



Mapping Broadband: California's Story

Presentation by Commissioner Rachelle Chong

California Public Utilities Commission

NARUC Summer Meeting Portland, OR

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Mapping Broadband: California's Story

- **California has Two Broadband Mapping Projects**
 - **Governor's Broadband Task Force**
 - One Time & Voluntary
 - Public-Private Collaboration w/ Broad Industry Participation
 - Street Address Level Availability Data
 - No Subscription Data
 - Includes Speed Tiers
 - **Commission's Mapping Pursuant to DIVCA**
 - Ongoing & Mandatory
 - Video Franchise Holders and their Affiliates Only
 - Census Tract Level*
 - Includes Both Availability & Subscription Data
 - Speed Tiers to Be Added Next Year
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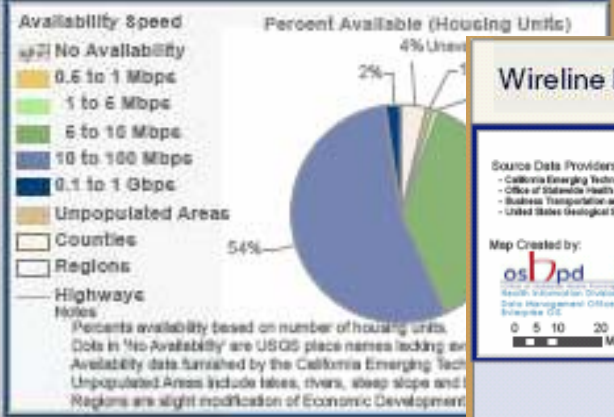
THE CALIFORNIA BROADBAND TASK FORCE

- **Executive Order S-23-06 (November 2006) created the California Broadband Task Force (CBTF)**
 - 21 members included representatives from state and local government, private industry, universities, non-profit organizations, and foundations.

 - **Broadband Task Force Map Products**
 - Statewide Maps of Wireline Broadband Availability and Speeds
 - Supplied Data: 15 million addresses and 7-8 million address equivalents
 - Participation: 12 ILECs and 11 cable companies, including the state's dominant providers
 - Statewide Maps of Wireless Broadband Availability (online only)
 - Participation: 5 wireless companies, including the state's dominant providers

 - **Other Products Included in the Task Force Report**
 - Survey of Broadband Prices across California
 - Analysis of Experienced Speeds
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California Wireline Broadband Availability



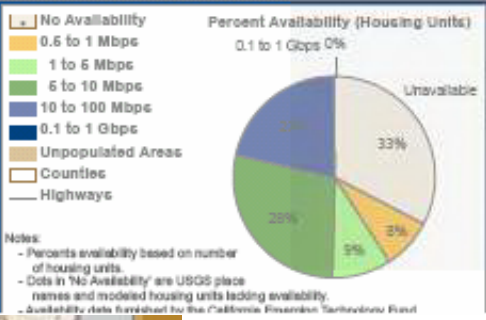
Wireline Broadband Availability: North Coast

Source Data Providers:
 - California Emerging Technology Fund
 - Office of Statewide Health Planning and Development
 - Business Transportation and Housing Agency
 - United States Geological Survey (USGS)

Map Created by:

 North Information Division
 Data Management Office
 Intrepid CC

0 5 10 20 Miles



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THE CALIFORNIA BROADBAND TASK FORCE

Broadband Availability by Region

Region	Unavailable	500 kbps-1 Mbps	1-5 Mbps	5-10 Mbps	10-100 Mbps	1-10 Gbps	Communities Without Broadband
Bay Area	1%	0%	0%	93%	6%	0%	92
Central Coast	5%	1%	1%	44%	49%	0%	117
East Side	40%	0%	3%	56%	0%	0%	115
Inland Empire	4%	0%	0%	18%	78%	0%	189
Los Angeles/Orange	2%	0%	0%	3%	95%	0%	48
Mother Lode	23%	16%	26%	36%	0%	0%	79
North Coast	33%	8%	9%	28%	22%	0%	279
Northern Sierra	43%	10%	25%	22%	0%	0%	240
Sacramento Metro	4%	3%	2%	39%	20%	32%	215
Sacramento Valley	11%	4%	6%	78%	1%	0%	197
San Joaquin	6%	2%	2%	70%	19%	1%	285
Southern Border	5%	1%	1%	2%	91%	0%	119
Percent Availability	4%	1%	1%	38%	54%	2%	1975

