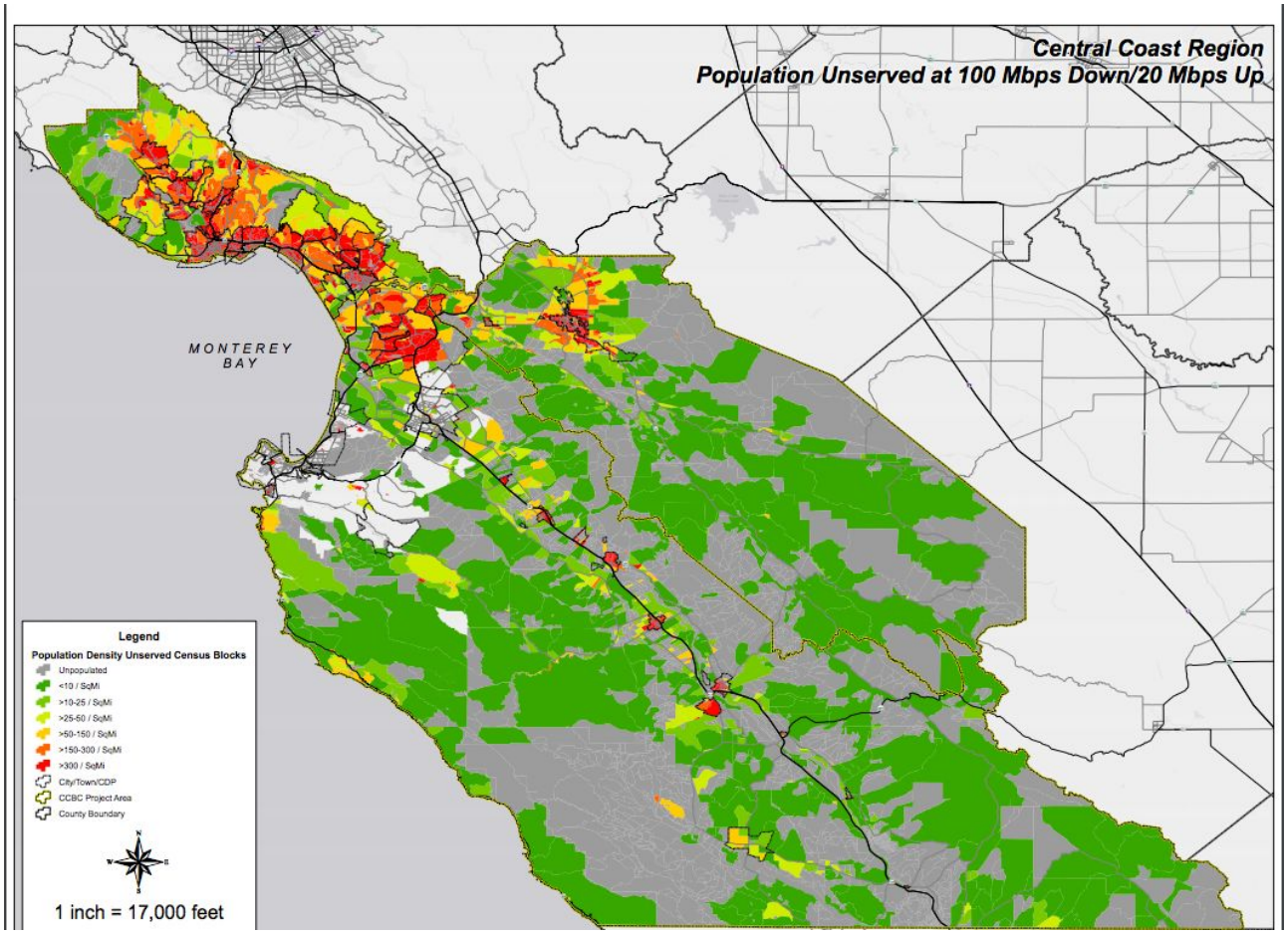
Comcast
Santa Cruz County used a fund, created and funded through its previous franchise agreement with Comcast, to pay for line extensions in the Santa Cruz mountains.

Regional Standard Recommendations

Using the findings from the studies shown above as well as other data provided by CCBC, the Broadband Leadership Team made the decision to adopt a new regional standard: **100 Mbps download** and **20 Mbps upload**. As indicated by the coverage map earlier below, the majority of the Monterey Bay region (based on December 2016 data) is not served or is underserved based on this regional standard. Coverage is not even close to the 98% claimed by the State of California as defined by its standard, nor is the California standard sufficient for our users' needs.

New standards of 100 down/20 up would mean that only 38% of the region would be served on a population basis. Once the Charter Communications upgrade is completed, coverage will be closer to 98% at 6 down/1 up standard, but will not be improved for 100 down/20 up coverage.

