

# WIRE CALIFORNIA

Universal Access to Middle-Mile Fiber for Wired Broadband

## California Wireline Broadband Usage & FCC Wireless Spectrum Licenses

**Sources:** Jan 15, 2023 data scraped from FCC's wireless license database; area/population numbers from [Wikipedia](#); compiled/mapped by <https://specmap.sequence-omega.net/> and tabled below by <https://wirecalifornia.org/>

### Conclusion

California doesn't need any more telecom-focused state bills, such as AB-965 or AB-1065. To close the Wireless digital divide, the CA Attorney General just needs to enforce the laws on the books for all currently unserved areas in California because FCC license terms require that providers serve the areas covered by the licenses. The FCC licenses currently in place require wireless carriers to ensure that all major roadways in these areas have wireless telecommunications service. **In short, no more expensive, taxpayer-funded carrots are needed — just one effective stick.**

Current FCC data proves that AT&T, Dish, T-Mobile and Verizon all have **sufficient FCC wireless licenses in every California county** to provide wireless signal strength — as measured by Received Signal Strength Indicator (RSSI) levels between -125 and -85 dBm — for wireless telecommunications service (the ability to make outdoor wireless phone calls, along major roadways). If there any areas with a significant gap in wireless telecommunications service in 2023, California's Attorney General can enforce the terms of the FCC license to compel wireless carriers to install sufficient infrastructure in order to close that significant gap in wireless telecommunications service.

### Table of Contents

**Source:** Microsoft October 2022 Broadband [Usage Data](#)

[The Microsoft Broadband datasets](#) consist of data derived from anonymized data that Microsoft collects as part of its ongoing work to improve the performance and security of Microsoft's software and services. The data does not include any personal identifying information including IP Address. Other than the aggregated data shared in this data table, no other data is stored during this process. Microsoft estimated broadband usage by combining data from multiple Microsoft services. The data from these services are combined with the number of households per county and zip code.

Every time a device receives an update or connects to a Microsoft service, Microsoft can estimate the throughput speed of a machine. **Microsoft knows the size of the package sent to the computer, and knows the total time of the download.** Microsoft also determines zip code level location data via reverse IP.

Therefore, Microsoft can count the number of devices that have connected to the internet at broadband speed per each zip code based on the FCC’s definition of broadband that is 25mbps per download. Using this method, **Microsoft estimates that 120.4 million people in the United States are not using the internet at broadband speeds.**

Getting Broadband numbers right is vitally important. Such data is used by federal, state, and local agencies to decide where to target public funds dedicated to closing this broadband gap. Because the ISP-self-reported data on FCC Form 477 is so gamed and unreliable, **millions of Americans already lacking access to broadband have been made invisible, substantially decreasing the likelihood of additional broadband funding or much needed broadband service.** Microsoft is publishing Broadband Usage data to allow others to use it to develop solutions to improve broadband access or address problems with broadband access.

- **FCC Broadband Availability** = % of people per county with access to fixed terrestrial broadband at speeds of **25 Mbps down/3 Mbps up** as of the **end of 2019** per [FCC data](#).
- **Microsoft Actual Broadband Usage** = % of people per county that use the internet at broadband speeds based on the methodology explained above. Data is from **October 2020**.
- The initial dataset released from April 2020 provided broadband usage percentages at a US county-level.
- In December 2020, Microsoft added a zip code-level view of the same information
- The Broadband Usage Percentages Dataset (percentages by households) is derived from aggregated and anonymized data that Microsoft collects as part of its ongoing work to improve software and service performance and security.
- To read more about how differential privacy has been applied to this data, read the Broadband usage differential privacy [paper](#)

County ID	County Name	Population (2022)	Area (sq. miles)	FCC Broadband Availability	Microsoft Actual Broadband Usage	FCC Overstates Broadband By	FCC Wireless Licenses
6001	Alameda County	1,628,997	738	99.9%	73.1%	27%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6003	Alpine County	1,190	739	18.3%	7.7%	58%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6005	Amador County	41,412	606	97.6%	35.2%	64%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6007	Butte County	207,303	1,640	98.7%	63.6%	36%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6009	Calaveras County	46,563	1,020	96.3%	44.2%	54%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6011	Colusa County	21,914	1,151	83.6%	11.9%	86%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>

