Central Coast
Broadband Consortium

CETF Priorities & Map Analysis

12 November 2014

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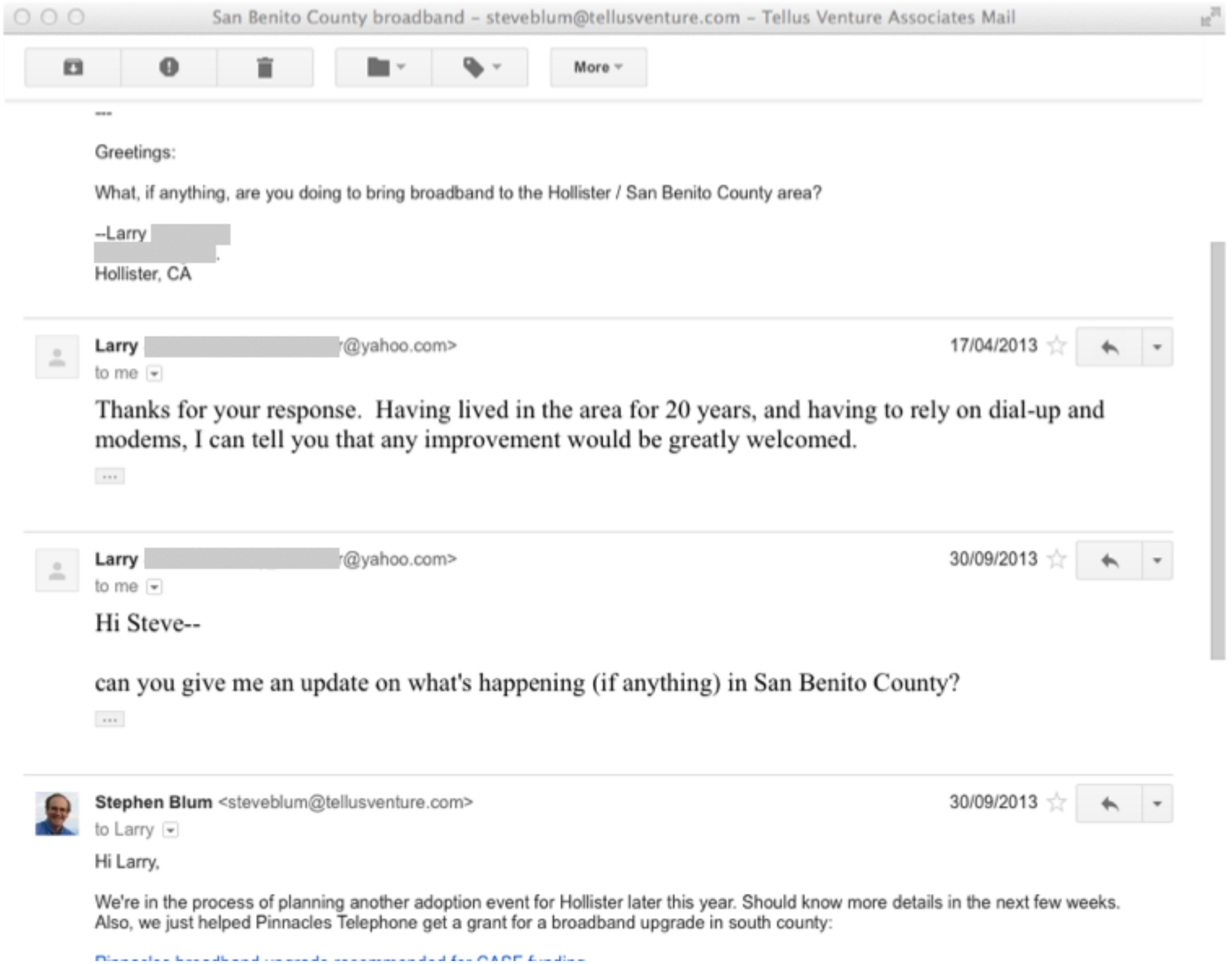
Tellus Venture Associates

