

South Lake Tahoe Broadband: Status & Policy

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**California minimum
(AB 1665)**

**6 Mbps download
1 Mbps upload**

FCC Minimum

**10 Mbps download
1 Mbps upload**

**FCC Baseline,
USDA Minimum**

**25 Mbps download
3 Mbps upload**

**MBEP/CCBC
standard, FCC
Above Baseline**








































**100 Mbps download
20 Mbps upload**

FCC Gigabit

**1 gigabit download
500 Mbps upload**



Broadband speed standards

	6 down/ 1 up CA legislature min	25 down/ 3 up FCC/USDA baseline	100 down/20up FCC "above baseline"	250 down/20 up CA avg max	1000 down/ 500 up FCC "Gigabit"
MBEP consumer					
MBEP business					
MBEP combined					
North county					
South county					
Monterey					
San Benito					
Santa Cruz					

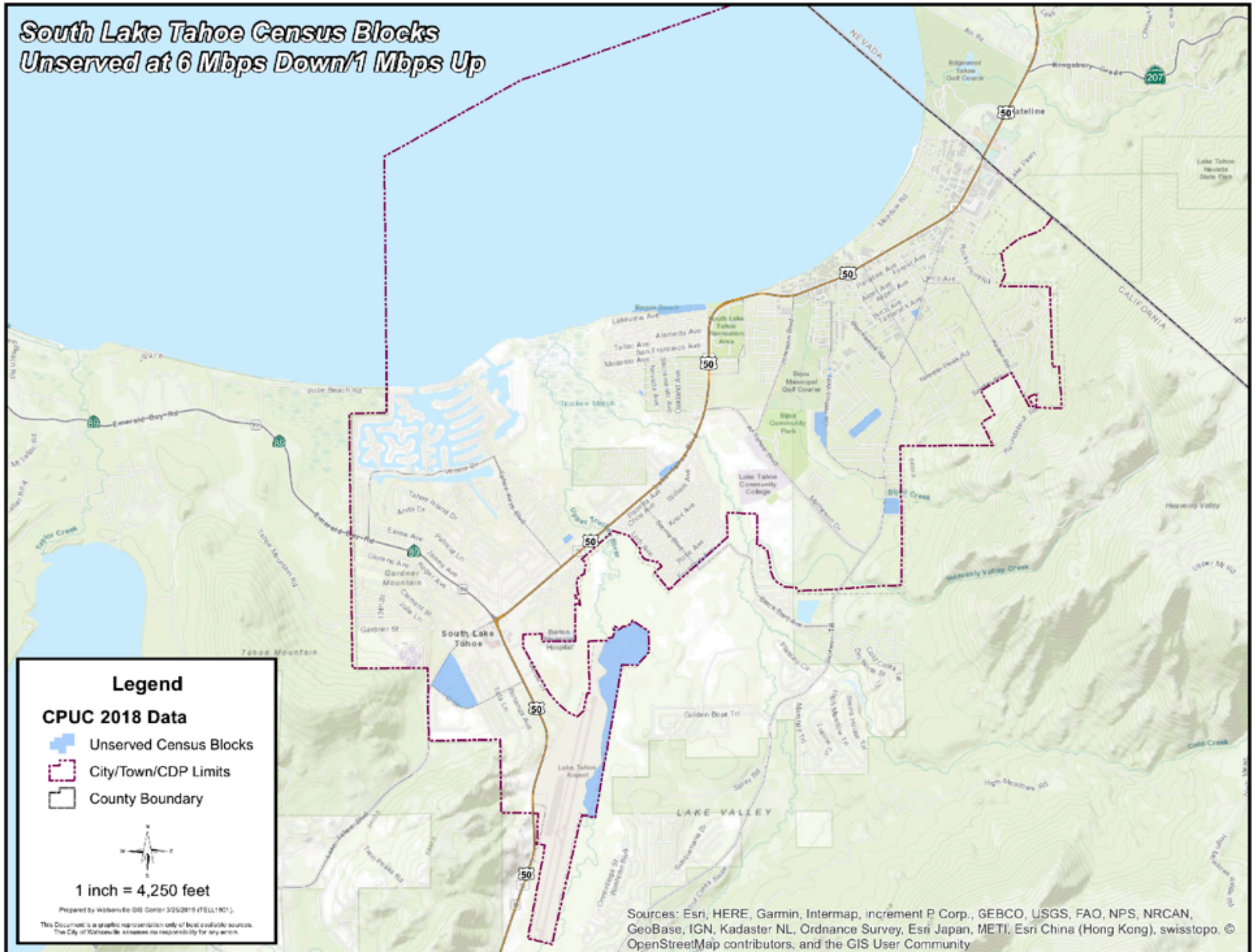
Rural and urban minimum needs the same



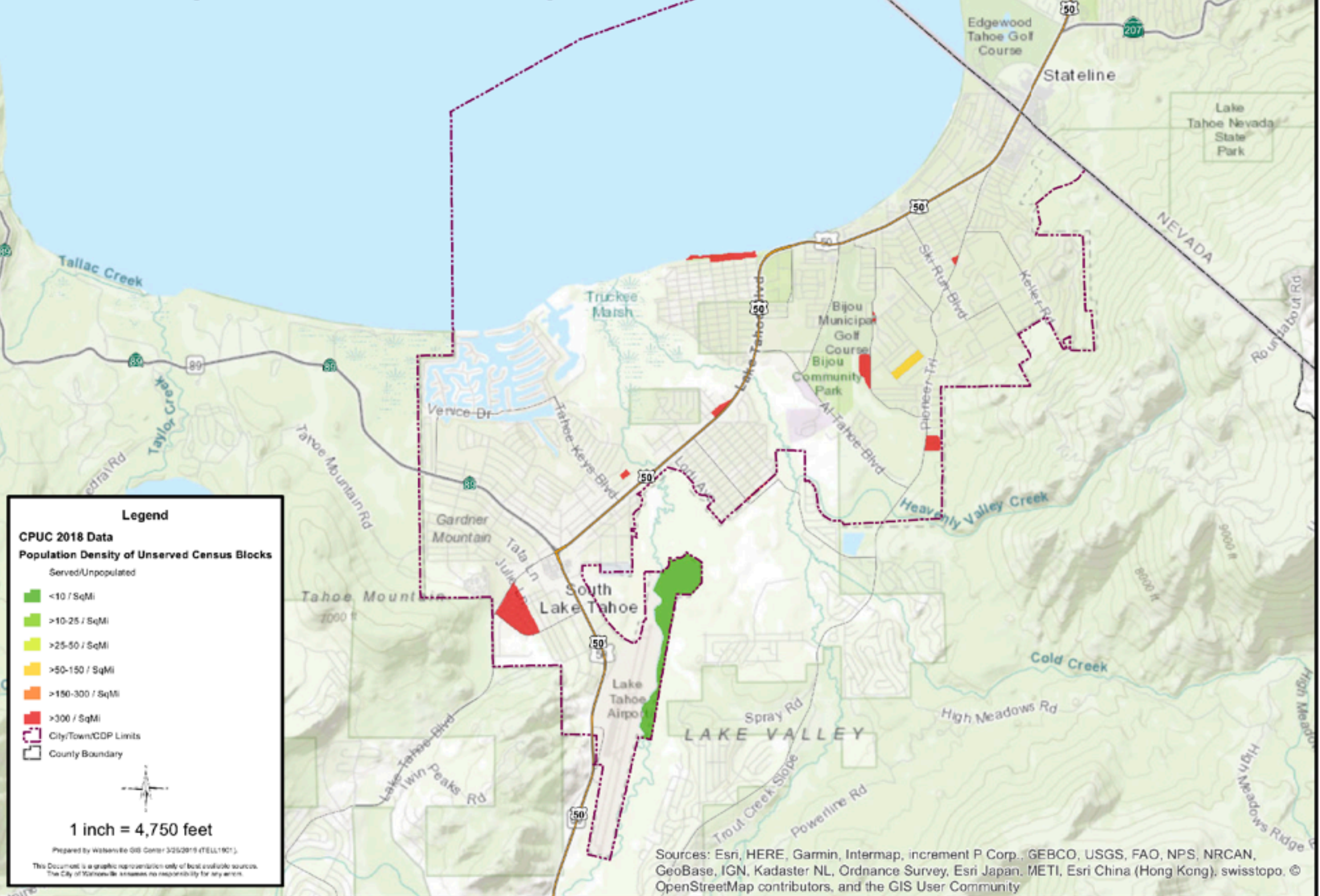
- Consumers comfortable with 100/20, can get by with 25/3.
- Businesses need better, but can get by with 100/20

