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**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Proceeding to
Consider Changes to the Commission's Carrier of
Last Resort Rules. R. 24-06-012

**OPENING COMMENTS OF
CONSOLIDATED COMMUNICATIONS OF CALIFORNIA COMPANY (U 1015 C)
ON ORDER INSTITUTING RULEMAKING PROCEEDING TO CONSIDER
CHANGES TO THE COMMISSION'S CARRIER OF LAST RESORT RULES**

Sean P. Beatty
BRB Law LLP
492 9th Street, Suite 220
Oakland, CA 94607
Phone: (510) 955-1083
Email: sean@brblawgroup.com

Attorneys for Consolidated Communications
of California Company.

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I. INTRODUCTION.

In accordance with Rule 6.2 of the California Public Utilities Commission's ("Commission") Rules of Practice and Procedure ("Rules") and based on the procedural schedule outlined in the Order Instituting Rulemaking ("OIR") that initiated this proceeding, Consolidated Communications of California Company (U 1015 C) ("Consolidated") hereby provides these opening comments on the OIR. Consolidated was named as a Respondent in this proceeding, and it provides these comments to describe its overall perspective on the subject of the OIR, in addition to addressing the specific questions upon which the Commission seeks comment.

Consolidated is an Incumbent Local Exchange Carrier ("ILEC") serving an exclusively urban and suburban market in the greater Sacramento metropolitan area, including the communities of Roseville, Citrus Heights, Rocklin, Orangevale, and portions of Sacramento County. These areas are subject to pervasive wireline and wireless competition—at least 95% of the customer locations in Consolidated's service territory have access to *four or more* reliable voice alternatives from mobile wireless carriers and approximately 99% of those locations have access to at least one wireline voice alternative, offered over broadband-capable networks that are managed by cable companies who offer Voice over Internet Protocol ("VoIP") service. In the face of these competitive pressures, Consolidated's traditional voice service has experienced a steady and precipitous decline in subscribership, with a 65% loss in voice access lines over the past 10 years. Despite these dynamics, Consolidated remains subject to the archaic requirements of the Commission's Carrier of Last Resort ("COLR") designation, which is a relic of a regulation-focused, as opposed to a market-based, approach to monitoring voice providers dating back to the earliest days of local competition, as reflected in Decision ("D.") 96-10-066. While Consolidated has certain pricing freedoms due to its Uniform Regulatory Framework ("URF") status, the intense competition within its footprint merits further regulatory change.

This proceeding represents an important opportunity for the Commission to recognize the competitive nature of the modern voice market and to reject the notion that *one carrier* amidst this rich tapestry of competitors should be saddled with a unique responsibility to serve all customer locations within its footprint, even where it receives *no high-cost support* from any state program. These are Consolidated's circumstances, and the retention of COLR obligations as to Consolidated only perpetuates an uneven playing field relative to the vast universe of other

competitors in the voice market, which not only have no COLR requirements, but which face far fewer regulatory burdens than Consolidated. Given the outdated nature of the COLR designation, Consolidated supports a robust reexamination of the COLR designation and the development of a reasonable path to lift COLR requirements where an area is sufficiently competitive, such as Consolidated’s service territory.

Consolidated will develop a record in this proceeding that demonstrates the compelling need for COLR relief in its service territory. As part of that presentation, Consolidated is providing data analysis and associated findings regarding the competitive status of its territory, summarized in the Declaration of Dr. Bryan Keating (“Keating Declaration”), a Stanford doctorate and an expert from the Compass Lexecon consulting firm who has closely examined the competitive landscape in Consolidated’s service territory.¹ The Commission should prioritize lifting COLR designations in areas like Consolidated’s service territory, where there is simply no need for a “default” carrier because there are so many options. The COLR concept is not mandated or enforced by any statute for URF carriers, and the Commission can and should take appropriate steps to move away from this framework, especially where the underpinnings of these requirements are so inconsistent with the current market reality. The Commission should not delay COLR relief for Consolidated—it should lift the designation promptly in this proceeding, without any further process. Regardless of what the Commission establishes for other service territories and other carriers, Consolidated’s market position is unique, and it strongly supports the need to lift COLR obligations.

In the discussion that follows, Consolidated provides additional regulatory context informing the need for COLR reform, and Consolidated summarizes the data that strongly supports its proposal for immediate COLR relief. Consolidated also responds to each of the questions posed in the OIR.

¹ See Attachment A (Keating Declaration).

II. THE “CARRIER OF LAST RESORT” DESIGNATION IS AN OUTDATED CONCEPT THAT IS A RELIC OF RATE-OF-RETURN REGULATION AND INCOMPATIBLE WITH THE MODERN COMPETITIVE ENVIRONMENT IN WHICH CONSOLIDATED OPERATES.

