

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

Order Instituting Investigation into the State of
Competition Among Telecommunications
Providers in California, and to Consider and
Resolve Questions Raised in the Limited
Rehearing of Decision 08-09-042

Investigation 15-11-007
(Filed Nov. 5, 2015)

Direct Testimony of

Laura Blum-Smith

Senior Research and Policy Analyst

Submitted as Information Request Response

on Behalf of Writers Guild of America, West, Inc.

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March 15, 2016

1 **Introduction and Summary**

2 This testimony represents the Response of the Writers Guild of America, West, Inc.
3 (“WGAW”) to the California Public Utilities Commission (“CPUC” or “Commission”)’s Order
4 Instituting Investigation to Assess the State of Competition Among Telecommunications
5 Providers in California, and to Consider and Resolve Limited Rehearing of Decision 08-09-042,
6 filed November 5, 2015, and in consideration of the clarifications and schedule laid out in the
7 Administrative Law Judge’s Ruling on Pending Motions and Issues Discussed at January 20,
8 2016 Prehearing Conference. Specifically, I submit this Response on behalf of WGAW to
9 Information Request 20: “Identify the metrics and sources of data that you believe would be
10 most useful and useable by the Commission to measure competition in both the retail and
11 wholesale markets, whether identified in Appendix A or found elsewhere.”¹

12 WGAW welcomes this opportunity to participate in the CPUC’s investigation and
13 evaluation of telecommunications competition in this state, in particular regarding the level of
14 competition in the provision of broadband services. In the course of our participation in other
15 Commission proceedings, specifically the Commission’s reviews of the Comcast Corporation
16 (“Comcast”)-Time Warner Cable (“TWC”) merger (A.14-04-013 et al.) and the ongoing Charter
17 Communications (“Charter”)-TWC merger (A.15-07-009), WGAW staff have produced two
18 analyses of wired broadband availability in California using publically available data from two

¹ Order Instituting Investigation to Assess the State of Competition Among Telecommunications Providers in California, and To Consider And Resolve Limited Rehearing Decision (D.) 08-09-042 (Nov. 12, 2015) at B-6.

1 adjacent time periods. These analyses considered broadband availability by speed and
2 technology in order to assess the presence of competition in the relevant companies' footprints,
3 representing the vast majority of broadband customers in the state. I believe that these materials
4 may be helpful to the Commission in the course of this Investigation, and so am including them
5 as Exhibits A and B, respectively. I carried out all of the analysis contained in Exhibit B, while
6 Exhibit A was authored by another Senior Research and Policy Analyst for WGAW.

7 **Q: What metrics or sources of data do these analyses contain?**

8 In participating in the Commission's reviews of the Comcast-TWC and Charter-TWC
9 mergers, WGAW staff including myself undertook analysis of publically available datasets in
10 order to illustrate the state of wired broadband competition in relevant portions of California.
11 Each analysis utilized the U.S. Department of Commerce, National Telecommunications and
12 Information Administration's State Broadband Initiative Data for California, which is collected
13 in partnership with the CPUC. This dataset lists information on broadband providers, technology
14 types and download and upload speeds offered by U.S. census block. The first analysis, referred
15 to here as "Analysis of December 2013 Data" and included as Exhibit A, utilized the December
16 31, 2013 dataset and covered the census blocks where Charter, Comcast or Time Warner Cable
17 offered service. The second analysis, referred to here as "Analysis of June 2014 Data" and
18 included as Exhibit B, utilized the June 30, 2014 dataset and covered the census blocks where
19 Charter, Time Warner Cable, Bright House Networks ("BHN") or Comcast offered service.
20 Though Comcast is not one of the companies seeking to merge in the proceeding for which the
21 Analysis of June 2014 Data was undertaken, it is the primary provider offering broadband
22 service to those portions of the state not served by Charter, TWC or BHN, and I included it in an
23 effort to provide a robust picture of broadband competition in California. Each analysis matched

1 the State Broadband Initiative dataset with 2010 U.S. Census Block data for the populations of
2 the relevant census blocks.² Both reflect analysis of broadband availability in census blocks
3 which collectively represent over 80% of the population of California. Though the two analyses
4 do not include all of the same metrics, they each provide a picture of competition in California.

5 The Analysis of December 2013 Data reflects the state of competition in the combined
6 California footprints of Comcast, TWC and Charter, as measured by the average number of
7 broadband providers per census block, the total number of providers for the population within
8 the footprint and the number of cable and fiber providers for the population within the footprint.
9 Additionally, the analysis notes an assessment of “competition” in the combined companies’
10 footprint by separating DSL or copper competition from fiber competition, a relevant metric
11 because of the different capabilities these technology types offer. Following the submission of
12 this material into the CPUC record, WGAW staff undertook additional analysis by isolating the
13 dataset for Los Angeles County, and evaluating the numbers of providers offering speeds of 25
14 Mbps or higher, overall and by demographic population.

