



GOLDENSTATENET

Project 4 | Colusa Overview Packet
January 31, 2022

This map identifies the initial 18 broadband project areas and the network solutions proposed by the Third Party Administrator (TPA), GoldenStateNet, which builds upon the California Public Utilities Commission (CPUC) recommended routes. Highlighted in this packet are the solutions identified for the Colusa Project and other geospatially registered data sets which influenced them.



Project 4 | Colusa Summary

As one of the most underserved regions in California, the Colusa area will see a tremendous increase in broadband capability with the proposed GoldenStateNet solution that completes a fiber path close to 20 miles long between Colusa and Arbuckle. The new fiber broadband route will provide greatly needed access for last-mile providers in Williams and Arbuckle.

This solution could enable precision agriculture applications, including soil and weather monitors, for farms along its path. A significant percentage of households in the area are below the poverty line and lack Internet access outside of poor and unpredictable cellular service or satellite connections. Additionally, the new middle-mile routes will be built within the region of the Tribal Nations of Colusa Rancheria and Cortina Rancheria. These communities will have the opportunity to access the middle-mile resources in the future.

For this solution, GoldenStateNet proposes working with Caltrans to build fiber broadband connections to span a projected 25-mile network route to run along Highway 20 to I-5. An Indefeasible Right of Use (IRU) dark fiber lease on an existing open access network will continue from Arbuckle to Sacramento. Connections from Colusa to Sacramento on existing core infrastructure will complete the solution. It will also create a second ring to provide network resilience, as well as connect to a Sacramento Internet Exchange Point, to link communities to the global Internet.

GoldenStateNet's proposed solution will seek to leverage existing open access networks where possible for diverse connections to the Sacramento Internet Exchange Point. This project is critical to completing the network ring design contemplated for Lake County (see Project Report #3). As in all cases where several projects are able to connect to or complete one another, this solution creates even greater resilience for larger geographic regions and supports an overall system design philosophy.

Project 4 | Colusa Highlights

Type of Solution:	New Construction Fiber Build Indefeasible Right of Use (IRU) dark fiber lease
Highways/Routes:	I-5, HWY 20
Start and End Points or Cities Connected:	Colusa, Williams, Arbuckle
Approximate Fiber Miles:	25 (plus additional IRU via Lake Project)
Quantity of Fibers:	4, 288
Approximate Start Date:	2022
Tribal Nations with Future Opportunities:	Colusa Rancheria, Cortina Rancheria
Regional Broadband Consortium:	Upstate California Connect Consortium
Regional Transportation Planning Agency (RTPA) & Metropolitan Planning Organization (MPO):	Colusa County Transportation Commission

GoldenStateNet Maps

The appended maps share detailed visualizations of the GoldenStateNet (TPA) recommended middle-mile network solutions. The maps illustrate the complex geographical, topological, technological, and socioeconomic landscape of California.

In combination with available network assets and regional partnerships, the map data has helped to directly inform GoldenStateNet's well-considered proposals.



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PROPOSED SOLUTION COLUSA: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

CALTRANS DISTRICTS

1-EUREKA

3-MARYSVILLE

Colusa

BUTTE

YUBA

NEVADA

LAKE

Delphos

Marysville

Williams

SUTTER

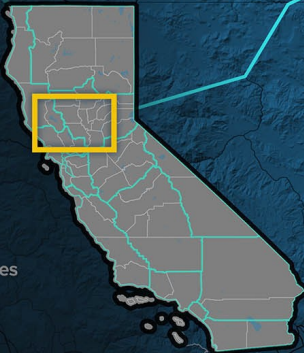
Arbuckle

Clearlake

PLACER

LEGEND

- State Routes & Highways
- Census block & County outlines
- Caltrans Districts
- Tribal Nations
- Existing Open Access Fiber
- CENIC Open Access Network
- Internet Access & Exchange Nodes
- CPUC Fiber Build
- TPA Fiber Solution



