



CALIFORNIA

Interactive Broadband Map (CalSPEED)

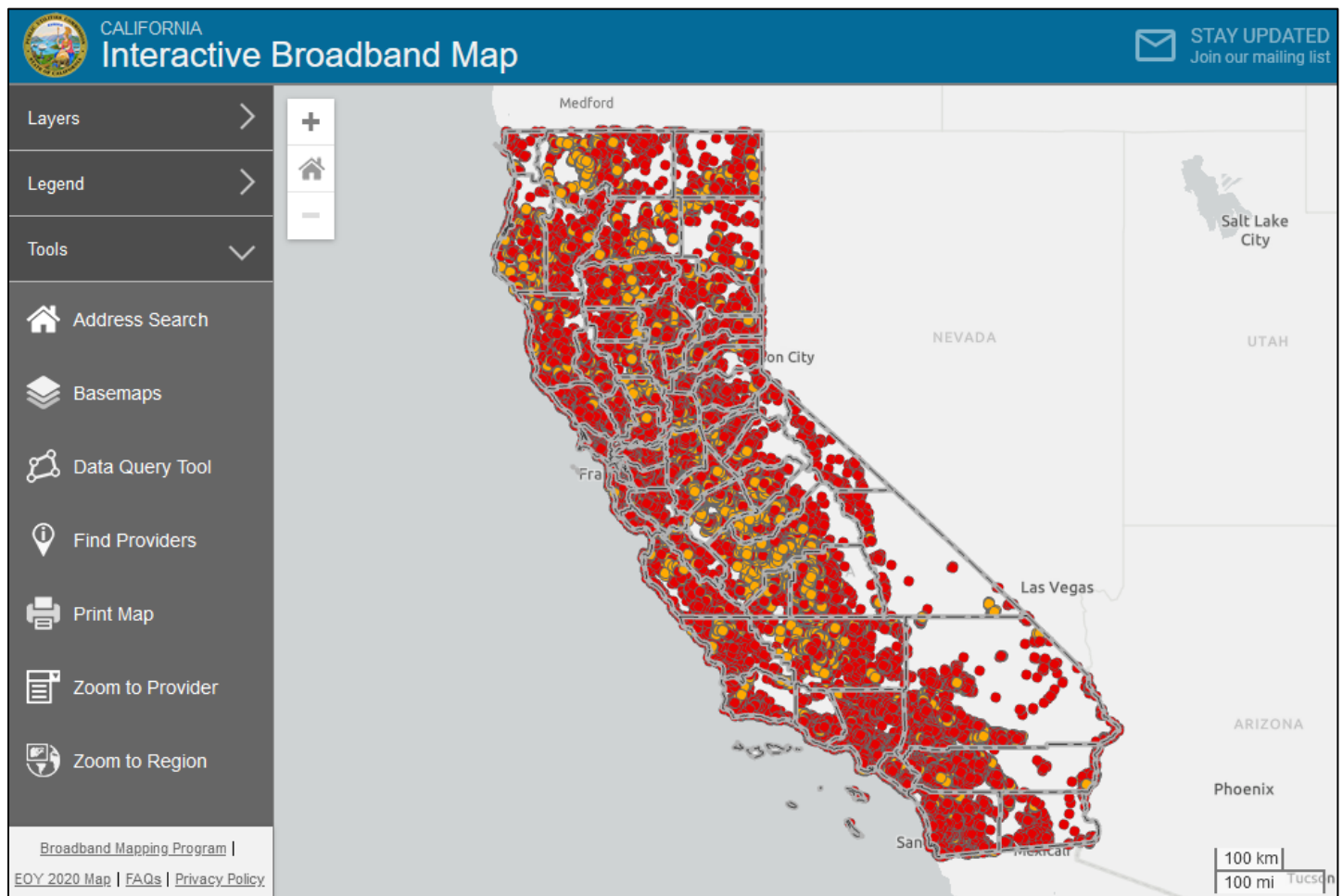
OVERVIEW

This document will assist users in using the California Interactive Broadband Map to access CalSPEED map layers. The map includes different layers that users can switch on and off to show various broadband-related information.

