JOINT APPLICANTS' APPENDIX

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Analysis of Cal PA's Assertions of Alleged "New" Information in Rebuttal Testimony

A. In-Home Broadband

Cal PA asserts that "Mr. Sievert provides new information and new arguments related to New T-Mobile's In-Home Broadband not previously provided including: information on subscription types, claims on cost savings, data plans, and stand-alone T-Mobile's plans on launching in-home broadband."[1] In-Home Broadband, however, has been extensively discussed from the outset of this proceeding.

For example, In-Home Broadband was:

- explicitly identified in the Wireless Notification as one of the benefits of the merger,[2]
- addressed extensively in Joint Applicants' responses to numerous data requests from Cal PA (as well as the Communications Division),[3]
- discussed at length at a meeting with Cal PA on October 18, 2018,[4] and
- discussed extensively in both (1) the T-Mobile/Sprint Public Interest Statement ("PIS") filed with the FCC, and (2) the Joint Opposition to the request for FCC approval of the merger. Confidential versions of both of those documents were produced to Cal PA in October 2018; public (redacted) versions of both documents have been publicly available to Cal PA and all other intervenors via the FCC's website since they were filed with the FCC in June 2018 and September 2018, respectively.[5]

[1] *See* Cal PA Motion, Attachment A at 1.

[2] *See* Wireless Notification at 4 and 22-25 (discussing speeds, deployment, applications of, and benefits of in-home broadband).

[3] *See* Responses to Cal PA DRs 1-6, 1-30, 1-122, and 2-2 (without attachments), copies of which are attached as Exhibit A. The Joint Applicants' responses to these data requests were made in October and November of 2018 – months before intervenors' opening testimony was due.

[4] *See* Consumer Group Presentation, provided in its Second Supplemental Response to Cal PA DRs 1-6 and 1-30 (dated October 29, 2018) beginning with Bates no. TMUS-CPUC-PA-10000113, a copy of which is attached as Exhibit B.

[5] *See, e.g.*, Hearing Exhibit Jt Appl. 2C, Attachment A ("PIS") at 58-64; PIS, Appendix B (Sievert Declaration) at ¶¶ 16, 27, 35-39; see also Hearing Exhibit Jt Appl. 2C, Attachment B ("Joint Opposition") at 62-72; Joint Opposition, Appendix A (Sievert Reply Declaration) at 2-5; Joint Opposition, Appendix J (Furchtgott-Roth Declaration) at 2-13.

Moreover, Mr. Sievert's rebuttal testimony concerning In-Home Broadband was submitted in direct response to assertions in Cal PA's opening testimony. For example, Cal PA's testimony incorrectly asserted that the In-Home Broadband offering of New T-Mobile was not adequately explained[6] – an assertion to which Joint Applicants necessarily responded.

Finally, in-Home broadband is relevant to several topics of interest identified in the Commission's Amended Scoping Memo, including (among others), "How would the merger impact competition for services currently provided by Sprint or T-Mobile in any metropolitan area or other geographically distinct market?" (Topic 1), "What new services, if any, that are not currently provided by T-Mobile or Sprint, are contemplated to be provided by the merged entity?" (Topic 2), and "How would the merger affect innovation?" (Topic 6).[7]

[6] *See* Hearing Exhibit Pub Adv-005C, Reed 5G Testimony at 18-21 (claims that the in-home broadband offering has not been explained adequately and that either current T-Mobile or Sprint, standing alone, could provide alternative to in-home broadband); *see also* Hearing Exhibit CWA-1, CWA Testimony at 46 (claiming inconsistency in T-Mobile/Sprint FCC Public Interest Statement regarding in-home broadband).

[7] *See* Amended Scoping Memo at 2-3.

B. Joint Opposition to Merger Filed with FCC and Reply to Joint Opposition

Cal PA complains that Mr. Sievert's testimony briefly mentioned T-Mobile/Sprint's Reply to the Joint Opposition to the merger and attached that document (as well as the Joint Opposition) to his testimony.[8] According to Cal PA, "the first time the companies submit this information as part of their arguments."[9] The record proves otherwise.

Cal PA concedes that it "[r]eceived a copy of" the T-Mobile/Sprint Reply through discovery,"[10] and a non-confidential version of the Joint Opposition has been publicly available on the FCC's website since it was first filed on September 17, 2018 – more than three months before intervenors' opening testimony was due.[11] Moreover, a confidential version of the Joint Opposition (including all appendices) was provided to Cal PA on October 10, 2018 in response to Cal PA's first set of data requests.[12] The Joint Opposition has since been referenced in responses to other data requests on at least four other occasions.[13] And it was repeatedly discussed in the Wireless Notification.[14] Indeed, Mr. Sievert's brief reference to the Reply went to the heart of the public-interest benefits of the merger[15] – a subject at the forefront of these proceedings since their inception.

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[8] *See* Cal PA Motion Attachment A at 1; *see also* Sievert Testimony at 4 (noting that "[t]he benefits and details of the merger have also been thoroughly described in the Public Interest Statement and in the Reply to the Joint Opposition both of which we filed at the Federal Communications Commission (FCC) and otherwise made available to all the parties to this proceeding.").

[9] *See* Cal PA Motion Attachment A at 1.

[10] Cal PA Motion, Attachment A at 1.

[11] *See* Joint Opposition, confidential version provided on October 10, 2018 and public version available (as of September 17, 2018) on the FCC website at: https://ecfsapi.fcc.gov/file/109171182702890/FINAL%20Joint%20Opposition%20091718%20(Public).pdf and https://ecfsapi.fcc.gov/file/109171182702890/Appendices%20A-K%20(Public).pdf.

[12] *See e.g.*, Initial Response to Cal PA DR 1-122, a copy of which is attached as Exhibit A.

[13] For example, Responses to Cal PA DRs 2-6, 2-15, 4-19 and 6-1.

[14] *See, e.g.*, Wireless Notification at 2-3, 6, 13, 15, 17-25, 27-30.

[15] Sievert Testimony at 4.

Moreover, the portions of Mr. Sievert's testimony highlighted by Cal PA were responsive to opening testimony from Cal PA's witness (Mr. Reed), who explicitly questioned whether New T-Mobile provided benefits beyond those that would be realized with the standalone companies.[16] There is nothing novel or "new" about the benefits of the merger – which was also relevant to several topics identified in the Amended Scoping Memo.[17] And Mr. Sievert (like Joint Applicants' other witnesses) was available for cross examination on any question related to the merger's benefits.

[16] *See* Hearing Exhibit Pub Adv-005, Reed 5G Testimony at 10-12.

[17] The issue is relevant to several topics, including (among others) "How would the merger impact competition for services currently provided by Sprint or T-Mobile in any metropolitan area or other geographically distinct market?" (Topic 1), "What new services, if any, that are not currently provided by T-Mobile or Sprint, are contemplated to be provided by the merged entity?" (Topic 2), "What merger-specific and verifiable efficiencies would be realized by the merger?" (Topic 5), and "How would the merger affect innovation" (Topic 6). *See* Amended Scoping Memo at 2-3.

C. Network Model

Cal PA asserts that "Mr. Ray provides new information and arguments related to the Network Model … related to how T-Mobile uses the model to build its network."[18] Again, this was not a new issue. To the contrary, New T-Mobile's planned use of the combination of the standalone companies' spectrum and network assets to create a world-class 5G network has been a cornerstone of this merger and a constant area of discussion from the outset of both federal and state proceedings.

Network modeling has been a matter of public record since T-Mobile and Sprint submitted their PIS to the FCC in June 2018, and is discussed extensively in Mr. Ray's declaration in support of the PIS.[19] These documents were not only publicly available on the FCC's website since June 2018, they were also repeatedly identified in the Wireless Notification,[20] and confidential versions were provided to Cal PA as early as October 10, 2018 – months before intervenors' opening testimony was due. T-Mobile also provided an explanation related to how it uses network models in the ordinary course in response to Cal PA's initial set of data requests.[21] In addition, on November 5, 2018, the Joint Applicants provided to Cal PA a copy of T-Mobile's ex parte presentations to the FCC regarding the network model in responses to Cal PA data requests.[22]

The Joint Applicants also met on two occasions with Cal PA where the network plan was discussed; the latter meeting in early December was *devoted exclusively to the network and the*

[18] *See* Cal PA Motion Attachment A at 1.
[19] *See* e.g., Hearing Exhibit Jt Appl.-3C, Exhibit A ("Ray PIS Declaration") at 13, para. 25 .
[20] *See* Wireless Notification at 13-21 (citing PIS and discussing building of a world-class, nationwide 5G network).
[21] See Response to Cal PA DR 1-29, a copy of which is attached as Exhibit C.
[22] *See* Response to Cal PA DR 3-3 (without document production) attached as Exhibit D.

model. Following that meeting, on December 11, 2019, Cal PA for the first time sought a copy of the data underlying the Network Model and all the filings with the FCC or DOJ regarding the same.[23] Not only did the Joint Applicants provide such information, they also provided Cal PA a laptop specially designed to help view the data underlying the model.[24]

Finally, network modeling is relevant to several topics identified in the Commission's Amended Scoping Memo, including (among others) "What merger-specific and verifiable efficiencies would be realized by the merger?" (Topic 5).[25] Again, neither the argument made nor the information provided was "new."

[23] *See* Response to Cal PA DR 6-3 and 6-4 (without document production) attached as Exhibit E. *See also* the Network Model Presentation produced in response to DR 6-3 included as Attachment A to Hearing Exhibit Jt Appl.-3C.
[24] *See* Exhibit E.
[25] *See* Amended Scoping Memo at 2-3.

D. California-Specific Coverage Maps

Cal PA asserts, contrary to all the evidence, that "the California county level projected coverage [maps] is new information provided in rebuttal testimony."[26] Joint Applicants in fact provided state-specific coverage maps for standalone Sprint and T-Mobile, and for New T-Mobile, with the submission of the Wireless Notification.[27] T-Mobile then created nine county-specific maps illustrating the projected 5G coverage in 2021 and 2024 for the standalone companies and for New T-Mobile. Those maps were provided to Cal PA on October 29, 2018.[28] Joint Applicants continued to work on creating such maps, and provided *a complete set for all 58 counties* on December 21, 2018 – more than two weeks before intervenors' testimony was due.[29]

The maps attached to Mr. Ray's rebuttal testimony were also directly responsive to intervenors' own testimony and therefore were a proper subject of rebuttal testimony. Mr. Ray included those maps to address, among other things, Cal PA's questions in its testimony regarding the benefits of the merger to both rural and urban Californians.[30] And that subject was also directly responsive to topics identified in the Amended Scoping Memo, including: "How would the merger impact the quality of, and access to, service to California consumers in … rural areas, or other geographically distinct markets?" (Topic 10).[31]

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[26] *See* Cal PA Motion Attachment A at 1.

[27] *See* Wireless Notification, Exhibit J; *see also* Wireless Notification at 4, 24 (addressing "benefits to consumers living in small towns and rural communities," including "increasing outdoor wireless coverage to reach 59.4 million rural residents, or 95.8 percent of the estimated 62 million rural residents, and indoor wireless coverage to reach 31 million rural residents.").

[28] *See* county-specific maps provided in the Second Supplemental Response to Cal PA DR 1-30, attached as Exhibit F.

[29] *See* county-specific maps provided in the Fourth Supplemental Response to Cal PA DR 1-30, attached as Exhibit G.

[30] *See e.g.*, Hearing Exhibit Pub Adv-005C, Reed 5G Testimony at 17-18.

[31] *See* Amended Scoping Memo at 3.

Nor was there any shortage of cross examination concerning the maps at issue at last week's hearings, and Cal PA is free to discuss them as it sees fit in its briefing.

E. Customer Migration

Like almost every other topic identified by Cal PA in it Motion, customer migration has been discussed and explored in these proceedings since the outset. The Wireless Notification itself contained a separate section entirely devoted to the subject.[32] Customer migration was also a topic explored extensively in the PIS as well as in discovery – materials readily available to Cal PA for many months.[33] Indeed, the Joint Applicants provided Cal PA with a copy of a presentation it made to the DOJ on this topic in particular.[34]

Moreover, Cal PA expressly raised the question of customer migration in Mr. Reed's testimony.[35] The rebuttal testimony provided by Mr. Ray directly – and appropriately – responded to Mr. Reed's unfounded concerns.

Finally, as with other issues highlighted by Cal PA, customer migration was identified as a relevant issue in the Amended Scoping Memo.[36] This was certainly not a "new" issue in these proceedings.

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[32] *See* Wireless Notification at 19-20 (section captioned "Consumer Migration").
[33] *See, e.g.*, PIS at p. 39; see also Ray PIS Declaration, confidential version provided on October 10, 2018 (public version available as of June 18, 2018 on the FCC website: https://ecfsapi.fcc.gov/file/10618281006240/Public%20Interest%20Statement%20and%20Appendices%20A-J%20(Public%20Redacted)%20.pdf and https://ecfsapi.fcc.gov/file/10620029903941/Appendices%20K-M.pdf).
See also Response to Cal PA DRs 1-123 and 2-15, copies of which (without production documents) are attached as Exhibit H.
[34] See document beginning with Bates no. TMUS-CPUC-CA-00005593, produced in Response to Cal PA DR 6-3 referenced above. A copy of that presentation is included as Exhibit I.
[35] *See* Hearing Exhibit Pub Adv-006C, Reed Service Quality Testimony at 13.
[36] *See* Amended Scoping Memo at 4 ("Obtaining satisfactory answers to the above questions will require consideration of multiple factual issues," including "customer migration").

F. Privacy

Cal PA asserts that Susan Brye's rebuttal testimony contained new information regarding T-Mobile's privacy practices for which it did not have time to conduct discovery.[37] Again, the evidence is to the contrary.

Cal PA propounded over approximately 50 data requests related to privacy issues to which T-Mobile provided timely responses.[38] Moreover, Cal PA's testimony explicitly asserted that T-Mobile's process for evaluating third-party risks has "some gaps" and also referred to a process that has since been updated.[39] Accordingly, it was entirely appropriate for Joint Applicants to submit rebuttal testimony to respond to Cal PA's incorrect assertion and to provide more current information.

The fact that Cal PA opted not to cross-examine Ms. Brye – or Mr. Dodd (T-Mobile's other privacy witness) – only underscores the lack of any evidentiary or other basis or Cal PA's claims.

[37] *See* Cal PA Motion Attachment A at 2.

[38] *See e.g.,* Responses to Cal PA DRs 4-22, 4-24 to 4-27 and 7-3 to 7-25, copies of which (without documentation produced) are attached as Exhibit J.

[39] Hearing Exhibit Pub Adv-007C, Donnelly Testimony at 10-12 (entire subsection devoted to third-party risk.

G. IKK Economic Model

Cal PA complains that the Wireless Notification did not attach a copy of the economic model prepared by Dr. Israel and his colleagues (the "IKK" model),[40] but this model did not exist at the time the Wireless Notification was filed in July 2018. Once the IKK model was prepared, however, Cal PA and other intervenors were free to learn about it by reviewing the Joint Opposition – which discussed the IKK model and which was filed with the FCC on September 17, 2018.[41] Moreover, the confidential version of a declaration describing the IKK model was provided to Cal PA on October 10, 2018 – months before Cal PA's opening testimony was due.[42] And a copy of a FCC ex parte presentation on the IKK model was provided to Cal PA on November 5, 2018.

Despite the fact that it knew (or should have known) about the IKK model for months, Cal PA only requested the model on December 11, 2018.[43] In response to that request, on December 18, 2018, the Joint Applicants provided the underlying data for the model (as well as presentations made to the FCC or DOJ regarding the model). The Joint Applicants even provided Cal PA with a specially-configured laptop that could manage the data underlying the model. Joint Applicants also made that information available to Cal PA's expert witness (Dr. Selwyn) on December 21, 2018 – more than two weeks before intervenors' testimony was due.

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[40] *See* Cal PA Motion Attachment A at 2.
[41] *See* Joint Opposition at https://ecfsapi.fcc.gov/file/109171182702890/FINAL%20Joint%20Opposition%20091718%20(Public).pdf and Appendices at https://ecfsapi.fcc.gov/file/109171182702890/Appendices%20A-K%20(Public).pdf.
[42] *See* Joint Opposition, Appendix F (Declaration of Dr. Mark Israel describing the IKK Model), produced in Response to Cal PA DR 1-6 beginning with Bates no. TMUS-CPUC-PA-00001301.
[43] *See* Response to Cal PA DRs 6-1 and 6-2 attached as Exhibit K.

Indeed, Dr. Selwyn's opening testimony cited submissions based on IKK model,[44] and it was appropriate for the rebuttal testimony from Dr. Israel to discuss the IKK model in response. The IKK model is also relevant to several issues identified in the Amended Scoping Memo, including (among others), "How would the merger impact competition for services currently provided by Sprint or T-Mobile in any metropolitan area or other geographically distinct market?" (Topic 1) and "What are the relevant markets to consider?" (Topic 3).[45] And the topic of competition was hardly new to this proceeding.[46]

Cal PA had access to the model and the underlying data for weeks, and cannot claim that the IKK model presented a "new" issue.

[44] *See* Selwyn Testimony at 63, n.48.
[45] Amended Scoping Memo at 2-3.
[46] *See, e.g.*, Wireless Notification at 30-31 (entire section on how New T-Mobile will enhance competition).

H. Wholesale Services

Cal PA asserts that "Mr. Keys provides new information and makes new arguments related to which carriers are the predominant wholesale providers of MVNOs," and that it did not have time to conduct discovery on this issue.[47] The provision of wholesale services to MNVOs, however, was thoroughly examined by Cal PA in this proceeding and a key issue from the outset.[48]

The Joint Applicants responded to numerous data requests regarding their provision of wholesale services to MVNOs and MVNAs.[49] Those responses detailed, among other things, the scope of the Joint Applicants' wholesale business, the number of customers served by MVNO's using T-Mobile's wholesale services, and how that business is structured.[50]

Moreover, Cal PA's opening testimony explicitly calls into question the impact of the merger on MVNOs and the wholesale market.[51] Mr. Keys' testimony was in direct response to that testimony, and Mr. Keys was made available for cross-examination concerning the entirety of his entire testimony. The fact that no party chose to question Mr. Keys about his testimony that AT&T and Verizon are the predominant providers of wholesale services to MVNOs is not surprising given that they are the predominant carriers with respect to most wireless services. In

[47] *See* Cal PA Motion Attachment A at 2.
[48] See, e.g., Wireless Notification at 31 (discussing "[o]ther competitors" to T-Mobile, such as TracFone and Google"); *see also* Amended Scoping Memo at 4 ("Obtaining satisfactory answers to the above questions will require consideration of multiple factual issues," including "issues related to … wholesale markets").
[49] *See, e.g.*, Responses to Cal PA DRs 1-20, 1-55, 2-7, 2-18 to 2-24, 5-10, and 5-12 to 5-15, copies of which (without document production) are attached as Exhibit L; PIS, Appendix B (Sievert Declaration) at ¶ 19.
[50] *See id.*
[51] *See* Hearing Exhibit Pub Adv-002C, Selwyn Testimony at 85; *see also* Odell Testimony at 15-16 (asserting that MVNOs are not competitors of T-Mobile).

any event, no further testimony or hearings are needed to explore an issue that all have known about from the outset.