County ID	County Name	Population (2022)	Area (sq. miles)	FCC Broadband Availability	Microsoft Actual Broadband Usage	FCC Overstates Broadband By	FCC Wireless Licenses
6013	Contra Costa County	1,156,966	720	99.2%	77.3%	22%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6015	Del Norte County	27,082	1,008	93.6%	79.9%	15%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6017	El Dorado County	192,646	1,712	98.3%	54.9%	44%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6019	Fresno County	1,015,190	5,963	99.6%	52.2%	48%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6021	Glenn County	28,339	1,315	96.8%	16.5%	83%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6023	Humboldt County	135,010	3,573	94.7%	56.3%	41%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6025	Imperial County	178,713	4,175	85.7%	64.4%	25%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6027	Inyo County	18,718	10,192	89.8%	43.5%	52%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6029	Kern County	916,108	8,142	96.2%	53.7%	44%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6031	Kings County	152,981	1,390	99.9%	45.5%	54%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6033	Lake County	68,191	1,258	93.4%	35.1%	62%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6035	Lassen County	29,904	4,558	91.4%	20.7%	77%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6037	Los Angeles County	9,721,138	4,060	99.6%	73.4%	26%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6039	Madera County	160,256	2,138	99.7%	36.0%	64%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6041	Marin County	256,018	520	98.3%	61.9%	37%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>

County ID	County Name	Population (2022)	Area (sq. miles)	FCC Broadband Availability	Microsoft Actual Broadband Usage	FCC Overstates Broadband By	FCC Wireless Licenses
6043	Mariposa County	17,020	1,451	82.7%	10.2%	88%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6045	Mendocino County	89,783	3,509	89.6%	39.4%	56%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6047	Merced County	290,014	3,044	100.0%	47.4%	53%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6049	Modoc County	8,511	3,944	45.3%	8.9%	80%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6051	Mono County	12,978	3,132	83.8%	65.8%	22%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6053	Monterey County	432,858	3,322	98.9%	57.5%	42%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6055	Napa County	134,300	754	98.9%	63.7%	36%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6057	Nevada County	102,293	958	96.7%	41.9%	57%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6059	Orange County	3,151,184	948	98.6%	85.4%	13%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6061	Placer County	417,772	1,407	98.6%	71.8%	27%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6063	Plumas County	19,351	2,554	96.2%	17.9%	81%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6065	Riverside County	2,473,902	7,208	97.5%	79.3%	19%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6067	Sacramento County	1,584,169	966	98.2%	77.7%	21%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6069	San Benito County	67,579	1,389	98.8%	64.3%	35%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6071	San Bernardino County	2,193,656	20,062	96.9%	77.1%	20%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>

County ID	County Name	Population (2022)	Area (sq. miles)	FCC Broadband Availability	Microsoft Actual Broadband Usage	FCC Overstates Broadband By	FCC Wireless Licenses
6073	San Diego County	3,276,208	4,204	98.1%	76.1%	22%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6075	San Francisco County	808,437	47	100.0%	58.0%	42%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6077	San Joaquin County	793,229	1,399	99.9%	64.8%	35%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6079	San Luis Obispo County	282,013	3,304	95.2%	65.8%	31%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6081	San Mateo County	729,181	449	100.0%	77.2%	23%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6083	Santa Barbara County	443,837	2,738	94.2%	64.7%	31%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6085	Santa Clara County	1,870,945	1,291	100.0%	84.9%	15%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6087	Santa Cruz County	264,370	446	100.0%	61.5%	39%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6089	Shasta County	180,930	3,786	93.6%	60.2%	36%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6091	Sierra County	3,217	953	66.0%	7.7%	88%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6093	Siskiyou County	43,660	6,287	86.1%	22.2%	74%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6095	Solano County	448,747	828	94.9%	77.1%	19%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6097	Sonoma County	482,650	1,576	96.8%	68.7%	29%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6099	Stanislaus County	551,275	1,495	100.0%	58.0%	42%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6101	Sutter County	98,503	603	99.3%	75.5%	24%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>

