COMMUNICATIONS DIVISION

California Interactive Broadband Map (CIBM) User Guide

https://www.broadbandmap.ca.gov/

2024

This guide shows how California residents and representatives of Broadband Providers can use the CIBM to look up information about broadband service availability and measured speeds throughout the State. The CIBM includes layers on Broadband Adoption, Availability, Grants, CalSPEED tests, and California Advanced Services Fund (CASF) Account Eligibility. Users may also provide feedback via the "Address Search" tool.

Visit the CPUC website for more information on the: Broadband Mapping Program & Annual Collected Broadband Data.

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Protecting California since 1911

The CPUC regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies.

@CaliforniaPUC

CIBM Quick Start Guide

Understanding the Map Layout and Features

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 labeled gray rectangle. Clicking the **"-"** icon will collapse the sub-menu. **Clicking the "ⓘ" symbol to the right of each layer name will show information about the layer.**

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

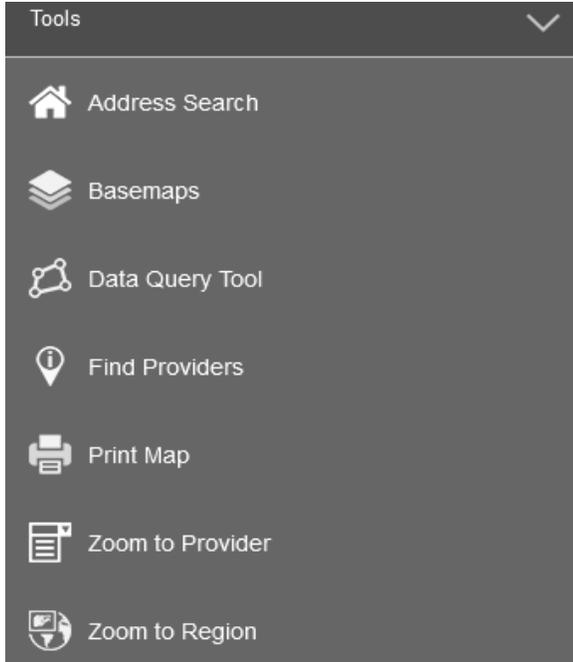Blue square means the layer is ON ■, while a white square means it's OFF ☐

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

After selecting a tool, click on "[?]" in the top right corner to see step-by-step instructions for the tool.

Tools

- Address Search
- Basemaps
- Data Query Tool
- Find Providers
- Print Map
- Zoom to Provider
- Zoom to Region

Address Search –Enter a postal address and receive a list of broadband providers serving that address for both fixed and mobile broadband service providers. Additionally, use this tool to send feedback on a specific address.

> *Submit feedback:* **Go to** *Broadband Availability Public Feedback (ca.gov)* **for instructions on submitting feedback through the Address Search Tool.**

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 and see summary information.

Find Providers – Find providers nearest to the selected point.

Print Map – Create a printable PDF of the current map view.

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.

CASF Eligibility Layer

The CASF Infrastructure Account Eligibility layer shows residential broadband serviceable locations unserved at broadband speeds equal to or greater than 25 Megabits per second (Mbps) download and 3 Mbps upload. These locations are considered either "Eligible" or "Priority Eligible."

- 🟠 "Eligible" unserved locations only have access to broadband at speeds between 10 Mbps download and 1 Mbps upload and 25 Mbps download and 3 Mbps upload.

- 🔴 "Priority Eligible" unserved locations only have access to speeds less than 10 Mbps download and 1 Mbps upload or no access to broadband at all.

The CASF Infrastructure Account Eligibility layer is filtered to **only** show locations that are categorized as residential.