Broadband development goals

1. Greatest good for the greatest number of people
2. Necessarily, identify feasible project areas

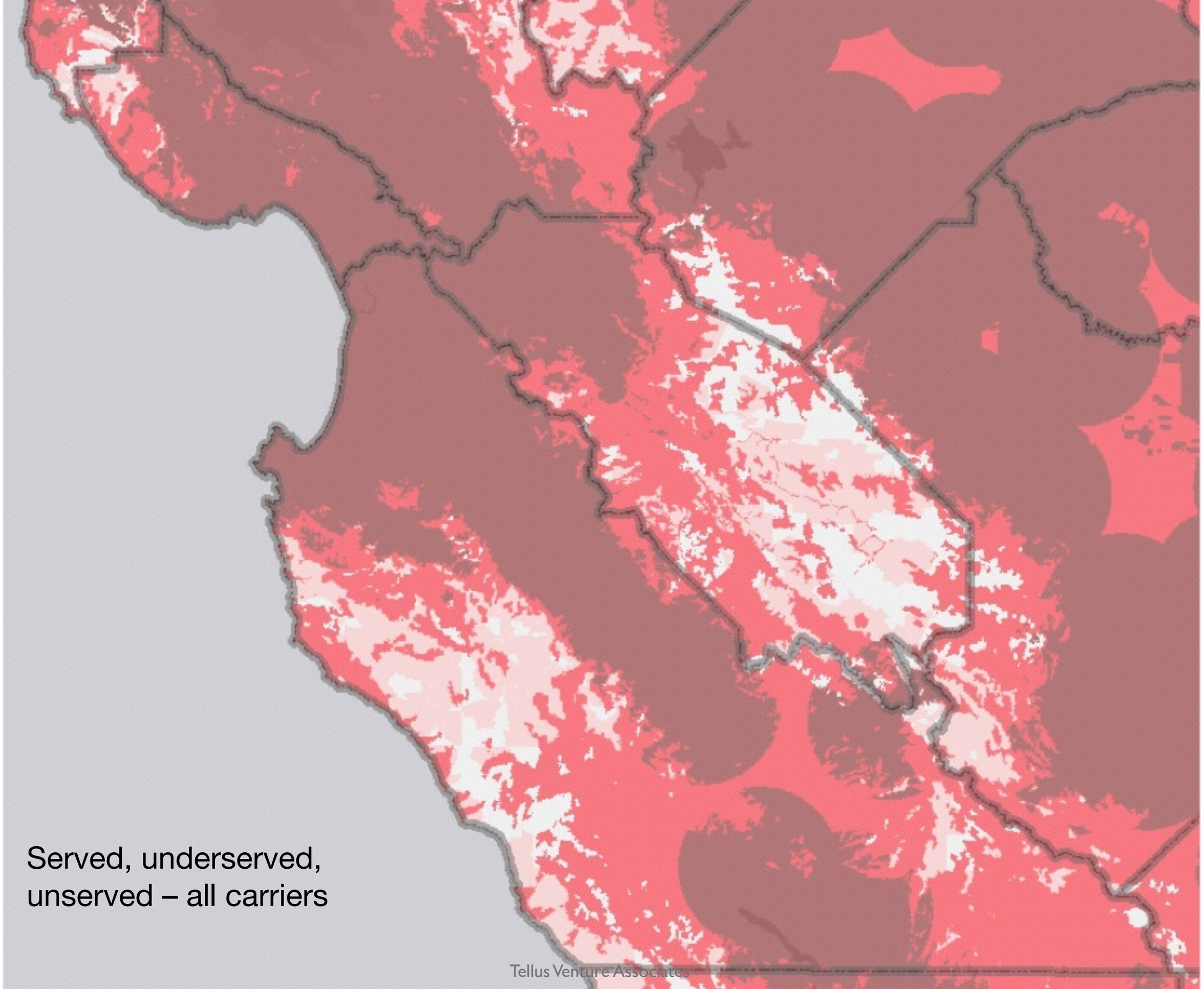
Get stuff built

Need to know where you should and where you can build



How do you find gaps & opportunities?

Relatively isolated anecdotes or a flood of data.


