

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
Establishing the Digital Opportunity Data) WC Docket No. 19-195
Collection)
Modernizing the FCC Form 477 Data Program) WC Docket No. 11-10

FOURTH REPORT AND ORDER, DECLARATORY RULING, AND FOURTH FURTHER
NOTICE OF PROPOSED RULEMAKING

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I. INTRODUCTION

1. Accurate, granular data on where broadband internet access services are (and are not) available are indispensable to closing the digital divide. With better data, the Commission, its sister federal agencies, state, local, and Tribal governments, and other interested stakeholders can target financial resources to the communities where support is needed most. Access to high-quality broadband availability data is also important to aid consumers in making informed choices and to help inform better policymaking.

2. Starting in February 2021, the Commission embarked upon an agency-wide effort to implement a new Broadband Data Collection (BDC).¹ The BDC is a fundamental change from the Commission’s prior efforts to collect broadband data. As required by Congress in the Broadband Deployment Accuracy and Technological Availability (DATA) Act,² the Commission’s rules now require that fixed broadband service providers report broadband availability on a location-by-location basis, and that mobile wireless broadband service providers report their coverage areas using standardized propagation modeling parameters. The BDC also includes—for the first time—mechanisms for entities and individuals to challenge the data on the FCC’s new National Broadband Map (NBM), as well as requirements for the Commission to verify and audit data submitted through the new collection.

3. Many lessons have been learned since launching the BDC. Today, we take important additional steps to ensure that we continue to receive high-quality data through our data-collection efforts and improve the challenge processes which are an important part of ensuring the accuracy of the data on the map. Specifically, in this *Fourth Report and Order*, we adopt rules to codify the challenge process deadline required by the Bipartisan Infrastructure Investment and Jobs Act (IIJA),³ as well as provide a specific delegation of authority to the Office of Economics and Analytics (OEA), in coordination with certain other bureaus and offices, to conduct audits of broadband data submitted by providers as required under the Broadband DATA Act.⁴ We also make ministerial edits to the existing rules to reference the Broadband Data Collection or BDC. In the *Declaratory Ruling*, we clarify that our rules do not preclude a service provider from subsequently submitting information in a later BDC filing to demonstrate that it can now make service available to a location or area that was previously removed through the challenge, verification or audit processes. We also delegate authority to OEA, in coordination with certain other bureaus and offices, to develop and publish detailed data specifications setting out the categories of information a provider must submit when seeking to restore a previously removed location or area through a subsequent BDC filing. Finally, in the *Fourth Further Notice of Proposed Rulemaking* we seek

¹ The Commission began implementation of the BDC following receipt of appropriations to fund the data collection. See Consolidated Appropriations Act, 2021, Pub. L. No. 116-260, § 906 (2020).

² Broadband Deployment Accuracy and Technological Availability Act, Pub. L. No. 116-130, 134 Stat. 228 (2020) (codified at 47 U.S.C. §§ 641-646) (Broadband DATA Act).

³ Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 60102(h)(2)(E)(i), 135 Stat. 429, 1198 (2021) (codified at 47 U.S.C. § 642(b)(5)(C)(i)), available at <https://www.govinfo.gov/content/pkg/BILLS-117hr3684enr/pdf/BILLS-117hr3684enr.pdf> (IIJA).

⁴ 47 U.S.C. § 644(a).

comment on proposed changes to the availability data filing process, as well as possible amendments and clarifications to several of our data-validation rules.

II. BACKGROUND

4. The Commission established the FCC Form 477 data collection in 2000, which originally collected subscription and connection data for local telephone and broadband services.⁵ In 2013, the Commission updated the Form 477 requirements to begin collecting deployment data, in addition to subscribership information, from broadband providers.⁶ Each facilities-based provider of fixed broadband service was required to provide a list of all census blocks in which it made broadband service available to end users.⁷ Recognizing that more precise data on fixed and mobile broadband and voice services are critical to inform the Commission’s policymaking decisions, the Commission adopted a Further Notice of Proposed Rulemaking in 2017 seeking comment on several issues aimed at improving the quality and usefulness of the information collected in the Form 477.⁸

5. In 2019, the Commission established the Digital Opportunity Data Collection⁹ to collect more granular fixed broadband service availability data specifically targeted toward advancing the Commission’s universal service goals.¹⁰ In the *First Report and Order*, the Commission also adopted a process to begin collecting public input, which it referred to as “crowdsourcing,” to complement the availability data submitted by providers and to improve the accuracy of that information.¹¹

6. Congress passed the Broadband DATA Act in March 2020. The Act required the Commission to establish a biannual collection of granular data relating to the availability and quality of service with respect to terrestrial fixed, fixed wireless, satellite, and mobile broadband internet access service.¹² Under the Act, fixed broadband availability data must be overlaid onto the Broadband Serviceable Location Fabric (Fabric), which is “a common dataset of all locations in the United States where fixed broadband internet access service can be installed.”¹³ In addition, Congress directed the Commission to establish processes through which it can verify the accuracy of the data collected,¹⁴ and a user-friendly challenge process through which consumers, State, local, and Tribal governmental entities,

⁵ *Local Competition and Broadband Reporting*, CC Docket No. 99-301, Report and Order, 15 FCC Rcd 7717, 7719-20, para. 3 (2000).

⁶ *Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10, Report and Order, 28 FCC Rcd 9887, 9902, para. 32 (2013).

⁷ *Id.* Each provider was also required to report the maximum speed offered in each census block where it offered service, breaking out reporting for residential and nonresidential services where appropriate, and by technology. *Id.*

⁸ See *Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10, Further Notice of Proposed Rulemaking, 32 FCC Rcd 6329, 6331, para. 6 (2017).

⁹ Although initially referred to in our rules and orders as the Digital Opportunity Data Collection (DODC), herein we refer to the collection as the Broadband Data Collection or BDC. Note also that in Section III.C. below, we make permanent in our rules the name change from the DODC to the BDC.

¹⁰ See *Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program*, WC Docket Nos. 19-195, 11-10, Report and Order and Second Further Notice of Proposed Rulemaking, 34 FCC Rcd 7505, 7506, para. 2 (2019) (*First Report and Order*).

¹¹ *Id.* at 7506, para. 3.

¹² 47 U.S.C. § 642(a)(1)(A), (a)(2).

¹³ 47 U.S.C. § 642(b)(1).

¹⁴ 47 U.S.C. § 642(a)(1)(B)(i).

and other entities or individuals may submit data to the Commission to challenge the accuracy of the coverage maps, the provider availability data, or the information in the Fabric,¹⁵ among other things.¹⁶

7. In July 2020, the Commission adopted the *Second Report and Order* to align the Digital Opportunity Data Collection with the requirements of the Broadband DATA Act.¹⁷ The Commission adopted several requirements for the submission and collection of fixed and mobile availability data from Internet service providers,¹⁸ adopted the Fabric,¹⁹ and established processes for verifying fixed broadband availability data submitted by providers.²⁰ The Commission also adopted the enforcement standards outlined in the Broadband DATA Act for submitting inaccurate or incomplete data,²¹ rules for the collection of verified broadband data from governmental entities and third parties,²² and standards regarding the confidentiality and privacy of data received in the BDC and the Fabric.²³

8. Subsequently, in the *Third Report and Order*, the Commission took additional steps to ensure that the BDC yields more precise and reliable data, not only for the Commission's purposes, but for those of the public, federal, state, Tribal, and local governments, and other stakeholders.²⁴ The Commission adopted additional requirements for Internet service providers that are required to report availability data in the BDC,²⁵ including an engineering certification requirement for filings by mobile and fixed providers.²⁶ As mandated by the Act, the Commission also adopted provisions for verifying the availability data submitted by mobile providers,²⁷ and established processes for challenges to the fixed broadband availability data and Fabric data,²⁸ and mobile coverage data,²⁹ along with the creation and

¹⁵ 47 U.S.C. § 642(a)(1)(B)(iii), (b)(5)(A).

¹⁶ The Broadband DATA Act also requires the Commission to establish a process for collecting verified data for use in the coverage maps from state, local, and Tribal governmental entities, from other federal agencies, and, if the Commission deems it in the public interest, from third parties, 47 U.S.C. § 642(a)(2)(A)-(C), and to develop a process through which entities or individuals may submit specific information about the deployment and availability of broadband Internet access service in the United States on an ongoing basis. 47 U.S.C. §§ 642(a)(1)(B)(iv), 644(b). The Broadband DATA Act generally refers to this submission of data as a “crowdsourcing” process. 47 U.S.C. § 644(b).

¹⁷ See *Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program*, WC Docket Nos. 19-195, 11-10, Second Report and Order and Third Further Notice of Proposed Rulemaking, 35 FCC Rcd 7460 (2020) (*Second Report and Order*).

