

NORTH BAY NORTH COAST BROADBAND CONSORTIUM (NBNCBC)						
COMPLETION REPORT YEARS 1-2						
Activities	Who Managed	Estimated Completion Date	Actual Completion Date	Outcomes or Deliverables	Accomplishments	Total Cost to CASF
<b>1. ENSURE COMMUNITY INVOLVEMENT</b>						
1.1. Engage Community Leadership 1.2. Maintain Community Commitment throughout the two years	County Teams	12/31/2014 6/30/2016	12/31/2014 6/30/2016	<p><b>1. Oversight Committee</b>--The four boards of supervisors have been engaged from the outset. They appointed one supervisor to serve on the NBNCBC Oversight Committee. This Committee met quarterly (8 times) over the two years. Each NBNCBC County Manager met frequently with his/her Board Supervisor to brief and discuss issues associated with the work of NBNCBC. Each County Team provided the full Board of Supervisors with update on the work of NBNCBC, at least annually and in a couple cases reports to the County CAO on a quarterly basis.</p> <p><b>2. Advisory Groups</b>--Mendocino (BAMC) and Sonoma (ASB) each have an advisory committee with countywide representation. These advisory committees met more than 12 times with participation from education, libraries, public safety, tribal communities, businesses, government agencies and residents of communities. Marin formed the Marin Broadband Task Force (MBTF) with representatives from county government agencies. MBTF met with the County Supervisor frequently, at least once a quarter. Napa's task force was similar to Marin's, but was less active.</p> <p><b>3. Involvement of Communities</b>--The NBNCBC county teams actively met with leaders in many of the 39 underserved and unserved priority communities to ascertain interest and willingness to contribute to going forward with the broadband infrastructure that had been identified as needed in these communities. This resulted in focusing our efforts on a few communities within each county.</p> <p><b>4. Media</b>--NBNCBC's web site was maintained as part of the Mendocino web site; four (4) semi-annual newsletters were issued by NBNCBC; several newspaper articles about broadband needs have been published; and, radio programs broadcasted, as a result of the work of NBNCBC.</p> <p><b>5. State and Federal Elected Officials</b>--NBNCBC has engaged Congressman Huffman and his staff; State Senator Mike McGuire; and Assemblymembers Jim Wood and Marc Levine. They have been kept informed of our activities and we have worked with them on broadband issues and legislation. Staff from Huffman's office attend the Oversight Committee meetings.</p>	<p><b>1. Counties Growing Commitment</b>--Over the two years the county government leadership-Boards of Supervisors and CAOs-have become aware of the importance of broadband to the economic development of the county and region and to its importance to their residents. We believe the work of NBNCBC has caused these county leaders to embrace the deployment and quality of broadband services as part of the county's infrastructure needs.</p> <p><b>2. Advisory Groups are Invaluable</b>--These groups have worked hard to make all residents, businesses and anchor institutions cognizant of the importance of broadband to the future of their county. They have served as a forum for community groups, including providers, to work on positive solutions.</p> <p><b>3. Community Awareness Increased</b>--Folks in underserved and unserved communities now have advocates (NBNCBC county teams) working to help them plan for their needs.</p> <p><b>4. Media Engaged</b>--The various forms of media are actively engaged in informing the public of the broadband issues and opportunities.</p>	\$ 24,903.10
<b>2. ASSESS, DOCUMENT AND MONITOR UNMET BROADBAND NEEDS</b>						
2.1 Assess Broadband Demands and Needs Throughout Each County and Region	NBNCBC and County Teams	6/30/15	3/31/15	<p><b>1. Priority Communities Identified</b>--Before NBNCBC the CPUC had requested the regional consortia and counties to submit their "unserved" and "underserved" priority areas for inclusion in CPUC's Resolution T-17443, approved on June 25, 2014. Mendocino, Sonoma and Marin counties had submitted 30 priority areas and designated them as either "unserved" or "underserved". Napa later identified nine (9) areas. NBNCBC used these 39 priority areas as the basis for launching its work.