Served, underserved,
unserved – all carriers
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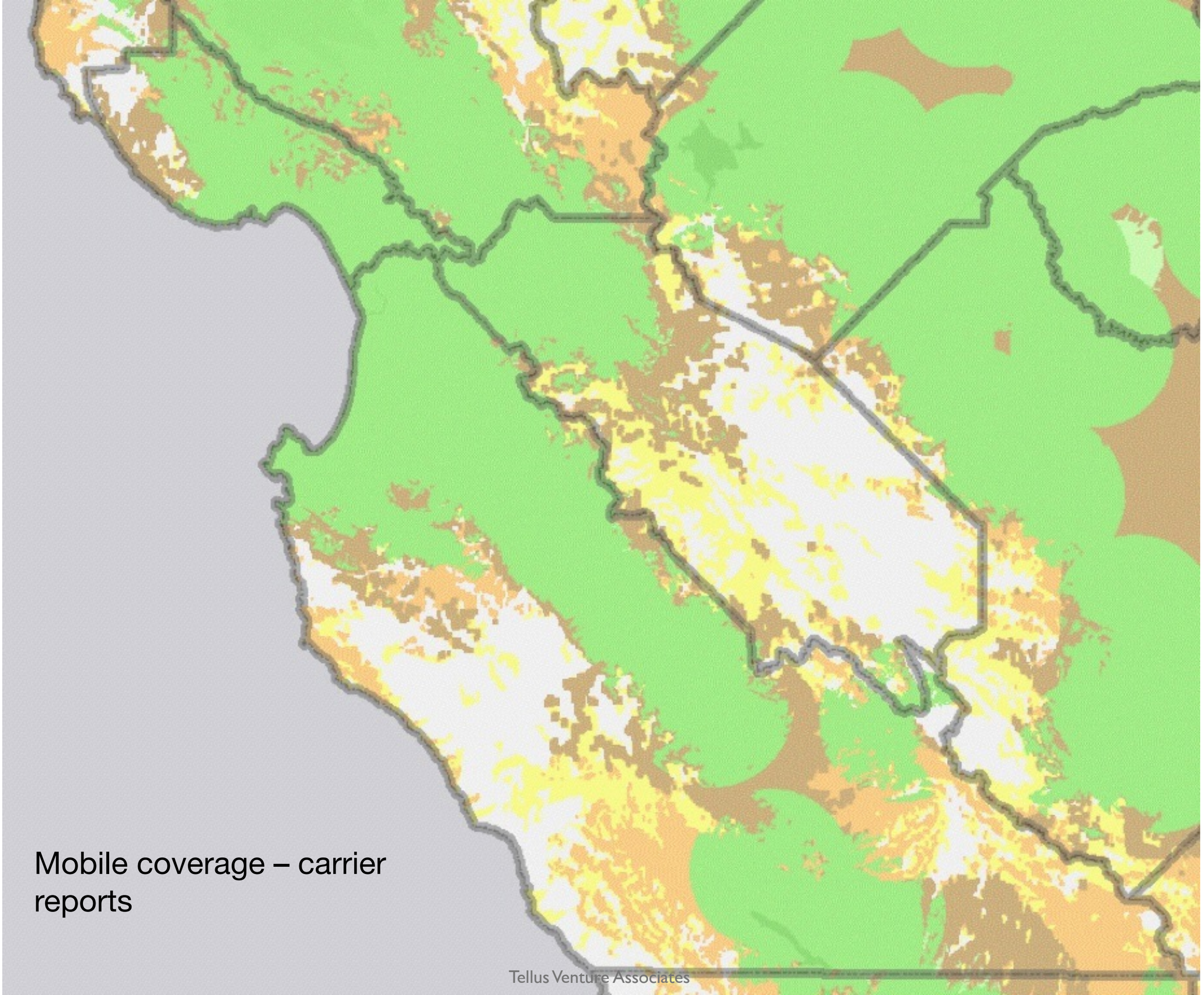
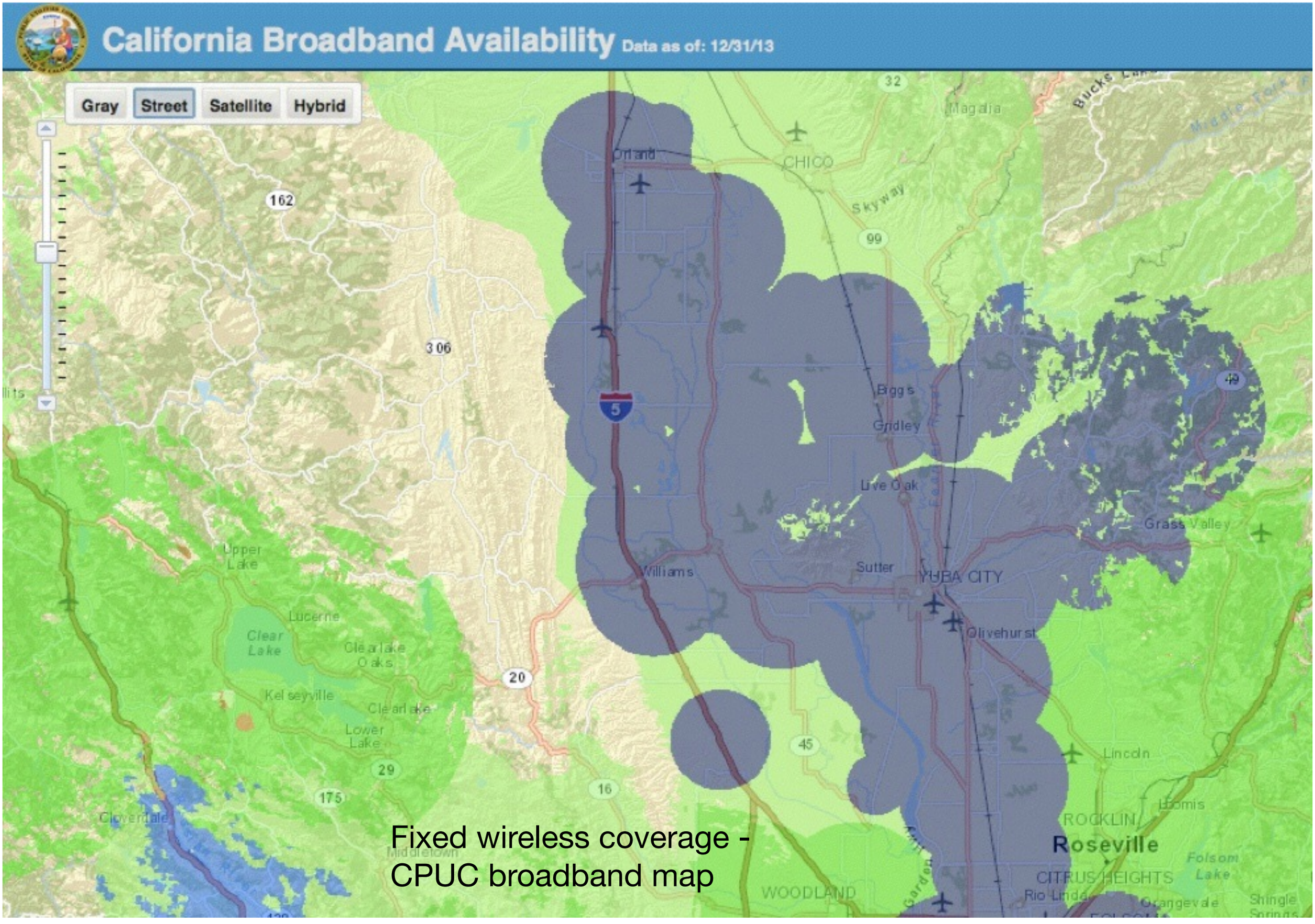
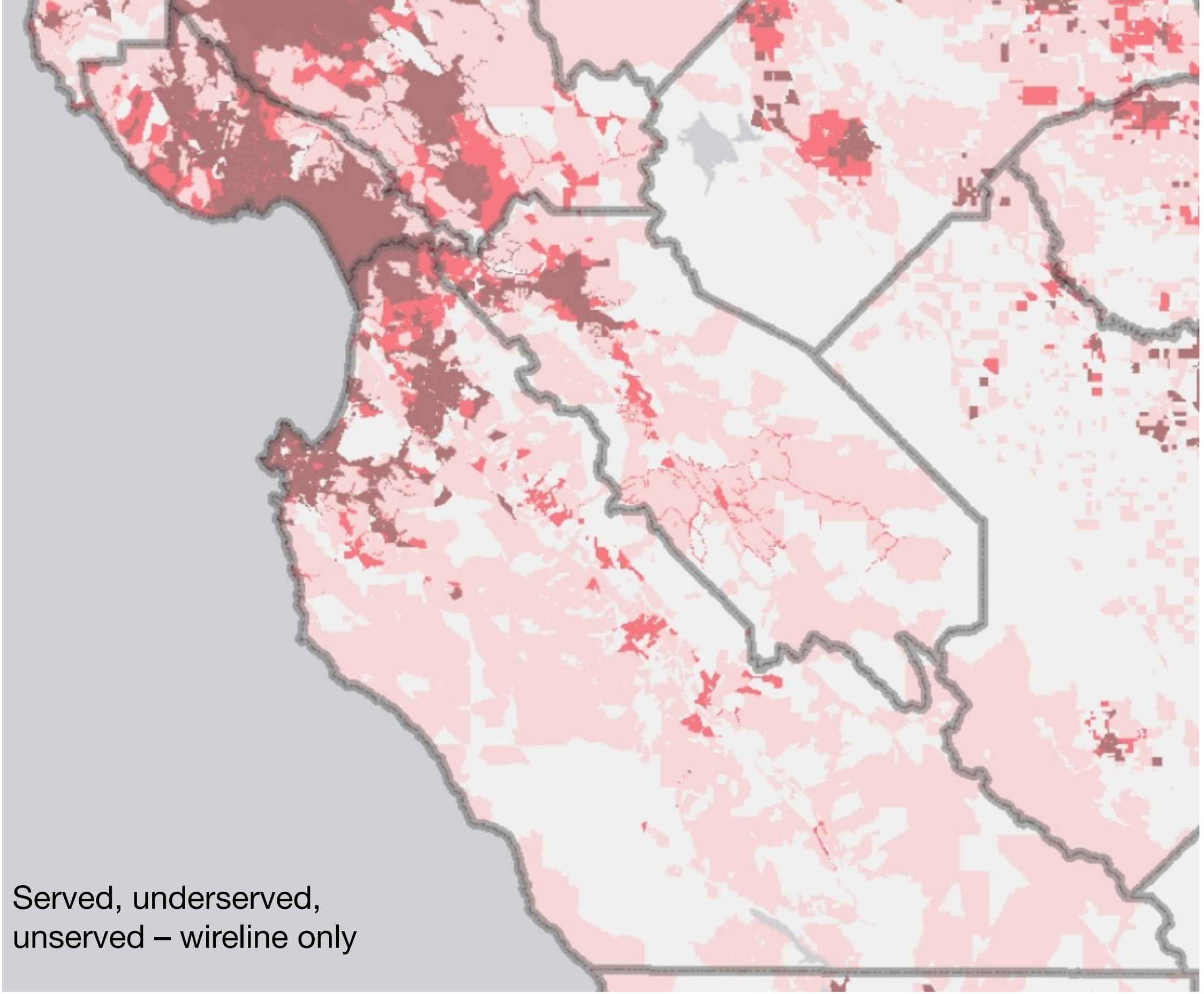