¹⁸ *Id.* at 7465-83, paras. 12-51.

¹⁹ *Id.* at 7484, para. 54.

²⁰ *Id.* at 7484-92, paras. 56-76.

²¹ *Id.* at 7393, para. 77.

²² *Id.* at 7494, para. 82.

²³ *Id.* at 7494-95, paras. 83-85.

²⁴ See *Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program*, WC Docket Nos. 19-195, 11-10, Third Report and Order, 36 FCC Rcd 1126 (2021) (*Third Report and Order*).

²⁵ *Id.* at 1130-44, paras. 10-41.

²⁶ *Id.* at 1144-45, para. 43. The Commission established the requirement that each mobile and fixed service provider submit certifications of the accuracy of its submissions by a qualified engineer, in addition to a certification by a corporate officer. *Id.*

²⁷ *Id.* at 1146-51, paras. 47-60.

²⁸ *Id.* at 1154-64, paras. 70-96.

²⁹ *Id.* at 1164-74, paras. 97-124.

implementation of the Fabric.³⁰ In March 2022, OEA, the Office of Engineering and Technology (OET), and the Wireless Telecommunications Bureau (WTB) adopted the *Mobile Technical Requirements Order*.³¹ The *MTR*O established technical requirements to implement the mobile challenge, verification, and crowdsourcing processes.³²

9. Based upon these rules and requirements, the Commission opened the inaugural BDC filing window on June 30, 2022, and closed the window on September 2, 2022.³³ Commission staff reviewed the data gathered through the inaugural filing window, engaged with filers to verify and validate the data submissions, prepared the data for publication and, on November 18, 2022, released a pre-production draft of the NBM.³⁴ Since that time, the Commission has released three subsequent datasets for broadband availability data as-of December 31, 2022, June 30, 2023, and December 31, 2023. The BDC system also updates the current dataset shown on the NBM on a bi-weekly basis to reflect the results of adjudicated challenges and verification inquiries.

10. Commission staff have since reviewed millions of challenges to location and availability data and conducted thousands of data verifications. Moreover, Commission staff have held hundreds of meetings with service providers, governmental entities, congressional offices, public interest groups, and other interested parties across the nation to ensure that the Commission is offering support and technical assistance to stakeholders participating in the BDC process, including more than 250 meetings with state broadband offices and other organizations representing local governments, and more than 90 meetings with Tribal entities. Staff have also responded to more than 8,000 technical assistance requests from Internet service providers and challengers.

III. FOURTH REPORT AND ORDER

A. Codifying the Adjudication Deadlines for Availability Challenges

11. In the IJA, Congress amended the Broadband DATA Act to require the Commission to resolve any challenges received as part of the BDC “not later than 90 days after the date on which a final response by a provider to a challenge to the accuracy of a map . . . is complete.”³⁵ Since the inception of the availability challenge processes, the Commission has followed this deadline. However, today we take steps to codify this deadline and memorialize the Commission’s challenge processes in the BDC rules.³⁶

³⁰ *Id.* at 1175-77, paras. 126-32. For example, the Commission adopted the definition of a “location” for purposes of the Fabric as “a business or residential location in the United States at which fixed broadband Internet access service is, or can be, installed,” along with other details about the Fabric dataset. *Id.* at 1175, para. 126.

³¹ *Establishing the Digital Opportunity Data Collection*, WC Docket No. 19-195, Order, 37 FCC Rcd 3007 (OET/OEA/WTB 2022) (*Mobile Technical Requirements Order*, or *MTR*O).

³² *Id.* at 3008, para. 1. Specifically, the Bureau and Offices adopted, among other things, a methodology for determining when the threshold to create a cognizable challenge has been met, detailed processes for mobile providers to respond to challenges, for the Commission to initiate a verification request to a mobile service provider, and for providers to respond to verification requests to confirm broadband coverage in areas they claim to have service. *Id.* at 3008, para. 2.

³³ *See Inaugural Filing Window for Broadband Data Collection has Opened; Filers May Begin Submitting Broadband Availability Data*; WC Docket Nos. 11-10 & 19-195, Public Notice, 37 FCC Rcd 7656 (BDTF June 30, 2023).

³⁴ *Broadband Data Task Force Releases Pre-Production Draft of the National Broadband Map; Announces the Start of the Broadband Availability Challenge Processes*, WC Docket Nos. 11-10 & 19-195, Public Notice, 37 FCC Rcd 13348 (BDTF/WTB/WCB/OEA/CGB Nov. 18, 2022).

³⁵ IJA § 60102(h)(2)(E)(i).

³⁶ These rule amendments governing the time frame for Commission action are exempt from the notice-and-comment requirements of the Administrative Procedure Act (APA) as “rules of agency organization, procedure, or practice.” 5 U.S.C. § 553(b)(A).

12. The following paragraphs describe how the Commission has implemented this 90-day deadline for processing fixed and mobile service challenges, and how we will amend our rules to reflect these existing practices and the minor modifications to those practices. For each type of challenge, we indicate the date on which we deem a provider's response to the challenge to be "final" and "complete" for purposes of triggering the 90-day deadline required by the IJA.³⁷ As set forth in the *Fourth Further Notice of Proposed Rulemaking* below, we tentatively conclude and seek comment on whether this deadline should apply to fixed and mobile availability challenges only, and not to challenges to data in the Fabric.³⁸

13. *Fixed Service Challenges.* For challenges to the accuracy of fixed broadband availability data and coverage maps, the Commission's rules currently provide that "within 60 days of receiving an alert" to a challenge, "a provider shall reply in the portal by: (i) [a]ccepting the allegation(s) raised by the challenger . . . or (ii) [d]enying the allegation(s) raised by the challenger, in which case the provider shall provide evidence . . . that the provider serves (or could and is willing to serve) the challenged location."³⁹ If the provider accepts the allegations raised by the challenger, the provider must "submit a correction for the challenged location in the online portal within 30 days of its portal reply."⁴⁰ The rules state that a provider's failure to respond to the challenge within the applicable timeframe "shall result in a finding against the provider."⁴¹ "If the provider denies the allegation(s) raised by the challenger," the rules state that "the provider and the challenger shall have 60 days after the provider submits its reply to attempt to resolve the challenge."⁴² The rules further provide that "[i]f the parties are unable to reach consensus within 60 days after submission of the provider's reply in the portal, then the affected provider shall report the status of efforts to resolve the challenge in the online portal, after which the Commission[] will review the evidence and make a determination, either: (i) [i]n favor of the challenger, in which case the provider shall update its [BDC] information within 30 days of the decision; or (ii) [i]n favor of the provider, in which case the location will no longer be subject to the 'in dispute/pending resolution' designation on the coverage maps."⁴³

³⁷ Section 1.4 of the Commission's rules governs the computation of time for the availability challenge adjudication deadline. For the first day of the 90-day period, section 1.4(c) of the Commission's rules provides that "[u]nless otherwise provided, the first day to be counted when a period of time begins with the occurrence of an act, event or default is the day after the day on which the act, event or default occurs." 47 CFR § 1.4(c). For the last day of the period, section 1.4(d) of the Commission's rules provides that "[u]nless otherwise provided, when computing a period of time the last day of such period of time is included in the computation, and any action required must be taken on or before that day." *Id.* § 1.4(d). In addition, under section 1.4(j) of the Commission's rules, "[i]f a rule or order of the Commission specifies that the Commission must act by a certain date and that date falls on a holiday, the Commission action must be taken by the next business day." *Id.* § 1.4(j).

³⁸ See Section V.B.2, *infra*.

³⁹ 47 CFR § 1.7006(d)(3). The initial 60-day period for a provider response begins when the provider receives an alert in the BDC system of an accepted challenge. *Id.* The provider may not receive an alert on the same day that a challenge is filed, as Commission staff perform an initial review of filed challenges to ensure the challenge includes required information before accepting the challenge in the BDC system and sending an alert to the challenged provider.

⁴⁰ 47 CFR § 1.7006(d)(3)(i).

⁴¹ 47 CFR § 1.7006(d)(4). This finding will result in mandatory corrections to the provider's BDC data. *Id.* ("Providers shall submit any such corrections within 30 days of the missed reply deadline or the Commission will make the corrections on its own and incorporate such change into the coverage maps.").

⁴² 47 CFR § 1.7006(d)(3)(ii).

⁴³ 47 CFR § 1.7006(d)(6). A failure by the provider to submit the status report required under the rule is considered an automatic concession of the challenge by the provider, in which case the provider must submit a correction for the challenged location within 30 days of the status report deadline or else Commission staff will correct the data to reflect the conceded challenge. See *id.* § 1.7006(d)(4), (d)(6).