The COLR framework dates back to 1996, an era of nascent competition for the delivery of local voice service, when the Commission was concerned that competitive forces might leave behind higher-cost areas of the State. This concern gave rise to the “Universal Service” rulemaking (R.95-01-020) and ultimately D.96-10-066, the decision formalizing a set of high cost funds to ensure that carriers, and specifically COLRs, could and would serve high-cost locations. One condition applied to access the high costs funds was that a recipient must be a COLR.²

The high-cost support framework adopted in D.96-10-066 assumes that there is really only one reliable utility providing voice service, but that assumption is outdated. In 1996, the wireless industry was in its infancy; today wireless subscriptions are far more robust than landline subscriptions. In 1996, few if any residential locations had broadband capable facilities deployed in their last mile connection; today, fiber to the home is common and broadband-capable facilities are expansive. Modern wireline and wireless networks are almost ubiquitously capable of enabling VoIP functionality. The proliferation of communications applications such as Facetime, Teams and Zoom make the concept of a simple voice call seem romantic. As long ago as 2006, the Commission determined that Consolidated and the other larger ILECs faced substantial competition.³ Those competitive offerings have grown exponentially since 2006.

Consolidated’s service territory is a poster child for these advances. Customers have not a single choice for their communications needs, but a broad array of options. In the meantime, Consolidated remains the designated COLR in its service area, yet it has not drawn from the CHCF-B in over a decade. No one is being left behind in Consolidated’s service territory, and the removal of the COLR label from Consolidated would not change this fact.

² See D.96-10-066, Appendix A, Rule 6.D.3.

³ See D.06-08-030, at 133 (finding that Consolidated, then known as SureWest, had demonstrated the presence of competitors throughout its entire service territory).

III. THE FIERCELY COMPETITIVE URBAN AND SUBURBAN MARKET IN WHICH CONSOLIDATED OPERATES JUSTIFIES TERMINATION OF ITS COLR STATUS THROUGH THIS PROCEEDING.

Consolidated is the most uniquely situated ILEC in California. It has a very small service territory, only covering 83 square miles. Unlike ILECs with smaller customer bases which are largely located in rural, sparsely populated areas, Consolidated's service territory is located in the Sacramento metropolitan area and is characterized by suburban, and even urban, environments. The population density and geographic features, relatively flat valley to low foothill terrain, of Consolidated's service territory mean that it is fully exposed to competition.

The Keating Declaration confirms this conclusion based on recent, data-driven analysis. According to Dr. Keating, Consolidated's service territory features at least three providers which offer service in 100 percent of Consolidated's footprint. At least 94 percent of Consolidated's footprint, covering 95 percent of the population, has at least four competitors, and wireline cable company networks cover approximately 99% of customer locations, creating a full, wireline facilities-based alternative to Consolidated's voice service.⁴

The competitive landscape in Consolidated's service territory is populated by large, financially muscular telecommunications providers such as Comcast, AT&T, Verizon and T-Mobile.⁵ The financial resources generated from Consolidated's California operations are dwarfed by the California operations of these competitors. Burdening a smaller carrier such as Consolidated with COLR obligations in the face of unconstrained competition from these behemoths simply defies logic and is harmful to the market and to the customers and carriers who inhabit it.

Consolidated's competitive circumstances are so extreme and compelling that the Commission should immediately grant Consolidated relief from COLR obligations based on the record created by these comments, including Dr. Keating's declaration, without the development of a framework or process that might apply to other carriers. While Consolidated should be entitled to immediate relief from COLR obligations, Consolidated supports an outcome in this proceeding whereby the Commission establishes a set of standards against which another COLR's request to be relieved of its COLR designation may occur. However, Consolidated does

⁴ See *Keating Declaration* at ¶ 6.

⁵ See *id.* at ¶¶ 8, 9.

not have a specific set of standards or framework to recommend in this regard. Nonetheless, Consolidated's competitive circumstances are so compelling that any such standards or framework are not important, because Consolidated would meet any reasonable standard upon which to base a COLR relief decision.

IV. RESPONSES TO SPECIFIC QUESTIONS.

- a. Is it still necessary for the Commission to maintain its COLR rules? Here, the Commission adopts a rebuttable presumption that the COLR construct remains necessary, at least for certain individuals or communities in California.**

The COLR construct is outdated and should be eliminated in all markets where there is robust competition for voice service. Consolidated supports the development of a reasonable standard for lifting COLR obligations where certain competitive conditions exist, but Consolidated's particular circumstances are so compelling that it would meet any reasonable standard for COLR relief. As noted above, and as shown in the Keating Declaration, at least 99% of the customer locations in Consolidated's service territory have access to at least one wireline alternative for voice service, *and* at least 95% of these locations have three alternatives for wireless voice service. There is no justification for continuing to apply COLR obligations to Consolidated in these circumstances, as there is no reasonable scenario where a customer would depend upon Consolidated's regulated service to obtain a voice connection. Consolidated rejects the suggested "rebuttable presumption" in the prompt of this question, but even if it did apply, there is an undeniable rebuttal to this presumption as it pertains to Consolidated.

- b. Should the Commission revise the definition of a COLR, and if yes, how should the Commission revise that definition? What should be the responsibilities of a COLR?**

To the extent that COLR obligations are retained, the Commission should confirm that reasonableness limitations apply to COLR responsibilities. The historical definition of COLR, which is nearly 30 years old, suggests that a COLR is "a local exchange service provider that stands ready to provide basic service to any customer requesting such service within a specified area."⁶ The Legislature has more recently confirmed, in enacting Public Utilities Code Section 275.6(b)(1), that a COLR is "a telephone corporation that is required to fulfill all *reasonable requests* for service within its service territory."⁷ COLR requirements should not apply to

⁶ D.96-10-066, Appendix D § 1(D).