Minimum speed: 100 Mbps down/20 Mbps up

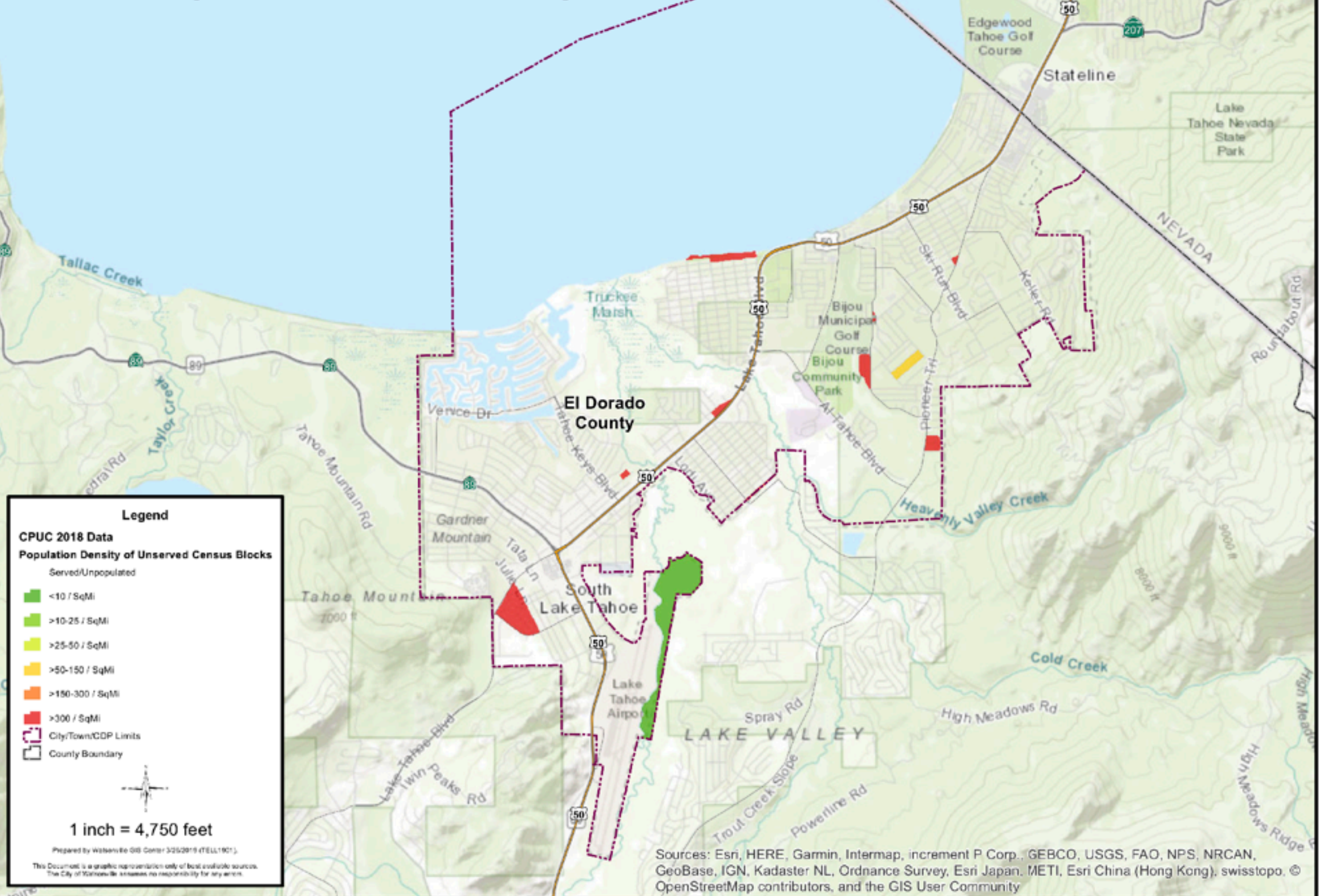
South Lake Tahoe Census Blocks Unserved at 6 Mbps Down/1 Mbps Up



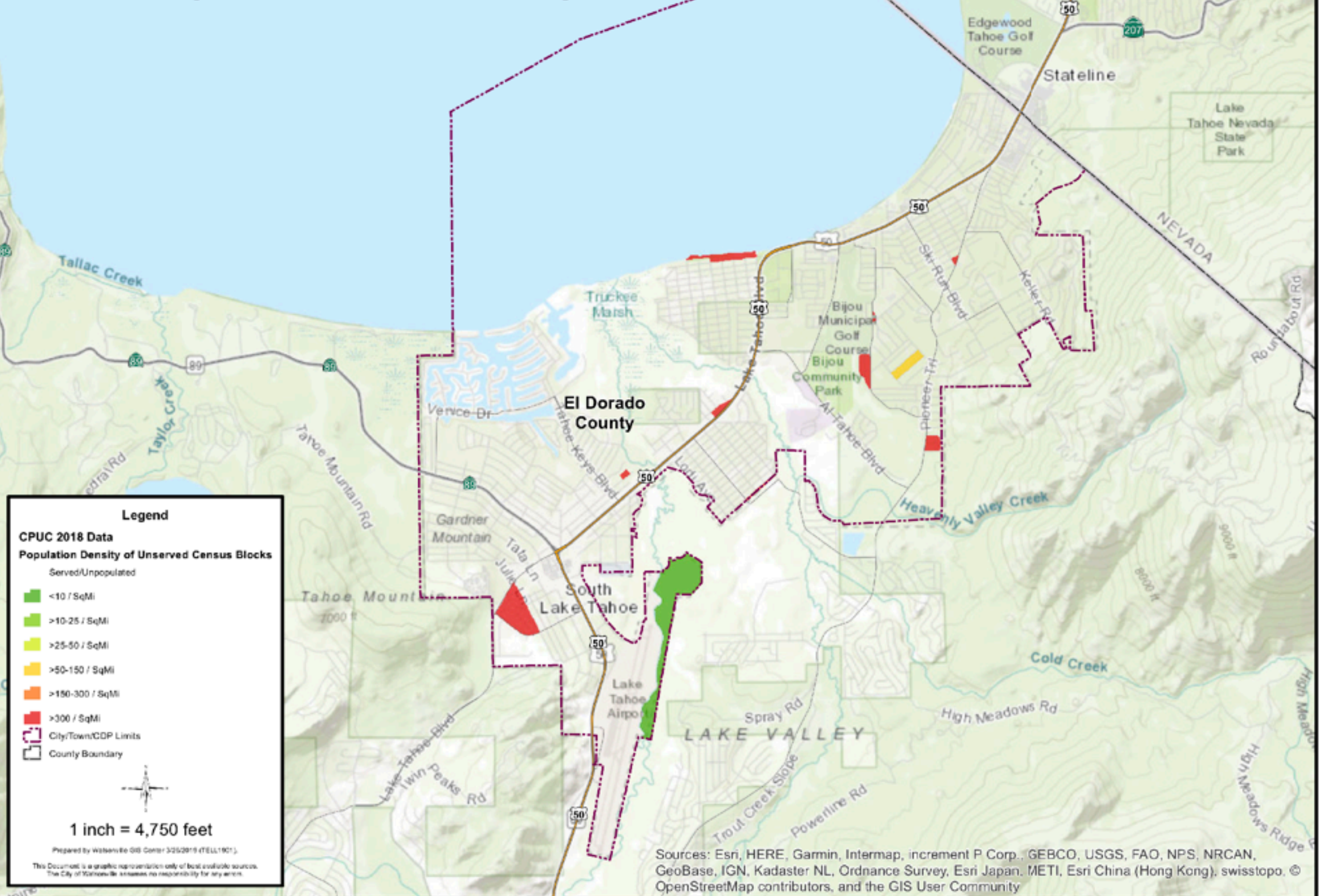
Population Density of Census Blocks in South Lake Tahoe Unserved at Speed Tiers 6 Down and 1 Up