15 The Analysis of June 2014 Data reflects the state of competition in the combined
16 California footprints of Charter, TWC and Bright House Networks (referred to in the analysis as
17 “New Charter footprint”), as well as the combined footprints of those three companies and
18 Comcast. This analysis also includes calculations of average broadband providers by census
19 block, total providers for the population of the footprint and isolation of competition from
20 providers of different technology types. Unlike the December 2013 analysis, the June 2014
21 analysis includes state-level as well as Los Angeles County-level calculations of the number of
22 providers offering broadband at speeds of 25 Mbps or higher.

² Though each provider may not serve the entire population of a given census block, the analysis considers the population of each census block to be part of the “footprint” of a provider that reports offering service in that census block.

1 **Q: What were the analyses’ findings regarding the level of competition in the analyzed**
 2 **areas?**

3 Both analyses found a significant lack of competition in the examined portions of
 4 California. For instance, the Analysis of June 2014 Data , which analyzed census blocks
 5 containing 86% of California’s broadband-served population (the combined set of census blocks
 6 served by Comcast, Charter, TWC and BHN, or “New Charter + Comcast”) revealed that while
 7 97% of the population in the analyzed census blocks had access to two or more broadband
 8 providers of any technology or speed, only 30% had access to two or more providers offering
 9 download speeds of 25 Mbps or higher, and only 20% had access to two or more providers of the
 10 most advanced technologies: cable and fiber broadband. This level of competition was relatively
 11 consistent among the three geographic areas of analysis: the four-company footprint representing
 12 86% of the state broadband-served population, the three-company (Charter, TWC and BHN, or
 13 “New Charter”) footprint representing 53% the state broadband-served population and the Los
 14 Angeles County footprints of Charter and TWC. Overall, the analysis showed consistently that
 15 the vast majority of California broadband customers have only one option for high-speed service:

Combined Statewide Footprint of Charter, TWC, BHN and Comcast – Pop. 31,139,757			
Number of Providers		Population	% of Footprint
Any Speed or Technology	1	876,092	2.81%
	2	23,356,670	75.01%
	3	6,328,544	20.32%
	4	548,308	1.76%
	5	28,065	0.09%
	6	2,078	0.01%
	Total	31,139,757	100%
Cable/Fiber Broadband Only	1	24,794,080	79.62%
	2	6,257,388	20.09%
	3	88,289	0.28%
	Total	31,139,757	100%

Combined Statewide Footprint of Charter, TWC, BHN and Comcast – Pop. 31,139,757			
Number of Providers		Population	% of Footprint
25 Mbps+ Broadband Only	0	195,759	0.63%
	1	21,712,746	69.73%
	2	8,755,526	28.12%
	3	455,237	1.46%
	4	20,489	0.07%
	Total	31,139,757	100%

1

Combined Los Angeles County Footprint of Charter and TWC – Pop. 9,615,743			
Number of Providers		Population	% of Footprint
Any Speed or Technology	1	240,088	2.50%
	2	7,170,685	74.57%
	3	2,107,262	21.91%
	4	95,353	0.99%
	5	2,355	0.02%
	Total	9,615,743	100%
Cable/Fiber Broadband Only	1	7,304,917	75.97%
	2	2,272,434	23.63%
	3	38,392	0.40%
	Total	9,615,743	100%
25 Mbps+ Broadband Only	1	6,687,515	69.55%
	2	2,875,179	29.90%
	3	52,987	0.55%
	4	62	0.00%
	Total	9,615,743	100%

2

3 I believe that these analyses provide useful and relevant information for the Commission’s stated
4 intention to measure competition in the retail market for broadband services in California,
5 including broadband services at the new national standard of 25 Mbps downstream service.³

³ Order Instituting Investigation to Assess the State of Competition Among Telecommunications Providers in California, and To Consider And Resolve Limited Rehearing Decision (D.) 08-09-042 (Nov. 12, 2015) at B-4.

1 **Statement of qualifications of Laura Blum-Smith**

2 My name is Laura Blum-Smith and my business address is 7000 West 3rd Street, Los
3 Angeles, California 90048. I am a Senior Research and Policy Analyst for the Writers Guild of
4 America, West Inc. Since joining WGAW in 2013 my work has focused substantially on
5 telecommunications policy matters as they relate to screen and television writers' employment
6 and business. My work has concerned telecommunications company mergers in particular. I have
7 been responsible for a significant portion of WGAW's participation in the regulatory reviews of
8 the Comcast-Time Warner Cable merger before the Federal Communications Commission, the
9 New York Public Service Commission and the California Public Utilities Commission. I
10 represented WGAW before this Commission in that proceeding. I assisted in the authoring of
11 WGAW's *LA Consolidation: the Effects of the Comcast-Time Warner Cable Merger in Los*
12 *Angeles* report (February 18, 2015). I have lead staff responsibility for WGAW's participation in
13 the regulatory reviews of the Charter-Time Warner Cable merger at the FCC and the CPUC. In
14 several areas of my work, I have been tasked with carrying out analysis of data obtained from
15 both external and internal sources.