Unserved and Underserved Census Blocks as of December 2016
(at speeds of 100 Mbps down/20 Mbps up)



Based on a standard of 100 download and 20 upload, the vast majority of the region is unserved, in both highly and less densely populated census blocks.

Recommended Policies for Jurisdictions

Ideally, MBEP and CCBC would like to encourage local jurisdictions to adopt policies that favor the proliferation of broadband as defined by the Broadband Leadership Team (not as defined by the State) in the Monterey Bay region. Though we cannot impact what the State of California defines as a "served" area, we can establish our own standards that meet users' needs.

The following are some examples of verbiage that can be incorporated into policy documents at a local level:

Served vs. Unserved Areas

A census block is considered unserved if 50% or less of its population does not have broadband access at the regional standard of 100 Mbps download/ 20 Mbps upload.

(Current CASF standards consider a census block to be served even if 99% of its inhabitants do not have coverage. The FCC 2018 Broadband Deployment Report specifies that a census block is covered "if there was at least one service provider serving that census block that reported 5 Mbps/1 Mbps as the minimum advertised speed.")

CPUC is now using adoption rate (still in draft form). If a census block has over 40% of people subscribing to service, then that census block is considered "served."

Technology Used for Covered Areas
Only wireline is considered when an area is considered served or unserved, not wireless technologies, including fixed terrestrial, mobile and satellite service.

Speed vs. Cost
Incumbent internet service providers will be required to serve all census blocks (see definition above) without increasing current costs of service by more than 25%.

Provider Preference
If a provider cannot serve census blocks at the regional standard without increasing costs more than 25% of current levels, the census block will be open to other internet service provider proposals for coverage.

Fair Competition
Large incumbent providers, such as AT&T, Comcast and Charter Communications shall not be given preferential treatment to unserved census blocks. ISP coverage that meets the speed and cost requirements may be offered to a provider of any size.

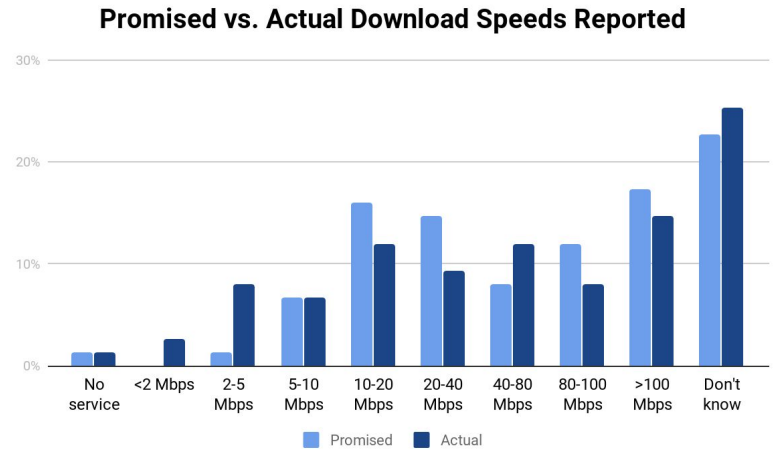
Prioritizing Areas
Use a rigorous, quantitative approach to setting broadband development priorities as accomplished by the CCBC. Identify communities based on social and economic development impact, and prioritize service to those communities.

Summary & Next Steps

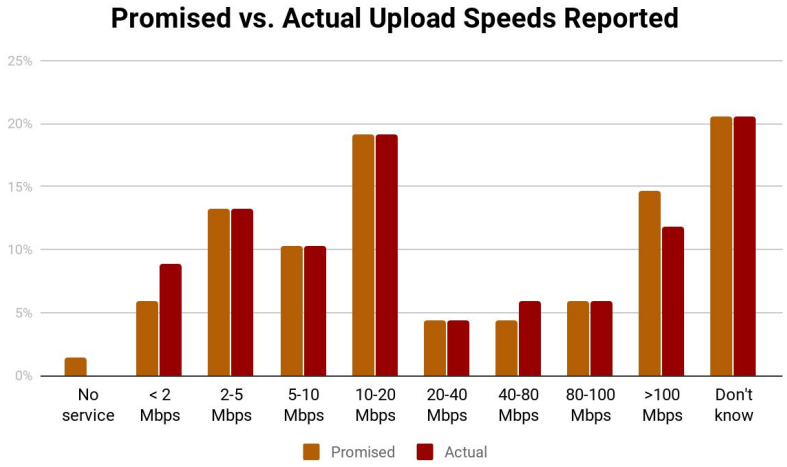
We currently have sufficient information to put a stake in the ground for new standards of broadband performance in the Monterey Bay region. The key is getting from planning to execution at this point. We face a number of challenges, from the standpoint of existing infrastructure and ability to cover our vastly varied geographies. Our Broadband Leadership Team will next establish a clear course of action, outlining roles and responsibilities to help us move forward. We will develop a timeline for anticipated coverage and upgrades, and will appeal to the various jurisdictions to get them on board. Improving our broadband will eventually lead to increased prosperity and growth of our region, and for that reason we must make it a priority.

