

Northeastern Broadband Meeting with Frontier Communications

22 June 2016
Redding, California



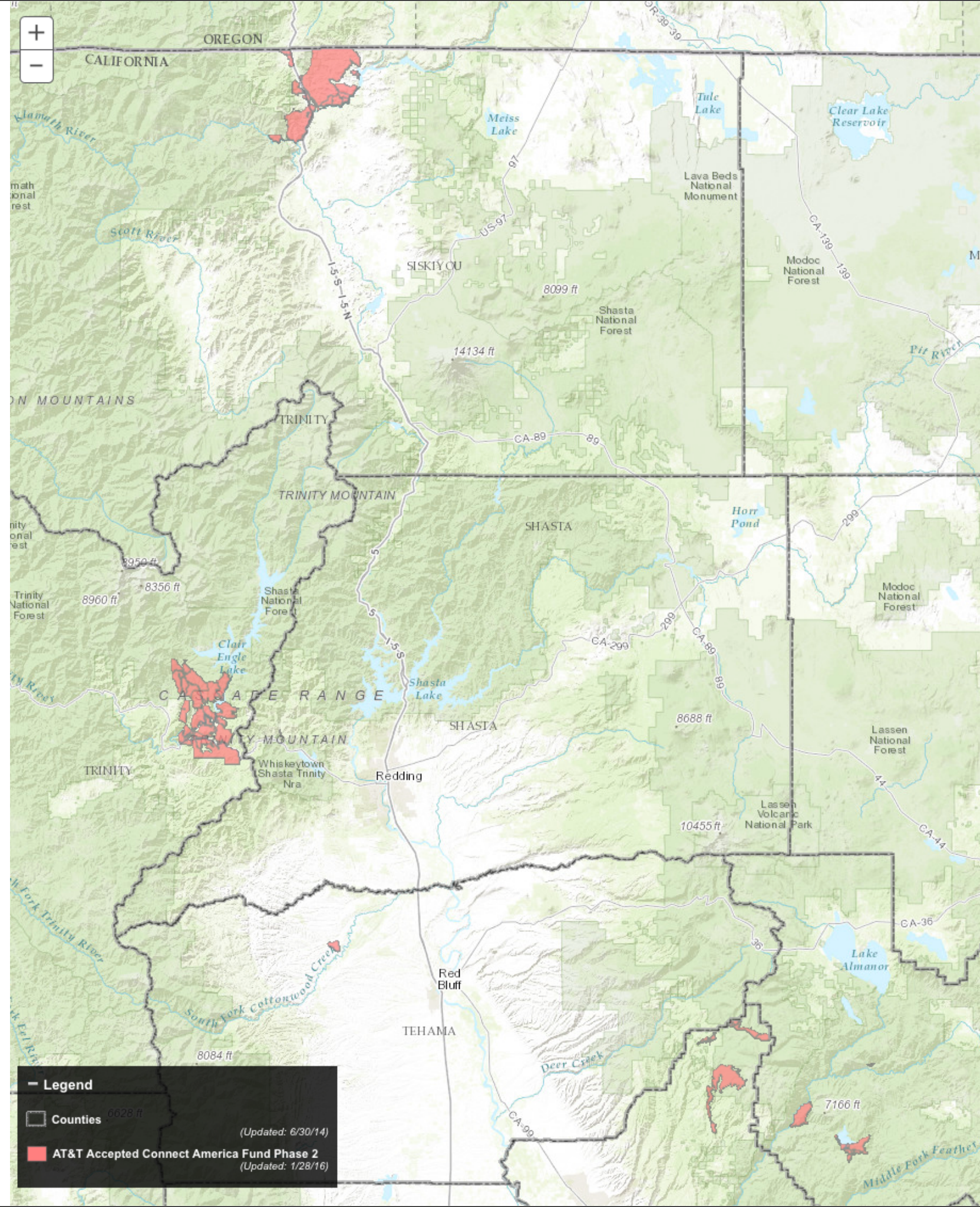
Frontier eligible for most of the \$20 million, six year CAF-2 subsidies