16 My education includes a Bachelor of Arts degree in History and Anthropology from
17 Oberlin College (2009), and a Certificate of Completion from University of Southern
18 California's Marshall School of Business, Office of Executive Education for its Understanding
19 Finance & Accounting Online Program.

DECLARATION IN SUPPORT OF DIRECT TESTIMONY OF LAURA BLUM-SMITH

I declare under penalty of perjury under the laws of the State of California that the foregoing testimony is my own and was prepared by me, and that the statements therein are true and correct to the best of my knowledge and belief.

Executed in Los Angeles, CA on this 15th day of March, 2016



Laura-Blum Smith
Senior Research & Policy Analyst
Writers Guild of America, West, Inc.

EXHIBIT A

Analysis of December 2013 Data:

Broadband competition in the California footprints of
Comcast Corporation, Time Warner Cable and Charter
Communications as of December 31, 2013

Authored by Emily Sokolski, Senior Research and Policy Analyst,
Writers Guild of America, West, Inc.

December, 2014 and February, 2015

WGAW analyzed wireline broadband data to understand residential Internet service choices for consumers in the census blocks where Joint Applicants (Charter, Comcast and Time Warner Cable) offer service. The primary data set WGAW used was the US Department of Commerce, National Telecommunications and Information Administration, State Broadband Initiative (CSV format December 31, 2013) for the state of California. We also utilized Census block population data from the 2010 Census. WGAW analyzed provider availability at the census block level because it is the smallest geographic unit for which broadband data is publicly available. In the tables below we describe the territory served by Joint Applicants' as "Joint Applicants Footprint" however, we would like to note that Joint Applicants' services may not be available to every household within a served block.

1. Data Sources

- a. NTIA data sets for California:¹
 - i. The small census block set (census blocks smaller than 2 miles)
 - ii. The large census block set (census blocks larger than 2 miles.)
- b. Census block population for the state of California (Census File 1.)²
- c. Census County Codes for California.³

2. Data Exclusions

- a. From both data sets, 'end user' categories coded as 2, 3, and 4 were excluded. This excludes all business and governmental users.⁴

3. Analysis of Broadband Service in Joint Applicants' Combined Footprint

- a. Created summary of all broadband providers by census block, broken out by technologies:
 - Asymmetric xDSL
 - Symmetric xDSL
 - Other Copper Wire
 - Cable Modem—Docsis 3.0 Down
 - Cable Modem—Other
 - Optical Carrier/Fiber to the End User
- b. Totaled broadband providers inclusive of all technology by census block
- c. Totaled cable and fiber broadband providers by census block
- d. Created a population weighted average for total number of broadband providers and total of only cable and fiber broadband providers

¹ WGAW analysis of National Telecommunications and Information Administration data and 2010 Census Block Data. US Department of Commerce, National Telecommunications and Information Administration, State Broadband Initiative, California (CSV format December 31, 2013), <http://www.broadbandmap.gov/data-download>.

² Missouri Census Data Center, Standard Summary File 1 (2010 Census) Extract Assistant, California, http://mcdc.missouri.edu/cgi-bin/broker?_PROGRAM=websas.sf12010x_extract_menu.sas&_SERVICE=appdev&st=.

³ US Census Bureau, 2010 FIPS Codes for Counties and County Equivalent Entities, https://www.census.gov/geo/reference/codes/files/st06_ca_cou.txt

⁴ Note: the CA data does not actually contain any end users coded as 3 or 4.

4. Summary Tables

Joint Applicants' Combined Footprint	
California Population (total)	37,253,956
Population Within Joint Applicants' Combined Footprint	30,651,791
As % of State Population	82%
Total Census Blocks in Joint Applicants' Footprint	351,751

Average Number of Broadband Providers	
Population Weighted Average (all technology)	2.22
Population Weighted Average (cable & fiber only)	1.23

