

# Community broadband planning and funding

30 October 2015

CPUC Workshop on the Water/Energy/Communications Nexus

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## Urban

## Rural

Low speed  
residential service



High speed  
residential service



Commercial grade  
service



Local fiber



Connections to  
Tier 1 hubs



Mobile service



Urban, suburban needs and priorities  
focus on economic development

Rural broadband planning is  
regional, urban is city-focused

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Connections to  
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Mobile serv



*Sweet spot  
for muni,  
EDA, PPP  
projects*

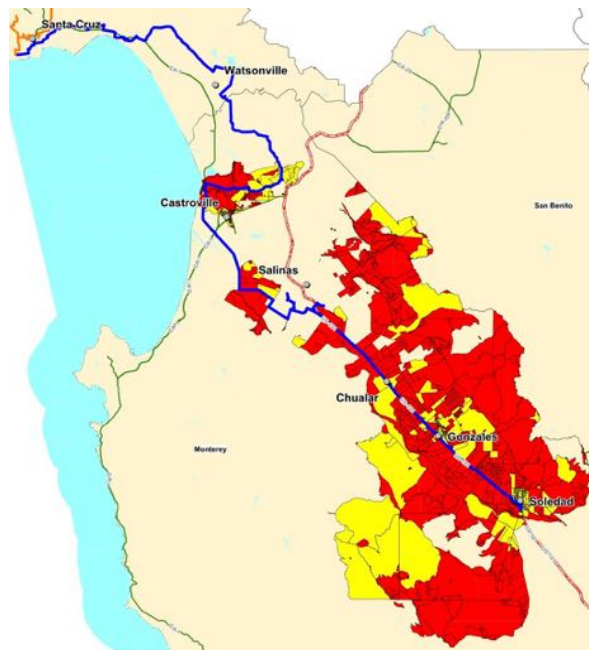
## Rural



*Sweet spot  
for CASF,  
federal rural  
programs*

Urban, suburban needs and priorities  
focus on economic development

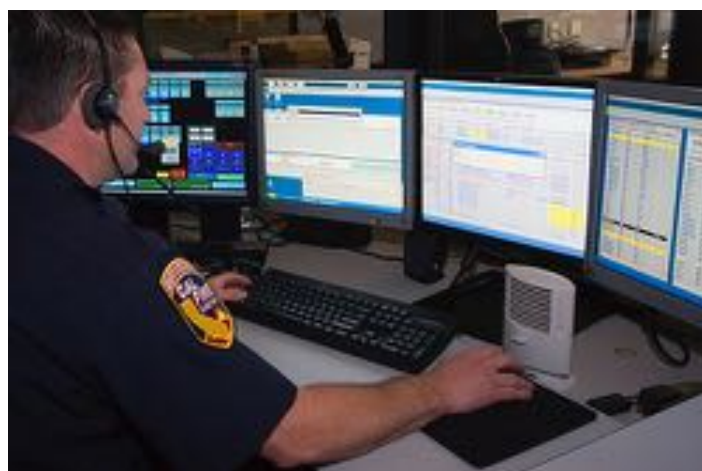
Rural broadband planning is  
regional, urban is city-focused