14. To codify the requirements of the IJA, we amend our rules to state that in cases where a fixed broadband provider disputes the allegations raised by the challenger, the response from the provider will be final and complete when the provider reports on the status of its efforts to resolve the challenge, at which time, the 90-day deadline for adjudication of the challenge will begin to run. For example, if a consumer submits a challenge to a fixed provider's availability data on February 28 and, after initial review, Commission staff accepts the challenge and alerts the provider (via the BDC system) of the challenge on March 1, the service provider would have until April 30 to either concede or dispute the challenge allegations (by submitting an "initial response" to the challenge in the BDC system). If the provider disputes the challenge allegation on April 30, then the parties would have until June 29 to attempt to resolve the challenge and for the service provider to report on the outcome of those discussions by submitting a "final response" to the challenge in the BDC system.⁴⁴ This status report is the "final response by [the] provider."⁴⁵ Accordingly, if the provider continues to dispute the challenge in its final response (i.e., the challenge has not been resolved by the parties), the 90-day deadline will commence once the provider submits its final response. If the provider submits its final response on the deadline of June 29, Commission staff would thus be required to adjudicate the challenge no later than September 27.⁴⁶

15. The only challenges that require FCC adjudication are those that the challenged provider does not concede and for which the challenger and the challenged provider are unable to reach a consensus.⁴⁷ We therefore find that the deadline for FCC action most appropriately begins once the provider has submitted its final response reporting on the status of the parties' efforts to resolve a disputed challenge.⁴⁸ Starting the 90-day period when a provider reports on the status of the parties' efforts to resolve the challenge, and not earlier, is consistent with the statutory objective that the adjudication period begin "after the date on which a final response by a provider to a challenge to the accuracy of a map . . . is complete."⁴⁹ We find that this process will also help the Commission adjudicate challenges efficiently because Commission staff will be able to begin the process of review and adjudication as soon as they have information on the outcome of the dispute resolution process.

16. The process we outline above is largely consistent with current Commission practice; however, we modify the existing process in two respects. First, the 90-day deadline for Commission adjudication of a fixed challenge will begin on the day after the service provider submits the status report, regardless of whether that report is provided on or before the 60th day allowed for under the rules. Our

⁴⁴ While a challenger and a service provider may use the full 60 days afforded under the rules to attempt to resolve the challenge, there may be cases in which the parties do not require the full amount of time. In such cases, the challenged service provider may submit its final response prior to the end of the second 60-day period.

⁴⁵ IJA § 60102(h)(2)(E)(i).

⁴⁶ The dates referenced above are merely illustrative. Parties are encouraged to familiarize themselves with the Commission's rules related to the computation of time for Commission proceedings. See 47 CFR § 1.4. The Broadband Data Task Force has previously published a BDC Help Center article setting forth the process for adjudication of a fixed availability challenge. See FCC, What to Expect after Filing an Availability Challenge, <https://help.bdc.fcc.gov/hc/en-us/articles/10476068909467-What-to-Expect-after-Filing-an-Availability-Challenge> (last updated Aug. 29, 2023).

⁴⁷ 47 CFR § 1.7006(d)(6). In cases where a fixed broadband provider either submits notice that it is conceding a challenge or fails to respond to a challenge, the challenge is considered "resolved" when those actions occur, after which the challenged provider files corrected data into the BDC. *Id.* § 1.7006(d)(3)(i), (d)(4).

⁴⁸ We note that, in the event that a provider fails to submit a status report by the deadline set forth in section 1.7006(d)(6), this failure is treated as an automatic concession of the challenge, in which case FCC intervention is not needed and the provider is required to update its data, or have its data updated by staff, within 30 days thereafter. See *id.* § 1.7006(d)(4).

⁴⁹ IJA § 60102(h)(2)(E)(i).

former practice was to begin the 90-day period on the day after the deadline for submission of the status report, even when the challenged provider submits the report prior to the deadline. Based on the Commission’s experience adjudicating challenges, this change in our process is appropriate in order to more expeditiously adjudicate fixed challenges when a final status report is filed prior to the end of the full 60-day period. Second, we clarify that when a provider corrects or updates its final response before the end of the 60-day resolution period, the adjudication period will restart upon the date of the recertification of the final response (unless the Commission has already adjudicated the challenge prior to the reversion of the final response).

17. *Mobile Service Challenges.* The Commission’s rules provide that, for areas with a cognizable challenge to the accuracy of mobile broadband data and coverage maps, “providers either must submit a rebuttal to the challenge within a 60-day period of being notified of the challenge or concede and have the challenged area identified on the mobile coverage map as an area that lacks sufficient service.”⁵⁰ The rules also provide that “[i]f needed to ensure an adequate review, [OEA] may also require that the provider submit other data in addition to the data initially submitted”⁵¹ This supplemental data must be submitted within 60 days of OEA’s request.⁵²

18. We amend our mobile service challenge rules to provide that, when a mobile provider disputes a challenge, the provider’s response will be final and complete on the 60th day after the provider is notified of the challenge (i.e., the deadline for submitting challenge rebuttal data).⁵³ The 90-day adjudication deadline required under the IIJA will begin to run on the day after the deadline for submitting the challenge rebuttal data, and this will also apply in cases where a provider responds to a challenge sooner than 60 days after it is notified of the challenge. In cases where Commission staff request supplemental data from a provider after receiving the provider’s initial response, the adjudication period will restart the day after the deadline by which the supplemental data is due to the Commission (within 60 days of the request for supplemental data). Initiating the adjudication period the day after the deadline for submitting the challenge rebuttal data, or the day after any supplemental data requested by staff is due, will ensure that the Commission has sufficient information to adjudicate challenges and will create administrative efficiencies by synchronizing the timing for resolving challenges with the monthly notifications we issue to providers regarding the status of challenged areas. We recognize that we are adopting different procedures for calculating the adjudication deadline for mobile availability challenges than for fixed challenges. However, this difference is justified because the data involved in submitting fixed and mobile challenges differ considerably, as do the methodologies for staff review and adjudication of fixed and mobile challenges. Mobile challenges are created through on-the-ground speed test data and, in most cases, mobile service providers respond to challenges using similar on-the-ground speed test data—both of which are submitted into the BDC system in a structured format. The BDC system performs analyses of these speed test results based upon hexagonal areas, and Commission staff use the results of these analyses to determine whether or not a challenge should be upheld or overturned. In contrast, fixed availability challenges are based upon a variety of Challenge Category Codes, with a

⁵⁰ 47 CFR § 1.7006(e)(3), (f)(4). The Commission referred to a “cognizable challenge” as one requiring a provider response. *Third Report and Order*, 36 FCC Rcd at 1168, 1172, paras. 105, 120. In the *Mobile Technical Requirements Order*, OEA and WTB adopted methodologies for determining whether the thresholds for a cognizable challenge have been met and the boundaries of the challenged area. *Mobile Technical Requirements Order*, 37 FCC Rcd at 3036-41, paras. 50-56. The 90-day deadline will apply for all challenges to mobile broadband coverage maps, including challenges based on lack of service or on poor service quality such as slow delivered user speed. 47 CFR § 1.7006(e).

⁵¹ 47 CFR § 1.7006(e)(4), (f)(5).

⁵² *Third Report and Order*, 36 FCC Rcd at 1169, 1174, paras. 108, 122.

⁵³ Similar to the fixed challenge process, in cases where a mobile broadband provider either concedes a challenge or fails to respond to a challenge, the challenge is considered “resolved” when those actions occur, after which the challenged provider files corrected data into the BDC. 47 CFR § 1.7006(e)(5), (f)(6).

large degree of variation in the types of evidence and information submitted both to create a challenge as well as by fixed providers in seeking to overturn challenges. We note that, under the process we adopt today, mobile challenges will be resolved considerably more quickly in most instances than the time allowed under the deadline due to the methodology used to review and process mobile challenge data. Accordingly, we believe that this different treatment of mobile and fixed challenge review and adjudication is warranted.

