

BROADBAND DEPLOYMENT
HIGH PRIORITY COMMUNITIES
CENTRAL COAST BROADBAND CONSORTIUM

COUNTIES

MONTEREY COUNTY

1. Greenfield
2. King City
3. Gonzales
4. Soledad
5. Castroville CDP
6. Chualar CDP

Explanation: Greenfield, King City and Gonzales were the highest ranked communities in Monterey County, per the methodology described below. Soledad, Castroville and Chualar were the three highest ranked communities on a regional basis that were not otherwise in a county's top 3.

SAN BENITO COUNTY

1. Aromas CDP & surrounding area
2. Airport/Northeast area
3. Cienega Road area

Explanation: highest ranked communities in San Benito County, per the methodology described below. (CDP = census designated place).

SANTA CRUZ COUNTY

1. Pleasure Point/Twin Lakes CDPs
2. Soquel CDP
3. Brookdale CDP

Explanation: highest ranked communities in Santa Cruz County, per the methodology described below. The Pleasure Point and Twin Lakes are small and contiguous census designated places (CDPs) and comprise a single community for project (and practical) purposes.

COMMUNITY AND PROJECT AREA IDENTIFICATION

Census and regional GIS data was used to identify census blocks that are included within the boundaries of incorporated cities and census designated places. Please note, however, this analysis is an ordinal ranking exercise. Initially, it was assumed that even though there are adjacent census blocks outside of these boundaries that might or might not be eligible for CASF funding, any inaccuracy would be roughly evenly distributed and not affect relative rankings. This assumption held true for Monterey County and, it appears, Santa Cruz County.

San Benito County presented a special problem, though. There are only two incorporated cities and two CDPs, none of which had more than a handful of CASF-eligible people. On the other hand, there were more than 6,000 people living in “unattached” census blocks. These census blocks were analysed using a heat map technique that showed relative population density. Five areas with significant concentrations of unserved people and were added to the rankings. Two of the areas, Airport and Northeast, were combined into one, because of their proximity.

Another cluster was combined with adjacent census blocks belonging to the Aromas CDP, which straddles the Monterey County line. Since county borders matter little to project feasibility, while population density and concentration does, all census blocks were included in the San Benito County rankings. Likewise, we intend to assess census blocks just over the Santa Clara County line for inclusion in any projects that might serve the Airport/Northeast area.

Similar heat maps were generated for Monterey and Santa Cruz Counties. It was evident that there were no large concentrations of people outside of cities and CDPs. As a test, the Big Sur area had been ranked, and as predicted it fell far down the list. Santa Cruz County is very similar, however we plan to run a deeper cluster analysis there to determine if unattached population concentrations might serve as “glue” to bring together two or more cities/CDPs into a larger project area. It does not appear so, but it is a smaller county with numerous CDPs in close proximity so further investigation would be warranted at some point in the future.

When we move to the project development stage, all relevant census blocks in an area will be included in project proposals, whether strictly within the boundaries of a city/CDP or not. Consequently, the census block lists we will provide for inclusion in commission resolutions will include census blocks outside of city/CDP boundaries, as well as within. We recognise that not all census blocks may be funded, but service providers will be interested in building business plans that include all potential customers in a project area. Above all, we do not wish to simply flip the broadband haves with the have nots in our communities.

RANKING CRITERIA

We have two objectives: deliver the greatest amount of good for the greatest number of people and, necessarily, identify opportunities for broadband infrastructure projects that have the greatest likelihood of success. Three primary criteria were used to sort and rank census blocks:

1. CASF eligibility.
2. Social and economic impact on a community.
3. Feasibility of building a financially viable broadband infrastructure project.

CASF eligibility was determined using CPUC broadband availability data for consumer wireline carriers. If a census block did not have at least one consumer wireline carrier reporting service of at least 6 Mbps down and 1.5 Mbps up, it was deemed eligible.

Mobile service was not taken into account because both CPUC field tests and our own experience with mobile speed testing and qualification of areas for CASF funding shows that carrier advertising claims are not a good basis for assessing actual service availability. In most cases, mobile carriers fail to meet advertised or even CPUC-minimum performance levels.

There was only a small area of fixed wireless service reported in the CPUC data, in an area that previously received CASF money and is thus ineligible anyway. Therefore, the question of how to treat fixed wireless availability reports is moot for now. Commercial wireline service providers were not included in the assessment because they do not serve residences in the normal course of business.

Other census blocks were deemed ineligible and excluded from the analysis because their under and unserved status results from institutional factors: college campuses, state prisons and military areas.

CASF eligibility was treated as a yes/no criterion. No extra weight was given to unserved census blocks because 1. state law and CASF rules automatically give greater priority to unserved census blocks and 2. rational project design entails starting with denser, usually underserved, areas and moving out to sparser, generally unserved areas. The more underserved, as opposed to unserved, census blocks in an area, the more likely a project is to be reckoned financially feasible and actually built. If the goal is reaching unserved census blocks, then the journey must start in served and underserved areas.