YOLO

Woodland

Sacramento

Folsom

NAPA

4-Oakland

Davis

Cordova

SACRAMENTO

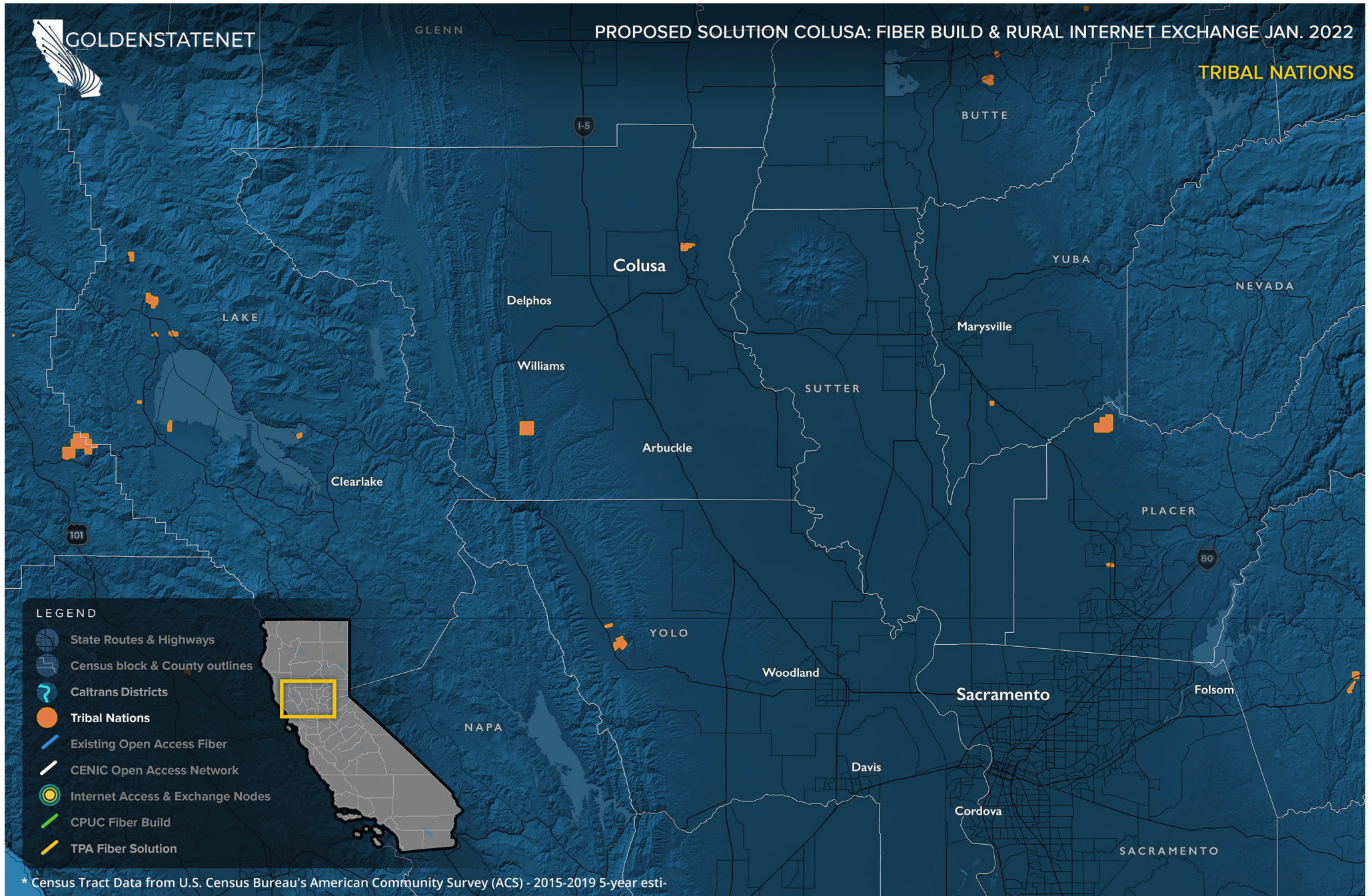
* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year esti-



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TRIBAL NATIONS



LEGEND

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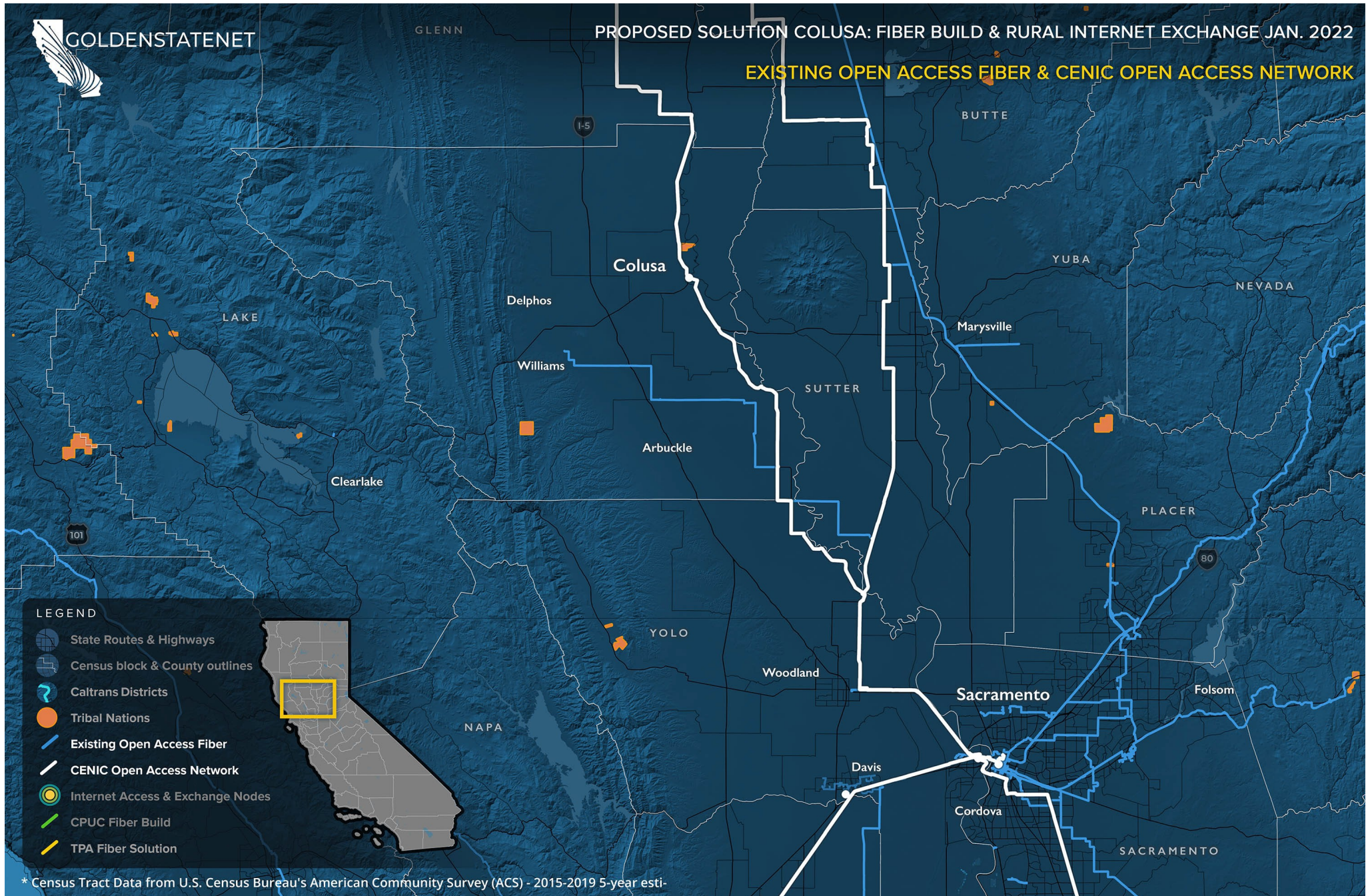
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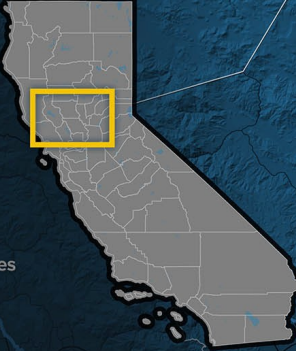
GOLDENSTATENET

