California Public Utilities Commission

California Advanced Services Fund

Annual Report

January 2014 – December 2014

Photo: LTE mobile wireless tower outside of Graeagle, California. This tower was connected directly to the Plumas-Sierra Middle Mile CASF-funded project in 2013 and provides 1x speed bandwidth to Plumas County.

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I. Executive Summary

The California Public Utilities Commission (CPUC) submits this annual report (pursuant to California Public Utilities Code Section 281(j)(1)) for calendar year 2014 of the CPUC's California Advanced Services Fund (CASF) program.[1]

This CASF Annual Report to the Legislature presents financial and programmatic highlights through the year 2014, including cumulative grant and loan awards, expenditures, federal matching funds, and annual surcharge collections through 2020. In addition, the impact of the CASF program is described in terms of geographic regions, remaining unserved and underserved areas in need of broadband access, adoption levels, and other expected benefits.

The CASF promotes deployment of broadband infrastructure in unserved and underserved areas through grants and loans to help fund eligible projects.

The statutory goal of the program is to award funding by December 31, 2015 for projects that will provide broadband access to no less than 98% of California households.[2] As shown in Table 1, the CPUC considers broadband availability based on an area having access to at least one of three technologies and the CASF program is currently about 2 percentage points below the statutory goal.[3]

Table 1. Broadband Availability by Technology

Availability In California by Broadband Technology	Compared to 98% Goal	Difference
Wireline (copper, fiber, cable)	95.5%	2.5%
Fixed Wireless (a.k.a. WISP)	67.4%	30.6%
Mobile Wireless	95.8%	2.2%

[1] The CPUC's Communications Division staff prepared this report.
[2] Public Utilities Code Section 281(b)(1).
[3] For the basis of determining served status, satellite technology is not considered. The CPUC defines "served" as broadband speeds of at least 6 megabits per second (Mbps) download and 1.5 Mbps upload. Broadband availability estimates are based on Round 10 data as of June 30, 2014, as discussed in Section IV.D. below

Through the CASF Program, the CPUC continues to make steady progress toward closing the digital divide in California. As of December 31, 2014, thirty CASF projects have either been completed or are in progress, and have started offering broadband service in their respective areas. Together, these projects are expected to provide broadband access to over 250,000 unserved and underserved households. In addition, the regional Consortia continue to advance initiatives aimed at increasing broadband deployment, access, and adoption in the geographic regions they represent that include unserved and underserved areas.

Key activities toward helping close the digital divide in 2014 included:

- Approval of Infrastructure Grant Account funding for six broadband projects extending high speed Internet service to communities in Fresno, Mono, Monterey, Santa Cruz and Shasta counties;

- Monitoring and grant administration of previously approved awards, 47 from the Infrastructure Grant Account and 16 from the Consortia Grant Account;[4]

- Completion of proceedings (Decision 11-06-038 and Decision 12-02-015) to implement Senate Bill 740 and Assembly Bill 1299 respectively;

- Creation of two new consortia groups -- the Pacific Coast Broadband Consortium and North Bay/North Coast Broadband Consortium, and approval of funding for the Tahoe Basin Project of the Gold Country Consortium.

Cumulative CASF funding awards as of December 31, 2014:

- Broadband Infrastructure Grant Account:
  The CPUC authorized $99.19 million for 47 projects[5] that will benefit up to 291,882 households when completed. Of these households, 15,891 were previously unserved and 275,991 were underserved.

- Regional Broadband Consortia Grant Account
  The CPUC authorized $2.42 million for 16 consortia grantees in 2014, resulting in a total budget allowance of $9.26 million for Consortia grantees.

[4] Attachment A shows a map of the 16 Consortia approved to date.
[5] The Interim Performance Audit Report (Volume I) that the CPUC submitted to the Legislature on April 2011 reported a total of 41 projects funded under CASF. The CPUC approved three additional projects and rescinded a total of 11 projects in 2011 bringing the total to 33 CASF projects. In 2012, the CPUC approved one additional project netting 34 CASF Infrastructure Grant Account project. In 2013, the CPUC rescinded a total of 4 projects and approved a total of 11 new projects. In 2014 the CPUC approved 6 additional projects, netting 47 CASF Infrastructure Grant Account projects to date.

- Broadband Infrastructure Revolving Loan Account:
  The CPUC authorized $85,677 for two loan awardees in 2014; hence, a cumulative total of $126,624 in loans since inception of the Loan Account.

The following table shows the total funds awarded and expended to recipients through December 31, 2014[6] under each of the CASF sub-accounts:

Table 2. CASF Funds Awarded and Expended

CASF Sub-Accounts	Total Funds Awarded	Total Funds Expended (as of 12/31/2014)
Broadband Infrastructure Grant Account	$ 99,188,571	$ 92,151,883
Rural and Urban Regional Broadband Consortia Grant Account	$9,263,476	$6,860,826
Broadband Infrastructure Revolving Loan Account	$126,654	$126,654
Total CASF Funds Awarded	$ 108,578,701	$ 99,139,363

2015 CASF program activities will include:

- Implement Senate Bill 740 statutory mandates:
  - Review and approval of infrastructure grant/loan applications submitted under the rolling application process that opened on December 1, 2014;
  - Review existing provider's compliance with "Right of First Refusal" provisions;
  - Begin receiving applications from local government entities on May 1, 2015.
- Implement Assembly Bill 1299 statutory mandates:
  - Review and approval of Public Housing grant applications submitted on January 15, 2015 and on quarterly deadlines thereafter.
- Continue oversight of existing consortia and solicit applications for new consortia and/or projects using remaining funds in the CASF Consortia Grant Account.
- Provide a second "right of first refusal" opportunity to existing providers that plan to expand their service availability.
- Evaluate and consider program improvements.
- Analyze proposed legislations on the CASF program.

[6] Henceforth, reference to 2014 means calendar year 2014 (January 1, 2014 – December 31, 2014).

II. CASF Program Background

The CASF promotes the deployment of broadband infrastructure in unserved and underserved areas of the State by providing grants to help fund eligible broadband projects. The CPUC established the CASF program in Decision 07-12-054. Senate Bill 1193 (Stats. 2008, c.393) affirmed the CASF as a new universal service program geared towards the deployment of broadband infrastructure in unserved and underserved areas of California. A history of the CASF program statutory and CPUC program developments are described in prior CASF annual reports.[7]

CASF Accounts:

- Infrastructure Grant Account
- Consortia Grant Account
- Revolving Loan Account
- Public Housing Account

Of significance, in 2014, the CPUC implemented statutory requirements adopted in Senate Bill (SB) 740 and Assembly Bill (AB) 1299. SB 740 expanded program eligibility to entities that are not telephone corporations (i.e., non-CPCN/WIR holders) given that they are not subject to the CPUC's regulatory authority. AB 1299 created an additional account under the CASF program called the Broadband Public Housing Account to support the deployment of broadband infrastructure and adoption programs in eligible publicly-supported housing communities (PSCs). The Broadband Public Housing Account is funded through $20 million from the CASF Broadband Infrastructure Grant Account and $5 million from the Broadband Revolving Loan Account.

The CASF Legislative reporting requirements include performance and financial audits by April 1 in years 2017 and 2021 (Public Utilities Code Section 281(i)(1)) and annual report to the Legislature for prior year activities (Public Utilities Code Section 281(j)(1)).

[7] These reports are posted on the CPUC website at: http://www.cpuc.ca.gov/PUC/Telco/Information+for+providing+service/CASF/CASFReports.htm

III. Program Accomplishments

Throughout 2014, the CASF continued to promote deployment of broadband infrastructure and advance broadband adoption in unserved and underserved areas of California. The following is a summary of the CPUC's key procedural accomplishments in 2014:

- The CPUC approved nearly $19 million in Infrastructure Grant funding for six new projects advancing broadband speeds in unserved and underserved areas of California. In April and June of 2014, the CPUC approved six Resolutions awarding Infrastructure Grant funding to projects bringing high speed Internet availability to 13,763 households[8] in unserved and underserved areas of the State. The counties benefiting from such projects include Fresno, Mono, Monterey, Santa Cruz and Shasta counties. Attachment C provides a summary of project proposals approved in 2014 from the CASF round of applications received in February 2013. To date, 17 out of the 30 applications received in February 2013 have been approved and one application remains under Commission review.

- The CPUC adopted Decision 14-02-018 amending the eligibility rules for the CSAF program pursuant to SB 740. On October 3, 2014, Governor Brown signed SB 740 into law. It expanded eligibility for CASF infrastructure grants/loans to non-telephone corporations. This decision implements that eligibility and additional enforcement mechanisms.

- The CPUC adopted Resolution T-17443 implementing new timelines for applicants to the CASF. This Resolution establishes when certain types of entities may apply for CASF grants, including local government entities and non-telephone corporations. It also describes how existing providers may exercise their "right of first refusal" as provided under SB 740. In addition this Resolution lists areas in California that various CASF-funded

[8] This includes 11,124 households estimated for the Sunesys middle mile project.

regional consortia groups and state agencies have identified as priorities for broadband infrastructure.

- The CPUC evaluated one commitment to upgrade from an existing provider which invoked its "right of first refusal" pursuant to SB 740. On November 1, 2014 Frontier Communications submitted its commitment to increase broadband speeds using its own funds in the areas of Alturas, Chester, Coleville, Janesville, Lake Almanor, Shingletown, and Tuolumne.

- The CPUC adopted Decision 14-02-018 implementing application requirements and guidelines for the Broadband Public Housing Account. On October 3, 2014, Governor Brown signed AB 1299 into law. AB 1299 created an additional account under the CASF called the Broadband Public Housing Account to support the deployment of broadband networks and adoption programs in eligible publicly supported communities. These efforts are funded through $20 million from the CASF Broadband Infrastructure Grant Account and $5 million from the Broadband Revolving Loan Account, respectively. In order to implement the provisions of AB 1299 Communications Division Staff conducted four public workshops in San Francisco, Fresno, Los Angeles and San Diego, and conducted research regarding public housing entities, broadband networks in multi-unit settings and adoption programs. This included consultations with potential vendors, housing authorities, the California Emerging Technology Fund, the California Tax Credit Allocation Committee, Department of Housing Community Development, Southeast Community Development Corporation, and the Youth Policy Institute. Following public comment, Communications Division staff published its amended report. The Commission in Decision 14-02-018 closed Rulemaking 12-10-012 and provided for staff implementation of the program to commence on January 15, 2015.

- The CPUC approved funding for two additional consortia groups and for the Gold Country Consortium Tahoe Basin Project. On May 15, 2014, the CPUC adopted Resolution T-17440 which approved a grant of up to $167,000 to supplement the Gold Country Consortium's existing budget. The purpose of the Tahoe Basin Project is to improve and expand broadband infrastructure, provide greater broadband access and help facilitate broadband adoption around the Lake Tahoe Basin, with a particular focus on El Dorado and Placer Counties. On June 16, 2014, the CPUC adopted Resolution T- 17445 which approved up to $550,000 in grants to fund both the Broadband Consortium of the Pacific Coast and the North Bay/ North Coast Broadband Consortium for two years. The Broadband Consortium of the Pacific Coast serves San Luis Obispo, Santa Barbara and Ventura counties and the North Bay/ North Coast Broadband Consortium serves Marin, Mendocino, Napa and Sonoma counties.

- Communications Division staff hosted the 2nd Annual Regional Consortia Learning Summit.[9] The focus of the summit, held on March 3-4, 2014, was to discuss and identify "priority areas/communities" throughout the State in need of broadband infrastructure deployment. This approach is intended to focus the CASF program on investments in areas with the greatest need for broadband infrastructure and funding. It is our hope that these priority area designations, combined with other changes to the CASF program (e.g., non-telephone corporations becoming eligible to apply), will spur more CASF projects to bring high speed broadband Internet service to all Californians

- The CPUC adopted Resolution T-17452 in September 2014, committing up to 10 percent in CASF matching funds to eligible California broadband projects/sponsors selected for FCC

[9] The CPUC in Decision11-06-038 directed CD to schedule and host on at least an annual basis a Regional Consortia Learning Community Summit. All consortia receiving CASF grants shall be required to attend the Summit. The purpose of the Summit is to provide a forum for all consortia to gather and exchange information and ideas on best practices to enhance the effectiveness of consortia programs.

Rural Broadband Experiment grants. The FCC adopted the "Experiments" initiative in January 2014,[10] for the purpose of using Connect America Fund (CAF) high cost support monies (in the CAF reserve account) to test how tailored economic incentives may advance the deployment of wireline and wireless next generation networks in rural, high-cost areas, including Tribal lands. In March 2015, the FCC received over 1,000 expressions for over $11 billion in funding nationwide, including nine projects from California. As none of these California projects were grant recipients, no CASF matching funds were utilized.

IV. Program Results

The following section presents the data required from the CASF in accordance with Section 281(j)(1) of the Public Utilities Code.

A. Amount and Recipients of Funds Expended from the CASF in 2014

Through the end of 2014, the CPUC has collected an estimated total of $199 million from the CASF surcharges[11] on revenues collected by carriers from end-users for intrastate telecommunications services. The following table summarizes the CASF program revenues and expenditures:

[10] *See Technology Transitions et al.*, GN Docket No. 13-5 et al., Order et al., 29 FCC Rcd 1433.

[11] The CPUC established a 0.25 percent CASF surcharge effective January 2008 to fund $100 million to the CASF program. On December 17, 2009, the CPUC approved Resolution T-17248, which reduced the CASF surcharge from 0.25 percent to 0 effective January 1, 2010. In September 2011, the CPUC issued Resolution T-17343 to re-establish the surcharge collection to fund the CASF as a result of SB 1040's expansion of the program from $100 million to $225 million. In February 2013 the CPUC approved Resolution T-17386, which increased the CASF surcharge from 0.14 percent to 0.164 percent. The Commission approved Resolution T-17434 in February 2014, increasing the surcharge rate from 0.164% to 0.464% effective April 1, 2014.

Table 3. CASF Program Revenues and Expenditures

CASF Program Revenues & Expenditures Report - as of December 31, 2014		
Revenues		
Regulatory Fees (Surcharge Revenue)		$ 197,769,521.57
Delinquent Fees		$ 108,480
Investment Income		$ 1,185,582
Loan Repayment + Interest		$ 6,579
Total Revenues		**$ 199,070,163**
Expenditures		
Payments to CASF Grant Recipients + Encumbrances		$ 99,139,363
Payments from the Infrastructure Grant Account	$ 49,523,285	
Remaining encumbrances from Grant Account	$ 42,628,598	
Payments from the Consortia Grant Account	$ 6,203,842	
Remaining encumbrances from Consortia Grant Account	$ 656,984	
Payments from the Infrastructure Loan Account	$ 40,977	
Remaining encumbrances from Loan Account	$ 85,677	
Admin Costs & Other Fees		$ 3,589,585
Pro-rata Costs		$ 1,371,731
Loan Account Servicing Contract		$ 283,590
Total Expenditures		**$ 104,384,269**
Grants Outstanding Obligations		
Infrastructure Grant Account	$ 7,036,688	
Consortia Grant Account	$ 2,402,650	
Loan Account	$ 0	
Total Grants Outstanding Obligations		**$ 9,439,338**
Total Account Balance		$ 85,246,556

The CPUC has awarded a total of $ 108.58 million in CASF grants through the end of 2014, as shown below in Table 4.