</p> <p><b>2. NBNCBC Questions Data on the CPUC Availability Maps</b>--The official California Broadband Availability Map, stated that 22 of the initial 30 priority areas were designated as being "served", including 13 priority areas that are only serviced by mobile wireless. NBNCBC expressed its concern that stand-alone mobile wireless should not qualify as a replacement for fiber-based broadband infrastructure to serve households, but only as a complement. CPUC staff suggested NBNCBC prove that the providers' advertised speeds in the California Broadband Availability Map for specific priority areas were incorrect through ground truth testing evidence.</p> <p><b>3. Mobile Wireless Ground Truth Testing Project</b>--NBNCBC launched a multi-faceted ground truth testing effort across the counties to test wireless speeds. Fixed wireless and mobile wireless speeds. The primary purpose of this effort was to validate or refute the claims of the advertised download and upload speeds reported to the CPUC by the providers in the NBNCBC priority areas. Based on the 732 field tests across 26 of the 39 priority areas and the subsequent independent analysis only two areas were designated as being "served" and the other 24 NBNCBC priority areas should be designated either as "unserved" or "underserved". NBNCBC requested CPUC to officially change the current designations of "served" to either "unserved" or "underserved" and that these data be used to update the California Broadband Availability Map.</p> <p><b>4. Focus on Selected Priority Areas</b>--Each county team worked with the "unserved/underserved" priority communities and by self-selection a subset became the foci for moving forward with intense planning.</p>	<p><b>1. Ground Truth Testing Completed</b>--Ground Truth testing validated our belief that all but two of the 26 priority areas tested lacked the existence of mobile wireless availability at the CPUC standards. In some small way this project may have influenced CASF staff to question the appropriateness of mobile wireless qualifying as broadband.</p> <p><b>2. Unserved/Underserved Communities emerged as the focus for pursuing projects</b>--As a result of the ground truth testing the Marin team focused its work with the Nicasio community. Sonoma worked with the Greater Joy Road community; and Mendocino has worked with several communities including Albion, Sherwood Road/Willowbrook, Gualala and Fort Bragg/Westport.</p>	\$ 73,328.26
2.2 Consult and Involve Major Anchor Service Entities in the County (Education, Library, Public Safety, Health Facilities and Local Governments)	County Teams	6/30/16	6/30/16	<p><b>5. Understanding Needs of Anchor Service Providers</b>--The county teams initially met with representatives from: 1) County Office of Education, 2) County Public Safety, 3) County Library and 4) Health Facilities to ascertain their status with broadband and their future needs. The schools and libraries are part of CENIC's CalREN network; Public Safety is part of federal initiative, and some health facilities are part of the Cal Telehealth Network. From the perspective of NBNCBC these "silo" approaches present a challenge to developing a comprehensive broadband strategy for each county and the region. While acknowledging the existence of these "silos" NBNCBC maintained close working relationships with these anchors over the two years. In June 2016 a meeting was held with CENIC, Cal Telehealth Network and the county anchors. Progress was made on working together.</p>	<p><b>3. County-based Service Providers Engaged</b>--Each county team involved representatives from education, library, health facilities, public safety, government agencies in its work, as appropriate.</p> <p><b>4. CENIC, Cal Telehealth and Public Safety</b>--It looks like there will be an opportunity to collaborate with CENIC and Cal Telehealth going forward. We anticipate the same with Public Safety.</p>	
<b>2. ASSESS, DOCUMENT AND MONITOR UNMET BROADBAND NEEDS (CONTINUED)</b>						