Appendix

Survey Data

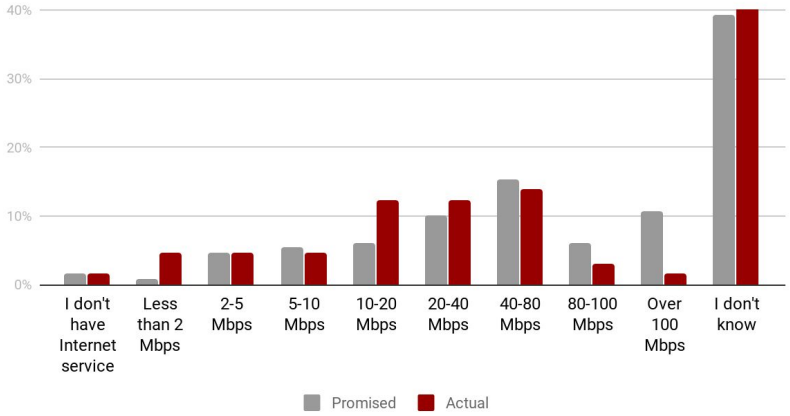


Source: 2018 MBEP Broadband Business Survey



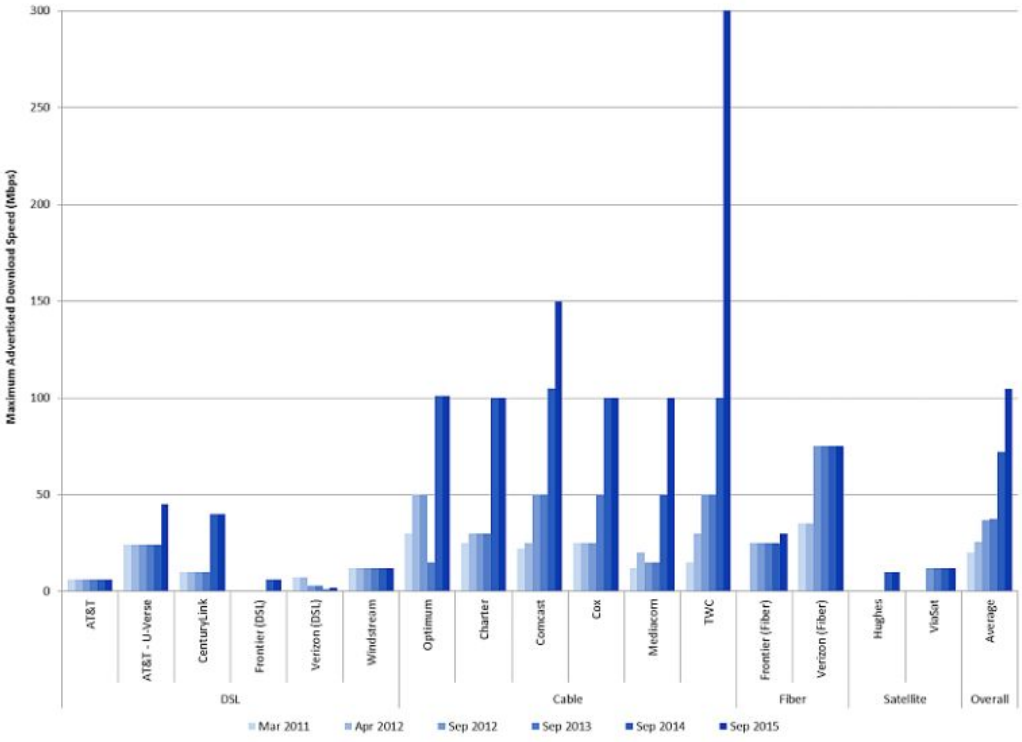
Source: 2018 MBEP Broadband Business Survey

Promised vs. Actual Download Speeds Reported



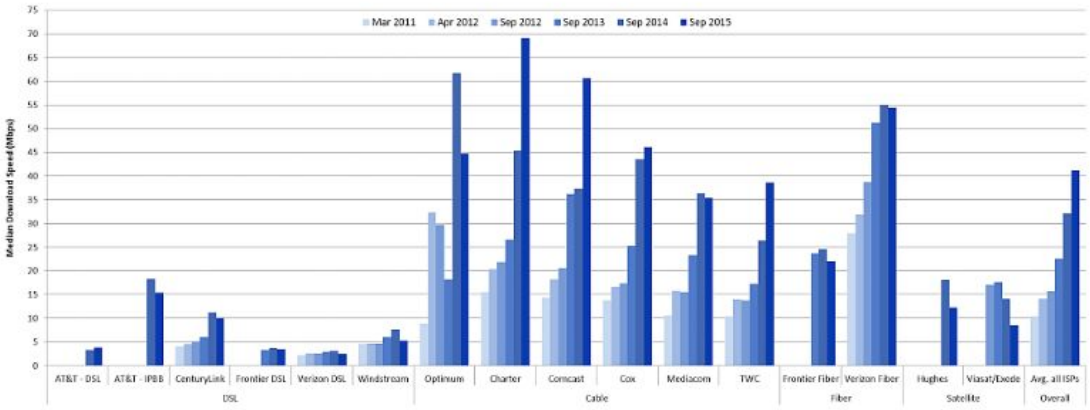
Source: 2018 MBEP Broadband Consumer Survey