Table 4. CASF Total Funds Awarded

CASF Sub-Accounts	Total Funds Awarded	Total Funds Expended	Grant Outstanding Obligations
Infrastructure Grant Account	$ 99,188,571	$ 92,151,883	$ 7,036,688
Consortia Grant Account	$ 9,263,476	$ 6,860,786	$ 2,402,690
Revolving Loan Account	$ 126,654	$ 126,654	$ 0
Total CASF Funds Awarded	$ 108,578,701	$ 99,139,363	$ 9,439,338

The total Infrastructure Grant/Loan Account awards amount to $99.31 million for 47 projects covering 10,712 square miles and potentially benefiting 291,882 households. Attachment D lists

Total Infrastructure Grant and Loan awards amount to $99.31 million for 47 projects covering 10,712 square miles and potentially benefiting 291,882 households.

the CPUC's approved CASF infrastructure projects, funding levels, and key information for each project as of December 2014.

Out of 47 projects that have been awarded CASF infrastructure grants, to date 26 projects have been completed (19 of these have requested full payment from the CASF). In 2014, eight of the 26 completed projects requested $8.85 million in payments from the fund. Seven of the 47 projects are still in progress and have also requested payments, netting a total of 26 projects for which CASF has expended $49.56 million. Actual project costs for 13 of the completed infrastructure projects were less than projected; hence, the CASF payments for these projects were below the awarded grant amounts and the CPUC can award these funds[12] to future eligible broadband projects. Beyond these highlights, Attachment E provides more information on the recipients and funds expended from the Infrastructure Grant and Loan Accounts through 2014.

The total Consortia Grant Account awards amount to $9.26 million[13] for 16 consortia groups advancing broadband deployment, access and adoption in counties throughout the State. To date, $6.14 million has been paid to consortia grantees, of which $2.42 million was paid in 2014. Attachment F provides detailed information on the CASF Consortia Grant recipients and expenditures through 2014.

B. Benefits Derived and Broadband Adoption Levels from Funds Expended in 2014

Public Utilities Code Sections 281(j)(1) requires the Commission to report on the expected benefits and actual broadband adoption levels from the funds expended from the CASF. The expected benefits from the CASF program can be measured in terms of the potential number of households that could subscribe to broadband service delivered by infrastructure projects funded by CASF to date. Actual broadband adoption levels are measured in terms of subscribership

[12] These funds amount to a total of $642,334, which includes $346,984 that was not paid to CVIN/CENIC because they did not construct the last-mile WiMAX network that was originally in the budget when the CASF grant was awarded.
[13] The total funding includes budget allowances over a three-year funding period and supplemental funding to attend the annual Regional Consortia Learning Community Summit.

reported by those fully or partially constructed CASF projects that are already delivering service. The Commission has household data for all the infrastructure awards to date (47 projects), while subscriber data comes from responses that grantees submit to the Communications Division for projects under construction or complete (30 projects as of December 31, 2014).

Table 5 summarizes the potential benefits from the 47 infrastructure projects that have been awarded CASF funds to date and the estimated cost per household, based on the expected number of households that could have broadband access as a result of these projects. It should be noted that four out of these 47 projects are middle mile infrastructure projects, which are not designed to provide broadband connections to individual households. Thus, the estimated number of middle mile households shown in the table below is based on households that may receive service through last mile connections to these CASF middle mile projects.

Table 5. CASF Infrastructure Account – Expected Benefits

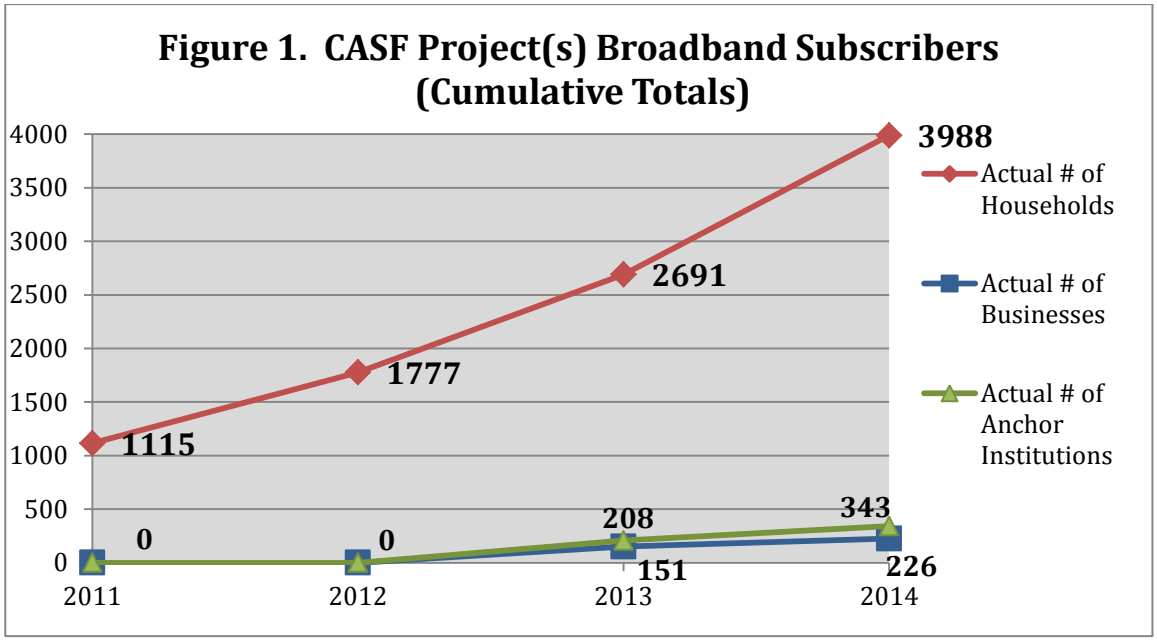
	Projects	Infrastructure Awards*	Availability (Households)	Cost/Household
Middle Mile	4	$40,441,545	248,418	$ 163
Last Mile	43	$58,873,680	43,464	$1,355
Total	47	$99,315,225	291,882	$340

Thirty of 47 CASF infrastructure projects, including 26 last mile and 4 middle mile projects, have been completed or are in progress and already delivering broadband connectivity in various counties of the State. As illustrated in Table 6, these projects have the combined potential to provide broadband access to over 250,000 households in the project areas.

Figure 1 illustrates reported actual subscribership for the 30 CASF infrastructure projects in service. The benefits derived from these projects include access and adoption to broadband service in unserved areas as well as access and adoption to broadband speeds of no less than 3 megabits per second (Mbps) download and 1 Mbps upload[14] in underserved areas. Actual broadband

[14] On June 12, 2008, the CPUC adopted Resolution T-17143 establishing the original CASF application requirements and scoring criteria. An underserved area was originally defined as an area where broadband is available, but no facilities-based

subscribership has reached a total[15] of 3,988 households, 226 businesses, and 343 anchor institutions.



provider offers service at speeds of at least 3 Mbps download and 1 Mbps upload. Except for the Pinnacles Monument Project, the other 29 projects were approved under these original CASF rules.

[15] Actual subscribership by project and recipient is competitively sensitive and therefore proprietary. This report therefore shows an aggregate total number of subscribers from CASF projects in 2014.

Table 6. CASF Broadband Infrastructure Projects Delivering Broadband Benefits as of 2014

Item #	Recipient	Project Name	Project Status	Geographic Region	Unserved Households	Underserved Households	Total Number of Households
LAST MILE PROJECTS							
1	AT&T	Alta/Blue Canyon	Completed	Nevada/Placer Counties	236	0	236
2	AT&T	Blanchard	Completed	Mariposa	123	0	123
3	AT&T	Comptche	Completed	Mendocino County	97	0	97
4	AT&T	Clovis	Completed	Fresno	0	125	125
5	AT&T	Easton	Completed	Fresno	0	9	9
6	AT&T	Grenada	Completed	Siskiyou	275	0	275
7	AT&T	Hopland	Completed	Mendocino	328	0	328
8	AT&T	Lodi	Completed	San Joaquin	0	35	35
9	AT&T	Mt. Wilson	Completed	Los Angeles	15	0	15
10	AT&T	Warner Springs	Completed	San Diego County	66	0	66
11	Audeamus	Tranquility and West Fresno	Completed	Tranquility and West Fresno	234	351	585
12	Calaveras Telephone Company	Poker Flat Project	**In-Progress**	Calaveras	0	409	409
13	Citizens Telecom. of California, Inc.	Birds Landing	Completed	Solano	0	69	69
14	Citizens Telecom. of California, Inc. (Frontier)	Livingston	Completed	Merced	0	308	308
15	Citizens Telecom. of California, Inc. (Frontier)	Prattville	Completed; no payment request yet submitted	Lake Almanor, Plumas	171	0	171
16	Frontier Communications of the Southwest, Inc.	Alpine	Completed; no payment request yet submitted	Alpine County	0	623	623
17	Frontier Communications of the Southwest, Inc.	San Bernardino	Completed; no payment request yet submitted	San Bernardino County	3,732	0	3,732
18	Frontier West Coast Inc.	Del Norte	Completed; no payment request yet submitted	Del Norte County	0	645	645
19	Pinnacles Telephone Company	Pinnacles Monument Project	Completed; no payment request yet submitted	San Benito County	0	47	47
20	Ponderosa Cable Vision	Ponderosa Cable Vision Auberry Project (Mount Diablo Base, Meridian)	**In-Progress**	Fresno	1,043	0	1,043

Item #	Recipient	Project Name	Project Status	Geographic Region	Unserved Households	Underserved Households	Total Number of Households
21	Race Telecom.	Mojave Air and Space Port Project	Completed	Kern County	0	0	0
22	Verizon	Pinyon	Completed; no payment request yet submitted	Riverside	382	0	382
23	Verizon	The Sea Ranch Project	Completed; no payment request yet submitted	Sonoma	0	232	232
24	Verizon	Crowley Lake & Swall Meadow	Completed; no payment request yet submitted	Mono County	67	426	493
25	Willits Online	Covelo	Completed	Mendocino	300	0	300
26	Willits Online	Laytonville	Completed	Mendocino	500	0	500
Sub-Total					7,569	3,232	10,848
MIDDLE-MILE PROJECTS[16]							
27	California Broadband Cooperative (Inyo Network)	Digital 395	**In-Progress**	Mono, Inyo and Eastern Kern Counties, North Eastern San Bernardino	0	28,127	28,127
28	CVIN LLC	Central Valley Next Generation BB Infrastructure Project	**Completed**	Placer, El Dorado, Amador, San Joaquin, Stanislaus, Calaveras, Colusa, Tuolumne, Mariposa, Merced, Madera, Nevada, Fresno, Tulare, Sutter, Yuba, Kings and Kern County	0	206,764	206,764
29	IP Networks	Hwy 36 Humboldt-Trinity Counties	Completed	Humboldt and Trinity Counties	0	527	527
30	Plumas Sierra Telecom.	Plumas-Sierra Middle-Mile Project Plumas County	Completed	Plumas, Lassen and Sierra	0	13,000	13,000
Sub-Total					0	248,418	248,418
Totals					7,569	251,650	259,219

[16] The percentage of households served by middle mile vs last mile connections is unknown at this time.

The benefits derived from the 16 Consortia groups receiving funding from the CASF Consortia Grant Account include promoting ubiquitous broadband deployment, access, and adoption in 55 out of 58 counties in California. Each regional Consortium delivers unique activities to the counties they represent that focus on the needs of their communities. These activities are intended to:

- Increase sustainability of broadband infrastructure and projects;
- Promote broadband deployment (availability) for residences in California;
- Promote broadband access and adoption (knowledge of service options and ability to utilize services as well as subscription of services) for residences in California;
- Increase the rate of broadband adoption by facilitating the impact of consumer education, outreach, and training;
- Support those community-based parties, especially anchor institutions, who are working to increase deployment, access, and adoption.

Of particular import are project applications in high-priority areas identified by the consortia effort. Several project applications under review are in high-priority areas and further applications within these areas are expected. Attachment G describes the accomplishments achieved by each regional Consortium in 2014.

C. Leveraging Program Funds with Federal Funds

With an investment of about $40 million in CASF funds, California has been able to leverage almost $155 million in federal matching funds from the American Recovery and Reinvestment Act of 2009 (Recovery Act) for broadband deployment in the State. The six projects that successfully secured Recovery Act funding, have received a total of $36.79 million from the CASF. The following table shows the amount of funds expended from the CASF for projects obtaining federal funds.

Table 7. CASF Broadband Infrastructure Projects That Leveraged ARRA Funding

Project Name	Recovery Act Funding (in millions)	CASF Funding Award (in millions)	CASF Funding Expended (in millions)
Ponderosa Cablevision Auberry Project	$3.85	$1.16	$0.61
Calaveras Poker Flat Project	$4.09	$0.64	$0.35
Digital 395 Middle Mile Project	$81.15	$29.22	$26.66
Plumas Sierra Telecommunications (PST) Middle Mile Project	$13.77	$1.72	$1.72
Audeamus Last Mile Project	$5.48	$1.15	$1.15
Central Valley Independent Network, LLC (CVIN) & the Corporation for Educational Network Initiatives in California (CENIC) Middle Mile Project	$46.62	$6.66	$6.30[17]
Total	**$154.96**	**$40.55**	**$36.79**

D. Broadband Availability Estimates

Under the 2009 State Broadband Initiative (SBI) Grant Program administered by the National Telecommunications and Information Administration (NTIA), the CPUC collects information on broadband service availability in the State. The CPUC also has access to Federal Communication Commission (FCC) Form 477, a semi-annual report filed by broadband service providers that shows how many wireline and fixed wireless connections they claim per census tract. By combining this connection and availability data with demographic data from the Census Bureau and other commercial data sets, Communications Division can determine broadband penetration with more detail and granularity than currently available from

CPUC's Interactive Broadband Availability Map helps consumers find and investigate broadband service in their area.

[17] The total payment to the CVIN/CENIC project was cut by $0.36 million due to a change in the build-out as noted earlier.

any other source. The CPUC's California Broadband Report[18] provides an overview of the State's broadband adoption rate,[19] by county, as of June 30, 2012.

The California Interactive Broadband Availability Map (Map) allows users to visualize data the CPUC collects every six months from broadband service providers in California and can be used to evaluate broadband deployment and adoption in the state. The data displayed on the Map has been validated by Communications Division staff.[20] The Map currently represents broadband availability as of June 30, 2014. The Map will be updated in Summer 2015 reflecting data for the period up to December 31, 2014, after thorough validation and analysis.

One of the most basic functions of the Map allows California residents to find and investigate broadband service in their area by revealing broadband availability near a particular address. The Map also supports more sophisticated functions including tools created to assist CASF Infrastructure Grant applicants in completing their CASF applications and CPUC staff in evaluating applications and challenges to applications to determine if areas are grant-eligible.