PUBLIC EXHIBIT A

Complete Set of T-Mobile's Responses to Cal PA DRs 1-6, 1-30, 1-122, and 2-2

(without document production)

Data Request 1-6 (9/14/18).

If the proposed transaction occurs, will You offer stand-alone Broadband service in California post-transaction to all newly acquired customers?

Response to Data Request 1-6 (10/10/18).

T-Mobile objects to this Data Request on the grounds it is vague and ambiguous with respect to temporal scope and the phrases "offer," "stand-alone Broadband service" and "newly acquired customers." T-Mobile further objects to this Data Request on the grounds it seeks information regarding future plans that is dependent on decisions which will not and cannot be finalized until the transaction can be consummated and on the grounds it seeks information that is neither germane to the pending Wireline or Wireless Applications nor is reasonably calculated to lead to the discovery of relevant information as broadband is an exclusively interstate service that is subject to the FCC's – not the Commission's – jurisdiction. T-Mobile further objects to this Data Request on the ground it seeks information that is equally available to the Cal PA as New T-Mobile's plans to provide broadband services is discussed in numerous public filings including the PIS and the Wireless Application.

Subject to and without waiving its objections, T-Mobile responds as set forth below:

If the transaction occurs, New T-Mobile will offer broadband service in California post-transaction to all newly acquired customers where capacity exists to do so. Currently, 9 percent of U.S. households do not have access to home broadband (25+ Mbps), 48 percent lack a choice for home broadband (0 or 1 option), and 79 percent lack a choice for high-speed broadband (100+ Mbps). In many areas, Californians lack of competitive alternatives for broadband which is reflected in the poor customer satisfaction rates for broadband providers. The sector ranks the lowest out of 43 industries for customer satisfaction as most consumers remain extremely dissatisfied with its high prices and terrible customer service.[1] New T-Mobile's 5G network will allow it to offer an in-home broadband offering – as well as its mobile broadband offerings – that will change this competitive dynamic, providing customers with consumer-friendly services and high-quality customer care.

New T-Mobile's 5G network will eliminate the speed and capacity differential between mobile and in-home wired broadband for many Californians, allowing them to free themselves from the grip of traditional in-home broadband providers. The new 5G network's speeds, capacity, and low prices will allow consumers to "cut the cord" and use their mobile wireless service as their broadband service both inside and outside the home and pocket the savings from eliminating an unnecessary and costly wired broadband bill month after month. New T-Mobile's plans for the new 5G network – including but not limited to its plans to provide a *bona fide* alternative to traditional in-home broadband providers – are described in detail in the Public Interest Statement and attached appendices filed in WT Docket 18-197. See Confidential PA Production Folder (the "PIS") and in the Joint Opposition of T-Mobile and Sprint Corporation,

[1] *See* Aaron Pressman, *The Cable TV Industry is Getting Even Less Popular*, FORTUNE (May 25, 2017), http://fortune.com/2017/05/25/cable-tv-comcast-verizon.

WT Docket 18-197. See Confidential PA Production Folder ("Joint Opposition"), App. J., Declaration of Harold Furchtgott-Roth.

Through the combination of T-Mobile's and Sprint's complementary assets, New T-Mobile will be uniquely positioned to create competition for these customers. The wireless in-home broadband service will be deployed where the available capacity exceeds mobile requirements and is sufficient to support the in-home services. Based on these criteria, New T-Mobile is expected to offer this service in over 52 percent of zip codes across the county. By 2024, New T-Mobile is expected to cover 64 percent of Charter's territory and 68 percent of Comcast territory with its in-home broadband services. In addition, New T-Mobile will use caching and other network optimization techniques to increase the number of households that can be served.

In total, the Applicants expect that New T-Mobile will acquire 1.9 million customers nationwide for its in-home wireless broadband service by 2021 and 9.5 million customers by 2024. Based on current customer figures, this would make New T-Mobile the fourth largest in-home Internet service provider ("ISP") in the United States in 2024. Of particular importance, T-Mobile estimates that 20-25 percent of these customers will be located in rural areas where there is currently limited broadband availability. Rural consumers should be particularly attracted to New T-Mobile's broadband offerings, given the high prices and limited competition for broadband services in rural areas today.

Supplemental Response to Data Request 1-6 (10/29/18).

Subject to and without waiving its objections, T-Mobile further responds by providing additional information, including California-specific information, regarding its anticipated in-home broadband services, network speed and capacity, and consumers' ability to otherwise rely on wireless broadband on New T-Mobile's 5G network. See Second Supplemental PA Production Folder, documentation beginning with bates stamp TMUS-CPUC-PA- 10000113 (Consumer Group Presentation – October 18, 2018).

Data Request 1-30 (9/14/18).

Please provide Your plans (assuming the proposed transaction occurs) for network investments, upgrades or expansions in California post-transaction, including but not limited to projects that will improve Your Voice or Broadband services in California. Please provide the following information:

a. *Name of project*
b. *Location (Census block or county/city/community name)*
c. *Estimated Start Date*
d. *Description*
e. *Estimated Number of Customers Affected*
f. *Estimated Total Capital Cost*
g. *Estimated Completion Date*
h. *Expected Download Speeds*
i. *Expected Upload Speeds*
j. *Identify any State and/or Federal grant/loans that will be used as sources of funding for the project.*

Response to Data Request 1-30 (10/10/18).

T-Mobile objects to this Data Request on the grounds it is vague and ambiguous with respect to the phrases "investments," "upgrades," "expansions," "improve" and "State and/or Federal grants/ loans." T-Mobile also objects to this Data Request on the grounds it vague and ambiguous with respect to temporal scope. T-Mobile further objects to this Data Request on the grounds it seeks information that is dependent on decisions which will not and cannot be finalized until the transaction can be consummated.

Subject to and without waiving its objections, and with the understanding that this Data Request seeks information regarding New T-Mobile's planned 5G deployment, T-Mobile responds that the combination of the two companies will generate enormous cost-savings in the form of approximately $43.6 billion total net present value cost synergies by 2024, allowing New T-Mobile to invest in new network technology, innovation, and operations to rapidly construct and deploy the first true, nationwide 5G network. New T-Mobile will use these synergies to invest nearly $40 billion to bring the combined company into the 5G era over the next three years, or approximately three times the amount that T-Mobile would have invested on its own without the merger.

New T-Mobile will implement natural cell splitting by (1) anchoring on the T-Mobile cell site network, (2) augmenting the density of deployed cell sites by retaining a number of Sprint cell sites (approximately 11,000 retained sites), and (3) deploying both parties' spectrum across New T-Mobile's network, ultimately leading to far more 5G sites being deployed than either standalone company had planned or could practicably deploy. This approach will lead to a multiplicative increase in overall network capacity.

T-Mobile anticipates being able to supplement this Response with additional California-specific information in the near term. See also, Wireless Application at Confidential Exhibit I (California-specific Spectrum Depth maps).

Supplemental Response to Data Request 1-30 (10/17/18).

Subject to and without waiving its objections, T-Mobile further responds by providing additional information regarding its plans for network investments, upgrades or expansions. See PA Production Folder, for documentation beginning with bates stamp TMUS-CPUC-PA-90001308, TMUS-CPUC-PA-90001319, and TMUS-CPUC-PA-90001322.

Second Supplemental Response to Data Request 1-30 (10/29/18).

Subject to and without waiving its objections, T-Mobile further responds by providing additional information describing its national 5G deployment plan as well as California-specific information regarding, among other things, coverage, capacity, 5G speeds, in-home broadband, prepaid services, anticipated retail openings, prepaid services, and rural coverage. See Second Supplemental PA Production Folder, documentation beginning with bates stamp TMUS-CPUC-PA-10000113 (Consumer Group Presentation – October 18, 2018). T-Mobile also responds by providing maps illustrating planned standalone and New T-Mobile 5G deployment in 2021 and 2024 for several California counties. See Second Supplemental PA Production Folder, documentation beginning with bates stamp TMUS-CPUC-PA-10000132. See also documentation beginning with bates stamp TMUS-CPUC-PA-10000001 and TMUS-CPUC-PA-10000030.

Third Supplemental Response to Data Request 1-30 (12/3/18).

With respect to DR 1-30, the California Public Advocates Office's Meet and Confer Letter dated November 9, 2018, provided as follows:

> *What amount (or percentage of the $40 billion) will New T-Mobile invest in its operations in California per year for 2019 through 2024?*

Subject to and without waiving its objections, and in response to the Meet and Confer letter and the follow up telephone conference with representatives of Cal PA on November 14, 2018, T-Mobile further responds that, as referenced in its original Response to DR 1-33, T-Mobile does not project capital expenditure at the state level or on a basis that aligns with state boundaries. Network engineering, which represents a substantial majority of T-Mobile's overall capital expenditures, is organized by engineering markets, which do not align with state boundaries, so projecting costs by state is not done in normal course of business. In addition, T-Mobile does not build market-level capital forecasts beyond the current year in the normal course of business, because sites in different markets become ready on an unpredictable basis. Moreover, while the Company could posit assumptions for timelines necessary for cell site permitting and spectrum clearing, certain core and non-discretionary requirements (*e.g.*, battery back-up, site repair, landlord or easement requests) do not operate on predictable schedules at a

market-by-market level. These costs are calculated on a national level and allocated only as more information becomes available.

Nonetheless, specifically for the purpose of responding to this Data Request, T-Mobile has developed a directional estimate of network capital expenditures for the period 2019-2024 that New T-Mobile could invest in California. Please note that this estimate does not account for the additional capital investment related to stores, other necessary facilities or expansion of businesses supported by the New T-Mobile network which is also part of New T-Mobile's projected overall capital investment but has not been estimated on a state-by-state basis at this time. The estimate of California capital investment in the network provided below was created based on known site upgrades and estimates of additional capital expenditures using drivers of those investments. Because of the non-ordinary course approach required to estimate state-specific costs, the numbers in this estimate may diverge significantly from actual spending, based on factors that cannot be forecast at the present time.

[BHC-AEO]

REDACTED

[EHC-AEO]

The methodology for determining this estimate can be further explained as follows. T-Mobile's ordinary course network build-out plans include costs for 5G roll-out, core spending and other non-discretionary spend. Core and non-discretionary costs are planned at the national level, based on historical investment levels and planned growth. These are not typically developed for the market- or state-level modeling. However, in order to develop an estimate of the core and non-discretionary costs for California for this response, T-Mobile has allocated those categories of capital expenditures based on the percentage of macro cell sites in California as a percentage of macro cell sites nationwide, *i.e.*, a factor of **[BHC-AEO]** REDACTED **EHC-AEO]**.

The site-specific investment data for 5G deployment can be segregated for California, and so this estimate includes California site-specific data. Moreover, the estimate incorporates some assumed spending for maintaining the Sprint network during the integration period, but detailed forecasts for spending for related categories are not available at this time and could significantly affect the estimate.

In addition, T-Mobile has used national averages for site build rates, even though market- and site-level cost differences do exist. In fact, the actual timing associated with the projected capital expenditure included in this estimate will likely vary due to, among other things, the unpredictability associated with securing site permits. California, in particular, is unpredictable with regard to the timing of securing site permits, which could prevent the Company from actually being able to invest the amounts predicted in this model and could further add to the actual cost of deployment, which would skew the estimate further away from real investment

amounts. T-Mobile also notes that deployment of multiple upgrades at the same time will result in some cost optimization, which cannot be modeled at this time without further information that does not exist.

Fourth Supplemental Response to Data Request 1-30 (12/21/18).

Subject to and without waiving its objections, T-Mobile responds by providing recently created maps illustrating planned standalone and New T-Mobile 5G deployment in 2021 and 2024 for all 58 of California's counties. See Supplemental Cal PA Production Folder, confidential documentation beginning with bates stamp TMUS-CPUC-PA-00005643.

Data Request 1-122 (9/14/18).

Please provide all anticipated proposed merger-related and restructuring impacts on Your financial structure in California, including details on consumer services, enterprise services, and wholesale services.

Response to Data Request 1-122 (10/10/18).

T-Mobile objects to this Data Request on the grounds it is vague and ambiguous with respect to the phrases "merger-related and restructuring impacts" and "financial structure in California."

Subject to and without waiving its objections, T-Mobile responds that this merger is driven by the significant opportunities offered by combining the complementary spectrum and other assets of the T-Mobile and Sprint. The synergies supporting the Transaction rationale are described below and are presented in greater detail in submissions to the FCC.

New T-Mobile's financials identify approximately $43.6 billion net present value ("NPV") in synergies generated by the merger. Of the $43.6 billion, the network synergies gained by eliminating the duplication of T-Mobile's and Sprint's existing networks constitute the largest share, approximately **[BC]** REDACTED **[EC]**, or **[BC]** REDACTED **[EC]**, of the massive cost savings. Unleashing these synergies requires investment and has a cost to achieve of **[BC]** REDACTED **[EC]** (**[BC]** REDACTED **EC]** to decommission Sprint sites; **[BC]** REDACTED **[EC]** in incremental network investment for integration). These synergies are critical to New T-Mobile's future growth and investment.

New T-Mobile will invest nearly $40 billion to combine the complementary spectrum, sites, and assets of T-Mobile and Sprint to deliver a robust, nationwide world-class 5G network and services sooner than otherwise possible. Current Sprint customers will realize 4G LTE coverage benefits; T-Mobile customers will realize improvements from the greater depth of spectrum; and, as the 5G network is built out, the speed and capacity gains will be significant. By 2024, the New T-Mobile network will have approximately double the total capacity and triple the total 5G capacity of T-Mobile and Sprint combined, with 5G speeds four to six times what they could achieve on their own. In the face of this challenge, Verizon and AT&T will need to respond with improved and accelerated 5G network investment and deployment to the betterment of all consumer, including those in California.

The New T-Mobile merger related and restructuring impacts will be positive for the company and its services in California. New T-Mobile will have a strong closing balance sheet: expected peak leverage of **[BC]** REDACTED **[EC]** EBITDA. It will have a fully funded business plan with significant liquidity at closing. This will result in enabling new or improved consumer services, enterprise services, wholesale services and broadband services as described below.

1. Consumer Services

Wireless Service. Consumers of wireless services will benefit from a robust nationwide 5G network with the capacity, speed, and lower costs to deliver massive benefits. As

demonstrated in the PIS and confirmed in declarations filed with the Joint Opposition, the T-Mobile and Sprint standalone plans to deploy 5G are not even close to comparable to what New T-Mobile will deliver. Consumers of New T-Mobile's wireless services will get dramatically faster speeds, improved quality, increased coverage and the huge capacity increases that will result in paying less and getting more.

Dr. David Evans has documented how the transaction will result in a dramatic increase in cellular data output and decrease in cellular data prices through dynamic investment competition. These effects are a result of New T-Mobile integrating the networks and spectrum portfolios of T-Mobile and Sprint, and accelerating the deployment of a strong 5G network, which will induce AT&T and Verizon to accelerate and intensify their 5G deployments to remain competitive. He showed that consumers would pay roughly 55 percent less per gigabyte ("GB") of data in 2024 as a result of the transaction.

Wireless In-Home Broadband Alternatives. Millions of consumers will receive broadband alternatives and save dollars each month. The PIS described how New T-Mobile will create competition for in-home broadband, as well as consumer benefits from enabling the substitution of wireless services for wired broadband services. Today, millions have no real broadband choice, but with New T-Mobile they will. Dr. Harold Furchtgott-Roth estimates that increased broadband competition enabled by the merger could produce annual consumer savings of as much as $13.65 billion a year by 2024.

New T-Mobile's in-home wireless broadband offering will provide consumers across the country with average in-home download speeds of 100 Mbps. By 2024, New T-Mobile will be able to cover more than 250 million people with data rates greater than 300 Mbps and more than 200 million people at greater than 500 Mbps. As noted in the Public Interest Statement, these speeds far exceed those contemplated by Verizon or AT&T for their proposed 5G services and match or exceed the offerings of most traditional ISPs. These speeds and coverage areas will be offered at a significant discount to the prices of traditional broadband providers, with monthly prices planned to be generally **[BC** REDACTED **[EC]** lower than traditional services.

New T-Mobile will provide its in-home wireless broadband offering consistent with T-Mobile's Un-carrier approach, which eliminated extended service contracts and strict monthly data caps for mobile wireless services. New T-Mobile estimates that its home broadband ARPU will be **[BC]** REDACTED **[EC]** across the period projected, signaling that it will offer consistently lower prices compared to those currently available in the market. The strength of the New T-Mobile network will enable it to provide highly competitive speeds and capacity. Moreover, New T-Mobile will extend the Un-carrier customer care model to in-home fixed wireless broadband services, providing consumers with high-quality 24-7 customer support.

By 2024, New T-Mobile expects to provide its home broadband internet offering to 9.5 million customers, making New T-Mobile potentially the fourth largest internet service provider in the U.S. by subscribership. This additional growth opportunity is expected to generate **[BC]** REDACTED **[EC]** in EBITDA by 2024.

Substantial consumer savings will also result from the millions of consumers who eliminate their in-home wireline or cable broadband service altogether and rely exclusively on

New T-Mobile's broadband wireless services for their in-home needs. T-Mobile has estimated that 5.8 million households will eliminate their traditional wireline in-home broadband service in favor of New T-Mobile's 5G mobile services by 2021 and a total of 6.3 million households by 2024. Many of these subscribers will be value-conscious consumers who would recognize the benefit of saving the significant costs of their monthly in-home broadband service.