PROPOSED SOLUTION COLUSA: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

EXISTING OPEN ACCESS FIBER & CENIC OPEN ACCESS NETWORK



- LEGEND**
- State Routes & Highways
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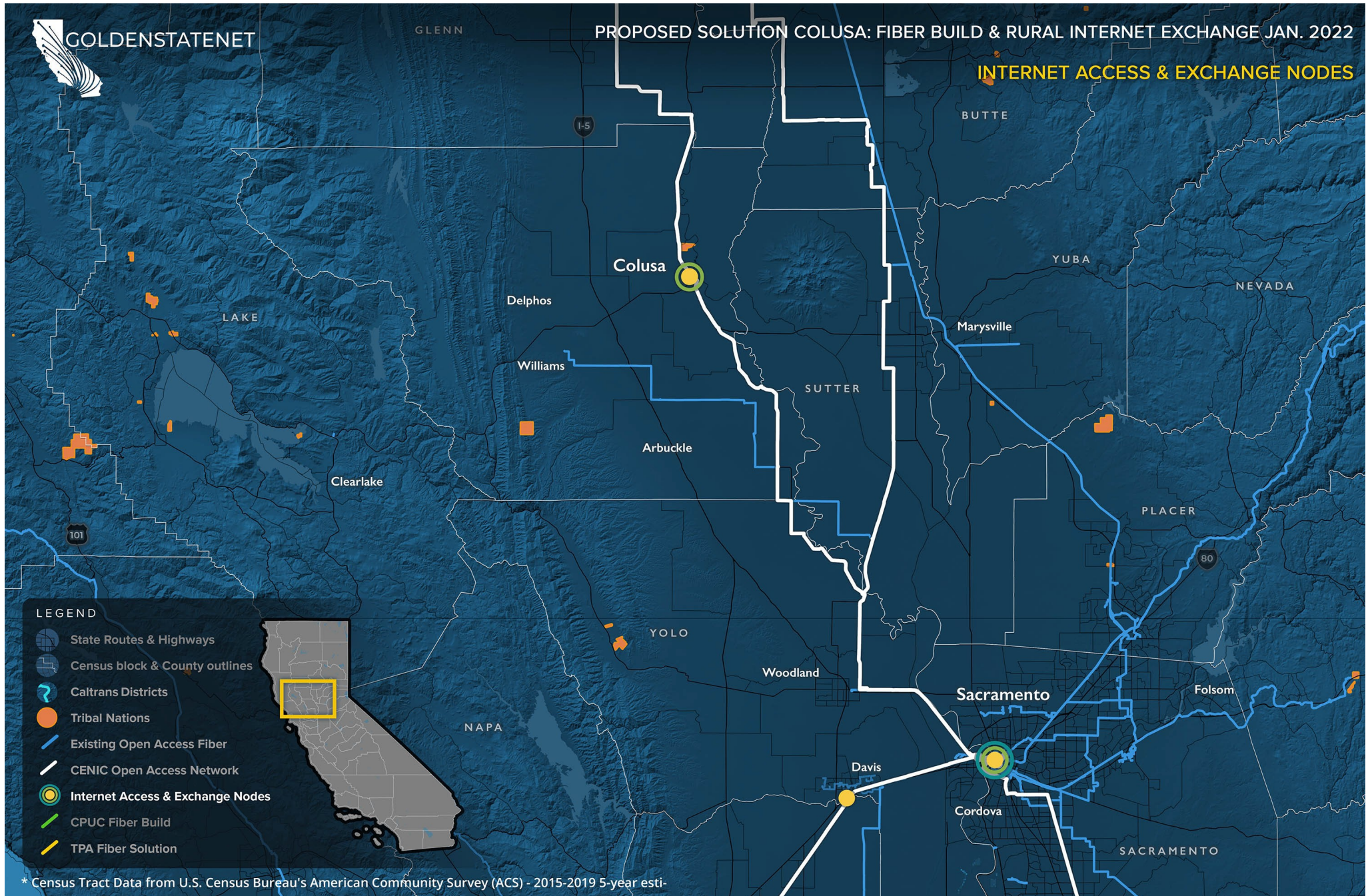
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PROPOSED SOLUTION COLUSA: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

