



GEOGRAPHICAL  
INFORMATION CENTER  
California State University, Chico



UPSTATE CALIFORNIA  
CONNECT CONSORTIUM

# Lake County Master Broadband Plan

## Telecommunications Infrastructure

09-17-2019

# Consortia Overview

- Geographical Information Center (GIC) at CSU, Chico Research Foundation is the lead agency of the Northeastern and Upstate California Connect Consortia (NECCC & UCCC)
- GIC and Center for Economic Development (CED) merged in 1/2018 to form the North State Planning & Development Collective (NSPDC)
- 10 Rural Counties of Northern California
  - UCCC: Lake, Glenn, Colusa
  - NECCC: Butte, Tehama, Plumas, Shasta, Lassen, Siskiyou, and Modoc

# Master Plan Goals

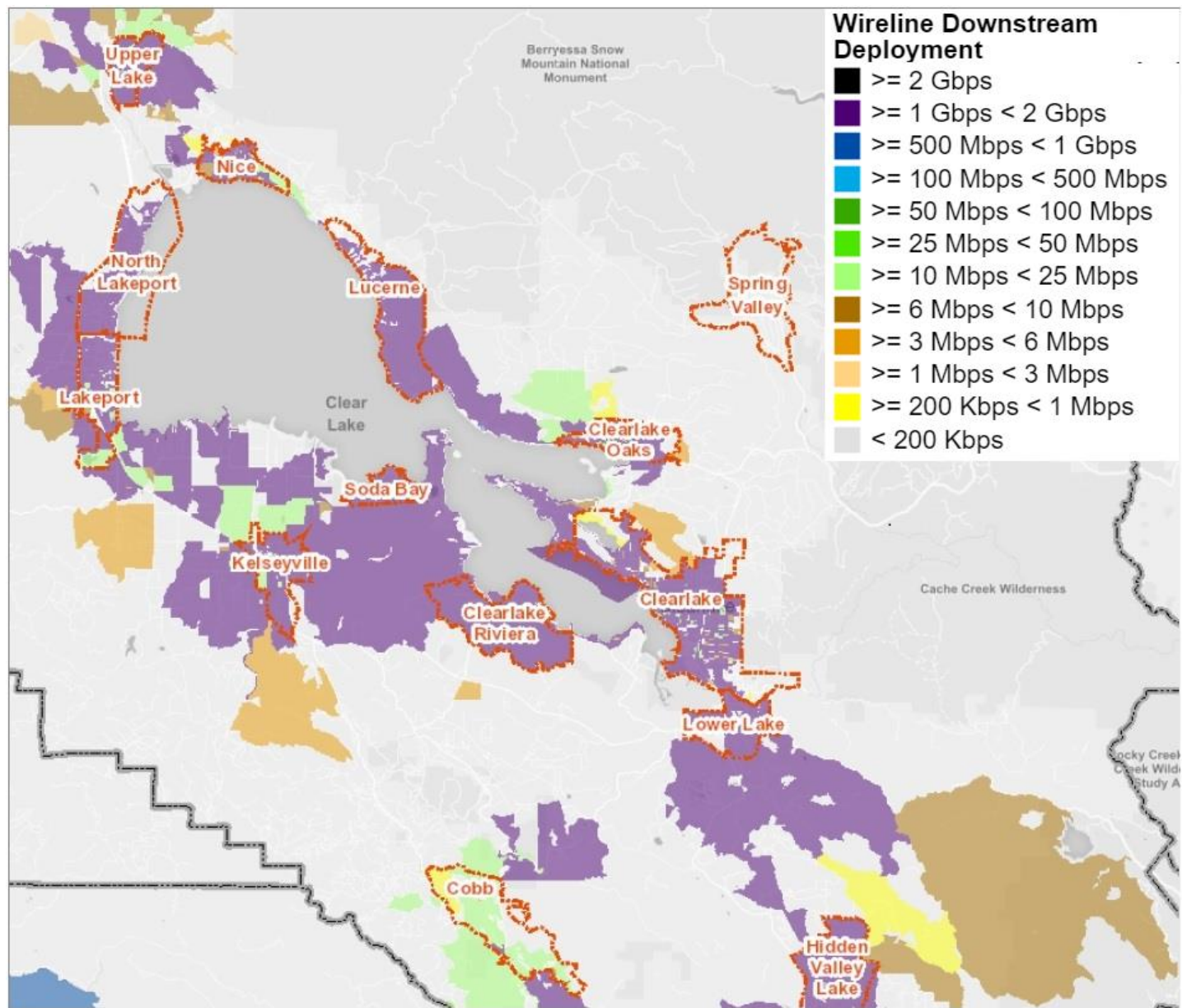
1. Comprehensive assessment of the landscape of residential and business broadband services
  - Wireline and fixed wireless technologies using CPUC data
2. Recommendations for improving broadband coverage and service speeds
  - Upgrading, expanding or launching networks
3. Recommendations for developing and implementing policies to support broadband deployments
  - Reducing barriers, local assets and streamlining process
4. Recommendations for improving broadband service adoption
  - Forming partnerships and identifying best practices