The Digital Infrastructure and Competition Act 2006 (DIVCA)



- CPUC issues state video franchises
 - Video franchisees must report data each April 1st relating to the availability of, and subscription to, broadband services
 - Data includes all affiliates
 - Broadband information initially required by census tract
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The Digital Infrastructure and Competition Act 2006 (DIVCA)



■ Phase III Decision

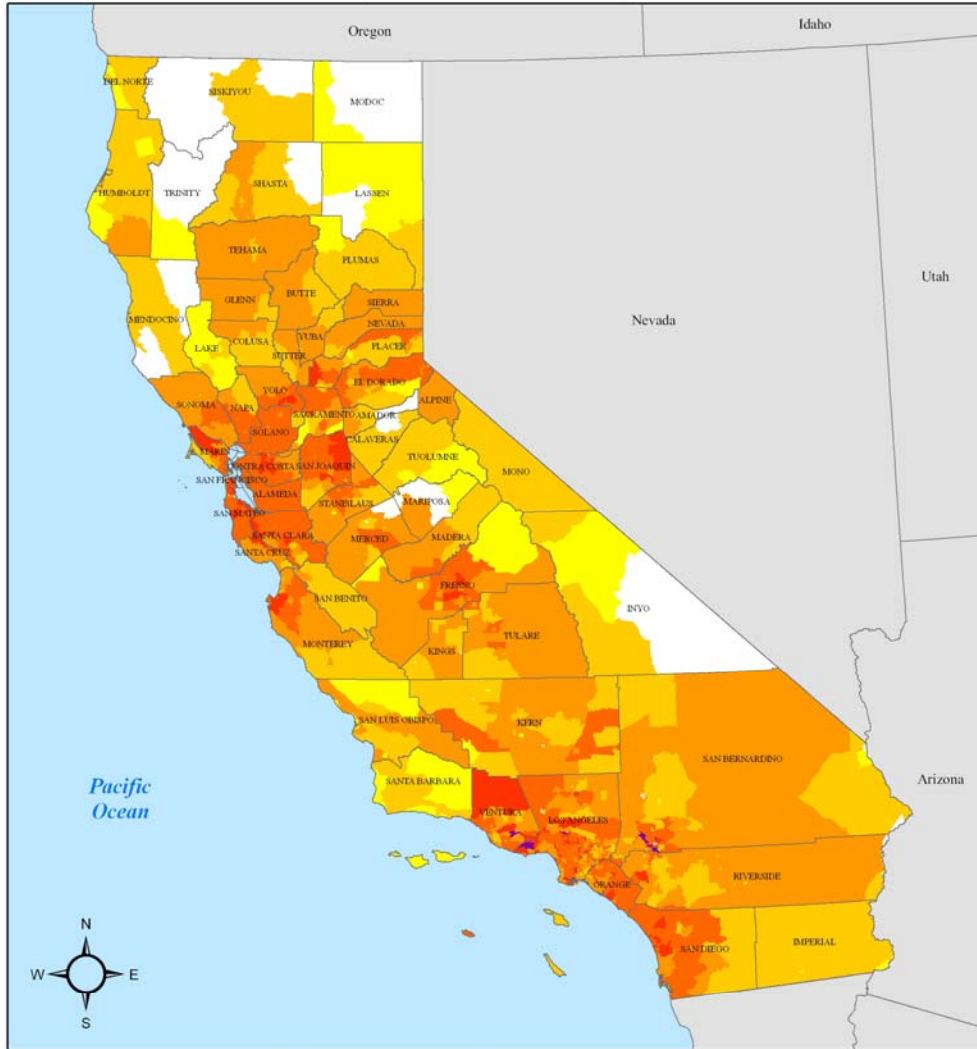
- ❑ CPUC's DIVCA Rules just revised to require franchisees to give FCC Form 477 broadband data to the Commission to satisfy our broadband data requirement, rather than imposing different requirements
- ❑ Form 477 requires subscriber data by census tract showing up/down speed tiers
- ❑ Form 477 broadband availability data rules being considered in FCC FNPRM on broadband data

CPUC MAPPING EXAMPLES



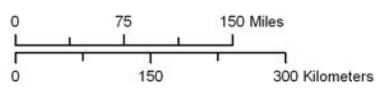
- Mapping examples:
 - **Number of broadband providers competing in each census tract**
-

AREAS OF BROADBAND COMPETITION IN CALIFORNIA (Wireline or Wireless)