County ID	County Name	Population (2022)	Area (sq. miles)	FCC Broadband Availability	Microsoft Actual Broadband Usage	FCC Overstates Broadband By	FCC Wireless Licenses
6103	Tehama County	65,245	2,951	98.0%	19.2%	80%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6105	Trinity County	15,781	3,179	24.8%	16.8%	32%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6107	Tulare County	477,544	4,824	99.5%	46.2%	54%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6109	Tuolumne County	54,531	2,236	99.4%	44.3%	55%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6111	Ventura County	832,605	1,846	98.6%	82.7%	16%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6113	Yolo County	222,115	1,012	94.1%	66.5%	29%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>
6115	Yuba County	84,310	630	99.5%	55.1%	45%	AT&T, Dish, T-Mobile, Verizon & <a href="#">more</a>

### Legend: Commercial Wireless Spectrum Categories for Tables That Follow

- **Low-Band** = 663–2,200 MHz — includes T-Mobile 5G-600 MHz and earlier 3G/4G bands
- **Mid-Band** = 2,305–3,980 MHz — includes recently-auctioned 5G-Citizen Band Radio Spectrum (CBRS)
- **High-Band** = 24,250–48,200 MHz — near-millimeter and millimeter wave spectrum, which is no longer being deployed, other than in select entertainment venues and a very few urban areas

## Alameda County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Alameda, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	250 MHz	1750 MHz
AT&T	81MHz	220 MHz	1100MHz
T-Mobile	56 MHz	346 MHz	1400MHz
Dish	30 MHz	125 MHz	500 MHz

## Alpine County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Alameda, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	280 MHz	1850 MHz
AT&T	75 MHz	230 MHz	1100 MHz
T-Mobile	66 MHz	326 MHz	1000 MHz
Dish	16 MHz	105 MHz	800 MHz

## Amador County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Amador, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	240 MHz	1850 MHz
AT&T	75 MHz	240 MHz	1100 MHz
T-Mobile	46 MHz	346 MHz	1200 MHz
Dish	26 MHz	105 MHz	800 MHz

## Butte County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Butte, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	230 MHz	1200 MHz
AT&T	75 MHz	230 MHz	1100 MHz
T-Mobile	46 MHz	346 MHz	1000 MHz
Dish	26 MHz	135 MHz	800 MHz

## Calaveras County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Calaveras, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	250 MHz	1000 MHz
AT&T	81 MHz	220 MHz	1000 MHz
T-Mobile	66 MHz	296 MHz	1500 MHz
Dish	20 MHz	115 MHz	600 MHz

## Colusa County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Colusa, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	250 MHz	1850 MHz
AT&T	63 MHz	220 MHz	1100 MHz
T-Mobile	46 MHz	296 MHz	1200 MHz
Dish	26 MHz	115 MHz	800 MHz
US Cellular	12 MHz	0 MHz	0 MHz

## Contra Costa County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Contra Costa, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	250 MHz	1750 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	56 MHz	346 MHz	1400 MHz
Dish	30 MHz	125 MHz	500 MHz

## Del Norte County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Del Norte, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	200 MHz	1000 MHz



<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
AT&T	38 MHz	230 MHz	1100 MHz
T-Mobile	44 MHz	184 MHz	1000 MHz
Dish	16 MHz	125 MHz	600 MHz

## El Dorado County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** El Dorado, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	230 MHz	1850 MHz
AT&T	75 MHz	240 MHz	1100 MHz
T-Mobile	46 MHz	346 MHz	1200 MHz
Dish	26 MHz	115 MHz	800 MHz

## Fresno County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Fresno, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	260 MHz	1850 MHz
AT&T	75 MHz	250 MHz	1100 MHz
T-Mobile	46 MHz	335 MHz	1000 MHz
Dish	26 MHz	115 MHz	800 MHz

## Glenn County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Glenn, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	230 MHz	1200 MHz
AT&T	63 MHz	230 MHz	1100 MHz
T-Mobile	46 MHz	346 MHz	1000 MHz