# 1. Broadband Landscape: ISPs

Internet Service Provider	Service Type	Technologies Offered
Allstream Business US Inc.	Business Only	<ul style="list-style-type: none"> <li>• Other Copper Wireline</li> </ul>
AT&T California	Residential & Business	<ul style="list-style-type: none"> <li>• Asymmetric xDSL</li> <li>• ADSL2, ADSL2+</li> </ul>
Digital Path, Inc.	Residential & Business	<ul style="list-style-type: none"> <li>• Terrestrial Fixed Wireless</li> </ul>
EarthLink Business, LLC	Business Only	<ul style="list-style-type: none"> <li>• Asymmetric xDSL</li> </ul>
Level 3	Business Only	<ul style="list-style-type: none"> <li>• Other Copper Wireline</li> <li>• Fiber to the end user</li> </ul>
MCI	Business Only	<ul style="list-style-type: none"> <li>• Other Copper Wireline</li> </ul>
Mediacom California LLC	Residential Only	<ul style="list-style-type: none"> <li>• Cable Modem DOCSIS 3.0</li> <li>• Cable Modem DOCSIS 3.1</li> </ul>
North Coast Internet	Residential & Business	<ul style="list-style-type: none"> <li>• Terrestrial Fixed Wireless</li> </ul>
US TelePacific Corp.	Business Only	<ul style="list-style-type: none"> <li>• Other Copper Wireline</li> <li>• Fiber to the end user</li> </ul>
Valley Internet	Residential & Business	<ul style="list-style-type: none"> <li>• Terrestrial Fixed Wireless</li> </ul>

