National Telecommunications and Information Administration

Broadband Technology Opportunities Program Evaluation Study

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Case Study Report

California Emerging Technology Fund: Broadband Awareness and Adoption

Sustainable Broadband Adoption (SBA)

Grant Thornton

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Executive Summary

Grantee Overview

The California Emerging Technology Fund (CETF) was established in 2005 as a nonprofit corporation by the California Public Utilities Commission (CPUC) to advance the adoption and usage of broadband technology in underserved communities across the state of California. CETF aims to close the digital divide in California by 2017 through the implementation of the Get Connected! initiative to provide broadband technology through schools, large infrastructure projects, and public housing.

Grant Overview

In 2010, CETF was awarded a Broadband Technology Opportunities Program (BTOP) grant in the amount of $7,251,295 for the Broadband Awareness and Adoption (BAA) project. CETF awards this funding to sub-recipients and partners that provide services and outreach to California residents. The goal of this project is to provide vulnerable and low-income communities with the basic tools necessary to adopt broadband technology throughout the state. Some grant programs target specific locations within the Bay Area, Central Valley, and Los Angeles, Orange County, San Diego, and the Inland Empire.

The project is expected to

- communicate and engage low-income and Spanish-speaking non-broadband users in low-adoption areas of California with messages on the benefits and affordability of broadband;

- expand twenty-seven 2-1-1 telephone line centers and databases in California to include broadband services in order to screen 250,461 callers statewide and generate 45,533 referrals from 11,383 low-income households;

- create the Intelligent Character Recognition (ICR) telephone system to screen 2-1-1 callers for those interested in information about broadband services;

- host eighteen Access Now Computer Help Day events to repair old or outdated equipment, offer subsidized refurbished equipment, provide hands-on computer training to 2,430 participants, and help two hundred households connect to the Internet;

- provide online training and accessibility information to California residents with disabilities and those working with or providing services to them through the Center for Accessible Technology (CforAT) website;

- upgrade Social Interest Solutions' (SIS) One-e-App screening and enrollment system to include broadband awareness and information for 75,000 adults and 56,000 youth, and assist 970 low-income households to subscribe to broadband services;

- offer refurbished desktop computers (with technical assistance and basic instruction) to Chicana/Latina Foundation (CLF) participants at various locations, including twenty-seven Mi Pueblo Markets locations, Sacred Heart Community Services of San Jose, Redwood City Main Library, and the Third Street Community Center;

- build a new public computer lab with thirteen computers and one printer through Dewey Square Group (DSG) inside Catholic Charities' Family Resource Center, offering open lab time and training sessions;

- address broadband access issues through 111 hours of a live call-in program and 111 hours of messages on Radio Bilingüe, reaching sixty thousand listeners and facilitating five hundred new household Internet subscriptions.

Targeted and Impacted Populations

CETF serves all of California, including the Bay Area, Central Valley, Los Angeles, Inland Empire, and Orange/San Diego service regions. California's total population is 36.3 million, including 10.2 million in the Los Angeles service region, followed by the Bay Area at 7.3 million, 5.4 million in the Central Valley, 4.0 million in the Inland Empire, and 3.1 million in the Orange/San Diego service region. CETF targets service towards households with an income under $40,000. The Central Valley has the largest percent of households with an income of less than $40,000 at 35 percent, followed by 33 percent of Los Angeles households, 30 percent of Inland Empire households, 30 percent of the state of California households, 26 percent of Orange/San Diego households, and 20 percent of Bay Area households. The target region is predominantly White, although to a lesser degree than the nation as a whole. Each target region also has large populations self-identified as Asian or "Other." All service regions have more than twice the national percentage of individuals who are Hispanic or Latino, with the exception of the Bay Area, which is eight percentage points higher than the nation. The service area also includes a large percentage of persons speaking languages other than English in the home.

Study Design

In October 2011, the evaluation study team met over a three-day period with the representatives from CETF and its BTOP partners and sub-recipients. This report presents a summary of the evaluation study team's findings. CETF was nearing the end of the implementation phase of the BAA project. The evaluation study team visited office locations for CETF and the following sub-recipients: Radio Bilingüe, 2-1-1 of Fresno, DSG, Latino Community Foundation (LCF), CLF, CforAT, SIS, and Access Now.

The purpose of this report is to gather lessons learned, assess the initial impacts of the BAA project, and to document the conditions in the service area surrounding the project. The evaluation study team will return to California in early 2013 to further research how this grant has evolved over the eighteen-month interval between site visits and assess the economic and social impacts of the grant.

Lessons, Techniques, and Strategies Identified by the Grantee

The grantee provided the evaluation study team with a summary of lessons learned, useful techniques, and successful strategies:

- Variations in reporting systems have prevented 2-1-1 from providing a total number of callers referred to training organizations, broadband, or other resources specifically.

- When it was first formed, CETF leaders anticipated that broadband companies would begin to supply more affordable Internet access or offer incentives to low income people. Internet Service Providers (ISPs), however, have not done so. As a result, CETF increased its focus to include teaching individuals how to be informed broadband consumers so that potential users could get the best deal possible. This was not an original part of the training content.

- CETF has an intake survey that is not mandatory, but CETF would advise making it mandatory to provide data on the individuals served by the grant.

- Sharing curriculum between project partners and allowing each partner to tailor it to the community it serves has been an efficient and effective project practice. This has been useful because each of CETF's partners serves individuals with different needs due to demographic and geographical differences, but the curriculum content is largely the same.

- Encouraging collaboration among partners (for example, the learning community) has been an important part of the project. CETF's status as a grant administrator has allowed it to see the work at a higher, aggregate level, providing the opportunity to inform partners of phenomena it notices working independently.

- Being flexible and willing to make adjustments has made the project more successful. This includes creating an atmosphere where people can share mistakes and successes from which other partners can learn.

- Using trusted community messengers to communicate and interact with individuals in the way(s) they are most comfortable is the most efficient way to communicate. For example, some partners trying to communicate with users via email found feedback lacking, later realizing the users they were trying to reach are more accustomed to communication by postal mail.

- Tailoring training to fit the needs and interests of the audience increases the likelihood participants will absorb the content and at the same time demonstrates the benefits of broadband in general. For example, if a trainer is working with parents, the class should focus on teaching the parents how to use the Internet to check their child's grades and how to help with homework. This helps teach Internet searching skills and illustrates the usefulness of Internet service to parents, thereby encouraging adoption.

Initial Impacts

The evaluation study team noted the following initial impacts of the BTOP grant:

- 2-1-1 California responds to calls and web inquiries about broadband education and adoption assistance and refers people to Internet services and training needs. 2-1-1 reported screening 166,238 calls, generating 4,877 new Internet subscriptions.

- Access Now hosts events that provide affordable computer problem diagnosis and technical repair to help individuals get online that same day. Progress to date has been slower than Access Now expected because participation is restricted by the size of the venue. Access Now reported forty-eight new Internet subscriptions from its outreach efforts.

- CforAT offers free online resources to increase Internet use by low-income adults and people with disabilities. CforAT has fully implemented its website and made all online resources available to users. CforAT had reported training 854 users, five of which subscribed to the Internet.

- SIS offers One-e-App, an online application system, to multiple health and human service organizations. SIS has fully integrated broadband awareness into One-e-App, providing users information on the uses and subscription process of home broadband connections. As of September 30, 2011, SIS had reported referring 132,971 users to programs that assist families accessing broadband services and about 725 household broadband subscriptions.

- CLF's student trainers instruct community members in basic computer and Internet literacy. CLF also provides users with refurbished desktop computers. CLF had given away 900 computers and 910 users had subscribed to broadband.

- DSG built a new, BTOP-funded computer lab inside Catholic Charities' Family Resource Center in Fresno. DSG also provides outreach regarding broadband adoption and

subscription, including a toll-free hotline, Club Digital, and Club Digital Live, offering online training and communication. DSG reported 38,145 new Internet subscriptions.

- LCF provides digital literacy training to limited-English speaking families in five Bay Area counties through eight of its own sub-recipients. No training had been completed, but LCF had reported seventeen new Internet subscriptions from other activities.

- Radio Bilingüe, a Spanish-language public radio station in the Central Valley region, broadcasts information regarding broadband use and adoption. Radio Bilingüe reported eighteen new Internet subscriptions resulted from its outreach efforts.

Introduction

The subject of this report is the evaluation of the California Emerging Technology Fund (CETF) Broadband Awareness and Adoption (BAA) SBA grant. This report includes the following sections:

- Section 1 describes the grantee, the demographic characteristics of the community affected by the grant's activities, and the services provided under the grant, including those performed by partner organizations.

- Section 2 describes the services provided under BTOP; what, if any, data are collected related to those services; the users of those services; and the impacts of those services, observed or measured, to date.

- Section 3 describes where the project is in its lifecycle and the issues and potential solutions the grantee is experiencing concerning the sustainability of BTOP activities beyond the BTOP grant period. This section also presents the lessons the grantee has learned thus far and the efforts the grantee has taken or plans to take to evaluate its BTOP grant.

- Section 4 describes next steps in this case study.

- Appendix A presents a list of the grant's service locations and specific addresses where possible.

- Appendix B presents economic, demographic, and broadband specific data on the area affected by the grant's activities. These data come primarily from public use data sets, but are augmented by grantee provided data when available and applicable.

- Appendix C summarizes the grantee provided quarterly Performance Progress Report data as provided to the evaluation study team by NTIA.

- Appendix D provides a listing of the source information and documents provided to the evaluation study team by the grantee or other project participants as part of the case study process. All collected information is included, whether specifically referenced in this report or not.

- Appendix E presents the agenda of the case study visit, including a listing of all locations visited, persons interviewed, and the purpose of these visits or discussions.

- Appendix F presents key terms that are used in the discussion of this case study. The use of these terms is based on guidance NTIA has provided to grantees.

This report presents information gathered from grantees, project partners, and various publicly available data sources regarding the impacts of the project on users, the community, and the entities involved in implementation. The report identifies successful techniques, tools, materials, and strategies used to implement the project and highlights activities and lessons the grantee has learned that influence its ability to achieve desired project outcomes.

Section 1. Background

The following subsections describe the CETF, the BAA grant, the demographic characteristics of the community determined to be affected by the grant's activities, and the services provided under the grant, including those performed by CETF's partners and sub-recipients.

1.1 Grantee Description

The CETF was established in 2005 as a nonprofit corporation by the California Public Utilities Commission (CPUC) in accordance with the SBC-AT&T and Verizon-MCI mergers. Terms required AT&T and Verizon to contribute a total of $60 million over five years to advance the adoption and usage of broadband technology in underserved communities across the state of California.

CETF invests in projects that work on closing the digital divide by improving broadband access, affordability, applications, accessibility, and assistance.[1] To identify programs, CETF releases Requests for Proposal (RFPs) and establishes partnerships with community leaders, community-based organizations, private firms, and California state agencies. CETF has created an extensive network of partner organizations to help provide broadband access to all Californians, compile data on broadband and computer access and need, and share best practices and resources among organizations.[2] Additionally, CETF produces progress and annual reports on best practices and lessons learned from both its own projects and those of its partners.

CETF's goal is to close California's digital divide by 2017. The organization's project initiatives include closing the achievement gap through increasing the use of broadband technology and training in schools, integrating broadband into the construction of large infrastructure projects, and providing broadband access in public-supported housing. CETF plans to accomplish this primarily through the Get Connected! initiative that seeks to increase broadband adoption among non-subscribers.[3] Progress under this initiative is measured by broadband infrastructure coverage and home adoption rates. Objective success in 2015 is defined as 98 percent infrastructure coverage and 80 percent home adoption.[4]

CETF is a re-granting agency that typically works in partnership with, or as a grantor to, agencies doing work in the field in California. For the BAA grant, CETF created a synthesis of partners that responds to the needs of various demographic groups in California or serves specific regions of the state. They used a careful screening process to select eight partners with proven experience addressing specific areas CETF identified as important to closing California's digital divide. These partners work together to address grant programming, amplify successful pre-existing pilot programs, and fill other gaps in Californian's access to, and awareness and use of, broadband Internet. Each partner delivers a specialized set of services and activities ranging from hands-on training, to radio advertisements, to education for people with disabilities. The eight partners are listed below. Each partner organization is described in Subsection 1.4 and the services they provided under the grant are discussed in detail in Section 2:

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[1] For more information, visit http://www.cetfund.org/aboutus/mission.

[2] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption*, *email attachment*, August 23, 2011.

[3] California 2-1-1, "Get Connected! CETF grant program materials guide", July 2011, http://69.89.31.60/~jameskle/wp-content/uploads/2011/09/CETF-Training-Manual.pdf.

[4] CLF informational packet provided by grantee on October 20, 2011.

- California 2-1-1
- Access Now
- Center for Accessible Technology (CforAT)
- Social Interest Solutions (SIS)
- Chicana/Latina Foundation (CLF)
- Dewey Square Group (DSG)
- Latino Community Foundation (LCF)
- Radio Bilingüe

The evaluation study team met with CETF BAA grant representatives and all eight of the BAA project's partners at their respective locations on October 19 to 21, 2011. For the full case study visit agenda, see Appendix E.

1.2 Service Locations and Service Area Description

The variety of programs conducted by partners under the CETF BAA grant collectively serve the entire state of California, although, with the exception of some rural areas in the Central Valley, there is a focus on more urban areas within the state.[5] Program delivery varies widely by project partner, with each having its own geographic target area. As is depicted in the first column of Table 1, these geographic target areas can be combined into regions including the Bay Area, Central Valley, Los Angeles, Inland Empire, Orange/San Diego, and those that serve the entire state. These regions collectively represent the grant's service area.

Table 1. Counties Served by Project Partners[6]

Service Region	Name of Organization	Counties Served
Statewide	211 California	Alameda, Contra Costa, Fresno, Kern, Kings, Los Angeles, Mendocino, Monterey, Marin, Napa, Nevada, Orange, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Tulare and Ventura
	Center for Accessible Technology	All
	Social Interest Solutions (One-E-App)	Alameda, Contra Costa, Fresno, Humboldt, Los Angeles, Napa, Nevada, Orange, Riverside, Sacramento, San Diego, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, and Sonoma
Bay Area	Access Now	Alameda, Monterey, San Francisco and Santa Clara

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[5] Grantee, in discussion with the author, October 19, 2011.
[6] California Emerging Technology Fund, "Service Region Definitions," *email attachment*, March 29, 2012.

Service Region	Name of Organization	Counties Served
	Chicana Latina Foundation	Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz and Sonoma
	Latino Community Foundation	Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara
	Dewey Square Group	Alameda and San Francisco
	Radio Bilingüe	Monterey, Napa, San Benito, Santa Cruz, and Sonoma
Central Valley	Access Now	Fresno and Sacramento
	Dewey Square Group	Fresno, Sacramento and Stanislaus County
	Radio Bilingüe	Calaveras, Fresno, Kern, Kings, Madera, Mariposa, Mendocino, Merced, San Joaquin, Stanislaus, Tulare, and Tuolumne
Los Angeles	Access Now	Los Angeles
	Dewey Square Group	Los Angeles
	Chicana Latina Foundation	Santa Barbara
	Radio Bilingüe	Santa Barbara
Inland Empire	Access Now	San Bernardino
	Radio Bilingüe	Riverside
Orange/San Diego	Dewey Square Group	San Diego
	Radio Bilingüe	Imperial and San Diego

Most grant activities are not conducted at specific service locations on a regular basis, although this varies by partner. Some partners have physical locations where their services are provided or use the same types of service locations with some regularity. These program specifics are discussed below:

- California 2-1-1: 2-1-1 serves twenty-seven counties in California reaching more than 33 million Californians, or 91 percent of the California population.[7] Those counties not served by 2-1-1 are all rural. Some 2-1-1 call centers also receive calls from nearby counties that do not have their own 2-1-1 (i.e. Madera County residents call Fresno 2-1-1), so the service area stretches beyond the twenty-seven counties directly served by the program. The 2-1-1 staff work at twenty-seven 2-1-1 telephone line centers located across the state of California. The individuals that call 2-1-1 mostly live in the counties listed for the program in Table 1.

- Access Now: Access Now serves the counties listed in Table 1, focusing on CETF's target populations including low-income urban communities lacking computers and affordable connections to the Internet, and rural communities lacking broadband infrastructure. There are no set locations for the outreach events that occur under this program, but Access Now

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[7] California 2-1-1, "The State of 2-1-1 in California," *email attachment*, October 21, 2011.

has hosted events in the Bay Area, Los Angeles, Sacramento, Salinas, Fresno, and Greenfield.

- Center for Accessible Technology (CforAT): CforAT content is online, with members throughout California, the U.S. and the world. CforAT is located in Berkeley, California and the computer training courses offered by CforAT take place at this location.

- Social Interest Solutions (SIS): Los Angeles (LA) and Fresno are the primary service areas for this grant partner. Their signature program, One-e-App, is publically accessible on the web, but users need a ZIP Code in one of the counties listed in Table 1 to gain access to the program because the social services programming in the One-e-App is county-based. There are also twenty-six One-e-App self-service stations in community buildings, including one station in each of LA's twenty-one Family Source Centers, one in San Diego and the remainder in UC Davis and Sacramento.

- Chicana/Latina Foundation (CLF): CLF serves the counties listed in Table 1 and hosts its training classes in various locations, which to-date have included:

  - Sacred Heart Community Services of San Jose, California

  - Mi Pueblo Markets, a popular grocery chain in Northern California

  - Computer labs at the Redwood City Main Library in San Mateo County

  - Third Street Community Center's community lab in San Jose, California

- Dewey Square Group (DSG): DSG targets the City of Fresno and the Greater LA area (LA county), but their Race to Close Digital Divide program includes work in San Diego, the Bay Area and Sacramento. The Club Digital program also includes San Francisco. Physical locations for the Race to Close the Digital Divide include churches and faith-based organizations throughout California. Training associated with Club Digital takes place at the Catholic Charities' Family Resource Center in Fresno, California.

- Latino Community Foundation (LCF): LCF partners with eight organizations to deliver training in the six counties included in Table 1. LCF's partners use their specific sites for classes which include venues such as libraries, senior centers, and community centers.

- Radio Bilingüe: Radio Bilingüe is a broadcasting entity that serves twenty-one out of California's fifty-eight counties. Radio Bilingüe has six full-power radio stations that broadcast Public Service Announcements (PSAs) and radio talk shows. The radio stations are physically located in Fresno, Modesto, Bakersfield, El Centro, Salinas, and Laytonville.[8]

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[8] "Radio Bilingüe's Six Full-Power Radio Stations in California's Main Agricultural Area," *email attachment*, October 20, 2011.

Figure 1. Service Area
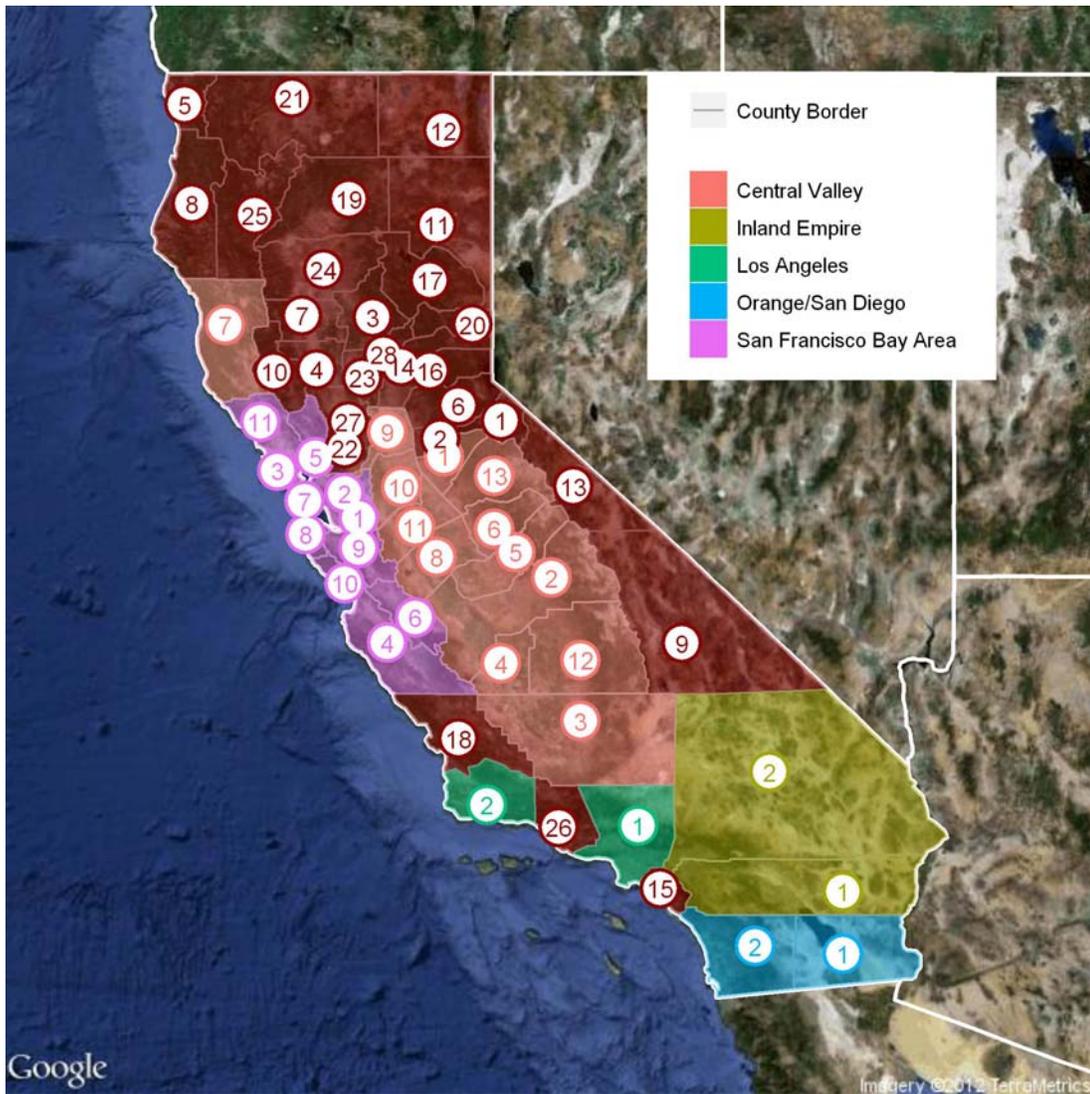
Table 2, below, illustrates the services offered at each of the locations shown in the map, above.

Table 2. Service Area Legend

Label	County	211	Access Now	CforAT	CLF	DSG	LCF	Radio Bilingüe	SIS
Central Valley									
1	Calaveras			✔				✔	
2	Fresno	✔	✔	✔		✔		✔	✔
3	Kern	✔		✔				✔	
4	Kings	✔		✔					
5	Madera			✔				✔	

Label	County	211	Access Now	CforAT	CLF	DSG	LCF	Radio Bilingüe	SIS
6	Mariposa			✔				✔	
7	Mendocino	✔		✔				✔	
8	Merced			✔				✔	
9	Sacramento	✔	✔	✔		✔			✔
10	San Joaquin			✔				✔	✔
11	Stanislaus	✔		✔		✔		✔	
12	Tulare	✔		✔				✔	
13	Tuolumne			✔				✔	
Inland Empire									
1	Riverside	✔		✔				✔	✔
2	San Bernardino	✔	✔	✔					
Los Angeles									
1	Los Angeles	✔	✔	✔		✔			✔
2	Santa Barbara	✔		✔	✔			✔	
Orange/San Diego									
1	Imperial			✔				✔	
2	San Diego	✔		✔		✔		✔	✔
San Francisco Bay Area									
1	Alameda	✔	✔	✔	✔	✔	✔		✔
2	Contra Costa	✔		✔	✔		✔		✔
3	Marin	✔		✔	✔		✔		
4	Monterey	✔	✔	✔	✔				
5	Napa	✔		✔	✔			✔	✔
6	San Benito			✔	✔			✔	
7	San Francisco	✔	✔	✔	✔	✔	✔		✔
8	San Mateo	✔		✔	✔		✔		✔
9	Santa Clara	✔	✔	✔	✔		✔		✔
10	Santa Cruz	✔		✔	✔			✔	✔
11	Sonoma	✔		✔	✔			✔	✔
Other Areas									
1	Alpine			✔					

Label	County	211	Access Now	CforAT	CLF	DSG	LCF	Radio Bilingüe	SIS
2	Amador			✔					
3	Butte			✔					
4	Colusa			✔					
5	Del Norte			✔					
6	El Dorado			✔					
7	Glenn			✔					
8	Humboldt			✔					✔
9	Inyo			✔					
10	Lake			✔					
11	Lassen			✔					
12	Modoc			✔					
13	Mono			✔					
14	Nevada	✔		✔					✔
15	Orange	✔		✔					✔
16	Placer			✔					
17	Plumas			✔					
18	San Luis Obispo	✔		✔					
19	Shasta			✔					
20	Sierra			✔					
21	Siskiyou			✔					
22	Solano	✔		✔					
23	Sutter			✔					
24	Tehama			✔					
25	Trinity			✔					
26	Ventura	✔		✔					
27	Yolo			✔					
28	Yuba			✔					

Figure 1 and Table 2 illustrate the grant service area and each of the target service regions defined in Table 1. Within these geographic areas, CETF's target populations include low-income urban and rural communities lacking computers and affordable connections to the Internet, rural communities lacking broadband infrastructure, and persons with disabilities lacking accessible technology. CETF chose these populations because of the differences in broadband adoption rates in California between these socio-economic groups and the population as a whole. The overall

adoption rate in California has been increasing since 2008, as have the rates associated with these groups.[9]

The data presented in the following paragraphs illustrate the economic and demographic characteristics of the area affected by the BAA grant. As shown in Table 1, the program specific target areas can be organized into six main regions including the entire state of California, the Bay Area, Central Valley, Los Angeles, Inland Empire, and Orange/San Diego. In the data presented below, economic, demographic and broadband statistics are discussed by these regions as defined by the counties listed in Table 1. Data for the nation is also discussed to provide context.[10]

Based on American Community Survey (ACS) data, California has a total population of 36.3 million. The Los Angeles service region has a population of 10.2 million, with 7.3 million in the Bay Area, 5.4 million in the Central Valley, 4.0 million in the Inland Empire, and 3.1 million in Orange/San Diego. Of the five regions, the population under the age of 18 ranges from 23 percent to 30 percent. The majority of the state's general population lives in the Los Angeles region, at 28 percent, followed by the Bay Area at 20 percent (Table 6, Appendix B).

The service regions contain about the same or a slightly a higher percentage of individuals under the age of twenty-five when compared to the nation. About 35 percent of the nation is under the age of twenty-five, compared to 40 percent in the Inland Empire, 39 percent in the Central Valley, 36 percent in Los Angeles, Orange/San Diego, and the state of California, and 32 percent in the Bay Area. The Bay Area and Los Angeles regions also have a slightly higher percentage of individuals between the ages of twenty-five and forty-four when compared to the other target areas and the nation as a whole. When compared to the nation, all service regions have a slightly lower percentage of population older than forty-five. (Table 7, Appendix B).

According to the ACS self-reported race data, each of the target regions is predominantly White, although to a lesser degree than the nation. Each target region also has a larger Asian and "Other" population when compared to the nation. The Bay Area is 21 percent Asian, the Central Valley 8 percent, Los Angeles is 13 percent, the Inland Empire is 6 percent, Orange/San Diego is 10 percent, and the state 12 percent compared to 4 percent in the nation. The Bay Area is 9 percent "Other", the Central Valley 14 percent, Los Angeles is 23 percent, the Inland Empire is 19 percent, Orange/San Diego is 9 percent, and the state of California 16 percent, compared to only 6 percent for the nation. (Table 8, Appendix B).