INTERNET ACCESS & EXCHANGE NODES



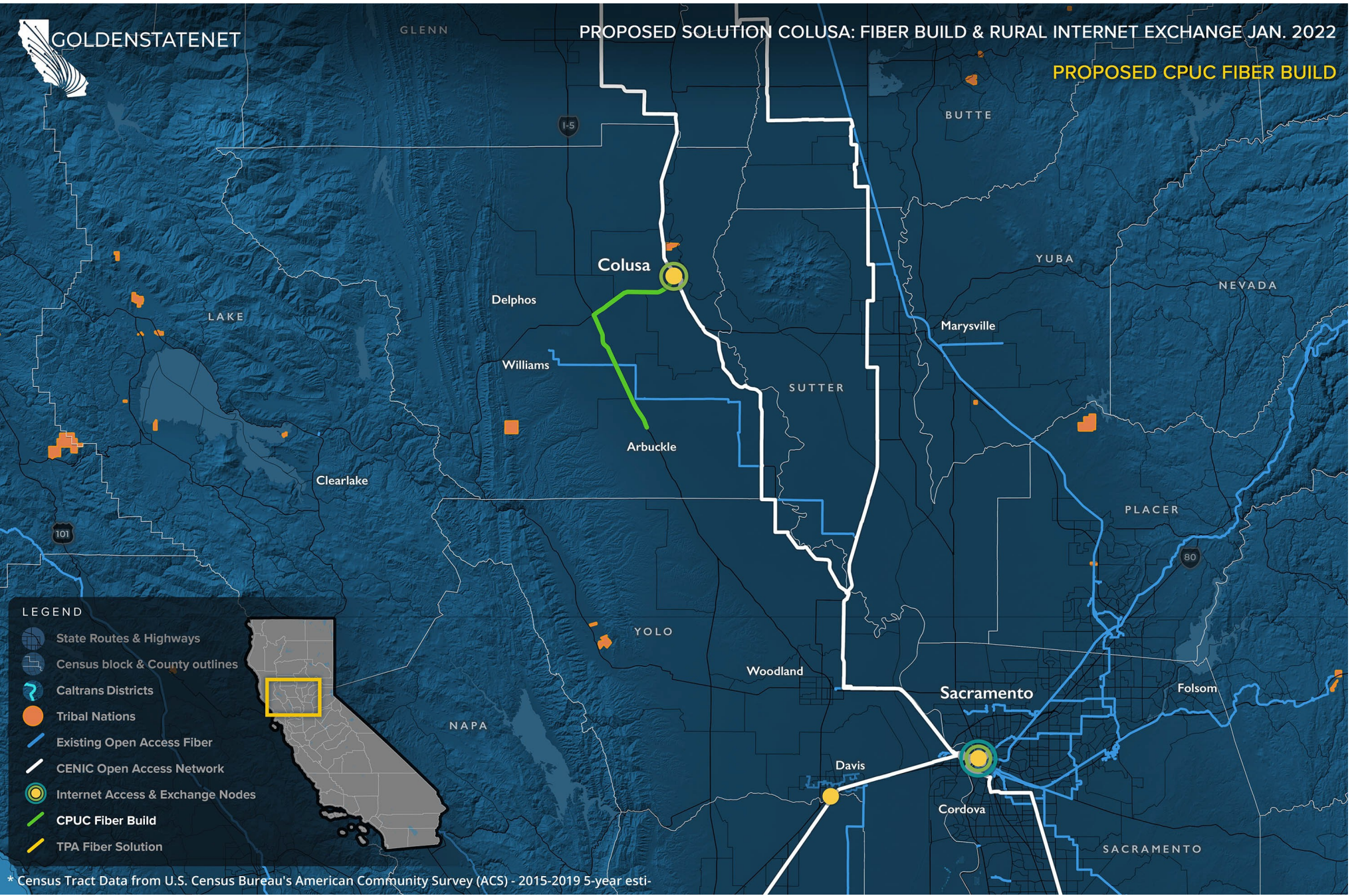
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PROPOSED SOLUTION COLUSA: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