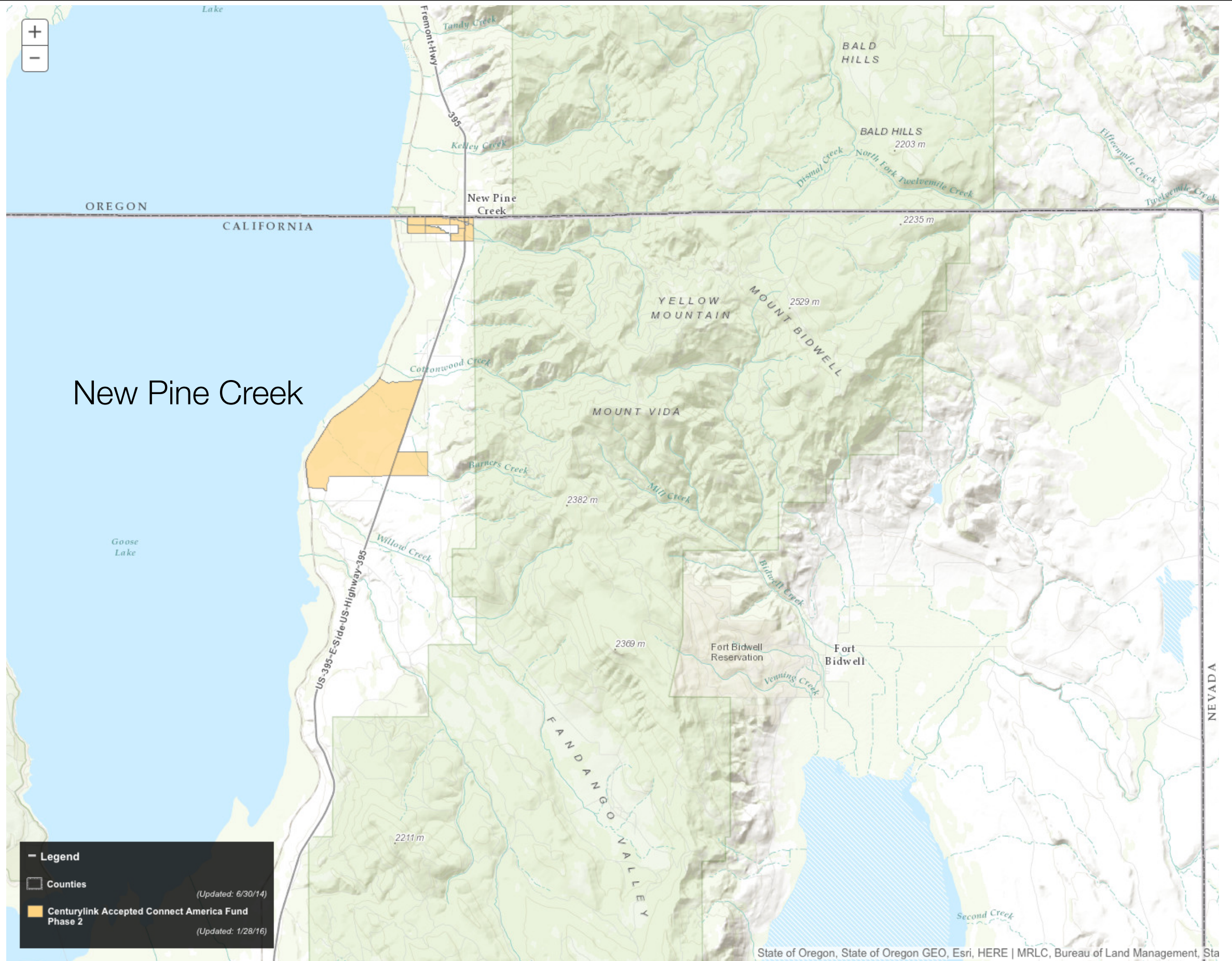
Must upgrade all funded census blocks to 10 Mbps download/1 Mbps upload speeds by end of 2020

CAF-2 Six Year Subsidies			
	AT&T	Frontier	Century Link
Lassen		\$3,582,833	
Modoc		\$7,372,722	\$313,547
Plumas	\$775,063	\$1,083,101	
Shasta	\$38,568	\$4,783,184	
Siskiyou	\$740,968	\$40,739	
Tehama	\$22,390	\$1,326,829	
Total	\$1,576,988	\$18,189,408	\$313,547

Subsidised "Locations"			
	AT&T	Frontier	Century Link
Lassen		1,469	
Modoc		1,905	41
Plumas	307	435	
Shasta	20	1,615	
Siskiyou	244	7	
Tehama	5	377	
Total	576	5,808	41