Additionally, the Map is used to provide an initial estimate of broadband availability in the State, based primarily on industry-provided data, following the NTIA data collection guidelines and according to the CASF definitions of unserved and underserved areas in Decision 12-02-015.[21] In keeping with NTIA's guidelines, however, broadband service providers submit data only on a census tract or census block level, and more granular information is not available. As a result, a census block may be categorized as served when a broadband provider serves at least one household within that census block, though the verification process can reverse such a categorization. Thus, it is important to understand that the Map is not capable of providing 100

[18] http://www.cpuc.ca.gov/PUC/Telco/generalInfo/Broadband+Reports.htm.

[19] Adoption rate is defined as the number of residential broadband subscriptions divided by households with broadband available.

[20] The validation procedure includes review of broadband usage, geo-location data purchased from 3rd party providers, wireless testing, and county parcel map data. Additional validation resources include specialized tests of actual broadband speed and quality as received by the consumer, among other techniques.

[21] An "unserved" area is an area that is not served by any form of wireline or wireless facilities-based broadband, such that Internet connectivity is available only through dial-up service. An "underserved" area is an area where broadband is available, but no wireline or wireless facilities-based provider offers service at advertised speeds of at least 6 Mbps download and 1.5 Mbps upload.

percent accuracy of broadband availability down to the individual household. This is particularly an issue for rural areas of the State, where population is less dense and census blocks cover a larger area.[22] Thus, through the administration of the CASF program, the review of broadband infrastructure project proposals, and the investigation of numerous challenges received on project areas throughout the State, it has become apparent that the percentage of households served, underserved, and unserved as shown in the Map is not precise. Consequently, Communications Division staff does not rely solely on information submitted by broadband providers as reflected in the Map, but instead closely reviews each project proposal to determine if the proposed area is served, underserved, or unserved. CASF applicants or interested parties, particularly broadband providers in the proposed project areas, have the opportunity to challenge an area as not served or served where the maps show otherwise.[23] Further, Communications Division staff is implementing additional methods in 2015 that will improve the accuracy of the map and data analysis. Despite the limitations of data that is reported at the census block level, the Map is a valuable tool to the CPUC to track broadband availability in the State.

To better measure the remaining households that are not served in California, below are three tables and maps that show the estimate of households having broadband availability at served and underserved speeds; and those that are unserved by wireline, fixed-wireless, and mobile wireless broadband technologies.[24] The presentation reflects data as of June 30, 2014, as submitted to the CPUC and validated by Communications Division to the census block level.

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[22] The presumption of considering a census block as served based on one subscriber within that block may be reasonable in urban areas where a census block area is small - service to one neighbor likely implies availability to the next. However, for rural areas, such is not a reasonable presumption given known geographic variability and low household density.

[23] Information on what is required on a challenge can be found at: http://www.cpuc.ca.gov/PUC/Telco/Information+for+providing+service/CASF/CASF+Application+FAQs.htm.

[24] The CPUC broadband availability map separates broadband services into several categories: fixed, fixed-wireless, mobile and satellite. The "fixed" category includes all those services which are delivered to a particular, stationary location. Such services are provided using several different technologies, including "wireline" technologies such as xDSL, Cable Modem, or Fiber to the Home. These technologies use wires or cables that make a physical connection from the provider to the user. However, "fixed wireless" solutions use wireless radio waves at a particular frequency, such as Wi-Fi, to make a "point-to-point" connection between the provider and the user at a fixed location. By contrast, the "mobile" category includes "wireless" technologies, such as 2G, 3G, or 4G LTE to provide service to users who can receive a broadband signal while the user is in motion. The "satellite" category includes those providers who use a connection via satellite to the customer to provide service.

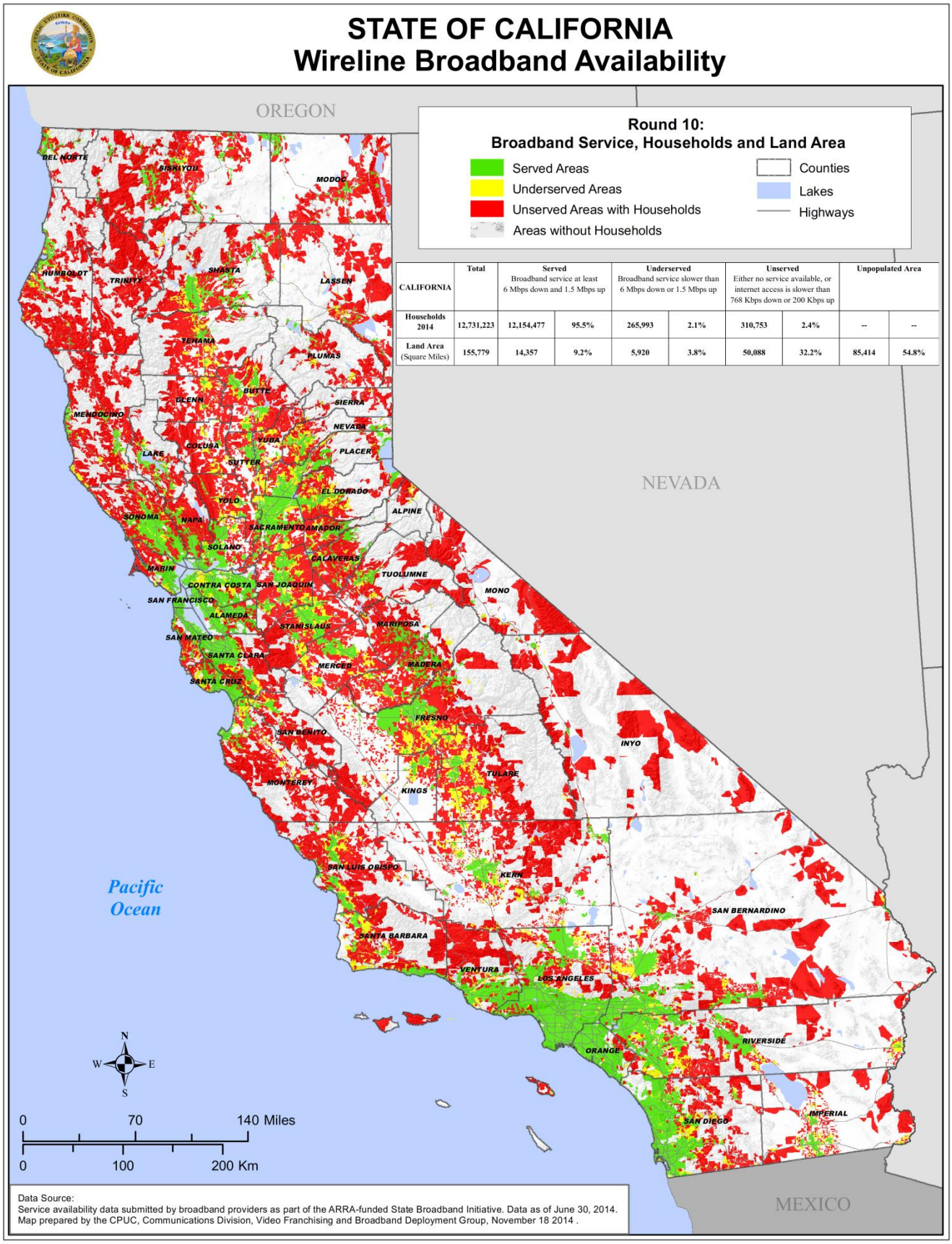
Map 1 and the table below, show broadband availability utilizing wireline broadband technologies. They show that **95.5 percent** of households (12,154,477) in California have served speeds available, **2.1 percent** of households (265,993) have only underserved speeds available, and **2.4 percent** of households (310,753) have service so slow, if at all, that they are considered unserved.

Instructive in the data table and apparent on the map below is the relatively small geographic area where wireline broadband is available at served speeds. For wireline broadband, only 9 percent of the land area in California contains 95 percent of the households having served speeds available. In contrast, 2 percent of the households that are unserved are associated with over 32 percent of the land area. This indicates that wireline services do not have thorough geographic coverage in rural, lower density areas of the State, and generally serve higher density, urban areas.

Table 8. Wireline Broadband Availability

CALIFORNIA	Total	Served Broadband service at least 6 Mbps down and 1.5 Mbps up		Underserved Broadband service slower than 6 Mbps down or 1.5 Mbps up		Unserved Either no service available, or internet access is slower than 768 Kbps down or 200 Kbps up		Unpopulated Area	
Households 2014	**12,731,223**	**12,154,477**	**95.5%**	**265,993**	**2.1%**	**310,753**	**2.4%**	--	--
Land Area (Square Miles)	**155,779**	**14,357**	**9.2%**	**5,920**	**3.8%**	**50,088**	**32.2%**	**85,414**	**54.8%**

Map 1



CALIFORNIA	Total	Served: Broadband service at least 6 Mbps down and 1.5 Mbps up		Underserved: Broadband service slower than 6 Mbps down or 1.5 Mbps up		Unserved: Either no service available, or internet access is slower than 768 Kbps down or 200 Kbps up		Unpopulated Area	
Households 2014	12,731,223	12,154,477	95.5%	265,993	2.1%	310,753	2.4%	--	--
Land Area (Square Miles)	155,779	14,357	9.2%	5,920	3.8%	50,088	32.2%	85,414	54.8%

Data Source:
Service availability data submitted by broadband providers as part of the ARRA-funded State Broadband Initiative. Data as of June 30, 2014.
Map prepared by the CPUC, Communications Division, Video Franchising and Broadband Deployment Group, November 18 2014 .

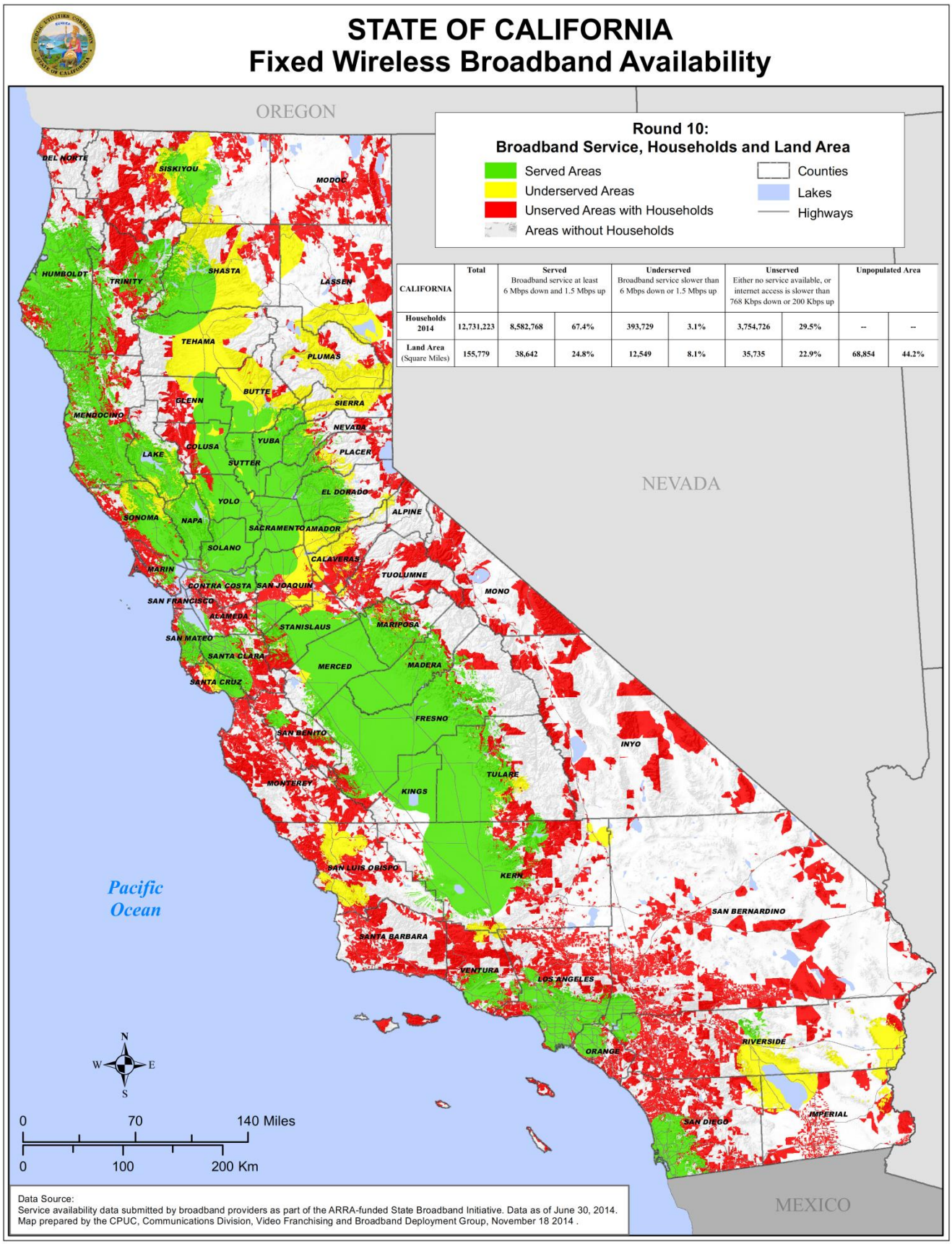
Map 2 and the table below, show broadband availability utilizing only fixed wireless broadband technologies. Instructive in the data table and map is the relative small percentage of households served by fixed wireless, only **67.4%** of households (8,582,768).[25] Additionally, the map shows that the fixed wireless offering is significant in that it provisions service largely in areas not served by wireline. Thus, fixed wireless remains an important broadband service technology.

Table 9. Fixed-Wireless Broadband Availability

CALIFORNIA	Total	Served Broadband service at least 6 Mbps down and 1.5 Mbps up		Underserved Broadband service slower than 6 Mbps down or 1.5 Mbps up		Unserved Either no service available, or internet access is slower than 768 Kbps down or 200 Kbps up		Unpopulated Area	
Households 2014	**12,731,223**	**8,582,768**	**67.4%**	**393,729**	**3.1%**	**3,754,726**	**29.5%**	--	--
Land Area (Square Miles)	**155,779**	**38,642**	**24.8%**	**12,549**	**8.1%**	**35,735**	**22.9%**	**68,854**	**44.2%**

[25] In the previous report, we showed 6.2% of the population served by fixed wireless. This was attributable to a change in validation methods that excluded any coverage area where there were no reported fixed wireless subscribers. This method did not take into account fixed wireless providers' actual coverage footprint and underestimated the served level population. The data above reflect our estimate using previous validation methods, which we believe are more accurate than the method used in the last report.