Explore CalSPEED Layers (Step-by-Step) Guide

Step 1 - Turn OFF Unwanted Layers
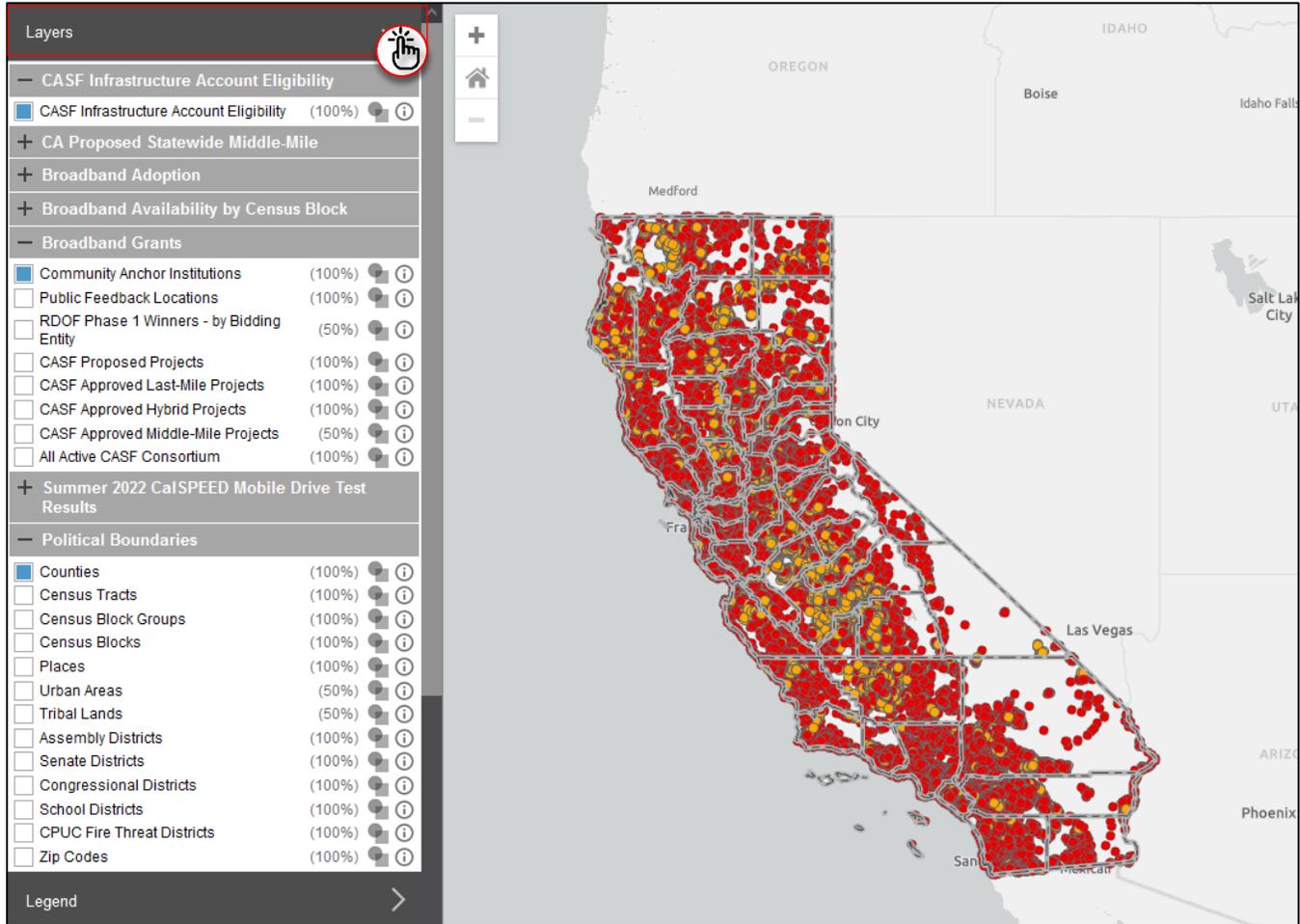
Expand the Layers menu. To expand the layers' sub-menus, click on 'Layers'. Active layers will have a blue square (■) next to their name. To remove any active layers from the map, click on the blue square to turn it OFF, changing it from blue to white (■➜□). By default, the following layers are active:

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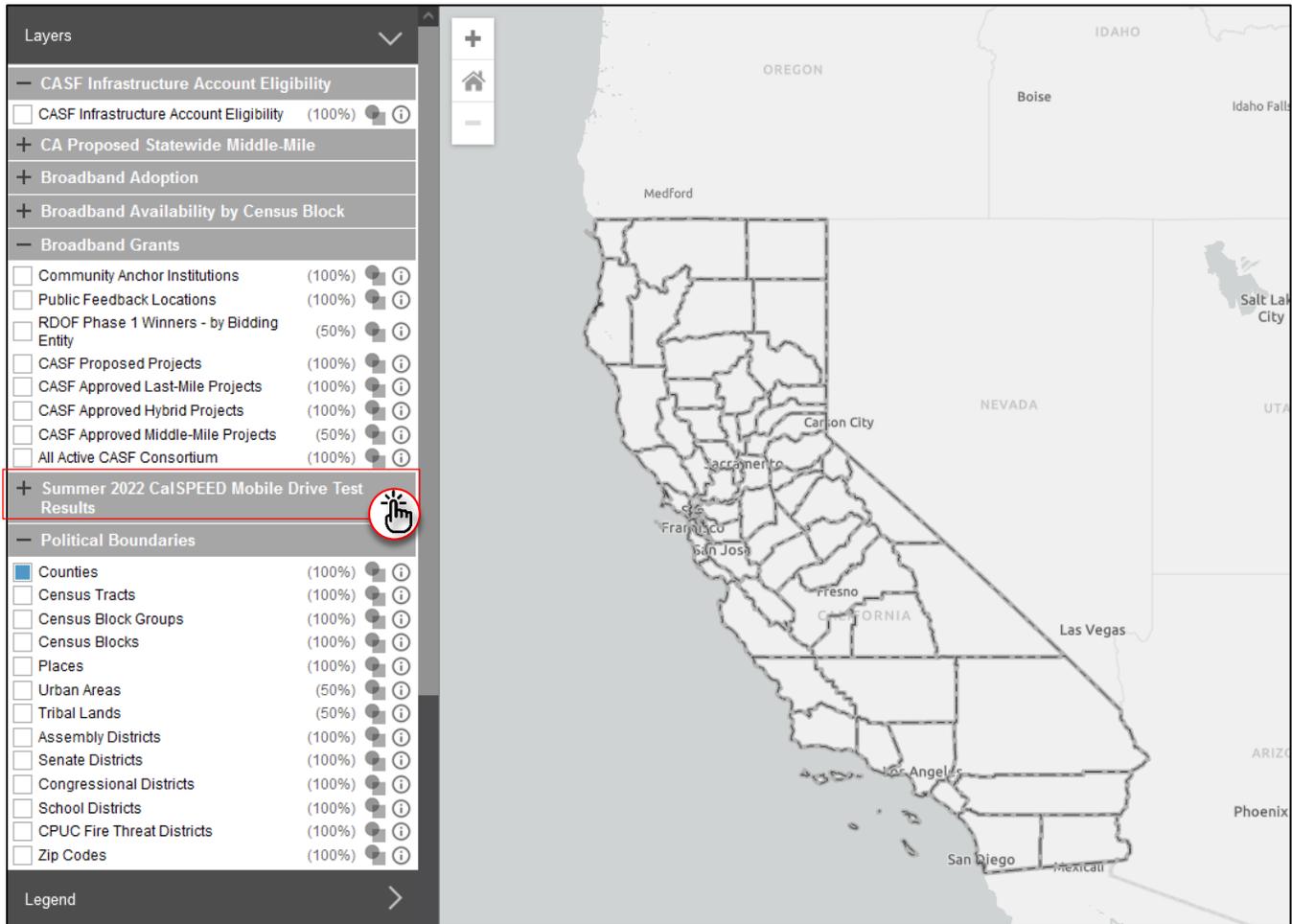
Expand and collapse sub-menus. To expand the menu for CalSPEED layers, click on 'Summer 2022 CalSPEED Mobile Drive Test Results'. Also, collapse the menus for 'CASF Infrastructure Account Eligibility' and 'Broadband Grants' by clicking on each. This will hide the layers associated with those menus.