Maximum Advertised Download Speed by Provider



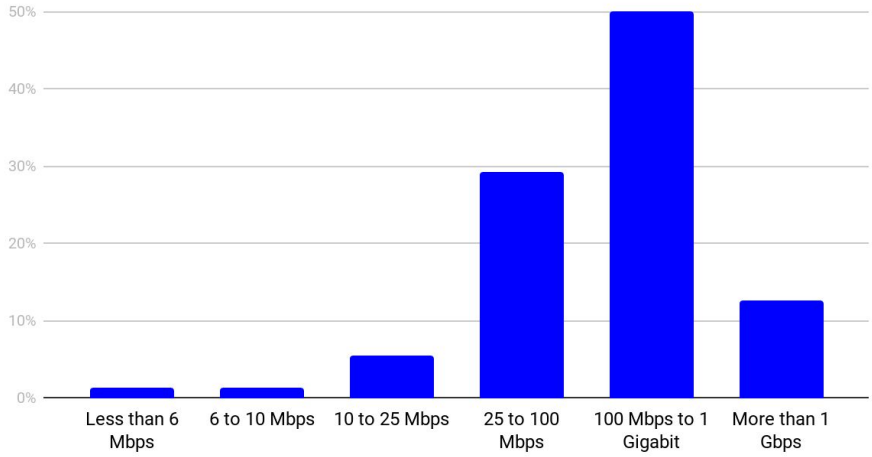
Source: 2016 FCC Measuring Fixed Broadband Report

Median Download Speeds by ISP



Source: 2016 FCC Measuring Fixed Broadband Report

Ideal Download Speeds



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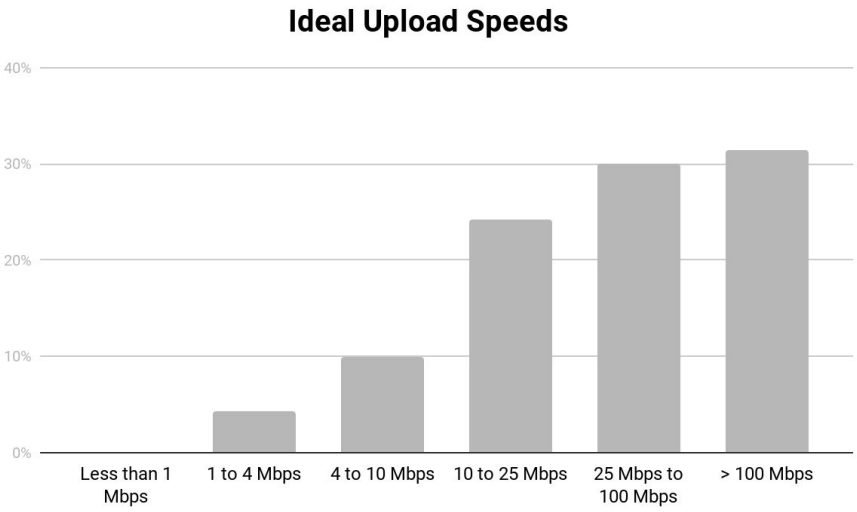

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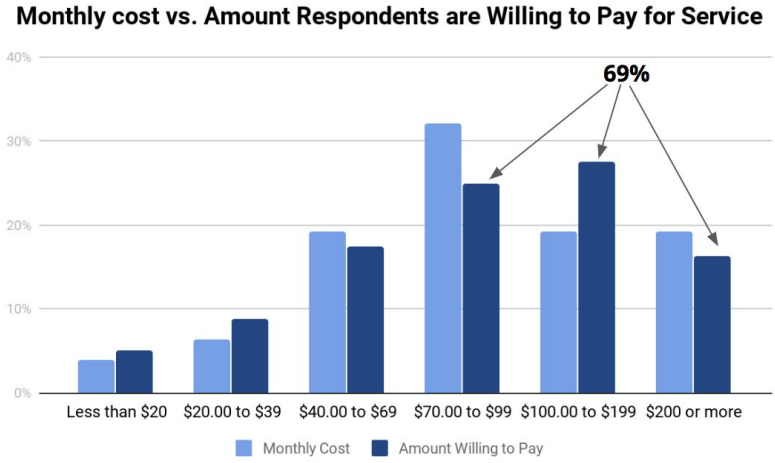