At T-Mobile's and Sprint's request, Dr. Harold Furchtgott-Roth has quantified the benefits from: (1) customers purchasing New T-Mobile's in-home wireless broadband offering; (2) customers who "cord cut" and substitute New T-Mobile mobile 5G broadband service for fixed broadband providers; (3) new broadband customers taking service; and (4) competitive responses of incumbent fixed broadband providers. The cumulative consumer welfare benefits are estimated to be as much as $13.65 billion in 2024. Dr. Furchtgott-Roth estimates that New T-Mobile's in-home broadband offering will account for **[BC]** REDACTED **EC]** in monthly consumer savings and **[BC]** REDACTED **[EC]** in annual savings by 2024.

Video Distribution Services. Video services will experience a disruptive competitor. New T-Mobile expects to use its supercharged network, increased scale, and increased financial resources to substantially expand its video content distribution business to disrupt the TV space. T-Mobile acquired Layer3, a small multichannel video programming distributor ("MVPD"), on January 23, 2018. New T-Mobile will leverage the benefits of scale in network, costs, and financial resources to disrupt the video market by offering TV packages that will allow customers to forego traditional multi-channel video programming distributors ("MVPDs") in favor of broadband-delivered video offerings. The company's 5G network will provide mobile and fixed video services to consumers in all markets, including rural areas, and deliver high quality – including 4K video – service offerings with lower prices than traditional options. This will exert tremendous competitive pressure on legacy cable providers and other MVPDs, forcing them to lower prices and invest and innovate to keep up with New T-Mobile. The transaction thus will greatly improve consumer welfare as consumers reap the benefits of competition in video delivery across the country.

Prepaid Services. Prepaid customers, just like all other New T-Mobile customers, will benefit from lower costs, more capacity, higher quality, and increased competition. Following this merger, all MetroPCS, Boost Mobile, and Virgin Mobile USA customers with compatible handsets will benefit from the increased capacity and improved service quality that the New T-Mobile nationwide network will provide. Prepaid plan customers with compatible handsets will enjoy the same improved network as postpaid plan customers, and perhaps more so, since many prepaid plan customers use more data than those on postpaid plans. **[BC]** REDACTED REDACTED **[EC]** New T-Mobile will be incentivized to deliver more for the same or less due to having substantially more capacity and lower costs. New T-Mobile also will face continued and likely intensified competition from Verizon, AT&T and others.

Rural Services. Rural Americans will benefit from improved broadband service. The merger provides the scale, capacity and incentives to deliver enormous benefits to rural Americans in terms of coverage and quality of service, an in-home broadband alternatives that include the following:

- **Coverage:** increasing outdoor wireless coverage to reach 59.4 million rural residents, or 95.8 percent of the estimated 62 million rural residents, and indoor wireless coverage to reach 31 million rural residents;

- **Quality:** improving signal quality and reliability and increasing network capacity to enable data intensive services and improve the overall consumer experience;

- **Speeds:** delivering mobile broadband service with download speeds of at least 10 Mbps or greater to 45.9 million rural residents over two million square miles, accounting for 74 percent of rural residents; and

- **In-Home Service:** providing fixed in-home broadband service of at least 25/3 Mbps to 52.2 million rural residents over 2.4 million square miles, approximately 84.2 percent of rural residents.

New T-Mobile also will make a significant economic investment in the future of rural America as a result of the transaction, expanding retail and sales operations to serve small towns and rural communities. Specifically, New T-Mobile plans to open 600 or more new stores to serve small towns and rural areas – at least 500 dealer stores and 100 corporate stores – directly resulting in approximately 5,000 new retail jobs. New T-Mobile also anticipates creating approximately 1,800 new jobs dedicated to transitioning the T-Mobile and Sprint networks in rural areas and expanding rural coverage.

New T-Mobile also expects to substantially increase its domestic customer care workforce to ensure it maintains T-Mobile's industry-leading standard of customer care. For example, the combined company anticipates opening up to five new technologically advanced Customer Experience Centers in small towns and rural communities to implement the company's innovative "Team of Experts" customer care and business model, directly employing approximately 5,600 professionals with career-boosting jobs.

After the merger, New T-Mobile will be positioned to accelerate and expand T-Mobile's plans to bring real broadband and broadband competition to rural Americans for the first time. Building out coverage in rural areas is expensive because sparse population density requires a particular combination of spectrum and network assets to make building out infrastructure in those areas viable. Although T-Mobile as a standalone is in the process of deploying its 600 MHz spectrum, the coverage provided with that spectrum alone will not have the depth to provide the increased speeds that rural customers want. Providing that speed requires deploying mid-band spectrum, but its reduced propagation relative to low-band spectrum makes this extremely capital intensive. That is why Sprint's 2.5 GHz spectrum is currently unused in rural areas. New T-Mobile's increased customer scale means that it will be able to support deployment at much lower population densities than either standalone network, and so it will have a much stronger offering to rural customers.

IoT and M2M Services. IoT and M2M services are growth opportunities for New T-Mobile. New T-Mobile's broad and deep 5G network will create opportunities for better products and services across a range of consumer and commercial IoT applications. Some

applications, such as connectivity for autonomous vehicles, are possible only with a network that provides reliability, speed, and low latency. Other applications, such as smart city lighting, sensors, or meter reading, are not latency-sensitive and do not require much speed, but do need a network that can handle a very large number of devices over a wide area. Unlike T-Mobile's and Sprint's standalone networks, New T-Mobile's 5G network will meet the needs of IoT use cases at both ends of this spectrum and at all points in between. By contrast, both T-Mobile and Sprint as standalone companies would lack the scale, robust coverage in rural areas, and economic incentive to invest heavily in IoT and M2M solutions, platforms, and capabilities.

2. Wholesale Services

The expanded coverage, increased capacity, and higher quality 5G nationwide network resulting from the merger will benefit MVNOs and their subscribers. Combining T-Mobile and Sprint's spectrum and site assets will lower costs and increase competition for wholesale services. The massive capacity gains and lower operational costs resulting from the merger will allow New T-Mobile to reduce its wholesale prices. Moreover, the superior New T-Mobile 5G network will allow the combined entity to apply significant competitive pressure to Verizon and AT&T, spurring the two incumbents to increase investment in their networks, expand network capacity, and provide more favorable terms to MVNOs. MVNO subscribers will benefit from increased, improved, and lower cost network options. These benefits are confirmed by MVNOs such as TracFone filing in support of the merger.

3. Enterprise Services

The increased reliability and capacity of its network will allow New T-Mobile to more aggressively pursue the enterprise segment than either company would absent the Transaction. Many Enterprise Customers highly prioritize technical requirements, such as performance, reliability, security, and coverage standards. T-Mobile and Sprint as standalone companies currently lack the network, sales and support, and technical platforms to offer competitive service to these customers.

T-Mobile and Sprint estimate that they currently have a combined enterprise share of approximately **[BC]** REDACTED **[EC]**. The dramatic improvement in network capacity and capabilities resulting from the Transaction will allow and incentivize New T-Mobile to make a dedicated effort to increase its presence in the enterprise segment. In particular, the Company expects New T-Mobile to seek opportunities to replace landline desk phones with wireless alternatives, and eventually enter the software-defined wide-area networks (SD-WANs) business for both back-up and primary service.

The Company expects New T-Mobile to hire 1,100 new employees, including ~940 new salespeople, to accelerate the New T-Mobile enterprise business. As New T-Mobile expands its enterprise sales team, it will also have more resources to develop internal business tools and employee expertise in the enterprise segment. Paired with its superior network, this will allow New T-Mobile to expand its portfolio of enterprise solutions, including wireline broadband substitute products and new commercial IoT/M2M offerings.

First Supplemental Response to DR 1-122 (10/29/18).

Subject to and without waiving its objections, T-Mobile further responds by providing information, including California-specific information, identified above in the Supplemental Responses to DR 1-30; see also Second Supplemental CD Production folder, documentation beginning with bates stamp TMUS-CPUC-PA-10000028 and TMUS-CPUC-PA-10000072.

Second Supplemental Response to DR 1-122 (12/3/18).

With respect to DR 1-2, the California Public Advocates Office's Meet and Confer Letter dated November 9, 2018, provided as follows:

a. What percentage of the total $43.6 billion NPV of synergies are attributable to operations in California?

b. What is the NPV of the "network synergies gained by eliminating the duplication of T-Mobile's and Sprint's existing networks" in California?

c. What is the total cost necessary to achieve the "network synergies gained by eliminating the duplication of T-Mobile's and Sprint's existing networks" in California?

d. How much will it cost New T-Mobile to decommission Sprint sites in California to achieve the synergies generated by the merger?

e. How much will it cost New T-Mobile to accomplish the "incremental network investment for integration" within California necessary to achieve the synergies generated by the merger?

f. What percentage of the "nearly $40 billion" will New T-Mobile invest within California to combine the complementary spectrum, sites, and assets of T-Mobile and Sprint to deliver a 5G network and services?

g. How many customers in California does New T-Mobile expect to provide its home broadband internet offering to by 2024?

h. How many dollars in EBITDA will New T-Mobile's anticipated home broadband internet offering generate within California by 2024?

i. Regarding the outdoor wireless coverage, how many of the 59.4 million rural residents are in California?

j. Regarding the indoor wireless coverage, how many of the 31 million rural residents are in California?

k. How many of the 45.9 million rural residents [with projected download speeds of at least 10 Mbps] are in California?

l. How many of the 52.2 million rural residents [with projected in-home broadband of at least 25/3 Mbps] are in California?

m. Please provide the number of dealer stores New T-Mobile plans to open in California to serve small towns and rural areas.

n. Please provide the number of corporate stores New T-Mobile plans to open in California to serve small towns and rural areas.

o. Of the "5,000 new retail jobs" mentioned above, how many are in California?

p. Of the "1,800 new jobs dedicated to transitioning the T-Mobile and Sprint networks in rural areas and expanding rural coverage," how many are in California?

*q. How many of the 1,100 new employees [*to accelerate the New T-Mobile enterprise business*] will be in California?*

r. How many of the "five new technologically advanced Customer Experience Centers in small towns and rural communities" will be located in California?

s. How many of the "5,600 professionals" [with "career boosting jobs" associated with the Customer Experience Centers] will be in California?

Subject to and without waiving its objections, and in response to the Meet and Confer letter and the follow up telephone conference with representatives of Cal PA on November 14, 2018, T-Mobile responds as follows:

a. T-Mobile states that it cannot estimate the portion or percentage of the total projected merger synergies attributable to operations in the State of California, as such an estimate would require information from integration planning decisions that will not and cannot be finalized until the transaction can be consummated.

b. T-Mobile states that the NPV of the projected network synergies gained by eliminating the duplication of T-Mobile's and Sprint's existing networks cannot readily be estimated or broken out at a state level. For purposes of responding to this

data request, however, and based on the data currently available, T-Mobile estimates that the net present value of network synergies from deduplication of the T-Mobile and Sprint networks in the State of California could be approximately **[BHC-AEO]** REDACTED **[EHC-AEO]**.

c. Based on the data currently available, T-Mobile estimates that the total cost range to achieve the network synergies gained by eliminating the duplication of T-Mobile's and Sprint's existing networks in California is approximately **[BHC-AEO]** REDACTED REDACTED **[EHC-AEO]**.

d. Based on data currently available, T-Mobile estimates that the cost range of decommissioning the Sprint California sites is approximately **[BHC-AEO]** REDACTED REDACTED **[EHC-AEO]**.

e. Based on data currently available, T-Mobile estimates that the cost range to accomplish the incremental network investment for integration within California necessary to achieve the merger synergies is approximately **[BHC-AEO]** REDACTED REDACTED **[EHC-AEO]**.

f. T-Mobile refers to its Response to Cal PA DR 1-30 above.

g. Based on data currently available, T-Mobile estimates that it will offer in-home broadband to approximately **[BHC-AEO]** REDACTED **EHC-AEO]** California residents by 2024. See also Response to Cal PA DR 2-2.

h. Based on data currently available, T-Mobile estimates that New T-Mobile's anticipated home broadband internet offering could generate **[BHC-AEO]** REDACTED REDACTED **[EHC-AEO]** in EBITDA.

i. Of the 59.4 million rural residents, T-Mobile estimates approximately **[BHC-AEO]** REDACTED **[EHC-AEO]** will be in California.

j. Of the 31 million rural residents, T-Mobile estimates approximately **[BHC-AEO]** REDACTED REDACTED **[EHC-AEO]** will be in California.

k. Of the 45.9 million rural residents, T-Mobile estimates approximately **[BHC-AEO]** REDACTED **[EHC-AEO]** will be in California.

l. Of the 52.2 million rural residents, T-Mobile estimates approximately **[BHC-AEO]** REDACTED **[EHC-AEO]** will be in California.

m. T-Mobile currently estimates that **[BHC-AEO]** REDACTED REDACTED **[EHC-AEO]** located to serve rural communities and small towns. Based on the latest integration plans, approximately 75 percent of these stores are expected to be corporate, and 25 percent are expected to be dealer-owned. All stores will be branded T-Mobile. See also Response to DR 2-1 subsection (a).

n. See Supplemental Response to subsection m above.

o. Integration planning at a state-specific level requires information from decisions, which will not and cannot be finalized until the transaction can be consummated. As such, the Company cannot project estimates of New T-Mobile employment numbers on a state-specific basis.

p. Integration planning at a state-specific level requires information from decisions, which will not and cannot be finalized until the transaction can be consummated. As such, the Company cannot project estimates of New T-Mobile employment numbers on a state-specific basis.

q. Integration planning at a state-specific level requires information from decisions, which will not and cannot be finalized until the transaction can be consummated. As such, the Company cannot project estimates of New T-Mobile employment numbers on a state-specific basis.

r. Integration planning at a state-specific level requires information from decisions, which will not and cannot be finalized until the transaction can be consummated. As such, the Company cannot project locations for the Customer Experience Centers.

s. Integration planning at a state-specific level requires information from decisions, which will not and cannot be finalized until the transaction can be consummated. As such, the Company cannot project estimates of New T-Mobile employment numbers on a state-specific basis.

Third Supplemental Response to DR 1-122 (12/21/18).

Subject to and without waiving its objections, T-Mobile further responds by providing the documents identified above in the Fourth Supplemental Response to DR 1-30.

Data Request 2-2 (10/23/18).

Please provide the following information related to Your claim the merger will increase T-Mobile's ability to offer in-home broadband plans.

a) What broadband speeds does T-Mobile expect to be able to offer for in-home wireless broadband?

b) Will the customer need any special equipment such as a Femtocell or a receiving antenna to take advantage of 5G in-home broadband?

c) What counties/cities would T-Mobile deploy its in-home broadband offerings by 2021? By 2024?

d) How many rural California Points of Presence (POPs) does T-Mobile estimate will be covered by the 5G in-home broadband service by 2021? By 2024?

e) How much area can a single 5G tower or small cell cover in KM/Miles?

f) Will subscribers to the in-home 5G service have to share the bandwidth of their nearby tower?

g) Would subscribers to the in-home 5G service be subject to a data cap? If yes, what would this data cap be?

Response to Data Request 2-2 (11/7/18).

T-Mobile objects to this Data Request on the grounds it is vague and ambiguous with respect to temporal scope and the phrases "5G tower," "small cell," "share the bandwidth," and "data cap." T-Mobile further objects to this Data Request on the grounds it seeks information that is dependent on decisions which will not and cannot be finalized until the transaction can be consummated. T-Mobile also objects to this Data Request on the grounds it seeks information that is neither germane to the pending Wireline or Wireless Applications nor is reasonably calculated to lead to the discovery of relevant information as broadband is an exclusively interstate service that is subject to the FCC's—not the Commission's—jurisdiction. T-Mobile further objects to this Data Request on the ground it seeks information that is readily available to the Cal PA as T-Mobile's plans to provide broadband services is discussed in numerous public filings including the PIS and the Wireless Application. T-Mobile also objects to this Data Request to the extent that it is duplicative of Cal PA DRs 1-6 and 1-122.

Subject to and without waiving its objections, T-Mobile responds as follows:

(a) New T-Mobile will provide *bona fide* alternatives to wired in-home broadband in two different ways: (1) use of the mobile 5G wireless service as a substitute; and (2) a new in-home service offering. First, New T-Mobile will provide 100 Mbps broadband service to **[BHC-AEO** REDAC **[EHC-AEO]** percent of Californians by 2024. Some areas will see much higher speeds, as New T-Mobile is expected to cover **[BHC-AEO** REDACTED **EHC-AEO]** Americans with speeds greater than 500 Mbps by 2024. See also Initial and Supplemental Responses to Cal PA DRs 1-6 and 1-122. This service will allow customers to use the New T-Mobile mobile wireless service as a substitute for in-home fixed service; thereby eliminating separate monthly charges. Second, New T-Mobile also will provide a separate in-home broadband service offering as a replacement for wired broadband by providing customers self-install wireless equipment to deliver services to a

variety of devices within their home. The speeds of the in-home service will be 100 Mbps or higher. These speeds are fast enough to enable New T-Mobile to compete successfully with landline broadband services in these areas. The New T-Mobile in-home service will be priced below wired broadband services of the incumbent cable and wireline companies.

(b) New T-Mobile customers using the mobile 5G service as a wireless substitute for in-home fixed broadband do not require any additional equipment beyond their mobile devices. New T-Mobile customers subscribing to the in-home broadband service offering that is a replacement for wired broadband service will use customer premises equipment ("CPE"), much like a wireless router, to convert New T-Mobile's wireless network signal into a Wi-Fi signal. Unlike other in-home broadband offerings, the wireless nature of the offering will empower customers to avoid installation appointments and related charges as they will be able to self-provision the necessary in-home equipment. New T-Mobile will extend the Un-carrier customer care model to its in-home broadband offering, providing consumers with high-quality 24-7 customer support.

(c) For its mobile wireless broadband service that serves as a substitute for in-home fixed broadband, T-Mobile refers to the maps provided in its Second Supplemental Response to Cal PA DR 1-6. See also Wireless Application, Confidential Exhibit I. New T-Mobile's in-home replacement service will be offered where capacity is available. Nationally, T-Mobile estimates that the in-home service will be made offered in 52 percent of the zip codes.

(d) Based on the FCC's definition of "rural," T-Mobile forecasts that **[BHC-AEO]** REDAC **EHC-AEO]** percent of California's rural PoPs will be covered by its mobile broadband 5G service by 2024. See also Initial and Supplemental Responses to Cal PA DRs 1-6 and 1-122. T-Mobile estimates that the New T-Mobile in-home replacement service will be offered in 20 to 25 percent of the country's rural areas.