The ACS tabulates the "Hispanic and Latino" ethnic group independent of race, which is used to compile the statistics presented above.[11] [12] ACS Hispanic and Latino data reveal that all grant target regions have a significantly higher percentage of Hispanics and Latinos when compared to the nation. All service regions with the exception of the Bay Area have more than twice the national percentage of individuals who are Hispanic or Latino (Table 9, Appendix B).

The ACS data also reveal that each of the grant target regions include large percentages of person speaking languages other than English at home when compared to the nation. The state of California is composed of nearly twice as many non-English speaking individuals as in the nation, while Los Angeles has 55 percent as compared to the nation's 21 percent. The Inland Empire and

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[9] Mark Baldassare et al., *California's Digital Divide*, *Just the Facts*, June 2011, http://www.ppic.org/content/pubs/jtf/JTF_DigitalDivideJTF.pdf.

[10] A detailed discussion of the economic, demographic and broadband statistics for the area is included in Appendix B. All data tables referenced within this section are included in this appendix.

[11] For Census 2000, American Community Survey: People who identify with the terms "Hispanic" or "Latino" are those who classify themselves in one of the specific Hispanic or Latino categories listed on the Census 2000 or ACS questionnaire - "Mexican," "Puerto Rican," or "Cuban" - as well as those who indicate that they are "other Spanish, Hispanic, or Latino." Origin can be viewed as the heritage, nationality group, lineage, or country of birth of the person or the person's parents or ancestors before their arrival in the United States. People who identify their origin as Spanish, Hispanic, or Latino may be of any "race".

[12] United States Census Bureau, "Glossary: Hispanic or Latino origin", May 8, 2012, http://factfinder2.census.gov/help/en/american_factfinder_help.htm#glossary/glossary.htm.

Orange/San Diego regions fall just short of that mark, with 39 percent and 37 percent of non-English speaking persons, respectively (Table 10, Appendix B).

Each of the grant target regions have higher unemployment rates than the national rate, with the Central Valley having the highest rate at 13.9 percent. California's unemployment rate is 11.3 percent, the Bay Area is 10.1 percent and the national average is 9.3 percent (Table 11, Appendix B). The Bay Area region has the highest percentage of households with a total income of above $75,000. The Los Angeles and Orange/San Diego regions, along with the state of California, have a higher percentage of households above that threshold than the nation (Table 13, Appendix B). CETF targets service towards households with an income under $40,000. Central Valley has the largest percent composition of households with an income of less than $40,000 at 34.9 percent, followed by 32.9 percent of Los Angeles households, 29.7 percent of Inland Empire households, 27.9 percent of the state of California households, 25.9 percent of Orange/San Diego households, and 20.1 percent of Bay Area households.

Of the grant target regions, the Central Valley has the highest poverty rate at 17.3 percent, which is above the national rate of 13.9 percent, followed by Los Angeles at 15.4 percent.[13] The Inland Empire and the state of California have poverty rates just below that of that nation at 13.3 and 13.2 percent, respectively. The Orange/San Diego region and Bay Area have poverty rates below the nation, at 12.0 percent and 9.7 percent, respectively. (Table 14, Appendix B).

All of the grant target regions other than the Bay Area have a larger percentage of individuals over the age of twenty-five without a high school degree than does the nation. More than 24 percent of the Los Angeles population over the age of twenty-five, for example, does not have a high school degree or equivalent GED, as compared to 16 percent for the nation. Within the service area, the Bay Area region has the highest composition of individuals with a bachelor's degree or higher, with more than 41 percent of its individuals over the age of twenty-five in that category (Table 16, Appendix B).

1.2.1 Broadband

Data from the National Broadband Map (NBM) show that 3.4 percent of the state of California population does not have a wired broadband provider available to them. The Central Valley and Orange/San Diego service areas have higher rates of broadband unavailability. At least 75 percent of each service area has either two or three service providers available to them. The Los Angeles service area has the highest percentage of its residents that have at least four service providers available to them (19 percent) (Table 19, Appendix B). NBM data also reveal there are twenty-eight service providers throughout the state of California. Not every service provider available in the state is available in the service location target regions, however. Only one provider, AT&T California, is available for more than 28 percent of the service area (Table 20, Appendix B).

More than 55 percent of individuals in the state of California have maximum advertised download speeds of 50-100 Mbps. This is also the maximum advertised download speed for at least 59 percent of the Inland Empire, Central Valley and Bay Area service areas. More than three-fourths of the Orange/San Diego service area has a maximum advertised download speed of 10-25 Mbps (Table 21, Appendix B). At least 56 percent of each service area population has maximum advertised upload speeds of 10-25 Mbps available (Table 22, Appendix B). It is estimated based on the NBM data that broadband subscription as a percentage in most of target regions is higher than the national rate, with the exception of the Central Valley and Inland Empire. In particular, the Los

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[13] Poverty, as defined by the U.S. Census Bureau, varies based on an income threshold determined by family size and composition. If a family's total income is below the threshold defined for that family's composition and size, then every individual in the family is considered to be living in poverty. The official poverty definition uses monetary income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps).

Angeles region has the highest broadband subscription rate of 70 percent, compared to the national rate of 59 percent (Table 23, Appendix B).

According to statewide Internet and broadband use surveys conducted by the Public Policy Institute of California (PPIC) in 2008, 2009, 2010, and 2011, 72 percent of Californians had access to high-speed broadband Internet at home in 2011, up from 70 percent in 2010, 62 percent in 2009, and 55 percent in 2008.[14] Despite double-digit gains in Internet use and access to broadband since 2008, some groups in California still remain much more likely than others to report use of information technology. For example, Internet use and access to broadband are reported by overwhelming majorities of Whites (92 percent Internet, 81 percent broadband), Asians (86 percent Internet, 76 percent broadband), and Blacks (85 percent Internet, 74 percent broadband), compared to far fewer percentages of Latinos (70 percent Internet, 55 percent broadband). Nearly all college graduates (97 percent) use the Internet, compared to only 69 percent of those without any college education, and 90 percent of college graduates have access to broadband, compared to only 53 percent of those with no college education. Those with incomes of $80,000 or more are far more likely than those with incomes under $40,000 to use the Internet (98 percent versus 72 percent) or to have broadband at home (93 percent versus 58 percent). With respect to age, California residents age fifty-five and older are much less likely to report Internet use and access to broadband (74 percent Internet, 61 percent broadband) than residents ages eighteen to thirty-four (92 percent Internet, 81 percent broadband) (Table 24, Appendix B).

Beyond these statewide Internet use and broadband access statistics, the PPIC survey breaks California broadband usage data down into five regions, including Los Angeles County, San Francisco Bay Area, Orange County and San Diego, Central Valley, and the Inland Empire.[15] Though these are the same geographic region names as presented above and in Appendix B, PPIC defines these regions differently. The regional groupings of economic and demographic data for the BAA grant described above only include data for those counties served by the grant, which are listed in Table 1. PPIC data, however, aggregates all of the counties physically located in each geographic region, as defined below:[16]

- Central Valley includes Butte, Colusa, El Dorado, Fresno, Glenn, Kern, Kings, Madera, Merced, Placer, Sacramento, San Joaquin, Shasta, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba Counties

- San Francisco Bay Area includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties

- Los Angeles refers to Los Angeles County

- Inland Empire refers to Riverside and San Bernardino Counties

- Orange/San Diego refers to Orange and San Diego Counties

The five geographic regions used by PPIC account for about 90 percent of California's population.[17] Residents from counties in California not listed above are included in the statewide PPIC reported results, but sample sizes for these less populated areas are not large enough to report separately. The PPIC data on Internet use and broadband access are different among the five regions. The data show, for example, that in 2011, Internet use in the five California regions varied from a high of 89 percent shared by the San Francisco Bay area and Orange County/San Diego regions to a low of 79 percent in Los Angeles County. Broadband at home statistics in 2011 ranged from a high of 78 percent in the San Francisco Bay area to a low of 66 percent in the Inland

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[14] Baldassare et al., *California's Digital Divide*.
[15] Baldassare et al., *California's Digital Divide*.
[16] Mark Baldassare, Dean Bonner, Sonja Petek, et al., *PPIC Statewide Survey: Californians & Information Technology*, June 2011, 25, http://www.ppic.org/content/pubs/survey/s_611mbs.pdf.
[17] *Ibid.*

Empire. Los Angeles County was second lowest at 68 percent (Table 24, Appendix B). CETF used this information in selecting their BAA project partners and targeted service regions.

1.3 Grant Description

CETF received a BTOP SBA grant of $7.25 million on March 1, 2010 under the program's Round 1 funding initiative to fund the Broadband Awareness and Adoption program.[18] BAA uses eight partners statewide to provide vulnerable and low-income communities impacted by the Digital Divide with the basic tools necessary to adopt broadband technology throughout the state, with some programs targeting specific locations within the Bay Area, Central Valley, and Los Angeles, Orange County, San Diego, and the Inland Empire.

Table 3. Grant Information[19]

Size of Award	$7,251,295
Match Amount	$2,109,377.00
Type of Entity	Nonprofit with 501(c)(3) IRS Status (Other than Institution of Higher Education)[20]
Round	1

Through BAA, CETF essentially replicated and scaled-up their existing Get Connected! Los Angeles (LA) project to reach all areas of California. Based on existing statewide research, LA had the worst adoption rate out of the five regions in California defined in this research, at 48 percent in 2008.[21] LA is also the most populated county in the state. As a result, CETF concluded it should begin its work in LA. CETF also targeted the low-income neighborhoods because, according to the same research, they were the least likely to already have a subscription to broadband. The goal of the GetConnected! LA pilot project was to increase broadband adoption by 10 percent in two years for the low-income population of LA. According to the PPIC Statewide Survey on information technology, the adoption rate in LA County increased 19 percentage points, while the state overall only increased by 15 percent.[22]

CETF based its approach to the BAA grant project on the success it achieved in Los Angeles.[23] The BAA project focuses on the Central Valley, which, after Los Angeles, has the lowest rate of broadband adoption in the state. For the BAA grant, CETF vetted each partner through a "venture capital" approach to grant making. This included focusing on disciplined documentation, assessing key outcomes, and measuring returns on investments.[24] Most partners on the BAA grant are new partners for CETF and are new to working with each other. Partners involved with the Get Connected! LA project include the Center for Accessible Technology and 2-1-1. The BAA grant partners are described in further detail in Subsection 1.4.

One year before the BAA grant began, CETF and its partners collaborated and shared ideas on grant implementation via Basecamp, an online forum and sharing community. Beginning in early 2010, CETF held conference calls with partners to begin gathering materials for grant delivery. While each partner is responsible for implementation and management of their own program under

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[18] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption.*

[19] Financial statistics provided by National Telecommunications and Information Administration on December 13, 2011.

[20] Type of entity is based on what is reported in the grantee's BTOP application.

[21] Mark Baldassare et al., *California's Digital Divide*, *Just the Facts*, August 2010.

[22] Baldassare et al., *California's Digital Divide*.

[23] Grantee, in discussion with the author, October 19, 2011.

[24] California Emerging Technology Fund, "California Emerging Technology Fund Access to Careers and Technology Application Part 1," *BroadbandUSA: Connecting America's Communities*, August 15, 2009, http://www2.ntia.doc.gov/files/grantees/cetf_r1_sba_application_part1.pdf.

the grant, the partners do work together to share best practices and lessons learned, and leverage each other's services. The grant's online forum "Getconnectedtoday" has a partner portal that lists resources and allows partners to post information such as presentations, so other partners can use that information and adapt it to their community and program needs.[25]

The partners use both traditional and high tech methods to engage low-income residents and promote the benefits of broadband. Specifically, the grant intends to increase the understanding, importance, and awareness of broadband and improve basic Internet skills and broadband adoption. The program also focuses on enabling low-income Californians to enter and continue in digital career paths.[26]

In addition to the BAA grant, CETF applied for BTOP grants to fund the Access to Careers in Technology (ACT) and Digital Literacy for All programs, both intended to build upon the work of BAA. Funding was awarded for ACT on September 27, 2010 in the amount of $7,108,181.[27] ACT focuses on certifications, job training, and placement in the Information Technology (IT) field. CETF conducts learning community forums for all partners in both the BAA and ACT projects monthly and quarterly. Through this networking and open communication between grants, CETF BAA and ACT partners cross-refer and leverage each other's services when delivering both grants to enhance the delivery of the BAA goals. CETF also organizes roundtable sessions and a newsletter to inform anchor institutions, community based groups, other NTIA grantees, and civic and elected leaders of each other's initiatives.

The Digital Literacy for All program was designed to provide medium-level digital literacy training in a forum more advanced than BAA, but less complex than ACT training. This grant, however, was not funded. CETF applied for Digital Literacy for All grant funding in round one under the project title "Digital Literacy for All: A California Emerging Technology Fund Public Computers Centers Proposal," requesting $7,723,506.[28] They also applied in the second round of funding, requesting $5,600,717 for the program, renamed "Digital Literacy for All."[29] With no funding for the Digital Literacy for All grant, CETF modified the training curriculums of both the BAA and ACT grants in order to fill this medium-level training need. Specifically, they added slightly more advanced training curriculum to the BAA grant and slightly less advanced material to ACT.

Other broadband-related activities on-going in the state that interact with the BAA grant include the Comcast Internet Essentials program as of September 2011. Under this program, Comcast is offering Internet access at $9.95 per month and a low-cost netbook to households with at least one child that receives free lunch through the National School Lunch program.[30] Furthermore, if 85 percent or more of students qualify for the free lunch program in a particular school, all remaining students are eligible for the Comcast offer as well. There are 700,000 children in the state of California that can benefit from this program. The Comcast Internet Essentials program has the opportunity to increase broadband adoption among the BAA grant's targeted populations. Comcast is not heavily advertising this program, but has conducted outreach with its own government affairs staff to school superintendents and elected school officials. CETF has started sharing the details of this program with its partners, who have passed it to the populations they are serving. Many families have shown interest in this program and CETF said they anticipate seeing subscribership in their target audience increase as a result of this offer.

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[25] For more information, visit http://getconnectedtoday.com/user/register.

[26] California Emerging Technology Fund, "California Emerging Technology Fund Access to Careers and Technology Application Part 1."

[27] National Telecommunications and Information Administration, "California Emerging Technology Fund Access to Careers and Technology," *BroadbandUSA: Connecting America's Communities*, January 18, 2012.

[28] National Telecommunications and Information Administration, "Applications Database," *BroadbandUSA*, January 18, 2012, http://ssl.ntia.doc.gov/broadbandgrants/applications/results.cfm?org=California+Emerging+Technology+Fund&keywords=&grantround=&id=&program=BTOP&state=&projstates=CA&status=Application+Not+Funded.

[29] National Telecommunications and Information Administration, "Applications Database."

[30] For more information, visit http://www.internetessentials.com/how/.

1.4 Partner Organizations

CETF delivers grant services statewide through eight partner organizations, chosen through a selection process designed to match partners' abilities with area need, as identified by CETF. Partners were selected specifically based on their experience and demonstrated ability in informing the target audiences about the benefits of broadband. CETF also chose partners in communities that could deliver hands-on basic training for interested members of the targeted population. Though partnerships were formed to address specific elements of the project, CETF designed the project to work as a cohesive unit to close California's digital divide. The resulting group of partners, organized as shown in Figure 2, is heterogeneous in approach and strategy, but work together towards common goals established by CETF. Each partner coordinates and runs its own unique programs through the grant and reports to CETF monthly. All partners have a variety of sub-recipients, such as health clinics and community centers, responsible for implementing the adoption and training activities at their own sites.

Figure 2. Grant Organization Chart

A description of each partner organization is provided below.

California 2-1-1 is a part of 2-1-1 U.S., which was created in 2000 by the Federal Trade Commission. The nationwide program is led by 2-1-1 U.S. partnering with United Way Worldwide (UWW) and the Alliance for Information and Rental Systems (AIRS), which have established standards and protocols for the number's use. The California Public Utilities Commission (CPUC) oversees the regulation, authority, and operation for 2-1-1 in the state of California. 2-1-1 is a free phone number and online database that connects Californians to existing health and human service programs. United Ways of California runs and houses many, but not all, of the California 2-1-1s. California 2-1-1 receives more than 1.4 million callers each year.[31]

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[31] California 2-1-1, "The State of 2-1-1 in California."

ACCESS NOW

Access Now is an organization that holds Computer Help Days, which are one-day events where low-income individuals can receive technical support, training and access to the Internet for free. The program started as an initiative of the San Francisco City government to engage volunteers to solve civic problems. Access Now serves all of California, but focuses on low-income urban communities lacking computers and affordable connections to the Internet, and rural communities lacking broadband infrastructure.[32]

The **Center for Accessible Technology (CforAT**) is an expert on accessibility, providing consulting services to improve technological accessibility for people with disabilities. CforAT was founded in the early 1980s as an assistive technology resource. Formerly, users would go into the Accessible Technology (AT) center, which was a challenge for people living far from the center and those with difficulties leaving home. CforAT wanted to disseminate information further than the AT Center's geographic reaches, so they developed the Accessible Technology Coalition to get technology information and training out to people who do not have these resources. CforAT's Accessible Technology Coalition capitalizes on the experience that CforAT has in leveraging technology to ensure access to broadband and technologies that rely on high-speed communication in the disabled community.[33]

Social Interest Solutions (SIS), formerly the Center to Promote HealthCare Access, was founded in 2005 as a nonprofit technology and solutions provider connecting low-income California families to health and social services programs, decreasing the Digital Divide. SIS's signature solution, One-e-App, has screened more than 6.5 million people and generated applications for more than 10 million programs. SIS offices are located in Oakland and Sacramento. The organization is staffed by about seventy professionals, most of whom are software developers, database analysts, and help-desk staff; although roughly six employees do policy and advocacy work.[34]

Chicana/Latina Foundation (CLF) has focused on professional development and leadership among the Latina population for more than thirty years. CLF acts through scholarships, leadership institutes, and after school programs. CLF also conducts scholarship workshops at twenty universities to teach students how to get scholarships and started a youth after-school program in math and leadership skills for parents in two local communities six years ago.[35]

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[32] For more information, visit http://www.computerhelpdays.org.
[33] For more information, visit http://www.cforat.org and http://atcoalition.org.
[34] For more information, visit http://www.socialinterest.org and http://statewide.oneeapp.org.
[35] For more information, visit http://www.chicanalatina.org.

The **Dewey Square Group (DSG)**, founded in 1993, is a public affairs firm that integrates the best strategy, tools, and tactics to design solutions in almost every industry, including energy, transportation and technology.[36]

The **Latino Community Foundation (LCF)** endeavors to help Latino children and their families build a better future by providing grants to organizations supporting Latinos, participating in learning communities, holding speaker series that bring experts and leaders into the community for public dialogue, and public relations.[37]

Radio Bilingüe is a nonprofit radio network with six full power radio stations covering the Central Valley. The Latino-controlled network is the only national distributor of Spanish-language programming in public radio.[38] Programming includes music, news, talk, drama, and more in Spanish, along with some English and three other indigenous languages. Radio programming reaches 60,000 listeners in farm worker communities in the state's interior, the lowest per-capita broadband access area in California.[39]

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[36] For more information, visit http://www.deweysquare.com.
[37] For more information, visit http://www.latinocf.org.
[38] For more information, visit http://www.radiobilingue.org/cat_index_50.htm.
[39] California Emerging Technology Fund, "Connecting the Latino Community," *Connections* 1, no. 1 (2011).

Section 2. Implementation and Impact

Implementation and impact of the CETF BAA grant varies by project partner. The following subsections describe the services provided through the BAA grant, the data that is collected, the users targeted and attracted, and the impacts and sustainability of the services provided. These topics are discussed for the grant as a whole and by partner as appropriate.

2.1 Overview

The CETF BAA grant provides basic training and information about broadband to spur interest in adoption. Through a network of partners, CETF is able to do this in number of different ways and in a number of different locations.

2.1.1 Services Offered

The majority of the services provided under the BAA grant are implemented by the project's partners and their sub-recipients. Services include various training, outreach, and information dissemination efforts. CETF also uses grant funds directly to perform outreach and manage collaboration activities, including commercials/advertisements, a website, Roundtables, and a learning community for partner and community networking.

CETF created a media campaign, Get Connected!, designed to effectively communicate and engage non-broadband users in California with tailored messages and themes relevant to the targeted demographics of the grant. The campaign is intended to convince non-users to adopt broadband. Its messages focus on the benefits and affordability of broadband, including potential savings the Internet can offer, such as free online phone service. Broadband access is framed as an opportunity to get ahead and stay connected and informed.[40]

Figure 3. CETF BAA Advertisement

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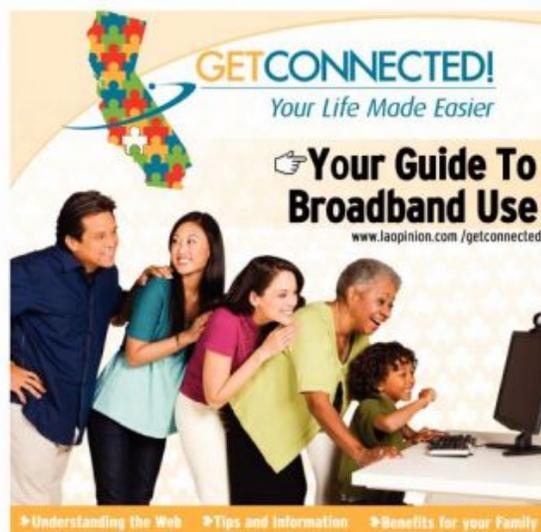
[40] Saeshe, "Work Plan: California Emerging Technology Fund," *email attachment*, March 5, 2011.

CETF and its BAA partners used BTOP funds to pay for the sixteen page supplement pictured above. It was included in impreMedia's California papers and their partners' papers in October 2010. CETF uses its own funds to buy flights of advertising time on both television and radio for the commercials that air on multiple stations in multiple regions of the state. These commercials focus on the primary markets of Fresno/Central Valley and LA, which have low adoption rates relative to other regions of California.[41] [42] CETF changes the location and messaging of the flights as needed, purchasing time on Spanish language stations aimed at low-income groups. CETF also created advertisements in English and Chinese. Commercials mainly refer people to 2-1-1, a BAA grant program discussed in detail in subsection 2.2. Others discuss how to purchase broadband service, providing lowest price quotes that are non-provider specific. Commercials are updated periodically to reflect changes in the broadband market. Additionally, some commercials are available on the Get Connected! Today website and YouTube.[43]

Using BTOP funds, CETF upgraded its collaborative website, GetConnectedToday.com, and will continue to expand the website over the course of the grant. The expansion of GetConnectedToday.com used the LA-specific portal (CETF's BAA pilot program) as a base. CETF scaled up the website to a full-feature site including a partner portal and resource map. CETF encourages its partners and networks to sign up. The portal allows CETF and its partners to communicate and share information easily. The resource map pulls broadband data from the 2-1-1 database and provides detailed information including hours, location, and contact information for Internet hot spots, computer training, public computer access, and community events available to residents. CETF shows grant users this map to identify broadband options available in their local communities. This map is also designed to be embedded on other websites, including those of elected officials and partners. CETF can track the number of times this map is embedded in other sites to better understand how far the map spreads.

CETF also hosts Roundtables in different regions and invites ACT grantees/partners, nonprofits, libraries, people providing training and hotspots, community initiatives, and people serving local communities to share information, ideas, solutions, and best practices and to network. Some participants come to all Roundtables, while others pick and choose based on roundtable agenda items.

Working with its partners, CETF plans how the Roundtables will best meet community and participant needs. Partners help create the agenda, identify host locations, and create the invitee list. These sessions allow various broadband-related initiatives to link up, share what is happening, and ensure people are not duplicating efforts. For example, the Bay Area ACT team presented at Roundtables and found CETF sub-recipients in Fresno with which to expand the program to that area.

CETF uses word of mouth and the 2-1-1 database to identify parties to invite. Thus far, CETF has held at least twelve Roundtables with 292 participants and 114 organizations in the Bay Area, Fresno, LA, San Diego, and Inland Empire, as noted in Table 4 below.[44] Participants complete an evaluation at the end of the Roundtables. CETF has received positive remarks about the events, consistently exceeding the expectations of and providing networking opportunities for participants.

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[41] Saeshe, "Work Plan: California Emerging Technology Fund."

[42] Baldassare et al., *California's Digital Divide*.

[43] For more information, visit http://getconnectedtoday.com/moreinfo/newsroom.

[44] Grantee, in correspondence with the author, January 30, 2012.

Table 4. CETF Roundtable Statistics[45]

Region	Number of Participants	Number of Organizations	Number of Roundtables
Los Angeles	76	19	3
Central Valley	73	21	3
Inland Empire	65	43	3
San Francisco Bay Area	78	31	3

CETF also supports a community of partners from the Roundtables and encourages them to share and critically evaluate their practices in an ongoing, reflective and growth-oriented manner to maximize effectiveness. Partners share experiences, strategies, ideas, and resources and grow participating programs as a whole.

Since receiving the grant, CETF and its eight partners have continued to hold regular webinars and conference calls to coordinate due diligence questions, training materials, media and outreach strategies, conduct quarterly learning community meetings, review overall progress, and recognize partner accomplishments. They have also expanded communication to include the learning community, both online and in person. Topics have since been added to the learning community discussion, including sharing best practices on federal reporting, project management, and any breakthroughs or potential partnerships with new entities from which all the BAA partners can benefit. CETF uses the Drop Box online file sharing application to share documents among all grantee partners.

Quarterly in-person meetings have proved essential to build relationships and increase participation levels. To ensure these meetings are as effective as possible and reflective of changing needs, CETF surveys partners on what they want to get out of the learning community. In the quarterly seminars, CETF separates BAA and ACT grantees for two-thirds of the day so grantees can work within their respective grant communities, and the last one-third of the day they come together to share lessons learned, issues, and common focus items. At these meetings, one partner is asked to give a presentation on its mission, challenges it has faced, and successes, then the presenter opens the floor up for a critique from the other partners. These meetings promote relationships among the grant partners. Over time, they have resulted in BAA partners collaborating jointly on key projects and events further reinforcing the team message in delivering the overall project outcome.

The overall learning community is complemented by regional working groups and workshops where partners can implement local strategies to reach new organizations that serve the target population. This regular and structured communication helps partners avoid working in isolation. The learning community also serves as a way for partners to hold each other accountable for meeting the overall goals of the grant.

Topics discussed in the learning community include curriculum design, broadband subscription documentation, and target population outreach methods. An example of the curriculum developed in the learning community is the multiple Spanish language training modules discussing the benefits of being online such as healthcare, education, and jobs, developed by the Latino Community Foundation (LCF). LCF provided the curriculum to the learning community for review and critique before disseminating the final version in the target population. Other partners also tailored this curriculum to the communities they reach. Dewey Square Group (DSG), for example, translated the training to English and adopted it for the DSG client community.

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[45] Grantee, in correspondence with the author, January 30, 2012.