B. Audits

19. *Background.* The Broadband DATA Act requires the Commission to verify the accuracy of the data reported by broadband Internet access service providers.⁵⁴ The Act also requires that the Commission conduct regular audits of the information submitted by providers in the BDC.⁵⁵ Under the Commission’s rules, the Commission must “conduct regular audits of the information submitted by providers in their [BDC] filings,” which “(1) [m]ay be random, as determined by the Commission; or (2) [c]an be required in cases where there may be patterns of filing incorrect information, as determined by the Commission.”⁵⁶ In the *Second Report and Order*, the Commission determined that it will audit availability data and other information submitted by all types of providers of broadband Internet access service (e.g., mobile and terrestrial fixed wireless, fixed wired, and satellite).⁵⁷ The Commission further specified that audit tools will include field surveys, investigations, and annual random audits to verify data accuracy, and that audits may additionally be initiated based on an unusual number of crowdsourced complaints.⁵⁸

20. The Commission has implemented its statutory obligations to verify the accuracy of the data reported in biannual BDC submissions in a variety of ways. As an initial matter, the Commission developed an entirely new system for ingesting, validating, and aggregating provider availability data for publication on the NBM. The new BDC system requires all data to be submitted in a structured format according to rigorous data specifications⁵⁹ and imposes comprehensive data-quality checks at the time data is uploaded and submitted into the BDC. These checks identify either “hard” errors that require a correction by the filer prior to certifying and submitting the data, or “soft” flags that alert the filer to a potential anomaly or error and requires an explanation if no change to the data is made. These measures ensure that service providers file higher-quality data.

21. After the close of each biannual BDC filing window, Commission staff conduct verifications of the submitted data to test their accuracy and reliability. These efforts include: review of the “soft” system flags, supporting data submitted in conjunction with availability data, and other filer data to identify potential anomalies or errors; outreach to filers based upon these reviews requesting their correction or explanation of the data; and vetting of subsequent changes to or explanations of the data by providers. Commission staff have performed several thousand data verifications using this process. In addition, Commission staff have initiated formal verification inquiries of the data submitted by certain fixed and mobile broadband providers. In response to such inquiries, providers have been required to submit explanation information relevant to the inquiry, such as network infrastructure data for the targeted verification area.

⁵⁴ 47 U.S.C. § 642(a)(1)(B)(i).

⁵⁵ 47 U.S.C. § 644(a).

⁵⁶ 47 CFR § 1.7006(a)(1)-(2).

⁵⁷ *Second Report & Order*, 35 FCC Rcd at 7486, para. 60.

⁵⁸ *Id.*

⁵⁹ Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data at 1 (Mar. 30, 2023).

22. In addition to these verifications, Commission staff have initiated audits of discrete coverage areas within the service availability reported by several mobile service providers. OEA and WTB staff have conducted these audits in coordination with the Broadband Data Task Force, Enforcement Bureau, OET, and Commission leadership. Commission staff have conducted two variations of mobile audits to date. The first involve on-the-ground testing of mobile service performance in resolution 8 hexagonal cells (“hex areas”) within a single county.⁶⁰ Commission staff, in coordination with its third-party contractors, selected the target county to audit and conducted on-the-ground testing based upon a variety of factors, including the number of service providers who claim some amount of network coverage in the county, the number of accessible hex areas in the county, the population density of the county, and the marginal coverage in the area. The second variation of audits involves requests for infrastructure data from service providers for a handful of randomly selected counties. These counties were selected using several of the factors used to identify areas for on-the-ground testing as well as other factors, such as the geography and topography of the counties.

23. To standardize the types of information the Commission requests through formal verification inquires and the second variation of mobile audits, as well as to provide transparency and certainty to service providers, the Commission has released an updated data specification for provider infrastructure data submitted in the challenge, verification, and audit processes.⁶¹ This data specification sets forth standardized, structured data that all service providers (fixed wireline, terrestrial fixed wireless, mobile wireless, and satellite) should be prepared to submit in response to verification inquiries and audits (as well as in response to challenges in instances where mobile wireless service providers are able to respond to mobile challenges with infrastructure data).

24. *Discussion.* Notwithstanding the clear mandates in the Broadband DATA Act, the *Second Report and Order*, and the Commission’s rules that we verify and audit availability data as part of the BDC, we take this opportunity to clarify the procedural mechanics of our audit rules. Accordingly, we begin by formally delegating authority to OEA, in coordination with WTB, the Wireline Competition Bureau (WCB), and the Space Bureau (SB), to continue to perform audits using the processes and data specifications currently available. We also reaffirm the authority of OEA, in coordination with the relevant bureaus and offices, to continue performing fixed and mobile data verifications using existing methods or any other methods and data specifications it may develop in the future for verifying availability data.⁶² We direct OEA, in coordination with WTB, WCB, and SB, to establish methodologies

⁶⁰ The Commission associates the location of each valid speed test with a particular underlying hexagonal cell geography based on the H3 geospatial indexing system. H3 is an open-source project developed by Uber Technologies, Inc. that overlays the globe with hexagonal cells of different sizes at various resolutions, from zero to 15. Isaac Brodsky, *H3: Uber’s Hexagonal Hierarchical Spatial Index*, (June 27, 2018), <https://eng.uber.com/h3/>. A single resolution 8 hexagonal cell has an area of approximately 0.7 square kilometers. *Mobile Technical Requirements Order*, 37 FCC Rcd at 3031-32, para. 41.

⁶¹ Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>. Certain of these data are also required to be maintained and produced upon request as a condition of the limited waiver of the professional engineering certification requirement in our rules. See *Establishing the Digital Opportunity Data Collection; Competitive Carriers Association and USTelecom – The Broadband Association Petition for Extension of Waiver Regarding the Requirement for a Certified Professional Engineer to Certify Broadband Data Collection Maps*, WC Docket No. 19-195, Order, DA 23-1123, at 1, 9-10 paras. 1, 17-20 (WCB/OEA/WTB Nov. 30, 2023) (*PE Waiver Extension Order*).

⁶² We previously “direct[ed] OEA to update the coverage maps as quickly as possible after the biannual submission deadlines and to update the maps on a continuing basis based upon the outcomes of challenges *and Commission investigations and inquiries, including those informed by verified data* and crowdsourced data as that information becomes available.” *Second Report and Order*, 35 FCC Rcd at 7493-94, para. 80 (emphasis added); see also *Second Report and Order*, 35 FCC Rcd at 7503, para. 103 (finding that the Commission’s requirements to verify the accuracy and reliability of the broadband Internet access service availability data submitted by providers is a distinct process from other requirements such as crowdsourcing and the challenge process, and thus the verification

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and procedures for selecting service providers (either fixed or mobile) and targeted locations or areas subject to random audit, as well as for determining “patterns of filing incorrect information” sufficient to warrant an audit. In the latter case—as well as in the case of verification inquiries—the methodology(ies) will continue to be based on anomalies or inconsistencies in the data a provider submits as part of its biannual submission and/or information submitted through, or behavior demonstrated in, the availability challenge processes or crowdsourcing submissions.

25. This delegation of authority specifically includes the authority to identify and select specific providers and geographic areas or Broadband Serviceable Locations subject to formal verification or audit. As part of this delegation, OEA is vested with authority to develop processes or procedures for randomly selecting geographic areas or locations to audit, as well as for determining “cases where there may be patterns of filing incorrect information,” consistent with our rules.⁶³ OEA, in coordination with WTB, WCB, and SB, is best qualified to make individualized determinations of the areas or locations that should be audited (subject to the conditions in section 1.7006(a) outlined above), given its subject-matter expertise in reviewing the underlying availability data and its understanding of resources (e.g., budget, staff time) available to perform audits.

26. We further delegate authority to OEA, in coordination with WTB, WCB, and SB (as appropriate), to collect all data required to conduct a thorough and complete audit, including, but not limited to, the information set forth in the BDC Infrastructure Data Specification,⁶⁴ on-the-ground mobile performance data (in the case of audits of mobile coverage areas), and any other data OEA determines are necessary to assess an entity’s claims that it makes service available to audited locations or areas. This authority permits OEA, in coordination with the relevant bureaus and offices, to use third-party contractors to gather and analyze the collected data, subject to the requirement that Commission staff supervise and direct any third-party contractors used to gather or analyze the data.

C. Ministerial Changes

27. The part 1, subpart V rules in Title 47 refer to the “Digital Opportunity Data Collection” or “DODC.”⁶⁵ This is the name formerly given to the data collection that the Commission now refers to as the Broadband Data Collection or BDC. In this Order, we make ministerial changes to our rules to replace references to the “Digital Opportunity Data Collection” or “DODC” with references to the Broadband Data Collection or BDC, as appropriate. These rule amendments are exempt from notice-and-comment requirements of the APA⁶⁶ because they are procedural rules that “do not themselves alter the rights or interests of parties.”⁶⁷ Notice and comment for these rule changes are also unnecessary because the edits are non-substantive and have no impact on regulated parties or the public.⁶⁸

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processes are intended to be in addition to other requirements). We ratify here the authority of OEA, in coordination with WCB, WTB, and SB, to continue to use system validations, pre-publication data reviews, data specifications, and other mechanisms to investigate and inquire into fixed and mobile availability data as part of the Commission’s verification efforts.