# Broadband Wireline Downstream Deployment

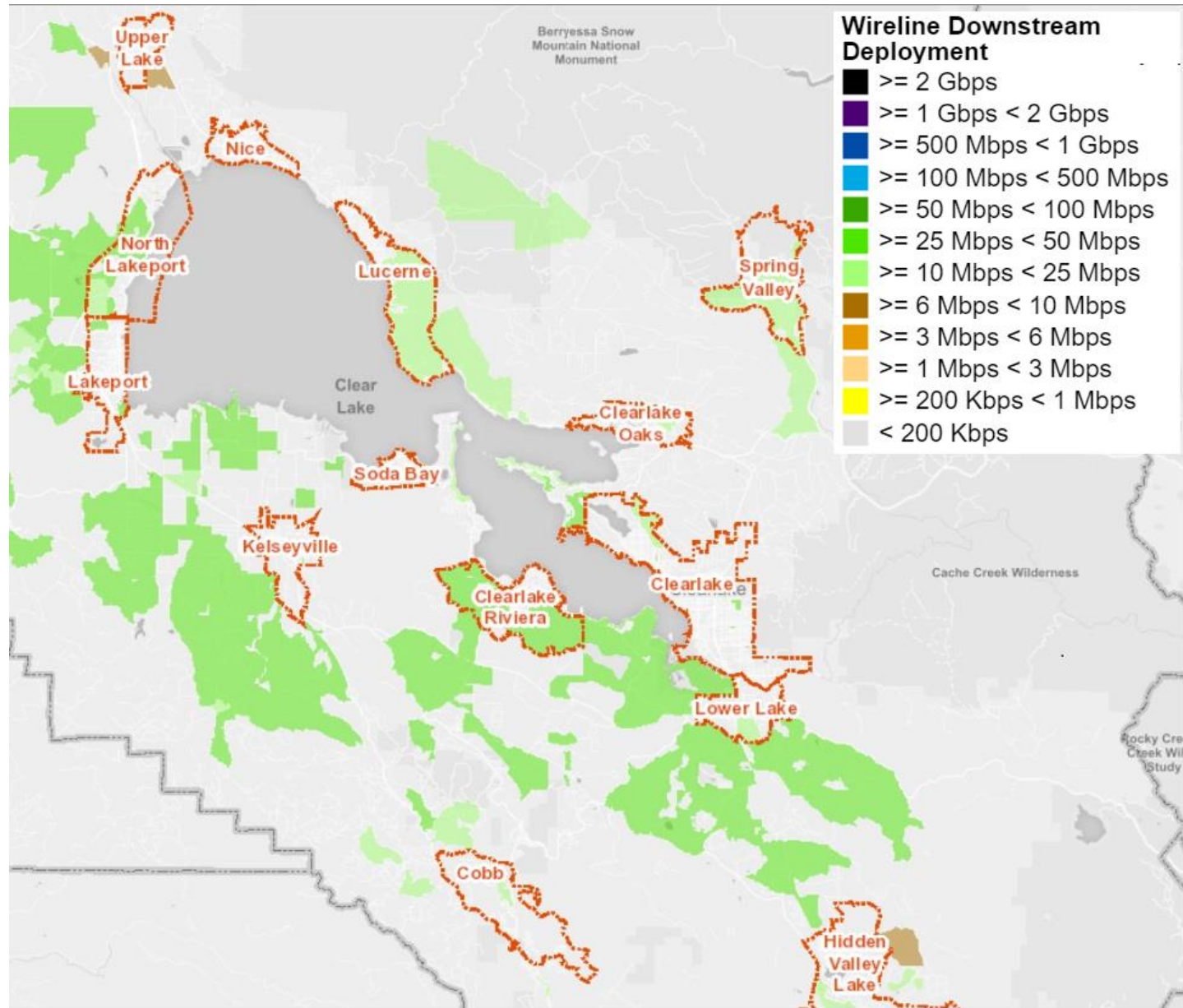
CPUC: 6/1Mbps  
FCC: 25/3Mbps



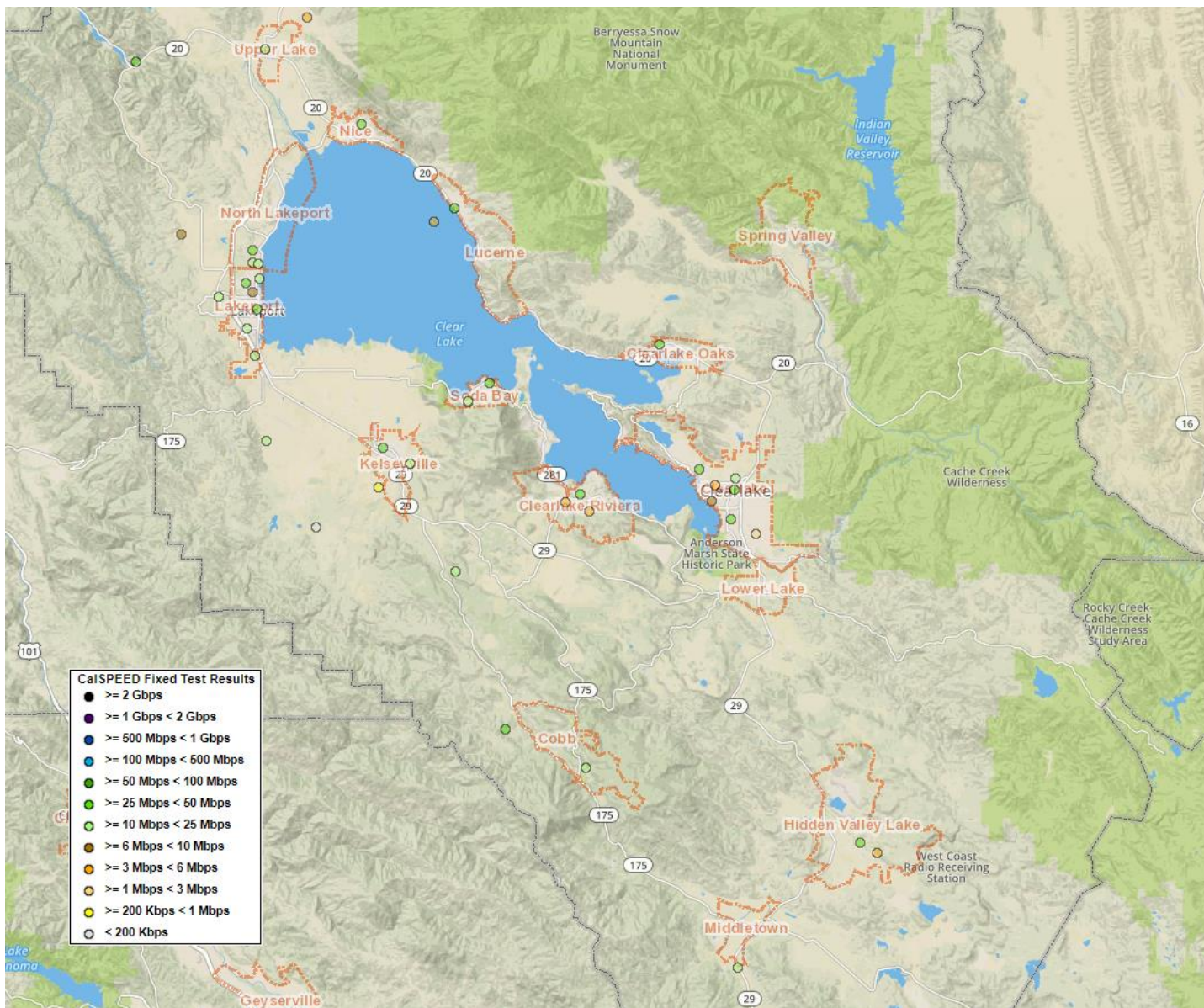


# Broadband Fixed Wireless Downstream Deployment

CPUC:  
6/1Mbps  
FCC:  
25/3Mbps



# CalSPEED Demo



## Coverage Validation Using CalSPEED

- Fixed and mobile broadband services
- Other forms of validation: public feedback form





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## Rural Internet (Broadband) Public Feedback Form

Broadband Policy and project funding are based on the National and California Broadband Maps ([broadbandmap.ca.gov](http://broadbandmap.ca.gov)). Your input is critical to understanding the internet speeds you are receiving, as opposed to what your carrier might be reporting. Help us collect accurate information for your community. Please complete the following to help us understand your internet (broadband) service:

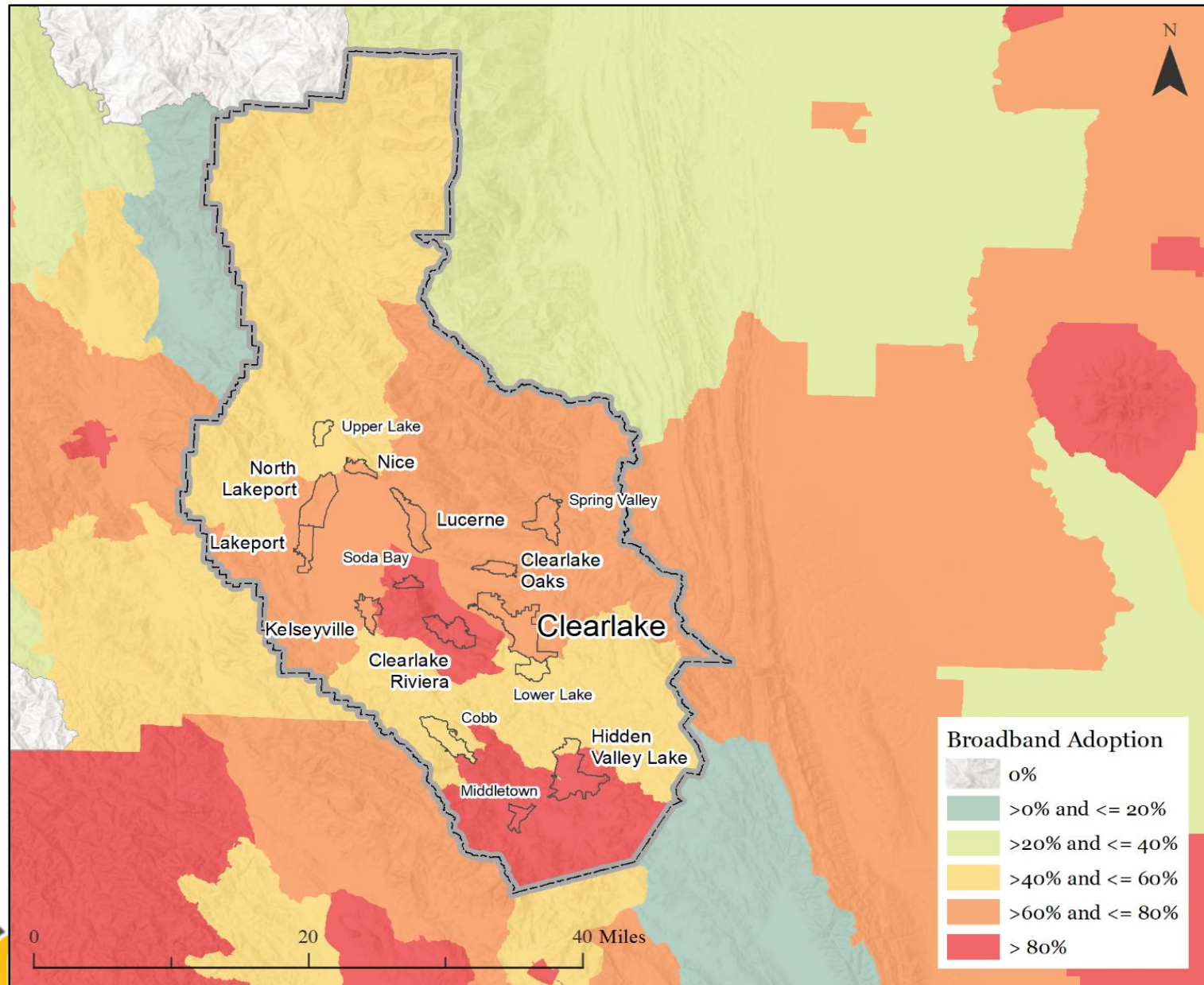
1. (Mandatory): Please list your complete Street Address where you have internet service.  
Sorry, no P.O. Boxes.  
Street Address: \_\_\_\_\_  
City: \_\_\_\_\_ ZIP: \_\_\_\_\_
2. Who Is Your Internet Provider (for example: Ducor, DigitalPath, Comcast?): \_\_\_\_\_
3. Do you know your internet speed?
  - a. \_\_\_\_ Yes (If so, list Download Speed here: \_\_\_\_Mbps & list Upload Speed here: \_\_\_\_Mbps
  - b. \_\_\_\_ No
4. In order for us to validate if you are receiving the internet speed your company says they are providing you, please do one of the following (Check one):  
\_\_\_\_ I am downloading the Calspeed application at [www.calspeed.net](http://www.calspeed.net) to my home computer and will run this test several times daily. I understand my speeds are automatically transmitted to the CPUC.  
  
\_\_\_\_ I will go to [speedtest.net](http://speedtest.net) on my home computer and click "Go", then list my results here:  
The result of my speed test is: Download Speed: \_\_\_\_\_ Mbps  
Upload Speed: \_\_\_\_\_ Mbps
5. If you are unable to do either of the above, please tell us why:  
\_\_\_\_\_  
\_\_\_\_\_
6. Comments:  
\_\_\_\_\_  
\_\_\_\_\_

Thank you for your feedback. Please email forms back to Alice Patterson at [ampatterson@csuchico.edu](mailto:ampatterson@csuchico.edu), or mail to Geographical Information Center, Attn: Alice Patterson 35 Main Street, Chico, CA 95928



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# Broadband Service Adoption Levels