⁷ Pub. Util. Code § 275.6(b)(1) (emphasis added).

Consolidated, and immediate relief is justified for Consolidated, but if COLR obligations are retained, this “reasonableness” limitation will be important to incorporate as part of an update to Legislative determinations since 1996. Consolidated is devoted to its service territory and is committed to serving the residents and businesses within its footprint, but some specific locations may be truly unreasonable to serve—either from a technical or a cost perspective. The Legislature’s updated definition in Section 275.6(b)(1) includes an appropriate clarification that should be incorporated into Commission regulations.

c. Should the Commission revise how it defines a COLR’s service territory?

To the extent that the COLR designation is retained, COLR requirements should only be applied in a service territory that is non-competitive. Regardless of how the Commission determines what level of competition is sufficient to deem an area “competitive,” Consolidated’s circumstances would meet any reasonable definition and its entire territory should be reclassified as a non-COLR area.

d. Are there regions or territories in California that may no longer require a COLR? Are there regions that require COLR service? If yes, how should the Commission distinguish between the two? What criteria should be met for a region or territory to no longer require COLR designation?

Yes, there are likely many areas of California where competitive dynamics make the COLR framework unnecessary. Consolidated’s entire service territory is highly competitive, with numerous wireless options available to substantially all of Consolidated’s customers, and alternative wireline networks with VoIP capabilities available to 99% of the population in Consolidated’s service territory.⁸ Consolidated has no current proposal regarding the minimum standard for triggering COLR relief, but Consolidated’s specific circumstances strongly support removing COLR obligations. Consolidated will review other parties’ proposals in this proceeding to provide input on what overall standards may be appropriate for moving away from COLR designations, but Consolidated should be given complete COLR relief *in this proceeding* because of its undeniable competitive circumstances.

e. Can the Commission require Voice over Internet Protocol (VoIP) providers to be COLRs? If yes, should the Commission designate VoIP providers as COLRs?

No. Asserting jurisdiction over VoIP providers would be unlawful under both state and federal law. VoIP providers do not own, control, operate or manage “telephone lines,” so they

⁸ See *Keating Declaration* at ¶ 7.

cannot be “telephone corporations” and are thus not “public utilities” under the Public Utilities Code.⁹ Similarly, federal law confirms that VoIP is interstate and subject to a federal policy of preemption as to contrary state laws that would seek to regulate the service.¹⁰ Consolidated is aware of the pending proposed decision in the VoIP proceeding, R.22-08-008, which would assert intrastate jurisdiction over fixed interconnected VoIP. Consolidated will be pointing out the legal infirmities with that proposed decision in due course, but even if the proposed decision is ultimately adopted, it would be a further legal error to designate an interstate service provider as a COLR.

f. Can COLR service be provisioned using wireless voice service? Can the Commission direct wireless voice providers to serve as COLRs? If yes to both, should the Commission designate wireless voice providers as COLRs?

In Consolidated’s experience, wireless service is a legitimate competitive substitute for traditional wireline service, and Consolidated’s service territory has ubiquitous wireless competition from each of the major wireless carriers. Rather than asking whether this substitutability could be the predicate for imposing COLR obligations on wireless carriers, the Commission should lift the requirements for ILECs like Consolidated.¹¹ There may be significant legal problems with applying COLR obligations to wireless carriers, but even if these could be overcome, the appropriate policy choice in the current environment is to remove regulatory obstacles, not extend them to new industry players.

g. If the Commission does not have the authority to require a wireless voice provider to offer COLR service, is a wireless voice provider eligible to volunteer to be a COLR? If yes, should the Commission grant such an application? Should the requirements of a potential wireless COLR be different than a COLR offering Plain Old Telephone Service (POTS) or VoIP service?

Consolidated takes no position on whether a wireless provider or a VoIP provider could volunteer to be a COLR. In Consolidated’s service territory, the COLR construct is outdated and

⁹ Pub. Util. Code §§ 216(a), 233, 234; *see also* Pub. Util. Code § 285(a) (incorporating federal definition of “interconnected VoIP service” by reference to 47 C.F.R. Section 9.3).

¹⁰ *Vonage Holdings Corporation Petition for Declaratory Ruling Concerning and Order of the Minnesota Public Utilities Commission*, WC Docket No. 03-211, *Memorandum Opinion and Order*, FCC 04-267 (rel. Nov. 12, 2004) at ¶ 22; *Minnesota PUC v. FCC*, 483 F.3d 570 (8th Cir. 2007) (affirming *Vonage* order); *see also Charter Advanced Services, LLC v. Lange*, 903 F.3d 715, 719 (8th Cir. 2018), (“[i]n the absence of direct guidance from the FCC,” interconnected VoIP service should be treated as an “information service.”), *cert. denied*, 140 S.Ct. 6 (2019).

¹¹ *See* 47 U.S.C. § 332(c)(3)(A) (preempting state regulation of “entry” and “rates” for wireless services).

should be eliminated. If the concept is retained as an overall policy matter, it should not be applied to Consolidated, and if alternative providers seek such a designation, their requests should be considered on a case-by-case basis.

h. Should the Commission revise the requirements of basic service? If yes, which requirements or elements should be revised, and what should be those revisions?