PROPOSED CPUC FIBER BUILD



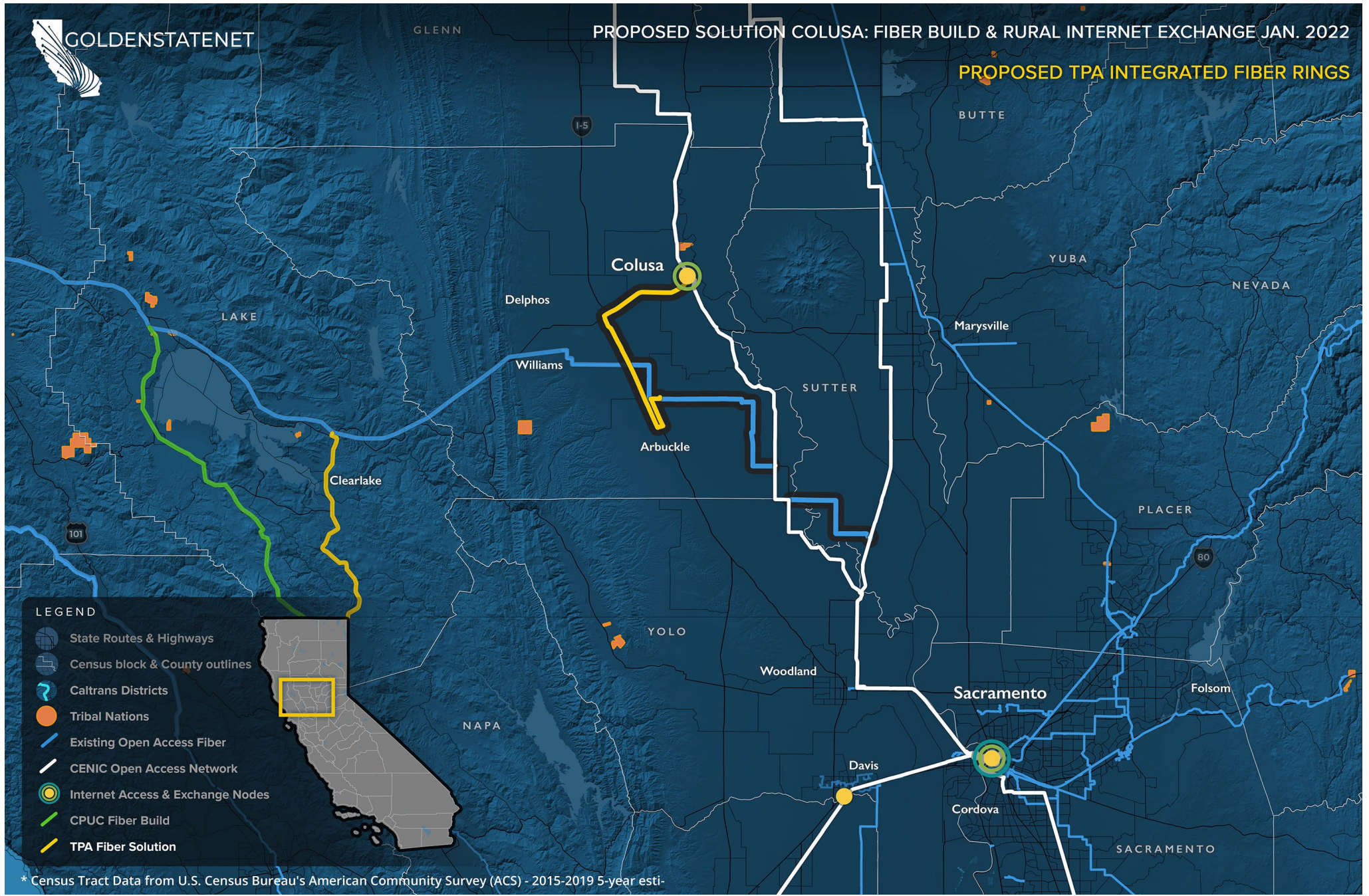
* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year esti-