California Advanced Services Fund restricted, segmented



EDA, transportation, public housing grants fill gaps for cities



Public safety systems narrowly tailored



School, library broadband programs create disincentives for rational planning

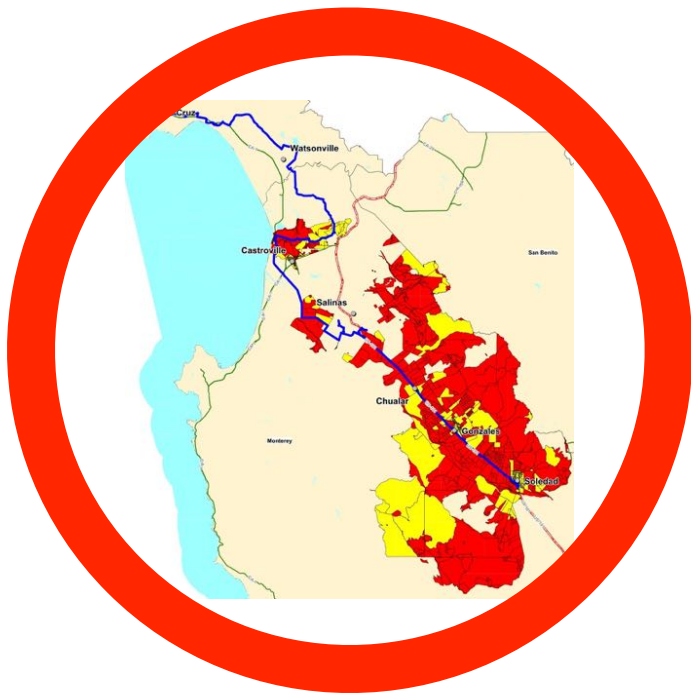


FCC, USDA rural programs designed for midwest, favor incumbents

Funding projects requires creativity

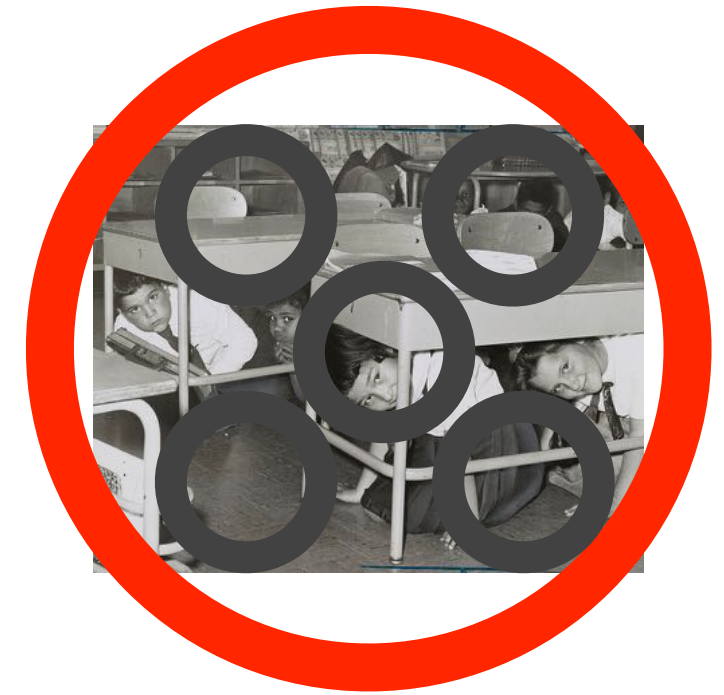
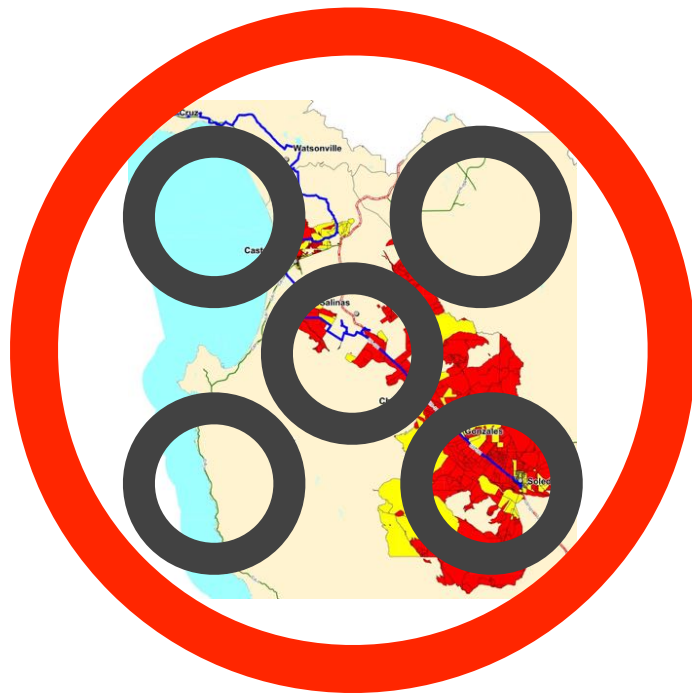
Broadband-specific sources are rare and problematic