⁶³ See 47 CFR § 1.7006(a).

⁶⁴ Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

⁶⁵ See 47 CFR §§ 1.7004-1.7010.

⁶⁶ See 5 U.S.C. § 553(b)(A).

⁶⁷ See *Mendoza v. Perez*, 754 F.3d 1002, 1023 (D.C. Cir. 2014).

⁶⁸ See 5 U.S.C. § 553(b)(B).

IV. DECLARATORY RULING

A. Restoration of Locations and Areas Removed Through Availability Challenges, Audits and Verifications

28. We next issue a declaratory ruling clarifying that providers must submit more detailed data in subsequent BDC filings when claiming availability for locations or areas that were previously removed through the challenge, verification or audit processes. In doing so, we specify the types of existing data specifications for demonstrating availability at previously removed locations or areas for certain types of challenges. The Broadband DATA Act required that the Commission adopt rules for “the biannual collection and dissemination of granular data . . . relating to the availability and quality of service with respect to terrestrial fixed, fixed wireless, satellite, and mobile broadband internet access service,”⁶⁹ and “processes through which the Commission can verify the accuracy of data” submitted by broadband service providers.⁷⁰ The Broadband DATA Act recognizes that, due to ongoing changes in the availability of Internet services across the United States and its Territories, the Broadband Data Collection is an iterative process and that the NBM must be updated regularly with refreshed data to reflect the on-the-ground reality of mass-market broadband availability. Providers must therefore report availability data as of June 30 and December 31 of each year,⁷¹ which may include expanded coverage since the provider’s last filing (due, for example, to build-out of additional infrastructure since the previous submission) and, in some cases, reduced coverage (due, for example, to the retirement of discontinued technologies or infrastructure, or to network capacity constraints preventing the connection of new customers).

29. We clarify that in cases where a provider’s claimed availability at a location (in the case of a fixed provider) or in an area (in the case of a mobile provider) is removed from the NBM as the result of a lost or conceded challenge, a verification inquiry, or an audit (together, a “Removed Location or Area”), our rules require the provider to submit updated availability data in a subsequent BDC filing if it can demonstrate that it can make service available to the Removed Location or Area.⁷² We interpret the Commission’s rules, as well as our statutory obligation to verify the accuracy of the data displayed on the NBM, to require a restoration process for Removed Locations or Areas in order to ensure that the data on the NBM remain accurate and to improve the usefulness of the coverage maps. In so doing, we delegate authority to OEA, in coordination with WCB, WTB, OET, and SB, to develop detailed data specifications setting out the categories of information a provider must submit when seeking to restore a previously Removed Location or Area through a subsequent BDC filing.

30. If a provider’s reported availability at a location or in an area is removed from the NBM as the result of a verification, audit, or challenge, a Removed Location or Area is created in the BDC system. The ways in which these Removed Locations or Areas are generated is described below.

31. *Verifications and Audits.* As discussed above, the Commission has robustly implemented its statutory obligations to verify the accuracy and reliability of broadband availability data that providers submit to the Commission and to audit provider-reported availability data.⁷³ If, in response to a Commission-initiated verification or audit, a provider is unable to submit sufficient information

⁶⁹ 47 U.S.C. § 642(a)(1)(A); *see also* 47 CFR § 1.7004 (establishing the scope, content, and frequency of BDC filings).

⁷⁰ 47 U.S.C. § 642(a)(1)(B)(i); *see also* 47 CFR § 1.7006 (establishing the Commission’s data verification efforts).

⁷¹ 47 CFR § 1.7004(b). BDC filings are due each year on or before March 1 (reporting data as of December 31 of the prior year) and September 1 (reporting data as of June 30 of the current year). *Id.*

⁷² Nothing in this Declaratory Ruling diminishes or changes the process whereby challenge, verification, and audit results “persist” as against future iterations of a provider’s BDC availability data until such time as the provider makes a sufficient evidentiary showing to warrant restoration of the Removed Location or Area.

⁷³ *See supra* paras. 19-26.

supporting its reported coverage at a location or area, the verification or audit may lead to a Removed Location or Area, which would include all or part of the area subject to the verification or audit.⁷⁴

32. *Service Availability Challenges.* The Broadband DATA Act directed the Commission to “establish a user-friendly challenge process through which consumers, State, local, and Tribal governmental entities, and other entities or individuals may submit coverage data to the Commission to challenge the accuracy of” the information on the NBM.⁷⁵ In the *Third Report and Order*, the Commission adopted rules establishing the fixed availability challenge process, including the procedures the Commission uses to resolve fixed availability challenges.⁷⁶ Similarly, the Commission adopted rules for challenges to mobile wireless coverage data based upon lack of service or poor service quality, such as slow delivered speeds.⁷⁷

33. A service availability challenge may result in a Removed Location or Area for several reasons. First, a provider may affirmatively concede a challenge.⁷⁸ Second, a provider’s failure to respond to a challenge within the applicable timeframes results in a finding against the provider, thereby leading to an automatic concession.⁷⁹ An automatic concession may be (i) intentional, because the provider agrees with the challenger and chooses to allow the challenge to automatically result in a finding against that provider or (ii) unintentional, due to a missed deadline, a misunderstanding of the BDC processes, or some other act or omission.⁸⁰ Finally, a fixed or mobile availability challenge could be

⁷⁴ See 47 CFR § 1.7009(d).

⁷⁵ 47 U.S.C. § 642(b)(5). The Act also mandates that the Commission “include a process for verifying the data submitted through the challenge process in order to ensure the reliability of that data.” *Id.* § 642(b)(5)(B)(ii).

⁷⁶ *Third Report and Order*, 36 FCC Rcd at 1154-61, 1162-63, paras. 70-88, 90-94; see 47 CFR § 1.7006(d).

⁷⁷ *Third Report and Order*, 36 FCC Rcd at 1164-74, paras. 97-124; see 47 CFR § 1.7006(e). In the *Third Report and Order*, the Commission delegated authority to WTB and OEA to implement certain detailed technical aspects of the mobile challenge process. *Third Report and Order*, 36 FCC Rcd. at 1167-68, paras. 105-06. Subsequently, WTB, OEA, and OET adopted the *Mobile Technical Requirements Order*, which established processes and methodologies for collecting mobile challenge data and determining when a mobile availability challenge is “cognizable,” as well as processes for mobile providers to respond to challenges. See *Mobile Technical Requirements Order*, 37 FCC Rcd at 3010-54, paras. 8-85.

⁷⁸ A provider may concede a fixed availability challenge because it accepts the allegation(s) raised by the challenger at the challenged location. See 47 CFR § 1.7006(d)(3)(i). The provider must then submit a correction for the challenged location within 30 days of its concession. *Id.* For areas with a cognizable mobile challenge, a provider may concede and have the challenged area identified on the mobile coverage map as an area that lacks sufficient service. *Id.* § 1.7006(e)(3), (f)(4). If a mobile provider concedes a challenge, “the provider must file, within 30 days, geospatial data depicting the challenged area that has been shown to lack service. Such data will constitute a correction layer to the provider’s original propagation model-based coverage map, and Commission staff will use this layer to update the broadband coverage map.” *Id.* § 1.7006(e)(6)(iii), (f)(7). Furthermore, “[t]o the extent that a [mobile] provider does not later improve coverage for the relevant technology in an area where it conceded . . . , it must include this correction layer in its subsequent [BDC] filings to indicate the areas shown to lack service.” *Id.*

⁷⁹ Similar to an affirmative concession, where an automatic concession of a fixed availability challenge has occurred, the provider must submit a correction to the challenged location within 30 days of the missed reply deadline, or the Commission will make the correction on its own. 47 CFR § 1.7006(d)(4). If a provider fails to submit data sufficient to overturn a mobile challenge within 60 days of notification, it must revise its coverage maps within 30 days to reflect the lack of coverage in the successfully challenged areas. *Id.* § 1.7006(e)(6), (f)(7); see also *Mobile Technical Requirements Order*, 37 FCC Rcd at 3044, para. 61 (citing *Third Report and Order*, 36 FCC Rcd at 1170, 1174, paras. 112, 124).

⁸⁰ We note that, since the launch of the BDC Help Center, over 2,000 service providers have contacted the technical assistance team, resulting in over 4,000 help tickets related to service provider requests. FCC staff have also engaged in hundreds of engagements with providers and trade associations, including one-on-one help sessions, webinars, presentations, and other engagements to assist providers with learning the BDC processes, including the (continued....)

adjudicated by the FCC in the challenger's favor.⁸¹ When a provider concedes or loses a challenge, it must update its availability data to align with the lost or conceded challenge and certify the updated data; the location or area lost or conceded as a result of the challenge process thereby constitutes a Removed Location or Area.