There are some obvious changes to the definition of basic service that should be made. The requirements to provide directory service, operator service, and free blocking, and observe specific “billing provisions” are outdated and tangential to the fundamental principal of “basic service,” which should be a voice-grade connection with access to E911. It would be reasonable to limit “basic service” to just the first two elements from D.12-12-038.¹² Even the 2012 definition of basic service retains numerous archaic provisions, the Commission should take this opportunity to simplify and streamline the definition. These revisions should be made regardless of whether the Commission authorizes COLR relief.

i. Should the Commission revise the subsidy amount offered for participation in the California High Cost Fund-B? What is an appropriate subsidy amount and how should it be calculated?

Consolidated has no position at this time regarding a potential recalibration of the CHCF-B support mechanism. As demonstrated herein, Consolidated serves an exclusively urban and suburban area, and it receives \$0.00 from the CHCF-B. It is more important to Consolidated’s long-term stability to remove regulatory obstacles such as COLR obligations than it is to reframe the CHCF-B. This question serves as a further reminder of the lack of justification for continuing COLR obligations for Consolidated, as it is not currently a CHCF-B participant and therefore it is not reasonably foreseeable that it will be in the future.

j. Should the Commission revise its rules for how and when a COLR is allowed to withdraw from its designated service territory? If so, how should the Commission revise its rules? Should the Commission require that the service of a potential replacement COLR be functionally similar to that of the current COLR? If yes, what similar functionality requirements should the Commission adopt?

Yes, the rules summarized in the OIR for addressing COLR relief are hopelessly outdated.¹³ These requirements are premised on the incorrect notion that there must be a COLR in every geographic area, which is no longer justified. There is no reason to require a

¹² See OIR, at 2, n. 5 (citing D.12-12-038, Appendix A).

¹³ OIR at 4 (citing D.12-12-038 and D.96-10-066).

replacement COLR or mandate a “reverse auction” in areas where there is not a competitive basis for having a COLR in the first place. As noted herein, Consolidated believes that the record in this proceeding will be sufficient to remove Consolidated’s COLR status, just as the URF proceeding (R.05-04-005) gathered information and reclassified Consolidated as an URF carrier instead of a “New Regulatory Framework” provider. The same transition occurred in the 1990s as the Commission moved away from rate-of-return regulation for the large and mid-sized ILECs.¹⁴ This proceeding is no different, and it should involve specific findings and conclusions that remove Consolidated’s COLR obligations. There is no need for an additional process in clear cases like Consolidated’s situation. Consolidated will reserve judgment and provide input on the procedure that may be appropriate for the state more generally, but Consolidated urges the Commission not to overlook Consolidated’s powerful and unique circumstances as a provider of exclusively urban and suburban areas with expansive competition.

k. When should a COLR seeking to withdraw be required to notify residents in the COLR territory of its request to withdraw? What should be included in the contents of that notification? What method(s) should be used for notification?

A simple 30-day notice in customer bills should be sufficient to signal a withdrawal from COLR status, at least in Consolidated’s situation. In Consolidated’s experience, where there is a competitive market, customers are not depending on—or even aware of—COLR requirements. COLR relief is unlikely to impact the vast majority of customers, if it impacts any customers, so an expansive noticing mandate is unnecessary. In any noticing requirements that the Commission does adopt, the Commission should be careful not to imply that COLR relief means a withdrawal from providing service. Consolidated’s interest in redesignation as a non-COLR is not a signal that it will stop providing service to any current or potential customer. It is just a natural evolution toward a more equitable and even-handled regulatory playing field between Consolidated and its many lesser-regulated competitors.

¹⁴ See 96-12-074 (applying the New Regulatory Framework, or “NRF” to Consolidated).

- I. **If a COLR applies to withdraw, and a new COLR is designated, is there a need for a customer transition period? If yes, how long should that transition period last? What customer service protections, if any, should the Commission impose as part of a customer transition period? What other elements or processes, other than customer protections, should be provided in a customer transition period? How long should a customer transition period last?**

In highly-competitive markets like the one in which Consolidated operates, there is no need for a “new” COLRs or a “transition period.” The very fact that Consolidated’s market has such extensive competition from both wireline and wireless providers obviates the need for these protocols.

V. THE PROCEEDING SHOULD BE RECATEGORIZED AS QUASI-LEGISLATIVE.

Rule 6.2 of the Commission’s Rules specifies that comments on an order instituting rulemaking are the appropriate place to raise any objections to the preliminary scoping memo regarding the category of the proceeding. Consolidated recommends that the Commission reconsider the preliminary categorization of this proceeding and specify that it will be conducted as a quasi-legislative proceeding.