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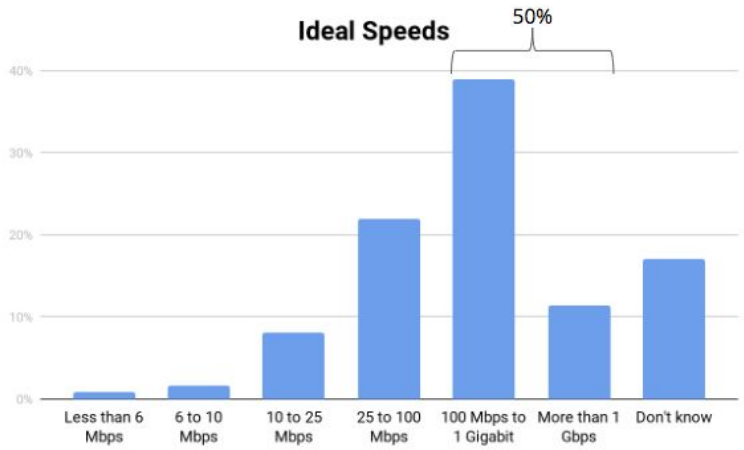

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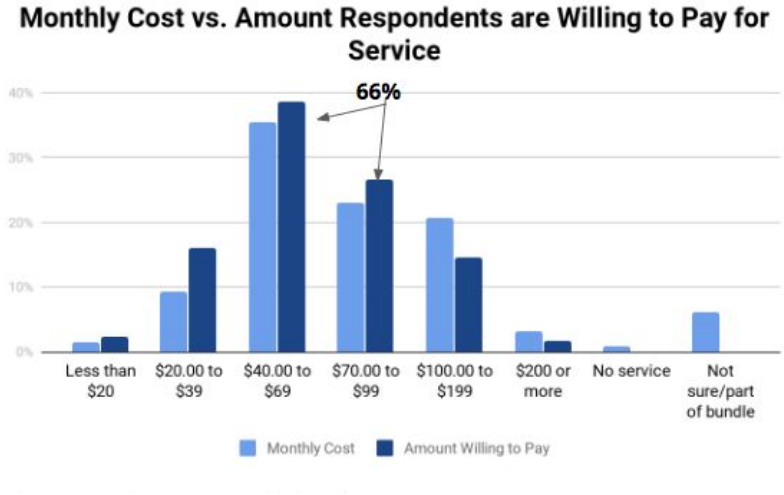

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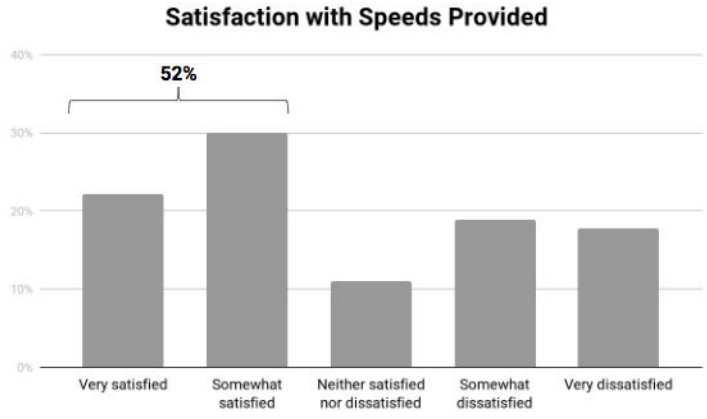