2.1.2 Grantee Data Collection and Methods

CETF relies primarily on the Public Policy Institute of California's (PPIC) annual Statewide Survey: Californians and Information Technology, analyzed along with data from the Federal Communications Commission (FCC) Broadband Adoption and Use Survey and the Pew Research Center's Internet & American Life survey for national comparison, to monitor trends in California's broadband use over time and demonstrate the longer-term impacts of both their BAA and ACT grants.[46]

CETF also conducts an initial online survey, distributed through the partner organizations, that collects user demographic information including gender, age, household income, race, and employment status. The survey also asks users about their computer and broadband experience, access, and home usage habits, along with what BAA grant program offerings, if any, the user would like to learn more about. They use this survey data to provide tailored information to the survey responder, and to update and modify the delivery of the grant programs to better meet users' needs.

To monitor and report outcomes and accomplishments of the CETF BAA grant activities, CETF collects data from each of the eight BAA grant partners and tracks them in an online tool called the BAA Outcomes Tracker. Illustrated in Figure 4 below, the BAA Outcomes Tracker is a CETF internal tool that tracks grant information organized by categories of importance to CETF in their management of the grant, including: accessibility, affordability, applications, assistance, awareness, and financial data.[47] The tool was developed and donated by dbarista.com and includes data on, among other things, the number of people who have completed training, the number of radio listeners, advertising impressions, and the number of households newly using the Internet. Each partner uses this standardized system to submit data on its grant-related activities to CETF. This data is used by CETF as part of its aggregated grant level reporting to NTIA, and for other internal grant management purposes. The online tracking system facilitates data transparency, management decisions in real time, and avoids corruption issues when sending spreadsheets back and forth through different systems. Outside of the BAA Outcomes Tracker, CETF also asks partners to collect and share letters or stories from users on how the program affects them.

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[46] For more information, visit http://www.ppic.org/main/publication.asp?i=985.
[47] California Emerging Technology Fund, "CETF BAA Outcome Tracker," *email attachment*, October 21, 2011.

Figure 4. CETF BAA Outcomes Tracker[48]
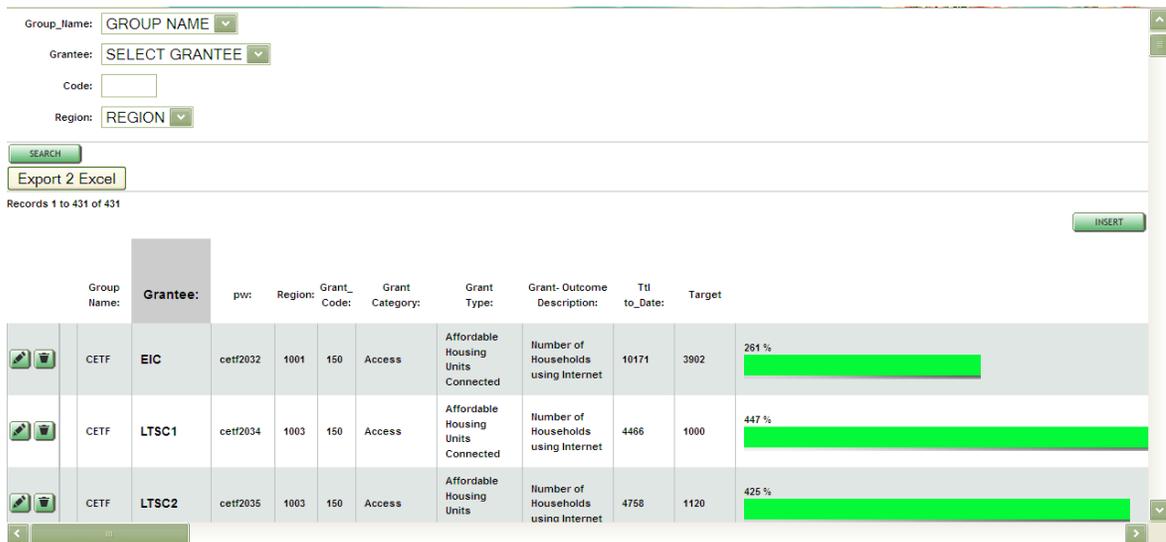
CETF defines adoption as a new active home Internet connection used by a computer.[49] For reporting purposes, CETF uses the PPIC Statewide Survey to track changes in broadband connections at home over time in the state of California, and specifically in CETF's target demographics, attributing a percentage of those changes to BAA grant efforts. The percentage applied, 6 percent, is based on the rate of broadband subscribership the United Ways of California/2-1-1 has found through their random sample of individuals called who have expressed interest in broadband services after receiving information from 2-1-1.[50]

CETF creates quarterly newsletters for both the ACT and BAA grants, summarizing outcome statistics from the Outcome Tracker and including anecdotal stories on the impacts of the grants. A listing of the newsletters collected during the case study visits is included in Appendix C.

For purposes of reporting to CETF in the BAA Outcomes Tracker, BAA partners use a variety of strategies to determine the number of household and business subscriptions to broadband resulting from their grant-related activities. Some partners call training participants within a month to determine if they have subscribed. New subscribers are asked to share their welcome letter or first month's bill to confirm service, while other partners use an email from class participants with the providers name to demonstrate subscription. Individual methods for each partner are discussed in more detail in Subsections 2.2 through 2.9.

2.1.3 Users

The BAA target population is low-income households, specifically those earning less than $40,000 per year, with emphases on the unemployed, Hispanics, African-Americans, and other ethnic groups, rural residents, and people with disabilities. Among ethnicities represented in California, Hispanics are the least likely to have a broadband connection and use the Internet.[51] People with disabilities are also less likely to have broadband access at home with 49 percent as compared to

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[48] California Emerging Technology Fund, "CETF BAA Outcome Tracker."
[49] Grantee, in discussion with the author, October 19, 2011.
[50] California Emerging Technology Fund, *Broadband Adoption and Awareness Second Quarter Report, 2011*, *BroadbandUSA: Connecting America's Communities*, July 29, 2011, http://www2.ntia.doc.gov/files/grantees/06-43-b10013ppr_2011_q2.pdf.
[51] Baldassare et al., *California's Digital Divide*.

the overall broadband at home rate in California of 72 percent.[52] Both Internet use and broadband access at home is similar among Californians from both rural and urban communities.[53]

An initial survey of BAA users indicated that about 56 percent are Hispanic or Latino and 65 percent have a yearly income of $20,000 or less. Eighty-one percent are interested in learning computer skills or how to choose a broadband provider.[54]

Figure 5. Broadband Subscribers[55]
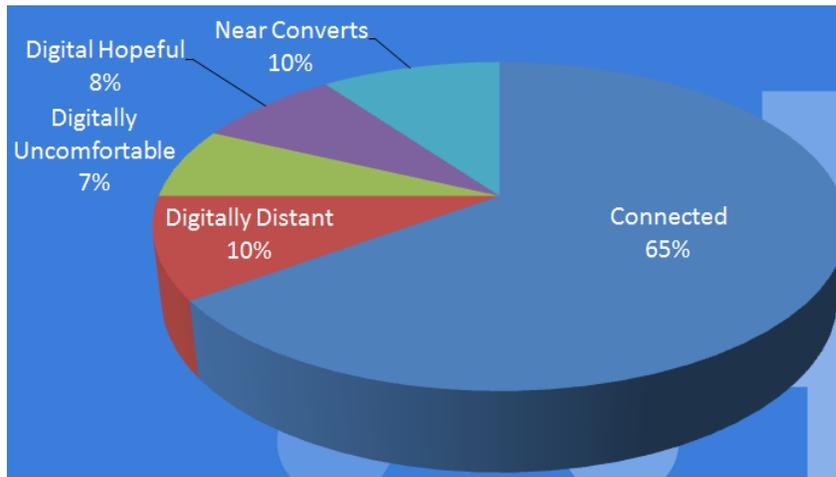
The FCC Broadband Adoption and Use Survey conducted in February 2010 identified the breakdown for subscribers and non-subscribers in California in an effort to quantify the digital divide. These results are depicted in the figure above. CETF is initially focusing on the 10 percent of near converts, the 8 percent of digital hopefuls, and the 7 percent of digitally uncomfortable to fulfill its mission.[56]

CETF and its partners have found that broadband adoption is cost-prohibitive for many people in their target demographic. Usually, this has to do more with up-front costs (purchasing a computer, installation fees, etc.), and being locked into a two-year contract commitment (many are transient), than the monthly subscription costs. Additionally, it is their observation that some low-income people have Internet on their mobile devices and do not see the need for a home connection.

Based on feedback from grant activities, CETF is learning the reasons people adopt and finding they vary based on the demographic and program specifics. For example, after teaching many users basic digital literacy, CETF found adoption did not increase, even though participants' knowledge of broadband had increased. Users also required assistance signing up for broadband service in order to increase adoption rates. As a result, this was incorporated into later classes which led to improved adoption.

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[52] Baldassare et al., *California's Digital Divide*.

[53] *Ibid.*

[54] California Emerging Technology Fund, "BAA Initial Survey," *email attachment*, October 21, 2011.

[55] OneCommunity and California Emerging Technology Fund, "Measuring Broadband Adoption: Data Collection and Data Analysis," in *presentation*, 2011; John B. Horrigan, "Broadband Adoption and Use in America," *OBI Working Paper Series* (Washington, DC: Federal Communications Commission, February 2010), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296442A1.pdf.

[56] Grantee, in discussion with the author, October 19, 2011.

2.1.4 Initial Impacts

CETF's goal is to increase the broadband adoption rate for the state of California to 80 percent by 2015, with no sub-groups or regions lower than 70 percent. According to the latest PPIC survey data results, broadband is used by 72 percent of Californians, 58 percent of low-income families, 55 percent of Latino, 53 percent of those without a college degree, and 49 percent people with disabilities.[57] CETF will continue with this mission post-BAA grant, but recognizes groups that have not adopted at that point will be difficult to reach. Anticipated and current adoption statistics are depicted in Figure 6.

Figure 6. California Broadband Adoption
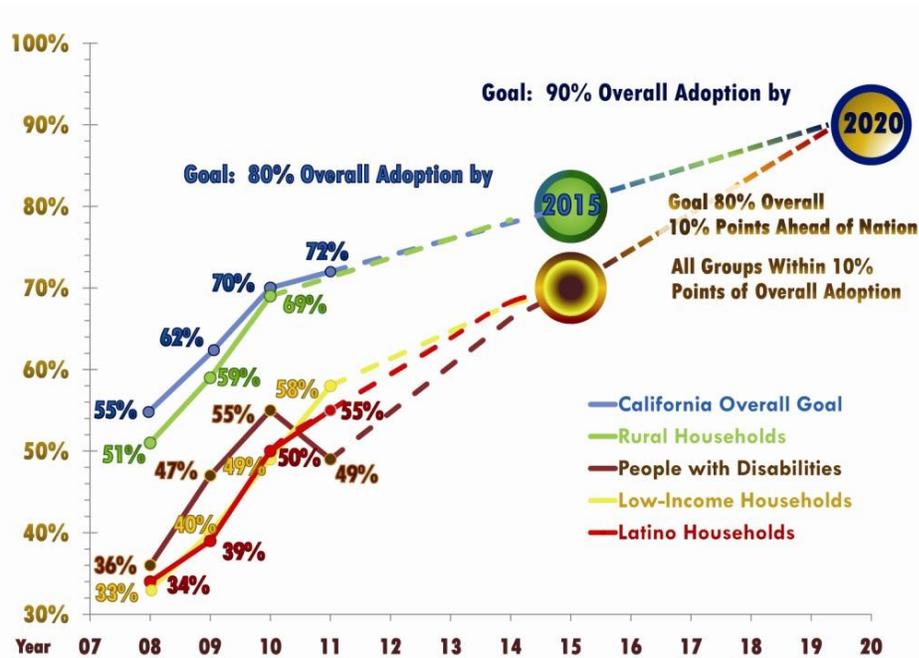
CETF has impacted many low-income individuals in the state of California, whether through advertisements or training sessions. CETF found anecdotally that it takes at least four touches with a family to spur adoption, an opinion shared by its partners as well.

To measure the impact of CETF's efforts to increase broadband subscribership across the state of California, CETF estimates that 6 percent of the change in home broadband connections found through the PPIC Statewide Survey can be credited to the efforts of CETF and its partners under the BAA grant. This percentage was established based on call back data from 2-1-1, on people randomly screened to determine who had subscribed to broadband since expressing an interest in broadband services and receiving information from 2-1-1. CETF views this as a conservative estimate.[58] CETF also adds a portion of those participating in the BAA's outreach and training activities to this figure to arrive at the total number of new households subscribing to broadband.

While there is no way to determine if this is directly attributable to the CETF BAA grant, CETF's targeted demographic populations have seen increases in broadband usage. California increased broadband usage at home from 70 percent in 2010 to 72 percent in 2011, while the Latino and low-

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[57] Baldassare et al., *California's Digital Divide*.
[58] California Emerging Technology Fund, *Broadband Adoption and Awareness Second Quarter Report, 2011*.

income populations experienced 5 and 9 percentage point increases, respectively. No other group experienced increases that large.[59]

Other CETF BAA achievements, as of June 30, 2011, are listed below and grant outcome counts by category are presented in Appendix B:

- 4,957,364 low-income residents have increased basic awareness of broadband technology from strong, targeted media messages.[60]

- 40,979 persons have learned basic skills related to broadband technology.[61]

- 50,299 new households in low-income communities have subscribed to broadband services.[62]

- With the help of World Institute on Disability, each partner organization is developing an accessibility plan to offer people with disabilities tailored training and employment services.[63]

2.2 California 2-1-1

2-1-1 is a free phone number and online database that connects Californians to existing health and human service programs. The 2-1-1 number was created in 2000 by the Federal Trade Commission, which required all states to use the number. The nationwide program is led by 2-1-1 U.S. as a partnership between United Way Worldwide (UWW) and the Alliance for Information and Rental Systems (AIRS), which have established standards and protocols for the number's use. The California Public Utilities Commission (CPUC) oversees the regulation, authority, and operation for 2-1-1 in the state of California.[64]

2.2.1 Services Offered

The line is open twenty-four hours a day and seven days a week and is available in 150 different languages.[65] The service provides Californians with free and confidential access to current community, health, and disaster information at any time. Statewide, there are an estimated 18,064 agencies listed in 2-1-1 databases covering almost 70,000 different service sites, most popularly those for housing, food and meals, and income support and assistance.[66, 67]

BTOP funding allowed for the expansion of twenty-seven 2-1-1 telephone line centers and databases in California to include broadband services in the 2-1-1 umbrella of resources. Providers statewide now respond to calls and web inquiries about broadband education and adoption assistance, and refer people to Internet services and training needs. All call specialists are trained to identify people seeking services, and inform them proactively about digital education and broadband adoption resources as a core part of its information and referral practice. As part of the BTOP BAA project application it was anticipated California 2-1-1 will refer 45,533 people to training programs, receive and screen 250,461 callers statewide, and assist 11,383 low-income households

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[59] Mark Baldassare, Dean Bonner, Jennifer Paluch, et al., *PPIC Statewide Survey: Californians & Information Technology*, June 2008, http://www.ppic.org/content/pubs/survey/S_608MBS.pdf.
[60] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption*.
[61] *Ibid.*
[62] *Ibid.*
[63] *Ibid.*
[64] California 2-1-1, "What is 2-1-1?", January 19, 2012, http://www.211california.org/about-2-1-1/77-what-is-2-1-1.
[65] For more information, visit http://www.211california.org.
[66] California 2-1-1, "The State of 2-1-1 in California."
[67] *Ibid.*

in subscribing to broadband services.[68] 2-1-1 received $2,060,000 in total funding (BTOP and match funds).[69]

2-1-1 distributes the grant money to the twenty-seven counties based on population size.[70] 2-1-1 calculated the average cost per call across the state at $18, including the screening and follow-up calls, database, infrastructure, and outreach costs. BAA project funding reimburses the centers $15 per call, and 2-1-1 funds the other $3 as an in-kind contribution.

Specifically, BTOP allows for the following services:

- Training: 2-1-1 performed regional training, train-the-trainer, follow-up, and one-on-one sessions to teach trainers about broadband services. 2-1-1 staff are responsible for educating callers on what Internet services are available in the callers' area. Call specialists are trained to assess each caller's real need and are taught that there are multiple answers to any given problem. There is a training manual that provides guidance for 2-1-1 staff, including populations to target and strategies for initiating the Get Connected! conversation (the CETF Training Manual from July 2011 is listed in Appendix C).

- Database: Through BTOP, 2-1-1 expanded the broadband technology component in its database originating from the Get Connected! LA pilot program. 2-1-1 reimburses its employees for the time they spend adding to and updating the broadband category of the database. Once a resource is in the database, it is 2-1-1's responsibility to scrub and maintain the database to ensure proper coding. 2-1-1 updates its database monthly and sends letters to database members to request updated contact information and service offerings.

- Screening: Each 2-1-1 caller receives an initial screening, for which the center receives $15 from CETF. If the caller does not have Internet, specialists go through a series of standard questions and refer the caller to a resource based on need, e.g., community broadband referral, access to computers locally, etc. (see Appendix C for a description of the CETF Call Tracking Report Template, along with two populated templates for Monterey and Riverside Counties). Call specialists screen by referring users to a website; if the user cannot access it, the specialist asks access-related questions and tries to provide resources as close as possible to the caller using database filters via ZIP Code. In some cases, specialists also screen during follow-up calls, hoping that users' positive experiences with 2-1-1 service will segue into a broadband discussion. If 2-1-1 refers them to a location, specialists follow-up with users to gauge the quality of service and update the database accordingly. Screening does not take place in emergency situations.

- Referrals: 2-1-1 will provide a caller with computer information.

- Outreach: CETF advertises 2-1-1 as an opportunity for learning about broadband at events, fairs, and CETF Roundtables where they increase networking and encourage agencies to incorporate 2-1-1 in their own advertising and referrals.

- Technology Model: Grant money goes toward the creation of an Intelligent Character Recognition (ICR) telephone system to continue screening at the centers. This is currently being built for the entire state of California and includes an option for users to get more information about broadband services.

Some TV and radio stations interview CETF or partner employees on their shows, further promoting 2-1-1. For example, Univision Radio ran half-hour interviews across stations in Los Angeles and Fresno, while Univision TV ran two-minute interview segments on Los Angeles and

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[68] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption.*
[69] *Ibid.*
[70] California 2-1-1, "The State of 2-1-1 in California."

Fresno channels. CETF also negotiated bonus spots on all channels/stations, which they calculated at an extra 40 percent of added-value.[71]

2-1-1 partners with different organizations throughout the community to cross-refer services. One such partnership is the 2-1-1 Bay Area and the Chicana/Latina Foundation (CLF), who met at a CETF roundtable and now refer to each other.

2.2.2 Grantee Data Collection and Methods

Grant outcome counts are tracked by 2-1-1, who reports them to CETF using the BAA Outcomes Tracker. 2-1-1 screens a minimum of 1 percent of callers through follow up phone calls that include questions specific to the callers' original area of inquiry and around Internet service subscribership. The follow-up surveys are used to estimate broadband subscriptions (see Appendix C for a listing of the CETF Call Tracking Report that includes the full listing of follow up survey questions). 2-1-1 also posts its database, which lists all of the broadband services available to a user by their location, online to provide users with information, and is starting to track website hits.

2-1-1 centers each produce monthly reports including referrals by category, number of resources including computer centers, training centers, libraries, and refurbishers that are added to a database category, and the number of resources deleted from the database to provide a clear picture of remaining gaps in the community. 2-1-1 also tracks information on all of the callers screened in a database, populated with the caller's response to each of the screening questions (see Appendix C for a listing of the CETF Monthly Database Report Template).

Due to variations in current systems used, not all centers report the resource referral information uniformly. This is evident in the monthly report examples from Monterey and Riverside (see listing in Appendix C).

2.2.3 Users

According to 2-1-1 staff, 2-1-1 mainly receives calls for basic assistance from low-income groups. Callers are usually female. The most common broadband request is for help finding a low-cost computer. During the case study visit, a 2-1-1 Fresno employee stated that 2-1-1 Fresno callers were mostly low-income, non-English speaking Hispanics without much knowledge of technology and families with school-aged children trying to get a computer for kids to use for homework. From their experience, many callers do not have a means of transportation to get to places with computers and Internet access. Some callers are from rural areas that do not have any access to the Internet.

2.2.4 Initial Impacts

2-1-1 tracks its grant outcome counts and reports them to CETF using the BAA Outcomes Tracker. 2-1-1 reports that 166,238 referral calls had occurred, resulting in 4,877 households newly using the Internet.[72]

Some 2-1-1 centers continue to screen for broadband past the number of BAA project funded screenings. Average call time has increased from five to eight minutes for all calls since the grant began, possibly due to the additional broadband screening. From the monthly call reports received to-date, 2-1-1 has found the following information regarding callers:

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[71] Saeshe, "Work Plan: California Emerging Technology Fund."
[72] California Emerging Technology Fund, "CETF BAA Outcome Tracker."

- 34 percent have sought resources for broadband subscription

- 33 percent have sought reduced-cost computers

- 32 percent have sought free or low-cost computer-related training[73]

Of those who do not subscribe to broadband services at home

- 43 percent indicated cost concerns;

- 39 percent stated it was because they do not own a computer;

- 18 percent cited other reasons (lack of knowledge/experience, available in other places, do not want it, etc.).[74]

Anecdotally, 2-1-1 staff have observed the following impacts:

- 2-1-1 staff are helping callers access computers and Internet at home, including some employees of 2-1-1 themselves.

- Parents appear to be concerned about children using the Internet; 2-1-1 is able to refer them to classes that teach Internet safety.

- Many California public social services agencies have applications online, but their target populations are not online. 2-1-1 can direct callers to resources that can help the caller access these applications online.

- Many job applications are online, so knowledge of how to find and apply to postings is necessary.

Call specialists at 2-1-1 of Fresno, visited by the evaluation study team, screen users to identify those who need computers or those who could benefit from basic Internet education. 2-1-1 of Fresno has increased calls by over 200 percent in the past few months and is now receiving more calls specifically about broadband, possibly due to the CETF marketing campaign and the Comcast Internet Essentials program. Call specialists report that calls increased from about 100 calls per month to over 600 regarding the discounted offer. CETF did advertise the $9.95 price without naming Comcast. Comcast did not purchase advertising.

2-1-1 has found that users need support talking to broadband companies in order to purchase only the level of service they truly need. They also observed that the broadband component of the program works best when there is a champion within the 2-1-1 call center. Such a champion helps to make the broadband adoption goal part of an organizational mission. Some centers use incentives, such as raffles for the highest number of broadband-related call screenings, to get staff on board with the initiative and to increase program success.

2.2.5 Sustainability

2-1-1 procedures require staff to maintain and update their database, including the broadband technology component, with current information. 2-1-1 will continue to perform these updates after the BAA grant concludes, providing a current database of broadband resources.

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[73] Alecia Foster, "Info requested during 2-1-1 Fresno visit," *email*, October 21, 2011.
[74] *Ibid.*

2.3 Access Now

Access Now is an organization that holds one-day events where low-income individuals can receive free computer technical support, training, and access to the Internet.

2.3.1 Services Offered

Access Now hosts events that provide affordable computer problem diagnosis and technical repair to help users get online that same day. Through the grant, Access Now will host eighteen Computer Help Day events to repair old or outdated equipment, offer subsidized refurbished equipment, and provide hands-on computer training.[75] As stated in the BTOP BAA application, Access Now anticipates introducing meaningful online resources for 2,430 participants and helping 200 households connect to the Internet.[76] Access Now received $87,800 in total funding (BTOP and match funds).[77]

Access Now identifies high-need neighborhoods (low-income, recent immigrants, elderly, mono-lingual people, and neighborhoods with few people connecting to the Internet), researches the reasons individuals and families do not connect to the Internet, and recruits and trains people to resolve those barriers. Access Now created a volunteer training program where volunteers were trained to help people use the Internet and identify a source for affordable computer equipment. Over time, the project shifted from access issues to a focus on hands-on technical support and advice.

Users can attend an Access Now event, where they can fix their computers, and, while they wait, use a computer lab to get online, receive digital literacy training, create an email address, and, depending on neighborhood Internet capabilities, get connected to the Internet.

Specifically, the Access Now Computer Help Days provide the services listed below:

- Computer Repair: Access Now hires professional computer technicians, with grant funding, to attend the help day and fix the computers that individuals bring. At smaller events, Access Now relies on volunteers rather than paid technicians. Users make appointments for computer repairs in advance at Access Now promotional events.

- One-on-One Assistance: Trainers informally train users during the wait for repairs. At this time, specialists can also assist users in identifying ways to purchase broadband.

- Workshops: Access Now identifies people's computer skill levels and interests and conducts workshops to provide lessons based on users' needs.

In addition to hosting their own events, Access Now also expands the program into other high-need areas by providing consulting events. Access Now travels to communities and works with groups such as nonprofits, community-based programs, and schools, instructing them how to set up and run events in their communities.

Access Now is also conducting formal train-the-trainer sessions to prepare participants for conducting a program in their own community. Access Now conducts a coaching session, supplemented with materials in Chinese, English, and Spanish. These sessions walk participants through the steps necessary in setting up and running a Computer Help Day. The materials include outreach and promotional materials, along with participant surveys for use during these events.

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[75] California Emerging Technology Fund, "Connecting the Latino Community."
[76] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption.*
[77] *Ibid.*

Access Now will travel to a community and train local agencies on conducting their own events, then host an event to show them its operation. From there, agencies can conduct their own events.

Access Now delivered its program to about fifty to seventy people per month in the Treasure Island Homelessness Development Initiative (TIHDI) Economic Self-Sufficiency Program. TIHDI is located on an abandoned military base that serves as a transitional environment for the formerly homeless or incarcerated, and veterans transitioning into housing. Wi-Fi is provided on Treasure Island by the City of San Francisco at no cost to users, and the TIHDI center has a free open computer lab with six computers. The goal of the Economic Self-Sufficiency Program is to find employment and promote self-sufficiency. Examples include transitioning users into online bank accounts and home computer use, especially those with children.

The BAA grant funds the work of one Access Now full time equivalent (FTE), along with covering event supplies, travel, and funding for repair technicians. Access Now uses CETF's partners to find volunteers, provide curriculum or training, and refurbish computers. They also use the resources of each community, focusing on local methods of promotion and outreach, and any available space and resources to conduct their Computer Help Days. These venues include computer labs, libraries, community centers or any other large facility with Internet access. To deliver the training, they borrow an Internet hotspot from LCF.

Access Now has partnered with many organizations and community partners, including the following groups, when conducting the Computer Help Days:

- Reliatech: Access Now hires technicians from Reliatech to repair computers at events. Reliatech is a nonprofit with a great deal of experience training people in the community to repair computers, so many technicians come from the communities they are serving.

- Fidelity Computers: This technician shop in LA has volunteered their services for Computer Help Days.

- Stride Center: Stride Center is a CETF ACT grantee that trains technicians and provides student volunteers to some Access Now events.

- Best Buy: Employees volunteered at a Computer Help Day.

2.3.2 Grantee Data Collection and Methods

Grant outcome counts are tracked by Access Now, who reports them to CETF using the BAA Outcomes Tracker. Access Now relies on its partners to follow up with attendees regarding subsequent subscribership. Users provide contact information when registering for events, so partners are able to follow-up with attendees to ask if they subscribed to Internet service. Access Now uses follow-up mailers, emails, and phone calls, in addition to interviewing people as they leave the event to get informal feedback from users on their experience at the event.

2.3.3 Users

Access Now reaches low-income families, recent immigrants, job seekers, veterans, people with disabilities, and seniors throughout California. Access Now has found these groups tend to have some, but limited, computer experience. Some are homeless, some have low literacy proficiency, and many do not have computers. Many of those with computers received them as gifts or donations. Based on the observation of Access Now staff, about 30 percent of attendees to their events have no Internet access at home, some have dial-up, and some do not want to subscribe without a working computer.