Essentially, this map is a useful tool that uses spatial data to show complex broadband-related information in a clear way. By using geographical context, users can better understand how broadband infrastructure is distributed across California.

 **Map Link:** [California Interactive Broadband Map](#)

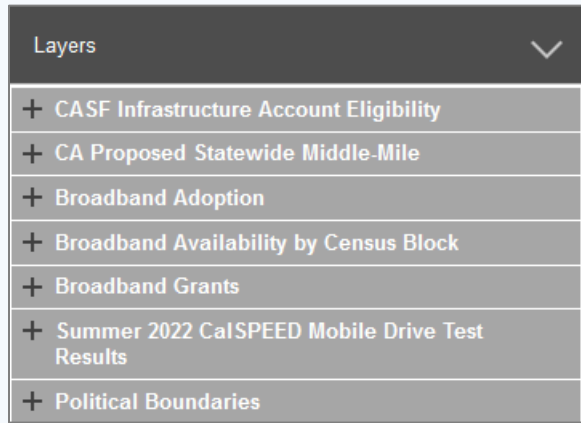
Below is a preview of the interactive map that loads by default.





UNDERSTANDING THE MAP LAYOUT AND FEATURES

The interactive map features three drop-down menu selections, each with its own description provided below.

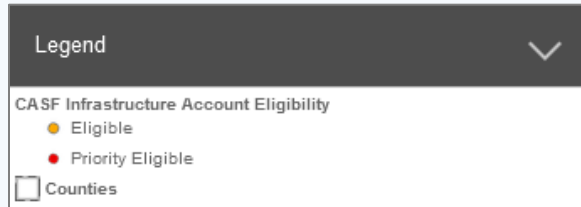


Layers

The Layers menu has seven sub-menus to choose from. You can expand a sub-menu by clicking the + icon or anywhere on the rectangle with the layer name. Once expanded, you'll see a - icon, and clicking it will collapse the sub-menu.

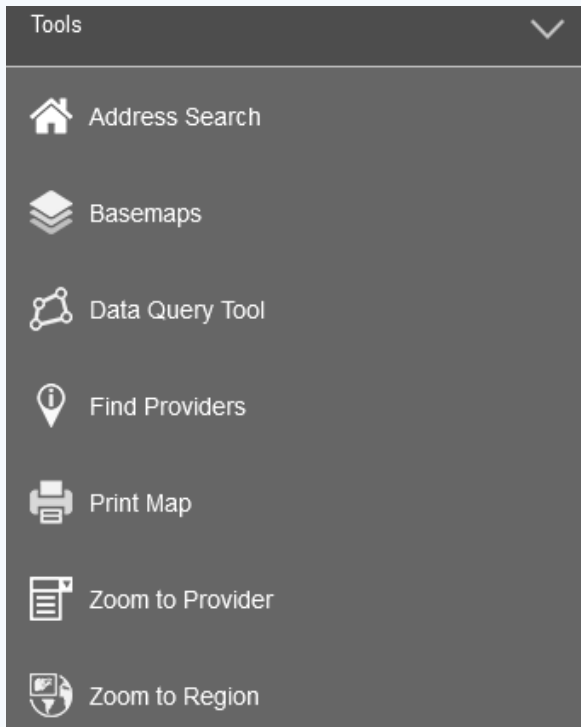
In each sub-menu, you can turn a layer ON by clicking its checkbox.

Blue square means the layer is ON , while a white square means it's OFF



Legend

The Legend updates automatically to show all layers that are currently turned ON. This example shows the two layers that are ON by default when you open the broadband interactive map.



Tools

Address Search – You can search for a postal address and receive a list of broadband providers serving that address, along with other information, including for both fixed and mobile broadband service providers. Additionally, you can use this tool to send feedback on a specific address.

Basemaps – You can change the map background between light, dark, satellite, and terrain views.

Data Query Tool – You can choose features by point, line, polygon, or by drawing a circle.

Find Providers – Find providers nearest to the point you select on the map.

Print Map – Make a print layout with the map, legend, north arrow, and scalebar.