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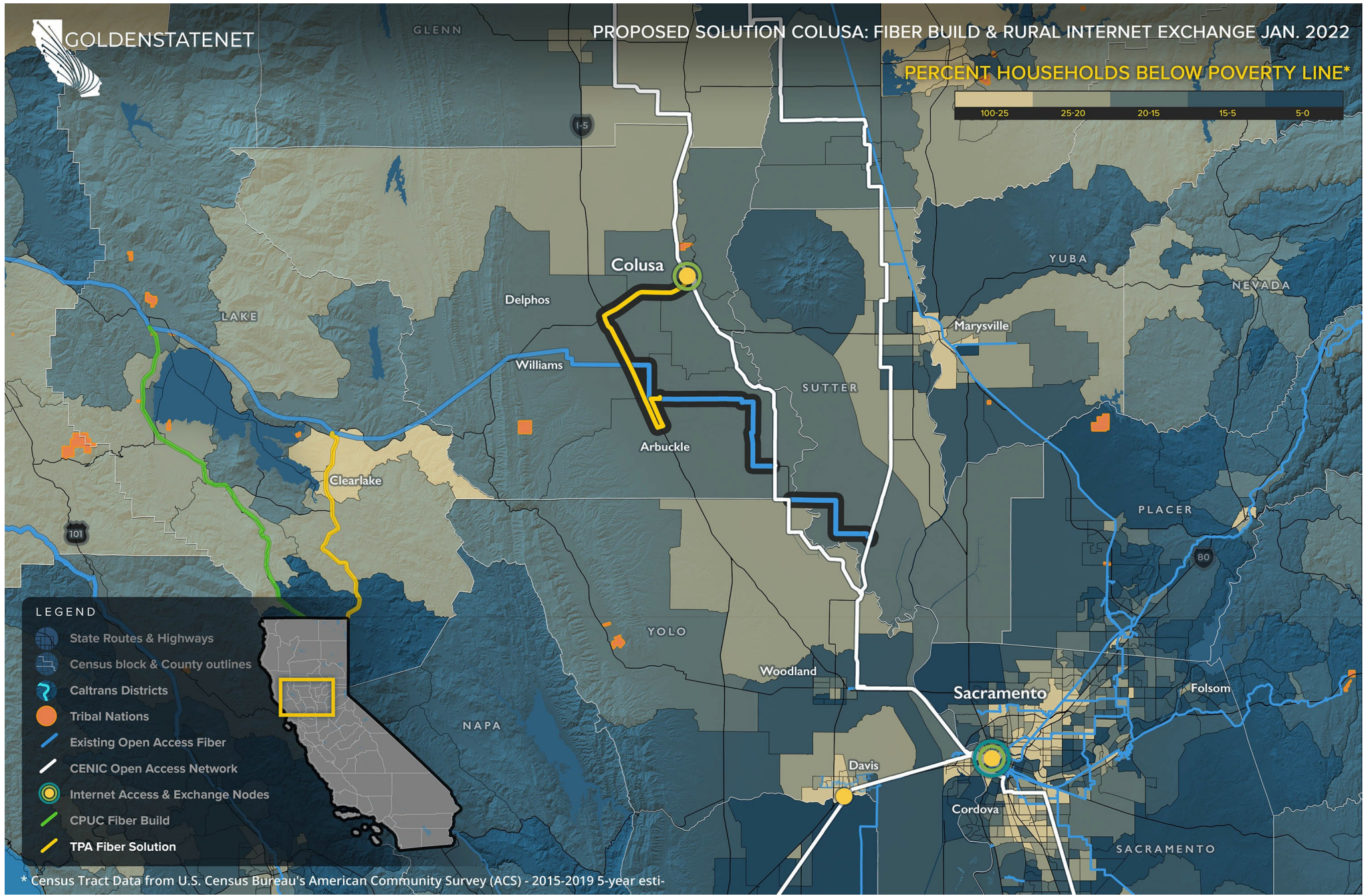
PROPOSED SOLUTION COLUSA: FIBER BUILD & RURAL INTERNET EXCHANGE JAN. 2022

PROPOSED TPA INTEGRATED FIBER RINGS



* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year esti-

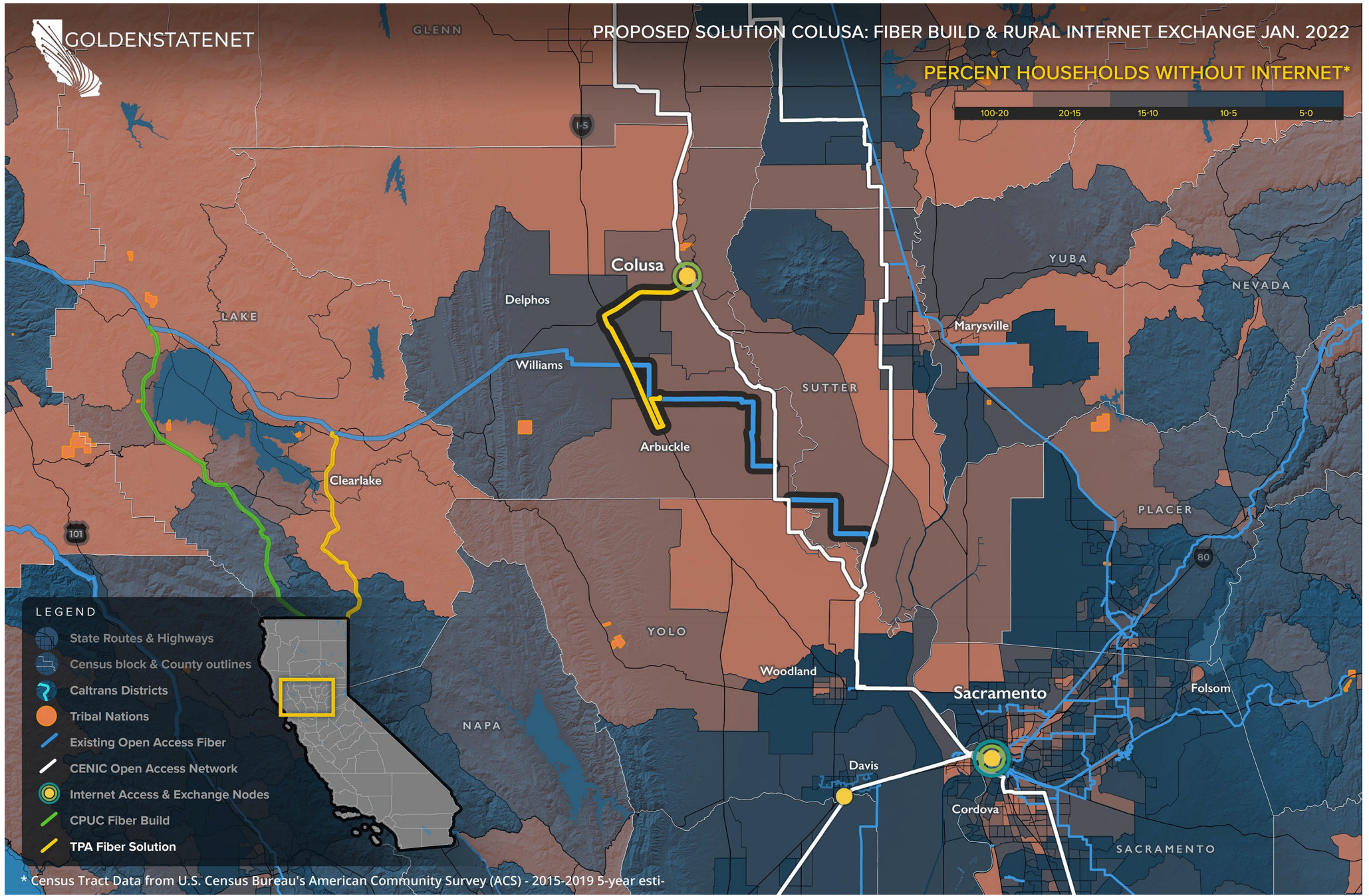
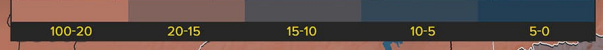
PERCENT HOUSEHOLDS BELOW POVERTY LINE*