Mobile coverage – carrier reports

Mobile coverage – CPUC testing


California Broadband Availability
Data as of: 12/31/13
Gray
Street
Satellite
Hybrid
162
306
Upper Lake
Lucerne
Clear Lake
Clearlake Oaks
Kelseyville
Clearlake
Lower Lake
Cloverdale
29
175
20
16
Orland
CHICO
Magalia
Skyway
99
Biggs
Gridley
Live Oak
Williams
Sutter
YUBA CITY
Olivehurst
Grass Valley
Lincoln
Rocklin
Roseville
Folsom Lake
Citrus Heights
Rio Linda
Orangevale
Shingle Springs
WOODLAND
45
5
Fixed wireless coverage -
CPUC broadband map


Served, underserved,
unserved – wireline only

Primary broadband infrastructure analysis

- Only looked at carriers that actually own last mile, wireline infrastructure
- Consumer broadband infrastructure is a generally reliable indicator of all types of service availability and core infrastructure.
    - For example, most AT&T and Comcast construction to date is based on expected revenue from consumers.
- Evaluation is based on grading according to advertised download and upload speeds, which provides a relative comparison even when ground truth differs.
- Secondary providers are business oriented and do not file reliable service reports.
    - If you call, we'll tell you if we can serve you and how much it will cost.

Examples

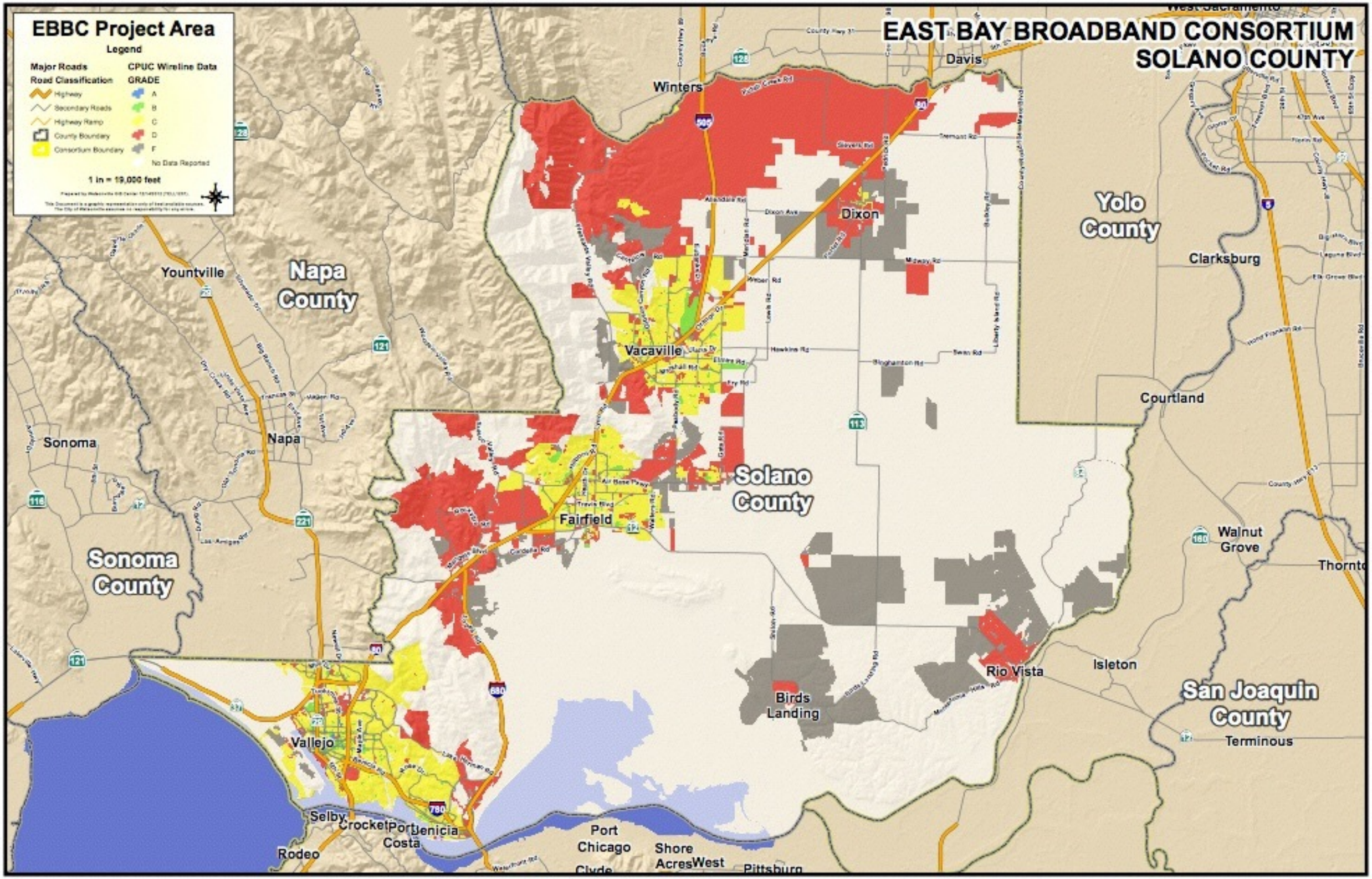
A — Astound (or Sonic) and/or Comcast and/or AT&T offering their best levels of service.