Ordering Paragraph 2 of the OIR preliminarily categorizes this proceeding as ratesetting. The stated rationale for this categorization is the possibility that the Commission may require changes to basic service requirements or impact the collection and expenditure of ratepayer monies, including the California High Cost Fund-B (“CHCF-B”).¹⁵

Rule 1.3(f) of the Commission’s Rules defines “quasi-legislative proceedings” as “. . . proceedings that establish policy or rules (including generic ratemaking policy or rules) affecting a class of regulated entities, including those proceedings in which the Commission investigates rates or practices for an entire regulated industry or class of entities within the industry, even if those proceedings have an incidental effect on ratepayer costs.” Applying these principles, this proceeding, which the OIR describes as a proceeding to consider changes to the Commission’s Carrier of Last Resort rules,¹⁶ plainly falls within the quasi-legislative category. The OIR is considering revisions to rules that impact a class of entities, namely COLRs, within the regulated telecommunications industry. On that basis alone, the OIR should be categorized as quasi-legislative. Furthermore, any changes to the CHCF-B, the potential of which is cited in the OIR,

¹⁵ See OIR at 6.

¹⁶ See *id.* at 1.

Attachment A

Declaration of Bryan Keating
On Behalf of Consolidated Communications
September 30, 2024

1. My name is Bryan Keating.¹ I am an Executive Vice President at Compass Lexecon, a global economic consulting firm. I received a BA in Economics and Government from Dartmouth College in 1999 and a PhD in economics from Stanford University in 2007. I have been with Compass Lexecon since 2007.

2. I have been asked by Consolidated Communications (“Consolidated”), through its counsel, to assess competition in the provision of voice services in Consolidated’s service territory in California. As described in more detail, customers in Consolidated’s footprint have voice service options to choose from that are offered over separate facilities-based networks from at least three—and typically four—other providers, including at least one fixed broadband competitor with a network capable of delivering Voice over Internet Protocol (“VoIP”) service and at least three mobile wireless providers offering voice and mobile broadband service, in addition to the voice services provided over Consolidated’s network.² On top of these facilities-based alternatives, resellers and over-the-top providers that rely on the voice or broadband networks of the underlying facilities-based carriers offer additional voice services.

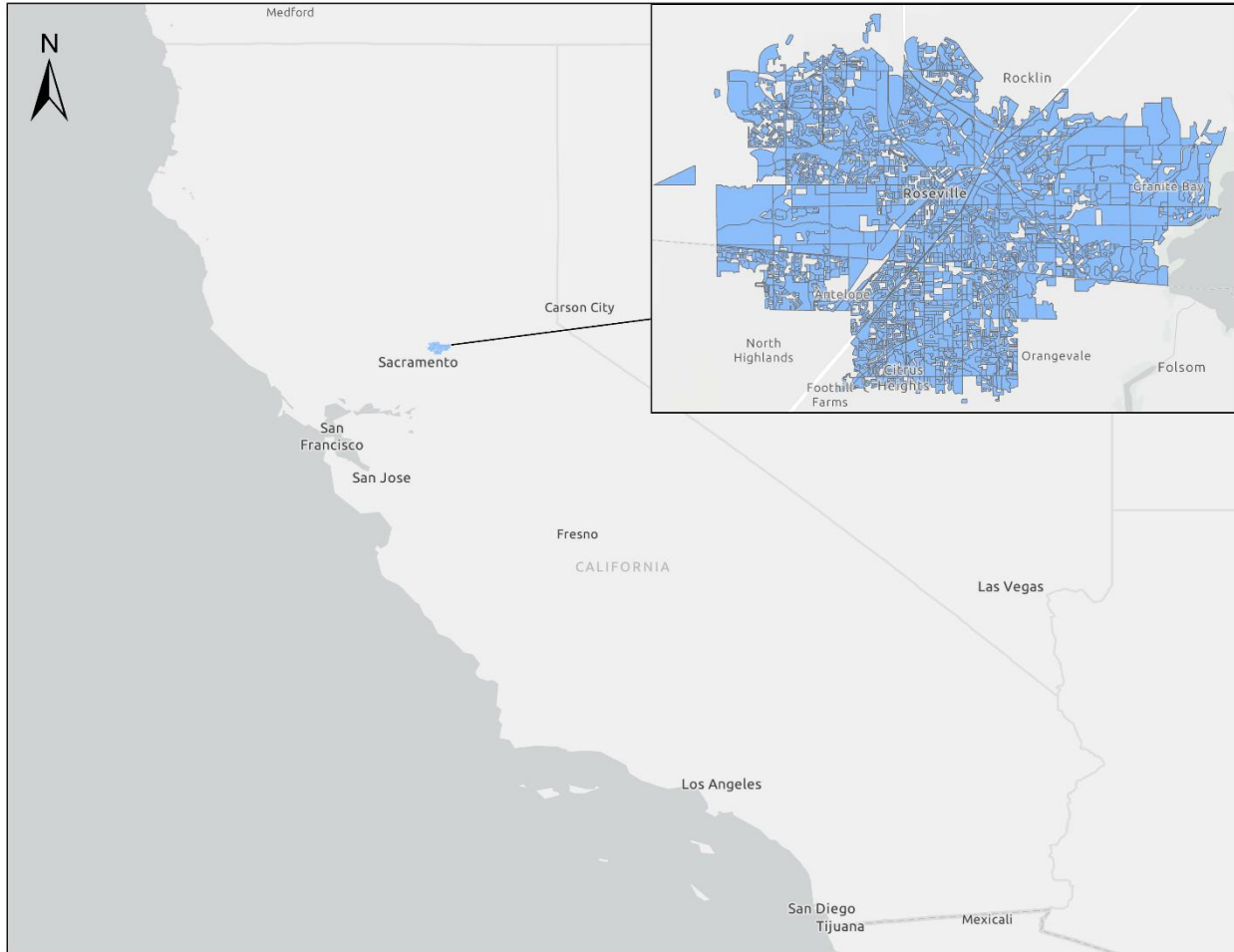
3. As shown in Figure 1 below, Consolidated provides voice services in 1,829 census blocks in the northeastern Sacramento metropolitan area, including the area of Placer County in and around Roseville, California.³ The total population of these census blocks is 226,347, less than one percent of California’s total population.