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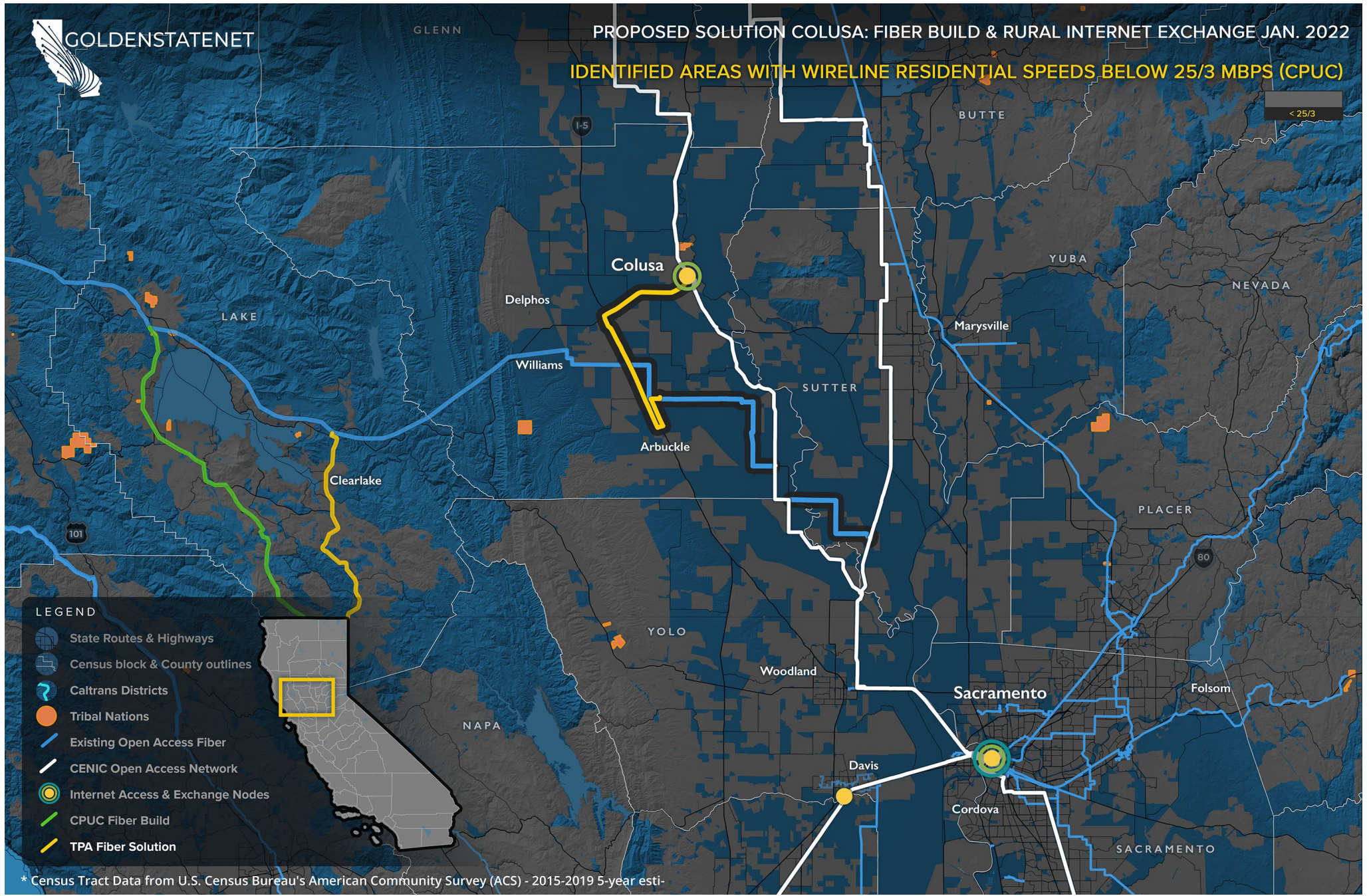
PERCENT HOUSEHOLDS WITHOUT INTERNET*