# California Interactive Broadband Map

<http://www.broadbandmap.ca.gov/>

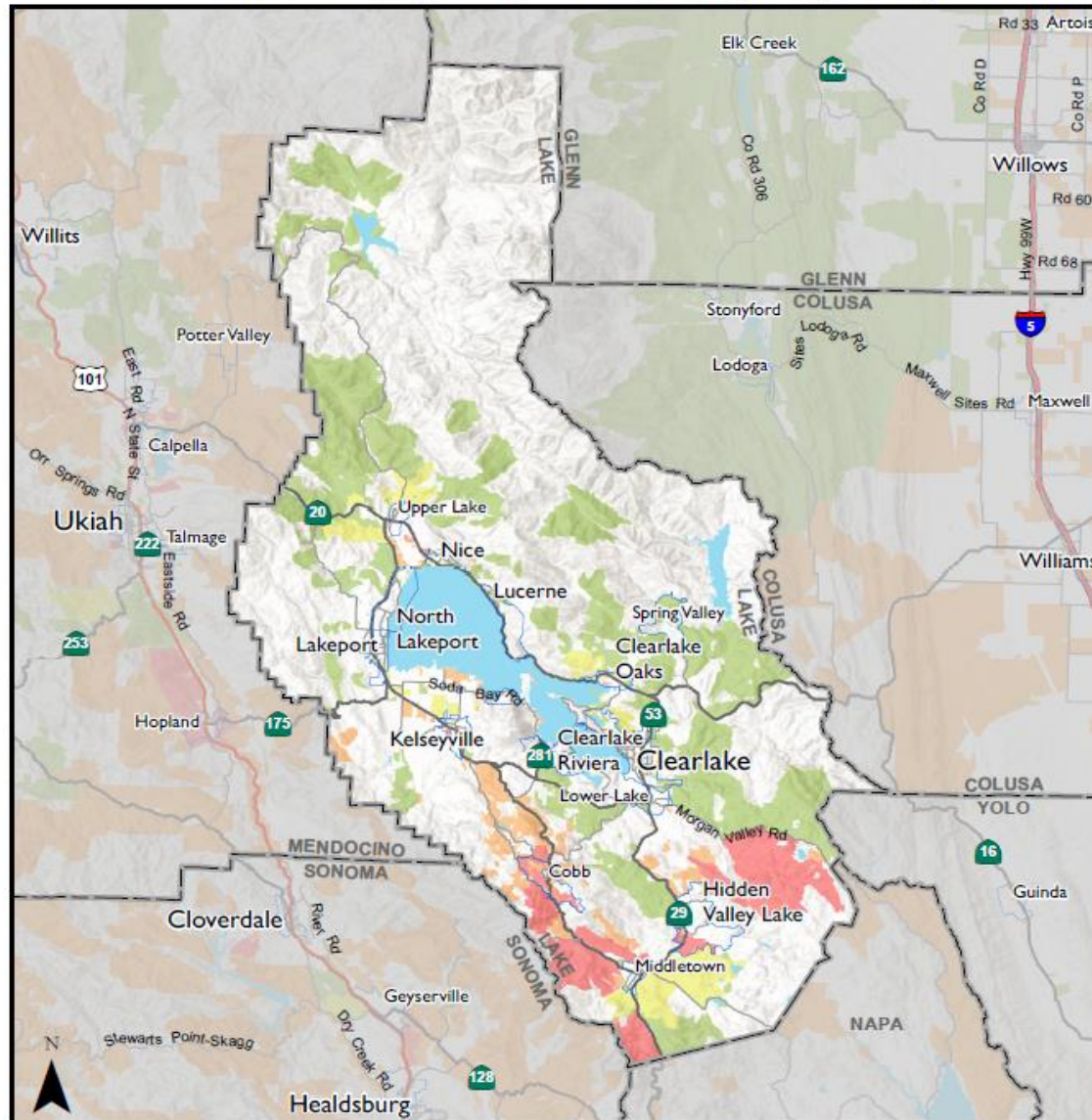
Demo

## 2. Improving Coverage and Speeds

- Work in Progress
- Developing assessment and recommendations based on the following items:
  - Identify priority areas for broadband deployments (i.e., unserved residential areas, business areas, etc.)
  - Eligible areas for CPUC CASF Infrastructure Grant applications
  - Eligible areas for USDA Reconnect Program applications
  - Input from internet service providers (ISPs) and local government
  - Input from more consortia partners