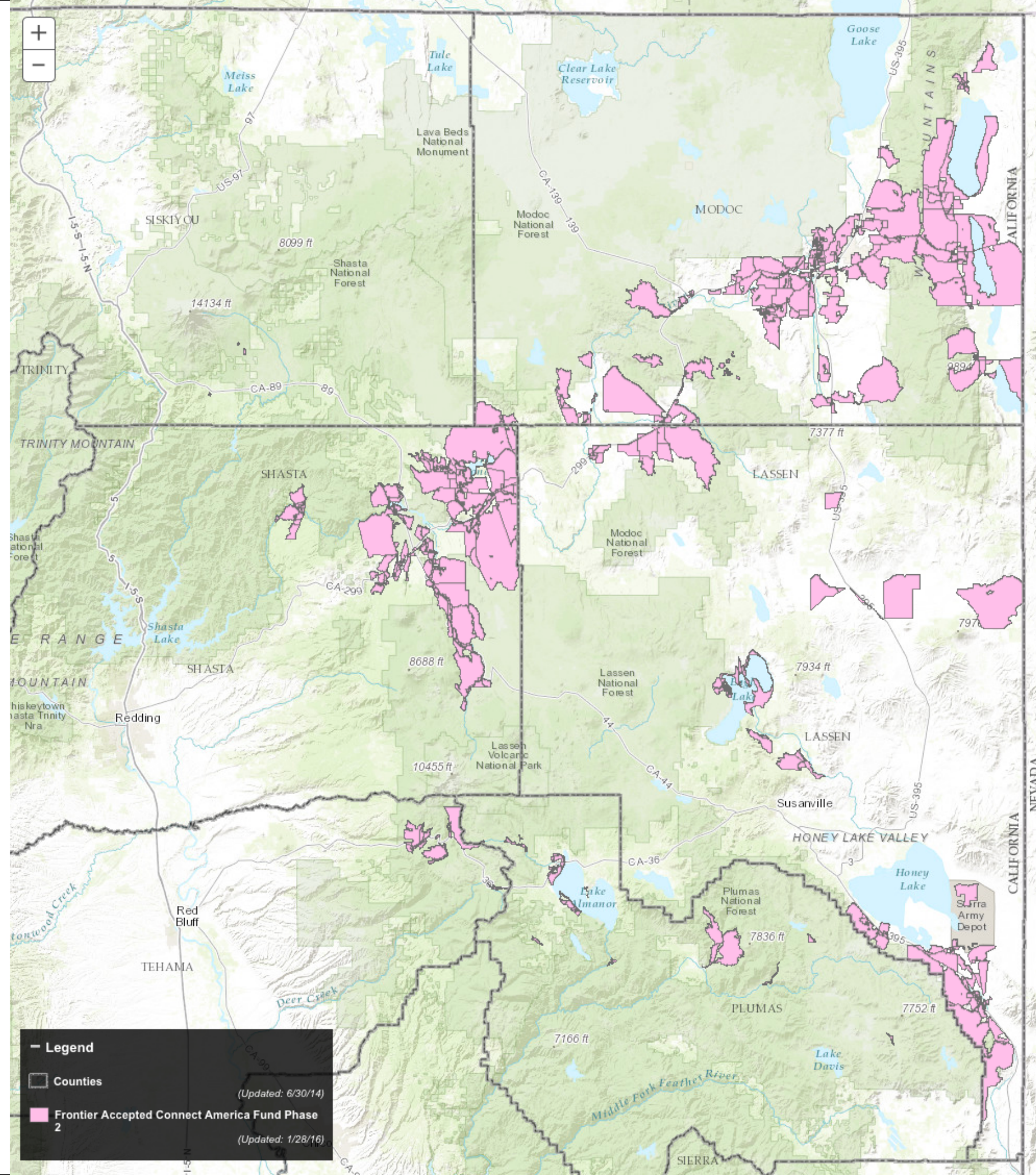
AT&T

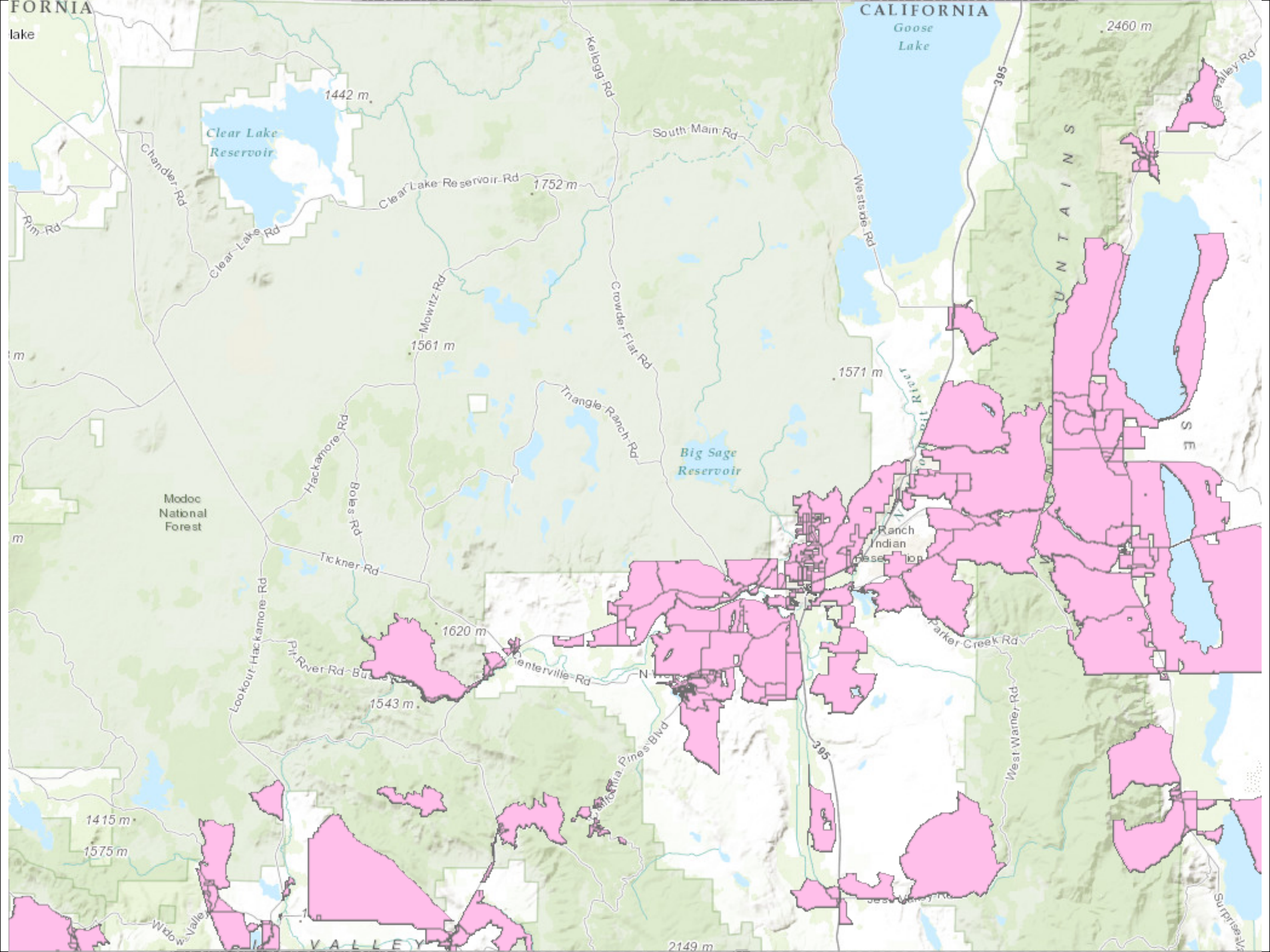


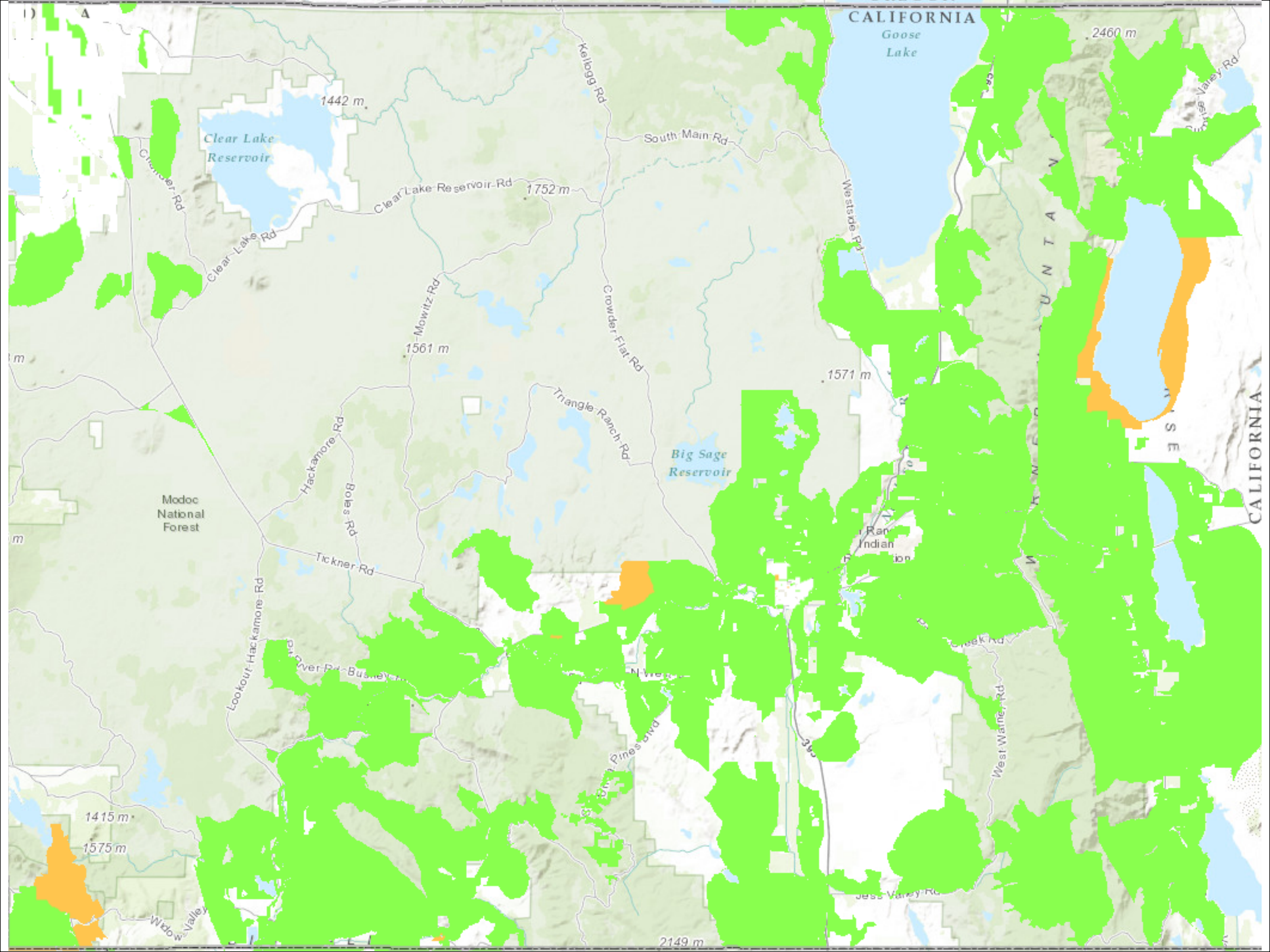


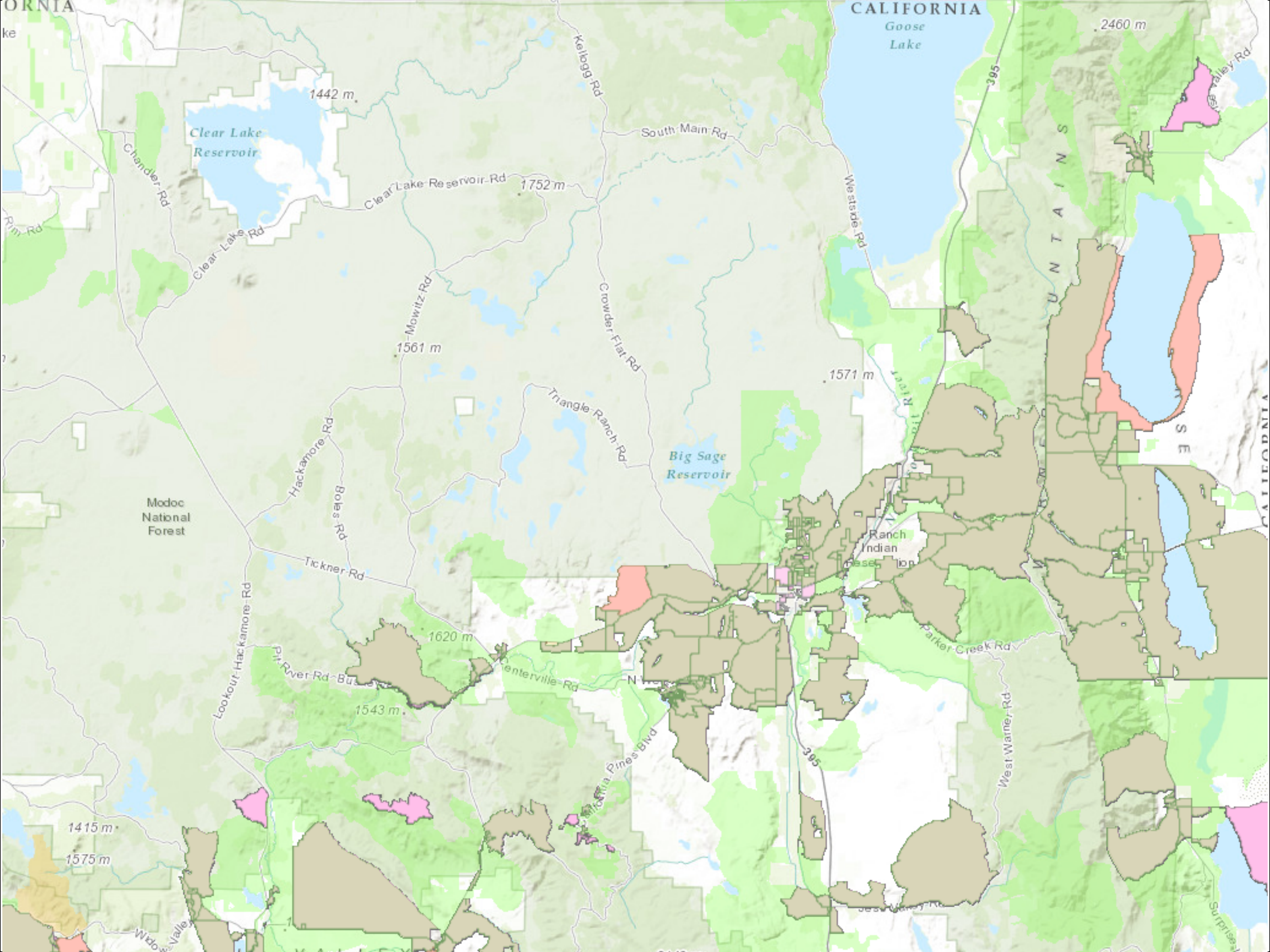
CenturyLink

Frontier









	CAF-2 locations	Minus 10% (business)	Remaining unserved (estimate)
Lassen	1,469	1,322	4,689
Modoc	1,946	1,751	1,041
Plumas	742	668	10,265
Shasta	1,635	1,472	5,860
Siskiyou	251	226	6,748
Tehama	382	344	7,289
Total	6,425	5,783	35,892

CAF-2 will not reach the majority of
unserved homes

Appears weighted toward upgrades
of existing broadband service

	Frontier locations	Minus 10% (business)	Unserved after CAF2
Lassen	1,469	1,322	507
Modoc	1,905	1,715	588
Plumas	435	392	86
Shasta	1,615	1,454	215
Siskiyou	7	6	2
Tehama	377	339	89
Total	5,808	5,227	1,487