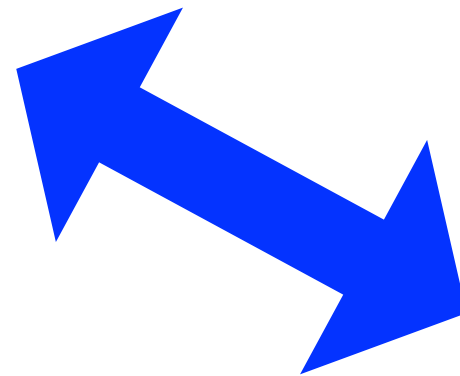
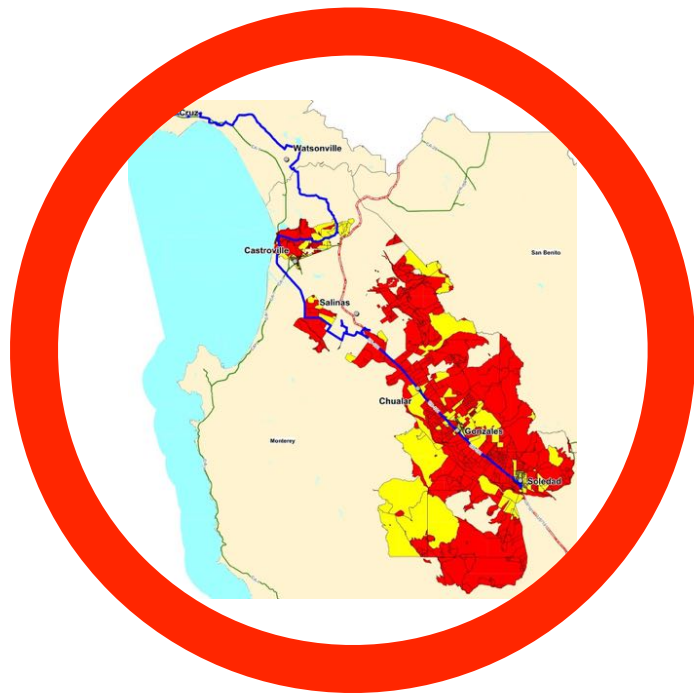
Broadband subsidy programs ring-fenced,  
siloes impossible to coordinate or combine

What if schools, hospitals,  
agencies, private equity,  
developers built separate roads?



Programs serve individual agency and private company needs, not general good

Example: E-rate/CTF program could fund unusable infrastructure



Big gap between federal Connect America Fund, California Advanced Services Fund

Different vision, different clients, different incentives

<b>Community</b>	<b>County</b>	<b>ILEC</b>	<b>Housing units</b>	<b>Pop</b>	
New Cuyama	Santa Barbara	Verizon	215	517	
Ponderosa	Tulare	AT&T	126	16	
Desert Center	Riverside	Verizon	140	204	
Boulevard	San Diego	AT&T	218	315	
Dos Palos Y	Merced	Verizon	123	323	
Squaw Valley	Fresno	Verizon	1,419	3,162	
Homestead Valley	San Bernardino	Verizon	2,198	3,032	
Anza	Riverside	Verizon	1,508	3,014	(CASF application pending)

CAF-eligible communities are largely  
small and isolated

Not all homes necessarily eligible  
for CAF subsidies



Community	County	ILEC	Housing units	Pop	Total CAF \$ (NPV)
New Cuyama	Santa Barbara	Verizon	215	517	\$833,298
Ponderosa	Tulare	AT&T	126	16	\$342,449
Desert Center	Riverside	Verizon	140	204	\$367,210
Boulevard	San Diego	AT&T	218	315	\$434,175
Dos Palos Y	Merced	Verizon	123	323	\$185,640
Squaw Valley	Fresno	Verizon	1,419	3,162	\$1,986,685
Homestead Valley	San Bernardino	Verizon	2,198	3,032	\$3,215,122
Anza	Riverside	Verizon	1,508	3,014	\$1,866,468

Nevertheless, substantial amounts are available

Net present value of 6 years of payments estimated on basis of county average, 5% interest rate

Community	County	ILEC	Housing units	Pop	CAF NPV	CASF match	CASF funds
New Cuyama	Santa Barbara	Verizon	215	517	\$833,298	70%	\$1,944,363
Ponderosa	Tulare	AT&T	126	16	\$342,449	70%	\$799,047
Desert Center	Riverside	Verizon	140	204	\$367,210	70%	\$856,823
Boulevard	San Diego	AT&T	218	315	\$434,175	70%	\$1,013,076
Dos Palos Y	Merced	Verizon	123	323	\$185,640	70%	\$433,160
Squaw Valley	Fresno	Verizon	1,419	3,162	\$1,986,685	70%	\$4,635,599
Homestead Valley	San Bernardino	Verizon	2,198	3,032	\$3,215,122	66%	\$6,217,211
Anza	Riverside	Verizon	1,508	3,014	\$1,866,468	70%	\$4,355,092