Map 2



CALIFORNIA	Total	Served: Broadband service at least 6 Mbps down and 1.5 Mbps up		Underserved: Broadband service slower than 6 Mbps down or 1.5 Mbps up		Unserved: Either no service available, or internet access is slower than 768 Kbps down or 200 Kbps up		Unpopulated Area	
Households 2014	12,731,223	8,582,768	67.4%	393,729	3.1%	3,754,726	29.5%	--	--
Land Area (Square Miles)	155,779	38,642	24.8%	12,549	8.1%	35,735	22.9%	68,854	44.2%

Map 3 and table below, represents the advertised speeds and coverage area of mobile broadband based on improved validation methodology that staff developed in 2014, as described in Section E below. The data table and map suggest that **95.8** percent of households (12,200,830) have available served speeds, **4.0** percent of households (505,284) have available underserved speeds, and **0.2** percent of households (25,109) are unserved by mobile broadband in California.

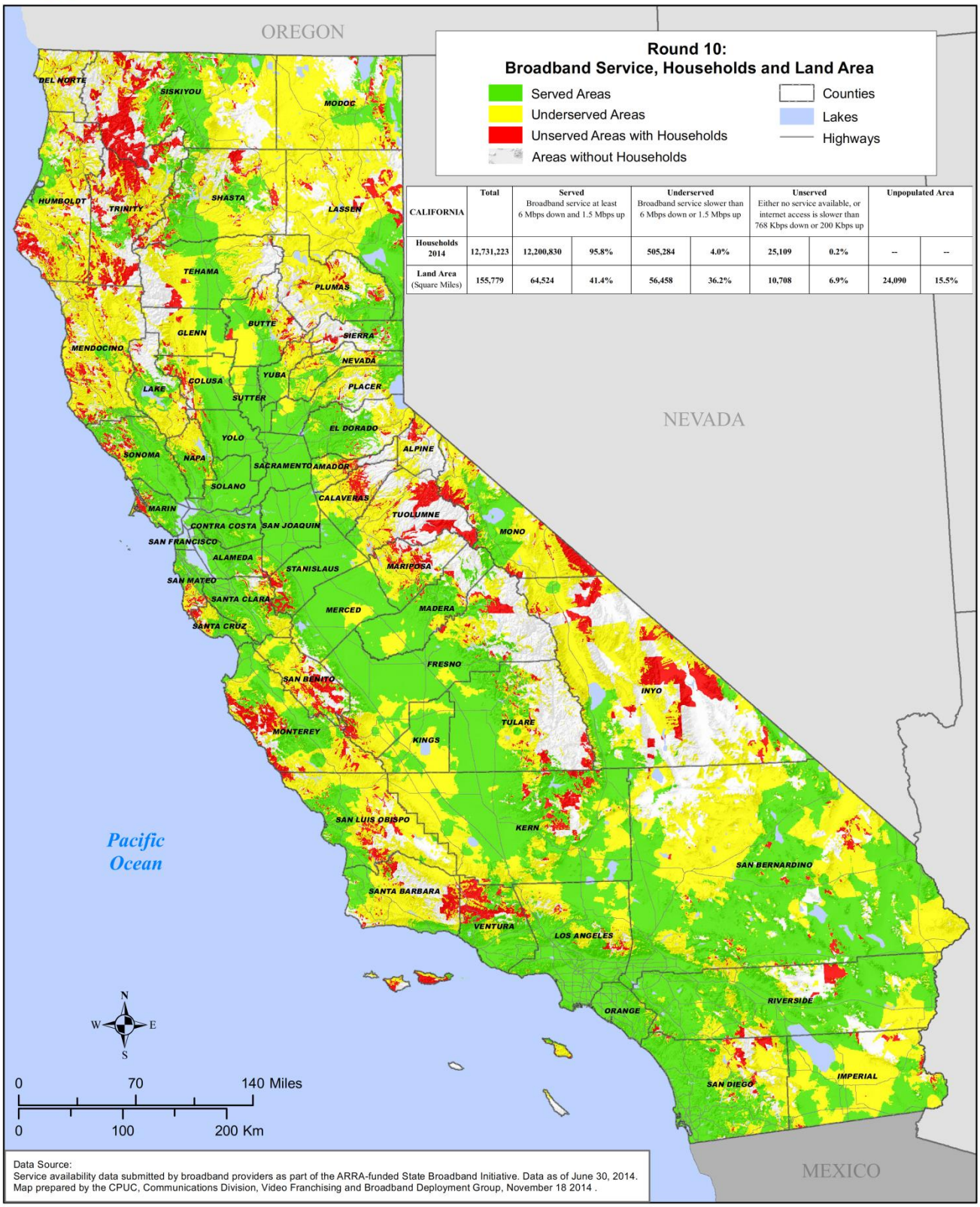
The 95.8 percent mobile availability at served speeds covers about 41 percent of the land area of California, in stark contrast to wireline and fixed wireless provisioning. Further, the map shows the reach of mobile in more rural areas than that of wireline. If we exclude satellite coverage, mobile is the largest broadband access technology across the land mass of the State.

Table 10. Mobile Broadband Availability

CALIFORNIA	Total	Served Broadband service at least 6 Mbps down and 1.5 Mbps up		Underserved Broadband service slower than 6 Mbps down or 1.5 Mbps up		Unserved Either no service available, or internet access is slower than 768 Kbps down or 200 Kbps up		Unpopulated Area	
Households 2014	**12,731,223**	**12,200,830**	**95.8%**	**505,284**	**4.0%**	**25,109**	**0.2%**	--	--
Land Area (Square Miles)	**155,779**	**64,524**	**41.4%**	**56,458**	**36.2%**	**10,708**	**6.9%**	**24,090**	**15.5%**

Map 3

STATE OF CALIFORNIA
Mobile Broadband Availability

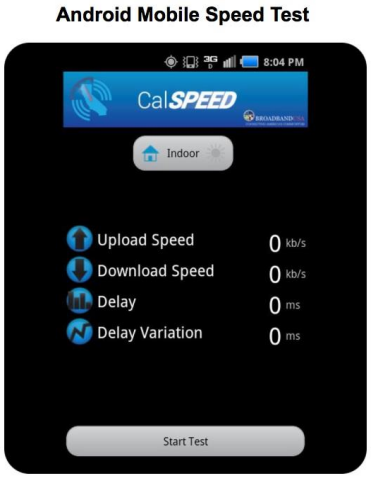


CALIFORNIA	Total	Served: Broadband service at least 6 Mbps down and 1.5 Mbps up		Underserved: Broadband service slower than 6 Mbps down or 1.5 Mbps up		Unserved: Either no service available, or internet access is slower than 768 Kbps down or 200 Kbps up		Unpopulated Area	
Households 2014	12,731,223	12,200,830	95.8%	505,284	4.0%	25,109	0.2%	--	--
Land Area (Square Miles)	155,779	64,524	41.4%	56,458	36.2%	10,708	6.9%	24,090	15.5%

Data Source:
Service availability data submitted by broadband providers as part of the ARRA-funded State Broadband Initiative. Data as of June 30, 2014.
Map prepared by the CPUC, Communications Division, Video Franchising and Broadband Deployment Group, November 18 2014 .

E. Variability in Mobile Broadband and Analysis Improvements

The CPUC recognizes the need to provide a better accounting of broadband availability in the State. The CPUC has implemented a process to better assess service quality- to take into consideration variability of service.[26] Additionally, it is essential to gather and fully consider "ground truth" information provided directly from the public. The CPUC has expanded its efforts to validate the availability of broadband, or and lack thereof, by increasing outreach. The following are the methods for the public to provide feedback regarding broadband availability in their areas:



1) **Online-Map Feedback:** Community members having broadband access may provide feedback directly via the online map, www.broadbandmap.ca.gov/map and inputting an address. A list of broadband providers that report they provide service in the area will appear on the screen, along with the type of broadband service and speeds they offer. When this list appears, community members will find in the upper left corner a link, labeled 'Send Feedback.' By clicking on this link, a survey will appear on the screen. The public is encouraged to answer the questions and submit the survey when done. Communications Division staff incorporates the survey responses and displays the information on the map's consumer feedback layer. The data will also be used to validate or invalidate providers' service availability information.

2) **CalSPEED Mobile App:** Anyone who has an Android smartphone or tablet may download the CPUC's CalSPEED mobile testing app from the Google Play app store and test the quality of mobile service actually available at a location at the time of the test. Tests done in areas with no service will be reported to the CPUC automatically the next time the tester enters an area with service and re-runs the test. The results will be uploaded to the California Interactive Broadband Map, and be used to validate that

[26] The results of the CPUC's CalSPEED and mobile field tests are showing that while the mean interpolated speeds indicate the area may be receiving acceptable service, other factors, such as jitter and latency, affect the variability and quality of service experienced by consumers. For example, an area could on average have service of 10 Mbps, however, speeds may vary between 18 Mbps to 2 Mbps of service.

provider's service. While CalSPEED is currently only available for Android phones, CD staff is working on publishing an iPhone version as well. Testing should be done while stationary and outdoors.

3) **Paper Feedback Form:** For households having no access to the Internet, a paper option feedback form is available. Attachment H provides this form which can also be obtained at http://www.broadbandmap.ca.gov by clicking the "Broadband Survey" link. In order for these survey responses to be useful, the CPUC needs actual street address information in order to indicate the feedback on the map. Communications Division staff has coordinated with CASF Consortia and other groups organizing local feedback to use this form and to offer suggestions for improving the survey.

The CPUC's Communications Division staff in 2014 improved the mobile drive test data analysis to better evaluate mobile broadband availability in California.[27]

In 2014, CPUC testers logged more than 60,000 miles behind the wheel testing broadband availability in the most rural areas of the State.

The CPUC changed its method of validating using geo-spatial interpolation. The CPUC created shapefiles from the Spring 2014 field test results using a geographic modeling technique called kriging. These kriging models were based on data collected from the 1,990 locations using average (mean) throughput minus one standard deviation. The standard deviation used was unique to each location and provider but averaged for both data card and smart phone[28], as well as for both East and West servers. A mask was used so that the surface interpolation and points used for analysis are only within the provider's service area based on each provider's submitted December 2013 availability data. Originally, the CPUC had used a kriging model based solely on average (mean) throughput. This meant that availability was reflected as

[27] In 2014, testers logged more than 60,000 miles behind the wheel, seeking out the most remote rural areas of the State, as well as urban areas and Tribal lands. The resulting data is available online, at http://www.cpuc.ca.gov/PUC/Telco/bb_drivetest.htm and has been shared with other State agencies.

[28] The CPUC's semi-annual mobile field tests employ both smartphone and data card devices (data card connected to a netbook) in order to get a more balanced reading of each provider's mobile network performance. These results are averaged together.

the likelihood of obtaining a certain speed 50% of the time. The change to using mean minus one standard deviation increases the likelihood of obtaining service of a certain speed approximately 68% of the time, which is an attempt to more accurately reflect the user experience.

F. Projected Surcharge Collection Each Year through 2020 to Fund Approved Projects

The CASF is funded by a surcharge rate on revenues collected by telecommunications carriers from end-users for intrastate telecommunication services. Per Public Utilities Code Section 281(d) (3), the CPUC may collect a total of $315 million to fund the CASF program; where $100 million was collected prior to January 1, 2011, and $215 million may be collected on and after January 1, 2011, and continuing through calendar year 2020, in an amount not to exceed $25 million per year. An amount higher than $25 million per year may be collected if it does not result in an increase in the total amount of all surcharges collected from telephone customers that year. Communications Division staff has determined that the CASF must collect an amount higher than the $25 million cap per year for calendar years 2014 through 2016 to make up the under collections from years 2011 to 2014[29] and to have funds available to meet the new requirements imposed on the program with the enactment of SB 740 and AB 1299. The following table provides the estimated surcharge collection for the CASF through calendar year 2020:

[29] Between 2011 and 2013, the CASF under-collected $17 million due to a decreasing billing base. In February 2014, the CPUC adopted Resolution T-17434 resetting the CASF surcharge rate to 0.464% effective April 1, 2014.

Table 11. CASF Estimated Surcharge Collection

Calendar Year	Surcharge Excess Collection 2008-10	Surcharge Rate	Surcharge Collection	Total	Variance (Under collection)	Estimated Running Total
Original CASF 2008-10	-	0.25%	$100 million	$100 million	-	$100 million
YEAR 1 - 2011	**$15,350,423**[30]	0.14%	$467,496	$16 million	($9 million)	$116 million
YEAR 2 - 2012	$0	0.14%	$22 million	$22 million	($3 million)	$138 million
YEAR 3 – 2013	$0	0.164%	$22 million	$22 million	($3 million)	$160 million
YEAR 4 – 2014	$0	0.464%**	$38 million	$38 million	$13 million	$198 million
YEAR 5 - 2015	$0	0.464%	$65 million*	$65 million	-	$263 million
YEAR 6 – 2016 (Jan. – Oct.)	$0	0.464%	$52 million*	$52 million	-	$315 million
YEAR 7 - 2017	$0	0.0%	$0 million*	$0 million	-	$315 million
YEAR 8 – 2018	$0	0.0%	$0 million*	$0 million	-	$315 million
YEAR 9 - 2019	$0	0.0%	$0 million*	$0 million	-	$315 million
YEAR 10 - 2020	$0	0.0%	$0 million*	$0 million	-	$315 million
Total				**$315 million**		

*Estimated Surcharge
**Surcharge rate was 0.164% in January to March 2014 and 0.464% thereafter.

VI. Program Activities for 2015

With the enactment of SB 740 and AB 1299 and the closure of Rulemaking 12-10-012, the CASF program focus in 2015 will be on overseeing the first application round with newly eligible non-telephone corporation applicants as well as local government entities, which may begin applying for CASF Infrastructure Grant funds on May 1, 2015. In addition, 2015 CASF program focus will include working with applications on a rolling basis for the first time, whereby grant proposals may be submitted at any time in the cycle beginning December 1, 2014 rather than

[30] $15,350,423 was calculated based on the amounts reported on the CALSTAR Q24 revenues reports from the start of the program to December 2010.

submitted on set deadlines. The program staff will also begin implementing the new "Right of First Refusal" (ROFR) provisions, whereby existing service providers may assert their intention to build out into service areas that the CASF Map identifies as unserved or underserved, and must complete these build-outs by May 2015. The Commission will provide annual opportunities for providers to express their ROFR. Further, the program is working with Consortia managers to evaluate requests for funding extensions based on work plans and need within the budget limitations. Staff will continue to work with Consortia and interested eligible parties to develop additional new CASF infrastructure projects that address the needs of unserved and underserved areas. Staff will also continue to implement the Broadband Public Housing Account, including reviewing applications for grants that support broadband in public housing communities.[31]

With several CASF-related legislative bills in the pipeline, including AB 238 (Stone) regarding increasing advertised broadband speeds (from 6/1.5 to 25/3 Mpbs) to parallel federal increases and AB 1262 (Wood) to transfer funds from the CASF Loan Account to the Consortia Grant Account, staff will continue to analyze bills and work with decision-makers to effect policy changes that will make the CASF program more effective towards its goals of near ubiquitous broadband access in California.

Additionally, the Communications Division staff will host the 3nd Annual CASF Regional Consortia Learning Summit on February 19, 2015.[32] The focus of this Summit will be on lessons learned, best practices, and sustainability plans for the Consortia to continue to encourage the ubiquitous deployment of high speed Internet service in California. Staff will continue to work with Consortia leaders following the Summit to identify next steps resulting from the Summit.