Access Now staff observes that users look for jobs, do online banking, look for educational opportunities, or assist their children with homework or other assignments on lab computers. The

most interest in the program comes from those who are looking for a job but lack necessary computer skills, those who want to get a computer for their children, and parents who want to be more involved in their children's school activities online, e.g., online report cards, emailing teachers, etc.

2.3.4 Initial Impacts

Access Now tracks their grant outcome counts and reports them to CETF using the BAA Outcomes Tracker. Access Now reports that they had provided technical assistance to 234 individuals.[78] To increase awareness, Access Now delivered outreach to 13,375 individuals at speaking events, and distributed 2,615 pieces of informational material.[79] Their work resulted in forty-eight households newly using the Internet.[80]

Progress to date has been slower than Access Now expected because participation is restricted by the size of the venue. Most computer labs have limited seats, which restricts the number of patrons that can be served per event.

Access Now has hosted events in the Bay Area, Los Angeles, Sacramento, Salinas, Fresno, and Greenfield (Monterey County), with the goal of getting people to join the social and economic mainstream through digital literacy. Specific impact areas vary based on partners. Before an event, Access Now will work with the partner to identify its goals for digital literacy or Internet use; typically, these vary by community. Impacts are mostly anecdotal, gathered by trainers talking to users at help days and following up with them afterwards.

After initial contact, Access Now conducted an orientation train-the-trainer session at Treasure Island. After hosting two events at Treasure Island, Access Now handed the reins to TIHDI, which now hosts events by itself. TIHDI has held one workshop, teaching users how to get connected, how to use computer equipment, and information regarding broadband subscription using the DSG curriculum. TIHDI would like to do another event again sometime in 2012.

The TIHDI program coordinator has a relationship with the users participating in the Access Now events and was able to follow-up with training participants. She found that eight or nine out of thirty-one attendees were able to find work after getting their computers fixed; participants were able to conduct a job search at home, as opposed to only in the computer lab which is only open four days per week. Use of Treasure Island's wireless network increased over the first few months of the grant, the only period it was measured.[81]

Access Now staff shared stories of their users. One woman, for example, has six school-aged children and had a computer with a virus on it that she was using to apply for jobs. She attended an Access Now event and had her computer fixed by one of the technicians for free. She is grateful for this because she and her children can now use the computer again.

Access Now uses well-known, trusted community partners to drive participation. A large portion of the director's time is spent building trusted relationships so communities are more responsive to the program.

2.3.5 Sustainability

Post BTOP, Access Now will continue to recruit volunteers and carry on their services with support from community based organizations. Promotional materials have already been developed and can

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[78] California Emerging Technology Fund, "CETF BAA Outcome Tracker."
[79] *Ibid.*
[80] *Ibid.*
[81] Grantee, in discussion with the author, October 21, 2011.

continue to be used, so costs would be largely limited to paying technicians. The plan is that Access Now will be able to train other agencies to the point they can carry out Computer Help Day events in the future, with each of these agencies funding the technicians and staff time to promote and run their own individual events.

One of Access Now's partners, TIHDI, plans to continue to provide Computer Help Days. They may need to use volunteers, pay technicians, or reimburse workers in the Job Corps program for college tuition. Job Corps is more focused on training than refurbishing, so students can teach a computer classes. TIHDI would likely have to work with a Job Corp supervisor to see if they can find funding for refurbishers.

2.4 Center for Accessible Technology

Center for Accessible Technology (CforAT) is an organization that provides information on technology for persons with disabilities and those that work with them.

2.4.1 Services Offered

CforAT helps low-income adults and people with disabilities access the Internet by engaging individuals with disabilities, assistive technology specialists, aging resources staff, independent Living Center staff, librarians, business owners, and school district staff through free webinar trainings, email marketing, and social networking.[82] CforAT received $659,950 in total funding (BTOP and match funds).[83] Specifically, the grant funds portions of the Accessible Technology Coalition website, training, marketing, and a financial incentive for adoption.[84]

Based on a survey conducted by PPIC in 2011, among those in California with disabilities, 67 percent use the Internet and 49 percent have access to broadband. Among persons without a disability, 87 percent use the Internet and 76 percent have access to broadband.[85] CforAT's goal is to level the playing field to allow people with disabilities access to opportunities through the Internet, with the CforAT website serving as an intermediary.

The CforAT website helps people with disabilities and those who work with them make decisions about assistive technology by relaying up-to-date information on technological advances for persons with disabilities.[86] Website maintenance is in-house, and content is developed in house by paid staff along with guest editors, some of whom are paid stipends and some of whom are volunteers. CforAT requests that members contribute to the site to promote a feeling of ownership of the site among members.

CforAT continuously tests the ease of use, jargon, and navigation of the website, taking into account mobility, developmental disabilities, learning disabilities, and vision impairments. They do this through focus groups of volunteers and University of California Berkeley students.

Specific website components are listed below:

- Webinars: Webinars on three to five different accessibility-related topics are held live each month on the site and are archived for later viewing. These webinars are aimed at libraries, universities, and therapists. The webinars also offer train-the-trainer sessions, for those who frequently interact with people with disabilities. The webinars are designed to be

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[82] California Emerging Technology Fund, "California Emerging Technology Fund Access to Careers and Technology Application Part 1."
[83] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption.*
[84] For more information, visit http://www.atcoalition.org.
[85] Baldassare et al., *California's Digital Divide.*
[86] For more information, visit http://www.atcoalition.org.

accessible by individuals with disabilities and include closed captioning, font size and font style options, color contrast, and the ability to customize the display to increase ease of use by those with impaired hearing and vision. Additionally, users can type questions or ask them via phone during the webinar.

- Search Engine: Users can search for articles on technologies specific to a certain disability. CforAT selects the articles that go into the database to ensure that all the articles are credible and helpful, allowing search results to return with few but quality articles. Both specific and generic terms related to disabilities are allowed in searches, widening the appeal to include both experts and those with no experience; users are able to identify relevant topics, then research details and technologies.

- Ask the Expert: People can post specific questions for experts in the field, which go to the editor first, who can normally answer the question; if not, it is answered by a hired editor.

The BTOP grant has also allowed CforAT to use its accessible computer lab for training sessions. CforAT now provides free, one-hour workshops designed to assist people in developing their computer skills, and to make using the Internet easier and more effective. The classes are small and users can take the classes as many times as they want. The intention is to reach people with disabilities by showing them the Internet via accessible computers on topics including

- computer basics

- using search engines to find information online

- using Skype to make free phone calls

- how to use the Internet to keep track of your child's school work

- online safety: how to protect your computer (and yourself)

- setting up a free email account

- accessing healthcare information online

- how to get high speed Internet at home

- social media and staying in touch with friends online

- online banking

CforAT received the broadband adoption curriculum through CETF partners LCF and DSG but customized the courses for its users. CforAT also developed curriculum for seniors that other BAA partners can also use. Classes include free time to discuss the concerns of class participants. Currently, there is one instructor leading the courses.

CforAT posts fliers in its building, along with libraries and senior centers to advertise the training, and posts the formal training calendar on their website.[87] The Center allows users to stay after class to employ the computers for personal use.

CforAT also uses email and social networking (Facebook, LinkedIn, and Twitter) to advertise their programs. As a nonprofit, CforAT also gets free access to a SalesForce database containing almost 5,000 contacts that it uses for mass emails that include their monthly calendar, a generalized newsletter, and smaller email blasts customized for certain target audiences. CforAT also searches for people who might find the website and webinars useful. They search staff list on

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[87] For more information, visit http://cforat.org/main_page/trainings.htm.

university websites, library list servers, and special education teachers on the Internet and sends emails to those people.

CforAT set aside grant money to offer users $30 to cover the first few months of broadband service. This offer is advertised during training and through business cards.

CforAT is working with other BAA partners to improve website accessibility, and collaborates with Blackboard.com, a company that offers website content as a fully accessible virtual classroom, to offer the AT Coalition webinars. The intent is for people with disabilities to be able use the website functionality of all BAA partners.

2.4.2 Grantee Data Collection and Methods

Grant outcome counts are tracked by CforAT, who reports them to CETF using the BAA Outcomes Tracker. CforAT provides users a link to a Survey Gizmo feedback survey after each webinar. Additionally, trainers follow up with calls to users after the training for feedback on the training program and any suggestions.

2.4.3 Users

CforAT focuses statewide on solutions to provide computer and broadband access to people with disabilities and those helping or working with them, including librarians, university disability staff, school districts, Accessible Technology (AT) staff from assisted living facilities, parents of children with disabilities, government agencies, community organizations, and medical staff.

One CforAT trainer observed that about 85 percent of training attendees are seniors, typically as a result of encouragement to get online by their children. A common interest among this group is learning to use Skype. Based on staff observation, most users in CforAT courses do not have computers at home and users usually find out about the training through other agencies located in the CforAT building.

2.4.4 Initial Impacts

CforAT tracks their grant outcome counts and reports them to CETF using the BAA Outcomes Tracker. CforAT had performed outreach to 38,955 individuals at speaking events, and distributed 49,376 pieces of informational material.[88] Their work resulted in five households newly using the Internet.[89]

The AT Coalition website was launched in October 2010. The website had 900 members in their online community from forty-nine states, the UK, Brazil, Portugal, Canada, Puerto Rico, Israel, Ireland, and Germany. CforAT reports that they had 13,234 unique visitors to their web page.[90]

During the formation of the program, CforAT thought the Ask the Expert program would be the most popular, but has found it to be the most underused. Conversely, CforAT did not foresee webinars having as much of an impact as their other services, but they have proven the most successful of CforAT's programs thus far. In 2011, webinars were attended by 271 people in the first quarter, 308 in the second, and had 115 registrations for the third at the time of the case study

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[88] California Emerging Technology Fund, "CETF BAA Outcome Tracker."
[89] *Ibid.*
[90] *Ibid.*

visit. Since the webinars began in August 2010, there have been 865 total attendees, with about 700 unique users.[91]

Recently, CforAT has seen a large increase in interest on accessible technology by universities. As a result, CforAT has tried to incorporate this information in some of its webinars.

CforAT observes that parents find its website and webinars helpful. For example, one parent learned about an iPad-based alternative to an augmentative communication (AAC) device, costing $149 (plus the cost of an iPad) rather than the $6,000 to $8,000 for an AAC device. CforAT also conducts webinars on iPads discussing what apps are available. Participants use the chat function during the webinar to share the apps they find useful. CforAT staff report that the response to the iPad webinars has been large and positive.

Anecdotally, CforAT is starting to see an increase in adoption from users who notify CforAT they have adopted after completing training. Other observations of CforAT staff include:

- Many people with disabilities are unemployed so their financial situation is difficult. Getting them online to search for a job is useful and can help close the gap for them.

- Utilizing the Internet means users can apply for jobs without immediately revealing they have a disability.

- While disabilities often lead to isolation, the Internet allows users to find peers and stay connected. Users can learn about services available to them, including things they never knew existed.

- For people with disabilities, physically visiting a location can be challenging or time consuming. Internet use allows for other options, such as online banking, and allows users to be more productive with their time. One lab user said, "In a large way, I spend a lot of my life on the Internet because I'm severely limited in physical ability. The only place where I can do things without a lot of help is on the Internet."[92]

- Affordability is the largest issue when encouraging low-income users to subscribe to broadband.

- Asking users what they want to learn is more productive than telling users what they need to learn.

The evaluation study team was able to speak to a children's librarian at a local library who attended a CforAT webinar. He heard about the webinar through am email received from CforAT. He finds webinars instrumental in helping libraries by providing previously unavailable information to the community and teaching library staff new skills. The webinars offer new approaches to providing services to people with disabilities and new ways to approach the limitation presented by certain disabilities. The librarian sometimes gets calls from out of the area and now he can refer them to the CforAT website for information. He has already referred other library staff, partners, and patrons to the website.

2.4.5 Sustainability

CforAT is looking to move into other industries, including tourism and medical services, to expand access for people with disabilities and offer independence at home.

CforAT hopes to sustain the website through paid memberships that offer access to certain content on the site. CforAT is considering a tiered pricing strategy; for example, universities would be

[91] California Emerging Technology Fund, "Connecting People with Disabilities," *Connections* 1, no. 2 (2011).
[92] *Ibid.*

charged higher membership fees than individuals. CforAT can also generate funding for its nonprofit mission through its own consulting services. Charging clients for training sessions and other services will allow the entire program to continue. CforAT is also improving the Ask the Expert portion of its programming in order to reduce the number of hours spent by staff answering individual questions, making it more sustainable post-grant.

2.5 Social Interest Solutions

Social Interest Solutions (SIS) offers the One-e-App which allows users to apply for multiple health and human services at the same time.

2.5.1 Services Offered

SIS's One-e-App is an online application system for benefit coverage designed to help people navigate public assistance programs by themselves, or with help from a call center or Certified Application Assistant (CAA). It provides an immediate eligibility screening for a range of health, social services, food, income support, and other social services programs and stores the user's information, signatures, and supporting documents for use on real-time applications and submissions to state and county systems. The application is available in eight languages and is currently used in four states (Arizona, California, Indiana, and Maryland).[93] Figure 7 provides a screenshot of the portion of the system that deals with broadband services.

Figure 7. One-e-App "Learn More" Screenshot
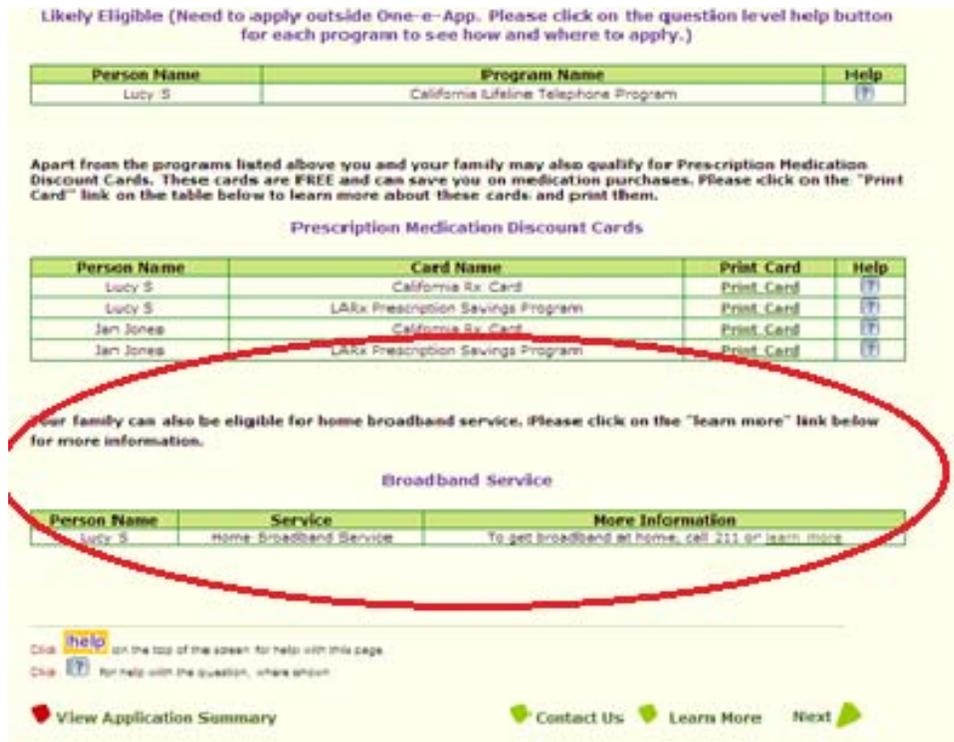
SIS received $1,961,166 in total funding (BTOP and match funds) to upgrade the One-e-App screening and enrollment system, integrating broadband awareness into the application with a

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[93] Lucy Streett, "Promoting Broadband Adoption," *presentation* (San Francisco, CA, 2011).

broadband informational page that appears once a user has filled out their One-e-App.[94] The informational page tells a user how the Internet can help them, defines broadband, and provides information on how a user can get broadband at home. CAAs also help individuals access information about computer training and other resources to help them subscribe to broadband and purchase low-cost computers. Under the BAA grant, SIS anticipates the One-e-App will reach 75,000 adults and 56,000 youth, and assist 970 low-income households subscribe to broadband services.[95]

The specific aspects of this project are described below:

- Education: Broadband information has been integrated through BTOP funding into a "Learn More" screen on One-e-App, allowing users to learn more about programs available, federal assistance application processes, etc.

- Referral: Referral information has been added to the One-e-App eligibility results screen that appears for each user once they complete the screening. Broadband information is available on all of these screens to help users get Internet at home.

- Outreach: SIS funded a portion of a supplement that appears in the La Opinion newspaper. They also contributed two pages worth of content about One-e-App, with specific information about where people in LA and Fresno can go to get connected to broadband.

- Self-service stations/Family Source Centers: SIS has implemented twenty-six One-e-App self-service stations in county health departments, hospital waiting rooms, and family resource centers. See Figure 8 below. These stand-alone computer stations give users educational access to the Internet and One-e-App, where people learn how to get connected to the Internet and apply for programs. All the stations are listed in the La Opinion supplement. The grant funded computers in these locations and training for the staff at the building where the computers are used to support the public. Staff are trained in One-e-App and getting access to broadband, so they can help clients. Each site also has a combination printer/fax for open use.

Figure 8. One-e-App Self-Service Station

- Rebate: SIS offers a $100 rebate to encourage participants to adopt by defraying the initial start-up costs for people that signed up for Internet. A test run of the rebate program showed success at increasing subscribership. As a result, grant funds were reallocated to cover rebates, since they were not an original part of the grant.
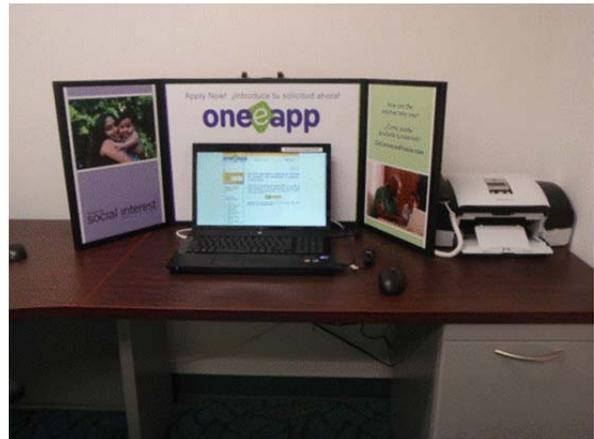
In delivering the services of the grant, SIS partners with the following organizations:

- 2-1-1, through referrals on the One-e-App eligibility screen

- Anchor institutions hosting self-service stations, such as the City of Los Angeles and Los Angeles school districts

- BAA partners, through cross-organizational network collaboration

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[94] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption.*
[95] *Ibid.*

- Statewide and regional organizations, by sharing networks

- Any organization that wishes to incorporate One-e-App into training programs and other services

- La Opinión, a Spanish language daily in Los Angeles, which featured SIS in the sixteen page bi-lingual supplement for CETF partners about where and how people can get connected

2.5.2 Grantee Data Collection and Methods

Grant outcome counts are tracked by SIS, who reports them to CETF using the BAA Outcomes Tracker. SIS tracks the number of household referrals through the online application, and subscriptions via follow-up phone calls and emails. Contact between SIS and users is indirect, as it is the community organization, county agency, hospital, and clinic partners that are in direct contact with users. SIS has reached out to users directly with follow-up questions, although it has received some call or email responses, but not to the extent of the organizations in direct contact with users during the program. SIS initially tried an email survey to identify if users were broadband adopters as a result of the program, but switched to a mail survey to improve the poor response rate.

2.5.3 Users

Given SIS does not have direct contact with the users of their services, observations regarding users are limited. SIS staff did have the impression, however, that most members of their target population do not own a computer.

2.5.4 Initial Impacts

SIS tracks their grant outcome counts and reports them to CETF using the BAA Outcomes Tracker. SIS reports that 25,637 youth and 21,373 adults had completed an SIS course.[96] SIS performed outreach to 800,000 individuals at speaking events and provided awareness resulting in 2,000,000 print impressions.[97] Their work resulted in 725 households newly using the Internet.[98]

The BAA grant funded twenty-six computer stations in social service agencies throughout California. These stations demonstrate the value of broadband and provide referrals to community technology resources. As of September 30, 2011, SIS referred 132,971 One-e-App users to programs that can assist families accessing broadband services, and about 725 households subscribed to broadband. Additionally, 800,000 copies of the impreMedia's educational supplement were distributed statewide.[99]

Before the BTOP grant, SIS program managers report that the One-e-App had shown that using the Internet and technology can help low-income individuals by making it easier and more efficient to apply for benefits from social programs and to help identify the programs for which individuals may qualify. This leads to an increase in application approvals and a decrease in notification time to the user as to what benefits they will receive. The addition of the BTOP component of the One-e-App allows users to learn how they can expand the use of the Internet and broadband into their own home.

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[96] California Emerging Technology Fund, "CETF BAA Outcome Tracker."
[97] *Ibid.*
[98] *Ibid.*
[99] Streett, "Promoting Broadband Adoption."

An email from a One-e-App user shared by SIS staff demonstrates the program's impact on a new broadband subscriber: "I just wanted to send you an e-mail to say thank you. [Due to your program, I] now am signed up for some online college courses through one of our local community colleges. Thank you again for all you do and all your help."[100]

SIS has learned that users need assistance getting over the cost hurdle of Internet subscribership. The rebate program was the result of this observation. The rebate has helped to increase the number of new subscribers. SIS has found via follow-up surveys that some people still prefer to communicate via phone and mail instead of email; follow-ups were modified to be delivered this way. SIS also found it needs to provide more specific recommendations for users beyond just signing up for broadband. They need details on how to do so. SIS has found that partnerships with anchor institutions, such as the City of Los Angeles, are the key to success for self-service stations. SIS is exploring the relocation of self-service stations, since fixed locations reach only a limited audience that tend to use them less and less over time.

2.5.5 Sustainability

The $100 rebate program will not continue after the grant ends, but SIS will continue information referrals. The employment training programs on digital literacy that have been implemented as a part of this project will remain in place, along with the self-service stations, due to the value they create for the community.

2.6 Chicana/Latina Foundation

The Chicana/Latina Foundation is focused on professional development and leadership among the Latina population.

2.6.1 Services Offered

CLF recruits young leaders as broadband ambassadors to reach into underperforming schools and community institutions, helping families adopt broadband through training and outreach in basic computer and Internet literacy.[101] Specifically, ambassadors teach people about the Internet and computer resources available, and provide people with a computer. CLF received $674,764 in total funding (BTOP and match funds).[102]

To encourage Internet adoption, CLF refurbishes desktop computers and distributes them to CLF trainee attendees on a first come first served basis. CLF works to find local refurbishers in the community. To help people who receive a computer, CLF conducts a one-hour to ninety minute class that discusses setting up an Internet connection, basic computer use, and basic virus and Internet safety protection. CLF also responds to technical assistance calls.

CLF teaches mostly Spanish-language computer courses in labs, utilizing a hotspot to deliver the training. CLF uses CLF scholarship recipients ("ambassadors") to recruit adult and high school volunteers from the community to teach classes. Volunteers are supported and trained by one part-time and two full-time trainers funded by BTOP.

Computer courses were originally comprised of two two-hour classes providing an introduction to computer use. Courses were expanded to include two additional classes to focus on community-specific needs such as job searching, accessing online support resources, Facebook, etc.

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[100] Streett, "Promoting Broadband Adoption."
[101] California Emerging Technology Fund, "Connecting the Latino Community."
[102] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption.*

To reach as many potential users as possible, CLF partners with other community organizations such as local groceries or libraries. They also encourage current and former students and ambassadors to advertise CLF services formally or through referral. Class size varies based on the capacity of each location. Some of CLF partnerships are listed below:

- CLF partners with the popular grocery chain, Mi Pueblo Markets, to provide training at 27 stores in Northern California to their employees and customers from the Hispanic community on connecting to the Internet.[103]

- CLF partners with Sacred Heart Community Services of San Jose, California to deliver their digital literacy classes in its on-site, thirty-computer lab.[104] Sacred Heart provides food, clothing, English as a Second Language (ESL) classes, computer classes, and employment services to the community. They serve about 57,000 people per year. CLF provides training for Sacred Heart volunteer instructors, who in turn lead once-a-week, four-week courses. At Sacred Heart, due to the transient population and low income levels of the students that attend the training, CLF has found short, four week classes work well since they can be completed before students relocate.

- CLF uses the computer labs at the Redwood City Main Library in San Mateo County to deliver digital literacy classes.[105]

- Third Street Community Center in San Jose hosts CLF courses in its computer labs, provided for Third Street clients.[106]

- CLF collaborates with the Santa Clara County Office of Education Head Start Program to recruit student trainers from high schools to train adults.[107]

- CLF reaches out to Catholic Charities' First Five Program clientele to attract new Internet subscribers.[108]

2.6.2 Grantee Data Collection and Methods

Grant outcome counts are tracked by CLF, who reports them to CETF using the BAA Outcomes Tracker. CLF counts the number of attendees at training courses and the number of laptops distributed and relies on trainers for anecdotal impacts of the grant.

2.6.3 Users

CLF focuses on underperforming schools in low-income communities, Latinos, and rural portions of the Bay Area and Sacramento.[109] The community served by Sacred Heart in particular is made up of low-income individuals, transient workers and the homeless. CLF has found the largest need for their services is in adult education, with a focus on finding employment including creating resumes and responding to job postings. Sacred Heart trainers have found that their users are typically not able to afford a computer. Typically, users are unfamiliar with computers and do not have other resources available to learn how to use them. Many users do not have email accounts prior to training, and those who do may not know how to use them.

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[103] California Emerging Technology Fund, "Connecting the Latino Community."
[104] For more information, visit http://www.sacredheartcs.org.
[105] Chicana/Latina Foundation, "Chicana Latina Foundation Information," *email attachment*, October 20, 2011.
[106] *Ibid.*
[107] *Ibid.*
[108] *Ibid.*
[109] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption*.

2.6.4 Initial Impacts

CLF tracks their grant outcome counts and reports them to CETF using the BAA Outcomes Tracker. CLF's accomplishments are listed below:

- CLF has given away 900 refurbished desktop computers.[110]

- Digital literacy training (a minimum of four hours) has been provided to sixty youth and 734 adults.[111]

- CLF conducted outreach for the Get Connected! Program, reaching about 15,000 people through distribution of flyers and 1,700 individuals at speaking events.[112][113]

- CLF has appeared on several local shows broadcasted on both Univision and Telemundo Spanish TV stations, and on local radio shows in Monterey County, San Mateo County, and Sonoma County. These appearances have reached about 100,000 Spanish speaking people and taught youth about giving back to the community and leadership skills.[114]

- CLF has provided forty-one scholarships and conducted a leadership seminar two weekends a year for scholarship recipients, teaching them leadership skills.

CLF's work resulted in 902 households newly using the Internet.[115] A county breakdown of subscriber locations are provided in the CLF BAA – New Internet Subscribers by County document listed in Appendix C.[116]

CLF couples their initiatives with existing programs to increase the impact. Local Union 297, for example, is a construction union located in Salinas, an agricultural area with mostly field workers, with many members out of work. Space in the union's office was converted into a training room containing four donated computers, where another NTIA grantee provides semiweekly two-hour classes.[117] Since the opening of the center, twenty union members have learned how to use the Internet, email, post job applications, and access resources.[118] CLF also partnered with grocery stores like Mi Pueblo in San Jose and Lola's Market in Santa Rose to promote the BAA grant in the Hispanic community.