¹ My full biography and curriculum vitae can be found at <https://www.compasslexecon.com/professionals/bryan-keating>.

² As described in more detail below, 99.6 percent of customers living in Consolidated’s footprint have at least one fixed broadband option other than Consolidated.

³ The U.S. Census Bureau defines census blocks as follows: “Census blocks, the smallest geographic area for which the Bureau of the Census collects and tabulates decennial census data, are formed by streets, roads, railroads, streams and other bodies of water, other visible physical and cultural features, and the legal boundaries shown on Census Bureau maps.” (U.S. Census Bureau, “Census Blocks and Census Block Groups,” available at <https://www2.census.gov/geo/pdfs/reference/GARM/Ch11GARM.pdf>). This footprint includes only Consolidated’s Incumbent Local Exchange Carrier (“ILEC”) service area, not any areas that may be served by its affiliated Competitive Local Exchange Carrier (“CLEC”), which is a separate company and not a Carrier of Last Resort (“COLR”).

Figure 1: Map of Consolidated’s Service Territory in California



Source: Consolidated customer data.

4. To identify providers of competing services using either wireless or wireline technologies, I use the following data sources:

- **Consolidated’s service territory:** Information gathered from Consolidated reflecting each census block in Consolidated’s service territory in California as well as the number of served residential and business telephone customer locations in each census block. I understand that similar data was provided to the Commission’s Public Advocates Office (“Cal Advocates”) in connection with a recent data request response identified as “DR-1.”

- **Fixed broadband providers:** The Commission’s Annual Collected Broadband Data provides information on deployment of fixed broadband service by census block.⁴
- **Mobile wireless providers:** The Commission’s Annual Collected Broadband Data provides information on deployment of mobile wireless service by census block.⁵

5. Using the Commission’s data on fixed broadband providers, I identify by census block each fixed broadband provider providing service other than Consolidated.⁶ Similarly, using the Commission’s data on mobile wireless providers, I identify by census block each mobile wireless provider offering service.⁷ For purposes of my analysis, I consider only providers that operate their own networks (*i.e.*, “facilities-based” providers), while excluding resellers such as over-the-top VoIP providers and mobile virtual network operators (“MVNOs”).⁸ I then merge these datasets with the Consolidated’s service territory data to identify fixed and mobile broadband providers in Consolidated’s footprint.⁹

6. As shown in Figure 2 below, Consolidated faces substantial competition throughout its footprint. At least three providers offer service in 100 percent of its footprint.¹⁰

⁴ CPUC, “CPUC Annual Collected Broadband Data,” Data as of December 31, 2021, *available at* <https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-mapping-program/cpuc-annual-collected-broadband-data> (hereinafter *CPUC Fixed Broadband Map*).

⁵ CPUC, “CPUC Annual Collected Broadband Data,” Data as of December 31, 2021, *available at* <https://www.cpuc.ca.gov/industries-and-topics/internet-and-phone/broadband-mapping-program/cpuc-annual-collected-broadband-data> (hereinafter *CPUC Mobile Broadband Map*).

⁶ I only include the fixed broadband providers that offer a throughput of at least 200 kbps in at least one direction. I count each fixed broadband provider only once, regardless of whether it offers one or more technologies (*e.g.*, DSL, cable, fiber). I exclude satellite providers.

⁷ If a service provider, *e.g.*, Verizon, offers both fixed wireless and mobile wireless services, I count such providers only once.

I count a mobile wireless service provider as offering service to a census block if the provider’s network covers at least 50 percent of the census block. Because mobile wireless providers offer complete coverage over most of Consolidated’s footprint, my analysis is not sensitive to using a higher cutoff such as 90 percent.

⁸ VoIP providers such as Vonage are available via standard broadband connections and are commonly used. (*See, e.g.*, FCC, “2022 Communications Marketplace Report,” ¶ 171.)

⁹ When merging the Consolidated and fixed broadband provider data, I find 65 CBs in Consolidated’s territory (out of 1,829 CBs) that are not covered in the fixed broadband provider data. These CBs account for less than one percent of the population in Consolidated’s footprint.

¹⁰ Because three large mobile broadband carriers (AT&T, T-Mobile, and Verizon) operate in all CBs in Consolidated’s territory, there are at least three mobile or fixed broadband providers in all of Consolidated’s territory. Moreover, this number is likely to be conservative because DISH has substantially expanded its mobile wireless network in the past few years. (DISH, “The DISH 5G Network is Now Available to Over 70 Percent of the U.S. Population,” July 15, 2023, *available at* <https://about.dish.com/2023-06-15-The-DISH-5G-Network-is-Now-Available-to-Over-70-Percent-of-the-U-S-Population>.)