[31] Assembly Bill 1299 (Bradford) established the CASF Broadband Public Housing Account and applications are reviewed by staff on a quarterly basis beginning January 15, 2015. For more information and to view the applications received to date: http://www.cpuc.ca.gov/PUC/Telco/Information+for+providing+service/CASF/Public+Housing+Account.htm.

[32] The CPUC in Decision 11-06-038 directed CD to schedule and host on at least an annual basis a Regional Consortia Learning Community Summit. All consortia receiving CASF grants shall be required to attend the Summit. The purpose of the Summit is to provide a forum for all consortia to gather and exchange information and ideas on best practices to enhance the effectiveness of consortia programs.

VII. Program Considerations in 2015

A. New Initiatives in 2015

- Expand Mobile Testing of Broadband Availability: To date, we have had over 3,000 public surveys submitted by the Regional Consortia and the general public and over 3,200 speed tests performed on the CalSPEED mobile testing app. Both are used to validate broadband availability for the California Interactive Map. We are also working with California State University Monterey Bay to develop an iPhone version of CalSPEED, which will expand the user base and reach of mobile testing.

- Address Agricultural Needs for Broadband: Mobile broadband is becoming increasingly important to the agricultural sector. Tractors are guided by Global Positioning Systems (GPS), and the data they collect is uploaded to cloud services over the mobile network. To address this increasing need for broadband in unpopulated farmlands, the CPUC recently met with several community colleges and the USDA in Clovis to discuss using CalSPEED to test mobile broadband in crop areas.

- Consider Mechanisms for Leveraging Non-CASF Resources: With a focus on sustainability, the CASF regional Consortia leaders a have identified a strong need for CASF project development and grant preparation assistance, including technical consultation and partnership facilitation ("matchmaking") between regional stakeholders (e.g., last mile and middle mile providers, community decision-makers, potentially investors). The CASF Program is exploring expanded roles and analysis that would leverage resources and support projects where broadband gaps exist (e.g., areas near pre-existing CASF funded middle mile infrastructure that still need last mile connectivity).

B. Impact of Federal Broadband Standards

The FCC recently changed their requirement for Connect America Fund recipients to deploy services capable of 10 megabits per second downstream and 1 megabit per second upstream (10/1), which is an increase from the previous standard of 4/1. Moreover, the FCC changed its definition of "advanced services" [33] to be 25/3. Using these new benchmarks, the number of households considered unserved in California increases from 4.3% to 6.7% (wireline only) as shown in the table below.[34]

Table 12. Estimated Served and Unserved Households In California By Wireline Broadband

Speed threshold in megabits per second	All Households	Served Households	Unserved Households
6 Mbps down and 1.5 Mbps up, or higher	12,731,223 (100.0%)	12,190,085 (95.7%)	541,138 (4.3%)
10 Mbps down and 1.5 Mbps up, or higher	12,731,223 (100.0%)	12,179,189 (95.7%)	552,034 (4.3%)
25 Mbps down and 3 Mbps up, or higher	12,731,223 (100.0%)	11,876,636 (93.3%)	854,587 (6.7%)

Our estimate for the number of unserved households correlates closely with the FCC's unserved population estimate of 7%. In looking at the table, one thing is immediately clear: there is practically no difference in the number of served households between the current CASF threshold of 6/1.5 and the FCC's new 10/1 threshold. One reason for the lack of difference is many DSL services are categorized under the same NTIA speed tier of 6 to 10 megabits per second.

[33] FCC 15-10, "2015 Broadband Progress report and Notice of Inquiry on Immediate Action to Accelerate Deployment," February 4, 2015, paragraph 45

[34] Unlike CASF, the FCC does not have a definition for "under-served," and for purposes of this comparison we combined underserved and unserved household counts together for the 6/1.5 calculation. Also, because the data we collect is provided to us in pre-defined speed tiers, the closest approximation to an upstream speed of 1 Mpbsd is the 1.5 – 3.0 Mbps speed tier. Under the FCC's new rules, speeds will be expressed in discrete numbers rather than tiers.

More critical than the overall differences in unserved households, though, is the large number of unserved households in rural areas. Based on the 25/3 threshold, we estimate the number of unserved urban households as a percentage of total urban households to be only 3% (391,189), whereas for rural, the percentage is 68% (463,398); more than two-thirds of all rural households. Considering the average cost per household for a 25/3 capability in urban areas is approximately $1,424 and the average cost of the same capability in rural areas is approximately $7,122, the cost to serve all unserved households would be approximately $ 4.3 billion, or $ 3.8 billion for rural and $ 557 million for urban. The estimated cost of providing access at 25/3 capability to 98% of households in California would be approximately $3 billion.[35] Some hard to reach households may be served by less costly technology than fiber to the home, though such may not offer 25/3. Given the availability of lower cost alternatives to deploy in remote areas, the policy issue is whether such projects should remain eligible for CASF funding in order to provide internet access.

[35] This estimate is based upon fiber-to-the-home grants awarded by the Commission to date which are largely "Greenfield" fiber projects. This estimate is intended to provide only an order of magnitude of the cost of providing access at 25/3. Fiber-to-the-home projects very widely depending upon numerous factors including density, terrain, and network architecture. Cost estimates for rural projects reflect the average household cost of grants for fiber-to-the-home projects awarded by CASF to date. For cost estimates of urban fiber-to-the home projects, we have assumed that the cost of urban projects will equal approximately 20% of the cost of CASF awarded rural fiber-to-the-home grants. The estimates provided for both urban and rural projects represent grant funds only. Applicants are required to self-finance between 30% and 40% of the total capital cost of the project depending on whether the grant is awarded for a served or unserved area. Versions of VDSL (very high speed digital subscriber line) which involve pushing fiber out closer to the home and copper channel bonding are capable of delivering speeds of 25/3 and above at a lower cost than fiber-to-the-home. However, we are unable to estimate the number of project applications CASF would receive for such projects. The pool of potential applicants using such technology is largely limited to Incumbent Local Exchange Carriers that connect their network via copper lines to the home. Also the cost estimate above does not include the cost of middle mile facilities which may have to be deployed to ensure "last mile" projects are capable of delivering speeds of 25/3. Such middle mile projects could add hundreds of millions of dollars in cost to the estimate.

Attachment A – Map of Commission Approved Consortia Grants

Attachment B – CASF Infrastructure Funding Requests

(Grant Applications Received through December 2014)

	Applicant Name	Project Name	Location	Area Type (Unserved/ Underserved/ Hybrid)	Project Type	Technology Type	CASF GRANT AMOUNT (Including Contribution in Aid of Construction)	CASF LOAN AMOUNT	TOTAL CASF FUNDING
1	Race Telecom.	Five Mining Com-munities	Inyo, Kern and San Bernardino Counties	Hybrid	Last Mile	Fiber-To-The-Home (FTTH)	$9,256,208	$0	$9,256,208
2	Ultimate Internet Access	Wrightwood	San Bernardino and Los Angeles Counties	Underserved	Last Mile	Fiber-To-The-Home (FTTH)	$2,055,820	$0	$2,055,820
3	Ultimate Internet Access	Helendale	San Bernardino County	Underserved	Last Mile	Fiber-To-The-Home (FTTH)	$1,563,064	$0	$1,563,064
4	Race Telecom	Gigafy North 395	Mono County	Underserved	Last Mile	Fiber-To-The-Home (FTTH)	$4,234,830	$0	$4,234,830
5	Race Telecom	Gigafy Mono	Mono County	Underserved	Last Mile	Fiber-To-The-Home (FTTH)	$7,633,459	$0	$7,633,459
6	Race Telecom	Gigafy Backus	Kern County	Underserved	Last Mile	Fiber-To-The-Home (FTTH)	$2,239,991	$0	$2,239,991
TOTAL							**$26,983,372**	**$0**	**$26,983,372**

Attachment C – CASF Project Proposals Approved in 2014

	Applicant	Project Name	Resolution Number	Last Mile/ Middle Mile	CASF Grant Award	CASF Loan Award	Total CASF Award	Unserved HH (Households)	Under-served HH (Households)	Total HH (Households)
1	Surfnet Com-munications	Paradise Road	T-17430	Last Mile	$177,959	$59,318	$237,277	$0	278	278
2	Surfnet Com-munications	Monterey Dunes	T-17431	Last Mile	$79,078	$26,359	$105,437	$0	120	120
3	Sunesys	C3 The Connected Central Coast	T-17429	Middle Mile	$10,640,000	$0	$10,640,000	$59	11065	11124
4	Shasta County Telecom	Shasta County Telecom Project	T-17439	Last Mile	$2,238,806	$0	$2,238,806	$32	1412	1444
5	Race Telecom	Mono County	T-17433	Last Mile	$4,650,593	$0	$4,650,593	$0	727	727
6	Ponderosa Telephone	Cressman	T-17428	Last Mile	$1,027,380	$0	$1,027,380	$59	11	70
Totals					**$18,813,816**	**$85,677**	**$18,899,493**	**150**	**13,613**	**13,763**

Attachment D – CASF Infrastructure Grants/Loan Awards

CASF Broadband Infrastructure Grant/Loan Account
Projects Approve through December 2014

Projects Not Complete
Completed Projects

	GRANTEE	PROJECT NAME	LOCATION	UNSERVED HH (Households)	UNDER-SERVED HH (Households)	TOTAL # OF HH (Households)	CASF GRANT AWARD	CASF LOAN AWARD	TOTAL CASF AWARD
1	AT&T	Grenada	Siskiyou	275	0	275	$57,596	$0	$57,596
2	AT&T	Hopland	Mendocino	328	0	328	$61,952	$0	$61,952
3	AT&T	Blanchard	Mariposa	123	0	123	$35,816	$0	$35,816
4	AT&T	Mount Wilson	Los Angeles	15	0	15	$2,420	$0	$2,420
5	Verizon	Pinyon	Riverside	382	0	382	$174,000	$0	$174,000
6	Frontier	Prattville	Lake Almanor, Plumas	171	0	171	$41,192	$0	$41,192
7	AT&T	Comptche	Mendocino County	97	0	97	$18,392	$0	$18,392
8	AT&T	Alta/Blue Canyon	Nevada/Placer Counties	236	0	236	$56,628	$0	$56,628
9	AT&T	Warner Springs	San Diego County	66	0	66	$93,896	$0	$93,896
10	Willits Online	Covelo	Mendocino	300	0	300	$54,000	$0	$54,000
11	Willits Online	Laytonville	Mendocino	500	0	500	$54,000	$0	$54,000
12	MCC Telephony	Kernville Teleconnect	Kernville, Onyx, Weldon, Wofford Heights, Inyokern	7,779	1400	9,179	$285,992	$0	$285,992
13	Ponderosa Cable Vision	Auberry	Fresno	1,043	0	1,043	$1,154,780	$0	$1,154,780
14	Frontier Comm. of the Southwest, Inc.	San Bernardino	San Bernardino County	3732	0	3732	$168,171	$0	$168,171
15	AT&T	Lodi	San Joaquin	0	35	35	$137,416	$0	$137,416
16	AT&T	Easton	Fresno	0	9	9	$49,869	$0	$49,869
17	Citizens	Birds Landing	Solano	0	69	69	$100,444	$0	$100,444
18	Frontier	Livingston	Merced	0	308	308	$62,000	$0	$62,000
19	AT&T	Clovis	Fresno	0	125	125	$36,393	$0	$36,393
20	IP Networks	Hwy 36 Humboldt-Trinity Counties	Humboldt and Trinity Counties	0	527	527	$5,753,240	$0	$5,753,240

	GRANTEE	PROJECT NAME	LOCATION	UNSERVED HH (Households)	UNDER-SERVED HH (Households)	TOTAL # OF HH (Households)	CASF GRANT AWARD	CASF LOAN AWARD	TOTAL CASF AWARD
21	California Broadband Cooperative	Digital 395 Middle Mile	Mono, Inyo and Eastern Kern Counties, North Eastern San Bernardino	0	28,127	28,127	$29,223,432	$0	$29,223,432
22	Verizon	The Sea Ranch	Sonoma	0	232	232	$1,872,017	$0	$1,872,017
23	Plumas Sierra Telecom	Plumas-Sierra Middle-Mile	Plumas, Lassen and Sierra	0	13,000	13,000	$1,721,280	$0	$1,721,280
24	Audeamus	Tranquility and West Fresno	Fresno County	234	351	585	$1,154,496	$0	$1,154,496
25	Race Telecom	Mojave Air and Space Port	Kern County	0	0	0	$506,199	$0	$506,199
26	Calaveras Telephone Company	Poker Flat Project	Calaveras	0	409	409	$640,698	$0	$640,698
27	CVIN LLC	Central Valley Independent Network, LLC. (CVIN) & the Corporation for Educational Network Initiatives in California (CENIC) middle mile fiber-optics network infrastructure	Amador, Calaveras, Colusa, El Dorado, Fresno, Kings, Kern, Mariposa, Merced, Madera, Nevada, Placer, San Joaquin, Stanislaus, Tuolumne, Tulare, Sutter & Yuba	0	206,764	206,764	$6,659,967	$0	$6,659,967*
28	Frontier Comm. of the West Coast	Del Norte	Fort Dick area of the Smith River exchange	0	645	645	$68,168	$0	$68,168
29	Frontier Comm. of the Southwest, Inc.	Alpine	Markleeville, Woodfords, Paynesville, Fredericksburg and surrounding areas	0	623	623	$95,919	$0	$95,919
30	Verizon	Crowley Lake & Swall Meadow	Mono County	67	426	493	$286,398	$0	$286,398

	GRANTEE	PROJECT NAME	LOCATION	UNSERVED HH (Households)	UNDER-SERVED HH (Households)	TOTAL # OF HH (Households)	CASF GRANT AWARD	CASF LOAN AWARD	TOTAL CASF AWARD
31	Happy Valley Telephone Company (TDS Telecom)	Olinda	Shasta County	0	1908	1,908	$1,833,689	$0	$1,833,689
32	Winterhaven Telephone Company (TDS Telecom)	Winterhaven	Imperial County	0	961	961	$2,063,967	$0	$2,063,967
33	Foresthill Telephone Company	Big Dipper	Placer County	0	84	84	$117,000	$0	$117,000
34	Race Telecom	Kern County High Desert	Kern County	0	4371	4,371	$12,583,343	$0	$12,583,343
35	Karuk Tribe	Klamath River Rural Broadband Initiative	Humboldt County	295	321	616	$6,602,422	$0	$6,602,422
36	Race Telecom	Kern County City of Boron	Kern County	0	892	892	$3,426,357	$0	$3,426,357
37	Willits Online	Westport	Mendocino County	60	66	126	$149,364	$0	$149,364
38	Willits Online	Boonville	Mendocino County	0	605	605	$122,931	$40,977	$163,908
39	Pinnacles Telephone Company	Pinnacles Monument	San Benito County	0	47	47	$195,299	$0	$195,299
40	Ponderosa Telephone Company	Big Creek	Fresno County	6	73	79	$898,574	$0	$898,574
41	Ponderosa Telephone Company	Beasore/Central Camp	Madera County	32	0	32	$1,755,042	$0	$1,755,042
42	Ponderosa Telephone Company	Cressman	Cressman area of Fresno County	59	11	70	$1,027,380	$0	$1,027,380
43	Surfnet Comm.	Paradise Road	Paradise Road, Monterey County	0	278	278	$177,954	$59,318	$237,272
44	Surfnet Comm.	Monterey Dunes	Monterey Dunes, Monterey County	0	120	120	$79,078	$26,359	$105,437
45	Sunesys	Connected Central Coast	Portions of the Central Coast between Salinas and Soledad in Santa Cruz and Monterey Counties	59	11065	11,124	$10,640,000	$0	$10,640,000
46	Shasta Telecom	Shasta County	North of Bella Vista, Round Mountain, Montgomery Creek and Lake Margaret areas of Shasta County	32	1412	1,444	$2,238,806	$0	$2,238,806
47	Race Telecom	Mono County	Mono County	0	727	727	$4,650,593	$0	$4,650,593
Total CASF Infrastructure Grant Account Funding for Unserved and Underserved Areas:				**15,891**	**275,991**	**291,882**	**$99,188,571**	**$126,654**	**$99,315,225**

* The budget for the CVIN/CNEC project was cut by .36 million due to a change in the buildout.