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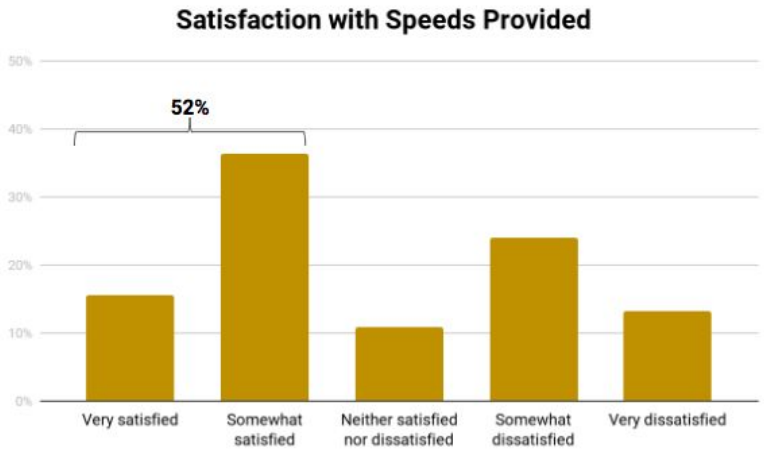
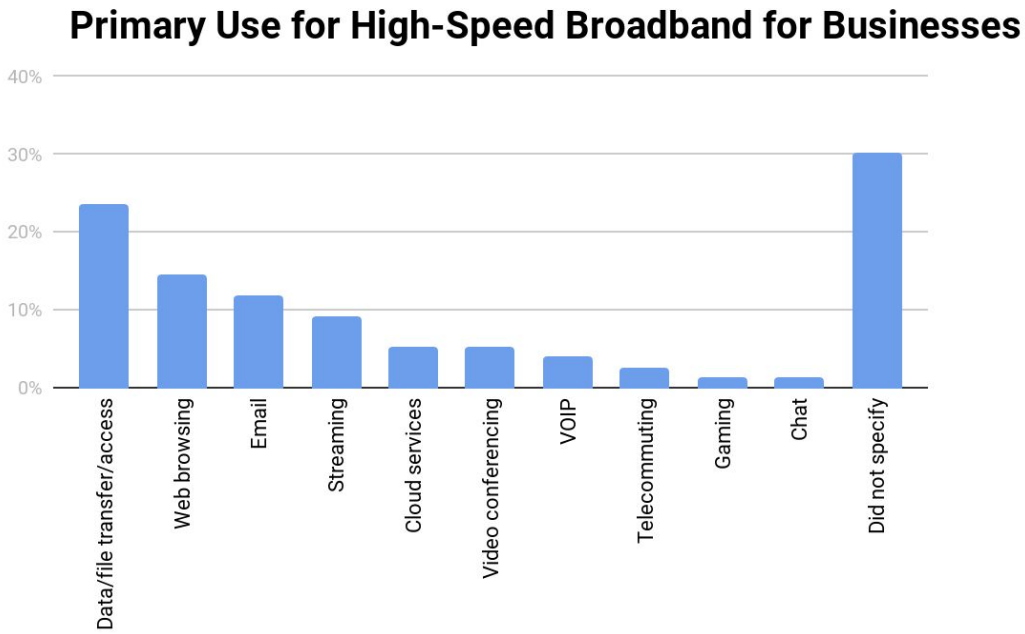
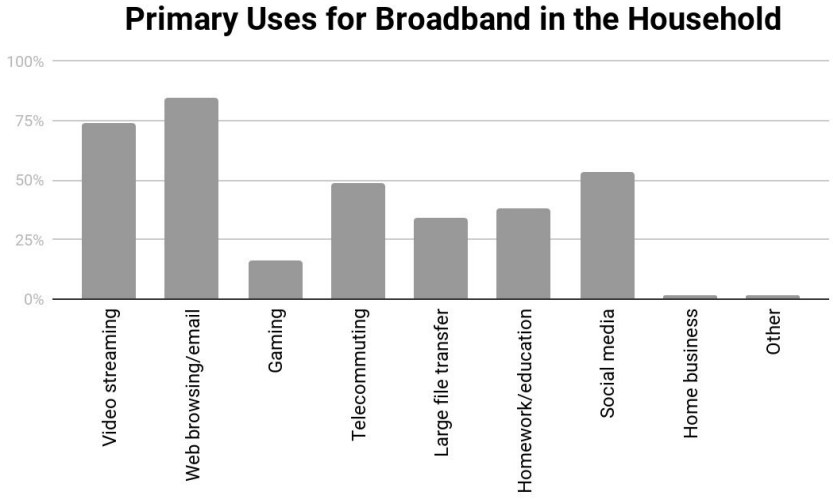


Source: 2018 MBEP Broadband Consumer Survey



Source: 2018 MBEP Broadband Business Survey



Source: 2018 MBEP Broadband Consumer Survey

Broadband Coverage by County

	% of households with any internet service**	% of households at regional standard*
Santa Cruz County	86%	76%
San Benito County	90%	75%
Monterey County	81%	63%

*100 Mbps down/20 up wireline service
** Includes mobile, satellite, wireless, dial-up or borrowed WiFi
Based on latest data provided by the CPUC as of 12/31/2018

Monterey Bay
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DATE: April 8, 2020
SUBJECT: COVID-19 Response Broadband Position Paper

The purpose of this position paper is to establish a clear set of recommendations that can be implemented in the Monterey Bay region to bridge the digital divide as we respond to the COVID-19 pandemic.

I. Background

Monterey Bay Economic Partnership (MBEP) is a regional membership-supported nonprofit organization consisting of public, private and civic entities located throughout the counties of Monterey, San Benito and Santa Cruz. Our mission is to improve the economic health and quality of life in the region.