At least 95 percent of its footprint, covering 99 percent of the population, has at least four competitors.¹¹

Figure 2: Summary of Competitive Overlap in Consolidated’s Footprint

	Census Blocks	Population	Consolidated's Residential Customers	Consolidated's Business Customers
<u>Consolidated Territory</u>	1,829	226,347	3,597	10,802
<u>Fixed or Mobile Broadband Carriers Other than Consolidated</u>				
3+	1,829 <i>100.00%</i>	226,347 <i>100.00%</i>	3,597 <i>100.00%</i>	10,802 <i>100.00%</i>
4+	1,740 <i>95.13%</i>	223,271 <i>98.64%</i>	3,491 <i>97.05%</i>	9,688 <i>89.69%</i>
5+	90 <i>4.92%</i>	19,758 <i>8.73%</i>	145 <i>4.03%</i>	1,772 <i>16.40%</i>

Source: Census maps and population estimates 2020, CPUC fixed and mobile broadband maps, Consolidated customer data.

Notes: [1] This figure includes all providers offering service of at least 200 kbps in at least one direction. [2] If a provider offers both wireline and wireless service, that provider is counted twice. [3] If a provider offers fixed and mobile wireless services, that provider is counted as a wireless provider only once.

7. The numbers above can be split into wireline competitors and wireless competitors. As shown in Figure 3 below, of the 1,764 census blocks for which I am able to match data on fixed providers, at least one and sometimes two or more fixed broadband providers offer service in all of them.¹² I use the term “fixed” here because my figures include Verizon Wireless’ fixed wireless service, which is the functional equivalent of a wireline service even though it relies on wireless connections between towers and equipment affixed to the customer premise to enable its service. Regardless of whether this fixed wireless platform is included, there is nearly ubiquitous coverage of Consolidated’s footprint from the wireline cable companies alone.

¹¹ These estimates are conservative because there are 65 census blocks for which I do not have information on the number of other fixed broadband providers and therefore are not included when counting the number of census blocks with 4+ or 5+ fixed or mobile broadband carriers other than Consolidated.

¹² These figures are conservative because they do not include the 65 CBs in Consolidated’s footprint where we do not have information on the number of fixed broadband carriers other than Consolidated. They are also conservative because fixed wireless service continues to expand.

Figure 3: Fixed Broadband Competitive Overlap in Consolidated’s Footprint

	Census Blocks	Population	Consolidated's Residential Customers	Consolidated's Business Customers
Consolidated Territory	1,764	224,336	3,540	9,870
Fixed broadband Carriers Other than Consolidated				
1+	1,744 98.87%	223,354 99.56%	3,495 98.73%	9,817 99.46%
2+	219 12.41%	53,274 23.75%	543 15.34%	3,192 32.34%
3+	18 1.02%	6,113 2.72%	27 0.76%	169 1.71%

Source: Census maps and population estimates 2020, CPUC fixed and mobile broadband maps, Consolidated customer data.

Notes: [1] This figure includes all providers offering service of at least 200 kbps in at least one direction. [2] This figure includes all providers of fixed broadband, regardless of whether they also offer wireline or fixed wireless broadband services.

8. Figure 4 below summarizes the main fixed competitors in Consolidated’s footprint. Cable providers are the most common type of fixed competitors. Comcast operates in 89 percent of Census Blocks in Consolidated’s footprint, or 87 percent if weighted by population. Wave, another cable company, has coverage of more than 11 percent measured by Census Blocks and 13 percent measured by population, relative to Consolidated’s service territory. Comcast and Wave have little or no overlap with one another, so collectively they represent an essentially complete, alternative wireline network option to Consolidated’s platform. Other fixed broadband competitors in Consolidated’s footprint include Verizon Wireless (fixed wireless) and AT&T.

Figure 4: Fixed Broadband Competitors in Consolidated’s Footprint

Providers	Number of overlap CBs with Consolidated footprint	Percentage of overlap CBs	Percentage of overlap CBs weighted by population	Percentage of overlap CBs weighted by number of residential customers	Percentage of overlap CBs weighted by number of business customers
Comcast	1561	88.5%	87.0%	82.9%	88.9%
Wave	189	10.7%	13.2%	16.6%	16.6%
Verizon Wireless	147	8.3%	17.2%	12.0%	15.9%
AT&T	46	2.6%	6.2%	2.0%	2.6%

Source: Census maps and population estimates 2020, CPUC fixed and mobile broadband maps, Consolidated customer data.

Notes: [1] These figures include all providers offering service with a throughput of at least 200 kbps in at least one direction. [2] These figures include all providers of fixed broadband, regardless of whether they also offer wireline or fixed wireless services.

9. Figure 5 below shows that all three of the nationwide mobile wireless providers, AT&T, T-Mobile, and Verizon, offer network coverage throughout Consolidated’s entire footprint.¹³ Consequently, customers can choose from at least three different mobile voice services, as well as from MVNOs that purchase wholesale network access from one or more of the nationwide mobile wireless providers.