Zoom to Provider – Zoom in on a specific provider after filtering by data type.

Zoom to Region – Zoom to different regions like senate districts, congressional districts, assembly districts, counties, census blocks, and more.



HOW TO DISPLAY CALSPEED LAYERS (STEP-BY-STEP)

Step 1 Turn OFF Any Unwanted Layers

Layer Name	Percentage	Status
CASF Infrastructure Account Eligibility	(100%)	Active (Blue square)
CA Proposed Statewide Middle-Mile		Inactive (White square)
Broadband Adoption		Inactive (White square)
Broadband Availability by Census Block		Inactive (White square)
Broadband Grants		Inactive (White square)
Community Anchor Institutions	(100%)	Active (Blue square)
Public Feedback Locations	(100%)	Inactive (White square)
RDOF Phase 1 Winners - by Bidding Entity	(50%)	Inactive (White square)
CASF Proposed Projects	(100%)	Inactive (White square)
CASF Approved Last-Mile Projects	(100%)	Inactive (White square)
CASF Approved Hybrid Projects	(100%)	Inactive (White square)
CASF Approved Middle-Mile Projects	(50%)	Inactive (White square)
All Active CASF Consortium	(100%)	Inactive (White square)
Summer 2022 CalSPEED Mobile Drive Test Results		Inactive (White square)
Political Boundaries		Inactive (White square)
Counties	(100%)	Active (Blue square)
Census Tracts	(100%)	Inactive (White square)
Census Block Groups	(100%)	Inactive (White square)
Census Blocks	(100%)	Inactive (White square)
Places	(100%)	Inactive (White square)
Urban Areas	(50%)	Inactive (White square)
Tribal Lands	(50%)	Inactive (White square)
Assembly Districts	(100%)	Inactive (White square)
Senate Districts	(100%)	Inactive (White square)
Congressional Districts	(100%)	Inactive (White square)
School Districts	(100%)	Inactive (White square)
CPUC Fire Threat Districts	(100%)	Inactive (White square)
Zip Codes	(100%)	Inactive (White square)

Expand the Layers menu. To expand the layers' sub-menus, click on 'Layers'. Active layers will have a blue square (■) next to their name. To remove any active layers from the map, click on the blue square to turn it OFF, changing it from blue to white (■→□). By default, the following layers are active:

- CASF Infrastructure Account Eligibility
- Community Anchor Institutions
- Counties

For this example, we'll turn off the 'CASF Infrastructure Account Eligibility' and 'Community Anchor Institutions' layers. You can also turn off the 'Counties' layer if you prefer.



Step 2 Expand CalSPEED Layer Menu/ Hide Other Layers Menus

Layer Name	Percentage	Status
CASF Infrastructure Account Eligibility	(100%)	Collapsed
CA Proposed Statewide Middle-Mile		Expanded
Broadband Adoption		Expanded
Broadband Availability by Census Block		Expanded
Broadband Grants		Collapsed
Community Anchor Institutions	(100%)	Collapsed
Public Feedback Locations	(100%)	Collapsed
RDOF Phase 1 Winners - by Bidding Entity	(50%)	Collapsed
CASF Proposed Projects	(100%)	Collapsed
CASF Approved Last-Mile Projects	(100%)	Collapsed
CASF Approved Hybrid Projects	(100%)	Collapsed
CASF Approved Middle-Mile Projects	(50%)	Collapsed
All Active CASF Consortium	(100%)	Collapsed
Summer 2022 CalSPEED Mobile Drive Test Results		Expanded
Political Boundaries		Expanded
Counties	(100%)	Active
Census Tracts	(100%)	Collapsed
Census Block Groups	(100%)	Collapsed
Census Blocks	(100%)	Collapsed
Places	(100%)	Collapsed
Urban Areas	(50%)	Collapsed
Tribal Lands	(50%)	Collapsed
Assembly Districts	(100%)	Collapsed
Senate Districts	(100%)	Collapsed
Congressional Districts	(100%)	Collapsed
School Districts	(100%)	Collapsed
CPUC Fire Threat Districts	(100%)	Collapsed
Zip Codes	(100%)	Collapsed

Expand and collapse sub-menus. To expand the menu for CalSPEED layers, click on 'Summer 2022 CalSPEED Mobile Drive Test Results'. Also, collapse the menus for 'CASF Infrastructure Account Eligibility' and 'Broadband Grants' by clicking on each. This will hide the layers associated with those menus.