# Lake County - CASF Funding Eligibility



- Eligible area (60% Funding Baseline)
- Eligible Dial-up Only area (up to 100% Funding)
- Eligible Low Income area (up to 100% Funding) \*\*
- Eligible Dial-up + Low Income area (up to 100% Funding) \*\*
- City/Town Boundaries

\*\* Low income = Median Household Income for community is less than CARE standard for a family of 4, which is currently \$30,200 (30%). Applicant serves low-income customers for no more than \$15/month (10%)

0 5 10 20 Miles



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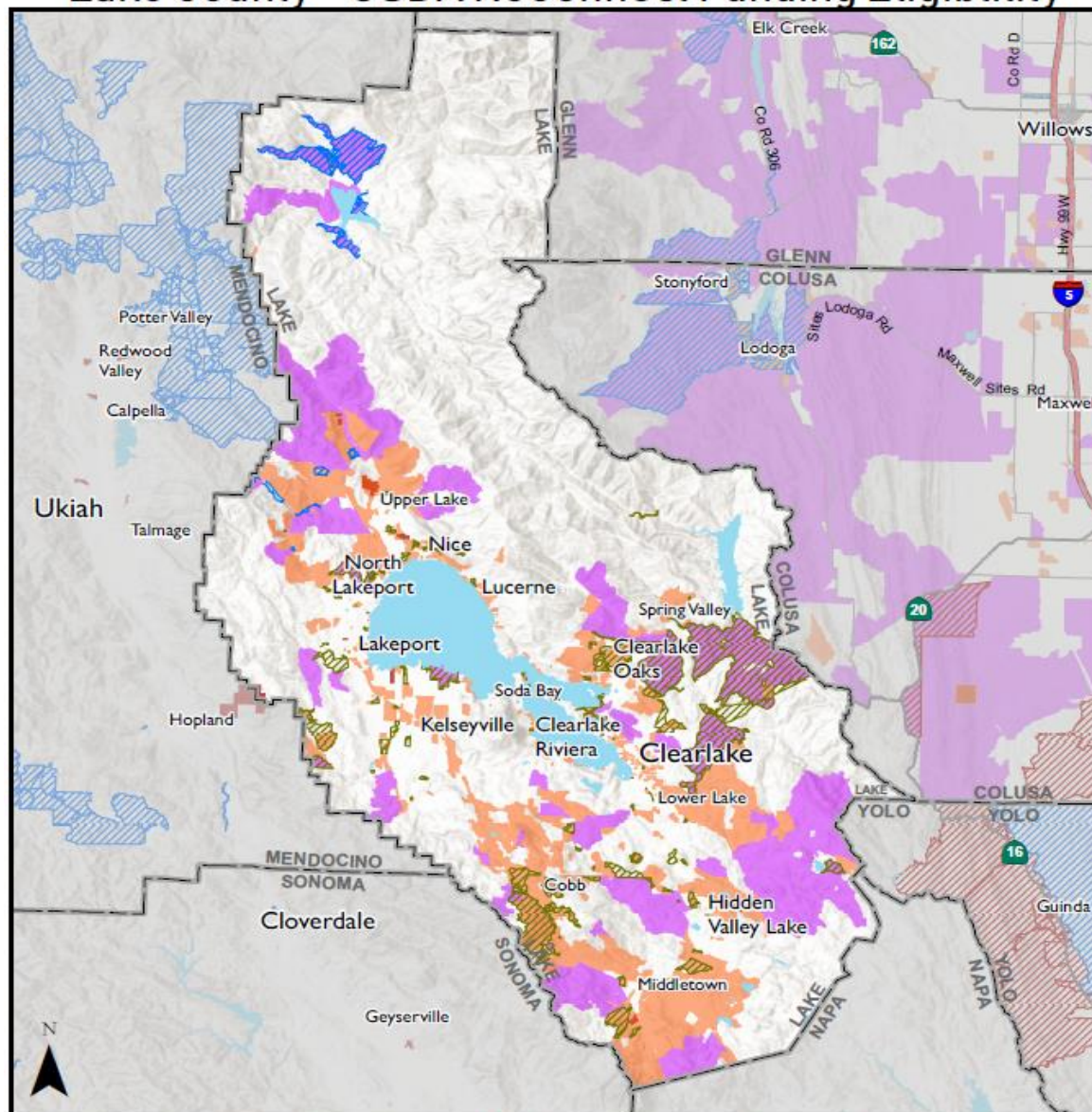