Social and economic impact was measured by the number of people and community anchor institutions in an eligible census block, the proportion of the community that would be reached by CASF-funded projects, and median household income. The lower the income in an area, the higher the ranking.

Financial feasibility is measured by the same factors. Although business case analyses are usually done on the basis of households, population numbers serve for the purposes of ordinal ranking. Community anchor institutions are also potentially large customers. Likewise, the greater

the percentage of a community that is fundable, the better the business case. Population density was added as a rough comparison of construction costs – the denser the population, the lower the cost per subscriber, all other factors being equal. Lower household income would usually be considered a negative factor in a financial analysis, but its importance in measuring social and economic impact outweighed that consideration. Nonetheless, version 1.2 of the spreadsheet analysis includes a ranking done on the basis of higher household income for comparison purposes.

DATA

The data used in this analysis was obtained from the CPUC and U.S. Census Bureau. CPUC broadband availability data was used to identify census blocks with sub-standard service, which were then matched with the corresponding census data, as shown in Table 1. The same data was also extracted for the entire community, as shown in Table 2, for comparison purposes. The full set of data for the entire region is in version 1.2 of the spreadsheet analysis, which is also provided.

Community	Population	Households	Housing units	Anchor institutions	Area (sq mi)	Household Income
Greenfield	16,330	3,460	3,752	14	2.1	\$55,591
King City	12,874	3,008	3,218	19	4.0	\$49,747
Gonzales	8,187	1,906	1,989	7	1.9	\$55,251
Soledad	15,205	3,552	3,755	21	3.1	\$50,265
Castroville CDP	5,928	1,364	1,431	6	0.9	\$53,160
Aromas CDP & area	3,596	1,242	1,312	3	18.6	\$62,446
Chualar CDP	1,190	245	251	1	0.6	\$65,771
Pleasure Point CDP	1,043	485	603	0	1.5	\$46,608
Twin Lakes CDP	450	245	371	1	0.6	\$48,389
Airport/Northeast	2,768	895	954	2	38.7	\$77,175
Soquel CDP	496	288	311	0	0.1	\$76,639
Cienega Road area	173	58	59	0	1.5	\$64,659
Brookdale CDP	413	154	187	0	0.5	\$84,134
Total	68,653	16,902	18,193	74	74.0	

Table 1 – CCBC priority community data, CASF-eligible census blocks only, version 1.2

Community	Population	Households	Housing units	Anchor institutions	Area (sq mi)	Household Income
Greenfield	16,330	3,460	3,752	14	2.1	\$55,591
King City	12,874	3,008	3,218	19	4.0	\$49,747
Gonzales	8,187	1,906	1,989	7	1.9	\$55,251
Soledad	25,738	3,664	3,876	21	4.6	\$43,796
Castroville CDP	6,481	1,470	1,539	7	1.1	\$53,154
Aromas CDP & area	3,596	1,242	1,312	3	18.6	\$62,446
Chualar CDP	1,190	245	251	1	0.6	\$65,771
Pleasure Point CDP	5,924	2,689	3,131	1	2.0	\$52,693
Twin Lakes CDP	4,917	2,223	2,741	7	1.2	\$51,028
Airport/Northeast	2,768	895	954	2	38.7	\$77,175
Soquel CDP	9,644	3,912	4,107	5	4.6	\$76,472
Cienega Road area	173	58	59	0	1.5	\$64,659
Brookdale CDP	1,991	806	912		3.9	\$84,965
	99,813	25,578	27,841	87	85.0	

Table 2 – CCBC priority community data, all census blocks, version 1.2

RANKING

The above mentioned data was collected for every census block in the region, and aggregate data for the identified communities was pulled out. The communities were then ranked on each of five criteria: population (larger ranked better), percentage of a community eligible for CASF funding (larger ranked better), population density (larger ranked better), number of anchor institutions (more ranked better) and household income (smaller ranked better). These five rankings were then added together (with population weighted double) for each community, thus producing a raw score. These scores determined the final order: the lower the score, the higher the ranking.

This ranking was done on both a county-by-county basis and for the region as a whole. The three top ranked communities within each county were identified, with contiguous communities combined into a single project area and the next highest community moved up. Finally, the three highest ranking communities on a regional basis that were not included in a particular county’s top three were added to the respective list. All three of these regional “wildcard” communities were in Monterey County, which by far has the highest number of under and unserved homes.

REVIEW OF METHODS AND DATA

The methods and data used in this analysis were reviewed by our technical and economic development expert groups, and then posted as a workshop on Civinomics.com. Maps and spreadsheets were posted to the workshop as new versions were developed, and members of the community were invited to comment. To date, the workshop has had more than 500 page views and many comments and suggestions.

SUMMARY

We believe that this process has produced a list of high priority communities that will receive great benefits from CASF-funded broadband infrastructure, and be able to financially support those projects. Although this analysis was conducted independently of any particular project or prospective applicant, it is worth noting that all six of the communities identified in Monterey County as well as the Aromas community assigned to San Benito County are either on or close by the path of the proposed Sunesys middle mile project, or, in the case of Greenfield and King City, are the next logical steps down the road.

The needs are great in many of our region's communities, but so are the opportunities.