If done correctly, the map will now only display the boundaries of the 'Counties' layer, with no other layers visible (as pictured in the image above).



Step 3 Turn ON CalSPEED Layers and Legend

Summer 2022 CalSPEED Mobile Drive Test Results		
<input checked="" type="checkbox"/>	Fastest Downstream Provider	(50%)
<input type="checkbox"/>	Fastest Upstream Provider	(50%)
<input checked="" type="checkbox"/>	AT&T S22 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	AT&T S22 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	AT&T S22 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	AT&T S22 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	FirstNet S21 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	FirstNet S21 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	FirstNet S21 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	FirstNet S21 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	Sprint S10 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	Sprint S10 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	Sprint S10 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	Sprint S10 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	T-Mobile S10 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	T-Mobile S10 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	T-Mobile S10 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	T-Mobile S10 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	T-Mobile S22 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	T-Mobile S22 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	T-Mobile S22 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	T-Mobile S22 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	Verizon S22 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	Verizon S22 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	Verizon S22 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	Verizon S22 Predicted Latency (ms)	(50%)

Click the checkbox next to a layer name. To view the CalSPEED data layer, click on the white square next to its name. This will turn it ON, changing it from white to blue (☐ → ■). While you can toggle on multiple layers, it's best to view them one at a time for clearer interpretation of the data and to prevent clutter on the map interface. Currently, the map pictured above is displaying the following layers:

- Fastest Downstream Provider
- AT&T S22 Test Sites by Download (Mbps)

Expand the Legends menu. To see a breakdown of the layer's symbols, click on 'Legend'. This will give you detailed information about the symbols and their meanings used within the layer. Clicking 'View on map' will add the legend directly onto the interactive map interface.

Legend

Fastest Downstream Provider

- AT&T S22
- Sprint S10
- T-Mobile S10
- T-Mobile S22
- Verizon S22
- No Service

AT&T S22 Test Sites by Download (Mbps)

- <= 1
- 1 - 10
- 10 - 25
- 25 - 50
- 50 - 75
- 75 - 100
- 100 - 200
- 200 - 300
- 300 - 400
- > 400

Counties



Step 4 View Layer Details

— Summer 2022 CaSPEED Mobile Drive Test Results

- Fastest Downstream Provider (50%)
- Fastest Upstream Provider (50%)
- AT&T S22 Test Sites by Download (Mbps) (100%)
- AT&T S22 Predicted Download (Mbps) (50%)
- AT&T S22 Predicted Upload (Mbps) (50%)
- AT&T S22 Predicted Latency (ms) (50%)
- FirstNet S21 Test Sites by Download (Mbps) (100%)
- FirstNet S21 Predicted Download (Mbps) (50%)
- FirstNet S21 Predicted Upload (Mbps) (50%)
- FirstNet S21 Predicted Latency (ms) (50%)
- Sprint S10 Test Sites by Download (Mbps) (100%)
- Sprint S10 Predicted Download (Mbps) (50%)
- Sprint S10 Predicted Upload (Mbps) (50%)
- Sprint S10 Predicted Latency (ms) (50%)
- T-Mobile S10 Test Sites by Download (Mbps) (100%)
- T-Mobile S10 Predicted Download (Mbps) (50%)
- T-Mobile S10 Predicted Upload (Mbps) (50%)
- T-Mobile S10 Predicted Latency (ms) (50%)
- T-Mobile S22 Test Sites by Download (Mbps) (100%)
- T-Mobile S22 Predicted Download (Mbps) (50%)
- T-Mobile S22 Predicted Upload (Mbps) (50%)
- T-Mobile S22 Predicted Latency (ms) (50%)
- Verizon S22 Test Sites by Download (Mbps) (100%)
- Verizon S22 Predicted Download (Mbps) (50%)
- Verizon S22 Predicted Upload (Mbps) (50%)
- Verizon S22 Predicted Latency (ms) (50%)

Zoom into the map for a closer look. For a closer look at the layer data, select an area of interest on the map and click the '+' button (see red arrow on image above) or use the mouse wheel to zoom in and out. To move the map, click and drag the mouse. Once you've zoomed in enough, click on the map to see detailed information for that specific layer in the clicked area.