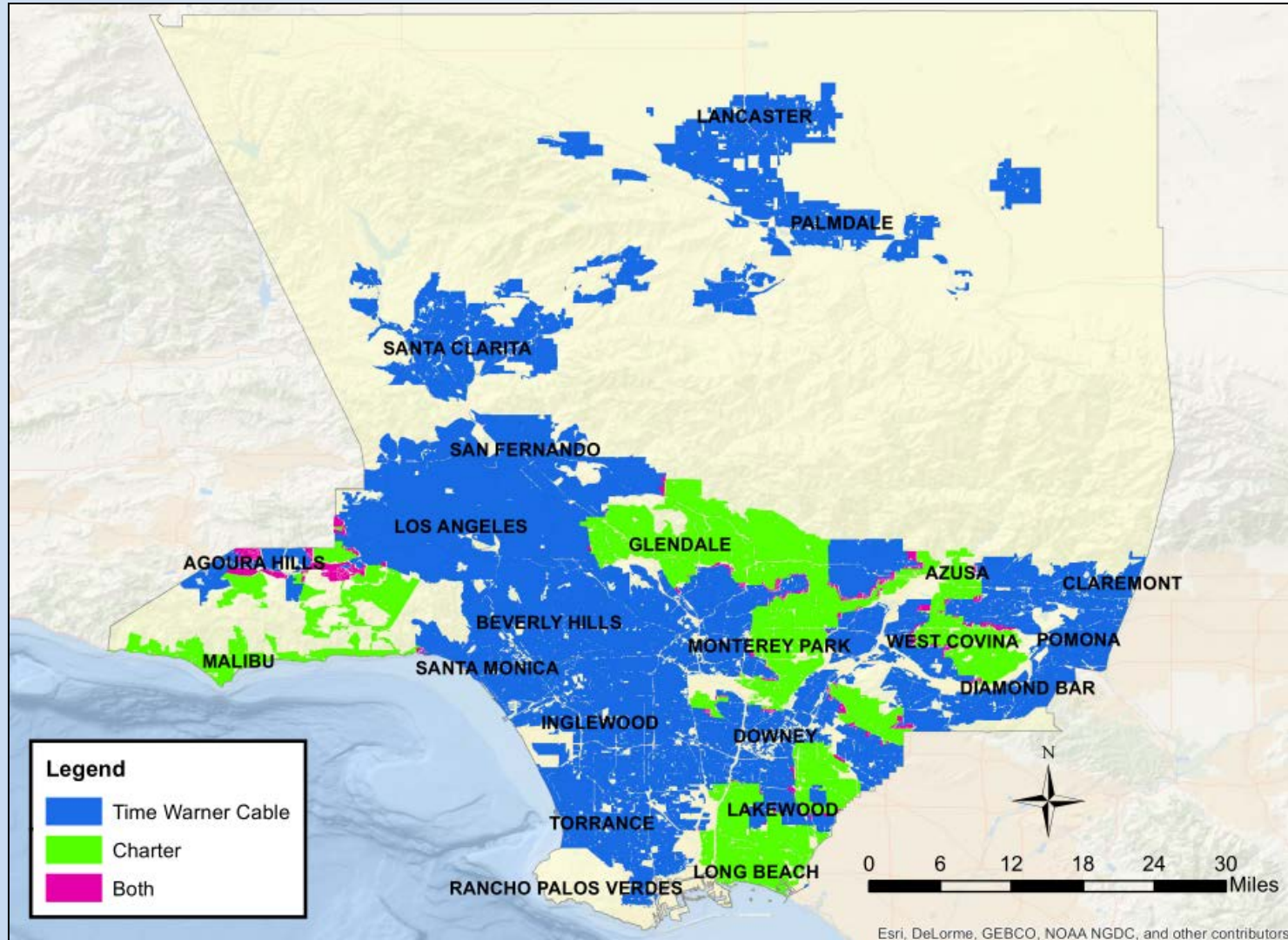
Providers Within Joint Applicants' Footprint (all technology)		
Number of Providers	Population in Footprint	% of Pop. In Footprint
1	865,790	2.82%
2	23,237,022	75.81%
3	5,605,305	18.29%
4	674,054	2.20%
5	235,116	0.77%
6	2,686	0.01%
0	31,818	0.10%

Cable and Fiber Providers Within Joint Applicants' Footprint		
Number of Providers	Population in Footprint	% of Pop. In Applicant Footprint
0	31,818	0.10%
1	24,318,739	79.34%
2	5,668,193	18.49%
3	633,041	2.07%

Census Blocks Where Joint Applicant's Only Competition is a DSL or Copper ISP			
Census Blocks	Block %	Population within Census Blocks	Population %
220,889	63%	21,075,294	69%

Fiber Availability in Joint Applicants' Footprint		
Census Blocks Served by a Fiber Provider	Population Served by a Fiber Provider	% of Population in Footprint Served by Fiber
48,808	530,3941	17%