34. Since the launch of the NBM on November 18, 2022,⁸² the verification, audit, and challenge processes have been active and have led to meaningful updates to the map. In just the first year following the map's launch, approximately 3.7 million fixed availability challenges were accepted and submitted to providers for response, resulting in more than 2.5 million updates to the fixed availability data on the NBM.⁸³ In approximately the same timeframe, 35 cognizable mobile challenges resulted in 18 corrections to mobile wireless coverage data on the NBM.⁸⁴ To date, FCC staff have initiated thousands of fixed data verification inquiries, as well as audits, which have resulted in updates to hundreds of provider submissions.⁸⁵ These processes are open and ongoing, and new verification efforts, audits, and challenges are regularly initiated and resolved. Meanwhile, significant federal investments in broadband infrastructure have been either awarded or deployed since the launch of the NBM, which will produce meaningful expansions of broadband availability across the United States and Territories.⁸⁶

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challenge processes and associated deadlines. Accordingly, providers have had ample opportunities to familiarize themselves with the BDC rules and processes.

⁸¹ In the case of a fixed service availability challenge, a provider may dispute the challenge and provide evidence, in the BDC system and to the challenger, supporting its reported availability at the challenged location. 47 CFR § 1.7006(d)(3)(ii). If a provider is not able to resolve the challenge directly with the challenger in the 60 days following its "dispute" in the BDC system, the challenge goes to the FCC for adjudication. *Id.* § 1.7006(d)(6). The FCC then reviews the evidence submitted by each party and, when it upholds the challenge, the provider must submit a correction to the location within 30 days. *Id.* § 1.7006(d)(6)(i). In the case of a mobile service availability challenge, a provider may dispute the challenge and submit on-the-ground test data (or infrastructure data, in certain limited circumstances) to verify its coverage map(s) in the challenged area. *Id.* § 1.7006(e)(4), (f)(5). After a challenged provider submits all responses and Commission staff determine the result of a challenge, in cases where a mobile service provider loses a challenge, it must file within 30 days geospatial data depicting the challenged area that has been shown to lack sufficient service. *Id.* § 1.7006(e)(6), (f)(7). Such data will constitute a correction layer to the provider's original propagation model-based coverage map, and Commission staff will use this layer to update the broadband coverage map. *Id.*

⁸² Availability data from the inaugural BDC filing window was released on the pre-production draft of the NBM on November 18, 2022. *See Broadband Data Task Force Releases Pre-Production Draft of the National Broadband Map; Announces the Start of the Broadband Availability Challenge Processes*, WC Docket Nos. 11-10, 19-195, Public Notice, 37 FCC Rcd 13348, 13348 (WTB/WCB/OEA/CGB 2022).

⁸³ *Broadband Data Task Force Seeks Comment on the Broadband Data Collection Challenge Processes*, WC Docket Nos. 11-10, 19-195, Public Notice, DA 24-64, at 5 (WCB/OEA/WTB, Jan. 19, 2024). Of the 2.5 million updates, over 2.2 million were provider concessions, and approximately 276,000 were FCC adjudications upheld in favor of the challenger. *Id.* These numbers reflect fixed challenges submitted between November 18, 2022, and November 16, 2023. *Id.*

⁸⁴ *Id.* at 7-8. Nearly 190,000 mobile on-the-ground speed test results were submitted to the Commission between November 18, 2022, and August 31, 2023. *Id.* Of those, approximately 85,000 were submitted as mobile challenge tests and 104,000 were submitted as crowdsource tests. Not all mobile challenge tests submitted were "negative" tests (i.e., tests where the speed results were less than the claimed coverage based upon technology and speed). According to staff analysis, approximately 40% of challenge speed test results submitted were "positive" tests that showed performance at or above the speed/technology claimed by the tested mobile wireless service provider's network.

⁸⁵ *See supra* para. 21.

⁸⁶ *See, e.g., Wireline Competition Bureau Announces Enhanced Alternative Connect America Cost Model Support Amounts Offered to Rate-of-Return Carriers to Expand Rural Broadband*, WC Docket No. 10-90, Public Notice, DA 23-779 (WCB Aug. 30, 2023) (announcing *Enhanced Alternative Connect America Cost Model Support (E-*

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35. Given the various ways in which broadband service availability can both expand and contract, it is entirely possible, and in fact, very likely, that a provider who previously reported mass-market broadband Internet service available at a Removed Location or Area may subsequently make such service available to the Removed Location or Area.⁸⁷ It is critical that the BDC be able to capture these types of developments in broadband availability over time.

B. Legal Authority for Implementing Location Restoration

36. Pursuant to the Act, the BDC captures changes in broadband availability data over time to ensure that the NBM remains accurate. Each BDC filing is a snapshot of broadband availability on a particular date, and each verification, audit, and/or challenge is applicable to availability information at that particular time. However, Removed Locations or Areas “persist” from one BDC filing to the next, in order to promote active participation in the challenge, verification, and audit processes by service providers and to alleviate the need for challengers and the Commission to repeatedly correct previously adjudicated locations or areas. Therefore, it is essential that providers submit updated data into the BDC for Removed Locations and Areas, and that the BDC provide an efficient, standardized way for the NBM to reflect where a provider reports in a subsequent filing that it can make service available at a previously Removed Location or Area. Without such a requirement or pathway to restore Removed Locations or Areas, the NBM would become outdated, and therefore less accurate—contrary to both Congress’s and the Commission’s intent.

37. Accordingly, we clarify that the requirement that BDC “filings shall be made each year on or before March 1 (reporting data as of December 31 of the prior year) and September 1 (reporting data as of June 30 of the current year)” includes an obligation that providers submit data on service availability to Removed Locations or Areas.⁸⁸ Because the BDC rules require providers to report their

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ACAM) to rate-of-return carriers to expand rural broadband); National Telecommunications and Information Administration, U.S. Department of Commerce, *Biden-Harris Administration Announces State Allocations for \$42.45 Billion High-Speed Internet Grant Program as Part of Investing in America Agenda* (June 26, 2023), <https://www.ntia.gov/press-release/2023/biden-harris-administration-announces-state-allocations-4245-billion-high-speed> (establishing initial allocations of \$42.45 billion in Broadband Equity, Access, and Deployment (BEAD) program funding among all 50 states and U.S. Territories); *Establishing a 5G Fund for Rural America*, GN Docket No. 20-32, Report and Order, 35 FCC Rcd 12174, 12178, 12185, paras. 10, 28 (2020) (creating a \$9 billion budget for the 5G Fund to bring 5G mobile broadband service to rural areas). These *public investments in broadband infrastructure are complimentary to the ongoing private investments expanding access to Internet services*. See, e.g., USTelecom, *Public-Private Partnerships: The Successful Path Forward for Connectivity* (Sep. 23, 2023), <https://www.ustelecom.org/public-private-partnerships/#:~:text=America's%20position%20as%20a%20global,billion%20invested%20in%202022%20alone>. (noting that approximately \$102.4 billion was invested by the private sector for expanding and upgrading broadband networks throughout the nation in 2022). USTelecom comments that not having a restoration process particularly in a time when there is an increase in new deployment due to programs such as BEAD would make the NBM imprecise, and therefore recommends that establishing such a process should be a Commission priority. USTelecom Comments at 5.

⁸⁷ On January 19, 2024, the Broadband Data Task Force issued a Public Notice seeking comment on the challenge processes. See *Broadband Data Task Force Seeks Comment on the Broadband Data Collection Challenge Processes*, WC Docket Nos. 11-10, 19-195, Public Notice, DA 24-64, at 5-11 (WCB/OEA/WTB Jan. 19, 2024). In response, CTIA and USTelecom commented that establishing a pathway for the restoration of locations which were previously lost or conceded to a service availability challenge is important in order to ensure that the NBM remains accurate. See USTelecom Comments at 4-5; CTIA Comments at 6-9; CTIA Reply Comments at 7-8.

⁸⁸ 47 CFR § 1.7004(b). Section 1.7004(c) elaborates on the data that providers must report biannually, stating that “[p]roviders shall include in their filings data relating to the availability and quality of service of their broadband internet access service.” *Id.* § 1.7004(c). In particular, section 1.7004(c)(1) states that “[e]ach provider of terrestrial fixed or satellite broadband internet access service shall submit polygon shapefiles or a list of addresses or locations, and each provider of fixed wireless broadband internet access service shall submit propagation maps and model

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broadband availability data accurately for each filing round and certify that those filings are accurate, it would be a violation of the Commission's rules for a provider to *not* report coverage at a Removed Location or Area where it now makes service available.