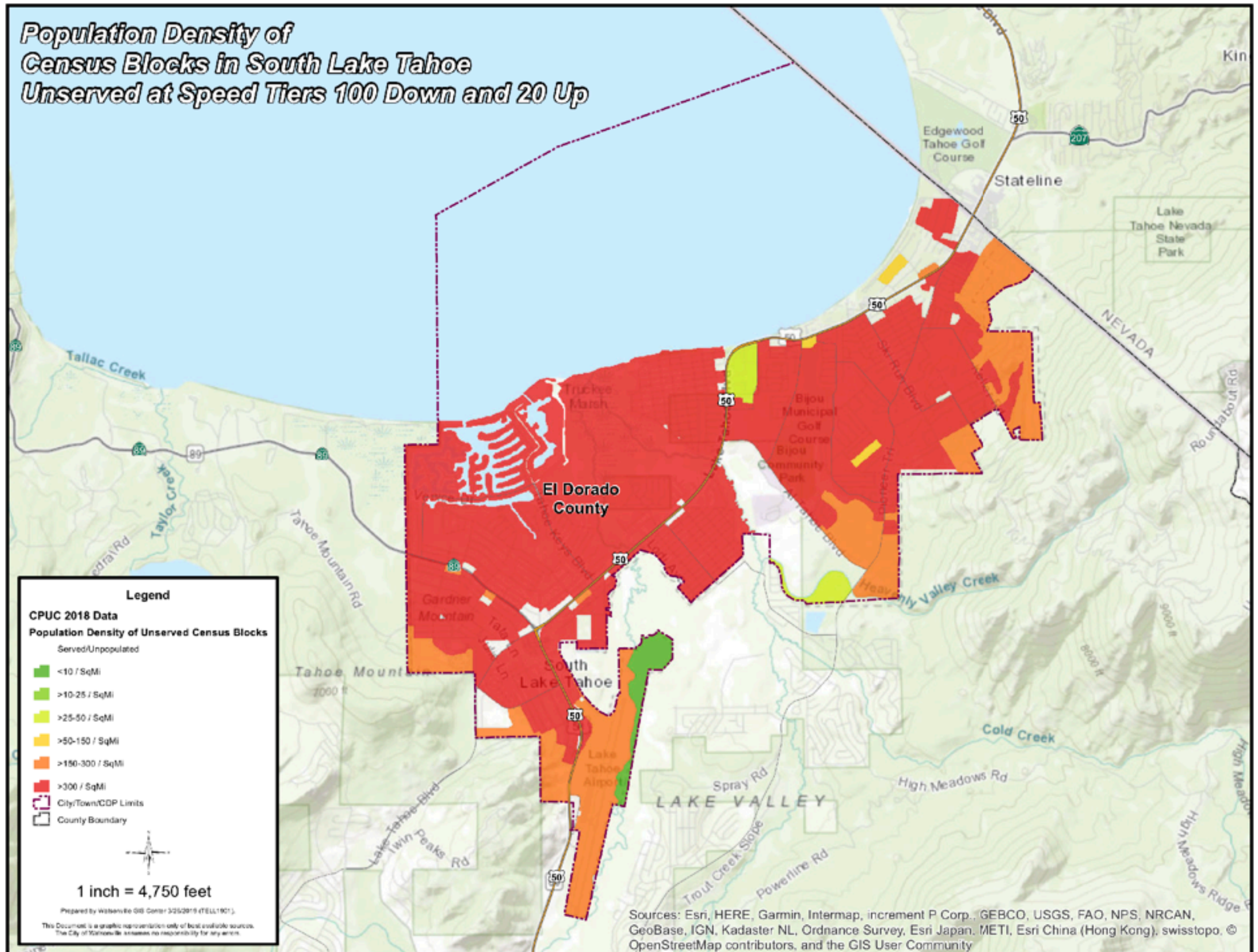
Population Density of Census Blocks in South Lake Tahoe Unserved at Speed Tiers 10 Down and 1 Up



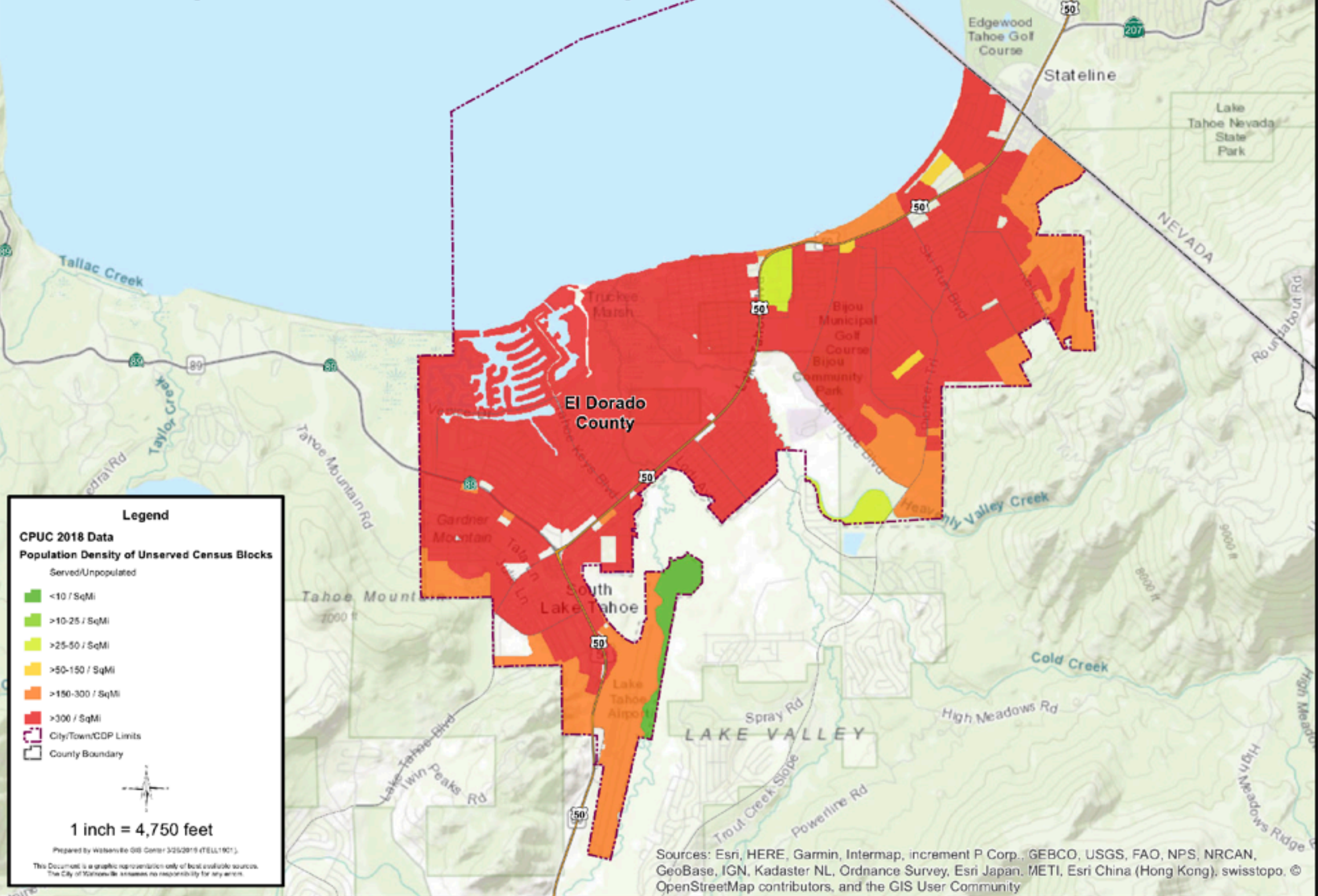
Population Density of Census Blocks in South Lake Tahoe Unserved at Speed Tiers 25 Down and 3 Up