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
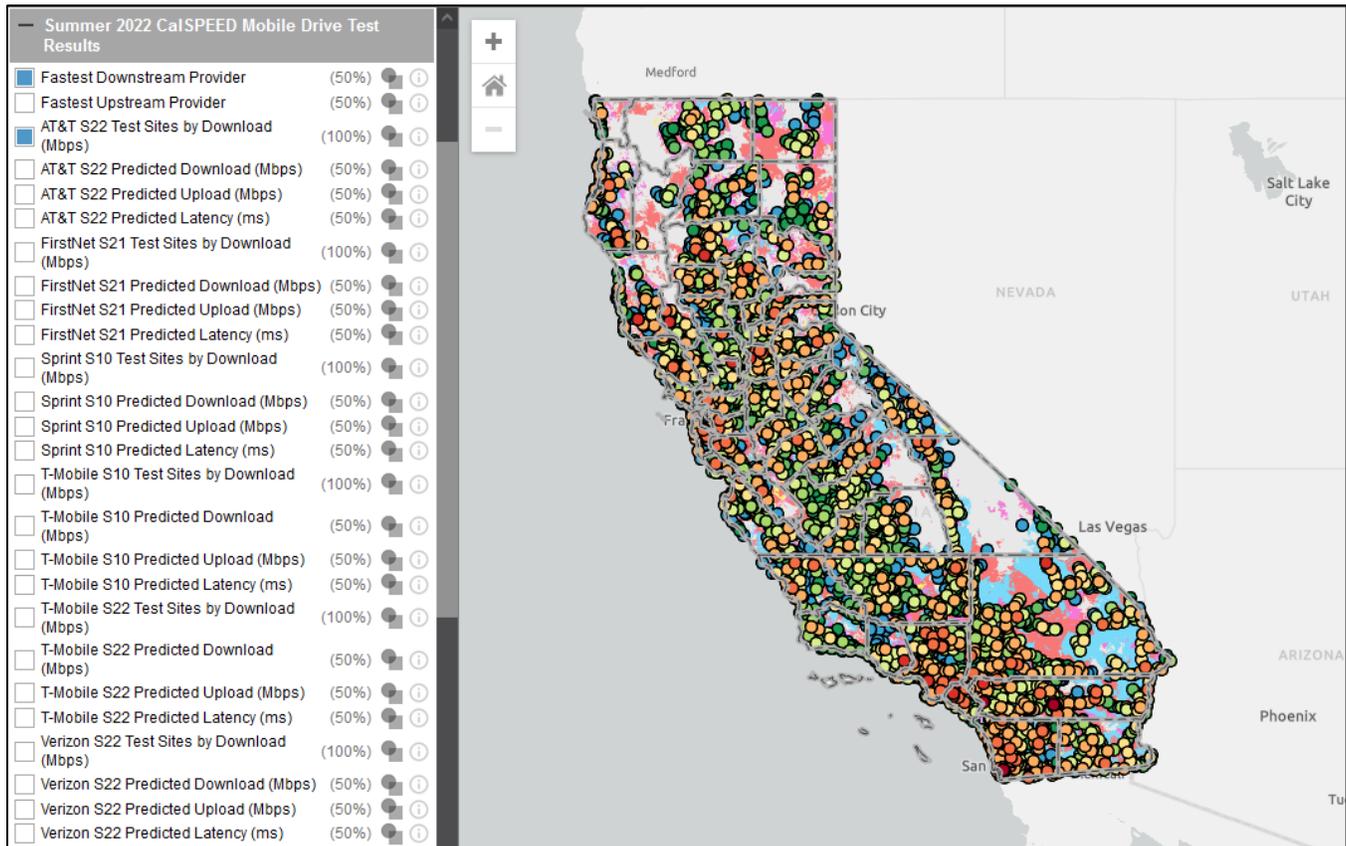
Click the checkbox next to a layer name. To view the CalSPEED data layer, click on the white square next to its name. This will turn it ON, changing it from white to blue (□➔■). While you can toggle on multiple layers, it's best to view them one at a time for clearer interpretation of the data and to 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.
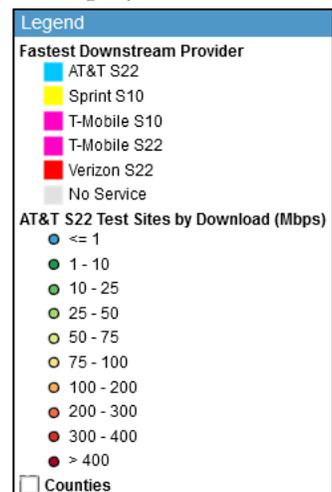
Step 4 - View Layer Details