B — Comcast Xfinity cable modem service and mid-level AT&T Uverse DSL.

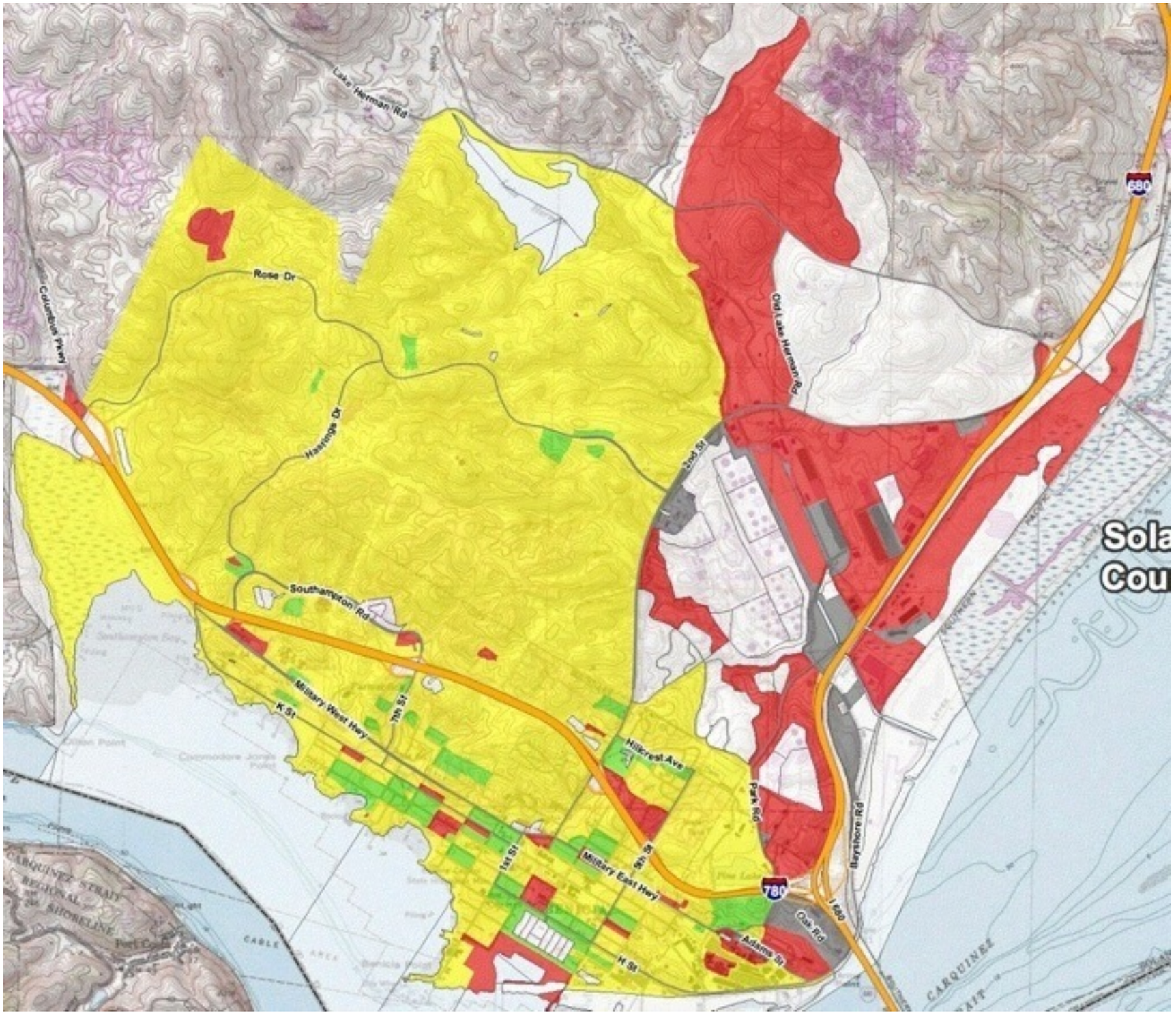
C — AT&T DSL and Comcast cable modem service.

D — Only one provider, e.g. AT&T or Comcast or Winters Broadband, meets spec.

F — Service via outdated DSL equipment or nothing at all.