Attachment E - CASF Infrastructure Grant/Loan Account
Project Payments Details

Projects Not Complete
Completed Projects

Item #	Recipient	Project Name	Awarded Amount	Pre-2011 Payments	2011 Payments	2012 Payments	2013 Payments	2014 Payments	Total Payments (as of 12/31/2014)
1	AT&T	Alta/Blue Canyon	$56,628	$0	$56,628	$0	$0	$0	$56,628
2	AT&T	Blanchard	$35,816	$0	$24,963	$0	$0	$0	$24,963
3	AT&T	Comptche	$18,392	$0	$9,364	$0	$0	$0	$9,364
4	AT&T	Grenada	$57,596	$0	$20,150	$0	$0	$0	$20,150
5	AT&T	Hopland	$61,952	$0	$22,306	$0	$0	$0	$22,306
6	AT&T	Mt. Wilson	$2,420	$0	$859	$0	$0	$0	$859
7	AT&T	Warner Springs	$93,896	$0	$43,985	$0	$0	$0	$43,985
8	AT&T	Lodi	$137,416	$0	$0	$45,541	$0	$0	$45,541
9	AT&T	Clovis	$36,393	$0	$0	$36,393	$0	$0	$36,393
10	AT&T	Easton	$49,869	$0	$0	$36,354	$0	$0	$36,354
Total AT&T			**$550,378**	**$0**	**$178,254**	**$118,289**	**$0**	**$0**	**$296,543**
11	Audeamus	Tranquility and West Fresno	$1,154,496	$0	$928,554	$0	$225,941	$0	$1,154,494
Total Audeamus			**$1,154,496**	**$0**	**$928,554**	**$0**	**$225,941**	**$0**	**$1,154,494**
12	Frontier	Birds Landing	$100,444	$0	$99,130	$0	$0	$0	$99,130
13	Frontier	Livingston	$62,000	$0	$39,555	$0	$0	$0	$39,555
Total Frontier			**$162,444**	**$0**	**$138,685**	**$0**	**$0**	**$0**	**$138,685**
14 & 15	Willits Online	Covelo & Laytonv	$108,000	$78,008	$24,017	$0	$0	$0	$102,025
16	Willits Online	Boonville	$163,908	$0	$0	$0	$0	$132,878	$132,878
Total Willits Online			**$271,908**	**$78,008**	**$24,017**	**$0**	**$0**	**$132,878**	**$234,903**
17	IP Networks	Hwy 36 Hubmboldt-Trinity Counties	$5,753,240	$0	$3,159,738	$2,593,503	$0	$0	$5,753,241
Total IP Networks			**$5,753,240**	**$0**	**$3,159,738**	**$2,593,503**	**$0**	**$0**	**$5,753,241**
18	Calaveras Telephone Company	Poker Flat Project	$640,698	$0	$0	$256,579	$91,674	$0	$348,254
Total Calaveras Telephone Company			**$640,698**	**$0**	**$0**	**$256,579**	**$91,674**	**$0**	**$348,254**
19	California Broadband Cooperative (Inyo Network)	Digital 395	$29,223,432	$0	$0	$6,413,765	$18,750,724	$1,489,552	$26,654,041
Total CBC (Inyo Networks)			**$29,223,432**	**$0**	**$0**	**$6,413,765**	**$18,750,724**	**$1,489,552**	**$26,654,041**
20	Plumas Sierra Telecom	Plumas-Sierra Midlle-Mile Project Plumas County	$1,721,280	$0	$0	$924,331	$333,784	$463,165	$1,721,280
Total Plumas Sierra Telecommunications			**$1,721,280**	**$0**	**$0**	**$924,331**	**$333,784**	**$463,165**	**$1,721,280**

Item #	Recipient	Project Name	Awarded Amount	Pre-2011 Payments	2011 Payments	2012 Payments	2013 Payments	2014 Payments	Total Payments (as of 12/31/2014)
21	CVIN LLC	Central Valley Independent Network, LLC middle mile fiber-optics network infrastructure	$6,659,967	$0	$0	$0	$6,004,348	$308,634	$6,312,983
Total CVIN LLC			**$6,659,967**	**$0**	**$0**	**$0**	**$6,004,348**	**$308,634**	**$6,312,983**
22	Race Telecom	Mojave Air and Space Port Project	$506,199	$0	$0	$0	$494,419		$494,419
23	Race Telecom	Boron	$3,426,357	$0	$0	$0	$0	$2,693,379	$2,693,379
24	Race Telecom	Kern County High Desert	$12,583,343	$0	$0	$0	$0	$3,060,171	$3,060,171
Total Race Telecom			**$16,515,899**	**$0**	**$0**	**$0**	**$494,419**	**$5,753,550**	**$6,247,969**
25	Ponderosa Cablevision	Auberry project	$1,154,780	$0	$0	$0	$0	$614,118	$614,118
Total Ponderosa Cablevision			**$30,254,022**	**$0**	**$0**	**$0**	**$0**	**$614,118**	**$614,118**
26	Foresthill Telephone Company	Big Dipper	$117,000	$0	$0	$0	$0	$87,750	$87,750
Total Foresthill Telephone Company			**$31,525,802**	**$0**	**$0**	**$0**	**$0**	**$87,750**	**$87,750**
Grand Total			$62,653,742	$78,008	$4,429,249	$10,306,467	$25,900,889	$8,849,649	$49,564,262

Attachment F – CASF Consortia Grant Account Project Payments Details

Item #	Recipient	Project Location	Award Amount * (over 3 years)	2012 Payments	2013 Payments	2014 Payments	Total Payments (as of 12/31/2014)
1	California's One Million NIU (New Internet Users) Coalition	Los Angeles County	$480,000	$89,001	$153,095	$146,417	$388,512
2	Central Coast Broadband Consortium	Monterey, Santa Cruz, San Benito	$480,000	$21,192	$76,148	$23,588	$120,928
3	Central Sierra Connect Broadband Consortium	Amador, Calaveras, Tuolumne, Mariposa, Western Alpine	$480,000	$0	$144,219	$220,542	$364,761
4	Connected Captal Area Broadband Consortium	Sacramento, Sutter, Yolo, Yuba	$478,301	$60,756	$141,819	$157,361	$359,936
5	East Bay Broadband Consortium	Alameda, Contra Costa, Solano, ABAG area	$480,000	$84,232	$138,379	$96,850	$319,461
6	Eastern Sierra Connect Consortium	Mono, Inyo, Eastern Kern	$480,000	$0	$220,488	$97,604	$318,092
7	Gold Country Broadband Consortium	Sierra, Nevada, Placer, El Dorado, Eastern Alpine	$480,000	$61,061	$201,218	$71,579	$333,858
8	Gold Country Consortium Tahoe Basin Project	Lake Tahoe Basin	$167,000	$0	$0	$35,647	$35,647
9	Inland Empire Regional Broadband Consortium	San Bernardino, Riverside	$480,000	$61,198	$205,282	$159,713	$426,193
10	Los Angeles County Regional Broadband Consoritum	Los Angeles county - 5 distinct sub-regions under the LACRBC umbrella	$2,310,000	$468,930	$738,515	$733,293	$1,940,738
11	Northeastern California Connect Consortium	Butte, Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama	$479,991	$96,424	$106,779	$127,282	$330,485
12	Redwood Coast Connect Consortium	Humboldt, Del Norte, Mendocino, Trinity	$480,000	$24,015	$102,908	$117,299	$244,222
13	San Diego Imperial Regional Broadband Consortium	San Diego, Imperial	$480,000	$15,661	$111,091	$176,310	$303,062

Item #	Recipient	Project Location	Award Amount * (over 3 years)	2012 Payments	2013 Payments	2014 Payments	Total Payments (as of 12/31/2014)
14	San Joaquin Valley Regional Broadband Consortium	San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, Kern	$480,000	$86,577	$107,675	$157,585	$351,837
15	Upstate California Connect Consotium	sa, Glenn, Lake, So	$478,184	$96,424	$106,779	$127,282	$330,485
16	Pacific Coast Regional Broadband Consortium	San Luis Obispo, Santa Barbara and Ventura	$300,000	$0	$0	$19,048	$19,048
17	North Bay/North Coast Regional Broadband Consortium	Marin, Mendocino, Napa and Sonoma	$250,000	$0	$0	$16,536	$16,536
Grand Total			**$9,263,476**	**$1,165,471**	**$2,554,395**	**$2,448,351**	**$6,203,802**

*Amounts include base funding plus supplemental funding to attend annual Regional Consortia Learning Summit

Attachment G – Consortia Account Grantee 2014 Annual Outcomes

Regional Consortia	Grant Award	Counties	2014 Accomplishments
California's One Million NIU (New Internet Users) Coalition	$480,000	Los Angeles	335 graduates received critical skills to navigate the Internet in 2nd Qtr of 2014. 409 NIU post- course workshops were completed in 2nd Qtr of 2014. 10 new jobs were created for NIU trainers. Over 40 graduation ceremonies and related outreach events were hosted targeting local media and political leaders. 20 NIU Empowerment Hubs provided Internet access to around 26,000 people. 18 community events promoted NIU courses and broadband to communities with limited computer literacy.
Central Coast Broadband Consortium	$480,000	Monterey, Santa Cruz, San Benito	Supported three CASF project applications (submitted in 2013): the Connected Central Coast middle mile project bringing broadband to the Salinas Valley from Soledad to Santa Cruz, as well as two last mile projects for Surfnet in northern Monterey County. Evaluated regional broadband needs and infrastructure, leading to designation of 12 CASF Priority Areas. Conducted similar project with the East Bay Broadband Consortium, assessing 32 broadband needs in Northern California counties for the California Emerging Technology Fund (CETF). Developed a package of broadband development policies (based on 2013 work with the County of Santa Cruz), which was presented to local jurisdictions and highlighted by the California Broadband Council (CBC) with formal adoption scheduled for 2015. Conducted a regional fiber survey and mapped long haul, middle mile and last mile fiber routes, which was distributed to local policy makers and published in interactive format on the CBC website. Contracted with Chico State to produce a new broadband development resource website and currently working to launch an online policy bank. Organized and conducted presentations, meetings, and workshops including participation by ISPs, local agencies, associations, and other stakeholders.
Central Sierra Connect Broadband Consortium	$480,000	Amador, Calaveras, Tuolumne, Mariposa, Western Alpine	Successfully encouraged Cal.net, a Sierra Foothills-based ISP, to apply for CASF funding for projects in all five Central Sierra Connect Consortia counties. Worked with Columbia College on a Broadband Improvement Project (BIP) class mapping project. Obtained over 700 responses for the CPUC broadband map. Continued work on regional broadband sustainability planning, policy, and outreach in preparation for grant funding. Motivated three County Board Supervisors to attend the Rural Regional Broadband Forum and support action items. Supported the opening of an Innovation Lab (technology and training center) in Tuolumne County.

Regional Consortia	Grant Award	Counties	2014 Accomplishments
			Conducted a broadband survey and outreach for low income residents at the Thanksgiving food bank (150 surveys completed).
Connected Capital Area Broadband Consortium (CCABC)	$478,301	Sacramento, Sutter, Yolo, Yuba	Conducted significant community outreach supporting CASF Priority Area designations and encouraging community members to provide "public feedback" to the CPUC broadband maps. Promoted the greenhouse gas reduction benefits of broadband to local, state and federal initiatives, including work by the California Air Resources Board (AB 32 Scoping Plan update), U.S. EPA, and the California Office of Planning and Research. Also pitched broadband as a green strategy to ILG, RCRC, LGC, USDA Rural Development, NTIA, California Department of Technology, and SACOG. Assisted Yolo County in leveraging and implementing their countywide broadband strategic plan. (ongoing) Continued to develop partnerships and at-home connections for families residing in subsidized housing units in Sacramento. Produced a Digital Access Project to bring affordable Internet options to four high schools in communities with low income households (ongoing with the Scholarship Sacramento Project). Prepared outreach materials for school districts to disseminate regarding affordable high speed Internet service, computers, and digital literacy learning options. (accessible in English, Spanish and Hmong) Submitted proposals to conduct broadband panels (two accepted to date), and conducted significant community outreach supporting broadband adoption in low income families including but not limited to: Mutual Housing of California, Sacramento Housing and Redevelopment Agency, Mercy Housing, Davis Joint Unified School District in Yolo County, Teach for America and Sacramento City Unified School District Counselors. Produced a research report, ***Broadband as a Green Strategy: Understanding how the Internet can shrink our carbon footprint*** that included an extensive literature review on current research in the areas of Telehealth, Telework, E-Learning, Smart Energy, Smart Grids and Smart Farming. Produced a document, ***Broadband and the Environment: Technology Strategies for a Greener California***, for policy makers and planners regarding broadband in the context of meeting our state greenhouse gas emission goals. Joined/participated in the first and second AgTech Roundtable with regional leaders regarding the nexus between precision agriculture and broadband access. Testified at the Public Participation Hearings on the California Teleconnect Fund on behalf of the California Library Association. Interviewed and blogged about local leaders (e.g., Pat Furr from Computers for Classrooms), profiling them in the CCABC newsletter and website. Successfully convened three events on broadband infrastructure needs and priorities: (1) Yuba County re Yuba/Sutter infrastructure; (2) Broadband Solutions Meeting, Internet, Education and the Common Core Curriculum; and (3) Broadband Solutions Meeting: Is Broadband in Your Strategic Plan?