Adding CASF money can triple the money available to a community

Under/unserved percentage based on wireline service

Community	County	ILEC	Housing units	Pop	CAF NPV	CASF match	CASF funds	Per HU
New Cuyama	Santa Barbara	Verizon	215	517	\$833,298	70%	\$1,944,363	\$12,919
Ponderosa	Tulare	AT&T	126	16	\$342,449	70%	\$799,047	\$9,059
Desert Center	Riverside	Verizon	140	204	\$367,210	70%	\$856,823	\$8,743
Boulevard	San Diego	AT&T	218	315	\$434,175	70%	\$1,013,076	\$6,639
Dos Palos Y	Merced	Verizon	123	323	\$185,640	70%	\$433,160	\$5,031
Squaw Valley	Fresno	Verizon	1,419	3,162	\$1,986,685	70%	\$4,635,599	\$4,667
Homestead Valley	San Bernardino	Verizon	2,198	3,032	\$3,215,122	66%	\$6,217,211	\$4,291
Anza	Riverside	Verizon	1,508	3,014	\$1,866,468	70%	\$4,355,092	\$4,126

Combining CAF and CASF money could pay for fiber to the home upgrades

Unfortunately, AT&T and Verizon prefer patchwork in rural areas

# Questions?

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# Back up slides

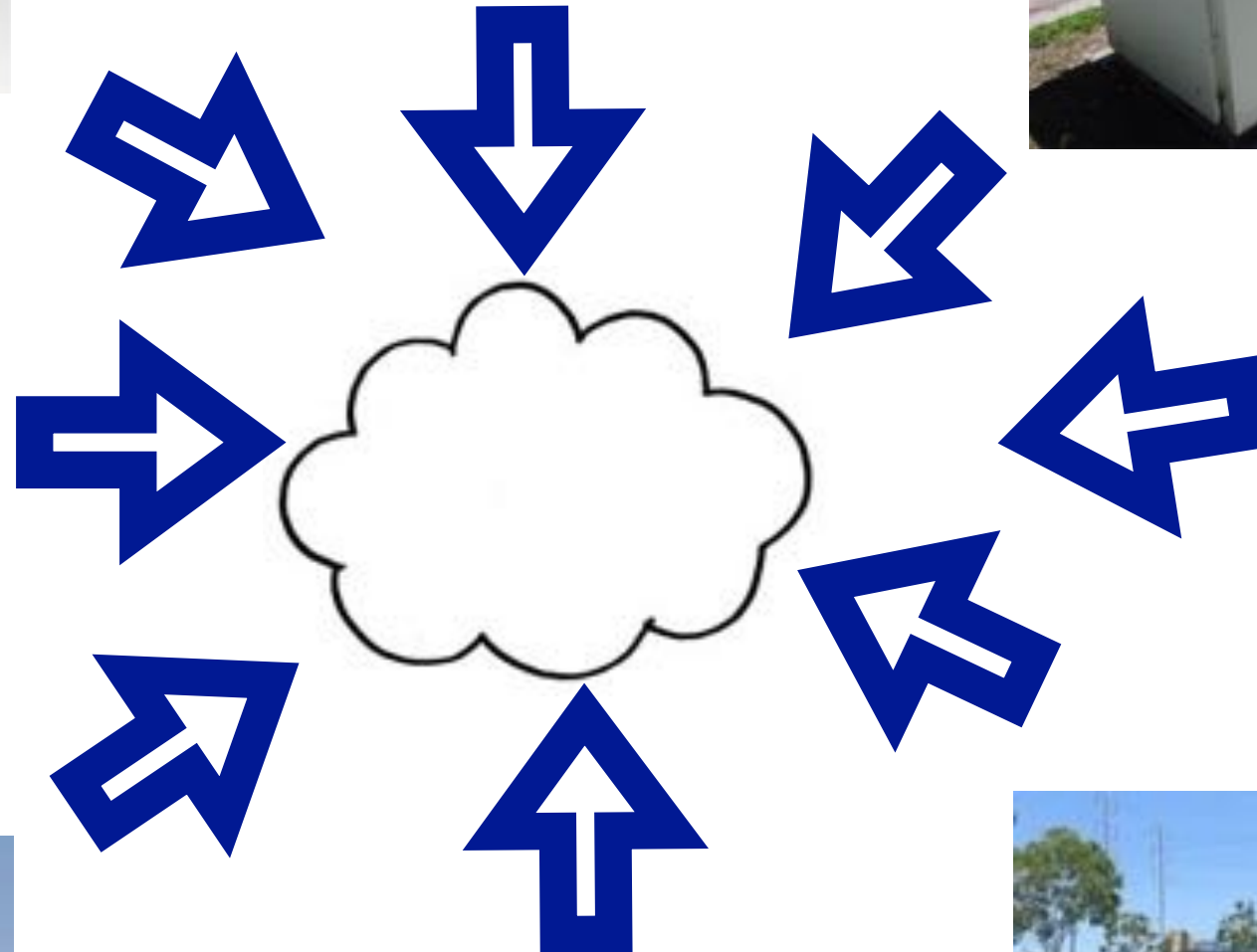
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Combining CAF and CASF money can pay for fiber to the home upgrades