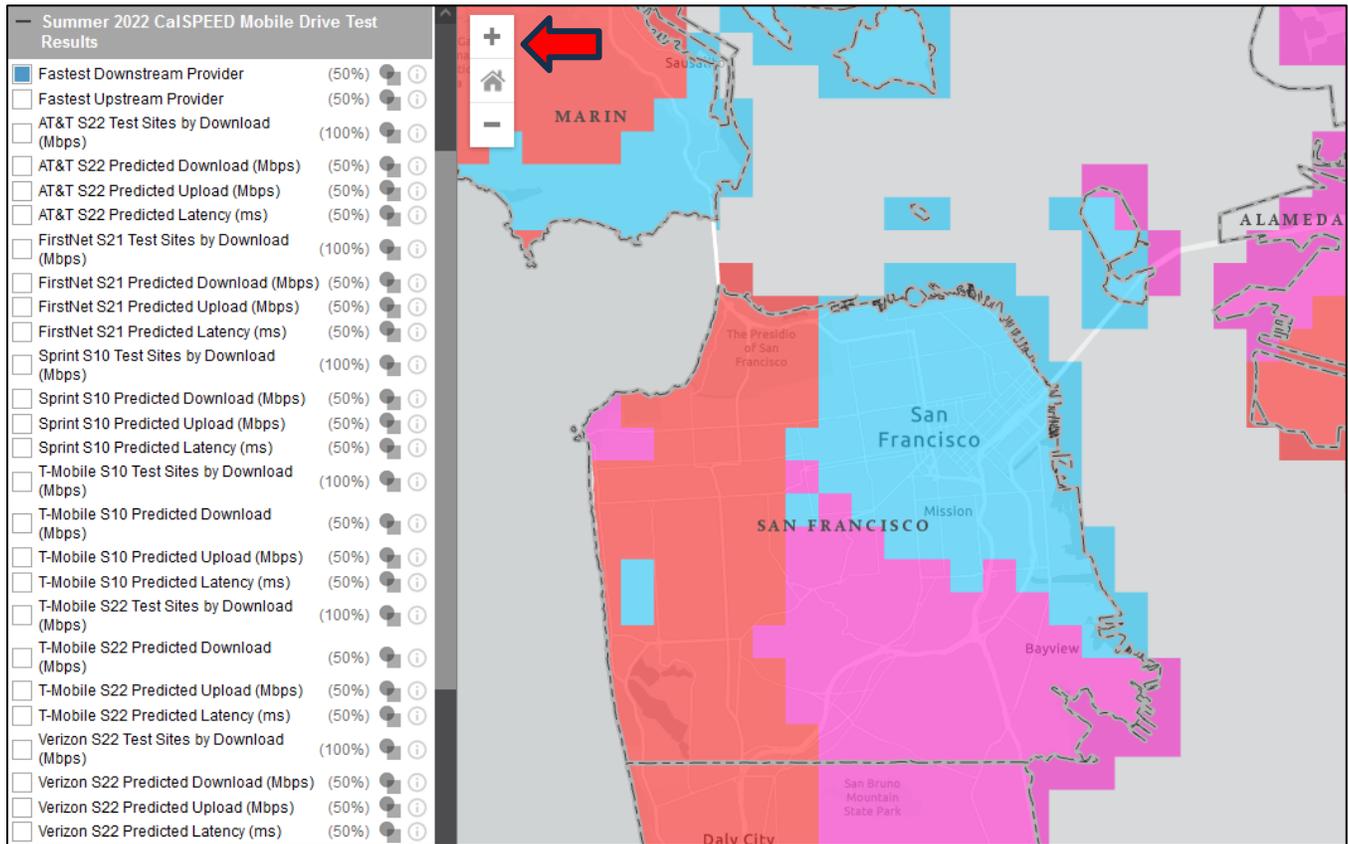**Zoom into the map for a closer look.** For a closer look at the layer data, select an area of interest on the map and click the '+' button (see red arrow on image above), or use the mouse wheel to zoom in and out. To move the map, click and drag the mouse. Once you've zoomed in enough, click on the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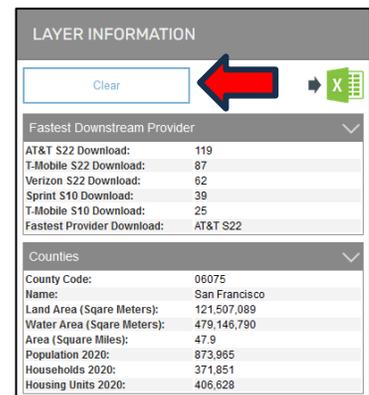
Where Can I Learn More?