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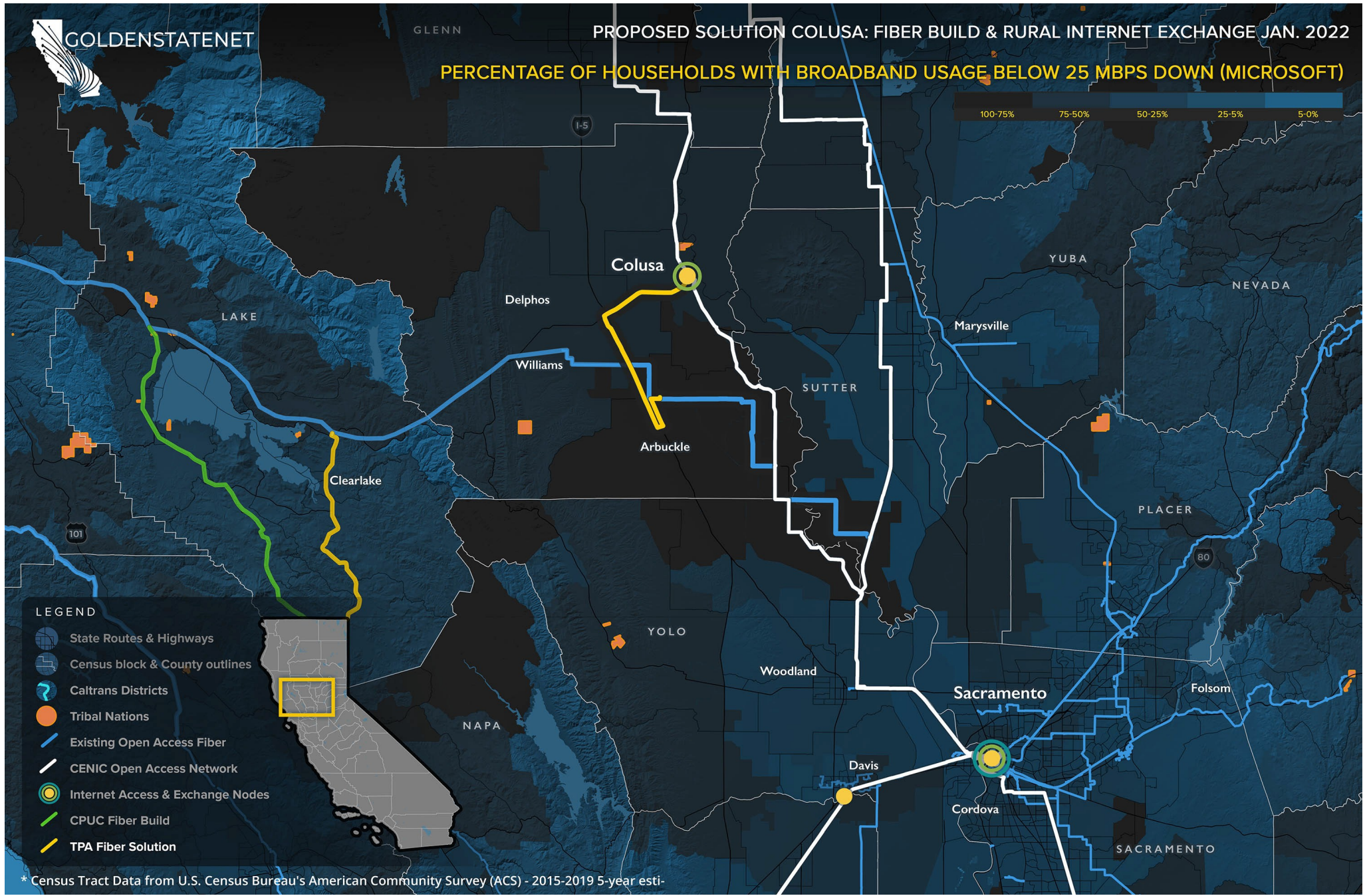
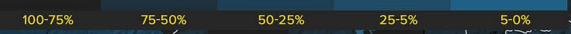
IDENTIFIED AREAS WITH WIRELINE RESIDENTIAL SPEEDS BELOW 25/3 MBPS (CPUC)



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PERCENTAGE OF HOUSEHOLDS WITH BROADBAND USAGE BELOW 25 MBPS DOWN (MICROSOFT)



* Census Tract Data from U.S. Census Bureau's American Community Survey (ACS) - 2015-2019 5-year esti-

Data Sources*

- American Community Survey - Internet Connectivity
- American Community Survey - Poverty Status
- California 2020 Legislative District Boundaries
- California Broadband Availability Maps and GIS Data
 - 20 Layers used from combined database
- California Census Blocks
- California Census Tracts
- California Counties
- California Fire Hazard Severity Zones
- California National Highway System
- California Major Lakes and Reservoirs
- California Parks Land
- California State Highway Network (SHN)
- California Tribal Lands
- CalTrans Juridictions
- CENIC Digital Fiber Segments
- CPUC Fixed Served Status
- Existing Open Access Networks - Under NDA
- FCC Fixed Consumer Deployment
- Microsoft Broadband Usage Percentages Dataset
- Ookla Test Data Results by Census Tract
- Technology Use Demographics (e.g. Internet use in home) by Census Tract

**All data was published between 2019 - 2021 and represents the most current data available. Not all layers are represented on the maps above. However, the data was utilized as a part of the development process.*



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