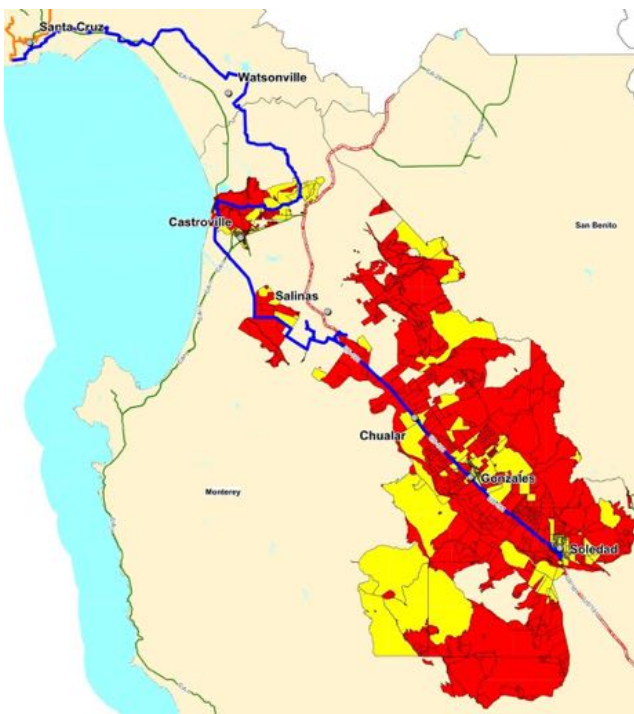
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Broadband is digging & rigging

It's not rocket science





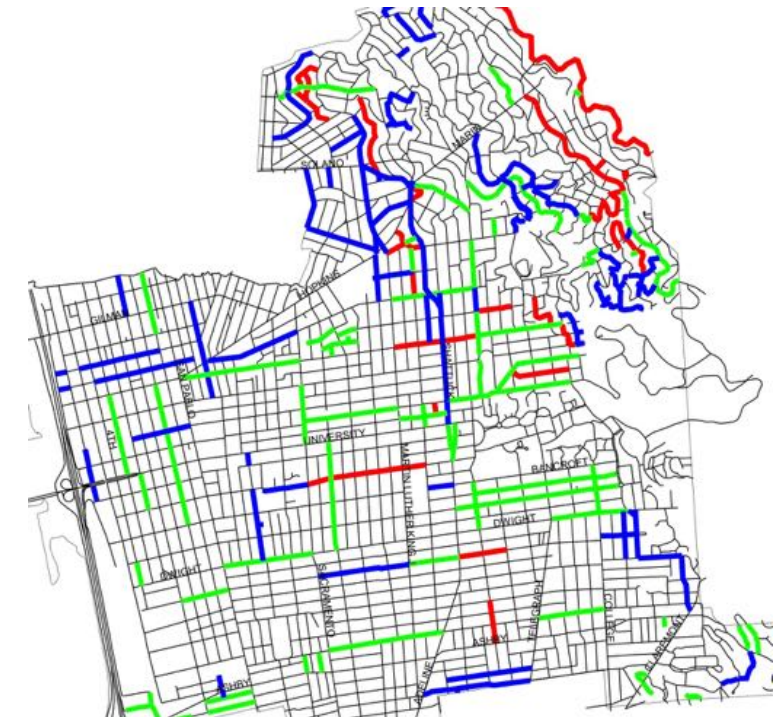
California Advanced Services Fund



Economic Development Administration



Operating subsidies: E-rate, telehealth, public safety, development fees, CAF, agency IT budgets



Transportation projects



FCC, USDA rural programs

Funding projects requires creativity

Broadband-specific sources are rare and problematic





Dig once, open trench, shadow conduit policies in Sonoma, Brentwood, Salinas



Gigabit muni residential fiber in Santa Cruz, Chattanooga; commercial fiber in San Leandro. Palo Alto, Santa Monica



Master permits, master leases, minimal process delays.



Maps unlock assets



Conflict, spiffs and nimbys drive away investment

# Local policy & projects drive broadband infrastructure

Capital is scarce, policy barriers can stop projects cold



# No practical difference between CPUC and FCC standards for grant purposes

- Current CASF standard is 6 Mbps download *and* 1.5 Mbps upload speed
- FCC standard is 25 Mbps down, 3 Mbps up
- AB 238 proposes to change CASF standard to 25/3
- Makes virtually no difference in Central Coast region