NUMBER OF PROVIDERS	
1	4
2	5
3	6

12,463,839 households
(99.7% of households in state)
are in census tracts where
at least one provider is
offering service to at least
one household)



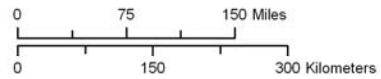
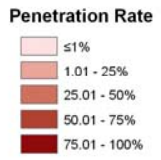
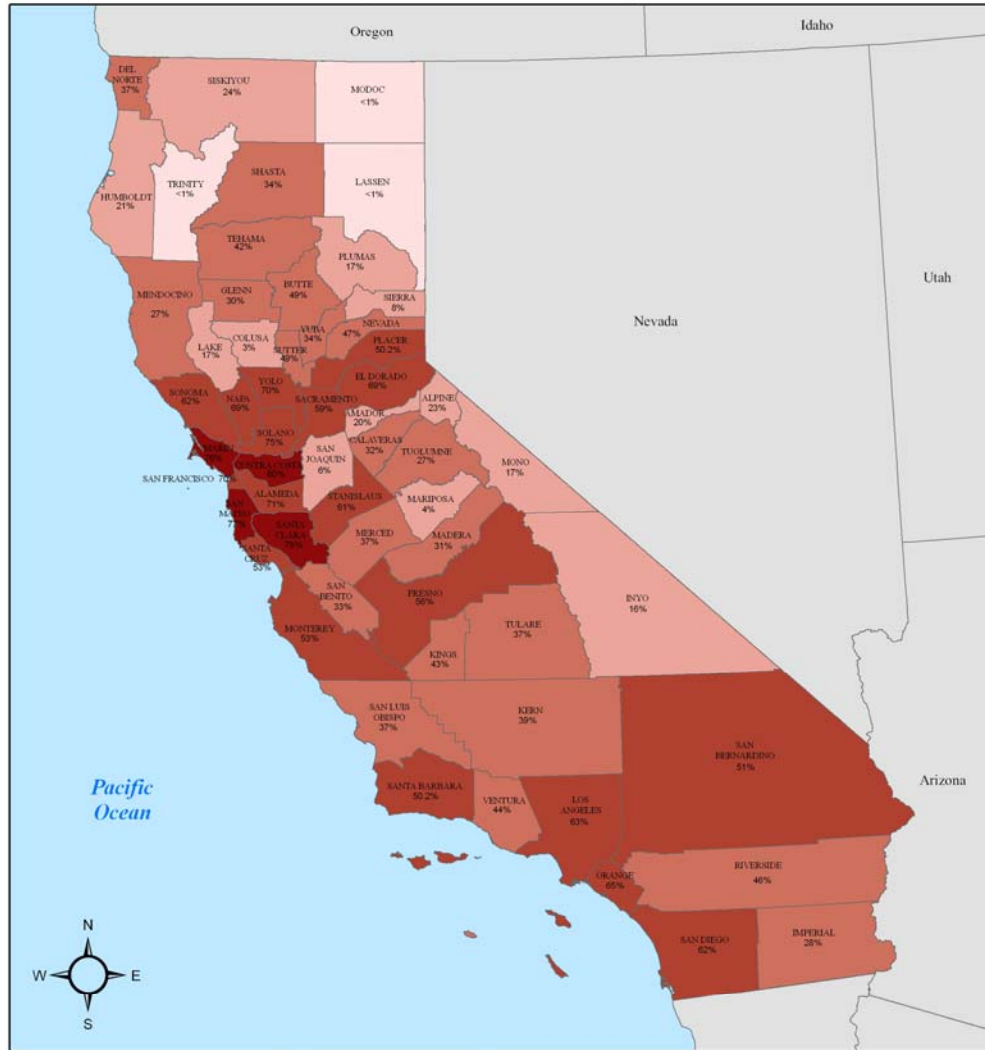
Sources: DIVCA Annual Data, 2008
Projection: Lambert Conformal Conic, Coordinate System: California State Plane, Zone 3; North American Datum 1983
Prepared by the California Public Utilities Commission, Communications Division, Video Franchising and Broadband Deployment Group

CPUC MAPPING EXAMPLES



- Mapping examples:
 - Number of broadband providers competing in each census tract
 - **Broadband penetration by county**
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BROADBAND PENETRATION IN CALIFORNIA (Wireline or Wireless)