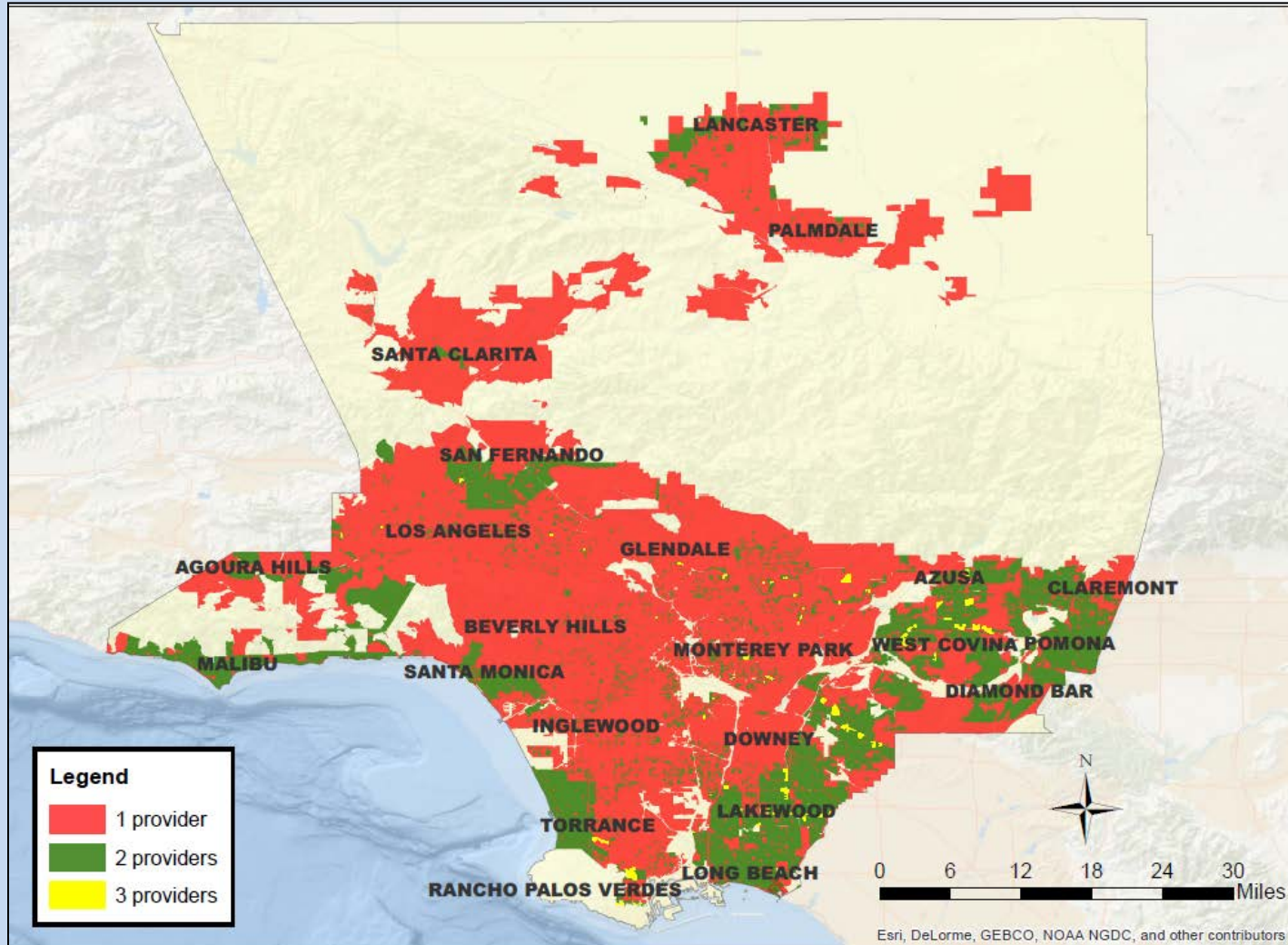
TWC & CHARTER FOOTPRINTS LOS ANGELES COUNTY