▸ **Visit**: https://www.cpuc.ca.gov/calspeed

✉ **E-mail**: calspeed@cpuc.ca.gov

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

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Appendix A: Detailed Layer Descriptions

CASF Infrastructure Account Eligibility

CASF Infrastructure Account Eligibility – shows residential broadband serviceable locations unserved at broadband speeds equal to or greater than 25 Megabits per second (Mbps) download and 3 Mbps upload. Locations displayed are either "Eligible" (Less than 25/3 Mbps) or "Priority Eligible" (Less than 10/1 Mbps). Data based on FCC's June 2022 Broadband Availability data validated using subscriber data combined at the Census Block level.

CA Proposed Statewide Middle-Mile

CA Proposed Statewide Middle-Mile – Shows the proposed statewide open-access middle-mile broadband network – September 15, 2023 version. The California Department of Technology is the lead agency for the middle-mile network and the current version is available at https://middle-mile-broadband-initiative.cdt.ca.gov/

Broadband Adoption

Broadband Adoption at Any Speed – Percentage of residential fixed internet access connections per total households with broadband deployment at any speed by Census Block. Data are as of December 31, 2021.
Broadband Adoption at 25/3 – Percentage of residential fixed internet access connections per total households with broadband deployment at speeds equal to or greater than 25 Mbps download and 3 Mbps upload by Census Block. Data are as of December 31, 2021.
Median Household Income – Median household income is based on the U.S. Census 2020 data and shown by Census Block Group. Data based on the 2021 American Community Survey 5 –Year Estimates.

Broadband Availability by Census Block

Fixed Consumer Served Status – Availability of speeds that are equal to or greater than 25 Mbps download and 3 Mbps upload. This layer is technology neutral. Data are as of December 31, 2021.
Wireline Consumer Served Status – No Legacy Tech – Availability of speeds that are equal to or greater than 25 Mbps download and 3 Mbps upload, using only non –legacy wireline technologies such as Cable (DOCIS 3.0 or later) and Fiber. Data are as of December 31, 2021.
Consumer Fixed Downstream Availability – Maximum available download speeds in a Census Block, as determined by the presence of at least one subscriber. Data are as of December 31, 2021.

Broadband Grants

Community Anchor Institutions – Names and locations of schools, libraries, health institutions, and public safety facilities in California as of March 2023.
Public Feedback Locations – Locations where public feedback received by Communications Division. Data are as of September 1st, 2022.
RDOF Phase 1 Winners – by Bidding Entity – Rural Digital Opportunity Fund Phase 1 winners and Eligible Telecommunications Carriers as of February 2023.
CASF Proposed Projects – Locations of proposed CASF Infrastructure Account projects received June 1, 2023.
CASF Approved Last –Mile Projects – Locations of approved CASF Infrastructure Account last mile projects. Data are as of June 2023.
CASF Approved Hybrid Projects – Locations of approved CASF Infrastructure Account last –mile projects that include middle –mile infrastructure. Data are as of June 2023.
CASF Approved Middle Mile Projects – Locations of approved CASF Infrastructure Account middle mile projects. Data are as of June 2023.
All Active CASF Consortium – CASF consortia regions with active Consortia Account grants as of January 2023. Data are as of January 2023.

CalSPEED Mobile Drive Test Results Layers Detailed Information

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.

Political Boundaries

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

Counties – County boundaries based on U.S. Census 2020 data.

Census Tracts – Census Tracts boundaries based on U.S. Census 2020 data.

Census Block Groups – Census Block Groups boundaries based on U.S. Census 2020 data.

Census Blocks – Census Blocks boundaries based on U.S. Census 2020 data.

Places – Census Designated Places boundaries based on U.S. Census 2020 data.

Urban Areas – Urban Areas boundaries based on U.S. Census 2020 data.

Tribal Lands – Tribal Lands boundaries based on U.S. Census 2020 data.

Assembly Districts – Assembly Districts boundaries based on U.S. Census 2020 data.

Senate Districts – Senate Districts boundaries based on U.S. Census 2020 data.

Congressional Districts – Congressional Districts boundaries based on U.S. Census 2020 data.

School Districts – School Districts boundaries based on U.S. Census 2020 data.

CPUC Fire Threat Districts – Statewide fire-threat map outlining the boundaries of High Fire-Threat Districts.

Zip Codes – Zip Codes boundaries based on U.S. Census 2020 data.