2.3 Involve and Work with Telecommunications Providers	NBNCBC and County Teams	6/30/16	6/30/16	<p><b>1. Working With Major Providers</b>--At the beginning of the grant period, fifteen (15) providers that service the 39 NBNCBC priority areas were invited to meet with NBNCBC to discuss their plans to implement infrastructure and offer services in those priority areas. AT&amp;T and Verizon, the two major providers in this region, rejected the invitations to meet. T-Mobile and Sprint, the third and fourth largest providers did not respond to either the invitation and attempts to follow-up. Comcast, Sonic, U.S. Cellular and Willis Online met with NBNCBC and indicated a willingness to work with NBNCBC in specific areas. There were also initial conversations with Central Valley Cable, 101 Netlink, INTEGRA, by various members of NBNCBC. Subsequently, AT&amp;T, Comcast and Sonic have met with various county teams.</p> <p><b>2. Working with Local WISPs</b>--NBNCBC Management and the county teams have met and worked with a number of local WISPs throughout the two years. For instance, we met with the De Novo Group (Further Reach), Soakay and Novato (Marin County) to discuss potential collaboration on deploying broadband in various priority areas in the counties. The Mendocino team has continued to work with each of these providers.</p> <p><b>3. June 2016 Meetings with Providers</b>--Meetings were held with current providers serving one or more of the counties: Comcast, Frontier, Sonic, Digital Path, Cal-Neva, Seakay, Further Reach, and Valley Internet, to ascertain their plans for increasing services into our priority areas. While there was not much new information shared, Frontier, as a result of acquiring Verizon wireline in our counties, has been very cooperative. Senior Frontier folks recently visited Mendocino and Sonoma.</p>	<p><b>5. Telecommunications Providers Informed</b>--Both at the NBNCBC and county levels every effort has been made to involve the major and local providers in the work of NBNCBC. To date the results are mixed. We keep them posted of our activities, but have a challenge in getting information about their plans from them. Sonic is the most forthcoming. We are hopeful Frontier will be too.</p>	
2.3 Involve and Work with AT&T	NBNCBC and County Teams	6/30/16	Ongoing	<p><b>1. AT&amp;T Service Outages</b>--On Thursday, September 3rd, 2015 at 9:55 a.m., the northern California coastal region experienced a telecommunications network failure that resulted in the loss of various services in the 3-county region of Mendocino, Humboldt, and Del Norte, affecting thousands of residents, businesses, and public agencies. This outage was due to a single-point of failure in inter-office facilities operated by the Incumbent Local Exchange Carrier (ILEC), AT&amp;T California. Similar network failures had occurred from Novato (August 2014) to Suisun City along the Route 7 corridor severely impacted 8 communities along the Mendocino Coast. Smaller failures have occurred in Covelo (700 people, 3 hours on August 27, 2015) and Laytonville (Spring 2015). Outages with significant impact have occurred in Humboldt County as well. Most recently on December 9th, a widespread outage caused the loss of services for an estimated 90,000 residents. The lack of infrastructure diversity and redundancy is a major concern.</p> <p><b>2. Follow-up Actions Taken</b>--Prior to the September Outage, Steel/BAMC held meetings between county staff and AT&amp;T (June, August, and then October) to improve communications and work out protocols. The Outage caused Congressman Huffman to host a Broadband Working Forum on November with participants from a wide range of entities, including AT&amp;T's VP Marc Blakeman. In January 2016 the Mendocino Board of Supervisors sent a report done by Steel, "September 2015 Telecommunication Outage and the Impacts on Residents of Mendocino County" to Assemblymember Woods with copies to Congressman Huffman, State Senator McGuire, the CPUC and others.</p> <p><b>3. AT&amp;T's Response</b>--At the Huffman meeting Blakeman stated AT&amp;T is planning to upgrade its two-way capabilities in the counties it serves and a major announcement would be made within several weeks. In January he gave verbal presentations to the Humboldt, Mendocino and Sonoma Boards. AT&amp;T's plans to go fixed wireless to serve the communities using CAF funds. Mendocino wanted written plans. Since January Senator McGuire has hosted meetings with AT&amp;T and supervisors from the four counties. He plans more meetings in the near future.</p>	<p><b>1. We have AT&amp;T's Attention</b>--As a result of the Mendocino team, Trish Steel, and the effort to document the September 2015 outage, county, state and federal officials are now involved and have kept the pressure on AT&amp;T. Now we will see if and how AT&amp;T responds.</p>	
<b>3. INCORPORATE NEEDS INTO COUNTYWIDE AND COMMUNITY-BASED PLANS</b>						