Esri, DeLorme, GEBCO, NOAA NGDC, and other contributors

WGAW0012

TWC & CHARTER COMBINED LA COUNTY FOOTPRINT PROVIDERS OFFERING 25MBPS+ INTERNET SERVICE

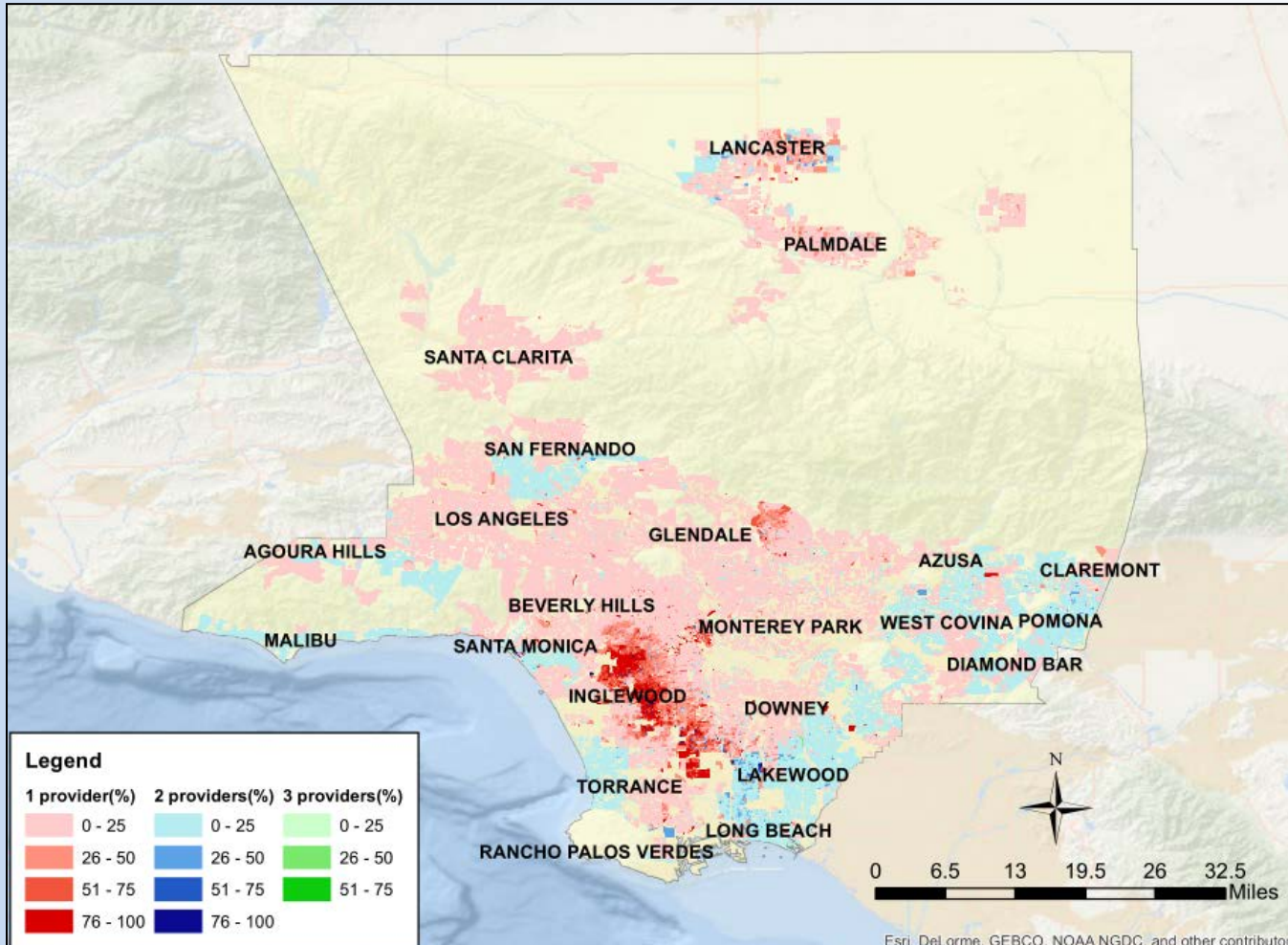


- 72% of the population is served by only 1 provider
- 28% of the population is served by 2 providers