Regional Consortia	Grant Award	Counties	2014 Accomplishments
East Bay Broadband Consortium	$480,000	Alameda, Contra Costa, Solano, ABAG area	East Bay Broadband Infrastructure Initiative to improve quality, speed, and coverage of wireless, wireline, and fiber Broadband infrastructure in the East Bay. Presented to numerous city councils, boards of supervisors and business organizations on the importance of Broadband to economic development and vital public services. Encouraged local governments to adopt policies and ordinances to improve Broadband infrastructure. Located sample policies and General Plan Amendments are posted on the EBBC website. Surveyed county and city Broadband initiatives to assess progress in Broadband infrastructure in the region. Prepared a progress report f or Feb. 3, 2015 East Bay Broadband Consortium Summit. East Bay Connects Digital Inclusion Initiative to help bridge the digital divide in the East Bay Joined with OTX West, a leading East Bay computer refurbisher and installer, to establish the Digital Inclusion Solution, which includes a very low cost Broadband (under $10 a month and a free computer, free digital literacy training, and free tech support for new Broadband subscribers. Secured donations of 1,500 computers from Alameda County and 1,400 from Contra Costa County, which makes it possible to include a free computer as part of the Digital Inclusion Solution, making it a much more powerful offer. Prepared an East Bay Connects video that is being shown in the reception areas of the offices of employment and human services agencies highlighting the virtues of Broadband through a number of vignettes featuring members of the target populations and Broadband resources. Provided 48 Digital Inclusion Solution workshops, in which 284 people participated. Secured Broadband subscriptions from 496 people who took advantage of the Digital Inclusion to get low-cost Broadband and a free computer, free training, and free tech support. Made a major effort to enroll new Broadband subscribers into Comcast's Internet Essentials program, which was offered for free for the first six months if subscribers signed up in September and early October. Joined with Oakland Unified School District (OUSD) and OTX West to complete survey of Broadband access in the homes of Oakland students, which showed that 40% of Oakland students (14,000 students) do not have home computers and home access to the internet—constituting a digital equity crisis. Joined with OUSD and OTX West to design and launch the 1-To-1 Around the Clock initiative, incorporating the East Bay Connects Digital Inclusion Solution, with the goal of addressing this equity crisis by providing essentially all students with access to computers and the internet in school, after school, and in their homes in two years. Began exploration of expansion of 1-To-1 Around the Clock in other school

Regional Consortia	Grant Award	Counties	2014 Accomplishments
			districts in the region. EBBC received a $50,000 grant from CETF to participate in a School2Home Neighborhood Transformation project in Oakland, which will facilitate development of Integrated Human Service Teams in West Oakland. Joined with OTX West to pursue a grant from the Thomas J. Long Foundation for continuation and expansion of 1-To-1 Around the Clock, East Bay Connects, and the Digital Inclusion Solution in Oakland and throughout Alameda and Contra Costa Counties.
Eastern Sierra Connect Consortium	$480,000	Mon, Inyo, Eastern Kern	Conducted conferences to facilitate deployment conversations with political leadership, industry-specific stakeholders, and regional advocates. This includes the Annual Broadband Summit 2015, conducted in Ridgecrest, the Ranchers Workshop in Lone Pine, and the joint ESC/CETF Digital 395 Roundtable in Mammoth Lakes. Continued advocacy and networking to connect communities by encouraging ISPs to submit for CASF loan program. Race Communications was awarded funding to connect Boron, Crowley Lake, and Stallion Springs and applied for four other communities in most recent round of submissions. Continued bridging the digital divide through digital literacy classes with two iPad laboratories. The Senior Center program in Lone Pine was funded by a grant from the Pillsbury Foundation. In Ridgecrest, the program was completed with the Women's Center, and all free online resources have been marketed to libraries, schools, and other public agencies. Development and implementation of broadband policies was achieved in Inyo and Mono Counties. Effort continues in East Kern, but with renewed support from Ridgecrest officials, and Kern Supervisor Gleason. Second round of online case studies was launched and nears completion. Leadership throughout the region was engaged using, among other resources, the comprehensive case studies developed by ESC. This engagement has resulted in tremendous activity (particularly in Kern), where action teams are being assembled to address remaining underserved areas (Kern River Valley, and other remote areas). Partnership with CSU Bakersfield Small Business Development Center has continued to offer webinars on digital tools and development strategies for small businesses throughout the region. Viewing sites have been established in four locations with uplink and video-conferencing, encouraging local participation- Continued to gather data for mapping and area assessment to provide CPUC and local providers in order to address areas of need.
Gold Country Broadband Consortium	$480,000	Sierra, Nevada, Placer, El Dorado, Eastern Alpine	Worked with ISPs in all counties to identify unserved and underserved communities in efforts to bring those communities service. Identified "priority areas" in the region where access to broadband Internet services are sorely needed. Worked with State Department of Education to help both school districts and specific schools that need higher speeds in order to meet Common Core bandwidth demands. Contacted providers regarding possible extension off Digital 395 past Truckee and

Regional Consortia	Grant Award	Counties	2014 Accomplishments
			into Sacramento. Supported existing and new CASF grant applications within the region, including the proposed Bright Fiber and Plumas-Sierra projects. Facilitated numerous community meetings in the Consortium area in order to engage community members to support broadband deployment as a priority and to set up ground-truthing efforts. Met with political leaders from all five counties. Participated in CETF Broadband Summit in Redding, which set up networking opportunities with State, Federal and private organizations that support broadband deployment, as well as potential CASF applicants.
Inland Empire Regional Broadband Consortium	$480,000	San Bernardino, Riverside	The Inland Empire Broadband Infrastructure and Access Plan was completed and adopted by the Inland Empire Regional Broadband Consortium on November 6, 2014. The Inland Empire Broadband Infrastructure and Access Plan focuses on broadband priorities in Riverside and San Bernardino Counties. The Plan emphasizes broadband as a component of public infrastructure, economic development, housing, healthcare, and education, as well as the need to close the Digital Divide. The Plan identifies a "smart region" corridor that includes UC Riverside and its newly opened Medical School, Bourns, Inc., Loma Linda University and Medical Center, Esri (GIS global leader), Cal State San Bernardino, Kelly Space and Technology, and the University of Redlands. The Plan addresses the need within the Inland Empire for broadband serving small business, start-ups. and growing businesses. The Plan uses case studies to emphasize that broadband availability, speeds, quality, and cost matters for business growth and sustainability. The Plan addresses the importance of access and affordability of broadband in the Inland Empire, especially related to small businesses, public housing, low income families, the disabled, veterans, and seniors. Established unserved and underserved broadband priority areas in the Inland Empire region for both Riverside and San Bernardino counties that need broadband and are eligible for CASF Infrastructure and Public Housing Broadband funding. Established a priority list of action for regional leaders, community stakeholders and local government to improve broadband infrastructure to support economic growth and close the Digital Divide. Fostered and provided technical assistance for CASF Infrastructure Grant Applications for San Bernardino County unserved and underserved Priority Areas listed in CPUC Resolution T-17443 and the Inland Empire Broadband Infrastructure and Access Plan, which resulted in four CASF applications submitted to the CPUC for the communities of Helendale; Phelan and Pinon Hills; Wrightwood; and, Red Mountain, Searles Valley, and Trona. Provided technical assistance to the Anza Electric Cooperative, which is now in the process of submitting a CASF Infrastructure Grant Application to the CPUC for the Riverside County unserved and underserved Priority Area of Anza, Mountain Center, and Pinyon Pines, which is listed in CPUC Resolution T-17443 and the Inland Empire Broadband and Infrastructure Access Plan. Attended the CPUC CASF Broadband Public Housing Grant Workshop on March

Regional Consortia	Grant Award	Counties	2014 Accomplishments
			25, 2014 in Los Angeles with Housing Authority staff from both Riverside and San Bernardino Counties. Assisted the Housing Authority of the County of San Bernardino, the City of Riverside Housing Authority, and the County of Riverside Housing Authority to identify, analyze, and prepare projects for the CASF Public Housing Broadband Grant Program released by the CPUC in December 2014. The housing authorities are planning to submit multiple CASF broadband infrastructure and adoption grant applications to the CPUC in early 2015. Partnered with the California Emerging Technology Fund (CETF) and the Inland Empire Economic Partnership to include broadband as a priority in the region for economic development, government policies and programs, housing, workforce development, and healthcare. Participated in the City of Ontario Municipal Fiber Network Forum held March 11, 2014. Supported Digital 395, the broadband high speed fiber project that serves the Barstow area within San Bernardino County. Outreach efforts throughout the year included consortium meetings focusing on the need for improved broadband in the Inland Empire, priority unserved and underserved areas, smart community policies and actions, closing the Digital Divide, broadband mapping, CPUC CASF infrastructure and public housing broadband funding for unserved and underserved communities, FCC Rural Broadband Experiment funding, and USDA Community Connect grants. Outreach also included discussions with Internet Service Providers, local government officials and staff, civil engineers, IT professionals, and housing and commercial developers to consider including broadband conduit and/or fiber in new developments, as well as in public infrastructure projects, such as new highway corridors, rail projects, transportation projects, paving, and local capital improvement projects.
Los Angeles County Regional Broadband Consortium	$2,310,000	Los Angeles – 5 distinct sub-regions under the LACRBC	The Los Angeles County Regional Broadband Consortia actively engaged in helping to close the digital divide in several technologically underserved communities throughout its five sub-regions. Sub-regional leaders helped to increase the digital pulse by promoting broadband access, deployment and adoption as a part of its overall goal and everyday activities. LACRBC sub-regional leads continued to meet regularly during 2014 to discuss best practices, challenges, accomplishments and other topics relevant to digital literacy and adoption. <u>COLLABORATIVE EFFORTS</u> *Broadband Adoption*: One of the more challenging tasks in 2014 was finding low-cost Broadband offers which met minimum criteria including coverage, speed and price points. However, with new partnerships formed and increased low-cost offerings, the LACRBC verified **1617** new broadband subscriptions during 2014 due to its efforts to promote adoption in underserved communities. *Digital Literacy & Computer Access*: Collectively, the LACRBC membership provided **10,618** students with digital literacy skills and over **15,514** end-users with open computer lab access. Individuals were able to search for employment, do homework, complete college applications and many other online

Regional Consortia	Grant Award	Counties	2014 Accomplishments
			activities. LACRBC members also worked with the City of Los Angeles and the California Emerging Technology Fund to help fashion a digital inclusion program providing refurbished computers to low income populations. *Countywide and Town Hall Meetings*: Sub-regional leads held local and countywide town hall meeting resulting in over **1,678** stakeholders being informed of the benefits offered through the CPUC California Advanced Services Fund. LACRBC members were also invited to participate in and/or speak at, several events to inform attendees about the LACRBC, its activities and broadband goals as well as CPUC offerings and opportunities *Los Angeles County Fair:* The LACRBC participated in the Los Angeles County Fair for its third time, meeting and exceeding its goals of distributing broadband and promotional literature to attendees. Moreover, outreach efforts also included conducting demographic surveys from several hundred people in line with stated outcomes. Over **10,000** pieces of broadband literature was distributed. *Outreach / Community Events:* In addition to the LAC Fair, the LACRBC team attended over **97** community events, resulting in **9,400** pieces of broadband literature and promotional materials being distributed. In addition, **1440** surveys were conducted for inclusion in the LACRBC 3-year summary. *Telehealth:* Three of the sub-regions offered some type of Telehealth learning component. Gateway Cities provided Skype for Health workshops, Central West provided an overview of the benefits of Telehealth within its curriculum, while South Bay conducted virtual wellness workshops at senior housing facilities. *Advocacy:* In an effort to help shape policy, the LACRBC leadership actively supported and participated in broadband initiatives aimed at closing the digital divide in Los Angeles County communities. Moreover, the LACRBC actively engaged stakeholders on the Infrastructure and Public Housing grants and loans available under the CPUC California Advanced Services Fund.
North Bay-North Coast Regional Broadband Consortium (NBNCBC)	$250,000	Marin, Mendocino, Napa and Sonoma	The NBNCBC focused on engaging local leadership and obtaining community involvement, assessing unmet broadband needs throughout our counties, identifying priority areas, and incorporating these needs into community-based last-mile plans. NBNCBC initially identified 30 Priority Areas for the four-county region and submitted these to the CPUC. Many were considered "served" based on mobile broadband data. The Consortium launched a major ground truth testing project for these areas using the CPUC's standing protocol for mobile testing. Phase 1 and 2 have been completed, results analyzed, and a report submitted to CPUC asking that these areas be eligible for funding based on testing results. A new layer on the State Broadband map will be added to reflect this data. Three new Priority Areas have been identified (Napa) and Phase 3 testing will begin in January of 2015. County managers met with local providers to understand their current

Regional Consortia	Grant Award	Counties	2014 Accomplishments
			offerings and future plans, and encourage and facilitate the development, funding, and implementation of specific projects for unserved and underserved areas. Each county has developed a preliminary fiber backbone planning map to highlight proposed middle mile fiber routes to reach as many underserved areas of each county as possible. These county-based plans will then be incorporated into a comprehensive, regional-based plan and used to develop a long-term strategy to keep deployment and adoption rates at or above standards throughout the region. In Mendocino County, the Broadband Alliance (the lead advocacy group working with the consortium) held regular public outreach meetings, and have produced a comprehensive report on a recent 3-day internet/phone outage from a single-point ATT fiber break that affected an estimated 20% of the county population, including basic 911 services. The county Executive Office posted this report on their website (http://www.co.mendocino.ca.us/bos/incidentreport.htm), and sent it to various state and federal regulatory agencies to encourage legislation that would increase diversity and redundancy requirements for rural broadband networks. Sonoma County offered Hispanic computer training classes in Guerneville with 35 beginning computer students ranging in age from 18 to 60. County managers from Sonoma and Mendocino spoke with representatives from Homeland Security regarding the non-redundant 911 systems in our counties and resultant outages. The local Native American Indian Rancheria (Kashia Band of Pomos) was encouraged to apply for Community Connect Grants, and four affordable housing agencies applied for CASF Housing Grants. Napa County has put together an internal working group consisting of County Manager Anthony Halstead (Napa County Library, ITS Head), Jon Gjestvang (a Board of Supervisor representative) and one other member of the ITS Dept. , In collaboration with the Sheriff's Office, the region identified three priority areas for their county which would benefit from ground-truth testing scheduled to begin in Jan 2015. Marin's management team includes a private telecom consultant with extensive experience in telecommunications, the manager for the County Enterprise Systems, and Executive Director for the Marin Telecommunications Agency (MTA). The inclusion of mobile wireless data unfortunately converted all four Marin priority areas submitted to the CPUC to a "served" designation (the only county in NBNCBC to experience such 100% conversion), and so Marin officials are gratified to see that the consortium ground truth testing has been successful in proving these areas eligible for grant funding, and the corrected figures are of critical importance to the Marin Broadband Task Force as they work with providers to secure CASF applications.