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Dish	26 MHz	105 MHz	800 MHz
US Cellular	12 MHz	0 MHz	0 MHz

## Humboldt County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Humboldt, CA

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	240 MHz	1525 MHz
AT&T	44 MHz	250 MHz	900 MHz
T-Mobile	66 MHz	219 MHz	700 MHz
Dish	10 MHz	125 MHz	600 MHz
US Cellular	67 MHz	110 MHz	1125 MHz

## Imperial County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Imperial, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	72 MHz	270 MHz	1850 MHz
AT&T	56 MHz	220 MHz	100 MHz
T-Mobile	66 MHz	216 MHz	1200 MHz
Dish	20 MHz	125 MHz	600 MHz

## Inyo County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Inyo, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	290 MHz	1570 MHz
AT&T	75 MHz	210 MHz	1100 MHz
T-Mobile	66 MHz	268 MHz	1280 MHz

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Dish	16 MHz	105 MHz	800 MHz

## Kern County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Kern, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	240 MHz	1950 MHz
AT&T	81 MHz	230 MHz	1100 MHz
T-Mobile	76 MHz	346 MHz	1100 MHz
Dish	20 MHz	105 MHz	700 MHz

## Kings County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Kings, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	225 MHz	1850 MHz
AT&T	75 MHz	265 MHz	1100 MHz
T-Mobile	46 MHz	326 MHz	1000 MHz
Dish	26 MHz	105 MHz	800 MHz

## Lake County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Lake, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	210 MHz	1850 MHz
AT&T	44 MHz	240 MHz	800 MHz
T-Mobile	66 MHz	286 MHz	800 MHz
Dish	10 MHz	115 MHz	600 MHz
US Cellular	67 MHz	110 MHz	700 MHz

## Lassen County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Lassen, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	210 MHz	1850 MHz
AT&T	44 MHz	240 MHz	800 MHz
T-Mobile	66 MHz	286 MHz	800 MHz
Dish	10 MHz	115 MHz	600 MHz
US Cellular	67 MHz	110 MHz	700 MHz

## Los Angeles County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Los Angeles, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	250 MHz	1670 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	76 MHz	346 MHz	1380 MHz
Dish	20 MHz	115 MHz	700 MHz

## Madera County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Madera, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	240 MHz	1850 MHz
AT&T	75 MHz	270 MHz	1100 MHz
T-Mobile	46 MHz	326 MHz	1000 MHz
Dish	26 MHz	125 MHz	800 MHz

## Marin County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Marin, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	220 MHz	1750 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	56 MHz	346 MHz	1400 MHz
Dish	30 MHz	145 MHz	500 MHz

## Mariposa County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Mariposa, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	230 MHz	1850 MHz
AT&T	81 MHz	250 MHz	1000 MHz
T-Mobile	66 MHz	286 MHz	1500 MHz
Dish	20 MHz	115 MHz	600 MHz

## Mendocino County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Mendocino, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	220 MHz	1850 MHz
AT&T	44 MHz	260 MHz	900 MHz
T-Mobile	66 MHz	231 MHz	800 MHz
Dish	10 MHz	125 MHz	600 MHz
US Cellular	67 MHz	110 MHz	700 MHz

## Merced County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Merced, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	210 MHz	1425 MHz

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
AT&T	81 MHz	270 MHz	1000 MHz
T-Mobile	66 MHz	276 MHz	1925 MHz
Dish	20 MHz	145 MHz	600 MHz

## Modoc County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Modoc, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	72 MHz	240 MHz	1400 MHz
AT&T	38 MHz	200 MHz	1000 MHz
T-Mobile	44 MHz	184 MHz	800 MHz
Dish	16 MHz	125 MHz	600 MHz
US Cellular	67 MHz	105 MHz	850 MHz

## Mono County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Mono, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	280 MHz	1425 MHz
AT&T	75 MHz	230 MHz	1100 MHz
T-Mobile	66 MHz	214 MHz	1425 MHz
Dish	16 MHz	105 MHz	800 MHz

## Monterey County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Monterey, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	240 MHz	1000 MHz
AT&T	81 MHz	235 MHz	1100 MHz