CLF train-the-trainer sessions impact students, parents, and the community. Student volunteers learn leadership and help improve the lives of parent trainees, creating value for the community as a whole. In Salinas, for example, program staff relayed that they believe volunteering offers an alternative to the problematic gang path. Thirty high school and college students have been trained to carry out basic computer/Internet classes in the communities of Santa Cruz and Pescadero. To date, they have trained seventy-five adults in these two communities.[119]

One training round had been conducted at Sacred Heart. The trainer observed these impacts from the training session:

- Users are able to complete the job search goals they identified in working with the Sacred Heart vocational case manager.

- Users receive an email address, so they can send out resumes and apply for jobs.

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[110] Chicana/Latina Foundation, "Chicana Latina Foundation Information."
[111] California Emerging Technology Fund, "CETF BAA Outcome Tracker."
[112] Chicana/Latina Foundation, "Chicana Latina Foundation Information."
[113] California Emerging Technology Fund, "CETF BAA Outcome Tracker."
[114] Chicana/Latina Foundation, "Chicana Latina Foundation Information."
[115] California Emerging Technology Fund, "CETF BAA Outcome Tracker."
[116] Chicana/Latina Foundation, "CLF BAA – New Internet Subscribers by County," *email attachment*, October 20, 2011.
[117] Chicana/Latina Foundation, "Chicana Latina Foundation Information."
[118] *Ibid.*
[119] *Ibid.*

- Classes demystify the Internet.

- Parents increase involvement in their children's education by looking up their children's curriculum and report cards online.

- Users are able to establish connections with each other.

CLF staff also shared copies of thank you letters from their students. Two students, for example, expressed gratitude to CLF for offering free computer training tailored to the Spanish-speaking community. These students said they knew the importance of the Internet for finding a job and connecting with family, but they did not know how to navigate the Internet well enough to do these things. They said the class provided them with the skills and confidence to do so.[120] CLF staff also noted that graduates of their classes are asking for more in-depth classes, which they view as a measure of success.[121]

2.6.5 Sustainability

CLF is currently working to address sustainability and looking for other grants to fund their work moving forward. It plans to use volunteers to deliver training after the grant, and knows at least two of the four classes at Sacred Heart will continue post-grant with volunteer staff.

2.7 Dewey Square Group

Dewey Square Group (DSG) is a public affairs firm that integrates strategy, tools, and tactics to design solutions.

2.7.1 Services Offered

DSG reaches out through churches and faith-based organizations throughout California to raise public awareness about the benefits of the Internet, register people for Internet service, and promote computer and broadband training opportunities provided by CETF and BAA project partner organizations. DSG uses an online Resource Map, developed using the 2-1-1 database, as a directory of locations that provide free Internet access and computer and digital literacy courses. DSG committed five employees to this project, and received $1,545,000 in total funding (BTOP and match funds).[122]

DSG developed a curriculum in both English and Spanish that teaches basic computer use, Internet navigation, email, and the where, why and how of broadband adoption. The curriculum is designed to be implemented with or without an instructor. Users get a certificate if they complete all four segments, and are allowed to come back for a refresher on the course. DSG delivers the curriculum to the West Fresno Healthcare Coalition, the Goodwill of San Joaquin Valley, and provides it directly to residents through the City of Fresno Parks and Recreation. DSG also makes the curriculum available to other BAA grant partners.

Training is also delivered in a new, BTOP-funded computer lab set-up by DSG inside Catholic Charities' Family Resource Center in Fresno.[123] The lab, which opened in November 2010 and had an official launch in February 2011, contains thirteen computers and one printer and is open to the general public. Users are also permitted to connect through Ethernet to the lab's broadband connection. Catholic Charities has a dedicated instructor for the center, offering two basic computer

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[120] "CLF Thank you Letters," *email attachment*, October 20, 2011.
[121] *Ibid.*
[122] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption*.
[123] Catholic Charities is a nonprofit that offers services to low-income persons.

training classes (English in the morning, Spanish in the afternoon) and three hours of open lab per day Monday through Thursday. Catholic Charities works closely with other agencies, such as a local rescue mission and United Way office, to make sure services are not being duplicated and to help identify needed programs.

DSG has a toll-free hotline, promoted during radio and television interviews and public events, which provides information on purchasing a computer and obtaining Internet service to callers. DSG also works with Radio Bilingüe, and other BAA partners, to promote the training sessions and the Catholic Charities' computer lab. DSG provides local businesses and universities with posters and fliers of monthly events, free classes and lab hours, and details of the Comcast Internet Essentials program.

DSG also conducted a raffle, funded through BTOP, where they gave away computers in order to get people interested in broadband. The organization is adaptive in their approach and tries to be flexible in the services they offer based on what they find is working or not working. For example, in the grant application, DSG outlined a program where they text message people to encourage them to switch from cell phone to computer Internet use. The text would ask questions about Internet benefits (e.g., "are you interested in learning how to use a computer to get a job?"), hopefully increasing interest and attendance for training courses. In community tests, DSG raffled iPads and computers to collect phone numbers for this outreach, but once respondents found out the raffle was over they did not respond to the text messages. Since DSG paid per message, the return did not warrant the costs, so texting was entirely removed as an activity under the grant.

DSG used its relationship with the Fresno Catholic Charities to start the Race to Close the Digital Divide initiative, which engages faith-based organizations to drive adoption by promoting broadband use. The goal of this project is to create a "trusted messenger" status for churches so users have a familiar source of information about broadband.

DSG employees sent out invitations in May 2011, followed up by phone calls and in-person visits, to promote this initiative and drive participation. Engaging churches required building personal relationships with church officials and congregation members first. Through these relationships, DSG learned the best ways to reach community members.

The competition under this initiative ended in October 2011, with the following prizes awarded to churches based on the number of new subscriptions achieved:

- First place won five computers and a printer

- Second place received four computers

- Third place was awarded three computers

Prior to the BTOP grant, *impreMedia*, the largest Spanish newspaper and magazine publisher in the U.S., created the Club Digital website and program. In August 2011, Club Digital offered twenty systematic Internet training lessons with walk-through videos to increase broadband knowledge and adoption among the Hispanic population. With BTOP funding, DSG was able to add content to the website on home Internet adoption and connection. DSG also created Club Digital Live, allowing users to chat live with top government officials, including personnel in immigration services and the Deputy Director of the White House Initiative on Educational Excellence for Hispanics. Chat topics have included education, citizenship, and healthcare reform.[124]

DSG uses partner organizations, including libraries, career centers, and schools, to distribute lesson recaps across the nation and spread the word about Club Digital.[125] A full list of partners, broken down by region is available. This document is listed in Appendix C under Club Digital

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[124] Club Digital, "Information Sheet," *email attachment*, January 10, 2011.
[125] Club Digital, "Information Sheet."

Community Based Partners.pdf. DSG advertises the Club Digital website in its training as a resource for users to access. Additional funding for Club Digital was provided by AT&T.[126]

ImpreMedia ran thirty full days of print, online and video content in August 2011 discussing Club Digital and how to get online. In addition, *impreMedia* published Club Digital in its publications La Opinion, La Opinion Contigo, and El Mensjaro.

2.7.2 Grantee Data Collection and Methods

Grant outcome counts are tracked by DSG, who reports them to CETF using the BAA Outcomes Tracker. DSG employs few data collection methods. Program impact can be determined only through staff observation.

2.7.3 Users

DSG staff have discovered that their target audience is less knowledgeable about the Internet than most groups. For example, many patrons believe the Internet has primarily negative impacts on users. They have also observed that people tend not to listen to broadband promotion unless it comes from someone they know and trust. As a result, they have employed pastors and church congregations as ambassadors in various communities. DSG staff have found that existing public computer centers tend not to have instructors and cannot meet demand. For example, in the areas in which DSG works, libraries provide access to computers, but there are frequently long lines, no instructors, and limited hours.

Initially, DSG had trouble drawing attendees. By tweaking marketing to match the audience, for example, adding or removing various religious symbols on fliers, DSG was able to increase attendance.

According to DSG staff, Catholic Charities reaches a low-income population that is roughly 50 percent Hispanic, which is representative of the Fresno area population as a whole. For the most part, users in Catholic Charities labs are over forty years of age, arrive by bus or foot, and use the computers to look for jobs online or create resumes. Some do not come to the center looking for jobs, but once they get there and see the resources available, shift their focus to employment-related activities.

Trainers observe only one or two people per class own computers, and roughly 70 percent have never touched a computer or have not used one in a long time. Most of the people they see either cannot get to a computer, find using a computer overwhelming, do not understand why they would need one, or are intimidated by computers.

Staff find that most users become aware of the training through 2-1-1 or Catholic Charities. DSG initially had difficulty attracting people to the classes, so they worked with the Senior Companion Program at Catholic Charities to attract seniors.

2.7.4 Initial Impacts

DSG tracks their grant outcome counts and reports them to CETF using the BAA Outcomes Tracker. DSG had distributed twelve computers to households and thirty-three computers to institutions.[127] DSG awareness reached 3,186,340 individuals through the radio, 728,000

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[126] Club Digital, "Department of Education and State Officials Attend Launch of Nation's Most Comprehensive Bilingual Digital Literacy Program," *email attachment*, August 10, 2011, http://www.prnewswire.com/news-releases/us-department-of-education-and-state-officials-attend-launch-of-nations-most-comprehensive-bilingual-digital-literacy-program-127445358.html.
[127] California Emerging Technology Fund, "CETF BAA Outcome Tracker."

individuals through television, and 82,757 individuals through presentations at speaking events.[128] DSG distributed 1,184,472 informational papers, contributing to an awareness campaign that resulted in 144,980,243 print impressions.[129] Digital literacy training was provided to 1,617 adults, while the Club Digital website had 680,537 unique visitors.[130] The DSG training and awareness campaigns resulted in 38,145 households newly using the Internet.[131]

DSG focuses on improving digital literacy to promote home broadband adoption. Many users worry about cost; DSG tries to show that broadband is necessary and provides many opportunities such as jobs, educational opportunities, housing options, and connecting to family. According to the Executive Director of the White House Initiative on Educational Excellence for Hispanics, accessing the Internet is one of the best ways to improve the academic achievement of Hispanics.[132] CETF BAA grant partners, including LCF and CLF, use Club Digital as a teaching curriculum. Club Digital helps students and parents gain Internet skills that boost classroom learning, knowledge, and workplace readiness.[133]

After launching in downtown Fresno in November 2010, the Catholic Charities Computer Training Center has held seventy basic bilingual training classes each month.[134] Over sixty community leaders attended the grand opening in February 2011, during which forty-six people were able to successfully file their taxes online.[135] Prior to Club Digital, roughly 60 percent of DSG training took place at the Catholic Charities lab, while the rest occurs through other partners.[136] Cesar Chavez adult school students generally use the open lab for homework, while people working with Workforce Connection often use the site to get training to apply for jobs.[137] Many users do not come back after the classes because they find jobs or additional resources and no longer need the Catholic Charities center.[138] Catholic Charities has observed an increase in the numbers going through intake services at the site since the lab opened, but the number has stabilized since March 2011 at roughly twenty-three people per week, or ninety-nine people per month.[139] Not all of the people going through intake are new people; some are repeat registrants.

Other project accomplishments as reported by DSG staff include the following:

- *impreMedia* ran thirty days of print, online, and video content to encourage those without Internet to subscribe in August 2011, resulting in a 2.2 million footprint (for the entire month).[140]

- Eighty-nine churches in California are participating in the Race to Close the Digital Divide, representing a population of over 100,000 people.[141]

While DSG believes it is too soon to determine the impacts of training, they expect a large impact from Club Digital. The evaluation study team was able to speak to three individual users who participated in training at the Catholic Charities computer lab. Their stories are described below:

- One senior heard about the program through the Catholic Charities Senior Companion Program, where he is a volunteer. He travels close to four miles to get to the site. Prior to

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128 *Ibid.*
129 *Ibid.*
130 *Ibid.*
131 *Ibid.*
132 Club Digital, "Department of Education and State Officials Attend Launch of Nation's Most Comprehensive Bilingual Digital Literacy Program."
133 *Ibid.*
134 California Emerging Technology Fund, "Connecting People with Disabilities."
135 *Ibid.*
136 Grantee, in discussion with the author, October 19, 2011.
137 *Ibid.*
138 *Ibid.*
139 *Ibid.*
140 *Ibid.*
141 *Ibid.*

the classes he had limited experience even though he has a computer and Internet connection at home. He has taken two classes at the computer lab (introducing and navigating the Internet), and is now beginning to use his home computer more to search for music, lyrics, organizations, and to look up directions. He believes classes should be aimed at seniors to give them more of a sense of community and enhance their lives.

- Another senior also heard about the training through the Catholic Charities Senior Companion Program, in which she is a member. She currently uses the computer to pay bills, email, and play games, and has begun to use her daughter's home computer with increasing comfort and confidence, no longer fearing computers. She would like to see higher levels of classes being taught, and thinks seniors would benefit from being more computer literate, specifically in paying bills online or other services they could do from their home.

- Another Catholic Charities Senior Companion Program member has taken three classes and plans to take more. She lives three blocks away and visits the center twice a week. The classes taught her how to use a mouse, use the Internet, and to use the Paint program. Through the classes and lab time, she has seen the benefits of using a computer and will be getting her own computer from her daughter in the future.

2.7.5 Sustainability

DSG has a Memorandum of Understanding (MOU) with the Fresno Catholic Charities that states Catholic Charities will be responsible for the lab and training post-grant. The lab will likely be used as an employment center in the future. Intake staff volunteers at Catholic Charities deliver the training, which will continue.

impreMedia will offer Club Digital again in California and expand it nationally in early 2012, with a goal of reaching more than 9.4 million Hispanics.

2.8 Latino Community Foundation

The Latino Community Foundation (LCF) provides grants to help Latino children and their families improve their standard of living.

2.8.1 Services Offered

LCF and its eight sub-recipients provide digital literacy training to limited-English speaking families in six Bay Area counties. LCF received $998,307 in total funding (BTOP and match funds).[142] LCF, in turn, granted $452,660 to the following organizations:

- Canal Alliance (San Rafael)

- CAMINOS Pathways Learning Center (San Francisco)

- Michael Chavez Center (Concord)

- Unity Council (Oakland)

- North Peninsula Neighborhood Services (South San Francisco)

- Tiburcio Vasquez Health Center (Hayward, Union City, and Fremont)

- Nuestra Casa (East Palo Alto)

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[142] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption.*

- Somos Mayfair (San Jose)[143]

LCF uses targeted outreach to communicate with residents, train adults in basic computer skills and Internet literacy, and assist low-income households subscribe to broadband. While the same services are offered through each partner, each is responsible for performing outreach, setting up training, and increasing adoption at their site. Initially, the LCF sub-recipients met monthly in person, but LCF has since shifted to conference calls and emails for communication and progress checks. Sub-recipients submit monthly reports that detail activities, issues, and challenges.

LCF divided the eight sub-recipients into North and South cohorts; each cohort received a mobile lab of twenty laptops and one mobile hotspot, shared among cohort members one week per month. The goal for each agency is to train forty people per month. The number of sessions delivered is at the discretion of each entity, allowing them to deliver training however they need to reach the goal. LCF provided an all-day train-the-trainer session to teach their sub-recipients how to use the mobile labs and to teach them the curriculum.

Each sub-recipient delivers the training most relevant to the interests and needs of the community it serves, modifying it as necessary. Trainers determine class sites based on community availability, including libraries, senior centers, and community centers. In many areas, libraries have computers but no training staff, so partners can deliver training in those locations. Class sizes vary by partner and available space, but maximum class size is twenty, since the mobile labs have twenty computers.

The training curriculum was developed by CAMINOS Pathways and the Michael Chavez Center, funded by the BTOP grant. These two partners had previous experience with digital literacy and were able to train the other partners. The curriculum is instructor-led, in Spanish, and laid out in a Word document for self-instruction, when necessary. The curriculum is made up of six modules: three modules on basic computer and Internet use and access; and three modules delivering the importance of using the Internet to further education, jobs, and health.

The eight LCF sub-recipients draw on deep community roots to deliver the most necessary and important information and training to their communities, advertise services, and promote broadband adoption. LCF created collateral marketing material and agencies tailored it for training. Outreach is performed at libraries, senior centers, and community centers, and some partners, such as Somos Mayfair, pass out fliers to notify people about classes.

LCF is planning to build in a soft skills component to their training, as they are finding a great deal of coaching and confidence building is required in the classes.

2.8.2 Grantee Data Collection and Methods

Grant outcome counts are tracked by LCF, who reports them to CETF using the BAA Outcomes Tracker. LCF surveys every class participant informally, with outreach staff calling users that provide their contact information for the courses to ask them if they subscribed to broadband. There is no formal data collection or analysis effort beyond what is required to complete the Outcome Tracker maintained by CETF for BAA grant reporting and its own management analysis.

2.8.3 Users

LCF targets low-income Latinos, with LCF trainers estimating that 60 percent of clients have an income under $20,000, 70 percent are female, and roughly 99 percent are Latino. According to

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[143] Latino Community Foundation, *Latino Community Foundation 2010 Report: Building a Better Future*, 2011, http://latinocf.org/publications/lcf_2010annualrep Online.pdf.

trainers, their students have limited computer experience, with only a small percentage knowledgeable about computer use or having a computer at home. The biggest hurdle for those who do not have a computer appears to be fear of computer use.

Somos Mayfair in particular serves mostly low-income Latino females, many of whom are stay-at-home mothers without a home computer who require childcare during class time. Many are also recent immigrants. Trainers at this center observe that classes serve as the first exposure to computers and the Internet for many students.

2.8.4 Initial Impacts

LCF tracks their grant outcome counts and reports them to CETF using the BAA Outcomes Tracker. LCF delivered training to 4,412 individuals.[144] LCF performed outreach to 17,409 individuals at speaking events, and distributed 7,809 pieces of informational material.[145] Their work resulted in seventeen households newly using the Internet and 125 households with new users who just learned to use the computer or the Internet yet already lives in a household with Internet.[146]

LCF focuses on helping families understand the importance of digital literacy in education, jobs, and healthcare, ultimately getting families to connect. The program started in June 2010 with train-the-trainer sessions by LCF, and mobile labs going out two weeks later.

LCF has found that students frequently want to retake classes.[147] Trainers report they spend about half of each class teaching and the other building confidence in students and helping them overcome personal barriers to learning. LCF belies the community accepts the training in large part due to this personal support. Trainers observe that the classes are decreasing the fear of using the Internet and computers for their students. Parents are seeing the value in getting online to keep up with what their children are learning.

Somos Mayfair, a community center in the Mayfair area, one of the lowest income areas in San Jose, supports family and community empowerment through cultural activism, social services and community organizing. Somos Mayfair focuses some of its training on *promotoras*, a group of community health workers that work locally in their own neighborhoods conducting peer education. At Somos Mayfair, the LCF trained a group of roughly twenty *promotoras*. Many users have Internet access due to renting a home that already had access, but no computers at home. Users typically use their phones to get online, but LCF is trying to shift the focus to getting on a computer at home. Somos Mayfair observed that signing contracts for broadband is a challenge for a population that relocates frequently. Somos Mayfair trainers have received positive feedback to the training thus far, with users showing excitement about the Internet. Trainers have found that *promotoras* are taking advantage of the resources they have available to them, including social services, library, health, unemployment, and financial literacy resources, through the project. Since *promotoras* pass their knowledge along, training them on a great number of resources appears to be having a high impact.

The evaluation study team attended a training session at Somos Mayfair for five *promotoras* who had already taken another LCF training course. Prior to the course, the users had no experience with computers. One student's son signed her up with an email account and she works outside of the class on her own to help learn how to use the computer. Another user has a child who uses an iPad in school. She is trying to learn more about computers because her child asks for help and

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[144] California Emerging Technology Fund, "CETF BAA Outcome Tracker."
[145] *Ibid.*
[146] *Ibid.*
[147] Students are allowed to re-take classes, but are not counted again in reported training totals.

she cannot assist him due to lack of knowledge. The classes cover basics, as some users do not know how to turn a computer on or go to the Internet.

With knowledge gained through the training, students report now using computers for email, assisting their children with homework, bill payment, connecting with service agencies via email, and creating PowerPoint presentations to educate others in the community. Students report interest in learning more to keep up with the technology around them and express disappointment that there is only one class. Specifically, users had reported a fear of losing or erasing material on the computer, but acknowledge the class is teaching them how to retrieve documents and to re-trace their steps in an Internet browser. Trainers refer users to other public computers in the library to practice their skills.

2.8.5 Sustainability

LCF would like to add elements to their training program to improve the upward mobility of participants. LCF is looking for private foundations to contribute money for this and the sustainability of program activities as a whole post-BAA grant.

2.9 Radio Bilingüe

Radio Bilingüe offers Spanish-language programming on public radio to the Central Valley region and smaller areas in southern California where farmworkers live.

2.9.1 Services Offered

Radio Bilingüe broadcasts a live call-in program and announcements in Spanish, English, and Mixteca designed to reach the Latino youth and adult target audience among its 60,000 listeners.[148] The grant funds 222 hours of programming (111 hours of talk shows and 111 hours of short messages) to address broadband access. Their goal under the grant is to facilitate 500 new household Internet subscriptions.[149] Radio Bilingüe received $1,037,016 in total funding (BTOP and match funds).[150]

Radio Bilingüe broadcasts thirty- to sixty-second messages promoting the benefits of broadband, with subjects including: how to get a computer; how to connect to broadband; dispelling myths about broadband service; user testimonials; and telling people about the "connected" portion of the Radio Bilingüe website where archived programs are stored. Through these messages, they also refer listeners to 2-1-1 and the CETF Get Connected! websites, along with the Radio Bilingüe website, for additional broadband information.

Broadband discussions on Radio Bilingüe typically occur on two types of programming: public affairs, which focuses on services available to the community and practical uses of the technology; and news, which provides information on more general topics such as online dating, Skype, and social media. This content is determined by editorial meetings with public affairs and news programming producers with input from listeners. More examples and details on topics that have been discussed on the air can be found in the document Radio Bilingüe topics.pdf listed in Appendix C.

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[148] California Emerging Technology Fund, "California Emerging Technology Fund Access to Careers and Technology Application Part 1."
[149] "California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption.*
[150] *Ibid.*

In addition to its programming, Radio Bilingüe sets up a booth to distribute information about training opportunities, computer availability, and broadband services at community events. Radio Bilingüe distributes marketing material, including information on the Comcast Internet Essentials program, along with pens, magnets, cards, and fliers, provided by a matching contribution through Radio Bilingüe. The marketing material leads people to the Radio Bilingüe website, providing information on the programming. Radio Bilingüe does not market a specific Internet Service Provider (ISP), but teaches listeners how to research the best options for their needs and budget.

Radio Bilingüe collaborates with parents and local partners to get feedback on their programming and to identify guests for the radio show. Radio Bilingüe has been invited to parent coffee hours and to set up a table at local high school lunches to pass out information. Partners include other NTIA grantees, the Children Services Network, Self Help Network, Catholic Charities, and Reading and Beyond. Reading and Beyond is an after-school nonprofit that teaches twenty-five parents every five weeks about access and use of the online system used by the local schools.

2.9.2 Grantee Data Collection and Methods

Grant outcome counts are tracked by Radio Bilingüe, who reports them to CETF using the BAA Outcomes Tracker. Radio Bilingüe logs all broadcasts in a database and reports audience size to CETF to include in its BAA reporting to NTIA. Radio Bilingüe considers these figures conservative estimates based on four of Radio Bilingüe's six full-power radio stations. Radio Bilingüe also asks people to send in copies of subscription confirmation letters but few do.

Radio Bilingüe focuses on collecting data from events and its website, including the number of attendees and the number of hits and downloads, respectively. Radio Bilingüe also measures the impact of the program anecdotally via user call-ins to radio programs. Though it has not attempted to determine program success, Radio Bilingüe is currently seeking ways to collect feedback on the usefulness of programs, including user stories of personal impacts.

2.9.3 Users

Radio Bilingüe's broadcast area mainly includes the agricultural valleys in the interior of the state, one of the least connected regions by per-capita adoption, to reach farm and other low-income workers in the Latino community.[151]

According to Radio Bilingüe, there was no media information available on broadband other than ads for broadband companies (which do not promote benefits of adoption) prior to the BAA grant. Computer labs in the area were closing due to budget cuts, increasing the demand for home computers and Internet connections, though the majority of listeners still did not own computers.

Radio Bilingüe also conducts a pledge drive, during which it asks if the donator has home Internet access—at least 50 percent do not.

Through observation and conversations with users, Radio Bilingüe has found several barriers to adoption for their audience. These are listed below:

- Cost: Broadband remains unaffordable for many, as they are unemployed.

- Availability: Infrastructure does not reach many rural areas. The Fresno Bee released a citizen letter in its Opinion the day before the evaluation study team site visit regarding the need for access, included in Appendix C as Opinion Article rural broadband. The author visited Washington, DC as a part of a delegation of rural Americans advocating policies to

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[151] California Emerging Technology Fund, *Fact Sheet: Broadband Awareness and Adoption.*

strengthen their communities. According to his letter, "there is a lot of potential in rural America, but without the necessary tools, [the] ability to grow…businesses or create…jobs…is seriously limited. One of these tools is high-speed Internet access—but this is a tool that many rural areas do not have."[152] Radio Bilingüe encourages users to work together with other people in their neighborhood to lobby to get Internet in their locations.

- ISP Requirements: ISP providers require a contract and credit checks; users do not have the time to work with the ISP provider to alleviate problems they may have.

- Lack of computers: Many users do not have functional, or any, computers, and the Fresno area has no refurbishers to provide service or used computers for sale.

- Lack of training: Users are unfamiliar with computers, or do not think they are capable of learning. Further, there are no locations that deliver training.

Reading and Beyond, a partner of Radio Bilingüe, has found that parents want to learn how to connect to and use broadband to access their children's grades and make appointments with teachers. Fresno Unified School District has a Parent Portal (Atlas) where parents can login and track their children's grades, progress, and performance. The district contains 26,000 ESL students, so information is provided in coded graphs (red, yellow, and green) to reach non-English speaking parents, increasing interest in computers and broadband among this community.[153] A survey of 85 parents showed that 84 percent have access to Internet and a computer but do not know how to use it or think they are capable of doing so.[154]

2.9.4 Initial Impacts

Radio Bilingüe tracks their grant outcome counts and reports them to CETF using the BAA Outcomes Tracker. Radio Bilingüe delivered ninety-one broadcast hours, resulting in 16,076,500 individuals receiving radio impressions.[155] Radio Bilingüe reported 143,900 youth Latino listeners and 435,700 adult Latino listeners.[156] Their website had 130,240 unique visitors, along with 12,720 downloads of radio programs.[157] They also performed outreach to 5,980 individuals at speaking events.[158] Their work resulted in eighteen households newly using the Internet.[159]

Radio Bilingüe has roughly 62,000 unique listeners per week, leading to 1.7 million non-unique impressions, which is the number of times a message is heard per week.[160] Previously, only advertisements promoted broadband subscription; the new media messages educate listeners on the affordability, necessity, and ease-of-use of broadband. Radio Bilingüe believes their status in the community as a trustworthy source of information strengthens the messages supported by the programming on the network. Radio Bilingüe is continuing to air messages past the initial commitment to CETF because it recognizes that they maintain the momentum of the overall grant mission.