Population Density of Census Blocks in South Lake Tahoe Unserved at Speed Tiers 100 Down and 20 Up



Population Density of Census Blocks in South Lake Tahoe Unserved at Speed Tiers 1000 Down and 500 Up



A

Superior infrastructure. At least two competing providers. At least one advertizing fiber-based service at a minimum of 1 Gbps download/500 Mbps upload speeds, and another offering service at a minimum of 400 Mbps download/20 Mbps upload speeds.

B

Above average infrastructure. At least two competing providers. At least one advertizing fiber-to-the-premise service at a minimum of 900 Mbps download/35 Mbps upload speeds, and another offering service at a minimum of 100 Mbps download/20 Mbps upload speeds.

C

Average infrastructure. At least two competing providers. At least one advertizing fiber to the premise service at a minimum of 400 Mbps download/20 Mbps upload speeds, and another offering service at a minimum of 30 Mbps download/5 Mbps upload speeds.

D

Barely passing. At least one provider that meets the Central Coast Broadband Consortium/ Monterey Bay Economic Partnership minimum standard.

F

Fail. At least one provider offers service, but no service is available that meets the Central Coast Broadband Consortium/Monterey Bay Economic Partnership minimum standard.

F-

Unserved. No broadband service available

Infrastructure grades: C is Californian average

Wireline Service Grades for Populated Census Blocks in South Lake Tahoe

South Lake Tahoe: F

Legend

CPUC 2018 Data

Wireline Service Grade

- A
- B
- C
- D
- F
- F-

City/Town/CDP Limits

County Boundary

1 inch = 4,250 feet

Prepared by Tellus Venture GIS Center 3/26/2019 (TELL1901)

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

**2018 Wireline Infrastructure Grading Criteria
for Primary Business/Consumer Providers**

A - At least two Primary Providers, one code 50 at a minimum of 1000/500 and one (any Code) at a minimum of 400/20.

B - At least two Primary Providers, one at a minimum of 900/35 and one at a minimum of 100/20.

C - At least two Primary Providers, one at a minimum of 400/20 and one at a minimum of 30/5.

D - At least one Primary Provider at a minimum of 100/20.

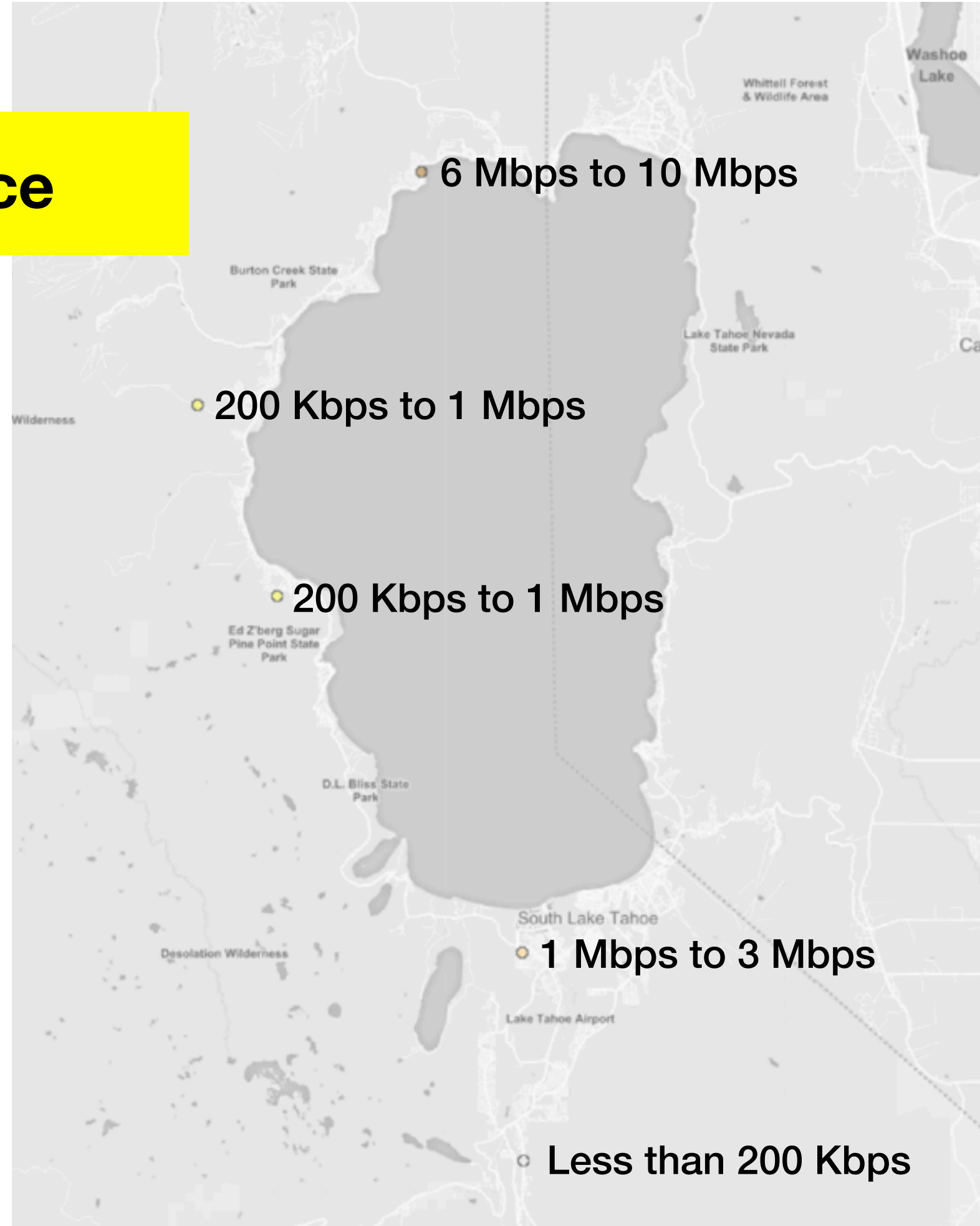
F - At least one Primary Provider but none that report a minimum of 100/20.