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
T-Mobile	56 MHz	366 MHz	1300 MHz
Dish	30 MHz	125 MHz	500 MHz

## Napa County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Napa, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	220 MHz	1750 MHz
AT&T	81 MHz	230 MHz	1100 MHz
T-Mobile	56 MHz	346 MHz	1400 MHz
Dish	30 MHz	125 MHz	500 MHz

## Nevada County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Nevada, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	230 MHz	1850 MHz
AT&T	75 MHz	240 MHz	1100 MHz
T-Mobile	46 MHz	346 MHz	1200 MHz
Dish	26 MHz	105 MHz	800 MHz

## Orange County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Orange, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	250 MHz	1670 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	76 MHz	346 MHz	1380 MHz
Dish	20 MHz	115 MHz	800 MHz

## Placer County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Placer, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	230 MHz	1850 MHz
AT&T	75 MHz	230 MHz	1100 MHz
T-Mobile	46 MHz	356 MHz	1200 MHz
Dish	26 MHz	145 MHz	800 MHz

## Plumas County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Plumas, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	46 MHz	270 MHz	1650 MHz
AT&T	38 MHz	220 MHz	1100 MHz
T-Mobile	66 MHz	326 MHz	1200 MHz
Dish	16 MHz	125 MHz	800 MHz
US Cellular	37 MHz	50 MHz	0 MHz

## Riverside County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Riverside, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	250 MHz	1670 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	76 MHz	346 MHz	1380 MHz
Dish	20 MHz	115 MHz	700 MHz

## Sacramento County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Sacramento, CA.



<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	260 MHz	1850 MHz
AT&T	75 MHz	230 MHz	1100 MHz
T-Mobile	46 MHz	356 MHz	1200 MHz
Dish	26 MHz	125 MHz	800 MHz

## San Benito County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** San Benito, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	220 MHz	1750 MHz
AT&T	81 MHz	250 MHz	1000 MHz
T-Mobile	66 MHz	264 MHz	1600 MHz
Dish	20 MHz	115 MHz	600 MHz

## San Bernardino County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** San Bernardino, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	250 MHz	1670 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	76 MHz	356 MHz	1380 MHz
Dish	20 MHz	115 MHz	700 MHz

## San Diego County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** San Diego, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	270 MHz	1400 MHz
AT&T	75 MHz	230 MHz	1000 MHz

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
T-Mobile	66 MHz	337 MHz	1000 MHz
Dish	26 MHz	105 MHz	1550 MHz

## San Francisco County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** San Francisco, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	250 MHz	1750 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	56 MHz	345 MHz	1400 MHz
Dish	30 MHz	125 MHz	500 MHz

## San Joaquin County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** San Joaquin, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	250 MHz	1000 MHz
AT&T	81 MHz	230 MHz	1100 MHz
T-Mobile	56 MHz	366 MHz	1300 MHz
Dish	30 MHz	125 MHz	500 MHz

## San Luis Obispo County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** San Luis Obispo, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	230 MHz	1950 MHz
AT&T	81 MHz	230 MHz	1100 MHz
T-Mobile	76 MHz	336 MHz	1100 MHz
Dish	20 MHz	115 MHz	700 MHz

## San Mateo County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** San Mateo, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	250 MHz	1750 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	56 MHz	346 MHz	1400 MHz
Dish	30 MHz	125 MHz	500 MHz

## Santa Barbara County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Santa Barbara, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	250 MHz	1950 MHz
AT&T	81 MHz	210 MHz	1100 MHz
T-Mobile	76 MHz	346 MHz	1100 MHz
Dish	20 MHz	125 MHz	700 MHz

## Santa Clara County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Santa Clara, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	240 MHz	1750 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	56 MHz	346 MHz	1400 MHz
Dish	30 MHz	125 MHz	500 MHz

## Santa Cruz County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Santa Cruz, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	200 MHz	1750 MHz
AT&T	81 MHz	250 MHz	1100 MHz
T-Mobile	56 MHz	346 MHz	1400 MHz
Dish	30 MHz	115 MHz	500 MHz