Each layer has unique attributes specific to its data. So, switch between different layers and then click on an area of interest on the map to view relevant information for that layer.

In the 'Layer Information' window, clicking the 'Clear' button (as indicated by the orange arrow in the image example on the right) allows you to select another area of the map to view details for its respective layer. Clicking the 'Excel Icon' exports the layer information into an Excel spreadsheet named 'Layers_Output.xlsx.' This spreadsheet contains data only for the clicked area on the map.

LAYER INFORMATION

←
➤

Fastest Downstream Provider

AT&T S22 Download:	119
T-Mobile S22 Download:	87
Verizon S22 Download:	62
Sprint S10 Download:	39
T-Mobile S10 Download:	25
Fastest Provider Download:	AT&T S22

Counties

County Code:	06075
Name:	San Francisco
Land Area (Square Meters):	121,507,089
Water Area (Square Meters):	479,146,790
Area (Square Miles):	47.9
Population 2020:	873,965
Households 2020:	371,851
Housing Units 2020:	406,628



CALSPEED LAYERS

Below are description of all layers found under the sub-menu for 'Summer 2022 CalSPEED Mobile Drive Test Results'

Summer 2022 CalSPEED Mobile Drive Test Results		
<input type="checkbox"/>	Fastest Downstream Provider	(50%)
<input type="checkbox"/>	Fastest Upstream Provider	(50%)
<input type="checkbox"/>	AT&T S22 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	AT&T S22 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	AT&T S22 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	AT&T S22 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	FirstNet S21 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	FirstNet S21 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	FirstNet S21 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	FirstNet S21 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	Sprint S10 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	Sprint S10 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	Sprint S10 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	Sprint S10 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	T-Mobile S10 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	T-Mobile S10 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	T-Mobile S10 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	T-Mobile S10 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	T-Mobile S22 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	T-Mobile S22 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	T-Mobile S22 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	T-Mobile S22 Predicted Latency (ms)	(50%)
<input type="checkbox"/>	Verizon S22 Test Sites by Download (Mbps)	(100%)
<input type="checkbox"/>	Verizon S22 Predicted Download (Mbps)	(50%)
<input type="checkbox"/>	Verizon S22 Predicted Upload (Mbps)	(50%)
<input type="checkbox"/>	Verizon S22 Predicted Latency (ms)	(50%)

AT&T | FirstNet | Sprint | T-Mobile | Verizon – The mobile wireless carrier used.

Fastest Downstream Provider – Shows which mobile provider has the fastest downstream service in the area.

Fastest Upstream Provider – Shows which mobile provider offers the fastest upstream service in the area.

Test Sites by Download (Mbps) – Shows measured download speed in megabits per second at 4,400 locations in the state.

Test Sites by Upload (Mbps) – Shows measured upload speed in megabits per second at 4,400 locations in the state.

Test Sites by Latency (ms) – Shows measured latency in milliseconds at 4,400 locations in the state.

Predicted Download (Mbps) – Shows predicted download speed in megabits per second based on test sites measurements.

Predicted Upload (Mbps) – Shows predicted upload speed in megabits per second based on test sites measurements.

Predicted Latency (ms) – Shows predicted latency in milliseconds based on test sites measurements.

S10 – Data was tested using Samsung S10 cell phone model.

S21 – Data was tested using Samsung S21 cell phone model.

S22 – Data was tested using Samsung S22 cell phone model.

Where can I learn more?

Visit: <https://www.cpuc.ca.gov/calspeed>

Email: calspeed@cpuc.ca.gov

To get updates about the California Interactive Broadband Map, just click the 'Stay Updated' button to subscribe to the mailing list.