Figure 5: Mobile Wireless Competitive Overlap in Consolidated’s Footprint

	Census Blocks	Population	Consolidated's Residential Customers	Consolidated's Business Customers
Consolidated Territory	1,829	226,347	3,597	10,802
Mobile broadband Carriers Other than Consolidated				
3+	1,829	226,347	3,597	10,802
	100.00%	100.00%	100.00%	100.00%

Source: Census maps and population estimates 2020, CPUC fixed and mobile broadband maps, Consolidated customer data.

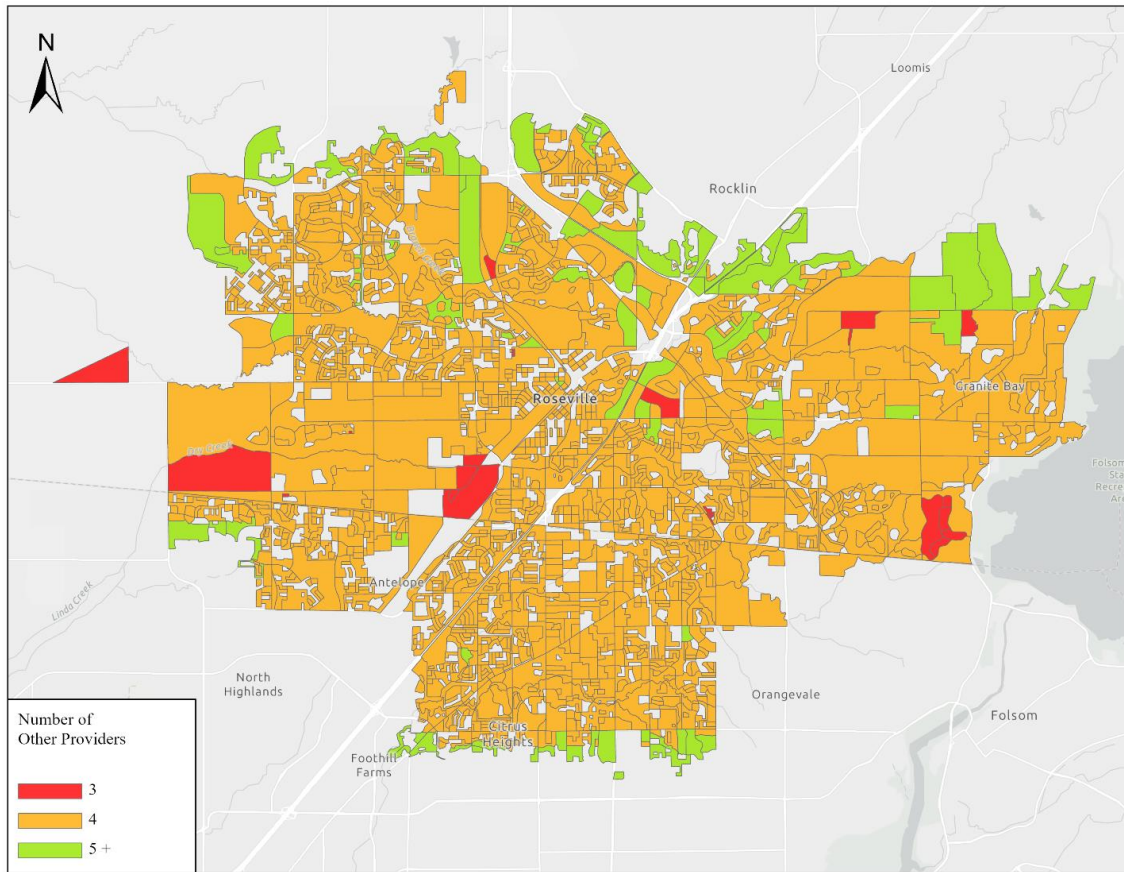
Notes: [1] This figure includes all providers offering service of at least 200 kbps in at least one direction. [2] I count all providers offering wireless service on their networks (excluding cable wireless), even if that provider also offers wireline service. [3] If a provider offers both fixed wireless and mobile wireless services, that provider is counted as a wireless provider only once.

10. Figure 6 below shows the prevalence of service alternatives on a map. It displays all census blocks in Consolidated’s footprint.¹⁴ The color of each census block is determined by how many alternative options are available at that census block. The great majority of census blocks in Consolidated’s footprint have four or more alternative fixed or mobile broadband providers.

¹³ As noted in note 10 above, DISH is also expanding its wireless network, so this count is likely to be conservative.

¹⁴ The map excludes the 65 CBs that I am unable to match between the Consolidated and fixed provider data.

Figure 6: Map of Competitive Overlap in Consolidated's Footprint



Source: Census maps and population estimates 2020, CPUC fixed and mobile broadband maps, Consolidated customer data.

Notes: [1] This figure includes all providers offering service of at least 200 kbps in at least one direction. [2] If a provider offers both wireline and wireless service, that provider is counted twice. [3] If a provider offers fixed and mobile wireless services, that provider is counted as a wireless provider only once. [4] There are 65 CBs in Consolidated territory for which I do not have the count of fixed broadband carriers and therefore do not include those CBs in the map above. However, since three large mobile broadband carriers (AT&T, T-Mobile, and Verizon) operate in all of these 65 CBs above, there are at least three mobile or fixed broadband providers in these CBs and thus in all of Consolidated's territory.