(e) New T-Mobile plans to use a combination of macro cells and small cells to provide 5G service. The reach of a small cell or macro cell site will depend on a variety of factors that affect propagation, and on an individual basis, the operating radius of a cell site may be impacted by its physical environment. Macro cell sites are used to cover greater areas, while small cells, which have smaller operating radii, are better suited to urban areas. Both can be used to provide 5G services. In general terms, the reach of a cell site depends on the frequency of spectrum on which the signals are transmitted and the technical rules dictated by the FCC for that spectrum. New T-Mobile's network will use low-band, mid-band, and high-band spectrum for 5G services.

Low-band spectrum (below 1 GHz) allows for broader coverage, both in-building and in rural areas. Spectrum below 1 GHz can support a macro cell site with an operating radius of up to 18 miles, allowing for broad coverage without the need for as much capital expenditure, especially in rural markets.

Mid-band spectrum (from 1 to 6 GHz) provides high capacity with some reduction in coverage capabilities as compared to sub-1 GHz spectrum bands. Because there is more

spectrum in the mid-band, there is more capacity that can be delivered from a single cell site, and it is well-suited for urban and suburban markets where consumer demand for more capacity is highest. Because the propagation in the mid-band is more limited (operating radii of approximately up to 4 miles around cell sites) the band is not optimal for rural area coverage, as it requires more capital expenditures to cover those geographies.

High-band spectrum (above 20 GHz) is best utilized in dense urban markets where there are extreme capacity demands, need for low latency, and surging use of high-speed data applications. High-band spectrum cell operating radii are significantly less than one-half of one mile, making use of this spectrum only economical in very densely populated areas. The positive attributes of high-band spectrum are that it has large bandwidths available, enables the use of very small antennas, and can be readily reused within a market area. These features enable high-band spectrum to deliver much higher data rates and lower latency than mid-band or low-band spectrum.

New T-Mobile will leverage the variety of spectrum at its disposal to deploy greater quantities (more spectrum per cell site) more densely (to more cell sites throughout the network). New T-Mobile will be able to deploy a capacity layer of 2.5 GHz spectrum to provide much higher 5G data rates to consumers. Moreover, the combined company will be able to deploy more spectrum in more cell sites, providing a much more consistent signal strength throughout the coverage area. Signal strength is one of the best approximations of the actual user experience—the stronger and more consistent the signal strength, the more likely the consumer will have a steady and robust data and voice connection. For this reason, signal strength is directly related to the actual data rates delivered to a customer.

(f) Typically, mobile broadband infrastructure is shared by users connected to a cell site, and in-home broadband users will also share access to a cell site. However, capacity in the new nationwide 5G network will be ample to support these users as such capacity will rival and often surpass that of wired broadband.

(g) The Company expects that New T-Mobile will provide its in-home wireless broadband offering consistent with T-Mobile's Un-carrier approach, which eliminated service contracts and strict monthly data caps for mobile wireless service. Final parameters for the in-home product, however, have not been finalized.

CONFIDENTIAL EXHIBIT B

Consumer Group Presentation

ENTIRE DOCUMENT FILED UNDER SEAL

PUBLIC VERSION

EXHIBIT C

T-Mobile's Response to Cal PA DR 1-29

PUBLIC VERSION

Data Request 1-29.

Please identify and describe how You currently decide whether to invest in, upgrade or expand Your network in California. Please describe all criteria You consider in making this determination.

Response to Data Request 1-29 (10/10/18).

T-Mobile objects to this Data Request on the grounds it is vague and ambiguous with respect to the phrases "invest," "upgrade" and "expand." T-Mobile also objects to this Data Request on the grounds it assumes that network decisions are made on a state-specific basis.

Subject to and without waiving its objections, T-Mobile responds that capacity and coverage decisions are made nationally. T-Mobile uses its ordinary course network model to inform its network coverage, data rate, capacity, and other quality improvements. The engineering team works in collaboration with the business team to drive new products and coverage based on economic and business priorities. At any given time based on a wireless traffic forecast, the model identifies congested sectors using ordinary course criteria for defining congestion. When the network model predicts that this level of throughput will not be reached, it then specifies a series of technical solutions (such as cell splits) designed to alleviate that congestion. The solutions are suggested by the model, but the engineering and business teams collaborate to determine if the solutions should be implemented or not.

Similarly, the engineering and business teams work together to determine opportunities for expanding into new areas, including indoor coverage. The two teams analyze the existing markets for business opportunities and then, based on cost/benefit analyses, determine if additional building will be implemented.

Additionally, the network engineering team has ongoing data tracking the performance of the network. This data helps inform the company of ongoing congestion issues or if particular subscribers have attempted to reach the T-Mobile network and instead are routed to a roaming partner. As these issues directly affect the business, they are primary factors in determinations of whether to add more macro/small cell sites to the network.

EXHIBIT D

T-Mobile's Response to Cal PA DR 3-3

(without document production)

PUBLIC VERSION

Data Request 3-3 (10/30/18).

Please provide complete and unredacted copies of all Notices of Ex Parte Communications filed with the FCC associated with the merger application(s) (WT Docket 18-197). Please provide the most up-to-date versions in searchable PDF file format. Please include copies of all associated presentations, appendices, attachments, letters, or any other associated documents, Data and files.

Response to Data Request 3-3 (11/5/18).

T-Mobile objects to this Data Request to the extent it has already provided the confidential version of the August 30, 2018 Ex Parte with the FCC its October 10, 2018 Response to, among others, Cal PA DR 1-6. See October 10th, 2018 Production document beginning with bates nos. TMUS-CPUC-PA-00001062. T-Mobile further objects to this Data Request on the grounds and to the extent the ex parte filings are equally available to Cal PA on the FCC's electronic docket for WT-18-197.

Subject to and without waiving its objections, T-Mobile provides an unredacted copy of all ex parte filings it has made with the FCC in the Docket WT-18-197. See PA Production Folder, documentation beginning with bates stamp TMUS-CPUC-PA-11007830 through TMUS- CPUC-PA-11008097.

EXHIBIT E

T-Mobile's Response to Cal PA DRs 6-3 and 6-4

(without document production)

Data Request 6-3 (12/11/18).

Please provide all network models and associated data You provided to the Federal Communications Commission as part of Docket 18-197. Please include any data and information explaining the network models.

Response to Data Request 6-3 (12/17/18).

T-Mobile objects to this Data Request on the grounds it is vague and ambiguous with respect to the phrases "all network models," "associated data," and "any data and information explaining the network models." T-Mobile also objects to this Data Request to the extent it is duplicative of DRs 1-6, 1-122, and 3-3.

Subject to and without waiving its objections, and pursuant to a telephone conversation with Cal PA representatives on Monday, December 17, 2018, T-Mobile responds that it is providing a copy of the Network Engineering Model on a specially-prepared laptop computer with the understanding that the data provided will not otherwise be copied or reproduced. In addition, T-Mobile is providing copies of various documents provided to the FCC and/or the DOJ to explain the model. A list of those highly confidential materials, including those materials already provided to Cal PA in response to previous data requests, is provided below:

Date	Document Description	Bates Nos.
	Network Engineering Model	Provided on Laptop
5/30/2018	Ray Presentation to DOJ	TMUS-CPUC-PA-00005355
6/18/2018	Public Interest Statement ("PIS")	TMUS-CPUC-PA-00001652 (Previously produced in response to DRs 1-6, 1-34, 1-35, 1-72, 1-74, 1-122, 1-123, 10/10/18)
6/18/2018	PIS, Appendix B, Ray Declaration	TMUS-CPUC-PA-00003846 (Previously produced in response to DRs 1-6, 1-34, 1-35, 1-72, 1-74, 1-122, 1-123, 10/10/18)
8/20/2018	Ex Parte (Ray presentation to FCC)	TMUS-CPUC-PA-00005399
8/30/2018	Ray Presentation to DOJ	TMUS-CPUC-PA-00005439
9/11/2018	Ex Parte (discussion with FCC re network model)	TMUS-CPUC-PA-11007900 (Previously produced in response to DR 3-3, 11/5/18)
9/14/2018	Ex Parte (Ray and Ewens Presentation to FCC)	TMUS-CPUC-PA-00005500
9/17/2018	Joint Opposition - FCC	TMUS-CPUC-PA-00001090 (Previously produced in response to DRs 1-6 and 1-122, 10/10/18)
9/17/2018	Joint Opposition - FCC, Appendix B, Ray	TMUS-CPUC-PA-00001225

	Declaration	(Previously produced in response to DRs 1-6 and 1-122, 10/10/18)
9/17/2018	Supplement to FCC Information Request (discussion of network model)	TMUS-CPUC-PA-00005523
10/1/2018	Response to DOJ Specification 50	TMUS-CPUC-PA-00005528
10/8/2018	Network Model Presentation to DOJ	TMUS-CPUC-PA-00005540
10/11/2018	Ex Parte (presentation to FCC re network model)	TMUS-CPUC-PA-11007973 (Previously produced in response to DR 3-3, 11/5/18)
10/12/2018	Ex Parte (includes brief summary of discussion with FCC re network model)	TMUS-CPUC-PA-11008021 (Previously produced in response to DR 3-3, 11/5/18)
10/24/2018	Ex Parte (discussion with FCC re network model)	TMUS-CPUC-PA-11008033 (Previously produced in response to DR 3-3, 11/5/18)
12/6/2018	Ex Parte (follow up with FCC re network model)	TMUS-CPUC-PA-00005584
12/7/2018	Supplemental Response to DOJ Questions re network modeling	TMUS-CPUC-PA-00005588
12/7/2018	Migration Overview Presentation to DOJ	TMUS-CPUC-PA-00005593

Data Request 6-4 (12/11/18).

Please provide all network models and associated data You provided to the U.S. Department of Justice as part of its review of Your proposed acquisition of Sprint Corporation. Please include any data and information explaining the network models.

Response to Data Request 6-4 (12/17/18).

T-Mobile objects to this Data Request on the grounds it is vague and ambiguous with respect to the phrases "all network models," "associated data," and "any data and information explaining the network models."

Subject to and without waiving its objections, T-Mobile references its Response to DR 6-3 above.

EXHIBIT F

County-Specific Maps (9 CA Counties)

Proposed Merger of T-Mobile and Sprint

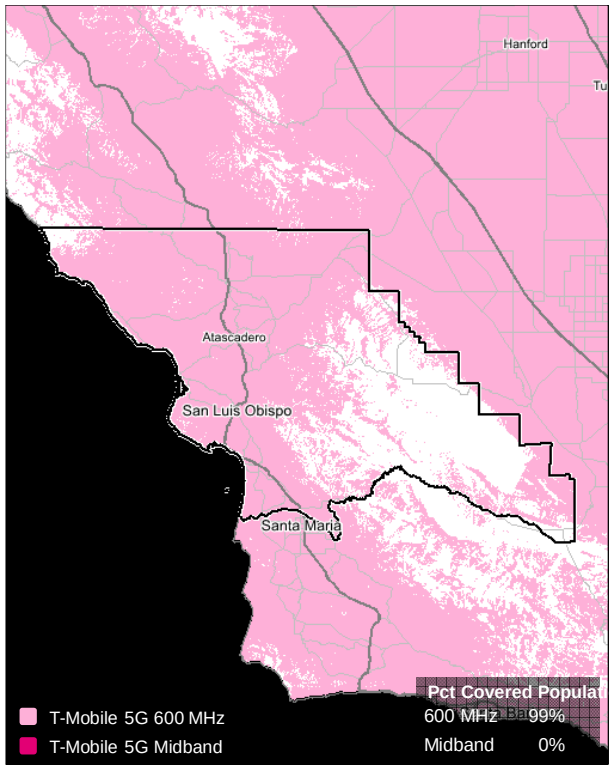
California County Maps

October 19, 2018

Confidential Treatment Requested

San Luis Obispo County: Projected 5G Coverage in 2021

T-Mobile Standalone



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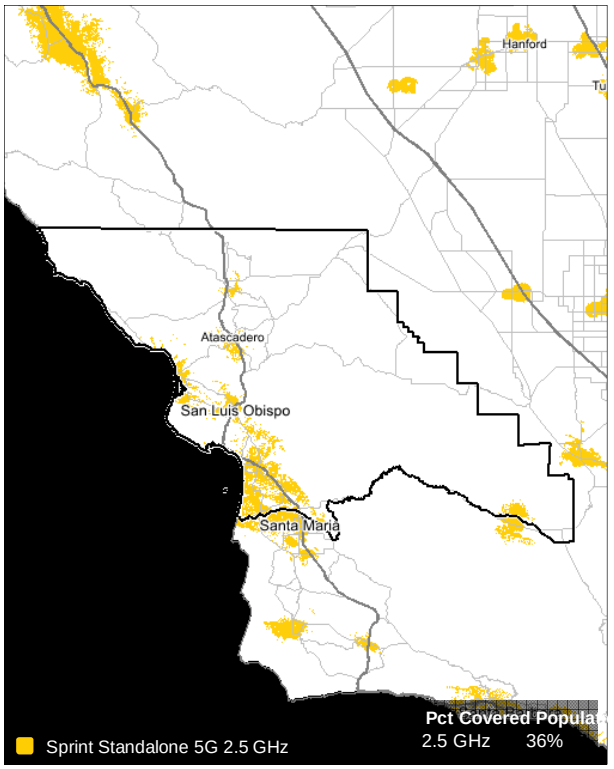
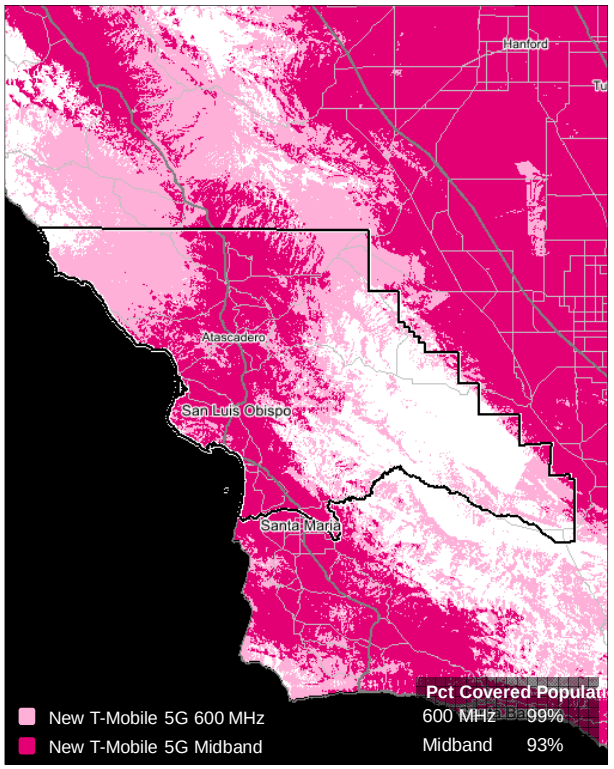
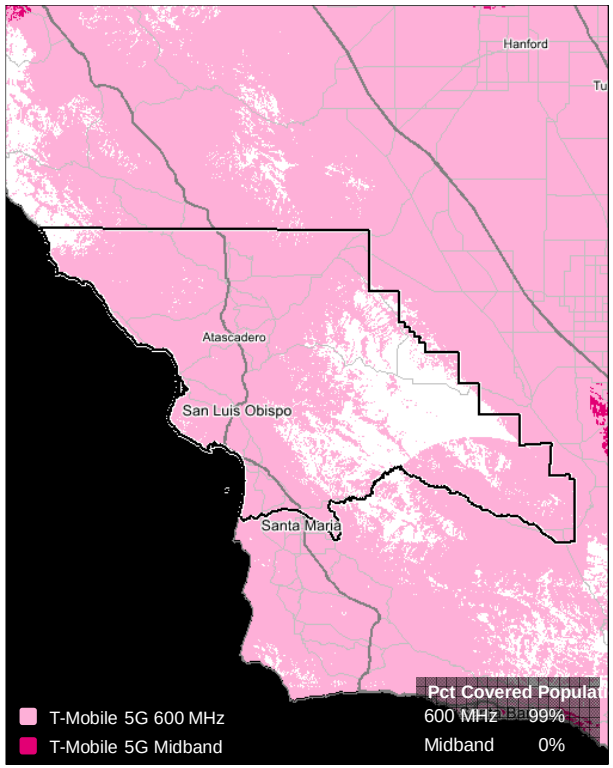


New T-Mobile



San Luis Obispo County: Projected 5G Coverage in 2024

T-Mobile Standalone



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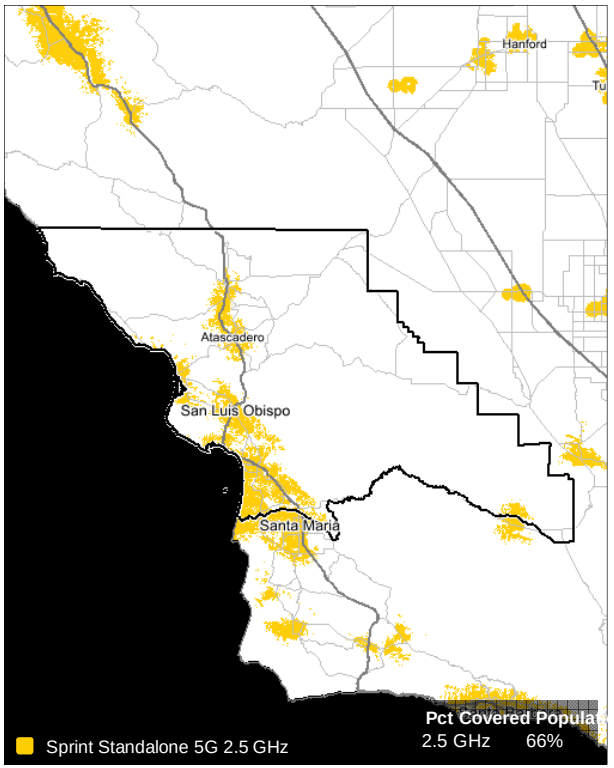