Residential broadband availability grading by census block (unweighted)



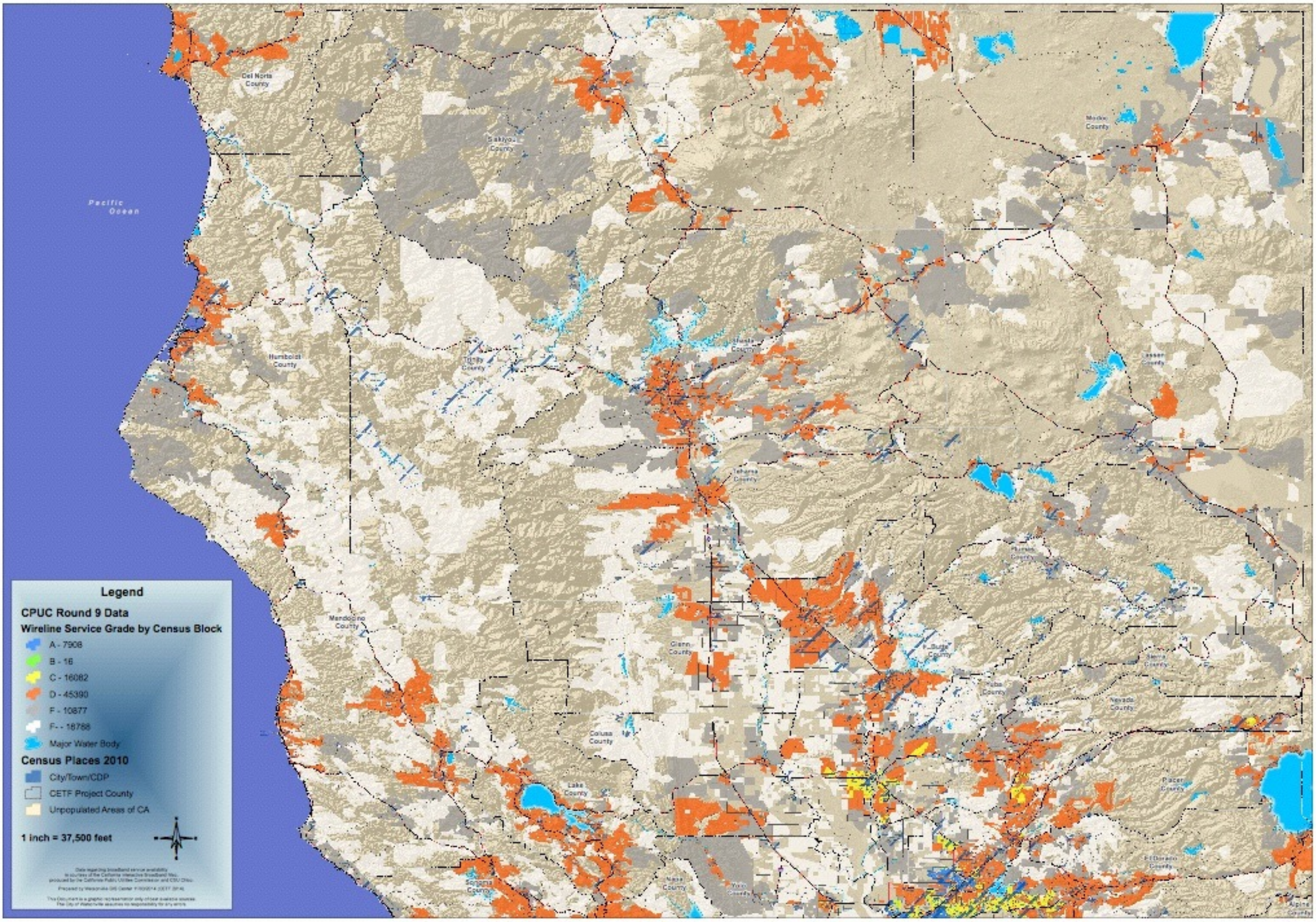
Broadband report card useful for comparison, urban analysis

Most of Northern California gets a “D” grade or worse.