Regional Consortia	Grant Award	Counties	2014 Accomplishments
Northeastern California Connect Consortium	$479,991	Butte, Lassen, Modoc, Plumas, Shasta, Siskiyou, Tehama	In conjunction, the Northeastern CA Connect Consortium and the Upstate California Connect Consortium conducted the following activities. Transferred fiscal agency from CENIC to CSU, Chico, w/Geographical Information Center as lead sponsor. Identified forty-seven* (47) different communities as "Priority Areas" to entice ISPs/WISPs as potential applicants for CASF infrastructure grant applications; due to lack of population density and low return-on- investment (ROI) opportunities, thirteen (13) were removed and thirty-four (34) communities were ultimately included in Resolution T-17443, Implementation of New Timelines for CASF Applicants (June 2014). Revisited previously conceived countywide backbone systems and community last-mile plans for each county, determined that w/out comprehensive access to middle mile backhaul the upstate counties will continue to lag. Maintained communication with each county's Board of Supervisors, and the Rural County Representatives of California (RCRC), especially regarding SB 740, and seeking continued funding for regional consortia. Distributed CPUC's Validation of Broadband Availability survey to entire database and each county. Convened 2nd Broadband Roundtable on behalf of Commissioner Catherine Sandoval, 42 attendees represented 9 counties; repeat of last year's themes, punctuated by the fact that Northern CA still lacks the infrastructure for middle mile backhaul, hence insufficient access to reliable, redundant, consistent bandwidth. Engaged Congressional Candidate Heidi Hall for CA's 1st District*, whose future platforms include broadband as a primary issue (*incumbent Doug LaMalfa). Per Broadband Availability Data from Rounds 9 and 10, re-evaluated original "Priority Areas", determined that although the use of "mean minus 1 standard deviation" relegates several hundred Census Blocks from "served" to "underserved", mobile broadband availability data "as advertised" still puts northern CA at serious risk for lagging development of critical, fundamental middle mile broadband infrastructure. Hosted prospecting meeting for MacQuarie Capital Group (an Austrailan Investment corporation, recently awarded Kentucky's Next Generation Information Highway, or "I-Way", State Infrastructure project), exploring possibilties of the "P3" business model for development of middle mile infrastructure in northern CA, with long-term, public utility benefit (30-yr ROI). Developed & distributed the "Broadband Availability Ground-Truthing Guide." Initiated the development of five (5) infrastructure grant applications (pending), per Resolution T-17443 Implementation of New Timelines for CASF Applicants (June 2014), including at least twelve (12) communities of the "Priority Areas."
Pacific Coast Broadband Consortia (BCPC)	$300,000	San Luis Obispo, Santa Barbara and	The consortium launched three unique countywide (Ventura, Santa Barbara & San Luis Obispo) task forces involving participation from elected officials and local government, private business and economic development organizations, telecom and cable companies, and the private sector.

Regional Consortia	Grant Award	Counties	2014 Accomplishments
		Ventura	Established a local GIS database for stakeholders to share mapping information and commenced the collection of broadband infrastructure and adoption plans from municipal governments across the region. Conducted an awareness campaign to inform public officials of the opportunity and imperative to support and participate the regional effort. Media reports appeared in the Pacific Coast Business Times, Ventura Star (including an editorial opinion endorsing the focus on broadband), San Luis Obispo, and Government Technology, a national industry publication (http://www.govtech.com/local/Consortium-Forms-to-Push-for-Faster-Internet-Access-in-Calif-Tri-County-Area.html). Conducted workshops focused on policy and standards for projects and secured commitment for ongoing conversation, identification of best practices, and process improvements for accelerated adoption. Established an online forum enabling the collaboration of stakeholders (https://bcpc.groupsite.com/login) and mechanisms to conduct a business survey and ground truth data collection for the stakeholders across three counties.
Redwood Coast Connect Consortium	$480,000	Humboldt, Del Norte, Mendocino, Trinity	Working closely with the Karuk and Yurok Tribes to assure the success of the regional consortia Increased the capacity of the counties' Board of Supervisors to participate in State and Federal broadband policy decisions. Found a successful former CASF Grant recipient to work with leaders in Trinity and Humboldt county to prepare a CPUC application for Highway 299! Both county Board of Supervisors voted unanimously in late 2014 to support the creation of Digital 299. Held a successful annual regional broadband forum to bring leaders, providers, and consumers of broadband together to share successes and challenges around policy, adoption and deployment in the region.
San Diego Imperial Regional Broadband Consortium	$480,000	San Diego, Imperial	SDIRBC has dramatically improved the accuracy of CPUC maps via extensive surveys, both from the CalSPEED application and both web-based and paper surveys. In 2014 , went from one "dot" on the CPUC's broadband map to more than 2,400 "dots". This shows specific locations with gaps of service and allows the consortia to be strategic with their ongoing adoption efforts. Southern California Tribal Digital Village (SCTDV) has upgraded their service capabilities by .5 GB. This upgrade has eliminated bottlenecks in current services and has helped connect 100 new homes providing broadband services to more than 350 residents. San Diego County Office of Education and Cox Communications continue to work together through the *Connect to Compete* program. In 2014, they hosted 40 events through San Diego County where more than 2,500 computers were distributed to low income students and their families with the opportunity to receive discounted Internet Service along with a discounted computer system.

Regional Consortia	Grant Award	Counties	2014 Accomplishments
			SCTDV released a report in partnership with the University of California, Santa Barbara on broadband traffic patterns within the 17 Indian Reservations. This report shows how customers are using broadband, specifically with inbound and outbound network activity and connectivity. SDTDV will use this report to make their network more efficient and reliable and allow for a broader cross section of usage. More than 500 individuals were trained on broadband and internet capabilities through various awareness campaigns, *Get Connected! And BTOP Programs,* in communities throughout San Diego and Imperial Counties. As the BTOP Program came to a close in 2014, customized training programs are underway in specific communities. These programs will continue to train residents on basic email and internet searches, to advanced online banking applications. SDIRBC \started an application for CASF infrastructure funding that would provide new adoption services to 400 to 500 homes. Specifically in Imperial County, 40 refurbished computers where distributed to students, including foster youth. Imperial Valley Office of Education continues to provide technical assistance to maintain wifi networks at public libraries and other shared spaces.
San Joaquin Valley Regional Broadband Consortium(SJ VRBC)	$480,000	San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, Kern	The "Get Connected!" grant work in the San Joaquin Valley was designed to help the State achieve its goals to close the digital divide and connect Californians to the Internet. As Internet usage and technology become further integrated in to our daily lives, it is critical that San Joaquin Valley residents are not left behind. These efforts in closing the digital divide are inclusive to those families facing financial difficulties, senior citizens, and people with disabilities. The lack of broadband infrastructure and high cost of internet service hinder families from getting connected. Today we work in partnership with the California Emerging Technology Fund (CETF), Fresno State, Youth Centers of America, Great Valley Center, School Districts in the San Joaquin Valley and other community partners to close the digital divide. The work accomplished in 2014 by "Get Connected!" San Joaquin Valley helped increase broadband adoption via school and community partnerships. Today, this collaborative effort helps the San Joaquin Valley remain economically competitive and has help promote increased educational opportunities, e-commerce, business development, and improve quality of life. In 2014, well over 1,200 new internet adoptions in the San Joaquin Valley were registered and documented. 12 School Partnerships were established and 4,500 computers, iPads, and internet hotspots were provided to low income families. In addition, through the work with the GetConnected! grant, San Joaquin Valley worked with Verizon Wireless, obtaining a new cell site being constructed at Orosi for expansion of 4G network, deployment of wireless internet service to rural area of Cutler-Orosi. Parent University, a program of the "Get Connected!" San Joaquin Valley, provides low income parents with opportunities to develop their digital literacy skills, and the ability to apply those skills in ways that enhances the prosperity of their households. In 2014, Parent University participants went beyond hardware

Regional Consortia	Grant Award	Counties	2014 Accomplishments
			and software functions and learned how to responsibly and safely use the Internet for the benefit of themselves and their children. Components of the Parent University program, for example, utilized technology to teach participants how to become more engaged in their children's education. Other program activities taught participants how technology can be used to (1) access information and services for employment, health, education, personal finance, citizenship, etc,; (2) communicate responsibly; and (3) consume and vend effectively. Parent University trainings were delivered in participants' native language. The program goal is to convey to participants that Internet access is no longer a luxury but a necessity. In 2014, well over 213 Parent University classes were taught in Madera, Merced, Stanislaus, San Joaquin, Kings and Fresno County. The average class had 20 participants. Parent University provides mobile labs equipped with Laptops and Internet hot spots at participating school and community facilities. USDA Rural Development representative was a featured panelist on the Infrastructure Development Panel at the CA Partnership Annual Summit in September 2014. His focus was on the deployment of Broadband infrastructure to support agriculture technology (AgTech) throughout the San Joaquin Valley. Staff participated in the Governor's AgTech Roundtable in November 2014. This gathering included various government, private sector, and non-profit stakeholders convening to discuss rural broadband network development. One of the projects will involve West Hills Community College and Farm of the Future students to conduct a grower AgTech needs survey and celluar coverage study. SJVRBC continues its work on accelerating the deployment, accessibility, and adoption of broadband within the Valley's eight county region. By working closely with our public and private partners the goal is to improve broadband access in the Valley and close the digital divide in the San Joaquin Valley.
Tahoe Basin Project (Part of Gold Country Broadband Consortium)	$167,000	El Dorado and Placer	*High Speed Internet Expansion:* Completed mapping of broadband service in the project area, including eligibility for state and federal subsidies and an evaluation of the population density and revenue potential of under and unserved areas. Held in person and phone meetings with incumbent and potential competitive Internet service providers to discuss possible projects eligible for California Advanced Services Fund grants and loans. Identified potential middle mile solutions for prospective last mile service and infrastructure upgrades. Began the process of evaluating and prioritizing potential partners and projects. Completed Round 1 speed test and survey outreach. There were over 1,100 speed tests conducted and over 600 surveys completed. All speed test data and relevant survey data were compiled and given to the CPUC for posting on the state's interactive, as well as the TPC maps. Community outreach continues through presentations to service and business groups, elected officials and one on one meetings with concerned/interested

Regional Consortia	Grant Award	Counties	2014 Accomplishments
			businesses and residents. Documentation continues on underserved and unserved areas not represented on the map. *Cell Service Expansion:* Held meeting with local regulatory agencies and cell provider/tower companies to discuss their interest in participating in a feasibility analysis of each company's collective five year plans. The goal of the feasibility analysis is to identify the areas of common interest in expanding cell coverage and thereby determining the best co-location spots for those areas with the greatest mutual interest. All companies expressed interest in participating. Individual meetings have been conducted or are scheduled with the interested companies and appropriate regulatory agencies to discuss the input needed for the feasibility analysis. The goal is to receive the completed input forms from the participants by the end of February 2015 for review, revisions and then plotting. Regulatory agencies will conduct the feasibility analysis over the following three months and future co-location sites on public lands will be determined as a result of that analysis.
Upstate California Connect Consortium	$478,184	Colusa, Glenn, Lake, Sonoma	In conjunction, the Northeastern CA Connect Consortium and the Upstate California Connect Consortium conducted the following. Transferred fiscal agency from CENIC to CSU, Chico, w/Geographical Information Center as lead sponsor. Identified forty-seven* (47) different communities as "Priority Areas" to entice ISPs/WISPs as potential applicants for CASF infrastructure grant applications; due to lack of population density and low return-on- investment (ROI) opportunities, thirteen (13) were removed and thirty-four (34) communities were ultimately included in Resolution T-17443, Implementation of New Timelines for CASF Applicants (June 2014). Revisited previously conceived countywide backbone systems and community last-mile plans for each county, determined that w/out comprehensive access to middle mile backhaul the upstate counties will continue to lag. Maintained communication with each county's Board of Supervisors, and the Rural County Representatives of California (RCRC), especially regarding SB 740, and seeking continued funding for regional consortia. Distributed CPUC's Validation of Broadband Availability survey to entire database and each county. Convened 2nd Broadband Roundtable on behalf of Commissioner Catherine Sandoval, 42 attendees represented 9 counties; repeat of last year's themes, punctuated by the fact that Northern CA still lacks the infrastructure for middle mile backhaul, hence insufficient access to reliable, redundant, consistent bandwidth. Engaged Congressional Candidate Heidi Hall for CA's 1st District*, whose future platforms include broadband as a primary issue (*incumbent Doug LaMalfa). Per Broadband Availability Data from Rounds 9 and 10, re-evaluated original "Priority Areas", determined that although the use of "mean minus 1 standard deviation" relegates several hundred Census Blocks from "served" to

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			"underserved", mobile broadband availability data "as advertised" still puts northern CA at serious risk for lagging development of critical, fundamental middle mile broadband infrastructure. Hosted prospecting meeting for MacQuarie Capital Group (an Austrailan Investment corporation, recently awarded Kentucky's Next Generation Information Highway, or "I-Way", State Infrastructure project), exploring possibilties of the "P3" business model for development of middle mile infrastructure in northern CA, with long-term, public utility benefit (30-yr ROI). Developed & distributed the "Broadband Availability Ground-Truthing Guide." Initiated the development of five (5) infrastructure grant applications (pending), per Resolution T-17443 Implementation of New Timelines for CASF Applicants (June 2014), including at least twelve (12) communities of the "Priority Areas."

Attachment H – Broadband Availability Paper Survey

CALIFORNIA PUBLIC UTILITIES COMMISSION
BROADBAND AVAILABILITY PUBLIC FEEDBACK SURVEY

Note: We have created a different method for testing your mobile (i.e., cellular) broadband service. If you use an android mobile device (not yet available on iOS), please download the State's mobile broadband app, CalSPEED, from the Google Play app store and use it to test broadband service quality at your location. Additionally, you may provide your responses via the Online-map survey at www.broadbandmap.ca.gov/map.

What is the street address of the location you are reporting? (P.O. Box is not a valid location)

1. Street Address _____

City_____, CA Zip Code_____

2. Is broadband Internet service other than satellite available at this address? Yes_____ No_____

3. Do you subscribe to broadband Internet service other than satellite at this address? Yes_____ No_____

3.a. Who is your current broadband Internet service provider? _____

3.b. Are you satisfied with your current broadband Internet service? Yes_____ No_____

Please use www.speedtest.net to measure speeds of your "fixed service" and tell us the results here:

3.c. Download speed: _____ Mbps **3.d.** Upload speed: _____ Mbps

4. Which broadband Internet service providers told you they were unable to p rovide service at your address?

_____

_____

Please sign below to have your address shown as a point location on the California Interactive Broadband Map along with any information you submit regarding broadband service at that address. This information will be used for determining the availability of broadband in California and will be publicly accessible. Your name and email will not be disclosed on the map. If you have any questions, comments, or concerns, please write them on the back of this form. Feel free to contact us at broadbandfeedback@cpuc.ca.gov or call us at (415) 703-5469. The California State privacy policy can be found at http://www.ca.gov/privacy.html.

Name: _____ Email: _____

Signed: _____ Date: _____

Please send via mail to:

Broadband Feedback
Attn: Owen Rochte
Communications Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Attachment I – Broadband Availability Validation Methods

Method	Wireline	Fixed Wireless	Mobile
FCC 477 (DVCA)	✓	✓	
BroadBand Scout	✓	✓	
TeleAtlas wire centers	✓		
CPUC mobile field tests			✓
CalSPEED mobile tests			✓
Provider supplied subscriber addresses	✓	✓	
Public feedback	✓	✓	✓