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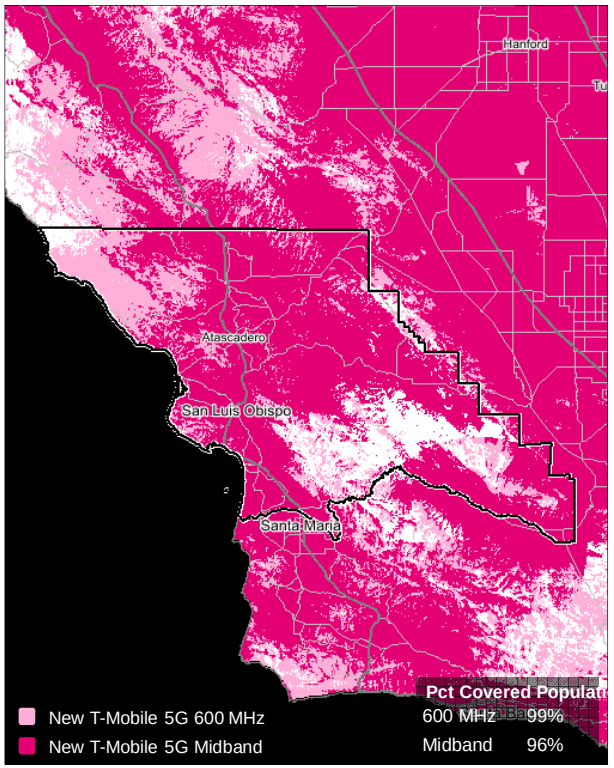
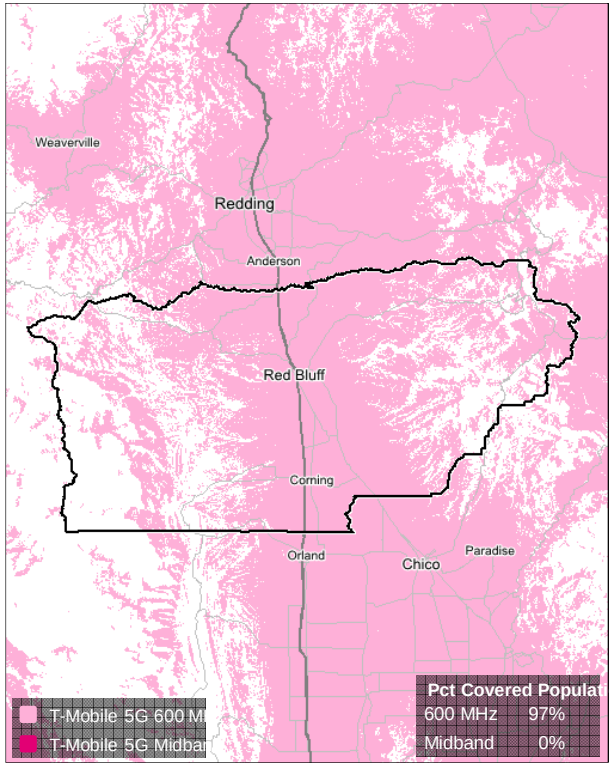


Tehama County: Projected 5G Coverage in 2021

T-Mobile Standalone



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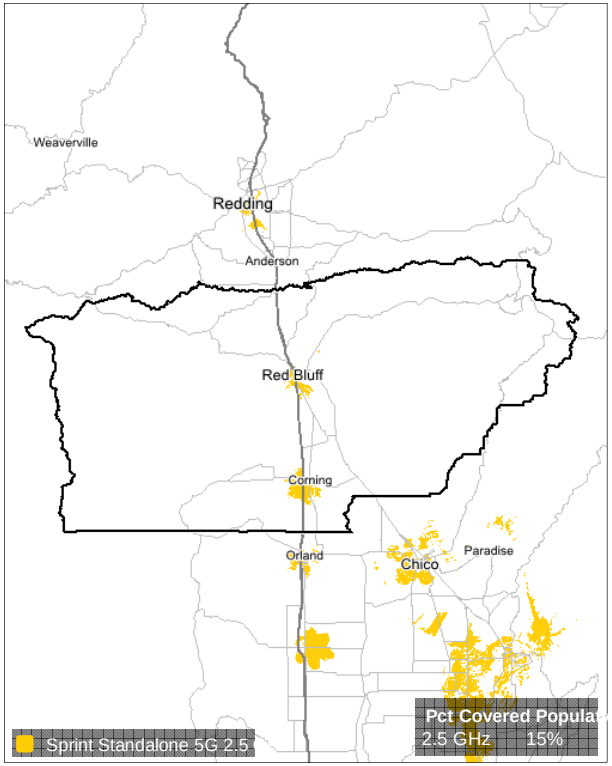

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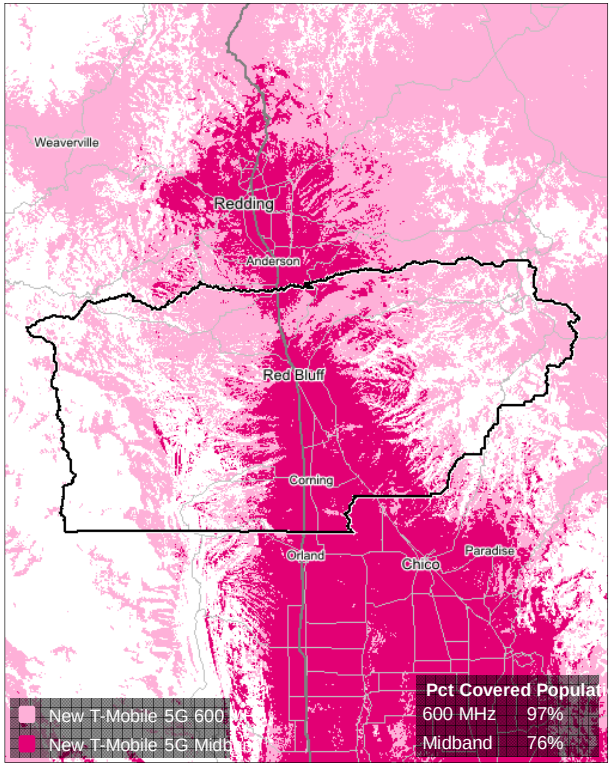
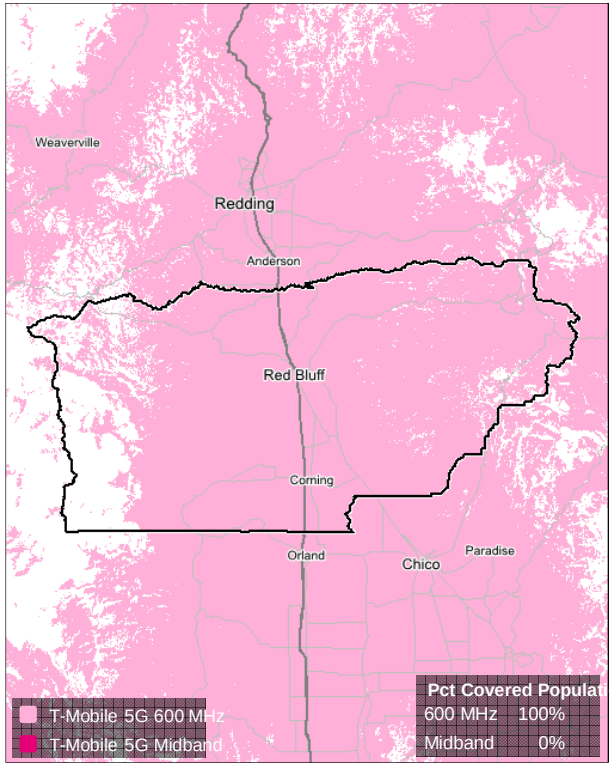


Tehama County: Projected 5G Coverage in 2024

T-Mobile Standalone



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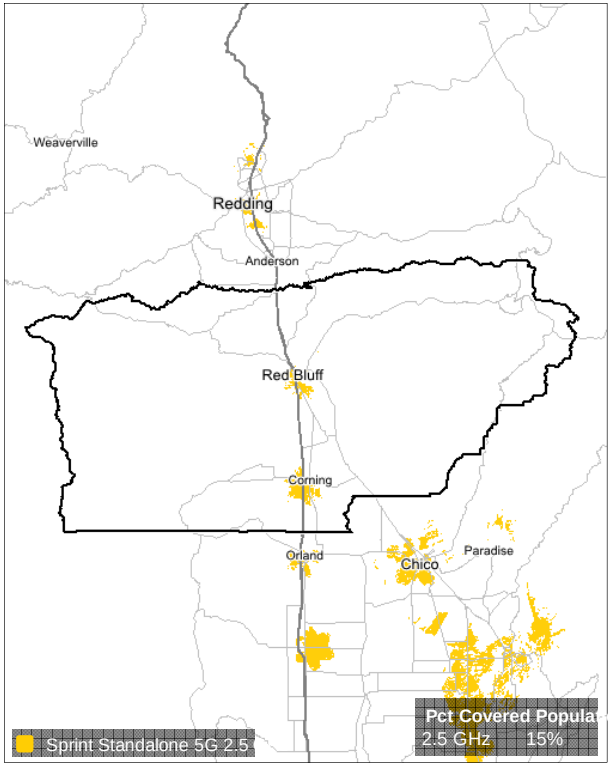

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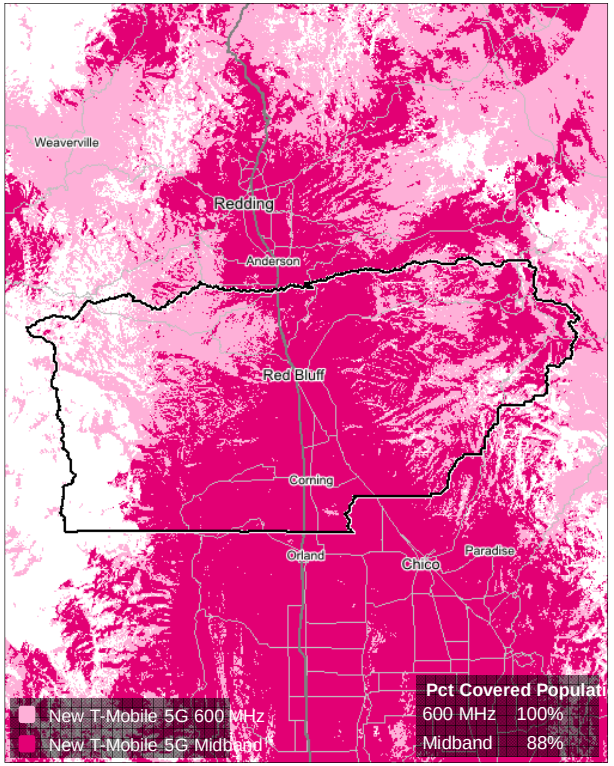
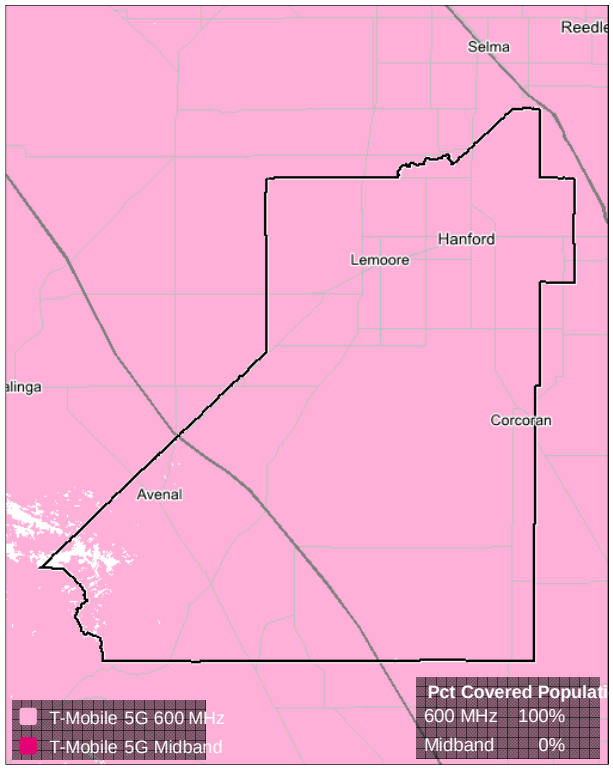


Kings County: Projected 5G Coverage in 2021

T-Mobile Standalone



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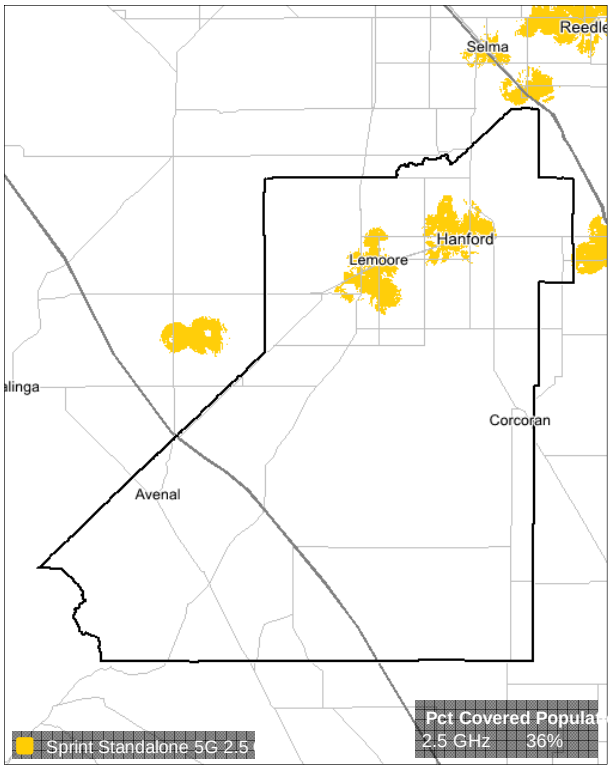

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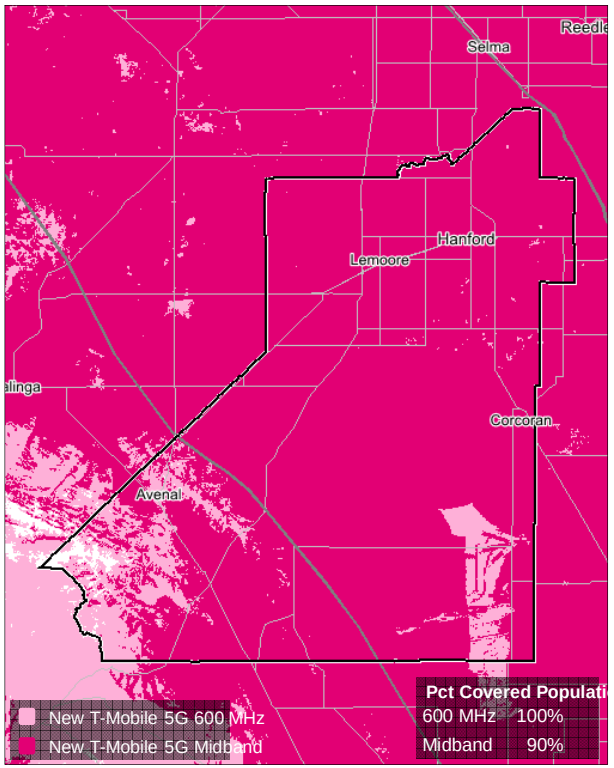
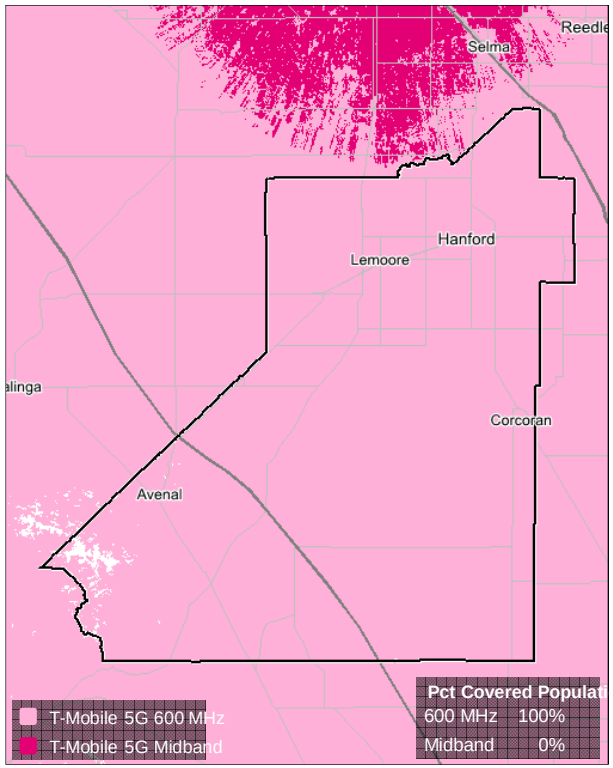


Kings County: Projected 5G Coverage in 2024

T-Mobile Standalone



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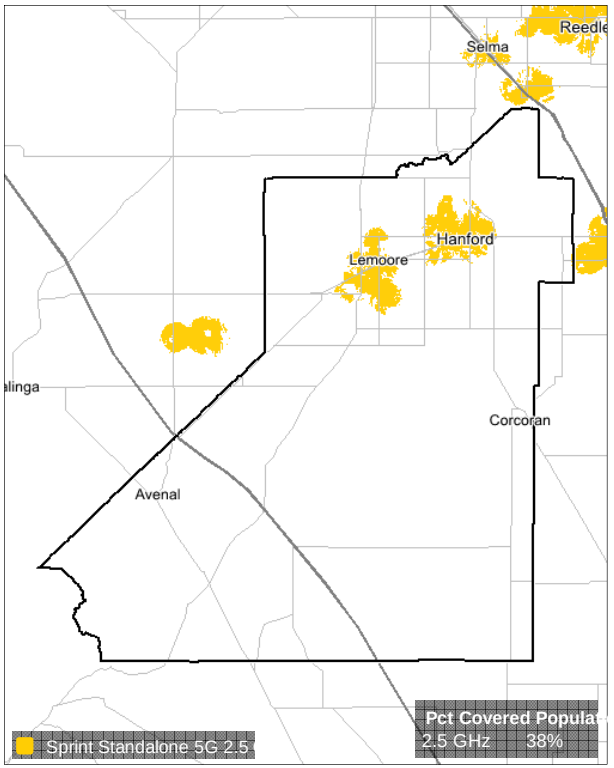