CETF Communicate + Connect + Compete

CETF RURAL BROADBAND

Wireline Service Grades for Northern California



Make the business case

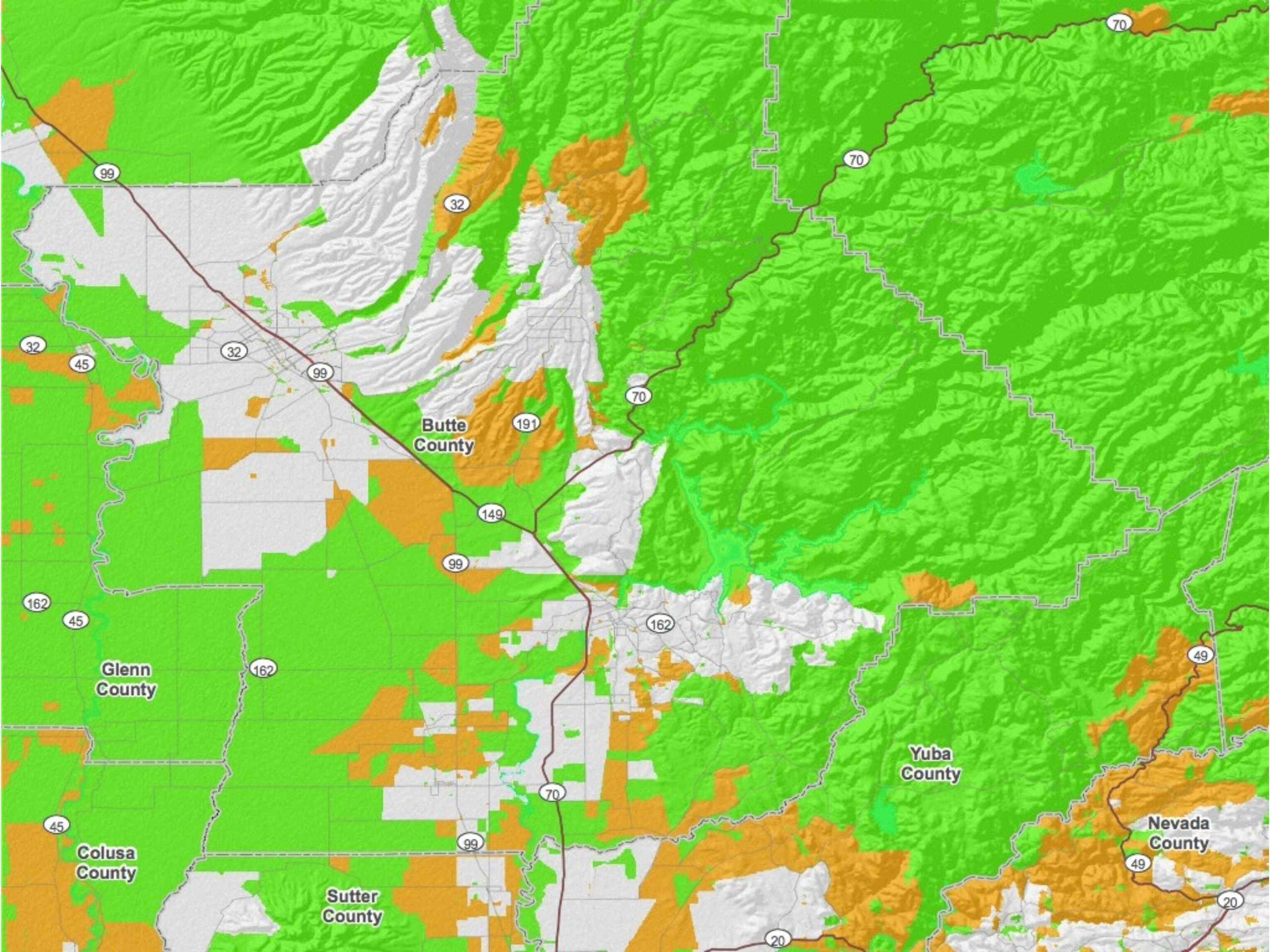
- Find the money to build and operate

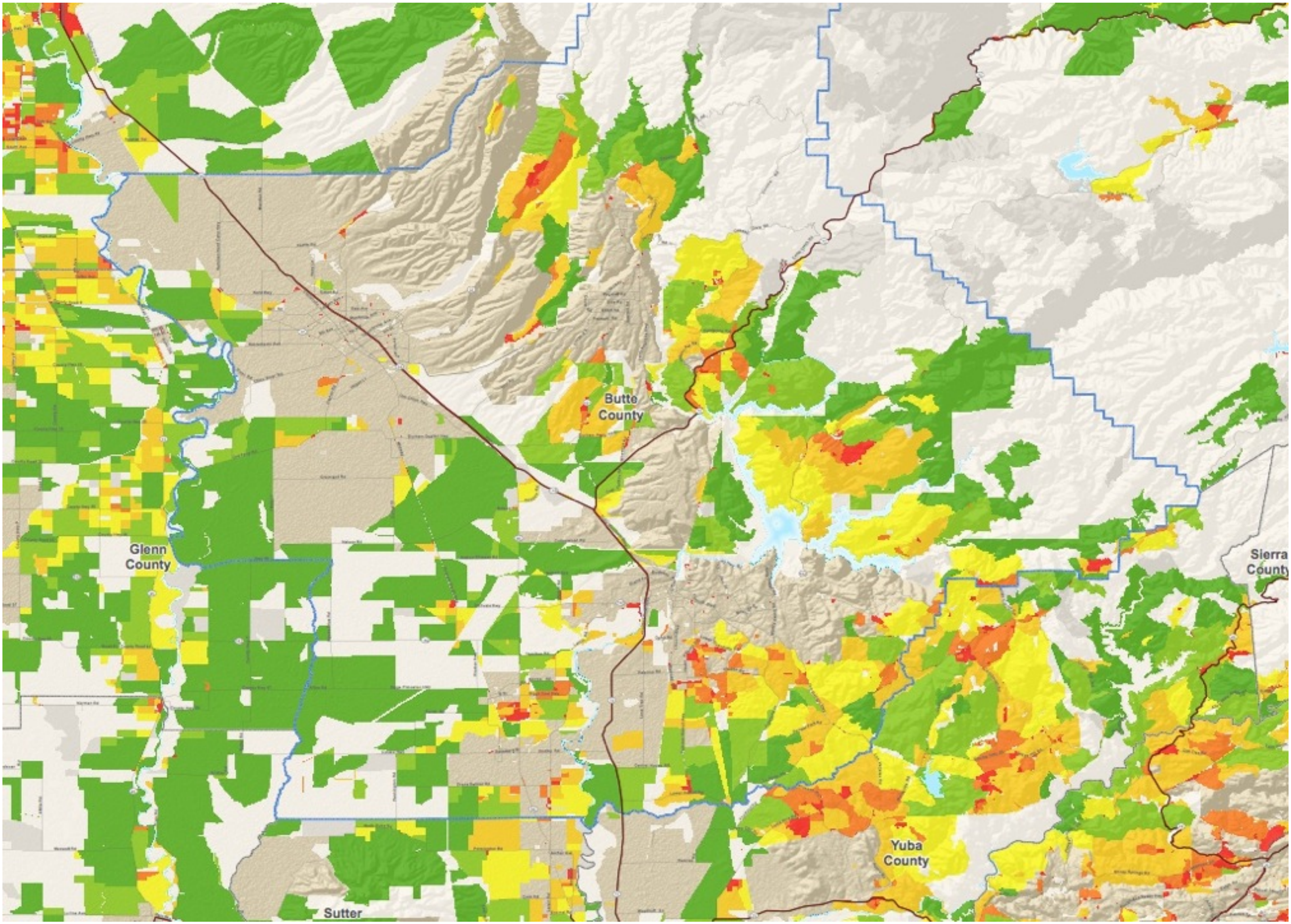
Need to know…

- Under and unserved areas
  - Focus on primary wireline infrastructure
  - Assume, for the moment, anything else is refutable.
- Number of homes
- Density of homes

Drain the flood to find the rocks

Map the money!