Same pattern but less severe in Frontier's actual CAF-2 funded census blocks

Need for line extensions, either new wire or upgrade to DSL specs

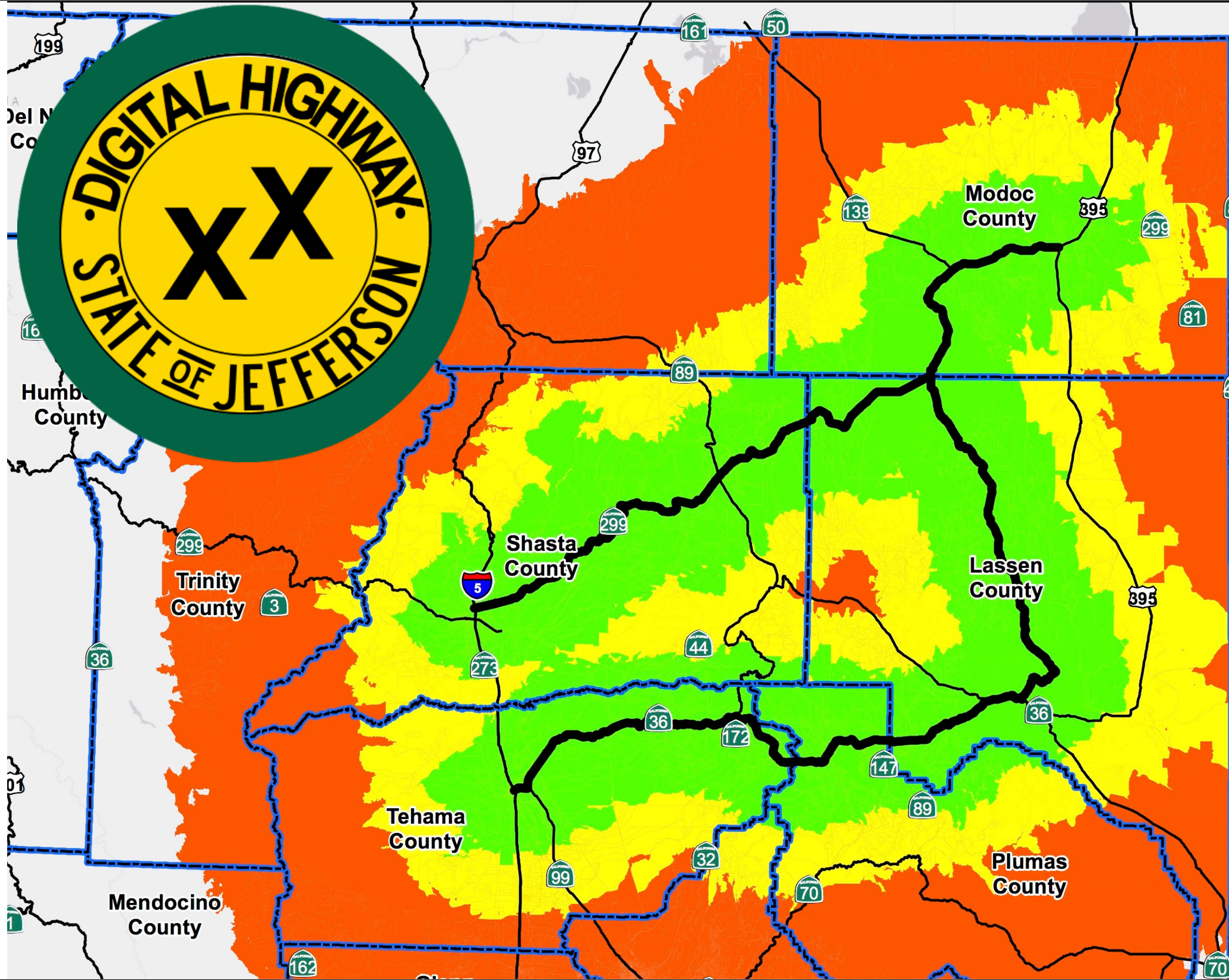
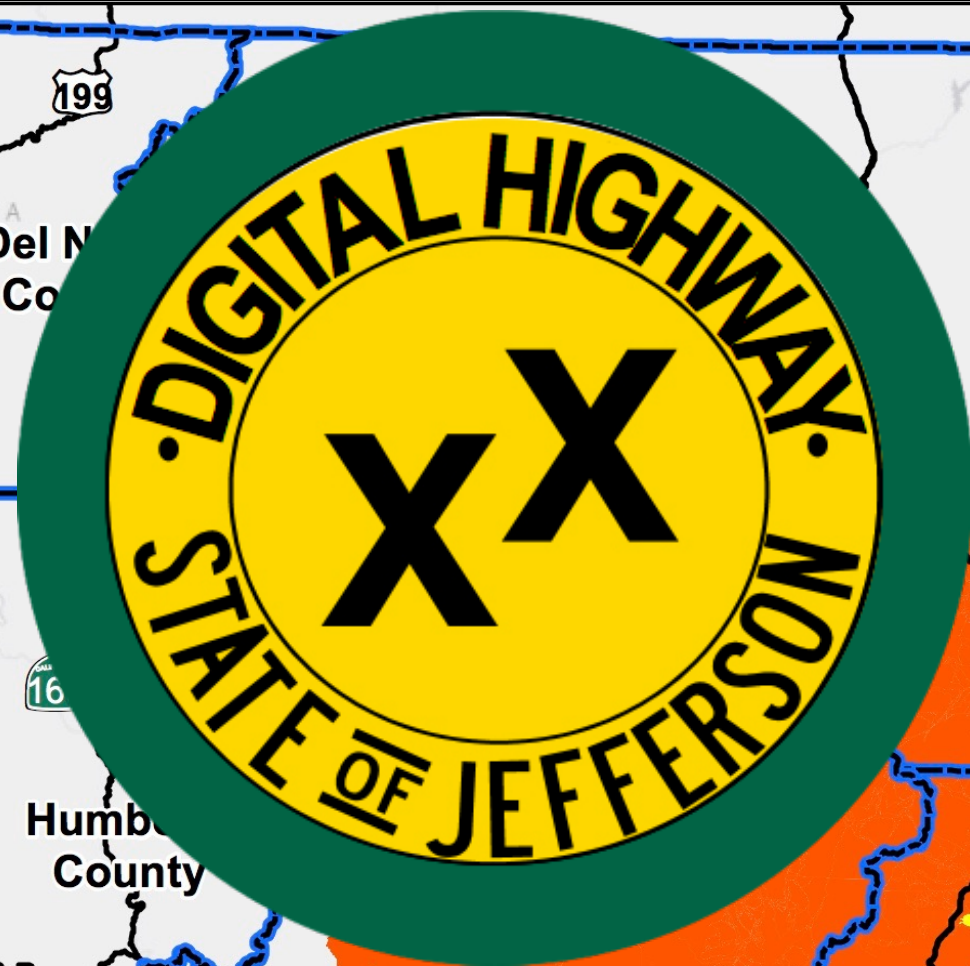
	Distance (miles)	Cost - low range	Cost - high range
Core Network	320	\$48,000,000	\$80,000,000
Community extensions	164	\$24,600,000	\$41,000,000
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Total	484	\$72,600,000	\$121,000,000