3.1 Develop Countywide Plan	County Teams	6/30/16	In Process	<p><b>1. Two Developing Countywide Broadband Plans</b>--Mendocino and Sonoma are now intent of developing a countywide broadband plan. At the start of the CASF grant period both were hopeful that by working with the current providers they would come up with a countywide conceptual design. This design would then be used to determine what infrastructure existed and where there were gaps that would need to be built. Unfortunately the major providers with fiber in the ground were unwilling to share information. So, to date, both counties only have a conceptual design developed. Each now plans to proceed in Years 3 and 4 to develop a countywide broadband plan. Sonoma proposes to use a planning consultant. Mendocino has formed a planning task force to undertake the work.</p>	<p><b>1. Awareness of the Need for a County Plan</b>--Sonoma and Mendocino are now organized to proceed with developing a formal countywide broadband plan.</p>	\$ 53,046.16
3.2 Assist Communities to Develop and Implement Broadband Access Plans	County Teams	6/30/16	6/30/16	<p><b>1. County Teams Work with Selected Unserved/Underserved Communities</b>--With the results of the ground truth testing in hand the county teams met with representatives in several of the unserved/underserved communities and then zeroed on specific communities to work with on broadband plan/projects.</p> <p><b>2. Marin Team</b>--The Marin team started working with the leadership of the Nicasio community. A potential provider was identified, however, after several months it was decided that relationship would not work. They then reached out to PRAXIS/Inyo Network, a company with a track record elsewhere in California, but not in our region. Inyo Network, assisted by the Marin team and the Nicasio community, developed a project and submitted for a CASF Infrastructure grant.</p> <p><b>3. Sonoma Team</b>--Early on the Sonoma team had preliminary engineering studies and cost estimates done for Greater Joy Road, Cazadero and Dry Creek communities. The Joy Road community was ready to go. Key local providers were asked to undertake the project; all declined. The Sonoma team then reached out to Race Communications, a company with a track record elsewhere in California. Race Communications, assisted by the Sonoma team and Joy Road leadership, developed the Occidental plan and submitted for a CASF Infrastructure grant.</p> <p><b>4. Mendocino Team</b>--The Mendocino team initially focused on Gualala to Albion/Road 409, and Sherwood Road/Willowbrook. They worked with Further Reach (FR), a UC Berkeley group, with a research grant, that had just deployed fixed wireless capabilities in the Gualala community to see if they could undertake other areas along the coast. After months, FR decided it could not seek CASF funding. In Central-Inland county the team contacted NCI about the possibility of going into the Sherwood Road and hosted a tour of the area. NCI determined it would not be a cost-effective, even with a CASF grant. In Central-Northern county US Cellular was contacted about its plans to upgrade its services in Mendocino and discussed with them the potential of seeking a CASF grant. US Cellular decided not to pursue a CASF grant but did upgrade services in 2015.</p>	<p><b>1. Three CASF Grants Pursued</b>--As a result of county team efforts three CASF Infrastructure grant applications were submitted; Inyo Networks--Nicasio has been approved; Race Communications--Occidental (Greater Joy Road) has been recommended for approval; and, Sea Ranch Association--Sea Ranch has been rescinded, but is going on its own.</p> <p><b>2. NON-CASF Projects Launched</b>--In other instances local providers have stepped up to increase services, but without seeking a CASF grant. Assistance was offered to providers to develop the CASF grant application, and work began with Further Reach on an application which ultimately was not completed due to barriers. However, limited deployment has occurred in areas. Further Reach--Gualala, Point Arena, Albion; North Coast Internet (NCI)--Central-Inland Mendocino; Seakay--Westport; U S Cellular--Central Northern Mendocino; and Sonic--in several communities in Marin and Sonoma counties.</p>	
<b>4. INTEGRATE NEEDS INTO REGIONAL PLAN</b>						