F- - NO Primary Provider

Uncolored Census Blocks are Unpopulated

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Mobile service

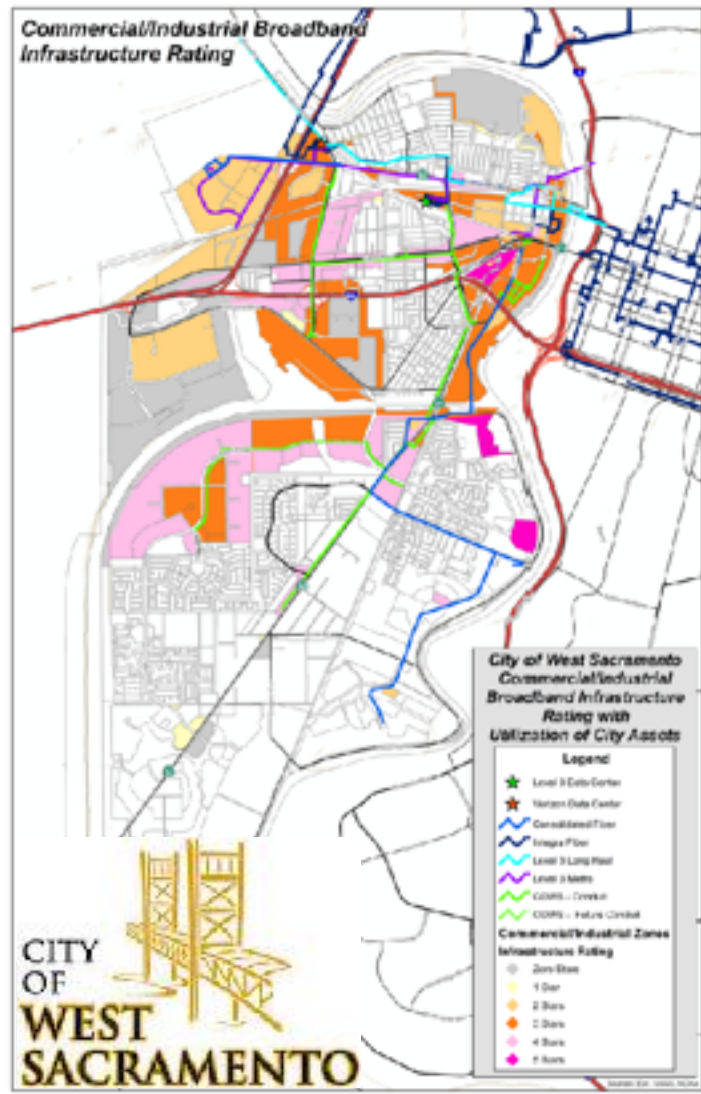


CPUC 2017
Mobile Testing



***What can you do
about it?***

Plan for broadband



Dig Once Policies

Open Trench Notification

Shadow Conduit

Excavation Moratoria

Public Works Projects

Utility Projects



Most of the cost of fiber is digging a hole and filling it back in.

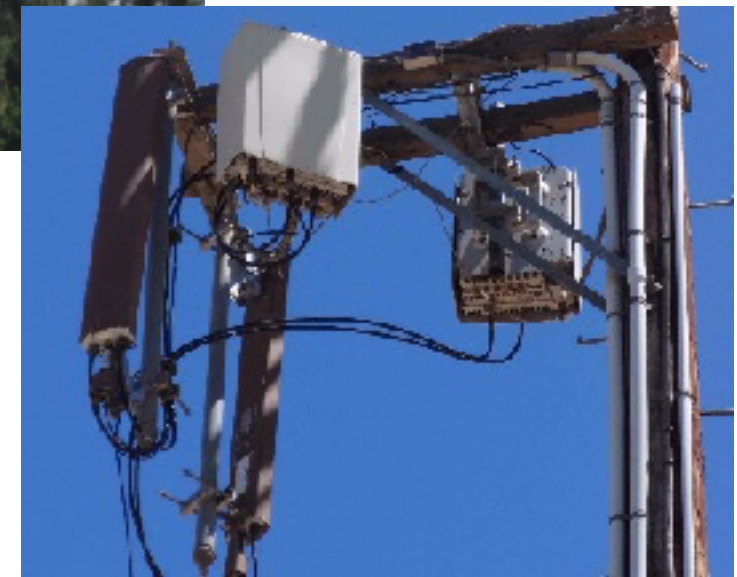
Top level policies for wireline & wireless

Streamlining & coordination

- Master leases
- Master permits
- Objective, written standards and requirements
- Standard reference designs and templates
- Checklists, defined process for conforming applications
- Harmonized terms



5G buildouts = more fiber, more digging, more City involvement



- Mobile data use growing from 7 GB to 49 GB per month by 2023.
- 5G is about two things: technology and densification.
- 5G is “infill” technology in rural areas.

Permits - ministerial, but not open season

Federal and state limits on process

- One chance to get it right
- Wireless shot clocks - 60, 90, 150 days



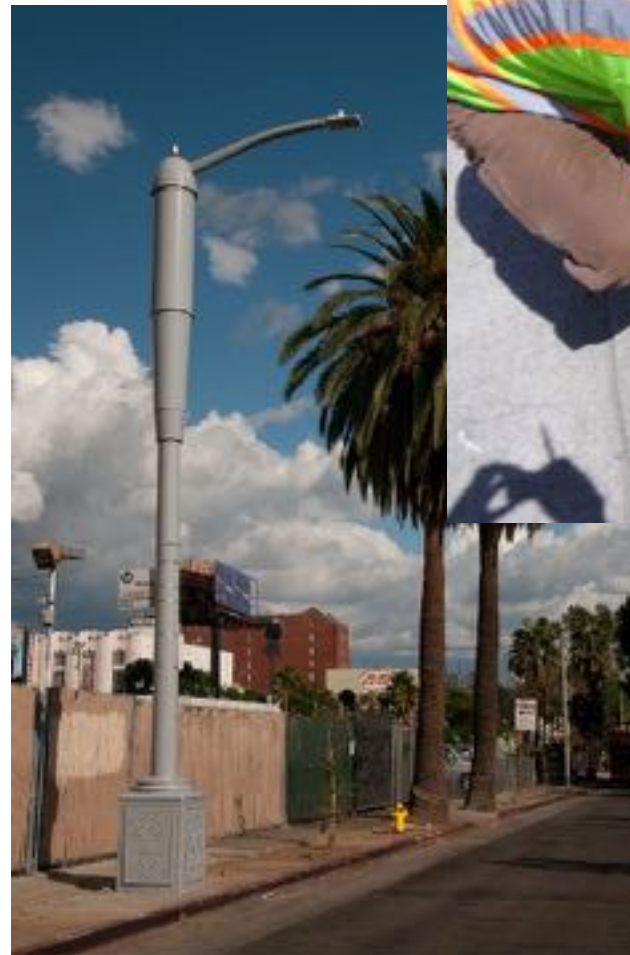
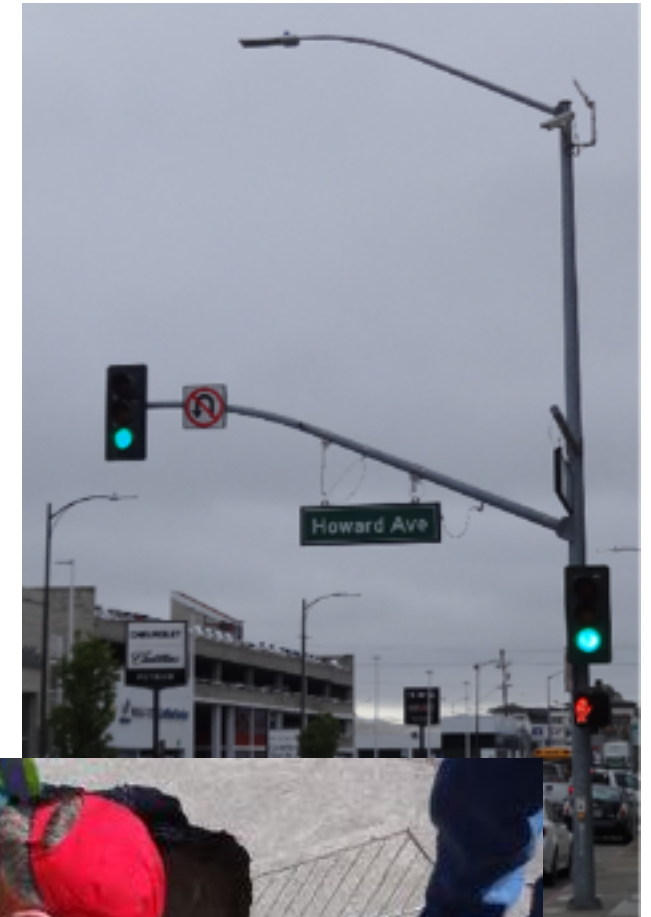
Time, place and manner