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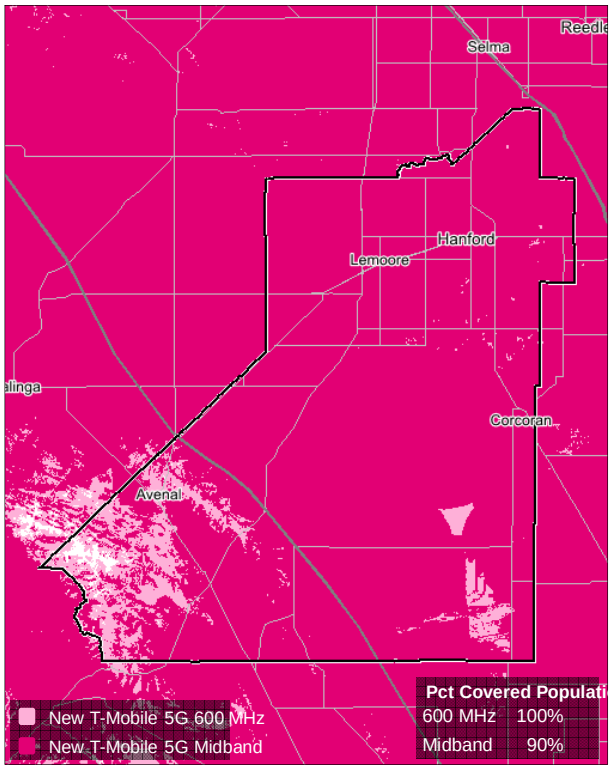
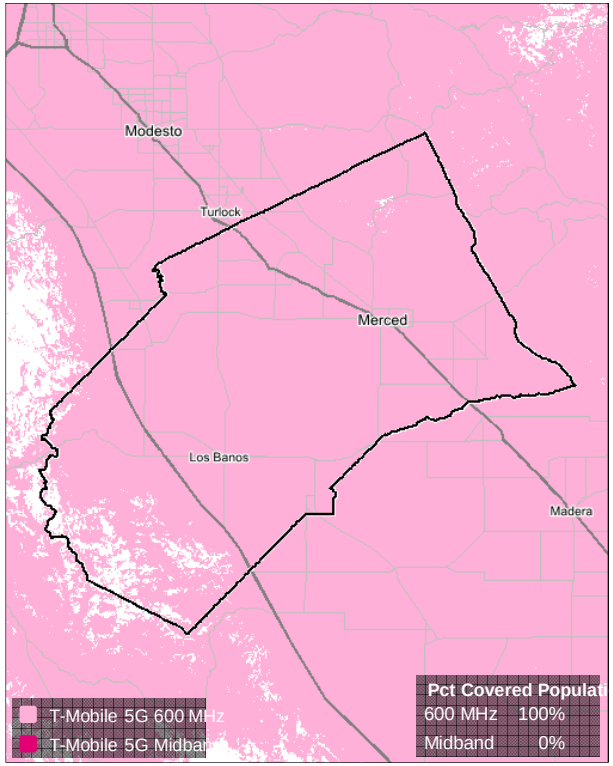


Merced County: Projected 5G Coverage in 2021

T-Mobile Standalone



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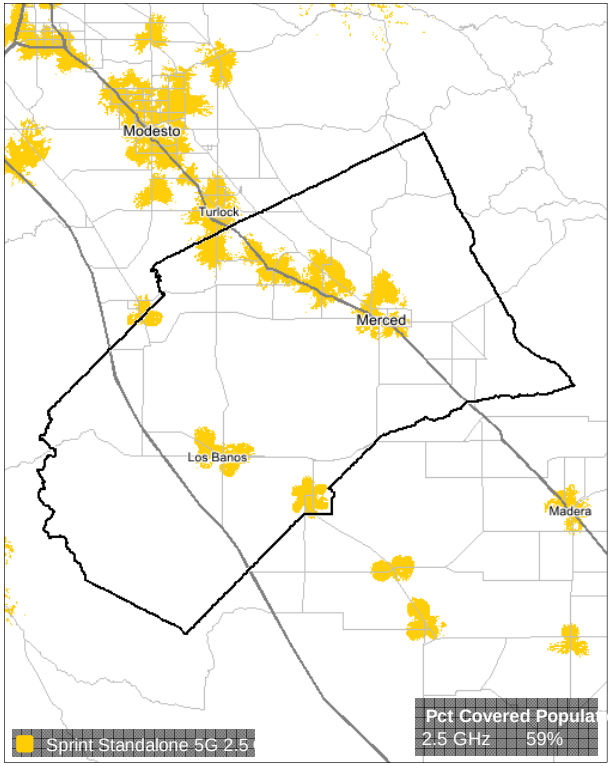

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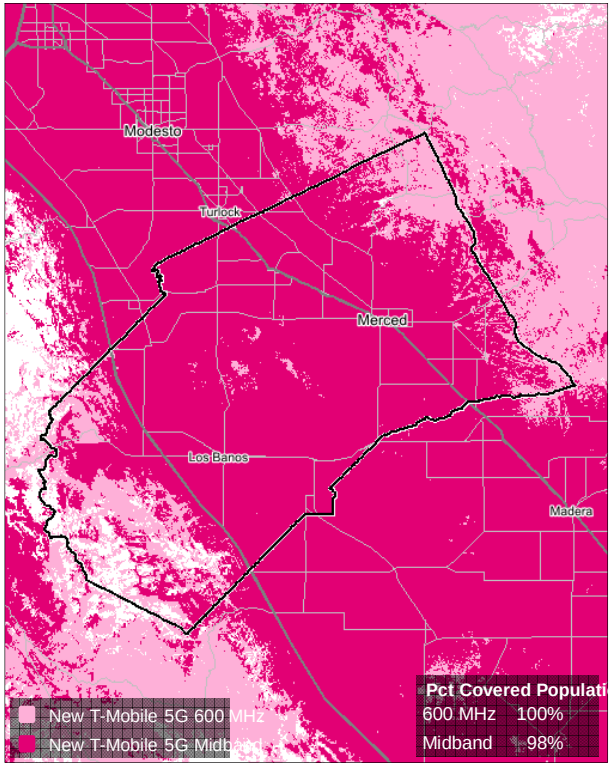
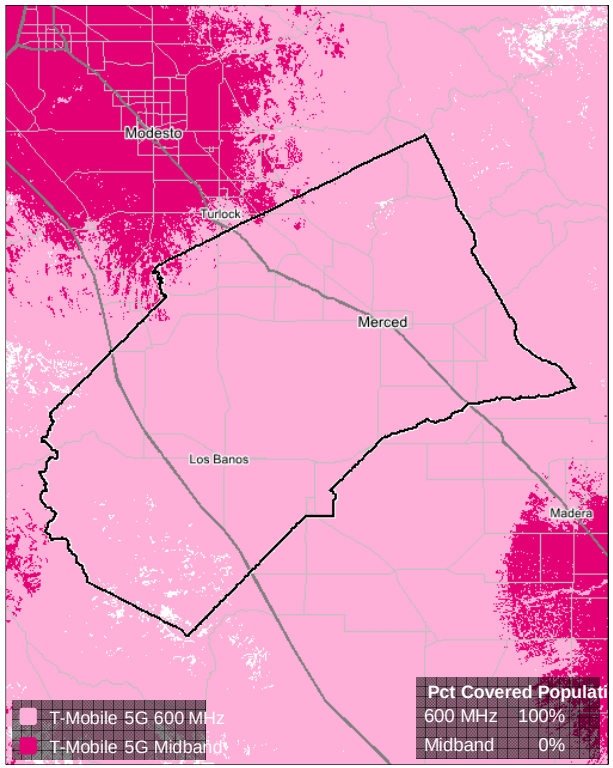


Merced County: Projected 5G Coverage in 2024

T-Mobile Standalone



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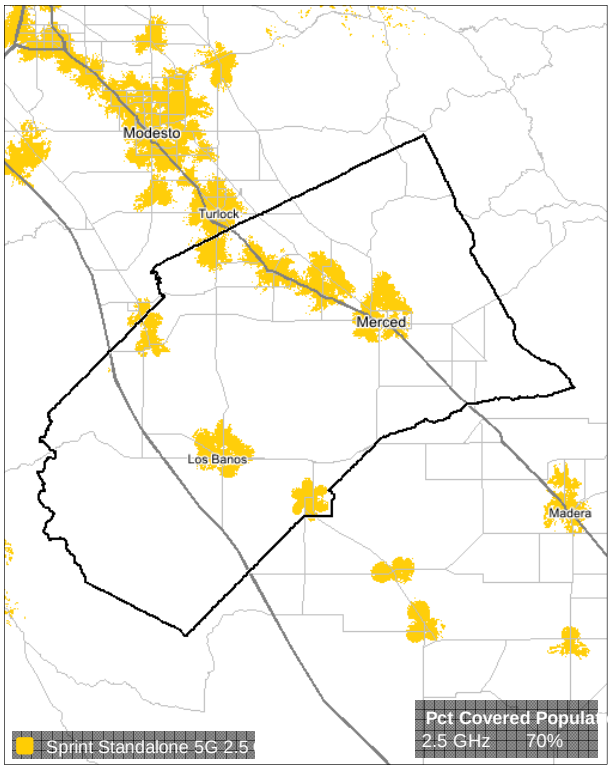

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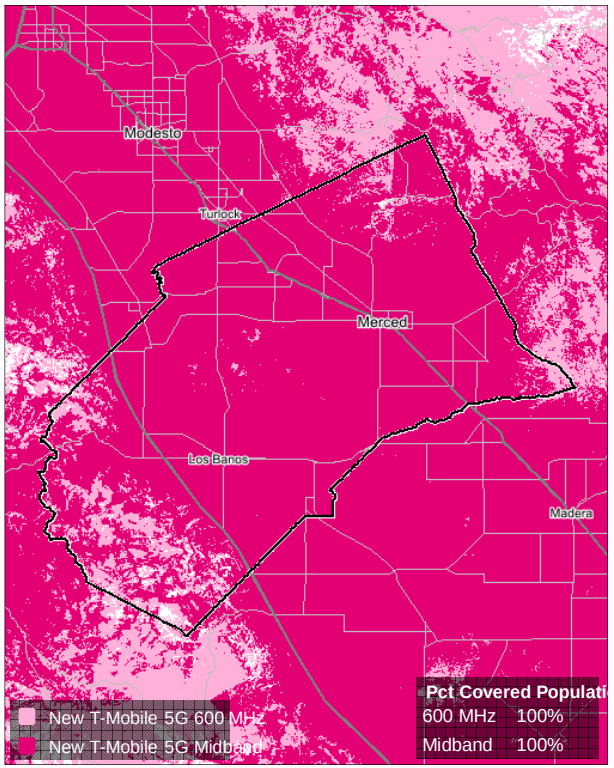
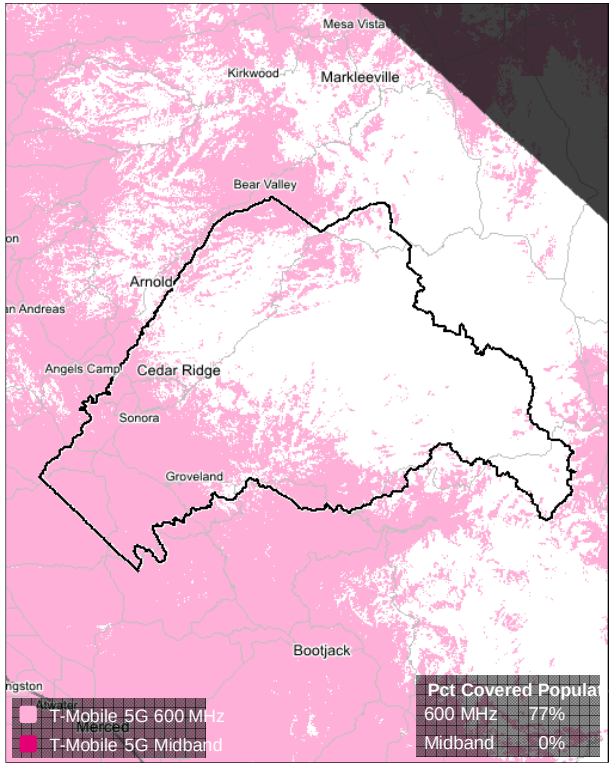


Tuolumne County: Projected 5G Coverage in 2021

T-Mobile Standalone



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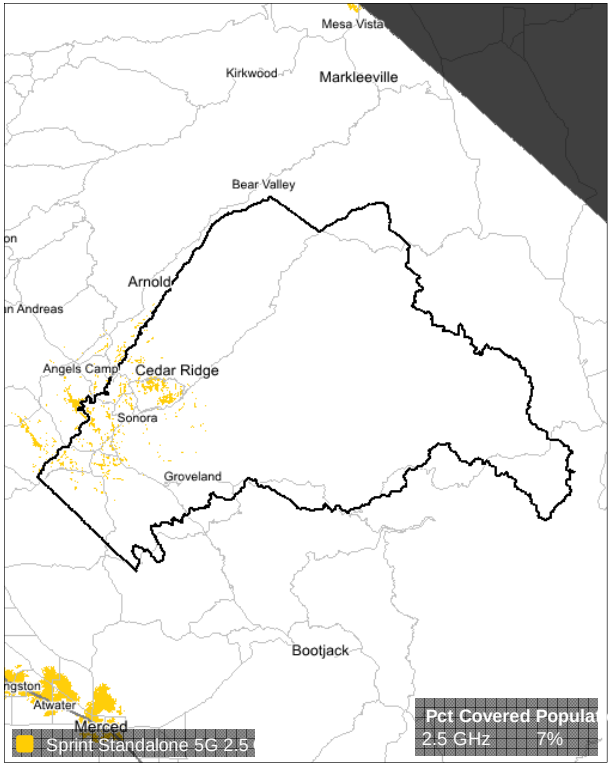

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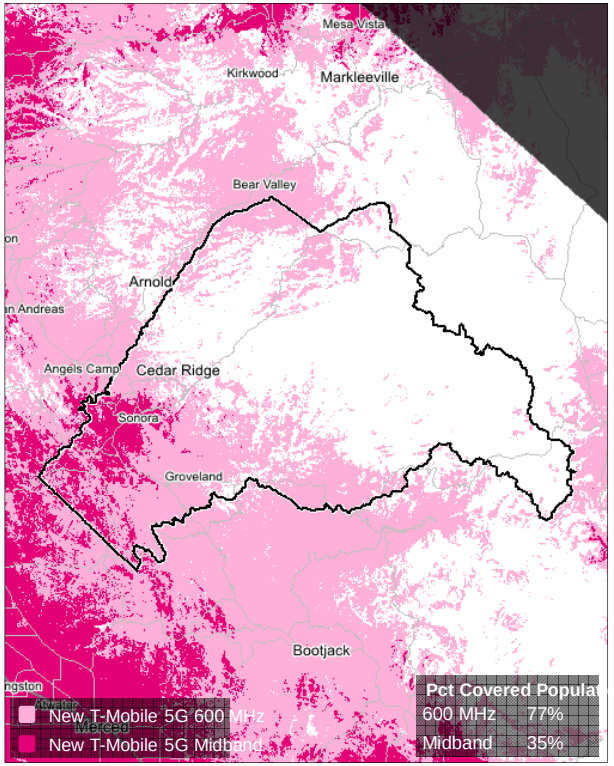
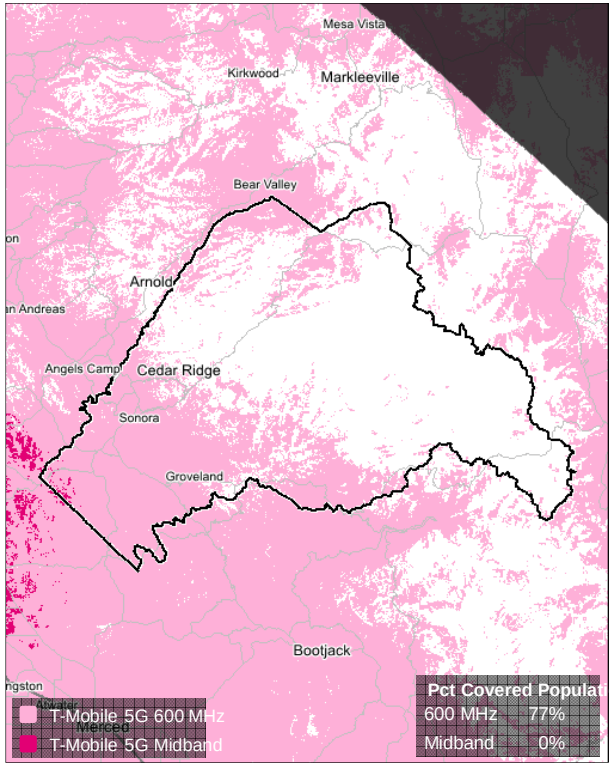


Tuolumne County: Projected 5G Coverage in 2024

T-Mobile Standalone



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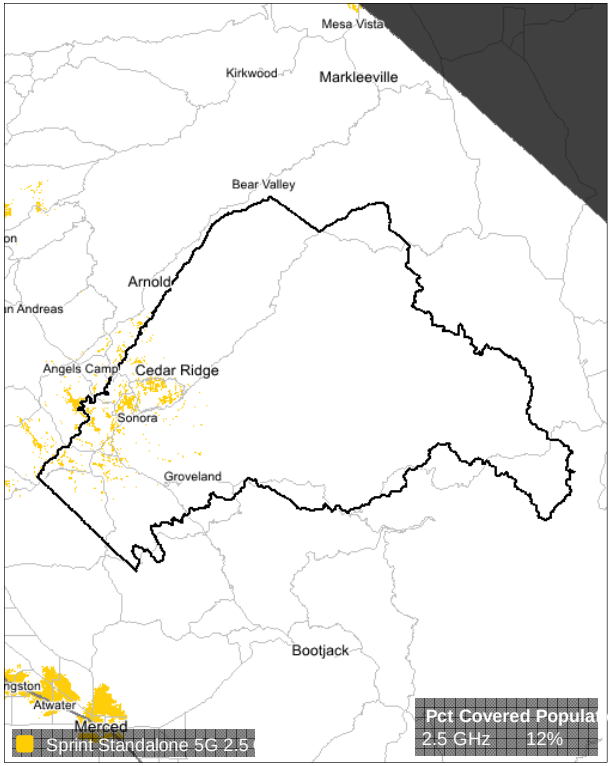