TWC & CHARTER COMBINED LA COUNTY FOOTPRINT

AFRICAN AMERICAN POPULATION

PROVIDERS OFFERING 25 MBPS+ INTERNET SERVICE

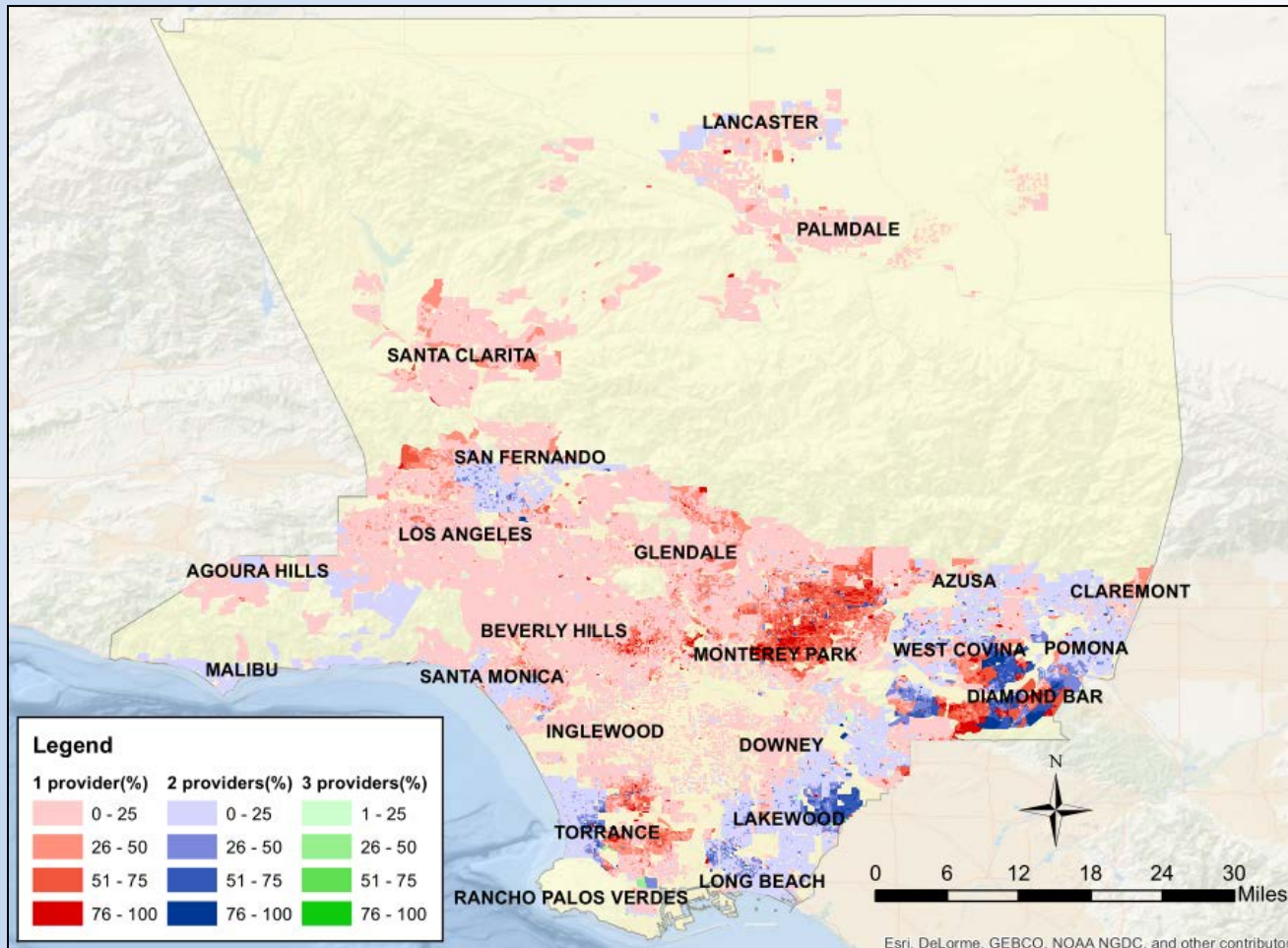


African-Americans

- 78% served only by one provider

TWC & CHARTER COMBINED LA COUNTY FOOTPRINT ASIAN POPULATION

PROVIDERS OFFERING 25 MBPS+ INTERNET SERVICE



Asian Residents

- 73% served only by one provider

EXHIBIT B

Analysis of June 2014 Data:

Broadband competition in the California footprints of Charter Communications, Time Warner Cable, Bright House Networks and Comcast Corporation as of June 30, 2014

Authored by Laura Blum-Smith, Senior Research and Policy Analyst,
Writers Guild of America, West, Inc.

January, 2016

I analyzed wireline broadband data to understand residential Internet service choices for consumers in the census blocks where Joint Applicants (Bright House Networks, Charter and Time Warner Cable) offer service, as well as the census blocks where Comcast Corporation offers service. The primary data set used was the US Department of Commerce, National Telecommunications and Information Administration, State Broadband Initiative (CSV format June 30, 2014) for the state of California. I also utilized Census block population data from the 2010 Census. I analyzed provider availability at the census block level because it is the smallest geographic unit for which broadband data is publicly available. In the tables below I describe the territory served by Joint Applicants' as "New Charter Footprint" however, I would like to note that Joint Applicants' services may not be available to every household within a served block. In order to get a more robust picture of competition in California, I analyzed both competition with the New Charter footprint (Applicants' combined footprint) and the New Charter/Comcast footprint.

1. Data Sources

- a. NTIA data sets for California:¹
 - i. The small census block set (census blocks smaller than 2 miles).
 - ii. The large census block set (census blocks larger than 2 miles).²
- b. Census block population for the state of California (Census File 1).³
- c. Census County Codes for California.⁴

2. Data Exclusions

- a. From both data sets, 'end user' categories coded as 2, 3, and 4 were excluded. This excludes all business and governmental users.⁵

3. Analysis of Broadband Service in Joint Applicants' and Joint Applicants' and Comcast's Combined Footprint

- a. Created summary of all broadband providers by census block, broken out by technologies:
 - Asymmetric xDSL
 - Symmetric xDSL
 - Other Copper Wire
 - Cable Modem—Docsis 3.0 Down
 - Cable Modem—Other
 - Optical Carrier/Fiber to the End User
- b. Totaled broadband providers inclusive of all technology by census block.
- c. Totaled DSL and copper broadband providers by census block.
- d. Totaled cable and fiber broadband providers by census block.
- e. Created a population weighted average for total number of broadband providers and total of only cable and fiber broadband providers.

¹ WGAW analysis of National Telecommunications and Information Administration data and 2010 Census Block Data. US Department of Commerce, National Telecommunications and Information Administration, State Broadband Initiative, California (CSV format June 30, 2014), <http://www.broadbandmap.gov/data-download>.

² Some providers report data for a given technology at multiple points in a large census block, leading to additional rows of data. Speed data for each provider and technology was averaged within each census block in the large census block dataset in order to avoid double-counting the number of providers and technologies.

³ Missouri Census Data Center, Standard Summary File 1 (2010 Census) Extract Assistant, California, http://mcdc.missouri.edu/cgi-bin/broker?_PROGRAM=websas.sf12010x_extract_menu.sas&_SERVICE=appdev&st=.

⁴ US Census Bureau, 2010 FIPS Codes for Counties and County Equivalent Entities, <https://www.census.gov/geo/reference/codes/cou.html>

⁵ Note: the CA data does not actually contain any end users coded as 3 or 4.

- f. Created summary of all broadband providers by census block, broken out by Maximum Advertised Download Speed
- g. Totaled all providers with Maximum Advertised Download Speed of 25 Mbps or greater.
- h. Repeated analysis, isolating Los Angeles County Census Blocks using the County identifying code digits in the Census Block.