1. Does not abuse its discretion or arbitrarily or unfairly deny requests for access
2. Establishes reasonable, written rules, including aesthetic requirements
3. Applies the rules "to all entities in an equivalent manner"
4. The rules do not effectively prohibit broadband facilities.

The pace will accelerate

Property

- FCC attempting to preempt muni ownership.
- Under review by 9th Circuit.
- Cities still negotiating market rate leases.
- Contingency plans.



Questions?



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Backup slides



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South Lake Tahoe Advertized Broadband Speeds by Census Block

AT&T

Download (Mbps)	0.768	1.5	3	5	6	10	12	18
Number of Cenus Blocks	17	37	68	23	93	49	61	140
Upload (Mbps)	0.128	0.384	0.512	0.6	0.768			
Number of Cenus Blocks	17	105	154	72	140			

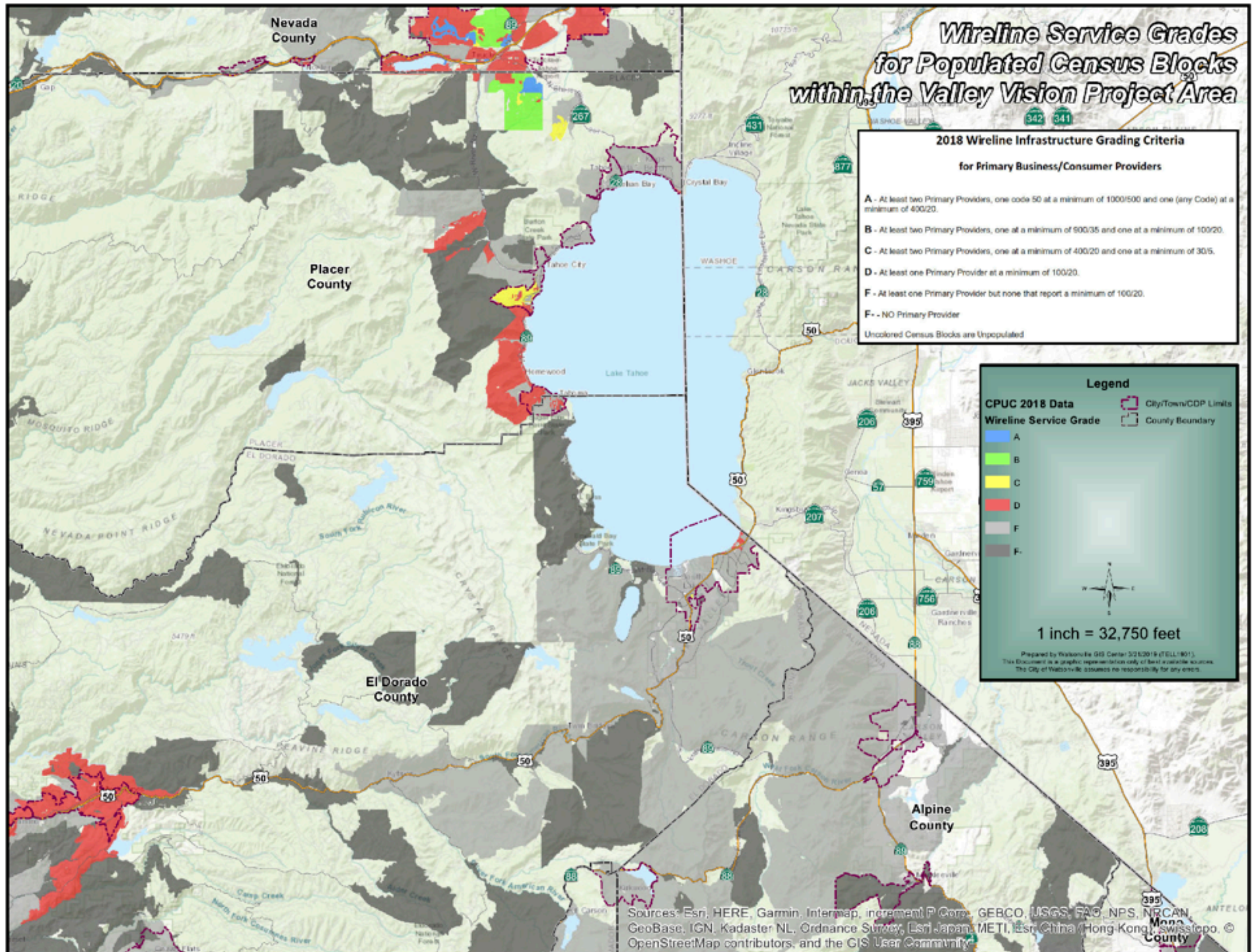
Charter Communications (consumer cable service)

Download (Mbps)	100	300
Number of Cenus Blocks	501	3
Upload (Mbps)	5	
Number of Cenus Blocks	504	

South Lake Tahoe Broadband Technology by Census Block

	DSL (1990s)	ADSL (2000s)	Other Copper	DOCSIS 3.0	Fiber to the
Allstream Business			1		
AT&T	9	479			
Charter Communications				504	9
Level 3			1		
PAETEC Communications					1

Tahoe Region Primary Broadband Infrastructure Grades			
	Grade	GPA	Change since 2016
South Lake Tahoe	F	0.0	(1.0)
Tahoma	F+	0.4	0.4
Sunnyside-Tahoe City	F+	0.6	0.4
Carnelian Bay	F	0.0	(1.0)
Tahoe Vista	F	0.0	(1.0)
Kings Beach	F	0.0	(1.0)
Truckee	D-	0.9	(0.1)
El Dorado County (all)	F+	0.6	(0.2)
Placer County (all)	F+	0.6	(0.6)



"Collocation" means the mounting or installation of an antenna on an existing tower, building or structure for the purpose of transmitting and/or receiving radio frequency signals for communications purposes". A utility pole is a "structure".