MBEP's work is accomplished through targeted initiatives:

- Housing: ensuring the availability of safe and affordable housing
- Workforce development: helping regional employers to hire local talent and providing resources to enable residents to make a living wage
- Technology: supporting the proliferation of high-speed internet access in the region and promoting efforts to strengthen our tech ecosystem
- Climate change: enhancing and building upon the carbon emission mitigation efforts around the region
- Transportation: MBEP is dedicated to improving the quality of life in the region, and how we move within and between our cities has a major impact on the well-being of our neighborhoods and residents.

MBEP's Technology Initiative

For the past few years we've worked with members and partners to promote a thriving tech ecosystem in the region with meetups, co-working spaces and access to education. We are now working with our members and partners to explore how we can facilitate high-speed broadband coverage throughout the region. We have established a partnership with the Central Coast Broadband Consortium to achieve our broadband goals.

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About the Central Coast Broadband Consortium
The Central Coast Broadband Consortium is a 10-year old broadly based, ad hoc group of local governments and agencies, economic development, education and health organizations, community groups and private businesses. It is dedicated to improving broadband availability, access and adoption in Monterey, Santa Cruz and San Benito Counties, and has a long history of broadband development projects implemented by its members and as a group.

The top priority of the CCBC to provide resources and incentives to telecommunications service providers, including local government agencies, to build broadband infrastructure and extend it throughout Monterey, San Benito and Santa Cruz counties. The main effort of the CCBC's CASF-funded project is to create a database of existing broadband resources and assets, including accessible conduit, rights of way and wireless sites, and to work with local agencies to develop model policies that support broadband deployment.

II. Situation Analysis

As of March 19, the State of California instituted a Shelter in Place order, which is expected to be extended until at least May 1, and is likely to last much longer, in an effort to slow the progress of the virus. Given that only "essential businesses" are allowed to remain open, our residents now need the appropriate tools for working and studying at home.

Monterey Bay Economic Partnership (MBEP) in conjunction with Central Coast Broadband Consortium (CCBC) has been working since 2018 on improving the broadband coverage throughout the Monterey Bay region. Broadband is defined as high-speed internet service. According to the State of California, this translates to speeds of 6 Mbps download / 1 Mbps upload. MBEP and CCBC have redefined the broadband standard for our region based on user needs and applications; we have determined that the broadband should be defined as 100 Mbps download / 20 Mbps upload speeds.

Below is current coverage of the region based on these two standards. The red and orange areas indicate the most densely populated census blocks that do not have coverage under the standard.

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California Standard - 6 Mbps download / 1 Mbps upload

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Monterey Bay Region Standard - 100 Mbps download / 20 Mbps upload

More detailed information can be found on the Central Coast Broadband Consortium website: https://centralcoastbroadbandconsortium.org/map/

The current situation necessitates 100% coverage of the region, as all activities are occurring in residences as long as the Shelter in Place order is in effect. Those who are particularly disadvantaged are low-income families who also may not have access to smartphones, tablets or laptops to participate in distance learning and working.

Though providing broadband infrastructure is a long-term goal, we are focused now on some immediate solutions to get communities fully connected with the level of broadband service they need.

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III. Actions to Date and Remaining Needs

Federal and State governments have begun to pass legislation that temporarily protects citizens from the economic repercussions of COVID-19.

- Congressional bill H.R 6201, the Families First Coronavirus Response Act, was instituted on March 18 to mobilize emergency funding for the COVID-19 response. It provides paid sick leave, tax credits, and free COVID-19 testing; expanding food assistance and unemployment benefits; and increasing Medicaid funding.
- The CARES (Coronavirus Aid, Relief and Economic Security) Act was passed on March 27 – $2 trillion for forgivable SBA loans, tax credits and deferrals, unemployment compensation benefits, deferral of mortgage payments, guidelines for healthcare, student loan repayments, and more. This act allocates $100 million to the ReConnect broadband infrastructure grant and loan program run by the federal agriculture department's Rural Utilities Service (RUS), as well as $200 million to the Federal Communications Commission's telehealth subsidy fund, and $25 million for a telehealth and distance learning program, also managed by RUS. However, historically California has not benefited proportionately from these programs.

Legislation at a local level is not likely to help our situation in this time of crisis. As mentioned above, missing broadband infrastructure is the essential piece to the puzzle, and in conjunction with that infrastructure, having affordable plans for all of our residents, but particularly for low-income families for connectivity and productivity.

Local legislation will not solve another major problem: business practices of large incumbents who cover a large area of the region, and have the ability to charge fees and provide speeds at their discretion. The monopolistic behavior of many of the large ISPs cannot be regulated to create a ubiquitous broadband situation.

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IV. Recommendations

We recommend three courses of action that will need to be instituted at the State level, and will moderately alleviate some of the pain around the work/study at home requirements in light of COVID-19.

1. **Simplify the Line Extension Program for wireless providers**

   The California Advanced Services Fund (CASF) provides grants for multiple broadband infrastructure projects. The Line Extension Program was created for individuals to apply for infrastructure grants that offset the cost of connecting a single property. It allocates a maximum of $500 for fixed wireless installations and $9,300 for wireline installations.