38. Requiring updates based upon changed circumstances is consistent with our statutory obligation to “establish . . . processes through which the Commission can verify the accuracy of the data submitted” by service providers in the BDC.⁸⁹ This includes a process for verifying data submitted through the challenge process “in order to ensure the reliability of that data.”⁹⁰ The Broadband DATA Act cannot hold its intended purpose if a service provider is not required to and does not have a pathway for reporting service availability to a location that, though previously unserved, is now capable of receiving the reported service. Clarifying this requirement, and establishing a pathway for restoring a previously Removed Location or Area improves the usefulness of the coverage maps by ensuring that the data on the NBM are timely and accurate. As noted by CTIA, where a provider has completed new deployments, service upgrades, or otherwise added more capacity to its network, the BDC must allow that provider to include those locations in a subsequent filing; without such a mechanism to restore these locations, the NBM would be underinclusive and could cause confusion for consumers.⁹¹

39. Moreover, clarifying this requirement and establishing a pathway for reporting Removed Locations or Areas is consistent with prior Commission direction in the context of mobile wireless coverage data submissions. The Commission previously contemplated that changed circumstances could lead to improved coverage at an area previously lost by a mobile wireless provider in the mobile challenge process. In the *Third Report and Order*, the Commission stated that if a mobile provider “that has failed to rebut a challenge subsequently takes remedial action to improve coverage at the location of the challenge, the provider must notify the Commission of the actions it has taken to improve its coverage and provide either on-the-ground test data or infrastructure data to verify its improved coverage.”⁹² While

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_____ details . . . or a list of addresses or locations, that document the areas where the provider has actually built out its broadband network infrastructure, such that the provider is able to provide service, and where the provider is capable of performing a standard broadband installation.” *Id.* § 1.7004(c)(1). Section 1.7004(c)(3) similarly states that “[m]obile providers must submit coverage maps based on the . . . specified parameters” and that “the [mobile] provider’s coverage maps must reflect coverage areas where users should expect to receive the minimum required download and upload speeds with cell edge coverage probability of not less than 90% and a cell loading of not less than 50%.” *Id.* § 1.7004(c)(3), (c)(3)(ii). In addition, section 1.7004(d) requires providers to include certifications from a corporate officer and a qualified engineer that the factual statements in these filings are correct (i.e., that the filings accurately reflect the availability of broadband service). *Id.* § 1.7004(d). Our clarifications apply to these rules as well.

⁸⁹ 47 U.S.C. § 642(a)(1)(B)(i); *see also id.* § 642(b)(4)(B) (requiring that the Commission “verify the accuracy and reliability of the information in accordance with measures established by the Commission” with respect to a provider that submits availability data in the BDC).

⁹⁰ 47 U.S.C. § 642(b)(5)(B)(ii).

⁹¹ CTIA Comments at 6. CTIA also states that the Commission’s rules set no limitations or waiting periods before a provider can report a location as serviceable again in a subsequent filing window. *Id.* at 7. Moreover, CTIA notes that location restoration is particularly important for fixed wireless providers, because “[n]etwork capacity for fixed wireless is a function of deployed spectrum and customer uptake, both of which can regularly change.” *Id.* at 8. Therefore, CTIA states that many of its members have conceded challenges to their fixed wireless availability data due to capacity constraints, but since a fixed wireless provider’s network is constantly evolving and may expand coverage over a relatively short period of time, that provider must be able to accurately report its availability data in the BDC in a later filing where it has regained or added new capacity to add subscribers. *Id.*

⁹² *Third Report and Order*, 36 FCC Rcd at 1170, 1174, paras. 111, 123; *accord* 47 CFR § 1.7006(e)(5), (f)(6); *see also* 47 CFR § 1.7006(e)(6)(iii), (f)(7) (noting that, in cases where a mobile provider concedes or loses a challenge, it must update its data with the FCC and “to the extent that [the] provider does not later improve coverage for the relevant technology in an area where it conceded or lost a challenge, it must include this correction layer in its subsequent filings to indicate the areas shown to lack service”). CTIA recommends that the Commission clarify the

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the Commission did not include similar language regarding fixed challenges, the rationale applies equally to both types of broadband services: if a provider lost or conceded a challenge but the provider is now able to produce additional evidence supporting its claim that it can make broadband service available at the previously Removed Location or Area, the BDC must implement a pathway to restoration.

40. We make clear that the obligation to submit updated data in subsequent filings extends to locations and areas that were removed because the provider previously failed to participate in the challenge processes or provided insufficient evidence in response to the challenge. For example, where a provider automatically conceded a challenge due to a misunderstanding of our rules or the BDC system, it is possible that the provider actually made service available at the resulting Removed Location or Area at the time the challenge was submitted. Similarly, because FCC adjudications are limited to the evidence submitted by the challenger and the provider, a challenge could be upheld due to insufficient evidence submitted by the provider in response to the challenge, even if the provider actually makes service available at the Removed Locations or Areas. In all of these instances, in order for the NBM to accurately reflect, on an ongoing basis, the broadband services that are available at each location or area, we must require providers to submit updated data and establish a pathway for restoring a Removed Location or Area.

C. Data Requirements for Restoration

41. In order to preserve the integrity of the challenge processes, including our obligation under the Broadband DATA Act to “mitigate the time and expense incurred by, and the administrative burdens placed on, entities and individuals”⁹³ in our challenge processes, providers must submit data to support a request in a subsequent availability filing to include a Removed Location or Area. Further, a data requirement mitigates the administrative burdens on the Commission to conduct verifications and audits of data submitted by providers at Removed Locations or Areas in subsequent filings.

42. Specifically, a provider must submit detailed information demonstrating that it can now make service available at the Removed Location or Area. The data elements included in the Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes⁹⁴ are indicative of the kind of information that we expect to be persuasive in the restoration of locations or areas removed from the NBM as a result of the challenge process, verification inquiries or audits, where infrastructure data would be relevant.⁹⁵ Providers are already familiar with these existing data specifications, and for the most part already retain this information. Specifically, fixed provider infrastructure data would be relevant for consumer and bulk fixed availability challenges lost under Challenge Category Codes 4, 5, 6, 8, or 9, and bulk fixed availability challenges lost under Challenge Category Codes 1 or 2.⁹⁶ Additionally, mobile provider infrastructure data would be informative when providers seek to restore coverage areas lost in the mobile challenge process as well as removed in

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mobile restoration process and offer guidance on how these rules will be implemented, including the specific actions and evidence that would be required of a mobile provider to restore previously challenged areas. CTIA Comments at 9.

⁹³ 47 U.S.C. § 642(b)(5)(B)(i)(III).

⁹⁴ Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

⁹⁵ We clarify that the data supporting a restoration would relate to the as-of date for the filing window in which the provider seeks to restore the area or location(s). Providers do not need to upload data relating to the original date of the challenge, verification, and/or audit which led to the Removed Location or Area.

⁹⁶ A description of each of the fixed availability challenge category codes is available on the BDC Help Center. See FCC, How to Format Bulk Fixed Challenge and Crowdsource Data – BDC Help Center, <https://help.bdc.fcc.gov/hc/en-us/articles/10390523851803-How-to-Format-Bulk-Fixed-Challenge-and-Crowdsource-Data>

response to verification inquiries or audits. While these existing data specifications are persuasive for restoration of locations and areas previously removed based on the above-referenced challenge codes, these data are not relevant to all challenge codes. Further, these data specifications do not include speed test data for mobile service. We, therefore, seek comment, in the *Further Notice of Proposed Rulemaking* below, on what information commenters believe would be persuasive in the restoration of fixed availability data removed from the NBM under the remaining Challenge Category Codes, as well as the potential use of on-the-ground speed test data for restoration of mobile coverage areas.⁹⁷

43. We additionally clarify that the data requirements for restoring a provider's availability to a previously Removed Location or Area are distinct from the rules and standards governing availability challenges. A provider's restored availability information can be subsequently challenged in accordance with rules 1.7006(d) (for fixed availability data), and 1.7006(e) and (f) (for mobile availability data).

44. We direct OEA, in consultation with WCB, WTB, OET and SB, to develop and publish data specifications detailing the information a provider must submit when seeking to restore a previously Removed Location or Area through a subsequent BDC filing—starting with the infrastructure data included in the Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes. We also direct OEA, in consultation with the other named bureaus and offices, to make the necessary system changes to implement the clarifications in this *Declaratory Ruling*. After the data specifications are published, a provider may upload the specific information necessary to restore a Removed Location or Area in the BDC system. Where Commission staff deems that information sufficient to demonstrate availability, the location or area will be restored on the National Broadband Map.