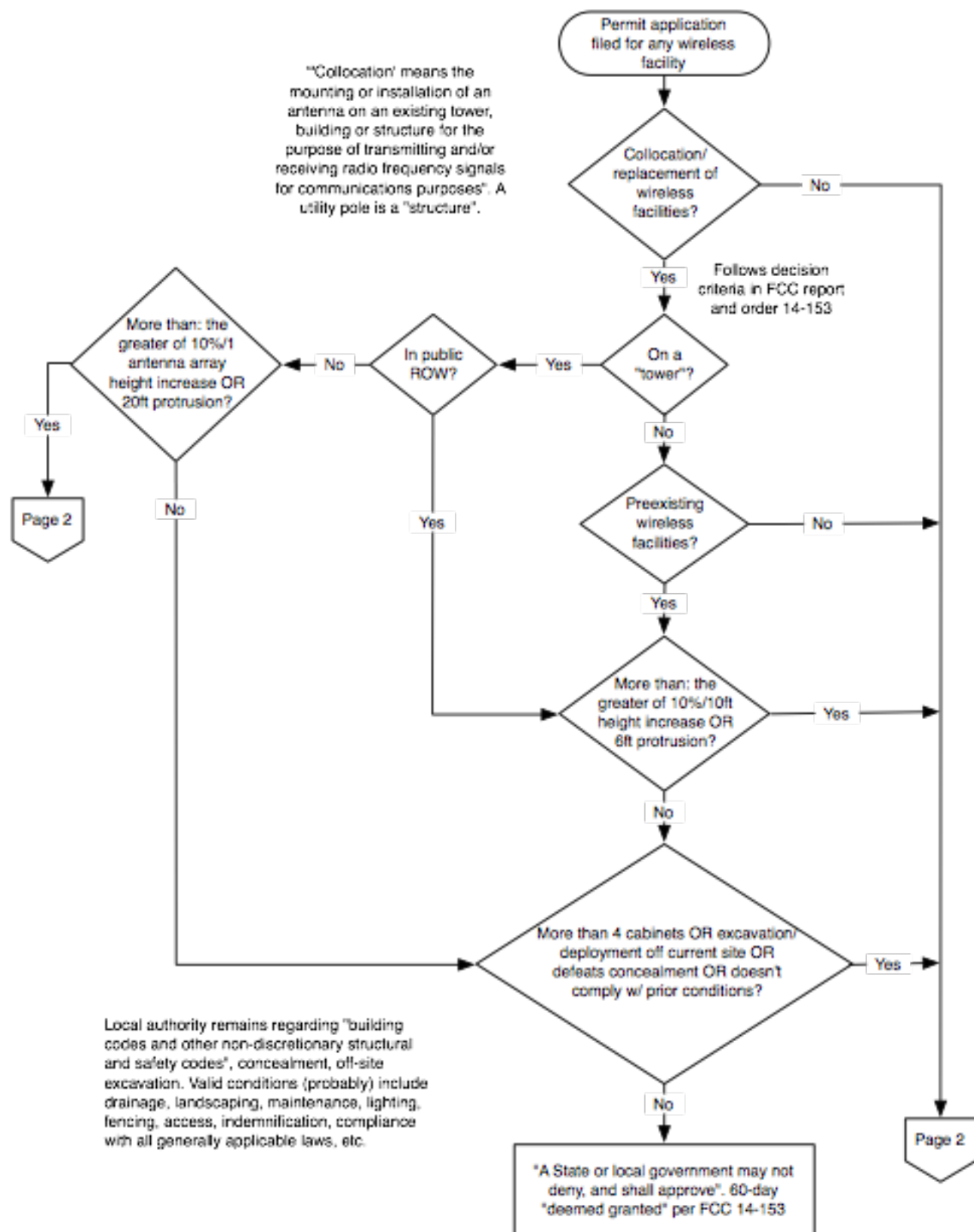


Figure 1 – Wireless permit "shot clock" flowchart, page 1.

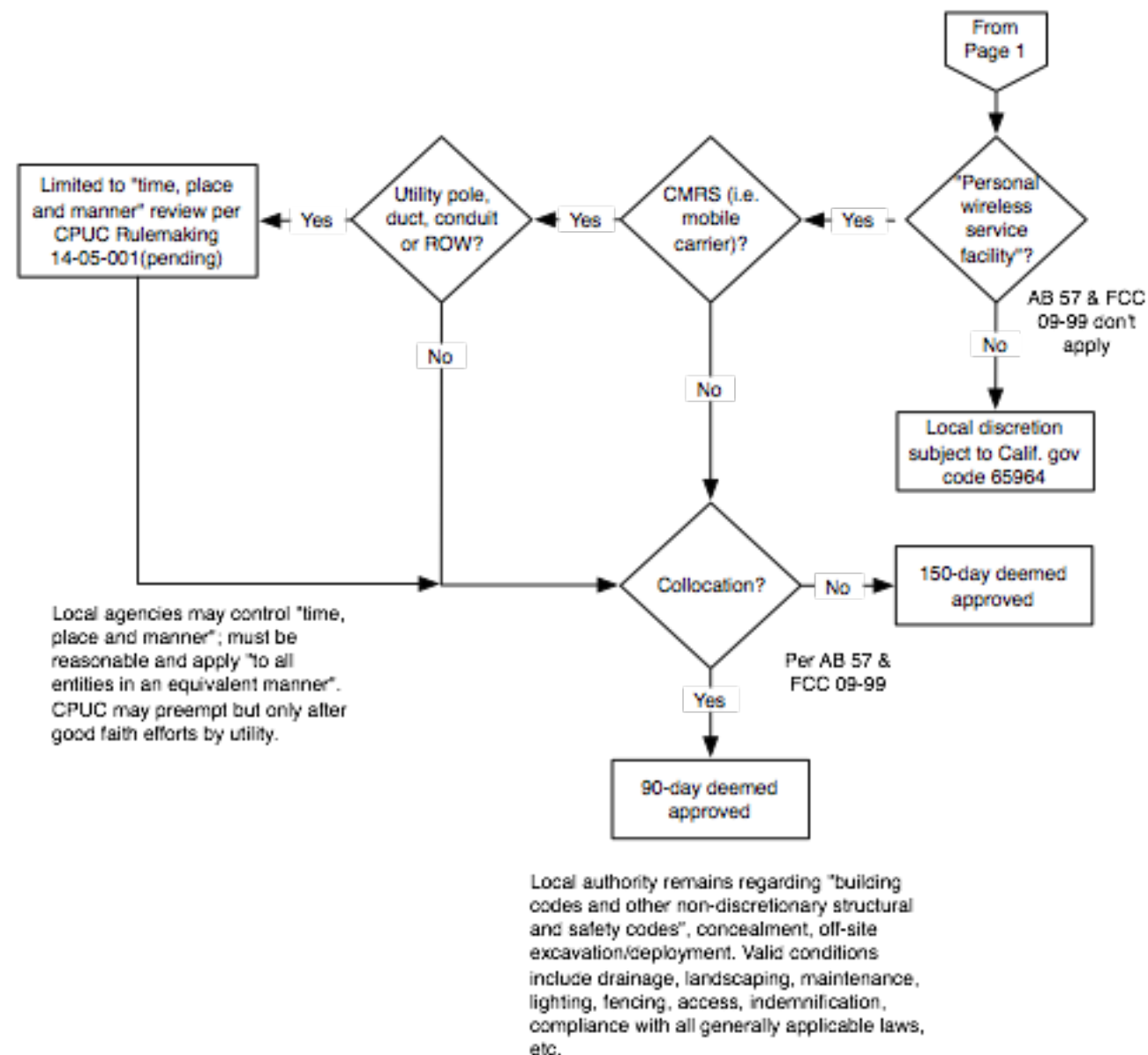


Figure 2 – Wireless permit "shot clock" flowchart, page 2.