Radio Bilingüe recently hosted its 28th Mariachi Festival in Fresno attended by over 4,360 people. There was a banner on stage advertising broadband, along with announcements, handouts, and a technology booth that was visited by over 700 people.[161]

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[152] Daniel Valencia, "Expand Rural Broadband," *The Fresno Bee*, October 18, 2011.
[153] Grantee, in discussion with the author, October 19, 2011.
[154] *Ibid.*
[155] California Emerging Technology Fund, "CETF BAA Outcome Tracker."
[156] *Ibid.*
[157] *Ibid.*
[158] *Ibid.*
[159] *Ibid.*
[160] Grantee, in discussion with the author, October 19, 2011.
[161] California Emerging Technology Fund, "Connecting People with Disabilities."

Anecdotally, Radio Bilingüe has found that people are interested in broadband and ready to explore its applications. They have been incorporating voices of listeners in the community into their programs to give the messages a more authentic sound and allow listeners to relate more to their peers. Users discuss their experiences and how they were thankful to learn about the Internet and are no longer afraid to use it.

Radio Bilingüe staff shared a story about a handicapped man who needed the Internet to transmit information on his medical equipment. When he looked up ISPs in his area, he saw that Comcast was available twenty yards away from his house and would have to run a wire to his home. Radio Bilingüe advocated on his behalf, and, while it took 1.5 months to get it, he now has Internet in his home.

When advertising broadband, Radio Bilingüe promotes the use of broadband to achieve the following impacts:

- Looking up jobs (main use of broadband)

- Improving health and education

- Accessing government services, including immigration paperwork, citizenship applications, Employment Development Department (EDD), and social and state services such as unemployment benefits, that are converting to online applications

- Banking online

- Becoming more involved in children's school

- Accessing Department of Motor Vehicles (DMV) resources

- Reducing the fear of using Internet

- Utilizing Skype

Radio Bilingüe has found that communities lack the proper access, training, and awareness of existing access and training to improve broadband use. Radio Bilingüe believes they would have had a larger impact if the Comcast Internet Essentials program had been available at the beginning of the grant period to decrease the affordability issue.

2.9.5 Sustainability

Radio Bilingüe is increasing awareness and promoting knowledge of broadband, and views the project as a success thus far. Radio Bilingüe believes it will be difficult to sustain the broadband awareness and education programs beyond the BTOP grant period at the same level they are currently running, but it is looking for funding to do so. Radio Bilingüe includes digital media in other grant proposals, but some foundations seem reluctant to provide funding. Due to this reluctance, Radio Bilingüe will focus on grouping other initiatives with broadband when applying for grants, rather than focusing on broadband alone.

Section 3. The BTOP Grant Going Forward

The CETF Broadband Awareness and Adoption project has begun to show outcomes and produce impacts. The experiences of CETF to-date provide information regarding how the implementation and administration of the BTOP grant influence CETF's ability to achieve its desired outcomes. Subsection 3.1 discusses where the project is in its lifecycle and the issues CETF is experiencing with respect to the sustainability of BTOP activities beyond the BTOP grant period and their potential solutions. Subsection 3.2 discusses the efforts CETF has taken or plans to take in evaluating its BTOP grant. Finally, Subsection 3.3 presents the lessons CETF has learned thus far that may be relevant to other BTOP stakeholders including strategies to employ or avoid in order to increase longer-term positive impacts.

3.1 Progress and Sustainability

CETF was nearing the end of its implementation phase and progress had been steady to date. Program managers anticipate an increase in the rate of adoption due to the Comcast Internet Essentials offer. CETF and DSG plan to run another program with the La Opinion newspaper next year and foresee getting more adults trained and adopting broadband from that as well.

Program progress is reported to NTIA through the five Performance Progress Reports (PPRs) BTOP grantees are required to submit each year: one per calendar quarter plus one annual report. PPRs are tailored for each BTOP grant type, although the reports have some questions in common. Quarterly and annual PPRs collect different pieces of information from grantees and are occasionally revised by NTIA to modify questions or clarify instructions. CETF's submitted PPR information has been summarized and is presented in Appendix B.

Due to its unique funding source and prescribed mission, CETF and its efforts to promote broadband will obviously continue beyond the BTOP grant. CETF's mission is largely the same as the goals of the BTOP program as a whole, so in that way, grant-related activities will continue beyond BTOP. Given that CETF chose to implement the BAA grant through partnerships with eight different organizations, however, the specific BAA grant-funded activities of those organizations may or may not continue beyond BTOP. Sustainability of those activities is program specific are discussed separately for each project partner in Subsections 2.2 through 2.9.

3.2 Grant Evaluation

CETF depends on the Public Policy Institute of California's annual survey to track changes in the Internet use and levels of broadband service at home for Californians and among various demographic and economic cohorts of Californians. CETF views their efforts, including those under the BAA grant, as drivers contributing to the changes that occur in Internet use and broadband at home within their target demographic. In this way, the PPIC annual survey is the only measure of the grant's impacts.

CETF is engaged in other data collection efforts that may yield data that could be used to gauge BAA project impacts, but no formal grant evaluation program using these data sources has been developed or is currently planned. These data collection efforts are described in subsection 2.1.

3.3 Lessons Learned

CETF has found that the high level of collaboration among the project partners has led to successes beyond what each organization could have achieved if working in isolation. While all of

the programs have experienced success towards achieving their individual goals, CETF believes LCF's training model of bringing computer resources into the community has been particularly successful. Bringing mobile labs to people has worked well, and the numbers of unique trainees have been higher than anticipated. CETF also noted that DSG has been successful in reaching a large number of community members.

CETF has identified the economic downturn, pessimism toward the utility of broadband, and a lack of emphasis (compared to other basic needs) in low-income populations as challenges for broadband adoption. CETF partners share lessons learned and best practices in addressing these specific challenges during their learning community sessions.

CETF and its partners have identified the following lessons learned and best practices during the grant thus far:

- When it was first formed, CETF leaders anticipated that broadband companies would begin to supply more affordable Internet access or offer incentives to low income people, but the ISPs did not. As a result, CETF increased their focus to include teaching users how to be informed broadband consumers so that potential users could get the best deal possible. This was not an original part of the training content.

- CETF has an intake survey that is not mandatory, but they would advise making it mandatory to provide data on the users they are serving.

- Sharing curriculum between project partners and allowing each partner to tailor it to the community it serves has been an efficient and effective project practice. This has been useful because each of CETF's partners serves individuals with different needs due to demographic and geographical differences, but the content is still largely the same.

- Encouraging collaboration among partners such as with the learning community has been an important part of the project. CETF's status, as a grant administrator, has allowed them to see the work at a higher, aggregate level, providing the opportunity to inform partners of phenomena they notice working independently.

- Being flexible and willing to make adjustments has made the project more successful. This includes creating an atmosphere where people can share mistakes and successes from which other partners can learn.

- Measuring outreach separately for people versus collateral delivers a more accurate picture of impacts. The impact/response rate is often higher with people than with collateral distributed.

- Using trusted community messengers to communicate and interact with users in the way(s) they are most comfortable is the most efficient way to communicate. For example, some partners trying to communicate with users via email found feedback lacking, later realizing the users they were trying to reach are more accustomed to communication by postal mail.

- Tailoring training to fit the needs and interests of the audience increases the likelihood participants will absorb the content and at the same time demonstrates the benefits of broadband in general. For example, if a trainer is working with parents, the class should focus on teaching the parents how to use the Internet to check their child's grades and how to help with homework. This helps teach Internet searching skills and illustrates the usefulness of Internet service to parents, thereby encouraging adoption.

Section 4. Next Steps

This case study is one of fifteen PCC and SBA case studies. A case study identifies how the grantee maximized the impact of the BTOP investment; successful techniques, tools, materials, and strategies used to implement the project; and best practices. It will also gather evidence from grantees, project partners, and publically available data regarding the impacts of the project in the community. The results of this case study will be included in an Interim Report intended for delivery in June 2012. This interim report will summarize the results of fifteen case studies and provide a window into the initial impacts of BTOP awards.

At the end of 2012 or in the first part of 2013, the evaluation study team will return to CETF to further research how the grant has evolved. The team will also visit the other fourteen selected grantees in order to study the development of their projects. In September 2013, a second set of interim case study reports will be delivered. These reports will include an update on the fifteen PCC and SBA projects analyzed in the first set of case studies. This methodology will allow for a longitudinal analysis of the impacts of the BTOP PCC and SBA grants over time.

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Glossary

AAC	Alternative to an augmentative communication
ACS	American Community Survey
ACT	Create Access to Careers and Technology
AIRS	Alliance for Information and Rental Systems
BAA	Broadband Awareness and Adoption
BTOP	Broadband Technology Opportunities Program Evaluation
CAA	Certified Application Assistant
CAI	Community Anchor Institution
CCD	Common Core of Data
CCI	Comprehensive Community Infrastructure
CETF	California Emerging Technology Fund
CforAT	Center for Accessible Technology
CLF	Chicana/Latina Foundation
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicle
DSG	Dewey Square Group
EDD	Employment Development Department
ERS	Economic Research Service
ESL	English as a Second Language
FCC	Federal Communications Commission
FTE	Full time equivalent
GCT	Get Connected Today!
ICR	Intelligent Character Recognition
IPEDS	Integrated Postsecondary Education Data System
ISP	Internet Service Provider
LA	Los Angeles
LCF	Latino Community Foundation
MOU	Memorandum of Understanding
NBM	National Broadband Map
NTIA	National Telecommunications and Information Administration
PCC	Public Computer Center
PPIC	Public Policy Institute of California
PPR	Performance Progress Report

RFP	Requests for Proposal
SBA	Sustainable Broadband Adoption
SIS	Social Interest Solutions
TIHDI	Treasure Island Homelessness Development Initiative
UWW	United Way Worldwide

Appendix A.   List of Service Locations

CETF does not have a specific set of service locations. For the most part, grant activities are not conducted at specific service locations on a regular basis, although this varies by partner. Some partners have physical locations where their services are provided or use the same types of service locations with some regularity.

- California 2-1-1 / United Ways of California: 2-1-1 serves twenty-seven counties in California, reaching more than 91 percent of the California population accessible to 33 million Californians.[162] Those counties not served by 2-1-1 are all rural. Some 2-1-1 call centers also receive calls from nearby counties that do not have their own 2-1-1 (i.e. Madera County residents call Fresno 2-1-1), so the service area stretches past the twenty-seven counties. The 2-1-1 staff work at 27 2-1-1 telephone line centers located across the state of California. The individuals that call 2-1-1 mostly live in the counties listed above.

- Access Now: Access Now serves the counties listed in Table 1, focusing on CETF's high target populations, including low-income urban communities lacking computers and affordable connections to the Internet, and rural communities lacking broadband infrastructure. There are no set locations for the outreach events that occur under this program, but Access Now has hosted events in the Bay Area, Los Angeles, Sacramento, Salinas, Fresno, and Greenfield (Monterey County).

- Center for Accessible Technology (CforAT): CforAT content is online, therefore CforAT has online members all over California, the U.S. and internationally. The actual CforAT location is in Berkeley, California. The computer training courses take place at this location.

- Social Interest Solutions: LA and Fresno are the primary service areas for this portion of the grant. There is also a publically accessible portion of One-e-App, Social Interest Solutions primary program, available to people outside of the counties listed in Table 1, but users need a ZIP Code in one of the counties listed to gain access to programs, as social services programming in the One-e-App is based on county. There are twenty-six One-e-App self-service stations in community buildings, including one station in each of LA's twenty-one Family Source Centers, one in San Diego and the remainder in UC Davis and Sacramento.

- Chicana/Latina Foundation (CLF): CLF serves the counties listed in Table 1. CLF hosts its training classes in various locations, which have included

  - Sacred Heart Community Services of San Jose, California delivers their digital literacy classes in its on-site, thirty-computer lab

  - Mi Pueblo Markets, a popular grocery chain in Northern California

  - Computer labs at the Redwood City Main Library in San Mateo County

  - Third Street Community Center's community lab in San Jose, California

- The Dewey Square Group (DSG): DSG targets the City of Fresno and the Greater LA area (LA county), but their Race to Close Digital Divide programs includes work in San Diego, the Bay Area and Sacramento. Their Club Digital program also includes San Francisco. Physical locations for the Race to Close the Digital Divide include churches and faith-based organizations throughout California. Training associated with Club Digital takes place at the Catholic Charities' Family Resource Center in Fresno, California.

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[162] California 2-1-1, "The State of 2-1-1 in California."

- Latino Community Foundation: The program is delivered in the six counties included in Table 1. LCF's trainers determine class sites based on community availability and include venues such as libraries, senior centers, and community centers.

- Radio Bilingüe: Radio Bilingüe serves twenty-one out of California's fifty-eight counties, including those listed in Table 1. Radio Bilingüe has six full-power radio stations that broadcast the PSAs and radio talk shows. The radio stations are physically located in Fresno, Modesto, Bakersfield, El Centro, Salinas, and Laytonville.[163]

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[163] "Radio Bilingüe's Six Full-Power Radio Stations in California's Main Agricultural Area."

Appendix B.   Characteristics of the Service Area

Appendix B describes the economic and demographic characteristics of the service area. These indicators were obtained from public data sources and are intended to provide basic background information about the areas impacted by BTOP and the state of broadband in the area. The demographic and economic characteristics presented, such as race or ethnicity, age, income level, and educational attainment have been linked in recent research to the "digital divide." All demographic tables included in this appendix were generated using the 2005 to 2009 estimates taken from the American Community Survey, unless noted otherwise.[164]

Figures presented in the tables throughout Appendix B are calculated using the counties associated with the target areas of the eight project partners. These program target areas can be combined into regions as defined by the grantee including the Central Valley, Inland Empire, Los Angeles, Bay Area, Orange/San Diego and those that serve the entire state. Collectively, these regions represent the grant service areas. Each table in Appendix B contains data on all six regions and nation, where available. The organizations and target counties are listed below in Table 5.

Table 5. Grantee Service Areas[165]

Service Region	Name of Organization	Counties Served
Statewide	211 California	Alameda, Contra Costa, Fresno, Kern, Kings, Los Angeles, Mendocino, Monterey, Marin, Napa, Nevada, Orange, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Tulare and Ventura
	Center for Accessible Technology	All
	Social Interest Solutions (One-E-App)	Alameda, Contra Costa, Fresno, Humboldt, Los Angeles, Napa, Nevada, Orange, Riverside, Sacramento, San Diego, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, and Sonoma
Bay Area	Access Now	Alameda, Monterey, San Francisco and Santa Clara
	Chicana Latina Foundation	Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz and Sonoma
	Latino Community Foundation	Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara
	Dewey Square Group	Alameda and San Francisco

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[164] The American Community Survey (ACS) is an ongoing survey that provides data every year, including basic demographics, education, and income. Rather than collecting information from the entire population, the Census Bureau collects ACS data from a sample of the population. All ACS data are survey estimates.

[165] California Emerging Technology Fund, "Service Region Definitions."

Service Region	Name of Organization	Counties Served
	Radio Bilingüe	Monterey, Napa, San Benito, Santa Cruz, and Sonoma
Central Valley	Access Now	Fresno and Sacramento
	Dewey Square Group	Fresno, Sacramento and Stanislaus County
	Radio Bilingüe	Calaveras, Fresno, Kern, Kings, Madera, Mariposa, Mendocino, Merced, San Joaquin, Stanislaus, Tulare, and Tuolumne
Los Angeles	Access Now	Los Angeles
	Dewey Square Group	Los Angeles
	Chicana Latina Foundation	Santa Barbara
	Radio Bilingüe	Santa Barbara
Inland Empire	Access Now	San Bernardino
	Radio Bilingüe	Riverside
Orange/San Diego	Dewey Square Group	San Diego
	Radio Bilingüe	Imperial and San Diego

B.1   Economic and Demographic

Table 6 presents a tabulation of the population living in the service area for this project. The Bay Area, Central Valley, Los Angeles, Inland Empire, and Orange/San Diego services areas account for 20 percent, 15 percent, 28 percent, 11 percent, and 9 percent of the state population, respectively. At least one fourth of the population within the state of California, Central Valley, Los Angeles, Inland Empire, and Orange/San Diego service areas are under the age of eighteen. Of all the geographic areas included in the table, Los Angeles accounts for the largest percentage of the state population under the age of eighteen at 28 percent.

Table 6. Population[166]

Geography	Total Population	Population Under 18
Bay Area	7,255,375	1,665,636
Central Valley	5,373,342	1,572,076
Los Angeles	10,187,320	2,646,839
Inland Empire	4,022,939	1209,637
Orange/San Diego	3,147,577	781,764
California	36,308,527	9,439,758

[166] United States Census Bureau, "ACS 2005-2009 Summary," *American Community Survey*, December 13, 2011, http://www2.census.gov/acs/.

Households with at least one child under eighteen are more likely to have Internet access than households without school-age children. Eighty-seven percent of families have Internet access (seventy-four percent with broadband), while just sixty-five percent of households without children subscribed to broadband.[167]

Table 7 presents a tabulation of the age distribution of the population in the service areas. More than 25 percent of the population within the Bay Area, Central Valley, Orange/San Diego and state of California is under the age of nineteen. About 35 percent of the nation is under the age of twenty-five, compared to 40 percent in the Central Valley, 34 percent in the Bay Area and 36 percent in the state of California. The Bay Area has a significantly higher percentage of individuals between the ages of twenty-five and forty-four when compared to the other service areas and the nation as a whole.

Table 7. Population by Age[168]

Age Group	Bay Area	Central Valley	Los Angeles	Inland Empire	Orange/ San Diego	California	Nation
Under 5	6.9%	8.3%	7.5%	8.0%	7.5%	7.4%	6.9%
5 to 9	6.1%	7.7%	6.7%	8.0%	6.5%	6.8%	6.5%
10 to 14	6.1%	8.2%	7.3%	8.7%	6.7%	7.3%	6.8%
15 to 19	6.3%	7.9%	7.4%	8.4%	7.1%	7.3%	7.2%
20 to 24	6.4%	7.3%	7.3%	7.2%	8.1%	7.2%	7.0%
25 to 34	15.0%	14.3%	15.7%	13.6%	15.0%	14.6%	13.4%
35 to 44	15.7%	13.7%	15.1%	14.3%	14.3%	14.7%	14.2%
45 to 54	14.9%	13.2%	13.5%	13.1%	13.9%	13.9%	14.5%
55 to 59	6.2%	5.2%	5.2%	4.9%	5.4%	5.5%	6.0%
60 to 64	4.7%	4.1%	4.0%	3.8%	4.2%	4.3%	4.8%
65 to 74	5.9%	5.4%	5.3%	5.3%	5.6%	5.7%	6.5%
75 to 84	4.1%	3.4%	3.6%	3.4%	4.1%	3.8%	4.4%
85 plus	1.7%	1.4%	1.4%	1.1%	1.6%	1.5%	1.7%

Older individuals, particularly those aged sixty-five and older, are significantly less likely than their younger counterparts to have broadband Internet access at home.[169] While the elderly are least likely, adults within the age range of thirty to forty-nine are most likely to subscribe to broadband.[170]

Table 8 tabulates self-reported race and shows that the service areas have a significantly larger percentage of Asian and "Other" populations when compared to the nation. The self-reporting Asian population in the Bay Area is 8 percentage points larger than that of the state and more than 15 percentage points larger than that of the nation. The Inland Empire and Los Angeles service

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[167] John B. Horrigan, "Broadband Adoption and Use in America," *OBI Working Paper Series* (Washington, DC: Federal Communications Commission, February 2010), http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296442A1.pdf.

[168] United States Census Bureau, "ACS 2005-2009 Summary."

[169] Economics and Statistics Administration and National Telecommunications and Information Administration, *Exploring the Digital Nation: Computer and Internet Use at Home*, November 9, 2011, http://www.ntia.doc.gov/files/ntia/publications/exploring_the_digital_nation_computer_and_internet_use_at_home_11092011.pdf.

[170] Horrigan, "Broadband Adoption and Use in America."

areas have at least 13 percentage points more individuals self-reporting as "Other" than does the nation. The percent composition of African American and White populations is lower in all of the service areas when compared to the nation.

Table 8. Population by Self-Reported Race[171]

Race	Bay Area	Central Valley	Los Angeles	Inland Empire	Orange/ San Diego	California	Nation
White	58.9%	66.1%	51.7%	62.7%	71.1%	61.3%	74.5%
African American	6.0%	6.1%	8.5%	7.5%	5.0%	6.2%	12.3%
Native American or Alaskan	0.5%	1.1%	0.6%	1.0%	0.8%	0.8%	0.8%
Asian	20.8%	8.4%	12.7%	5.5%	9.8%	12.3%	4.3%
Pacific Islander or Native Hawaiian	0.5%	0.4%	0.3%	0.3%	0.4%	0.4%	0.2%
Other	9.5%	13.9%	23.2%	19.2%	9.2%	15.5%	5.7%
Two or More Races	3.7%	3.9%	3.0%	3.8%	3.7%	3.5%	2.3%

Table 9 describes the distribution of the Hispanic or Latino ethnic group in the five service areas. ACS estimates that the majority (54 percent) of Hispanic and Latino Americans fall under the White demographic in the previous table.[172] All five service areas have a significantly higher percentage of Hispanics when compared to the nation. The Central Valley service area, the Los Angeles service area, the Inland Empire service area and the state of California all have more than twice the national percentage of Hispanic individuals.

Table 9. Hispanic or Latino Population[173]

Ethnicity	Bay Area	Central Valley	Los Angeles	Inland Empire	Orange/ San Diego	California	Nation
Not Hispanic	76.0%	62.2%	53.1%	55.1%	67.3%	63.9%	83.8%
Hispanic or Latino	24.1%	37.8%	47.0%	44.9%	32.7%	36.1%	16.2%

Asian households exhibit the highest subscription rates of home broadband service (81 percent), followed by White households (72 percent).[174] Hispanic households and Black households have historically had lower subscription rates than these groups. Slightly more than half of all Black and Hispanic households (55 percent and 57 percent, respectively) subscribe to home broadband

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[171] United States Census Bureau, "ACS 2005-2009 Summary."

[172] United States Census Bureau, "Race and Ethnicity," *American Community Survey*, 2009, http://factfinder.census.gov/servlet/ACSSAFFPeople?_submenuId=people_10&_sse=on/.

[173] United States Census Bureau, "ACS 2005-2009 Summary."

[174] Economics and Statistics Administration and National Telecommunications and Information Administration, *Exploring the Digital Nation: Computer and Internet Use at Home.*

service. Households headed by American Indian or Alaska Native householders also have computer use (66 percent) and broadband adoption (52 percent) rates lower than the national average of 68 percent.[175]

Table 10 presents information on the presence of non-English speakers in households in the service areas. There is a much higher percentage of individuals who speak a language other than English at home in the service areas than in the nation. More than half of individuals in Los Angeles speak a language other than English in their home. Non-English speakers are more than two times more prevalent in Los Angeles and California than in the nation.

Table 10. Persons Speaking Language Other Than English at Home[176]

Geography	Non-English
Bay Area	40.5%
Central Valley	36.9%
Los Angeles	55.3%
Inland Empire	39.1%
Orange/San Diego	37.1%
California	42.3%
Nation	20.6%

Spanish-speaking Hispanics are far less likely to subscribe to home broadband than those who speak English in the home. [177] Hispanics opting for an English version of a broadband use survey recorded a 65 percent broadband adoption rate, while Spanish-language respondents registered a 20 percent home broadband subscription rate.[178] Furthermore, speaking a language other than English is negatively correlated with broadband adoption. Service areas with a substantial percentage of non-English speakers will likely have lower adoption rates.

Table 11 shows the unemployment rate in the service area. All of the service areas and the state of California have a higher unemployment rate than the national average. The Central Valley service area has the highest rate of unemployment at close to 14 percent, more than four and a half percentage points higher than the nation. When compared to the unemployment across the state of California, the Orange/San Diego service area has lower rates.

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[175] Economics and Statistics Administration and National Telecommunications and Information Administration, *Exploring the Digital Nation: Computer and Internet Use at Home.*

[176] United States Census Bureau, "ACS 2005-2009 Summary."

[177] Horrigan, "Broadband Adoption and Use in America."

[178] *Ibid.*

Table 11. Unemployment Rates[179]

Geography	Rate
Bay Area	10.1%
Central Valley	13.9%
Los Angeles	11.5%
Inland Empire	13.2%
Orange/San Diego	10.5%
California	11.3%
Nation	9.3%

There is an inverse relationship between broadband use and unemployment. Unemployed persons are less likely to have the means necessary to afford a broadband subscription. In addition, a lack of access to broadband may contribute a prolonged period of unemployment. Broadband access is a potential resource in finding employment as it enables more effective job hunting by increasing the amount of information available to both employers and employees.[180] Service areas with relatively high unemployment rates suggest limited access to broadband and the potential for significant marginal benefits with its adoption.

Table 12 illustrates the distribution of employment in the service areas and nation. The Bay Area has the highest concentration of "Management, professional and related occupations" where it makes up more than 43 percent of employment, 8 percentage points higher than the state of California. The Central Valley service area has the highest percent composition of "farming, fishing and forestry occupations" of the geographies shown, 4 percentage points higher than the state. "Production" related occupations account for 14 percent of Inland Empire's employment, 3 percentage points more than the nation.

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[179] Bureau of Labor Statistics, "Labor Force Data by County, 2009 Annual Averages," *Labor Force Data by County, 2009 Annual Averages*, 2009, http://www.bls.gov/lau/home.htm#data.

[180] Robert D. Atkinson et al., *The Internet Economy 25 Years After .com* (Washington, D.C.: Information Technology and Innovation Foundation, March 15, 2010), http://www.itif.org/files/2010-25-years.pdf.

Table 12. Resident Employment by Industry Sector[181]

Employment Sector	Bay Area	Central Valley	Los Angeles	Inland Empire	Orange/ San Diego	California	Nation
Management, professional, and related occupations	43.6%	29.6%	34.1%	28.2%	39.0%	35.9%	34.7%
Service occupations	15.5%	17.7%	17.6%	18.1%	18.0%	17.1%	16.9%
Sales and office occupations	23.8%	25.1%	26.0%	26.9%	25.4%	25.5%	25.6%
Farming, fishing, and forestry occupations	1.1%	5.1%	0.5%	0.7%	0.6%	1.4%	0.7%
Construction, extraction, maintenance, and repair occupations	7.6%	10.1%	8.6%	11.9%	8.7%	8.9%	9.5%
Production, transportation, and material moving occupations	8.4%	12.5%	13.3%	14.3%	8.3%	11.2%	12.6%

Employment in manufacturing and services industries (particularly finance, education, and health care) is positively related to broadband penetration.[182] Nonfarm private employment and employment in several industries is positively associated with broadband use. More specifically, for every 1 percentage point increase in broadband penetration in a state, employment is projected to increase by 0.2 to 0.3 percent per year.[183]

Table 13 illustrates the distribution of household income in the service areas. The Bay Area has the largest percentage of houses with an income of more than $100,000 with more than 46 percent of households above this threshold, 19 percentage points more than the nation. The Central Valley service area has the largest percentage of households with an income less than $50,000 of the geographies included in the table below, representing more than 44 percent of households. This income group is 8 percentage points larger in Central Valley than in the state of California.

In addition to the income breakouts shown in the table below, CETF targets service towards households with an income under $40,000. Central Valley has the largest percent composition of households with an income of less than $40,000, with 34.9 percent of its households falling below this threshold. In comparison, this income bracket represents the following percentages of

[181] United States Census Bureau, "ACS 2005-2009 Summary."
[182] Robert W. Crandall, William Lehr, and Robert E. Litan, "The Effects of Broadband Deployment on Output and Employment: A Cross-sectional Analysis of U.S. Data," *Issues in Economic Policy* (The Brookings Institution, July 2007), http://www.brookings.edu/views/papers/crandall/200706litan.pdf.
[183] *Ibid.*

households in the other service areas: 32.9 percent of Los Angeles households, 29.7 percent of Inland Empire households, 27.9 percent of the state of California households, 25.9 percent of Orange/San Diego households, and 20.1 percent of Bay Area households.