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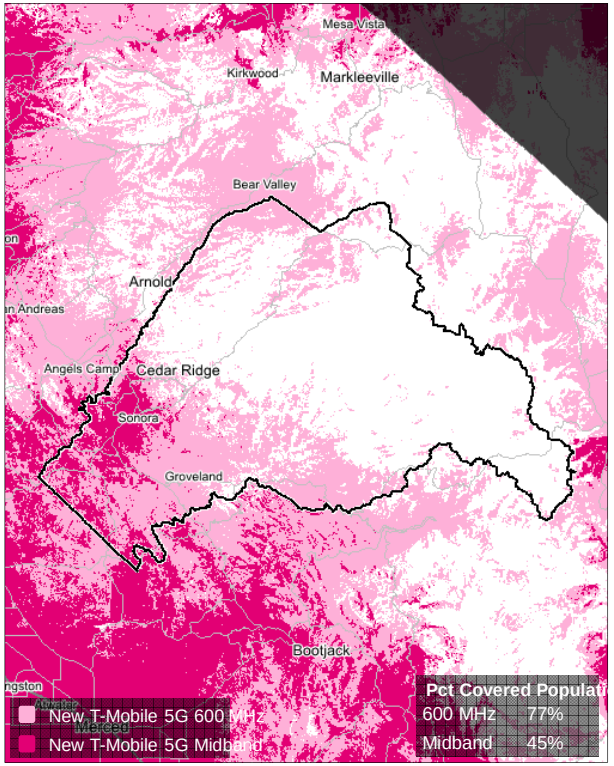
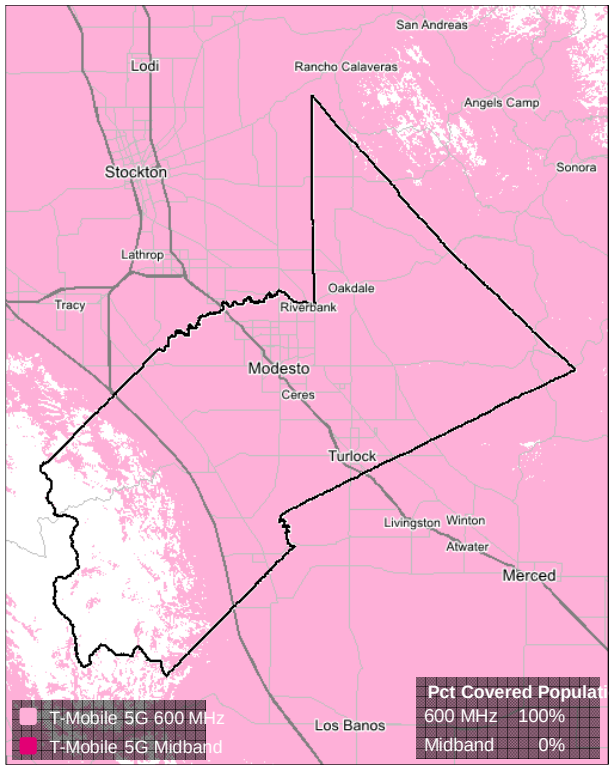


Stanislaus County: Projected 5G Coverage in 2021

T-Mobile Standalone



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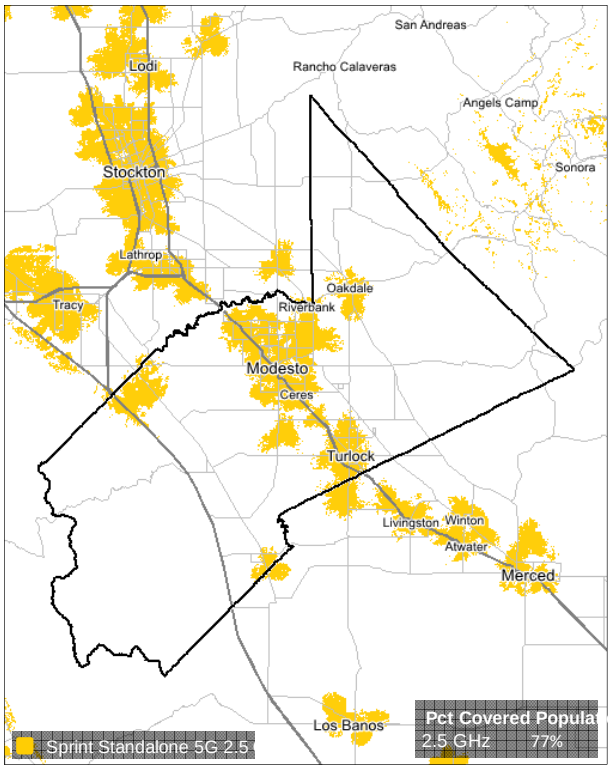

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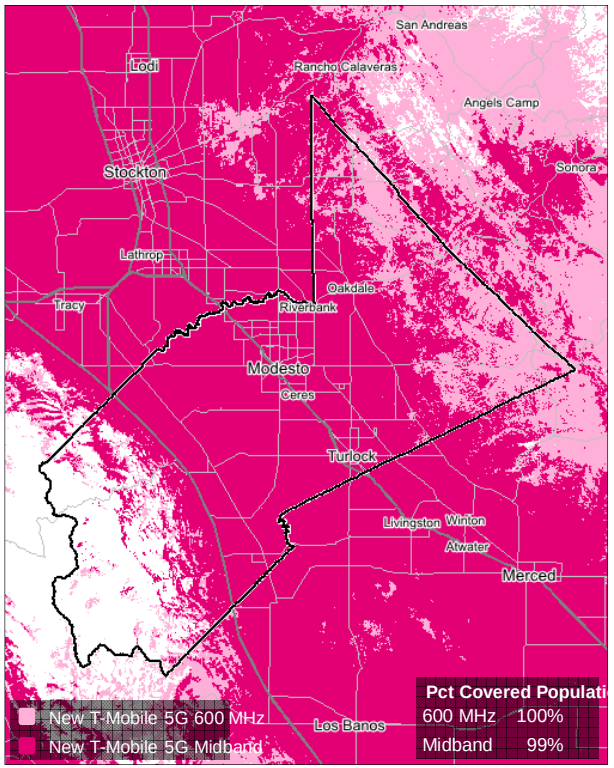
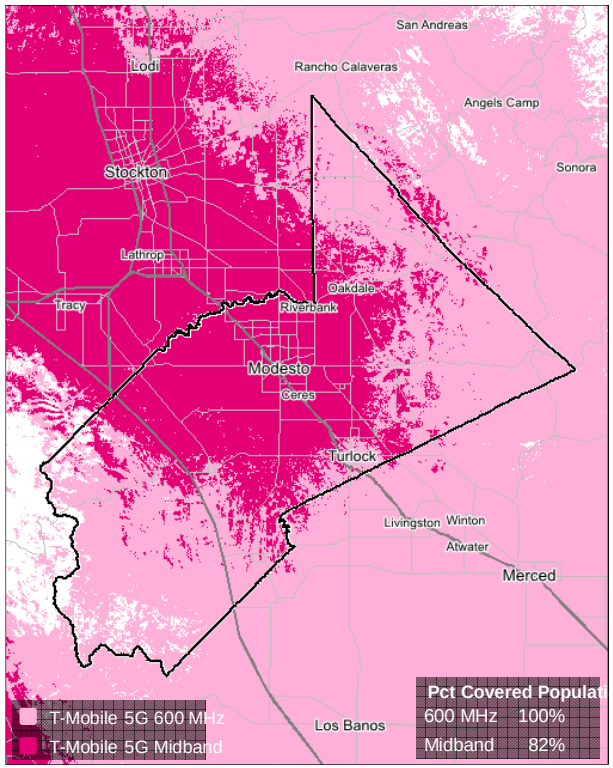


Stanislaus County: Projected 5G Coverage in 2024

T-Mobile Standalone



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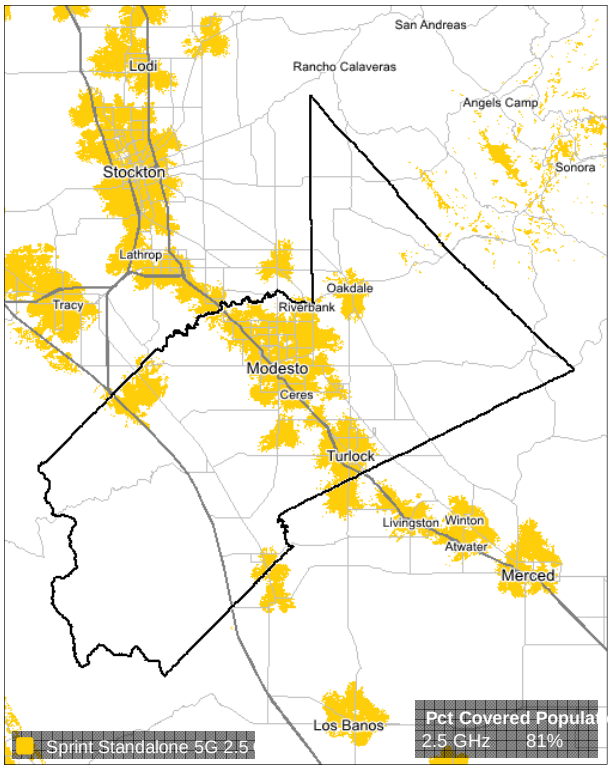

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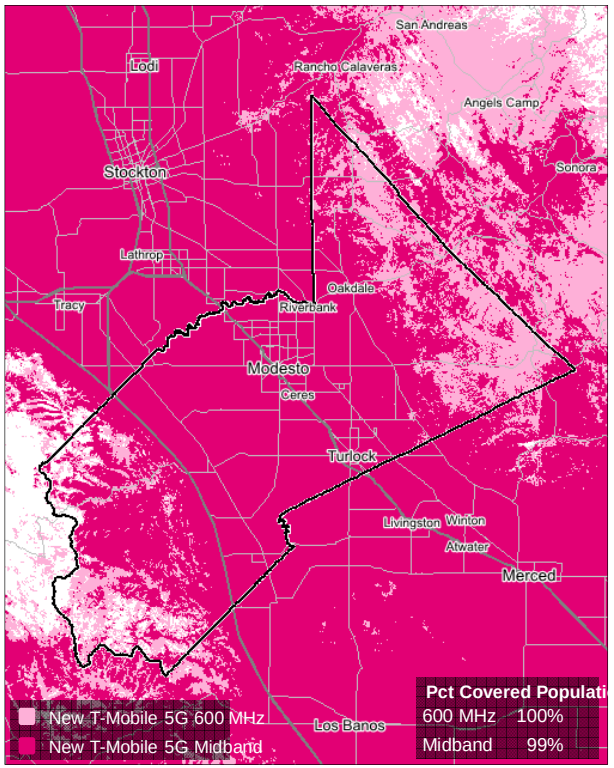
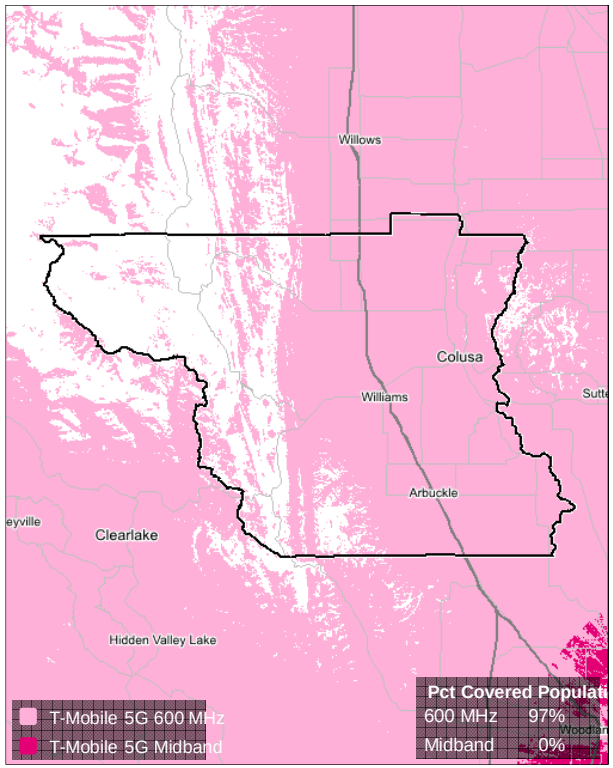


Colusa County: Projected 5G Coverage in 2021

T-Mobile Standalone



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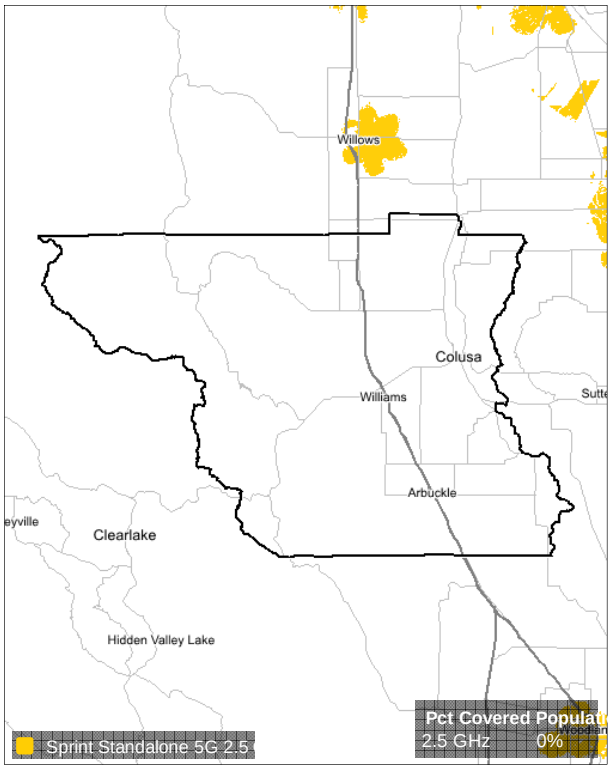

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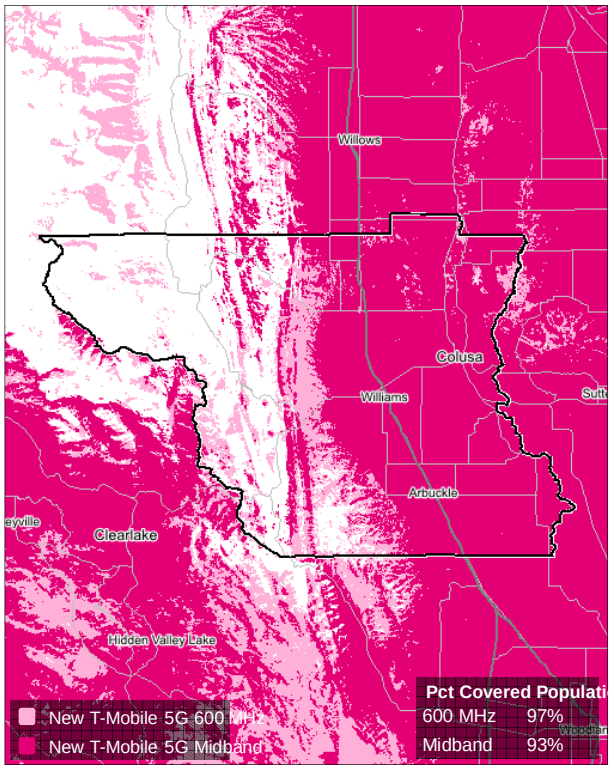
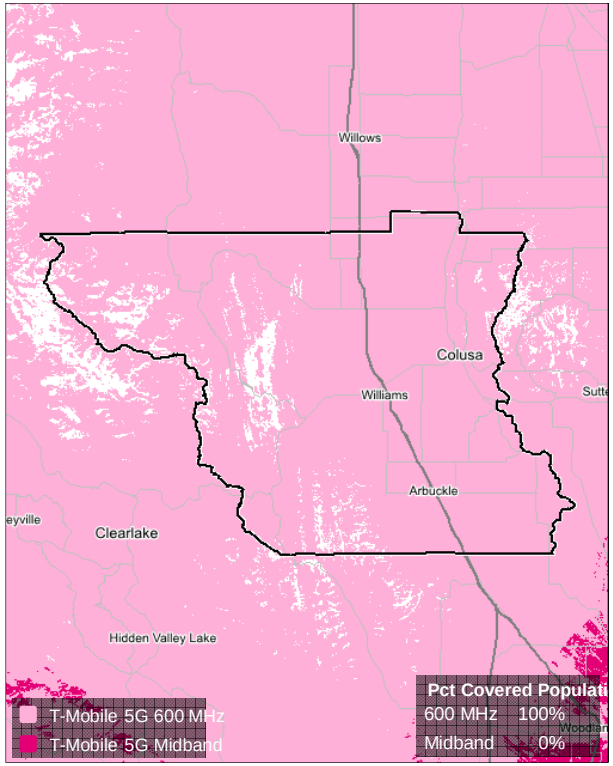


Colusa County: Projected 5G Coverage in 2024

T-Mobile Standalone



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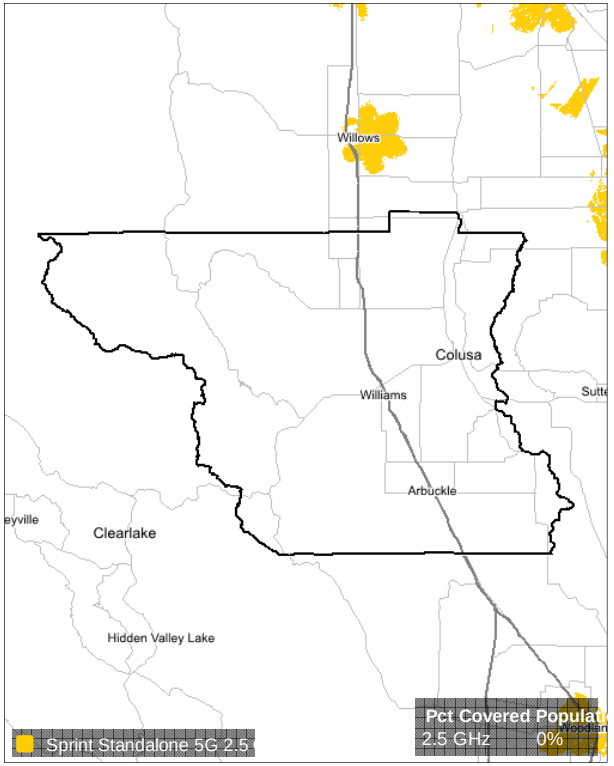