4. Summary Tables – State Level (New Charter)

New Charter Footprint	
California Population in Served Census Blocks	36,321,020
Population Within New Charter Combined Footprint	19,308,317
As % of State Population	53%
Total Census Blocks in New Charter Footprint	219,787

Average Number of Broadband Providers in New Charter Footprint	
Population Weighted Average (all technology)	2.17
Population Weighted Average (cable & fiber only)	1.27

Providers Within New Charter Footprint (all technology)		
Number of Providers	Population in Footprint	% of Pop. In New Charter Footprint
1	680,834	3.53%
2	14,865,872	76.99%
3	3,596,188	18.63%
4	161,862	0.84%
5	3,561	0.02%

Cable and Fiber Providers Within New Charter Footprint		
Number of Providers	Population in Footprint	% of Pop. In New Charter Footprint
1	14,170,596	73.39%
2	5,056,994	26.19%
3	80,727	0.42%

New Charter Footprint With Only DSL/Copper Competition		
Number of DSL/Copper Providers	Population in Footprint	% of Pop. In New Charter Footprint
1	12,814,081	66.37%
2	651,124	3.37%
3	24,162	0.13%
4	395	0.00%
Total	13,489,762	69.87%

Providers Within New Charter Footprint (25 Mbps+)		
Number of Providers	Population in Footprint	% of Pop. In New Charter Footprint
0	102,419	0.53%
1	13,273,321	68.74%
2	5,844,724	30.27%
3	87,791	0.45%
4	62	0.00%

5. Summary Tables – State Level (New Charter + Comcast)

New Charter + Comcast Combined Footprint	
California Population in Served Census Blocks	36,321,020
Population Within New Charter + Comcast Combined Footprint	31,139,757
As % of State Population	86%
Total Census Blocks in New Charter + Comcast Footprint	353,764

Average Number of Broadband Providers in New Charter + Comcast Footprint	
Population Weighted Average (all technology)	2.21
Population Weighted Average (cable & fiber only)	1.21

Providers Within New Charter + Comcast Footprint (all technology)		
Number of Providers	Population in Footprint	% of Pop. In New Charter + Comcast Footprint
1	876,092	2.81%
2	23,356,670	75.01%
3	6,328,544	20.32%
4	548,308	1.76%
5	28,065	0.09%
6	2,078	0.01%

Cable and Fiber Providers Within New Charter + Comcast Footprint		
Number of Providers	Population in Footprint	% of Pop. In New Charter + Comcast Footprint
1	24,794,080	79.62%
2	6,257,388	20.09%
3	88,289	0.28%

New Charter + Comcast Footprint With Only DSL/Copper Competition		
Number of DSL/Copper Providers	Population in Footprint	% of Pop. In New Charter + Comcast Footprint
1	21,164,125	67.96%
2	2,613,518	8.39%
3	125,874	0.40%
4	13,685	0.04%
5	786	0.00%
Total	23,917,988	76.81%

Providers Within New Charter + Comcast Footprint (25 Mbps+)		
Number of Providers	Population in Footprint	% of Pop. In New Charter + Comcast Footprint
0	195,759	0.63%
1	21,712,746	69.73%
2	8,755,526	28.12%
3	455,237	1.46%
4	20,489	0.07%

6. Summary Tables – Los Angeles County

New Charter Footprint	
Los Angeles Population in served Census Blocks	9,785,916
Population Within Joint Applicants' Combined Footprint	9,615,743
As % of County Population	98%
Total Census Blocks in Joint Applicants' Footprint	94,512

Providers Within New Charter Footprint (all technology)		
Number of Providers	Population in Footprint	% of Pop. In New Charter Footprint
1	240,088	2.50%
2	7,170,685	74.57%
3	2,107,262	21.91%
4	95,353	0.99%
5	2,355	0.02%

Cable and Fiber Providers Within New Charter Footprint		
Number of Providers	Population in Footprint	% of Pop. In New Charter Footprint
1	7,304,917	75.97%
2	2,272,434	23.63%
3	38,392	0.40%

New Charter Footprint With Only DSL/Copper Competition		
Number of DSL/Copper Providers	Population in Footprint	% of Pop. In New Charter Footprint
1	6,509,183	67.69%
2	538,004	5.60%
3	17,334	0.18%
4	308	0.00%
Total	7,064,829	73.47%

Providers Within New Charter Footprint (25 Mbps+)		
Number of Providers	Population in Footprint	% of Pop. In New Charter Footprint
1	6,687,515	69.55%
2	2,875,179	29.90%
3	52,987	0.55%
4	62	0.00%

Charter Pre-Merger Footprint	
Charter Census blocks	23,760
Charter Population	2,062,015
Charter % of LA County (pop)	21%
Charter % LA County (block)	24%

TWC Pre-Merger Footprint	
TWC Census blocks	71,697
Population in TWC blocks	7,666,682
TWC % of LA County (pop)	78%
TWC % of LA Blocks	73%