4.1 Aggregate Regional Needs 4.2 Develop Time Action Plan for Regional Plan	NBNCBC Team	6/30/15 6/30/16	6/30/15 6/30/16	<p><b>1. Regional Middle Mile Backbone Needed</b>--Based on the data collected and analyzed NBNCBC determined a major need for a fiber-based middle mile infrastructure along the Route 101 Corridor from the Bay Area to the Oregon and from Novato (Marin County) to Suisun City along the Route 7 corridor to: 1) facilitate economic development in the region; 2) create a more competitive and cost-effective environment for broadband services to this region; and, 3) to put into place a comprehensive capability that would provide the resiliency and redundancy currently lacking.</p> <p><b>2. Conceptual Design Developed</b>--NBNCBC developed a high-level conceptual design that consisted of five segments: Segment #1-200 Paul Street in San Francisco to San Rafael; Segment #2-San Rafael to Santa Rosa; Segment #3-Novato to Suisun City on Route 80; Segment #4-Santa Rosa to Route 36 in Humboldt County; and, Segment #5-Route 36 to Oregon Border.</p> <p><b>3. Conducted Feasibility Analysis and Cost Estimates</b>--A consultant completed a feasibility analysis with a very preliminary design and "budget" cost estimate to deploy a fiber-based middle mile infrastructure on two segments--Segment #4--the Route 101 corridor between Santa Rosa in Sonoma County and the Route 36 intersection in Humboldt; and Segment #3 along Route 37 corridor between Novato in Marin County through Napa County to Suisun City on Route 80. Segment #4 will not only serve as the regional backbone but it will be an integral part of the Mendocino and Sonoma countywide backbone plans. Likewise, Segment #3 will be a vital link for Napa County both east and west. The planning consultant estimated a rough cost of \$68 million to deploy these two segments--\$55 million for Segment #4 and \$13 million for Segment #3.</p> <p><b>4. Plan of Action Laid Out</b>--As part of NBNCBC Year 3 and 3 Action Plan a time action plan for pursuing the full development and implementation of the Regional Middle Mile Backbone is in the NBNCBC Specific annual work plans.</p>	<p><b>1. Awareness of the Need and a Commitment to Pursue Implementation</b>--When the work of NBNCBC started in 2014 it was generally accepted that there was adequate diverse, redundant and resilient middle mile fiber-based infrastructure deployed throughout the region to meet our needs into the long-term future. Only after digging for information to confirm that belief did we come to the realization the existing middle mile infrastructure lacked diversity and redundancy. Furthermore, we learned that one major provider controlled most of what existed causing local providers to be dependent upon that company. NBNCBC believes it vital to the economic development of the region to ensure there is a robust, diverse and redundant regional middle mile backbone, as well as countywide backbones that connect all the communities to that regional backbone.</p>	\$ 12,902.62
<b>5. FACILITATE ADOPTION AND TRAINING PROGRAMS</b>						
5.1 Update Data on Existing Adoption Programs 5.2 Facilitate/Assist Community Organizations with their Adoption Programs	County Teams	3/15/15 6/30/16	11/15/15 6/30/16	<p><b>1. Two Assessment Reports Produced</b>--Mendocino completed a comprehensive assessment of free public access computer availability and digital literacy programs that are found throughout the county in March 2015. The full report - <i>The Availability of and the Needs for Adoption Programs in Mendocino County</i> was distributed to BAMC's email list of over 400 people, and is posted on the BAMC website. The report identified a significant need in most areas of the county for digital literacy classes and public access to free use of computers and Wi-Fi, especially the rural and coastal areas, where many people do not have access at home. Sonoma developed and distributed a survey to gather data on existing adoption programs. <i>The Sonoma County Adoption Report</i> was published in November 2015. The results showed that current programs are clustered around the Highway 101 corridor. Additional funding is necessary to provide training in rural areas by anchor institutions and social service, not for profit agencies.