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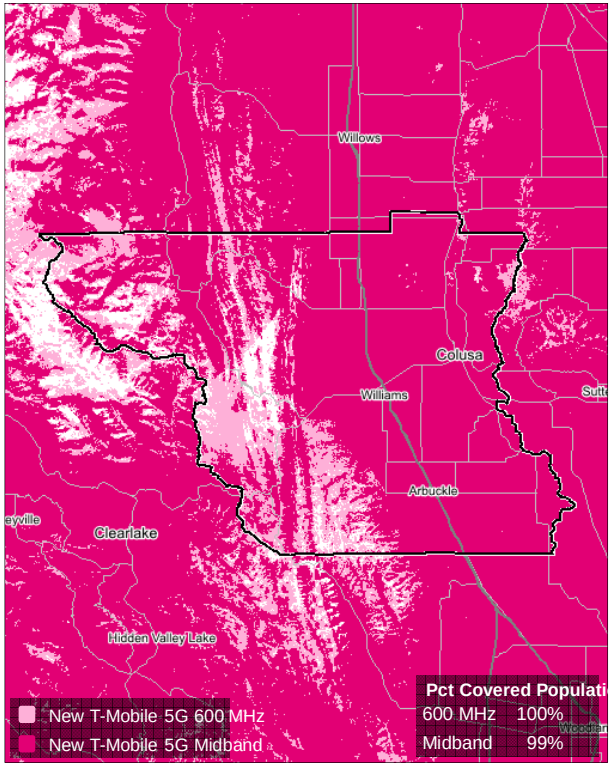
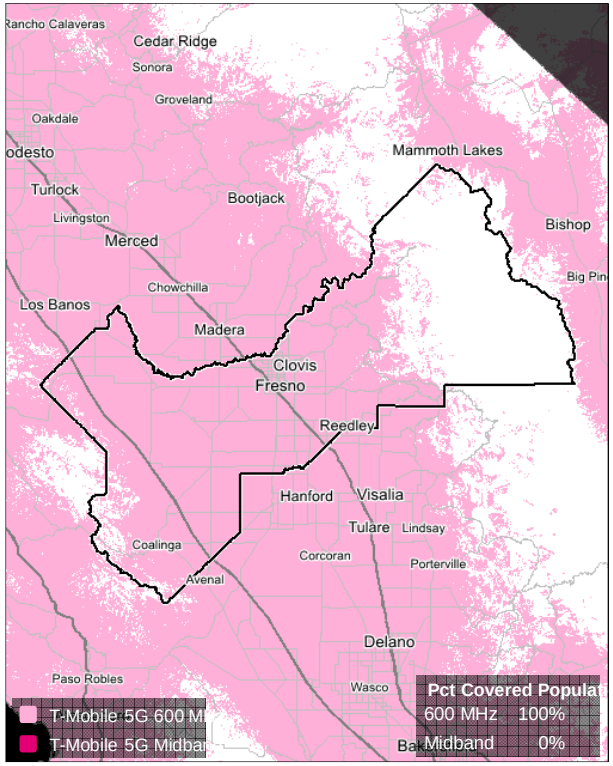


Fresno County: Projected 5G Coverage in 2021

T-Mobile Standalone



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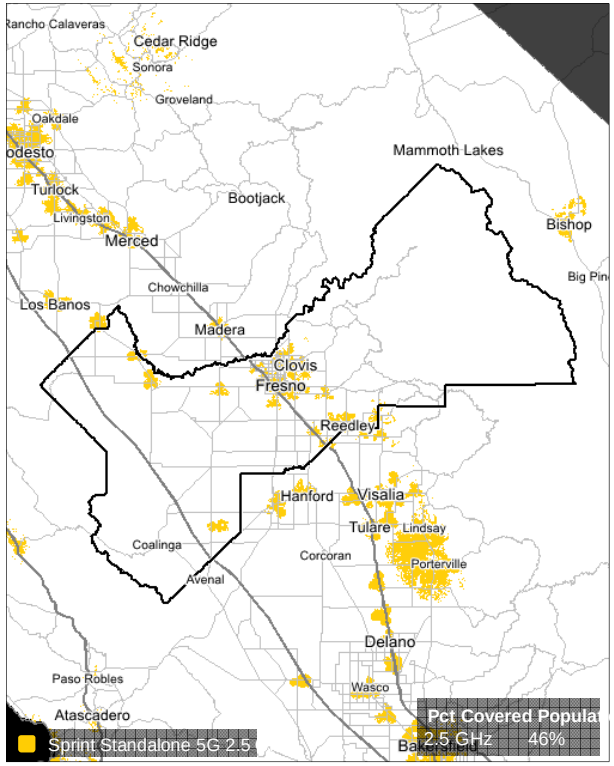

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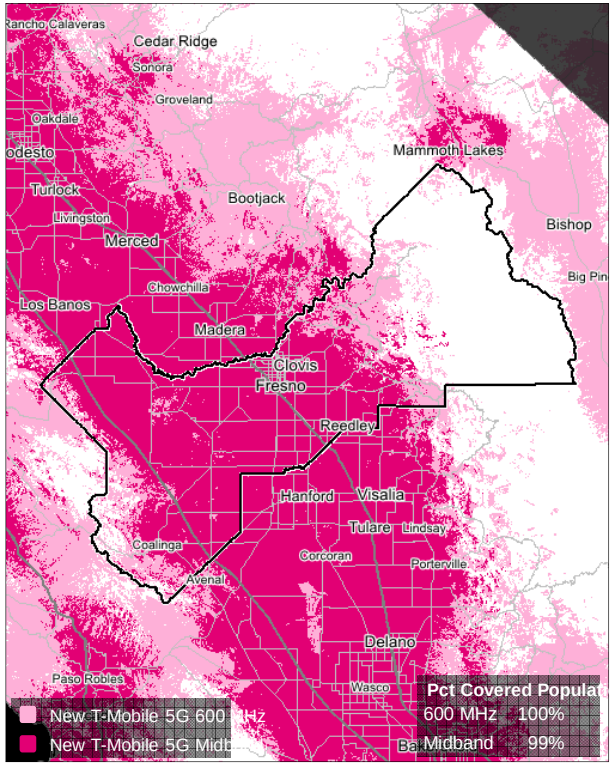
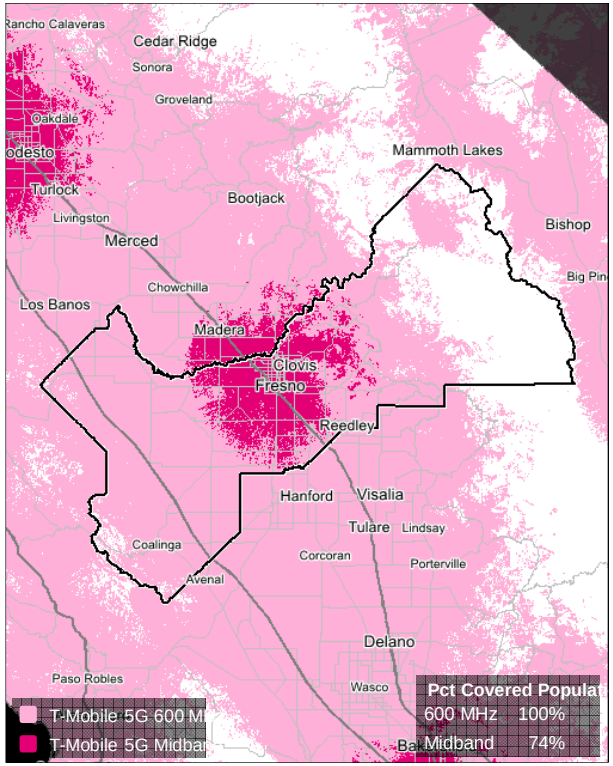


Fresno County: Projected 5G Coverage in 2024

T-Mobile Standalone



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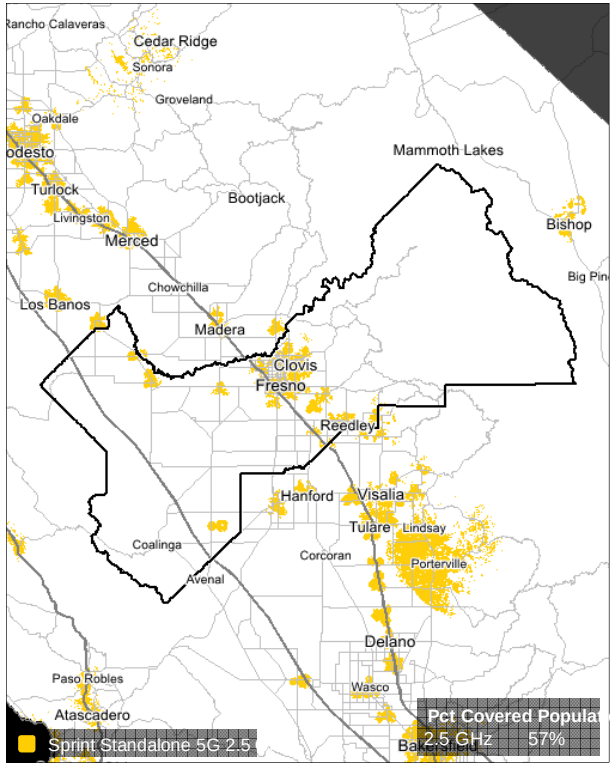

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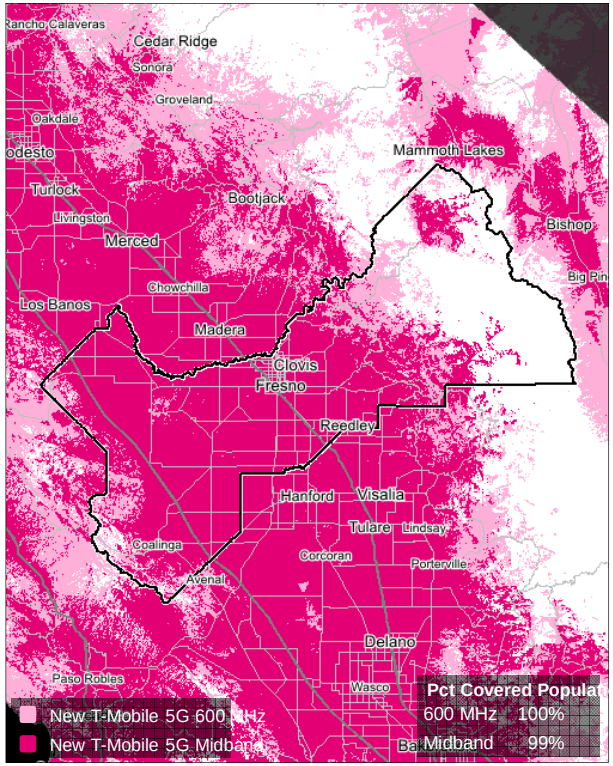
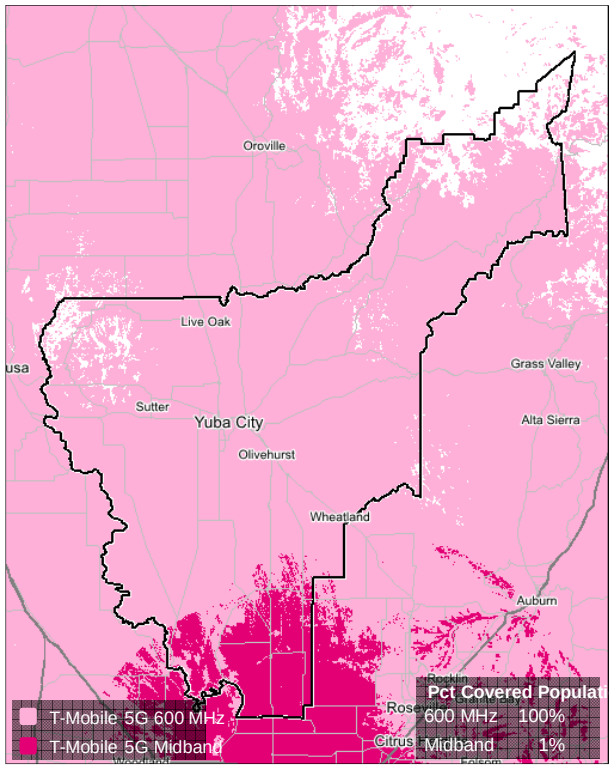


Yuba and Sutter Counties: Projected 5G Coverage in 2021

T-Mobile Standalone



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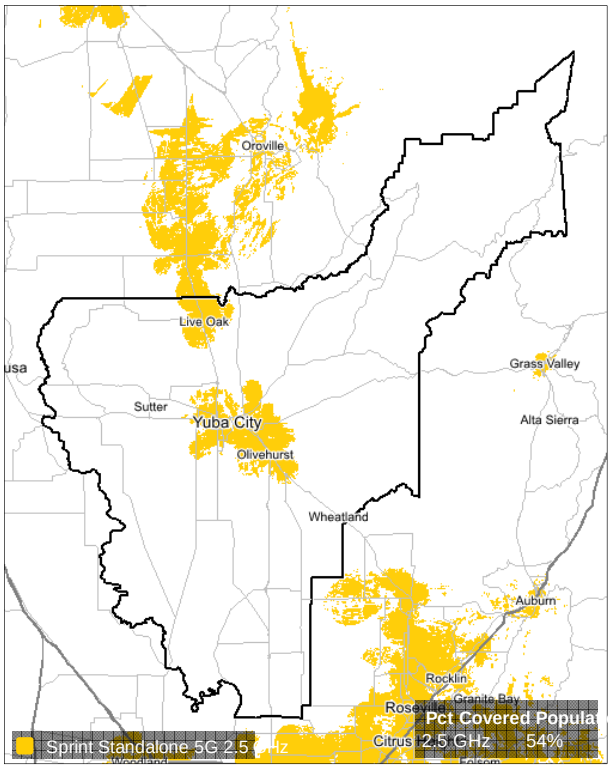
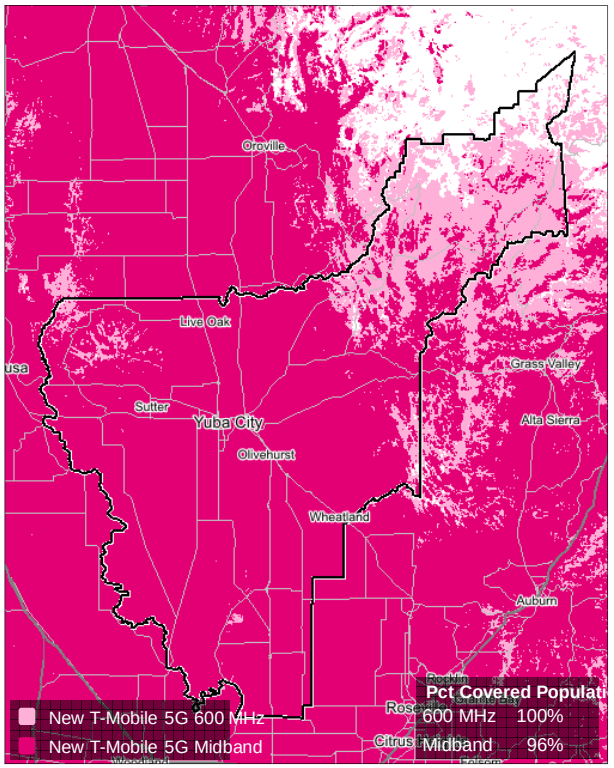
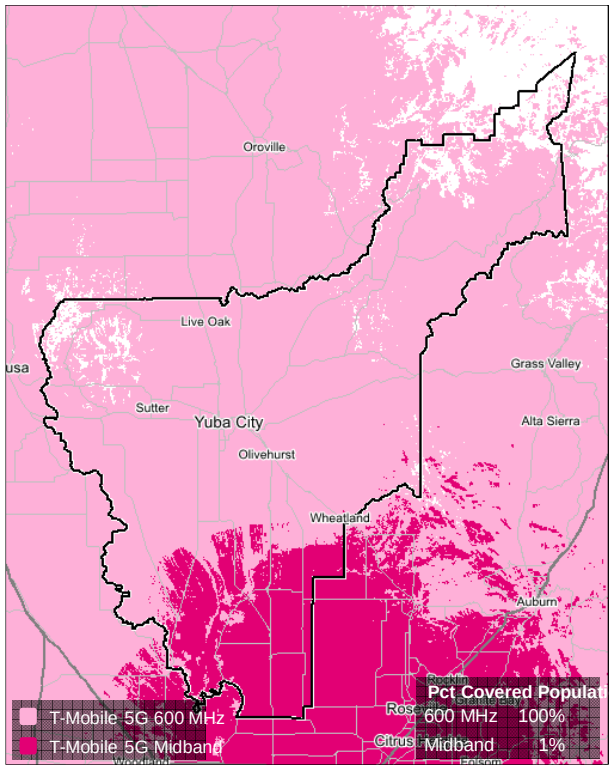


New T-Mobile

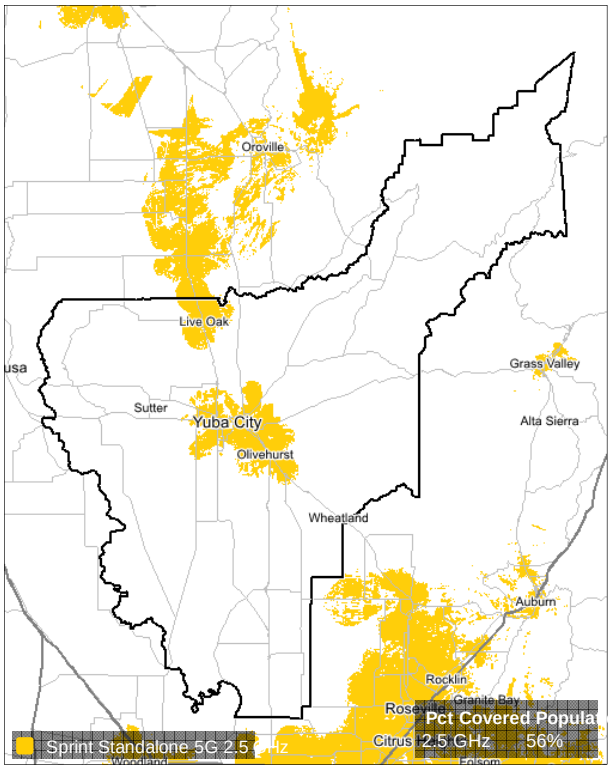


Yuba and Sutter Counties: Projected 5G Coverage in 2024

T-Mobile Standalone



Sprint Standalone



New T-Mobile