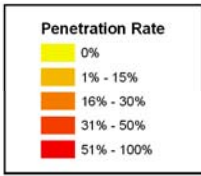
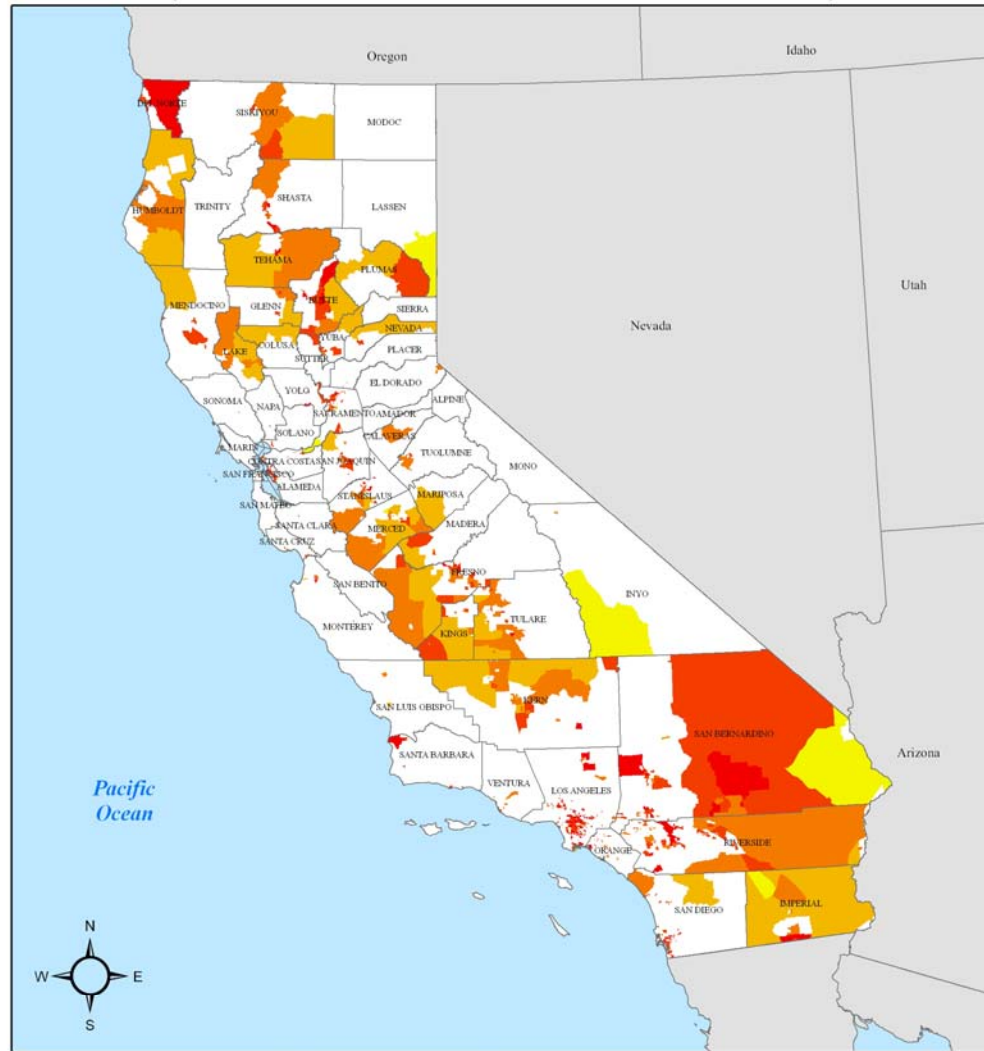
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CPUC MAPPING EXAMPLES

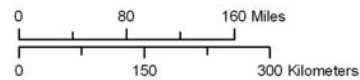


- Mapping examples:
 - Number of broadband providers competing in each census tract
 - Broadband penetration by county
 - **Broadband penetration in low income census tracts**
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WIRELINE BROADBAND PENETRATION (Census Tracts With Over 50% Low Income Households)



Represents 1809 Census Tracts
2,910,574 Households Projected
43% penetration rate