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Date: 6 March 2019  
Projection: NAD 1983 California Teale Albers  
Broadband Data Source: California Public Utilities Commission Data as of 31 December 2017



# Lake County - USDA ReConnect Funding Eligibility



Census Block below 10/1 - CPUC Dec2017 Data CAFII Auction 903 Public Results CAFII CAM43 Supported Locations

Population per Sq.Mi.

Fewer than 6

6 or greater

Cal.net, Inc.

Geolinks

Viasat, Inc.

ATT

Frontier

Tribal Lands



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UPST/  
CONN

0 4 8 16 Miles

Date: 30 January 2019  
Projection: NAD 1983 California Teale Albers  
Broadband Data Source: California Public Utilities Commission Data as of 31 December 2017



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# 3. Broadband Policies

- Dig once policy
  - Maximize access to excavation projects in PROW and to optimize resources for conduit installation
  - Common approaches:
    - Requiring an excavator applying for a permit in PROW to notify ISPs
    - Requiring an excavator to install empty conduit for future use
- Develop conduit specifications and standards
  - Allows carry out cost estimations and efficient planning
  - Standards would achieve higher efficiencies if adopted county- or region-wide
  - Specification might include:
    - Size, type and material of the conduit, installation and placement, depth and distance from utility infrastructure, vault installation parameters, and clearance between vaults or manholes, etc.

# AB 1549 - Caltrans Collaboration

- CA AB [1549](#) (2016) requires that Caltrans, during the planning phase of highway construction projects, notify broadband deployment companies and organizations on its website of projects involving construction methods suitable for installation of broadband
- Upon notification from Caltrans, companies or organizations working on broadband deployment may collaborate with Caltrans to install conduit as part of a project
- The bill also requires Caltrans to develop guidelines to facilitate the installation of broadband conduit on State highway right-of-way (January 1, 2018)
- Broadband consortia developed strategic broadband corridors for the CTC's Comprehensive Multimodal Corridor Plan Guidelines



# 3. Broadband Policies

- Master lease agreement
  - Reduce processing time and the complexity of leasing a local government's assets
  - Needs an up-to-date asset inventory
  - The agreement might include:
    - Fee structures, agreement duration, renewal terms, access and responsibilities of the parties, co-location rights, etc.
- Streamline application process and permit fees
  - Allows faster expansion of broadband infrastructure and services
  - At-cost fees might contribute to competitive broadband pricing
  - Reducing/removing requirements for broadband infrastructure in PROW
  - Review land use regulations and permits for certain broadband facilities within PROW

# Asset Inventory Spreadsheet File

# Asset Inventory Demo

# 4. Broadband Service Adoption

- “Digital Divide”: Inequitable distribution of broadband to rural areas
- Adoption of broadband services is equally as important as availability
- Rural communities need assistance finding low-cost Internet service
- Providing equipment and training opportunities will allow community to understand benefits of broadband including:
  - E-commerce, tele-education, telehealth, apply for jobs, receive vocational training and function effectively in a digital world
- Communities seeking to connect users with equipment and access to curriculums should establish partnerships with existing organizations and programs to establish credibility



## Q & A

Thanks You!

David Espinoza

[despinozaaguilar@csuchico.edu](mailto:despinozaaguilar@csuchico.edu)



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# Links of Interest

- Upstate California Connect Consortium:  
<https://upcalbroadband.org/>
- CalSPEED: <http://calspeed.org/>
- Business Broadband Service Survey:  
<https://gicwebsrv.csuchico.edu/websites/obbs/prod/>
- California Interactive Broadband Map:  
<http://www.broadbandmap.ca.gov/>
- CalSPEED Home Broadband Study:  
<https://www.calspeed.net/>



# Broadband Service Pricing