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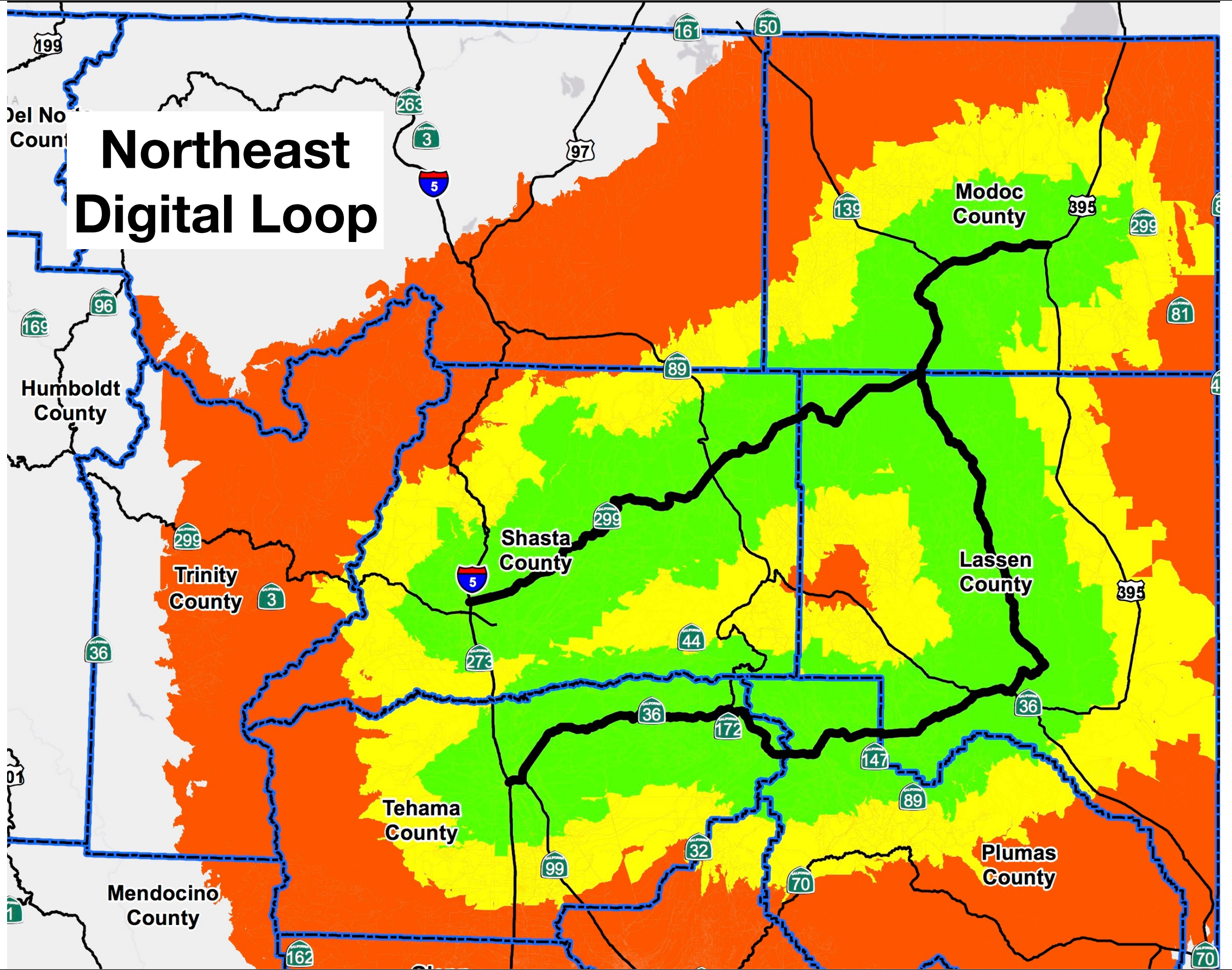
Need for line extensions, either new wire or upgrade to DSL specs