Table 13. Cumulative Household Income Distribution[184]

Geography		Income Ranges							
		$0 - $9,999	$10,000- $24,999	$25,000- $49,999	$50,000- $74,999	$75,000- $99,999	$100,000- $124,999	$125,000- $199,999	$200,000+
Bay Area		2.8%	8.0%	15.8%	15.5%	13.5%	20.5%	10.7%	13.2%
	cum.	2.8%	10.7%	26.6%	42.0%	55.5%	76.1%	86.8%	-
Central Valley		5.0%	14.6%	24.5%	19.5%	13.8%	14.4%	4.7%	3.5%
	cum.	5.0%	19.6%	44.1%	63.5%	77.3%	91.7%	96.5%	-
Los Angeles		4.6%	13.9%	22.9%	18.0%	12.6%	14.9%	6.2%	7.0%
	cum.	4.6%	18.5%	41.3%	59.3%	72.0%	86.8%	93.0%	-
Inland Empire		3.9%	11.7%	23.3%	19.9%	15.0%	16.5%	5.7%	4.0%
	cum.	3.9%	15.6%	38.9%	58.8%	73.8%	90.3%	96.0%	-
Orange/San Diego		3.3%	10.2%	20.5%	17.9%	14.6%	18.2%	7.9%	7.5%
	cum.	3.3%	13.5%	34.0%	51.9%	66.4%	84.7%	92.5%	-
California		3.8%	11.3%	20.9%	18.0%	13.8%	17.2%	7.4%	7.7%
	cum.	3.8%	15.1%	36.0%	54.0%	67.8%	85.0%	92.3%	-
Nation		4.8%	11.9%	23.2%	20.1%	14.5%	15.0%	5.4%	5.2%
	cum.	4.7%	16.7%	39.9%	60.0%	74.5%	89.5%	94.8%	-

Home computer use and Internet adoption are strongly associated with income.[185] In 2010, less than half (43 percent) of all households with annual household incomes below $25,000 reported having broadband Internet access at home, compared to the majority (93 percent) of households with incomes exceeding $100,000.[186] Affordability significantly influences a household's decision not to subscribe to broadband services.[187] Low-income individuals in particular identify cost as the most significant barrier to broadband adoption.[188]

Table 14 below shows the poverty rate for the service areas. Central Valley has the highest poverty rate of the geographic areas and is nearly 4 percentage points higher than the state of California. The poverty rate in Los Angeles (15 percent) is the only other geographic region shown below that also has a poverty rate higher than that of the nation. The Bay Area has the lowest poverty rate of the included geographic regions at less than 10 percent.

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[184] United States Census Bureau, "ACS 2005-2009 Summary."
[185] Economics and Statistics Administration and National Telecommunications and Information Administration, *Exploring the Digital Nation: Computer and Internet Use at Home.*
[186] *Ibid.*
[187] *Ibid.*
[188] Horrigan, "Broadband Adoption and Use in America."

Table 14. Poverty Rate[189]

Geography	Poverty Rate
Bay Area	9.7%
Central Valley	17.3%
Los Angeles	15.4%
Inland Empire	13.3%
Orange/San Diego	12.0%
California	13.2%
Nation	13.9%

Poverty, as defined by the U.S. Census Bureau, varies based on an income threshold determined by family size and composition. If a family's total income is below the threshold defined for that family's composition and size, then every individual in the family is considered to be living in poverty. The official poverty definition uses monetary income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, or food stamps).[190]

Population size, urbanization, and access to larger communities are often crucial elements in research dependent on county-level data sets. To further such research, the U.S. Department of Agriculture Economic Research Service (ERS) developed a set of twelve county-level urban influence categories that capture differences in economic opportunities. These twelve granular urban influence codes can be organized into three higher level groupings: metropolitan areas, micropolitan areas, and non-metro areas.[191] [192]

As seen in Table 15, the entirety of the Bay Area is considered a metropolitan area. Almost 70 percent of Central Valley's counties are considered metropolitan and 96 percent of the population lives within those counties. More than 63 percent of the counties in California are metropolitan and contain nearly 98 percent of the population.

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[189] United States Census Bureau, "ACS 2005-2009 Summary."

[190] United States Census Bureau, "How the Census Bureau Measures Poverty," *American Community Survey*, October 18, 2011, http://www.census.gov/hhes/www/poverty/methods/measure.html.

[191] United States Department of Agriculture Economic Research Service, "Measuring Rurality: Urban Influence Codes", August 8, 2007, http://www.ers.usda.gov/Briefing/Rurality/urbaninf/.

[192] Metro areas are defined as all urbanized areas regardless of total area population. Additionally, outlying counties are included if they surpass a single commuting threshold of 25 percent. Micropolitan areas are defined as a non-metro county with an urban cluster of at least 10,000 persons. Additionally, outlying counties are included if commuting to the central county is 25 percent or higher, or if 25 percent of the employment in the outlying county is made up of commuters from the central county. Finally, non-metro areas are defined as all non-metro counties that do not satisfy micropolitan requirements. For more information, visit http://www.ers.usda.gov/Briefing/Rurality/NewDefinitions/.

Table 15. Rurality of Service Area[193]

Geography	Urban Influence Code Description (2003)	Percent of Counties in Service Area	Percent of Population in Service Area
Bay Area	Metropolitan Area	100%	100%
Central Valley	Metropolitan Area	69%	96%
	Micropolitan Area	15%	3%
	Non-metro Area	15%	1%
Los Angeles	Metropolitan Area	100%	100%
Inland Empire	Metropolitan Area	100%	100%
Orange/San Diego	Metropolitan Area	100%	100%
California	Metropolitan Area	64%	98%
	Micropolitan Area	14%	2%
	Non-metro Area	22%	1%

B.2 Education

ACS also measures the highest educational attainment levels of individuals over the age of twenty-five. Table 16 tabulates the service area populations over these educational attainment levels. Almost 24 percent of the Central Valley region population over the age of twenty-five does not have a high school degree or equivalent GED. This is more than 8 percentage points higher than the national figure. The Bay Area has the highest composition of individuals with a bachelor's degree or higher with more than 41 percent of its individuals over the age of twenty-five, 14 percentage points higher than the national rate and 11 percentage points higher than the state of California.

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[193] United States Department of Agriculture Economic Research Service, "Urban Influence Codes", November 4, 2004, http://www.ers.usda.gov/Data/UrbanInfluenceCodes/.

Table 16. Highest Educational Attainment of Population 25 or Older[194]

Geography	No High School	High School Graduate	Some College	Bachelor's Degree or Higher
Bay Area	14%	18%	26%	41%
Central Valley	24%	25%	32%	19%
Los Angeles	24%	22%	26%	28%
Inland Empire	22%	27%	32%	19%
Orange/San Diego	16%	20%	31%	33%
California	20%	22%	29%	30%
Nation	16%	29%	28%	27%

Education is one the most important predictors of Internet adoption.[195] Households headed by someone without a high school diploma have particularly low home broadband service adoption.[196] Fifty-seven percent of adults whose highest level of education was a high school degree are broadband users at home; seventy-four percent of adults who attended some college are broadband users at home; and college graduates report an eighty-seven percent subscribership rate.[197] This suggests that areas in which low levels of education are characteristic may have lower rates of broadband adoption. The relationship between broadband and education can best be described as reciprocal. Broadband enhances education through better access to resources, while education is often required to fully recognize the potential benefits of broadband.

Table 17 illustrates the pupil-to-teacher ratio in elementary and secondary schools within the service areas. Below we see that the pupil to teacher ratio within all of the service areas is significantly higher than the national average. Teachers in schools within the service areas are responsible for roughly five more students when compared to the nation.

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[194] United States Census Bureau, "ACS 2005-2009 Summary."

[195] John P. Robinson, Paul DiMaggio, and Eszter Hargittai, "New Social Survey Perspectives on the Digital Divide," *IT & Society* 1, no. 5 (2003): 1-22, http://www.webuse.org/pdf/RobinsonEtAL-NewSocialSurveyPerspectives2003.pdf.

[196] Economics and Statistics Administration and National Telecommunications and Information Administration, *Exploring the Digital Nation: Computer and Internet Use at Home*.

[197] *Ibid.*

Table 17. Elementary and Secondary Schools[198][199]

Geography	Pupil/Teacher Ratio
Bay Area	20.0
Central Valley	20.5
Los Angeles	20.9
Inland Empire	22.0
Orange/San Diego	20.8
California	20.9
Nation	15.5

By 2005, 97 percent of all public schools with Internet access used broadband.[200] This is particularly relevant when considering school enrollment. While the majority of public schools with Internet access subscribe to broadband, about 74 percent of families with children under eighteen had home subscriptions in 2009.[201] Drop out figures are also relevant in analyzing the likelihood of broadband adoption. Those without high school diplomas are significantly less likely to subscribe to broadband than those whose highest level of educational attainment is high school or college.[202]

Table 18 tabulates the number of students currently enrolled in postsecondary institutions with and without distance learning opportunities in the service areas and the state. In each service area, students enrolled in schools with distance learning outnumber those that do not by more than four to one.

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[198] National Center for Education Statistics, "ELSI Table Generator", November 11, 2011, http://nces.ed.gov/ccd/elsi/tableGenerator.aspx.

[199] The Department of Education's primary database on public elementary and secondary education in the United States is the Common Core of Data (CCD). The CCD surveys are conducted annually and collect data about all public elementary and secondary schools, all local education agencies, and all state education agencies throughout the United States. CCD contains three categories of information: general descriptive information on schools and school districts; data on students and staff; and fiscal data. The general descriptive information includes name, address, phone number, and type of locale; the data on students and staff include selected demographic characteristics; and the fiscal data cover revenues and current expenditures.

[200] National Center for Education Statistics, *Internet Access in U.S. Public Schools and Classrooms: 1994-2005 Highlights*, November 2006, http://nces.ed.gov/pubs2007/2007020.pdf.

[201] Horrigan, "Broadband Adoption and Use in America."

[202] Economics and Statistics Administration and National Telecommunications and Information Administration, *Exploring the Digital Nation: Computer and Internet Use at Home*.

<h3 style="text-align:center">Table 18. Postsecondary Education[203][204]</h3>

Geography	Distance Learning Opportunities	Total Enrollment	Full-Time Enrollment	Part-Time Enrollment	Graduation Rate
Bay Area	No	92,303	84,745	7,558	71.7%
Bay Area	Yes	460,644	191,621	269,023	33.6%
Central Valley	No	25,439	23,409	2,030	52.1%
Central Valley	Yes	283,315	125,915	157,400	25.2%
Los Angeles	No	71,306	63,620	7,686	64.0%
Los Angeles	Yes	563,057	249,413	313,644	32.2%
Inland Empire	No	22,329	21,045	1,284	64.4%
Inland Empire	Yes	159,888	63,200	96,688	23.5%
Orange/San Diego	No	25,574	18,343	7,231	56.9%
Orange/San Diego	Yes	195,311	73,153	122,158	26.0%
California	No	256,078	228,085	27,993	64.5%
California	Yes	2,097,341	905,597	1,191,744	30.8%

Online distance education provides the geographically isolated, disabled, incarcerated, and those occupied with work or children access to an education otherwise unattainable. This accessibility is extremely beneficial for students, presenting the opportunity to engage in a wider variety of course options and learning opportunities, including postsecondary education. This is particularly important for students in rural or disadvantaged regions who otherwise may not have access to such options.

Broadband is a fundamental element of online higher education. Where broadband subscribership increases, educational possibilities follow. As of February 2009, e-learning was estimated to represent about 10 percent of the overall U.S. training and educational market.[205] Examining the existence of distance learning opportunities indicates the presence of presumably feasible educational opportunities for service area inhabitants with broadband access. Considering the existence of such opportunities and current levels of educational attainment within a region may be suggestive of substantial benefits attainable through broadband adoption.

B.3 Broadband

The National Broadband Map (NBM) was created by NTIA in collaboration with the Federal Communications Commission (FCC) and in partnership with fifty states, five territories and the District of Columbia. The NBM is part of NTIA's State Broadband Initiative and is updated every six months. Data were first published on February 17, 2011.[206][207] Population weighting for all tables

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[203] The Integrated Postsecondary Education Data System (IPEDS) is a system of interrelated surveys conducted annually by the U.S. Department's National Center for Education Statistics (NCES). IPEDS gathers information from every college, university, and technical and vocational institution that participates in the federal student financial aid programs.

[204] National Center for Education Statistics, "IPEDS Data Center", November 18, 2011, http://nces.ed.gov/ipeds/datacenter/Default.aspx.

[205] Atkinson et al., *The Internet Economy 25 Years After .com*.

[206] National Broadband Map, "About National Broadband Map", November 28, 2011, http://www.broadbandmap.gov/about.

[207] Provider information and community anchor institution data were obtained from the "Complete National Datasets" provided on the Website. The comparison of community anchor institutions was created by searching the master community anchor institution list for PCC and SBA locations provided by grantees. Speed test data were obtained through the use of Application Programming Interface (API) calls to the NBM.

using NBM data was done using 2009 block level estimates from Geolytics.[208] The NBM tables also present two calculations for each of the geographies included. The first uses the NBM definition of broadband and the second uses the NOFA definition of broadband.[209]

Using the NOFA definition of broadband, more than 3 percent of the state of California's population does not have a wired broadband provider available to them. The Central Valley and Orange/San Diego service areas have higher rates of individuals with a wired broadband provider available when compared to the state. More than 75 percent of each service area has either two or three service providers available to them. The Los Angeles service area has the highest percent composition of individuals with at least four service providers available, with 19 percent of its population falling in this category.

Table 19. Availability of Broadband Providers[210]

Number of Providers Available	Percent of Population											
	Bay Area		Inland Empire		San Diego		Central Valley		Los Angeles		California	
	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA
0	1.9%	1.9%	3.9%	3.3%	4.5%	4.5%	7.9%	7.3%	0.6%	0.6%	3.7%	3.4%
1	3.0%	2.9%	5.7%	3.9%	5.1%	3.8%	11.2%	10.4%	0.9%	0.5%	4.8%	4.2%
2	31.9%	31.1%	32.5%	29.3%	48.8%	46.0%	59.9%	61.1%	8.6%	6.6%	30.3%	29.1%
3	57.7%	58.6%	54.5%	56.1%	39.5%	42.6%	15.8%	15.8%	85.6%	73.5%	57.3%	54.2%
4	5.5%	5.5%	3.3%	7.1%	1.9%	2.8%	5.2%	5.3%	4.3%	17.9%	3.9%	8.8%
5	0%	0%	0%	0.3%	0.2%	0.2%	0.1%	0.1%	0.1%	0.9%	0.1%	0.4%

As shown in Table 20, there are twenty-eight service providers throughout the State of California. No single provider serves the entire State of California. AT&T California serves the largest percentage of the state (72 percent) and at least 28 percent of each service area. The next largest coverage provided across the state is Covad Communications Company who is available to almost 67 percent of the state's population and at least 19 percent of each service area.

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[208] GeoLytics, "Block Level Estimates (2009)", May 5, 2012, http://geolytics.com/USCensus,Block-Estimates,Products.asp.

[209] The National Broadband Map defines broadband as download speeds of at least 3 Mbps and upload speeds of at least 768 kbps to end users. The NOFA defines broadband as download speeds of at least 768 kbps and upload speeds of at least 200 kbps to end users.

[210] National Broadband Map, "U.S. Broadband Availability Data by CSV", October 20, 2011, http://www.broadbandmap.gov/data-download.

Table 20. Wired Provider's Availability by Population Percentage[211]

Provider Name	Bay Area		Inland Empire		San Diego		Central Valley		Los Angeles		California	
	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA
No Broadband Service Available	1.9%	1.9%	3.9%	3.3%	4.5%	4.5%	7.9%	7.3%	0.6%	0.6%	3.7%	3.4%
AT&T California	95.2%	95.2%	28.9%	28.9%	93.3%	93.3%	78.4%	78.4%	61.3%	61.3%	72.0%	72.0%
Astound Broadband	8.5%	8.5%	0%	0%	0%	0%	0%	0%	0%	0%	1.7%	1.7%
Bright House Networks	0%	0%	0%	0%	0%	0%	11.9%	11.9%	0%	0%	1.8%	1.8%
CALAVERAS INTERNET	0%	0%	0%	0%	0%	0%	0%	0.1%	0%	0%	0%	0%
CHARTER COMMUNICATIONS INC.	2.9%	2.9%	24.5%	24.5%	0%	0%	5.7%	5.7%	21.1%	21.1%	11.5%	11.5%
Cal-Ore Telephone Co.	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Comcast	92.2%	92.2%	0%	0%	0%	0%	67%	67.0%	1.7%	1.7%	31.9%	31.9%
Covad Communications Company	60.7%	61.6%	60.4	64.3%	86.2%	86.5%	19.3%	19.3%	92.9%	92.9%	66.0%	66.7%
Cox Communications	0%	0%	0%	0%	17.1%	17.1%	0%	0%	2.7%	2.7%	4.0%	4.0%
Ducor Telephone Company	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
FRONTIER COMMUNICATIONS OF CALIFORNIA	0%	0%	0%	0.1%	0%	0%	2.9%	4.2%	0%	0%	0.5%	0.8%
KERMAN	0%	0%	0%	0%	0%	0%	0.4%	0.4%	0%	0%	0.1%	0.1%
Level 3 Communications, LLC	0.1%	0.1%	0%	0%	0.2%	0.2%	0%	0%	0.1%	0.1%	0.1%	0.1%
Mediacom Communications Corp.	0%	0%	0.8%	0.8%	0.4%	0.4%	0.8%	0.8%	0%	0%	0.4%	0.4%
Northland Cable TV	0%	0%	0%	0%	0%	0%	0.2%	0.2%	0%	0%	0.1%	0.1%
PaeTec Corporation	0.1%	0.1%	0.4%	0.4%	0.8%	0.8%	0%	0%	0.7%	0.7%	0.4%	0.4%
Pinnacles Telephone Co	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Ponderosa Telephone Company	0%	0%	0%	0%	0%	0%	0%	0.1%	0%	0%	0%	0%
Raw Bandwidth Telecom, Inc.	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Sierra Telephone Company Inc.	0%	0%	0%	0%	0%	0%	0.3%	0.3%	0%	0%	0%	0%
Sierra Telephone Company, Inc.	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Suddenlink Communications	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.1%
SureWest Broadband	0%	0%	0%	0%	0%	0%	8.3%	8.3%	0%	0%	1.7%	1.7%

TDS Telecom	0%	0%	0%	0%	0.1%	0.1%	0%	0%	0%	0%	0%	0%
TIME WARNER CABLE	0%	0%	70.1%	70.9%	30.9%	30.9%	0%	0%	75.8%	75.8%	39.7%	39.8%
Telscape Communications	0%	0%		3.8%		6.0%	0%	0%		15.4%	0%	5.7%
The Siskiyou Telephone Company	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Verizon California Inc.	1.9%	2.2%	62.1%	66.1%			3.8%	4.2%	35.6%	38.3%	20.2%	21.8%
Volcano Internet Provider	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wave Broadband	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0.7%	0.7%
Tw telecom of California l.p.	0.3%	0.3%	0.5%	0.5%	0.9%	0.9%	0.5%	0.5%	0.3%	0.3%	0.5%	0.5%

Data is available on the National Broadband Map (NBM) for maximum advertised download and upload speeds in geographic areas. Based on data from the NBM, Table 21 and Table 22 show the advertised maximum download and upload speeds, respectively, that are available within the service area. More than 55 percent of individuals in the State of California have a maximum advertised download speeds of 50-100 Mbps. This is also the maximum advertised download speed for at least 59 percent of the Inland Empire, Central Valley and Bay Area service areas. More than three-fourths of the Orange/San Diego service area has a maximum advertised download speed of 10-25 Mbps. At least 56 percent of each service area population has maximum advertised upload speeds of 10-25 Mbps.

Table 21. Max Advertised Download Speeds by Population[212]

Max Advertised Download Speed	Percent of Population											
	Bay Area		Inland Empire		San Diego		Central Valley		Los Angeles		California	
	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA
No Broadband Service Available	1.9%	1.9%	3.9%	3.3%	4.5%	4.5%	7.9%	7.3%	0.6%	0.6%	3.7%	3.4%
1 Gbps+	0.2%	0.2%	0.4%	0.4%	0.8%	0.8%	2.3%	2.3%	0.7%	0.7%	1.0%	1.0%
50 Mbps - 100 Mbps	89.8%	89.8%	59.4%	59.4%	16.9%	16.9%	63.8%	63.8%	44.9%	44.9%	55.3%	55.3%
25 Mbps - 50 Mbps	2.9%	2.9%	0.3%	0.3%	0.7%	0.7%	5.4%	5.4%	0.3%	0.3%	2.0%	2.0%
10 Mbps - 25 Mbps	5.1%	5.1%	33.3%	33.3%	76.1%	76.1%	18.2%	18.2%	53.3%	53.3%	36.5%	36.5%
6 Mbps - 10 Mbps	0%	0%	1.6%	1.6%	0.5%	0.5%	1.6%	1.6%	0.1%	0.1%	1.2%	1.2%
3 Mbps - 6 Mbps	0.1%	0.1%	1.2%	1.4%	0.4%	0.4%	0.9%	1.0%	0.1%	0.1%	0.4%	0.5%
1.5 Mbps - 3 Mbps	N/A	0.1%	N/A	0.3%	N/A	0%	N/A	0.2%	N/A	0%	N/A	0.1%
768 kbps - 1.5 Mbps	N/A	0%	N/A	0%	N/A	0%	N/A	0.2%	N/A	0%	N/A	0.1%

[212] National Broadband Map, "U.S. Community Anchor Institutions", October 20, 2011, http://www.broadbandmap.gov/data-download.

Table 22. Max Advertised Upload Speeds by Population[213]

Max Advertised Upload Speed	Percent of Population											
	Bay Area		Inland Empire		San Diego		Central Valley		Los Angeles		California	
	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA	NBM	NOFA
No Broadband Service Available	1.9%	1.9%	3.9%	3.3%	4.5%	4.5%	7.9%	7.3%	0.6%	0.6%	3.67%	3.4%
1 Gbps+	0.1%	0.1%	0.3%	0.3%	0.7%	0.7%	2.2%	2.2%	0.7%	0.7%	0.92%	0.9%
100 Mbps - 1 Gbps	0%	0%	0%	0%	0.1%	0.1%	0.1%	0.1%	0%	0%	0.05%	0%
50 Mbps - 100 Mbps	0%	0%	0%	0%	0%	0%	5.8%	5.8%	0%	0%	1.10%	1.1%
25 Mbps - 50 Mbps	0%	0%	0.1%	0.1%	0.3%	0.3%	0%	0%	0.1%	0.1%	0.11%	0.1%
10 Mbps - 25 Mbps	93.0%	93.0%	66.6%	66.6%	56.2%	56.2%	58.1%	58.1%	78.2%	78.2%	72.55%	72.6%
6 Mbps - 10 Mbps	0%	0%	0%	0%	0%	0%	0%	0%	0.1%	0.1%	0.06%	0.1%
3 Mbps - 6 Mbps	2.4%	2.4%	15.5%	15.5%	29.5%	29.5%	5.5%	5.5%	17.1%	17.1%	13.04%	13.0%
1.5 Mbps - 3 Mbps	2.5%	2.6%	10.9%	11.0%	4.0%	4.0%	17.3%	17.3%	2.9%	2.9%	6.45%	6.5%
768 kbps - 1.5 Mbps	0%	0%	2.6%	2.5%	4.7%	4.7%	3.2%	3.2%	0.2%	0.2%	2.05%	2.0%
200 kbps - 768 kbps	N/A	0%	N/A	0.5%	N/A	0%	N/A	0.5%	N/A	0%	N/A	0.2%

FCC Form 477 gathers standardized information about subscribership to Internet access services in fifty states, the District of Columbia, and inhabited insular areas (American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and U.S. Virgin Islands). The information is reported by telephone companies, cable system operators, terrestrial wireless service providers, satellite service providers, and other facilities-based providers of advanced telecommunications capability.[214] Subscribership estimates were derived using a population weighted from U.S. census tract population data from ACS data files and estimated subscribership rates at the census tract level found in FCC Form 477.[215]

Table 23 shows that the broadband subscription as a percentage of the population is highest in Orange/San Diego of the geographies included. Central Valley has the lowest rate of subscription, accounting for less than 53 percent of the population, 10 percentage points less than the State of California and 7 percentage points less than the nation.

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[213] *Ibid.*

[214] Federal Communications Commission, *Internet Access Services: Status as of December 31, 2010* (Washington, DC, October 28, 2011), http://transition.fcc.gov/Daily_Releases/Daily_Business/2011/db1011/DOC-310261A1.pdf.

[215] Below are the subscribership rate assumptions made from the FCC Form 477 "Residential Fixed High-Speed Connections per 1000 Households (BTOP/BIP Definition)" data element. If Residential Fixed High-Speed Connections per 1000 Households (BTOP/BIP Definition) ='Zero' then 0% of the Census Tract population was estimated to have a connection. If Residential Fixed High-Speed Connections per 1000 Households (BTOP/BIP Definition) ='Zero < x <= 200' then 10% of the Census Tract population was estimated to have a connection. If Residential Fixed High-Speed Connections per 1000 Households (BTOP/BIP Definition) ='200 < x <=400' then 30% of the Census Tract population was estimated to have a connection. If Residential Fixed High-Speed Connections per 1000 Households (BTOP/BIP Definition) ='400 < x <=600' then 50% of the Census Tract population was estimated to have a connection. If Residential Fixed High-Speed Connections per 1000 Households (BTOP/BIP Definition) ='600 < x <=800' then 70% of the Census Tract population was estimated to have a connection. If Residential Fixed High-Speed Connections per 1000 Households (BTOP/BIP Definition) ='800 < x' then 90% of the Census Tract population was estimated to have a connection.

Table 23. Broadband Subscribership[216]

Geographic Area	Number of Subscribers	Percent of Population
Bay Area	5,073,596	69.9%
Central Valley	2,825,981	52.6%
Los Angeles	6,272,489	61.6%
Inland Empire	2,370,080	58.9%
Orange/San Diego	2,213,384	70.3%
California	22,914,861	63.1%
Nation	178,747,593	59.3%

The Public Policy Institute of California completed a survey on California's digital divide in June 2011. Table 24 shows the results of this survey for various demographic groups in California.[217] The demographic groups with the highest percentage of broadband subscribership at home are persons that have an income of $80,000 and college graduates. According to the study, noncitizens have the lowest percentage of Internet users and home broadband subscribers.

The PPIC survey breaks California broadband usage data down into five regions, listed under "Region" in Table 24 below.[218] Though these are the same geographic region names as presented in the tables above, PPIC defines these regions differently. The regional groupings of economic and demographic data for the BAA grant described above only include data for those counties served by the grant, which are listed in Table 1. PPIC data, however, aggregates all of the counties physically located in each geographic region, as defined below:[219]

- Central Valley includes Butte, Colusa, El Dorado, Fresno, Glenn, Kern, Kings, Madera, Merced, Placer, Sacramento, San Joaquin, Shasta, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba Counties

- San Francisco Bay Area includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties

- Los Angeles refers to Los Angeles County

- Inland Empire refers to Riverside and San Bernardino Counties

- Orange/San Diego refers to Orange and San Diego Counties

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[216] Federal Communications Commission, "Local Telephone Competition and Broadband Deployment Form 477", November 28, 2011, http://transition.fcc.gov/wcb/iatd/comp.html.