   We recommend that the CPUC create a short form, online application and an expedited review process for California Advanced Services Fund Line Extension Program grants, with a one week application, challenge and approval cycle as the objective. Although wireline companies may take advantage of this process, the immediate goal is to facilitate rapid deployment of wireless Internet service via ministerial $500 grants. We also propose that ISPs who take advantage of the expedited process be required to provide the first two months of internet service free to such customers.

2. **Expand free service to new customers**

   Below is a table showing offers from the major internet providers in the region after the crisis.

PROVIDER	OFFER (may be eligible only for new customers with good credit)
AT&T	**$10/month** for qualifying low-income households. During the coronavirus emergency, the first 60 days are free.
Charter/Spectrum	**$17.99/month** ($22.99 with WiFi capability) for qualifying low-income households. During the coronavirus emergency, the first 60 days are free.

Comcast/Xfinity	**$9.95/month** for qualifying low-income households. For people who subscribe by April 30, 2020 the first 60 days are free.
Cruzio	**$14.95/month** for qualifying low-income households. During the Covid-19 emergency, the first 90 days are free.
Frontier	**$19.99/month** for qualifying low-income households.
Suddenlink	**$14.95/month** for qualifying low-income households. During the Covid-19 emergency, the first 60 days are free.

The only local wireline provider that does not offer free internet service to new customers during the emergency is Frontier Communications. We recommend that Frontier provide the same offer as the others.

3. Expand Lifeline programs

Lifeline is the CPUC's program, subsidised in part by the FCC, to help make communications services more affordable for low-income consumers. Lifeline provides subscribers free or discounted monthly telephone service, which is sometimes bundled with broadband service, from participating providers.

Subscribers may receive a Lifeline discount on service from either a wireline telephone company (e.g. AT&T) or from a mobile provider (e.g. Verizon), but they may not receive a discount on both services at the same time. FCC and CPUC Lifeline rules prohibit more than one Lifeline service per household.

We propose that during the current emergency communications companies receiving subsidies under the Lifeline program be required when technically feasible to add broadband service to packages that do not include it, and to increase monthly data caps to a minimum of 50 gigabytes for all users. If adding broadband to an existing package is not technically feasible, any waiting period imposed on an individual be waived so that he or she may switch packages and/or providers immediately. We recognise that some of these recommendations might require legislative action to fully implement, and we urge the Legislature to address such issues as quickly as possible, but

to the extent that legislation is not required, we request the CPUC to implement these temporary changes immediately.

4. **Subsidize Rural Telephone Companies**

Many rural telephone companies, including Pinnacles Telephone Company in San Benito County, operate under "rate of return" regulations which provide access to vital universal service subsidies but also restrict the actions such companies may take in response to emergencies such as we are experiencing now.

We recommend that the FCC continue its current practice of expeditiously granting temporary waivers to such regulations, and that the CPUC begin doing so as well.

5. **Offer E-Rate subsidies**

The federal E-Rate program and the complementary California Teleconnect Fund provide subsidies to eligible educational organisations and libraries for broadband service, which is often of a much higher speed and quality than the service generally available in the surrounding community. Use of the facilities and service subsidised by these programs is restricted to certain educational purposes and to the physical boundaries of participating schools and libraries.

We recommend that the FCC immediately clarify that E-Rate subsidised facilities and service may be used for emergency response purposes, such as supporting temporary field hospitals, when such activities are located within or adjacent to school and library property. We also recommend that the FCC and CPUC temporarily waive restrictions on E-Rate subsidised facilities and services to the extent allowed by current law, and that the California legislature and the U.S. congress approve legislation that temporarily suspends any statutory restrictions.

6. **Extend Distribution of Hotspot Devices**

With Shelter in Place orders extended it has become mandatory for residents to study and work remotely. Many low-income residents do not have devices

or internet access to accomplish day-to-day tasks. A shining example of bridging the digital divide can be found in the City of Gonzales, which provided 2,000 wireless hotspot devices free of charge to City residents. Once the Shelter in Place order was instituted the City organized a drive-through event for hotspot device pick-up. The City partnered with T-Mobile for this initiative, which supplied the 4G LTE Wi-Fi devices.

The City of Gonzales is subsidising the service at a cost of $300 per year.

We recommend that this program be replicated in other cities throughout the region, particularly in Watsonville and Salinas. MBEP is working with those governments to determine if a similar program can be implemented.

We also recommend that the State of California use this model to provide internet access in the unserved and underserved areas in our three counties. A relatively small expenditure by the State could subsidize a significant portion of our uncovered area in the region.

For more information about MBEP's Technology Initiative, please contact Freny Cooper at fcooper@mbep.biz