99
32
32
45
32
99
Butte
County
191
149
70
70
70
99
162
45
162
Glenn
County
162
70
45
Colusa
County
99
Sutter
County
Yuba
County
49
Nevada
County
49
20
20



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Housing Density of Un/Underserved Census Blocks in Yolo County

Legend

Census Blocks 2010

Housing Unit Density

- No HU / Unpopulated
- HU > 0 / Unpopulated
- No HU / Population > 0
- <3 HU / SqMi
- >3-8 HU / SqMi
- >8-15 HU / SqMi
- >15-50 HU / SqMi
- >50-100 HU / SqMi
- >100 Hu / SqMi
- Major Water Body
- CETF Project County
- County Boundary

1 inch = 38,000 feet

Data regarding broadband service availability is courtesy of the California Interactive Broadband Map, produced by the California Public Utilities Commission and CSU Chico.

Prepared by Watsonville GIS Center 10/01/2014 (CETF 2114).

This Document is a graphic representation only of best available sources. The City of Watsonville assumes no responsibility for any errors.

Colusa County
Lake County
Napa County
Yolo County
Sutter County
Yuba County
Placer County
Solano County
Sacramento County
San Joaquin County

Social impact

- Number of people
- Eligible percentage of community
- Population density
- Anchor institutions
- Median income (lower = higher impact)

Business potential

- Number of housing units
- Eligible percentage of community
- Housing density
- Anchor institutions
- Median income (higher = greater potential)

Rank the opportunities

Method of sorting & comparing, not a final determination

Social impact of under/unserved areas

Top 20 of the 36 counties analysed

706 incorporated cities & census designated places

Plus “Rest of county”

Rank (impact)	Community	County
1	Lake Isabella CDP	Kern
2	Rest of Trinity County	Trinity
3	Hayfork CDP	Trinity
4	Weldon CDP	Kern
5	Covelo CDP	Mendocino
6	Lone Pine CDP	Inyo
7	Los Molinos CDP	Tehama
8	**Weaverville CDP**	**Trinity**
9	**Boron CDP**	**Kern**
10	Willow Creek CDP	Humboldt
11	Happy Camp CDP	Siskiyou
12	Westwood CDP	Lassen
13	Laytonville CDP	Mendocino
14	Berry Creek CDP	Butte
15	Wofford Heights CDP	Kern
16	Lewiston CDP	Trinity
17	King City city	Monterey
18	Kernville CDP	Kern
19	Klamath CDP	Del Norte
19	Portola city	Plumas

Business potential of under/unserved areas

Top 21 of the 36 counties analysed

706 incorporated cities & census designated places

Plus “Rest of county”

Rank (potential)	Community	County
1	Greenfield city	Monterey
2	**Gonzales city**	**Monterey**
3	King City city	Monterey
4	Carmel-by-the-Sea city	Monterey
5	Stinson Beach CDP	Marin
6	Bolinas CDP	Marin
7	**Aromas CDP**	**Monterey**
8	**Mammoth Lakes town**	**Mono**
9	Frazier Park CDP	Kern
10	Prunedale CDP	Monterey
11	Quincy CDP	Plumas
12	**Soledad city**	**Monterey**
13	Loma Rica CDP	Yuba
14	**Castroville CDP**	**Monterey**
15	**Chualar CDP**	**Monterey**
16	Pine Mountain Lake CDP	Tuolumne
17	Susanville city	Lassen
18	Rosamond CDP	Kern
19	Portola city	Plumas
20	Pine Canyon CDP	Monterey
21	**Weaverville**	**Trinity**

Social impact of under/unserved areas

Top 20 in Butte County

Rank (impact)	Community	County
14	Berry Creek CDP	Butte
28	Concow CDP	Butte
45	Butte Valley CDP	Butte
50	Bangor CDP	Butte
75	Honcut CDP	Butte
90	Forbestown CDP	Butte
99	Stirling City CDP	Butte
110	Forest Ranch CDP	Butte
144	Rest of Butte County	Butte
145	Rackerby CDP	Butte
159	Richvale CDP	Butte
174	Clipper Mills CDP	Butte
191	Palermo CDP	Butte
208	Robinson Mill CDP	Butte
251	Yankee Hill CDP	Butte
280	Thermalito CDP	Butte
355	Butte Meadows CDP	Butte
359	Chico city	Butte
372	Butte Creek Canyon CDP	Butte
388	Durham CDP	Butte

Business potential of under/unserved areas

Top 20 in Butte County

Rank (potential)	Community	County
36	Forest Ranch CDP	Butte
63	Butte Meadows CDP	Butte
168	Berry Creek CDP	Butte
210	Butte Valley CDP	Butte
228	Rest of Butte County	Butte
232	Concow CDP	Butte
241	Chico city	Butte
261	Bangor CDP	Butte
270	Stirling City CDP	Butte
273	Richvale CDP	Butte
280	Palermo CDP	Butte
298	Clipper Mills CDP	Butte
309	Butte Creek Canyon CDP	Butte
341	Honcut CDP	Butte
343	Forbestown CDP	Butte
346	Nord CDP	Butte
357	Rackerby CDP	Butte
362	Durham CDP	Butte
387	Thermalito CDP	Butte
400	Paradise town	Butte

Questions?

Maps make the case

ftp.cityofwatsonville.org/gis/Outgoing/CCBC/

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