Northeast Digital Loop





Northeast Digital Loop



A map of Northeast California showing several counties: Del Norte, Humboldt, Modoc, Shasta, Tehama, Plumas, and Mendocino. A blue dashed line outlines a digital loop network. The map is color-coded: orange for areas outside the loop, yellow for areas within the loop but not on the core network, and green for the core network itself. Major highways are marked with shields: 199, 96, 169, 36, 161, 50, 263, 3, 5, 97, 139, 299, 81, 395, 89, 32, 70, 147, 162, and 70.

Northeast Digital Loop

	Distance (miles)	Cost - low range	Cost - high range
Core Network	320	\$48,000,000	\$80,000,000
Community extensions	164	\$24,600,000	\$41,000,000
Total	484	\$72,600,000	\$121,000,000

	Current Availability	NE Digital Loop - Total	NE Digital Loop - Unserved	New Availability	Gain
Lassen	56%	10,047	3,264	81%	26%
Modoc	36%	3,422	1,957	74%	38%
Plumas	31%	4,739	1,512	40%	10%
Shasta	90%	7,762	2,888	94%	4%
Tehama	72%	2,658	1,701	79%	6%
Total	75%	28,628	11,322	83%	6%

Loop reaches significant number of unserved homes, boost speed to many more

Combined with Frontier's network, impact likely to be greater

Questions?





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Back up slides



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

Urban

Low speed
residential service



High speed
residential service



Commercial grade
service



Local fiber



Connections to
Tier 1 hubs



Mobile serv



*Sweet spot
for muni,
EDA, PPP
projects*

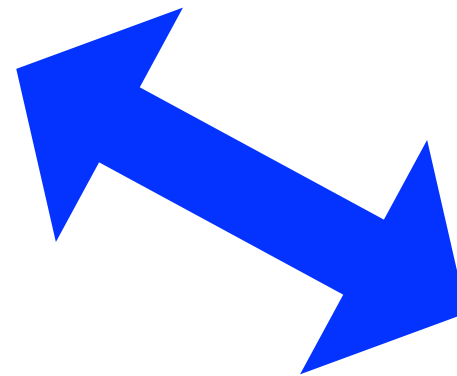
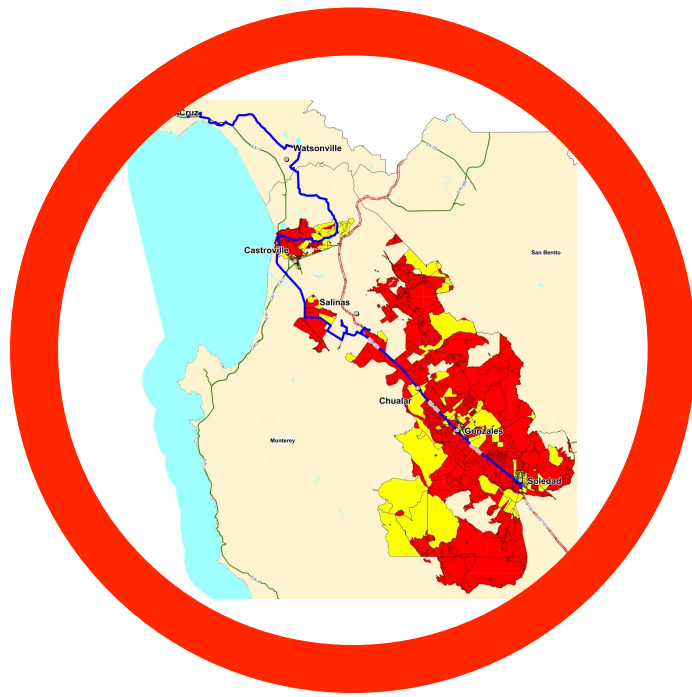
Rural



*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



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

Different vision, different clients, different incentives