[217] Public Policy Institute of California, *California's Digital Divide*, *Just the Facts*, August 2010.

[218] Baldassare et al., *California's Digital Divide*.

[219] Baldassare, Bonner, Petek, et al., *PPIC Statewide Survey: Californians & Information Technology*, 25.

Table 24. Broadband Subscribership[220]

Category	Demographic	Internet Use[221]				Broadband at Home			
		2008	2009	2010	2011	2008	2009	2010	2011
All Adults		70%	76%	81%	84%	55%	62%	70%	72%
Race/Ethnicity	Asians	80%	85%	87%	86%	67%	74%	77%	76%
	Blacks	82%	81%	82%	85%	66%	62%	70%	74%
	Latinos	48%	53%	65%	70%	34%	39%	50%	55%
	Whites	81%	88%	90%	92%	68%	75%	82%	81%
Citizenship	U.S. Born	81%	85%	89%	91%	67%	71%	79%	80%
	Naturalized Citizen	62%	68%	71%	78%	46%	57%	60%	64%
	Noncitizen	36%	45%	51%	65%	23%	31%	36%	50%
Education	No College	47%	54%	62%	69%	32%	37%	46%	53%
	Some College	81%	84%	88%	94%	63%	69%	75%	84%
	College Graduate	92%	93%	95%	97%	81%	83%	90%	90%
Income	Under $40,000	49%	58%	66%	72%	33%	40%	49%	58%
	$40,000 to $80,000	83%	87%	86%	94%	64%	74%	78%	82%
	$80,000 or more	92%	97%	98%	98%	85%	89%	94%	93%
Ownership	Own	76%	83%	85%	87%	64%	73%	77%	78%
	Rent	61%	66%	75%	78%	44%	48%	61%	63%
Disability[222]	Yes	57%	60%	68%	67%	36%	47%	55%	49%
	No	73%	79%	85%	87%	60%	65%	75%	76%
Age	18 to 34	78%	83%	87%	92%	60%	65%	76%	81%
	35 to 54	73%	75%	83%	84%	61%	64%	73%	72%
	55 and older	58%	68%	73%	74%	44%	57%	64%	61%
Gender	Men	71%	77%	83%	86%	59%	65%	74%	74%
	Women	68%	74%	79%	82%	52%	59%	67%	69%
Children age 18 or younger?	Yes	69%	74%	83%	83%	54%	62%	71%	72%
	No	71%	77%	81%	84%	57%	63%	71%	72%
Region	Central Valley	71%	67%	78%	85%	53%	51%	64%	70%
	San Francisco Bay Area	77%	86%	86%	89%	65%	73%	79%	78%
	Los Angeles	61%	71%	78%	79%	48%	58%	67%	68%
	Orange/San Diego	73%	81%	82%	89%	58%	70%	75%	76%
	Inland Empire	70%	76%	81%	83%	56%	60%	71%	66%

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[220] Public Policy Institute of California, *California's Digital Divide*.

[221] "Internet use" includes those who answered yes to the question "Do you ever go online to access the Internet or send or receive email?" or to the question "Do you send or receive email, at least occasionally?"

[222] For 2008, "Disability" includes those who answered yes to the question "Does any disability, handicap, or chronic disease keep you from participating fully in work, school, housework, or other activities, or not?" Since 2009, it includes those who answered yes to that question or to the question "Do you often have difficulty seeing, hearing, talking, or walking in the course of your everyday life?"

Appendix C. Grantee Reported Data

BTOP grantees are required to submit four quarterly and one annual Performance Progress Reports (PPRs) each year. PPRs are tailored for each BTOP grant type, though the reports have some questions in common. Quarterly and annual PPRs collect different pieces of information from grantees and are occasionally revised by NTIA to modify questions or clarify instructions.

Grantees are responsible for completing the PPRs and submitting the information to NTIA each quarter. Although NTIA collects the information, grantees are responsible for the content of the reports. All PPR data were obtained directly from NTIA. All PPRs are available online in PDF format.[223]

Question 2 of the quarterly SBA PPR asks grantees to provide the percent complete for key milestones of the BTOP-funded project reported cumulatively from award inception to the end of the most recent reporting quarter. Table 25 shows these milestones for each quarter data are available.

Table 25. SBA Milestone Data

Year	Quarter	2a: Overall Project	Overall Percent Narrative
2010	Q3	32%	The overall project is on target with expenditures for equipment taking a longer time to purchase. Referral calls and related expenditures began late in this quarter and will continue to grow next quarter. (Q3 Goal is 33%)
2010	Q4	51%	Project is now almost at the 53% reported on the baseline.
2011	Q1	64%	CETF estimated that the project would be 69% in the fifth quarter of this project.
2011	Q2	77%	CETF estimated that the project would be 89% in the sixth quarter. CETF held back payments both at the request of sub-recipients and withheld payments in order to ensure partners refine project strategies to meet stated goals.
2011	Q3	87%	The project was to conclude at the end of Q4 2011. One partner is expected to conclude but the remaining partners will continue through June 2012.

Question 4 of the quarterly SBA PPR asks grantees to provide the number of households and the number of businesses and CAIs receiving discounted broadband service as result of BTOP funds. To-date, CETF reports zero discounted broadband service to Households and Businesses as this function is not encompassed within the project's objectives.

A website was created under the Recovery Act to show the American public how Recovery funds are spent by recipients of contracts, grants, and loans and the distribution of Recovery entitlements and tax benefits.[224] As a part of these data, recipients of Recovery Act contracts, grants, and loans are required to report quarterly on the number of jobs paid for with Recovery funds. Jobs are calculated on a quarterly basis using 520 hours as the number of hours a full time employee works over a quarter of a year:

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[223] For more information, visit http://www2.ntia.doc.gov.
[224] The Recovery Accountability and Transparency Board, "Recipient Data", December 6, 2011, http://www.recovery.gov/Transparency/RecipientReportedData/Pages/RecipientLanding.aspx.

40 hours per week $\times$ 52 weeks per year $=$ 2,080 hours per year

2,080 hours per year $\div$ 4 quarters per year $=$ 520 hours per quarter

The numbers of jobs created quarterly by each recipient, shown as Full-Time Equivalents (FTEs), are not a cumulative statistic.[225]

Table 26. Jobs Created[226]

Quarter	Jobs Reported (FTEs)
January 1 – March 31, 2010	0.00
April 1 – June 30, 2010	14.11
July 1 – September 30, 2010	19.27
October 1 – December 31, 2010	21.85
January 1 – March 31, 2011	17.82
April 1 – June 30, 2011	16.39
July 1 – September 30, 2011	15.42
October 1 – December 31, 2011	14.69

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[225] The Recovery Accountability and Transparency Board, "How Jobs are Calculated", January 15, 2010, http://www.recovery.gov/News/featured/Pages/Calculator.aspx.

[226] The Recovery Accountability and Transparency Board, "Advanced Recipient Data Search", December 5, 2011, http://www.recovery.gov/Pages/TextViewProjSummary.aspx?data=recipientAwardsList&RenderData=ALL&State=ALL&Agency=ALL&Amount=ALL&AwardType=CGL.

Appendix D. List of Grantee Provided Source Data

The table below includes the list of documents provided to the evaluation study team during the case study visits, introductory or follow-up discussions, or emails. This includes grant-related materials that may or may not be cited within this document.

Document Name	Format Received		Description
	Hard Copy	Soft Copy	
California is Key to Closing the Digital Divide in America (*CETF_2011_STATES2_slide.pptx*)		X	Map comparing the size for various CETF target population sizes in relation to other states in the U.S. Provided by Susan E. Walters, Senior Vice President, CETF.
CETF Call Tracking Report Template (*CETF_Call_Tracking_Report_TEMPLATE.xlsx*)		X	Excel spreadsheet of questions 2-1-1 employees ask during their screening process and follow-up calls. Provided by Alecia Foster, CETF Program Coordinator, California 2-1-1.
Work Plan: California Emerging Technology Fund (*Get Connected Media_Flight1_Advertising_Workplan_3_25-11.doc*)		X	Information on Get Connected!'s Media and Outreach approach for the State of California. Provided by Susan E. Walters, Senior Vice President, CETF.
Measuring Broadband Adoption: Data Collection and Data Analysis (*111006_NTIA_Mid_Course_Workshop.pptx*)		X	Presentation on Get Connected! Including data, tools, challenges and indicators CETF is using for this project. Provided by Susan E. Walters, Senior Vice President, CETF.
BAA Initial Survey (*BAA_SurveySummary_10212011.pdf*)		X	BAA initial survey results. Provided by Susan E. Walters, Senior Vice President, CETF.
BAA Initial Survey (in Spanish) (*BAA_SurveySummary_10212011_SPAN.pdf*)		X	Results of the BAA initial survey conducted in Spanish. Provided by Susan E. Walters, Senior Vice President, CETF.
CETF BAA Outcome Tracker (*CETF BAA Outcome Trackers.xlsx*)		X	Outcomes of grant by partner, created in a tool developed and donated by dbarista.com to the grantee. Provided by Susan E. Walters, Senior Vice President, CETF.
CETF Monthly Database Report Template (*CETF_Monthly_Database_Report_Template.xlsx*)		X	Data collection template for all 27 2-1-1 locations. Provided by Alecia Foster, CETF Program Coordinator, California 2-1-1.

Document Name	Format Received		Description
	Hard Copy	Soft Copy	
GetConnected! CETF Grant Program Materials (*CETF_Training_Manual_July_2011.pdf*)		X	Updated guide on the CETF GetConnected! BAA grant, including the screening process and questions for 2-1-1 staff. Provided by Alecia Foster, CETF Program Coordinator, California 2-1-1.
Screenshots of One-e-App (*Location_of_broadband_referral_messaging_on_Website.docx*)		X	Includes screenshots of the One-e-App questions and the link that users can click on to learn more about broadband once they have filled out their application. Provided by Susan E. Walters, Senior Vice President, CETF.
Just the Facts – California's Digital Divide (*JTF_DigitalDivideJTF.pdf*)		X	Various broadband usage statistics for the State of California, including a percentage breakdown of the digital divide in California for 2008-2010. Provided by Susan E. Walters, Senior Vice President, CETF.
Just the Facts – California's Digital Divide 2011 (*JTF_DigitalDivideJTF 2011.pdf*)		X	Various broadband usage statistics for the State of California, including a percentage breakdown of the digital divide in California for 2008-2011. Provided by Susan E. Walters, Senior Vice President, CETF.
2-1-1 Monterey Data Collection Spreadsheet (*Monterey_Example.xlsx*)		X	2-1-1 Data Collection spreadsheet filled out for Monterey County. Provided by Alecia Foster, CETF Program Coordinator, California 2-1-1.
More Californians Using Cell Phones to Go Online (*PPIC_2011_Press-Release.pdf*)		X	PPIC statewide survey on Californians and their use of technology and Internet. Provided by Susan E. Walters, Senior Vice President, CETF.
2-1-1 Riverside Data Collection (*Riverside_Example.xlsx*)		X	2-1-1 Data Collection spreadsheet filled out for Riverside County. Provided by Alecia Foster, CETF Program Coordinator, California 2-1-1.
Promoting Broadband Adoption (*SIS_BTOP_EvaluationSite_Visit_10_21_11.pptx*)		X	Presentation on Social Interest Solutions and their One-e-App. Provided by Lucy Streett. Senior Policy Manager, SIS One-e-App.
CETF Newsletter Volume 1 No. 1 Winter 2011 (*CETF_nsl_winter_2011_FINA Q1 2011.pdf*)		X	Newsletter on progress of CETF's BAA and ACT grants (Volume 1 No.1). Provided by Susan E. Walters, Senior Vice President, CETF.

Document Name	Format Received		Description
	Hard Copy	**Soft Copy**	
CETF Newsletter Volume 1 No. 2 Spring 2011 (*Connections_Q2_2011.pdf*)		X	Newsletter on progress of CETF's BAA and ACT grants (Volume 1 No.2). Provided by Susan E. Walters, Senior Vice President, CETF.
CETF Newsletter Volume 1 No. 3 Summer 2011 (*Connections_Q3_2011_1.p df*)		X	Newsletter on progress of CETF's BAA and ACT grants (Volume 1 No.3). Provided by Susan E. Walters, Senior Vice President, CETF.
Fact Sheet Broadband Awareness and Adoption (*Fact_Sheet_BAA_updated_ 11.08.23.pdf*)		X	Fact sheet for the CETF BAA grant. Provided by Susan E. Walters, Senior Vice President, CETF.
Californians and Information Technology (*PPIC_2011_Californians_in fo_tech.pdf*)		X	Full PPIC June 2011 Statewide Survey Results Report. Provided by Susan E. Walters, Senior Vice President, CETF.
Basic Computer Skills (*Basic computer skills_instructor manual.pdf*)	X		"Basic Computer Skills" manual for instructors. Provided by Susan E. Walters, Senior Vice President, CETF.
Catholic Charities (*Catholic Charities.pdf*)	X		Informational documents about Catholic Charities. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
Club Digital (*Club digital.pdf*)	X		Informational documents about Club Digital. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
Navigating the Internet (*Navigating the internet instructor manual.pdf*)	X		"Navigating the Internet" manual for instructors. Provided by Susan E. Walters, Senior Vice President, CETF.
Race to Close the Digital Divide (*Race to close digital divide.pdf*)	X		Informational documents about Race to Close the Digital Divide. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
Roadmap to Broadband (*Roadmap to broadband instructor manual.pdf*)	X		"Roadmap to Broadband" manual for instructors. This class teaches students how to shop for broadband. Provided by Susan E. Walters, Senior Vice President, CETF.
Setting Up a Personal E-Mail Account (*Setting up an email account instructor manual.pdf*)	X		"Setting Up a Personal E-mail Account" manual for instructors. Provided by Susan E. Walters, Senior Vice President, CETF.

Document Name	Format Received		Description
	Hard Copy	**Soft Copy**	
2-1-1 Information (*211 Information.pdf*)	X		Information on 2-1-1 services and updates from Quarter 3 regarding broadband outreach. Provided by Alecia Foster, CETF Program Coordinator, California 2-1-1.
Radio Bilingüe's Línea Abierta (*Radio Bilingüe topics.pdf*)	X		Highlights some of the past radio show topics. Provided by Jose Moran Project Manager, Radio Bilingüe.
Radio Bilingüe's Area of Coverage by County (*Radio Bilingue's Area of Coverage by County.pdf*)	X		Lists the Radio Bilingüe Service Counties. Provided by Jose Moran Project Manager, Radio Bilingüe.
Radio Bilingüe's 6 full-Power Radio Stations in California's Main Agricultural Areas (*Radio Bilingue's 6 Full-Power Radio Stations in California's Main Agricultural Areas.pdf*)	X		Map of six Radio Bilingüe radio station locations. Provided by Jose Moran Project Manager, Radio Bilingüe.
Expand Rural Broadband (*Opinion article_rural broadband.pdf*)	X		Fresno Bee newspaper opinion article that discusses the importance of broadband access and usage in rural areas of California. Provided by Jose Moran, Project Manager, Radio Bilingüe.
CLF BAA – New Internet Subscribers by County (*CLF BAA – New Internet Subscribers by County.pdf*)	X		Breakdown of new Internet subscribers by county for CLF. Provided by Alicia Orozco, Projects Coordinator, CLF.
Chicana Latina Foundation Information (*Chicana Latina Foundation Information.pdf*)	X		Informational document on CLF project deliverables, impacts on the community, and partnerships. Provided by Alicia Orozco, Projects Coordinator, CLF.
Club Digital About Us (*Club Digital About Us.pdf*)	X		Background information on Club Digital funding partners. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
CLF Thank you Letters (*CLF Thank You Letters.pdf*)	X		Four thank you letters from CLF users. Provided by Alicia Orozco, Projects Coordinator, CLF.
Club Digital (*Club Digital Information.pdf*)	X		Provides information on Club Digital programs and community partners. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.

Document Name	Format Received		Description
	Hard Copy	Soft Copy	
US Department of Education and State Officials Launch of Nation's Most Comprehensive Bilingual Digital Literacy Program (*Club digital Dept of Edu and State Officials Launch of Nation's Most Comprehensive Bilingual Digital Literacy Program.pdf*)	X		Press release discussing the success of Club Digital and the need for more similar programs. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
Club Digital Community-Based Partners (*Club Digital Community-Based Partners.pdf*)	X		List of community-based partners broken down by geographic areas in California (Bay Area, Central Valley, Sacramento Region, and Los Angeles/Orange County). Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
Club Digital Media (*Club Digital Media.pdf*)	X		Various Club Digital media prints. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
Club Digital Live (*Club Digital Live.pdf*)	X		Information on Digital Live including Web chat schedule and topics. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
impreMedia Launches Club Digital Nation's Largest Bilingual Program to Close the Digital Divide (*impreMedia Launches Club Digital.pdf*)	X		Press release discussing the launch of Club Digital including a high level summary of the program. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
Club Digital Lessons (*Club Digital Lessons.pdf*)	X		Detailed list of the 20 lessons in Club digital's 4-week training program. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
Statewide Survey Shows Increase in Broadband at Home Among Latinos; More Work Needed to Close Digital Divide (*Club Digital Statewide Survey Show Increase in Broadband at Home Among Latinos.pdf*)	X		Press release discussing the PPIC 2011 survey results and the importance of increasing broadband adoption for Latino populations. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.

Document Name	Format Received		Description
	Hard Copy	**Soft Copy**	
What They're Saying About Club Digital (*What They're Saying About Club Digital.pdf*)	X		Various quotes from leaders about the benefits and success of Club Digital. Provided by Robert Rodriguez, Social Innovation and Philanthropy Practice, DSG.
Info Requested During 2-1-1 Fresno Visit (*211 Email from Alecia Foster Data 10212011.pdf*)		X	Email containing data on 2-1-1 statistics. Provided by Alecia Foster, CETF Program Coordinator, California 2-1-1.
CETF LCF BAA Map (*CETF_LCF_BAA_Map.pdf*)		X	Information on LCF's 8 sub-recipients for the BAA grant. Provided by Susan E. Walters, Senior Vice President, CETF.
Service Region (*Service_Region_Redo.docx*)		X	Table identifying BAA service regions and California counties served by the BAA grant, broken out by partner. Provided by Susan E. Walters, Senior Vice President, CETF.
Regional Map (*CA_Counties_Map.pdf*)		X	Map of California detailing the service location regions. Provided by Susan E. Walters, Senior Vice President, CETF.

Appendix E.   Case Study Visit Agenda

October 19, 2011	
Overview of BAA grant with staff California Emerging Technology Fund (CETF) *5 Third Street Suite 320* *San Francisco, CA 94103*	Susan E. Walters Senior Vice President, CETF *(415) 744-2385* *susan.walters@cetfund.org* Luis Arteaga Director of Emerging Markets, CETF *(415) 744-2388* *luis.arteaga@cetfund.org* Audrey Chiang Communications and Portfolio Manager, CETF *(415) 744-2391* *audrey.chiang@cetfund.org* Aaron Price Glen Price Group *aaron@glenpricegroup.com*
Radio Bilingüe *5005 E. Belmont Ave* *Fresno, CA 93727*	Maria Erana Director of Broadcasting, Radio Bilingüe *(559) 455-5781* *mariax@radiobilingue.org* Jose Moran Project Manager, Radio Bilingüe *(877) 341-8270* *jmoran@radiobilingue.org* Maria Ceballos Community Connection Coordinator, Reading and Beyond *(559) 600-6188* *mceballos@readingandbeyond.org*
2-1-1 of Fresno *4949 E. Kings Canyon Rd.* *Fresno, CA 93727*	Beatriz Alejandre 2-1-1 Call Center Manager, United Way of Fresno County *(559) 243-3694* *balejandre@unitedwayfresno.org* Alecia Foster CETF Program Coordinator, California 2-1-1 *(213) 808-6227* *afoster@211california.org* Lilian Coral Program Manager, California 2-1-1 *(877) 355-2604 ext. 4* *lcoral@211california.org*

October 19, 2011	
Dewey Square Group (DSG) *Catholic Charities Computer Lab* *149 N. Fulton St.* *Fresno, CA 93701*	Robert Rodriguez Social Innovation and Philanthropy Practice, DSG *(916) 288-1026* *rrodriguez@deweysquare.com* Dayanna Macias-Carlos Project Director of the Race to Close the Digital Divide *(916) 447-4099* *dmcarlos@deweysquare.com* Mark Trainer, Catholic Charities Computer Lab

October 20, 2011	
Latino Community Foundation (LCF) *Somos Mayfair* *370 S King Rd. Suite B* *San Jose, CA 95116-3400*	Kathy Valenzuela Program Director, LCF *(415) 733-8579* *kvalenuela@sff.org* Pam Gudino Family Support Program Director, Somos Mayfair *(408) 937-2566* *pgudino@somosmayfair.org*
Chicana/Latina Foundation (CLF) *Sacred Heart Community Service* *1381 South First St.* *San Jose, CA 95110*	Alicia Orozco Projects Coordinator, CLF *(415) 828-7653* *alicia@chicanalatina.org* Lydia Guel Director Self Sufficiency Services, Sacred Heart Community Service *(408) 916-5060* *lydia@sacredheartscs.org* Gina Trainer, San Jose Mario Trainer, San Mateo County

October 20, 2011	
Center for Accessible Technology (CforAT) *CforAT Berkeley* *3075 Adeline, Suite 220* *Berkeley, CA 94703*	Dmitri Belser Executive Director, CforAT *(510) 841-3224* *dbelser@cforat.org* Karen Sheehan Director of Marketing, CforAT *(510) 841-3224* *ksheehan@cforat.org* Eric Smith Associate Director, CforAT *(510) 841-3224* *esmith@cforat.org*

October 21, 2011	
Social Interest Solutions (SIS) *CETF Office* *5 Third Street Suite 320* *San Francisco, CA 94103*	Lucy Streett Senior Policy Manager, SIS One-e-App *(510) 273-4644* *lstreett@oneeapp.org*
Access Now *CETF Office* *5 Third Street Suite 320* *San Francisco, CA 94103*	Kari Gray Director, Access Now *(415) 786-9935* *kehgray@gmail.com* Sherryl S. Hairston Economic Self-Sufficient Program Coordinator, Treasure Island Homelessness Development Initiative
Wrap-Up Meeting *CETF Office* *5 Third Street Suite 320* *San Francisco, CA 94103*	CETF Staff

Appendix F.   Definitions

This section presents key terms that are used in the discussion of this case study. The use of these terms is based on guidance NTIA has provided to grantees. This guidance is summarized below; it is used to frame the discussion of the NTIA grants included in these case studies, except in the following cases:

1. The term is used in a sentence with a footnote reference to another study or source of information. In this case, the referenced author's use of the term should be understood to apply to the footnoted sentence as a whole. There is no attempt to adjust results provided by other authors to conform to NTIA guidance.

2. Grantees or other informants have used the term in question in discussion with the author, based on their definitions. These cases are identified with footnotes that, where possible, include the definition used by the grantee or other informant, if it is available.

The key terms used in this section are as follows:

Access – A household has access to such broadband service if it can readily subscribe to that service upon request.[227] For the purposes of PCC and SBA grants, this is taken to mean that the household has the tools and knowledge required to take advantage of the broadband connections that are available to it.

Adoption – Adoption indicates the integration of broadband technology into daily life. For the purposes of PCC and SBA grants, adoption may include both broadband subscribers and regular users of broadband services.

Availability – Broadband service is considered to be available if a customer can obtain it in a seven to ten day service window without an extraordinary commitment of resources. This might include cases where construction or other work might need to be completed first, but only if such activities can be done within the service window and at acceptable cost.[228]

Broadband – Broadband is defined to be the "…two-way data transmission with advertised speeds of at least 768 kilobits per second (kbps) downstream and at least 200 kbps upstream…"[229]

Rural – A rural area is defined to be "…any area, as confirmed by the latest decennial census of the Bureau of the Census, which is not located within: 1. A city, town, or incorporated area that has a population of greater than 20,000 inhabitants; or 2. an urbanized area contiguous and adjacent to a city or town that has a population of greater than 50,000 inhabitants. For purposes of the definition of rural area, an urbanized area means a densely populated territory as defined in the latest decennial census of the U.S. Census Bureau."[230]

Subscriber – Subscribers may include households, businesses, or community anchor institutions. Households are considered to be subscribers if they have a broadband Internet connection, whether they pay for the service in whole, in part, or not at all. One or more members of a household could have a broadband Internet subscription, but each household counts only once

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[227] Rural Utilities Service and National Telecommunications and Information Administration, "Broadband Initiatives Program & Broadband Technology Opportunities Program," *Federal Register* 74, no. 130 (July 9, 2009): 33109, http://www.gpo.gov/fdsys/pkg/FR-2009-07-09/pdf/FR-2009-07-09.pdf.

[228] National Broadband Map, "About National Broadband Map."

[229] Rural Utilities Service and National Telecommunications and Information Administration, "Broadband Initiatives Program & Broadband Technology Opportunities Program," 33108.

[230] Rural Utilities Service and National Telecommunications and Information Administration, "Broadband Initiatives Program & Broadband Technology Opportunities Program," 33109.

toward measuring broadband subscribership. New subscriptions are reported on PPRs under Question 4a.

Underserved – Underserved areas are defined for BTOP infrastructure grants. An underserved area is "composed of one or more contiguous census blocks meeting certain criteria…"[231] These measures relate to broadband availability, advertised broadband speeds, and household subscribership rates. For PCC and SBA grants underserved is defined in terms of membership in a group with historically lower levels of broadband adoption (set forth in the definition of vulnerable population, below).

Unserved – Unserved areas are defined for BTOP infrastructure grants. An unserved area is defined to be an area "composed of one or more contiguous census blocks, where at least 90 percent of households in the proposed funded service area lack access to facilities-based, terrestrial broadband service, either fixed or mobile, at the minimum broadband transmission speed (set forth in the definition of broadband above)."[232] For PCC and SBA grants unserved is defined in terms of membership in a group with historically lower levels of broadband adoption (set forth in the definition of vulnerable population, below).

User – Users are defined to be "regular users" of broadband services. A regular user is anyone who uses any means to obtain a broadband Internet connection, including household subscriptions, public computer centers, publicly available Wi-Fi connections, broadband-enabled smartphones, broadband subscriptions at the homes of friends or family, workplace broadband connections, or any other broadband connection. Grantees are asked to describe how they obtain statistics on the number of regular users they know of, and the methodology they use to identify regular users. This information is reported on PPRs in the free response to Question 1, "Significant project accomplishments."

Vulnerable Population – Vulnerable populations are groups that have historically lower rates of broadband adoption. These groups include low-income, unemployed, or aged individuals; children; minorities; and people with disabilities.[233]

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[231] Rural Utilities Service and National Telecommunications and Information Administration, "Broadband Initiatives Program & Broadband Technology Opportunities Program," 33131.

[232] Rural Utilities Service and National Telecommunications and Information Administration, "Broadband Initiatives Program & Broadband Technology Opportunities Program," 33109.

[233] Rural Utilities Service and National Telecommunications and Information Administration, "Broadband Initiatives Program & Broadband Technology Opportunities Program," 33106; Rural Utilities Service and National Telecommunications and Information Administration, "Broadband Initiatives Program & Broadband Technology Opportunities Program," 33131.