Claimed Cell Company Coverage

AT&T



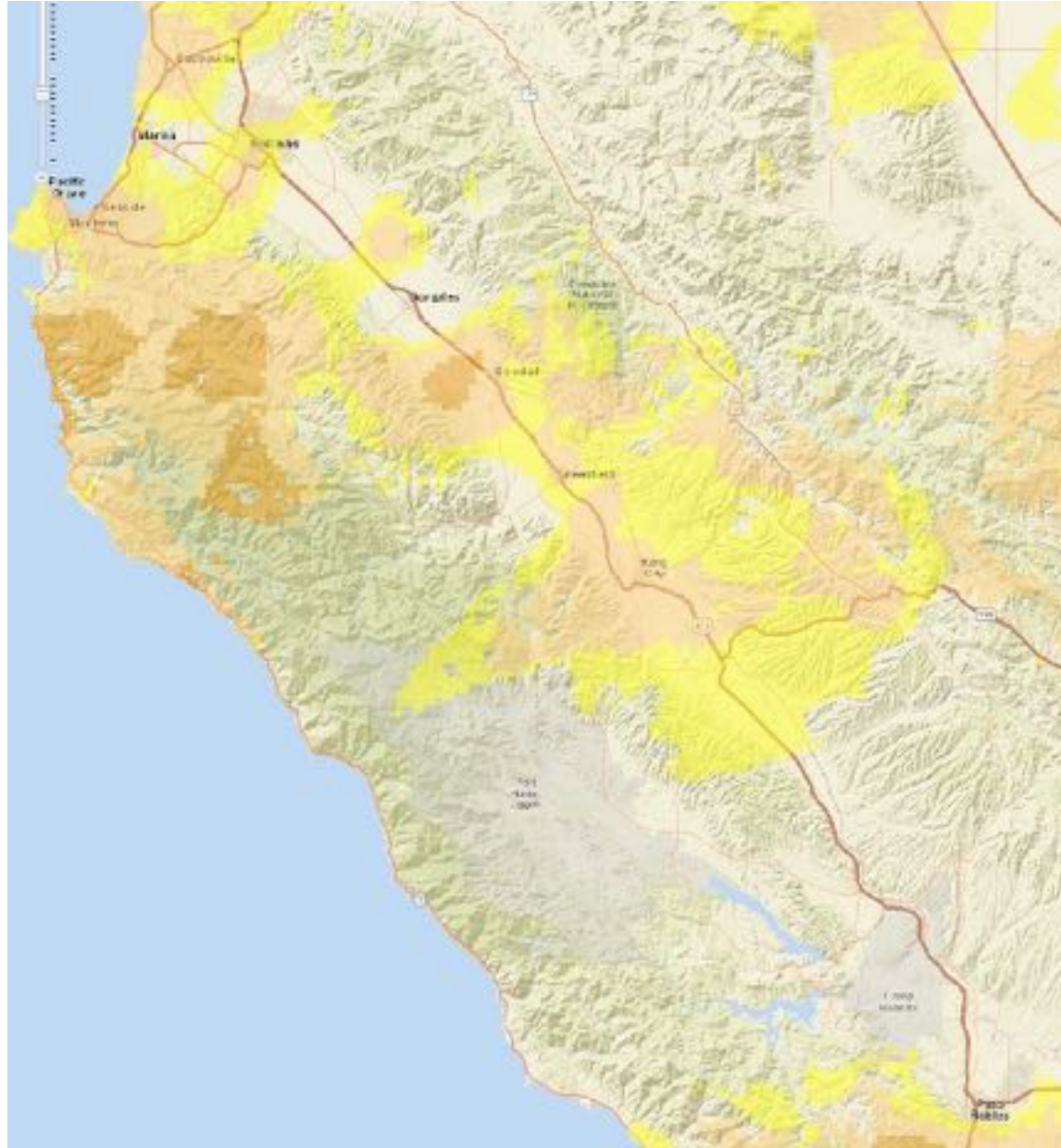
2016 data

Verizon

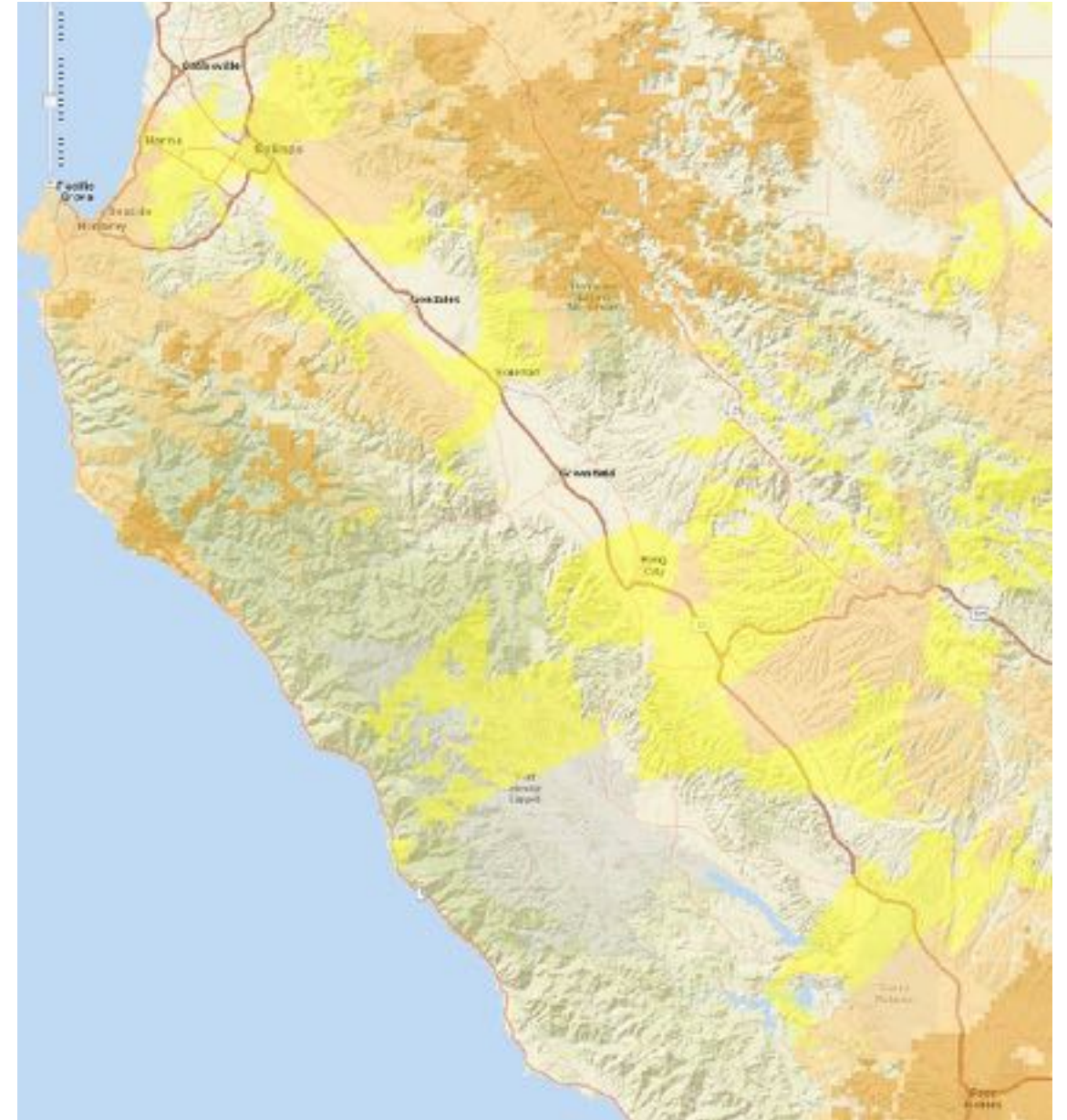


CPUC Measured Coverage

AT&T



Verizon



2016 data