</p> <p><b>2. County Teams Work With Community Groups</b>--Napa developed a two-year project plan to provide broadband access and adoption training to as many as 500 migrant workers who reside in the three county-owned and operated farm worker centers throughout the year. <i>Napa County Farmworker Housing Centers: Two Year Broadband Adoption, Training and Access Program</i>. Napa continues to look for funding to make the program operational. The Marin County Board of Supervisors and the MTA have charged MBTF with the responsibility to support broadband adoption programs, with funding from the county budget along with use of franchise fees from MTA. MBTF has 3 target communities for adoption programs including: The Canal Area neighborhood in San Rafael, the Hamilton section of Novato, and Marin City in the unincorporated area of Southern Marin. Mendocino (BAMC) has worked with 9 school districts to develop a digital literacy program and submitted the proposal for private funding (Bechtel and Cisco). Unfortunately, to date BAMC has not found funding for the program but efforts are on-going. BAMC successfully applied to the CETF/Frontier grant program on behalf of the Cal Healthy Start.</p>	<p><b>1. Increased Awareness of Need for Adoption Programs</b>--While NBNCBC's efforts have been primarily focused on facilitating the deployment of broadband to underserved areas, these efforts of the county teams to assess and facilitate adoption programs has increased awareness of the need for such programs.</p> <p><b>2. Established a Digital Literacy Program in Marin City</b>, in Marin County, the Marin Telecommunications Agency, the County of Marin and other non profits partnered to establish a ten computer lab in Marin City that is used for digital literacy training for low income youth and seniors/adults.</p>	\$ 8,443.70
<b>6. EVALUATE THE PERFORMANCE OF THE CONSORTIUM</b>						
6.1 Conduct an overall evaluation of NBNCBC's performance	NBNCBC Team	6/30/16	6/30/16	<p><b>1. Self-Evaluation Process</b>--During the final quarter of the CASF grant the NBNCBC Management Team conducted a self-evaluation of the consortium's performance. Brian Simmons ran the evaluation process. Interviews were conducted with each county team and Oversight Committee member. The quarterly reports to CASF were reviewed and compared to the activities in the various annual work plans.</p> <p><b>2. Final Report</b>--A final report was written, vetted, distributed and posted on the NBNCBC web site.</p>	<p>See above for the accomplishments by activity.</p>	\$ 1,607.00
<b>TOTAL</b>						\$ 174,293.84
Describe Consortium accomplishments in terms of goals and objectives in original Action Plan (cite pages).						
In the original NBNCBC Action Plan the stated goals, were for a 3-5 year period. Our original CASF grant request was three years with a total of \$450,000, or \$150,000 per year, under the limits set by the CASF program. CASF awarded us a two year grant of \$250,000, or \$125,000 per year. When asked about the two year grant we explained that we believe NBNCBC made significant progress towards achieving these long term goals over the first two years as a consortium in the following ways: 1. Identified the 39 underserved/unserved priority areas; 2. Met with residents in most of these areas making them aware of the need and possibilities; 3. Facilitated the development of three CASF Infrastructure grant applications with one award, one pending approval and one rejected but going on its own; 4. Facilitated the development or expansion of services by current providers with their own funds; 5. Started work on developing countywide plans in two of our counties; 6. Identified the need for a regional middle mile backbone along Route 101 and develop a preliminary design and cost estimate for two segments; 7. Assessed the needs for adoption and training programs and facilitated county groups to						
Describe how Consortium impacted broadband deployment and/or access and adoption as a result of activities and accomplishments.						
During the first two years of its existence the primary focus of NBNCBC was on the need for and to facilitate the deployment of broadband throughout the four counties with an emphasis on unserved and underserved communities. We believe we had a big impact. And, we have been able to set a clear course as to what is still needed to advance the economic development of the counties and region and to provide our residents, and businesses and anchor entities the same quality of broadband services enjoyed in other parts of California.						
Perhaps the most important impact NBNCBC has made these past two years is getting our elected leaders at the federal, state, county and most communities engaged and understanding the importance of the deployment and adoption of broadband to our future. They have all worked hard on helping to make this happen.						