## Shasta County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Shasta, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	240 MHz	1400 MHz
AT&T	63 MHz	220 MHz	1000 MHz
T-Mobile	44 MHz	296 MHz	800 MHz
Dish	16 MHz	135 MHz	600 MHz
US Cellular	44 MHz	80 MHz	0 MHz

## Sierra County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Sierra, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	270 MHz	1650 MHz
AT&T	75 MHz	220 MHz	1100 MHz
T-Mobile	66 MHz	326 MHz	1200 MHz
Dish	16 MHz	105 MHz	800 MHz

## Siskiyou County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Siskiyou, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	230 MHz	1400 MHz

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
AT&T	38 MHz	220 MHz	1000 MHz
T-Mobile	44 MHz	296 MHz	800 MHz
Dish	16 MHz	105 MHz	600 MHz
US Cellular	68 MHz	90 MHz	850 MHz

## Solano County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Solano, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	240 MHz	1750 MHz
AT&T	81 MHz	220 MHz	1100 MHz
T-Mobile	56 MHz	346 MHz	1400 MHz
Dish	30 MHz	145 MHz	500 MHz

## Sonoma County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Sonoma, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	200 MHz	1750 MHz
AT&T	81 MHz	240 MHz	1100 MHz
T-Mobile	56 MHz	356 MHz	1400 MHz
Dish	30 MHz	125 MHz	500 MHz

## Stanislaus County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Stanislaus, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	190 MHz	1850 MHz
AT&T	81 MHz	265 MHz	1100 MHz

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
T-Mobile	56 MHz	351 MHz	1300 MHz
Dish	30 MHz	125 MHz	500 MHz

## Sutter County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Sutter, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	240 MHz	1200 MHz
AT&T	75 MHz	220 MHz	1100 MHz
T-Mobile	46 MHz	356 MHz	1000 MHz
Dish	26 MHz	125 MHz	800 MHz

## Tehama County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Tehama, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	240 MHz	1400 MHz
AT&T	63 MHz	220 MHz	1000 MHz
T-Mobile	44 MHz	296 MHz	800 MHz
Dish	16 MHz	125 MHz	600 MHz
US Cellular	44 MHz	80 MHz	0 MHz

## Trinity County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Trinity, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	210 MHz	1100 MHz
AT&T	44 MHz	240 MHz	900 MHz
T-Mobile	66 MHz	286 MHz	700 MHz

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Dish	10 MHz	105 MHz	600 MHz
US Cellular	67 MHz	110 MHz	700 MHz

## Tulare County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Tulare, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	235 MHz	1850 MHz
AT&T	75 MHz	245 MHz	1100 MHz
T-Mobile	46 MHz	336 MHz	1000 MHz
Dish	26 MHz	115 MHz	800 MHz

## Tuolumne County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Tuolumne, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	240 MHz	1850 MHz
AT&T	81 MHz	245 MHz	1000 MHz
T-Mobile	66 MHz	381 MHz	1500 MHz
Dish	20 MHz	115 MHz	600 MHz

## Ventura County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Ventura, CA.

<b>Wireless Carrier</b>	<b>Low-Band Bandwidth</b>	<b>Mid-Band Bandwidth</b>	<b>High-Band Bandwidth</b>
Verizon	47 MHz	250 MHz	1670 MHz
AT&T	81 MHz	210 MHz	1100 MHz
T-Mobile	76 MHz	366 MHz	1380 MHz
Dish	20 MHz	115 MHz	700 MHz

## Yolo County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Yolo, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	230 MHz	1850 MHz
AT&T	75 MHz	230 MHz	1100 MHz
T-Mobile	46 MHz	356 MHz	1200 MHz
Dish	26 MHz	145 MHz	800 MHz

## Yuba County

[Link to](#) view a color-coded Spectrum Chart and map: select the “**County Depth Map**” tab, choose **State:** California and **County:** Yuba, CA.

Wireless Carrier	Low-Band Bandwidth	Mid-Band Bandwidth	High-Band Bandwidth
Verizon	47 MHz	240 MHz	1200 MHz
AT&T	75 MHz	220 MHz	1100 MHz
T-Mobile	46 MHz	356 MHz	1000 MHz
Dish	26 MHz	115 MHz	800 MHz