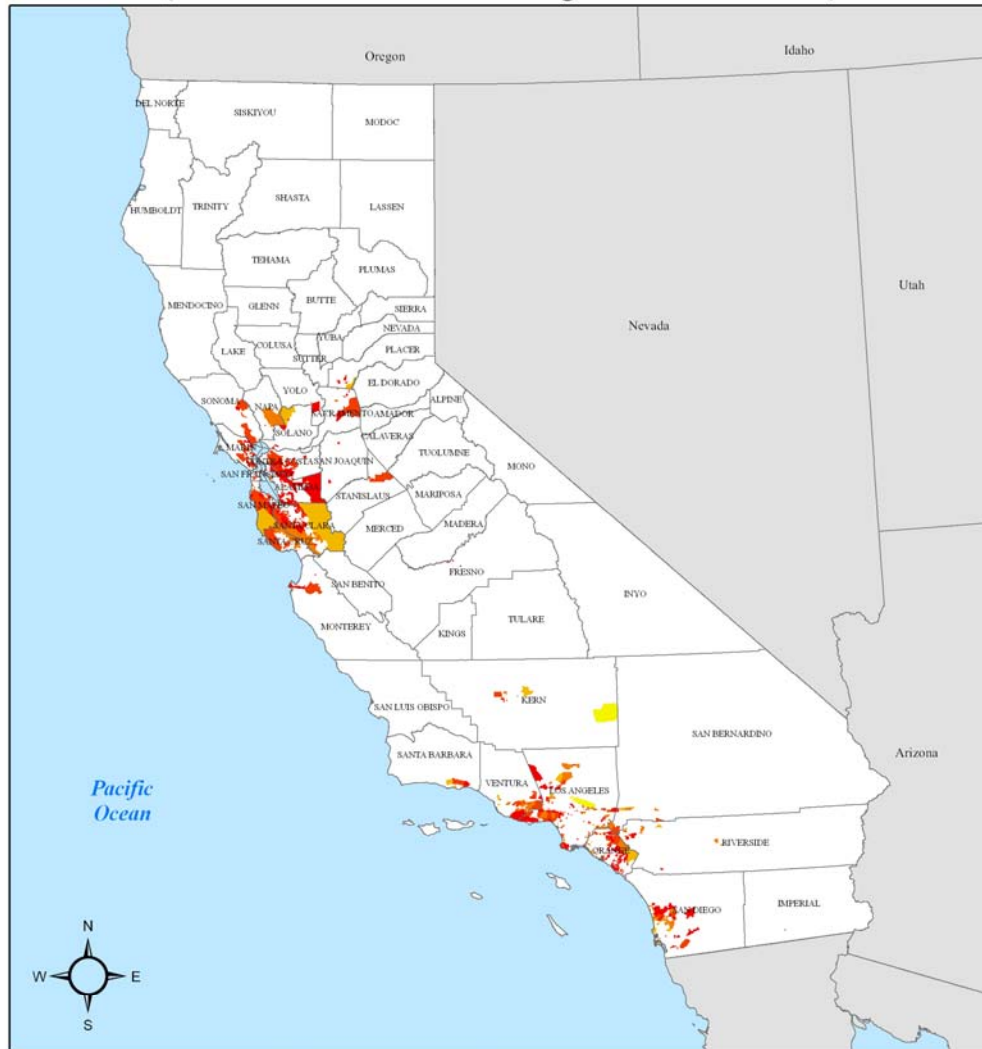
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CPUC MAPPING EXAMPLES



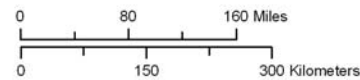
- Mapping examples:
 - ❑ Number of broadband providers competing in each census tract
 - ❑ Broadband penetration by county
 - ❑ Broadband penetration in low income census tracts
 - ❑ **Broadband penetration in high income census tracts**
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WIRELINE BROADBAND PENETRATION (Census Tracts With Over 50% High Income Households)



Penetration Rate	
	0%
	1% - 25%
	26% - 50%
	51% - 75%
	76% - 100%

Represents 1077 Census Tracts
1,880,006 Households Projected
73% penetration rate



Sources: DIVCA Annual Data, 2008.
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California Public Utilities Commission

- GIS Mapping will be used to:
 - Evaluate the extent of broadband competition
 - Analyze factors leading to the Digital Divide
 - e.g., income, education, age, % English-speaking
 - Help Commission and Legislature develop & implement broadband policies/programs
 - e.g. California Advanced Service Fund
 - 2 year CPUC program to grant \$100 million to build out broadband infrastructure in unserved and underserved areas
 - Support private-public partnerships
 - California Emerging Technology Fund (CETF)
 - California Telehealth Network
 - California Partnership for the San Joaquin Valley
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More Information

- <http://www.calink.ca.gov/taskforcereport/>
California Broadband Task Force Report –
including on line map links

CPUC – Video Franchise Contact:
Michael Morris mmo@cpuc.ca.gov