V. FOURTH FURTHER NOTICE OF PROPOSED RULEMAKING

A. Modifications to the FCC's Availability Data Collection Requirements

1. Limiting Publication of Data on "Grandfathered" Services

45. We seek comment on whether we should limit the publication of availability data to avoid the potential for releasing subscribership information, typically treated as confidential in other contexts, with respect to grandfathered services that providers are phasing out.

46. *Background.* The Broadband DATA Act mandates that the Commission collect data on the availability of "broadband internet access service" which, for purposes of the Act, "has the meaning given the term in section 8.1(b) of title 47, Code of Federal Regulations, or any successor regulation."⁹⁸ Under this rule, broadband Internet access service is a "mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up internet access service."⁹⁹

47. In the *Third Report and Order* the Commission clarified that all facilities-based providers of broadband Internet access services are required to comply with the requirements of the BDC.¹⁰⁰ Fixed broadband Internet access service providers must report the maximum advertised download and upload

⁹⁷ See *infra* Section V.B.5. As noted below, we seek comment on the information relevant to locations previously removed by consumer challenges (rather than bulk submissions by governmental and other entities) under Challenge Category Codes 1 or 2, and all challenges lost or conceded under Challenge Category Code 3.

⁹⁸ 47 U.S.C. §§ 642(a)(1)(A)(i), 641(1).

⁹⁹ 47 CFR § 8.1(b). The term "also encompasses any service that the Commission finds to be providing a functional equivalent of the service described in the previous sentence or that is used to evade the protections set forth in this part." *Id.*

¹⁰⁰ *Third Report and Order*, 36 FCC Rcd at 1130-31, para. 10.

speeds associated with the service available at a location.¹⁰¹ Accordingly, the BDC collects availability data from a wide array of service providers encompassing a broad range of technologies and service types. The data collection covers both new and novel services, as well as legacy services that providers are in the process of permanently discontinuing. In the latter case, a filer may provide facilities-based broadband Internet access service to existing subscribers at particular locations, but no longer market or sell that service to potential or new customers in the area and would not continue offering the service to a location once the existing subscriber disconnects that service at the location. In such instances, the effect of the filing requirement is that the availability data submitted by the provider for this service could essentially be a list of current subscribers of the service. The Commission routinely treats subscribership data submitted as part of the FCC's Form 477 as confidential.¹⁰²

48. Certain providers have expressed concern that publishing availability data for grandfathered services could reveal confidential subscribership information. For example, Verizon recently requested confidential treatment of its incumbent local exchange carriers' DSL service availability data submitted as part of its December 2023 BDC filing because the data reflect "only those locations where [Verizon] currently provide[s] service to an existing customer, thereby resulting in the reporting of confidential customer-identifiable location and service information of those customers."¹⁰³ Verizon noted that "[a]lthough the Commission generally favors disclosure of service availability information, the nature of the DSL availability information [Verizon is] required to report will reveal the precise number of [its] subscribers in an area, plus the customer address and type of service provided to each DSL customer and cannot be masked by non-customer locations where the service is no longer offered."¹⁰⁴ We seek comment on whether publication of availability data for grandfathered services should be limited.

49. *Discussion.* We propose to amend our rules to permit filers to indicate that the service offered at a location is a grandfathered service only. We further propose that in cases where a provider submits a request for confidential treatment of such data, and such a request is not denied, we would not publish such data as part of the location-specific availability information in the NBM. We also propose that information on the availability of these services would only be disclosed by the Commission on an aggregated, redacted or otherwise de-identified, differentiated or masked basis. The Commission would afford those data the protections from disclosure already established for subscription data gathered via FCC Form 477, and treated as confidential.¹⁰⁵

50. We believe there are multiple benefits to this approach. First, it would enable the Commission to collect and analyze more in-depth, useful information on the nature of fixed broadband services (whether they are grandfathered or not), thereby forming a more nuanced and comprehensive picture of broadband service availability. Second, it would better protect against potential disclosure of confidential customer information. Third, not showing on the NBM locations where a service has been discontinued and is available only to legacy subscribers (but not to any new or potential subscribers in the future) could provide more helpful information to consumers about broadband availability. We seek

¹⁰¹ *Id.* at 1136, para. 22.

¹⁰² See 47 CFR § 1.7001(d)(2)(i). The Commission previously sunset the collection of broadband deployment data using FCC Form 477 but continues to collect broadband and voice subscription data using this form, though filers submit their data through the BDC system. See *Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program*, WC Docket Nos. 19-195, 11-10, Order, 37 FCC Rcd 14957, 14957, para. 1 (2022).

¹⁰³ See Letter from Ian Dillner, Associate General Counsel Federal Regulatory and Legal Affairs, Verizon to Marlene H. Dortch, Secretary, FCC, WC Docket No. 19-195 at 1 (filed Mar. 1, 2024).

¹⁰⁴ *Id.*

¹⁰⁵ See *Local Competition and Broadband Reporting*, CC Docket No. 99-301, Report and Order, 15 FCC Rcd 7717, 7760, para. 91 (2000).

comment on these proposals. Are there any alternative approaches we should consider that would appropriately protect data that could constitute subscribership information and provide accurate information on the services that are actually available at a particular location? Are there alternatives we should consider for the types of information and format the Commission discloses about grandfathered services, or the protections afforded to this data?

51. We seek comment on how to define a “grandfathered” service for purposes of reporting broadband availability and making data on such services potentially eligible for this differentiated treatment on the NBM. We propose to define a “grandfathered” service similar to the definition used in other areas of our rules:¹⁰⁶ any broadband Internet access service that is currently provided to an existing end user at a Broadband Serviceable Location, but that a facilities-based provider is discontinuing, has permanently ceased to advertise or market to new or potential subscribers, and would not make available to a new or potential subscriber at the Broadband Serviceable Location. We seek comment on this proposed definition. We note that this proposed definition would not encompass locations where the provider is willing to connect a new end user but the potential customer is “waitlisted” due to capacity constraints that exist on the as-of date of the biannual BDC submission; it would similarly not include locations where a provider is unable to conduct a standard broadband installation within 10 business days due to equipment unavailability, capacity constraints or other limitations. Under our proposal, service to locations in these circumstances would not be considered grandfathered. Would this proposed definition, if adopted, provide sufficient clarity to BDC filers to know whether or not a particular service would be considered a grandfathered service? Are there alternative definitions we should consider?

52. We also seek comment on whether we should adopt any requirements pertaining to the size of the area where the service is no longer advertised or marketed in order to qualify as a “grandfathered” service. Must the provider cease marketing and selling the service throughout its entire footprint before it qualifies as a grandfathered service? How should the Commission treat a service provider with a multi-state footprint who ceases marketing or selling the service in one or more states, but continues to offer the service in the other state(s) within its footprint? Should such a provider be permitted to claim “grandfathered” status for the service in the state(s) or other remaining geographic area(s) where it no longer markets or sells the service (and would not make it available to new or potential subscribers)?

53. We seek comment on whether we should adopt a process for a provider to “undo” a prior claim of grandfathered status. If we were to adopt such a process, what evidence, if any, should we require the provider to submit in support of a request to reverse a prior claim of grandfathered service status?

54. What measures, if any, should we adopt to protect against potential gaming of the protections we propose for “grandfathered” services? For example, should we require a service provider to include with its request for confidential treatment an affidavit, declaration or other certification that it does not currently market or sell to new or potential subscribers, and will not market or sell to new or potential subscribers in the future, the service reported as a grandfathered service in the system? Should we require that any such certification or other attestation be executed by a corporate officer of the filer? Should we require the filer to submit evidence that it no longer markets or sells to new or potential subscribers the reported service, and, if so, what types of evidence would be acceptable? Are there other measures we could adopt to protect against possible gaming? Alternatively, should Commission staff instead rely upon existing tools, such as verifications, audits, and enforcement mechanisms, to investigate and validate claims of grandfathered services?

55. We also seek comment on whether we should collect information on other attributes related to potential limitations on the availability of a particular broadband service. For example, should we have providers indicate that a service is made available to existing subscribers in an area, but is not

¹⁰⁶ See 47 CFR § 63.60(d).

marketed or sold in the area temporarily due to capacity constraints on the “as-of” date of the biannual BDC submission (though it will be marketed or sold in the area once those capacity constraints were alleviated)? In addition, while all broadband service transmission technologies are theoretically capacity constrained, certain services—such as spectrum-based terrestrial fixed wireless and satellite services—can be more affected by capacity considerations than traditional wireline services. In such cases, a provider may be able to connect service on a marginal basis to some, but not all, of the locations included in its availability data (if, theoretically, all the residents or businesses at such locations were to request service at the same time), or it may not be able to offer service to all of the locations at the reported maximum advertised speeds, due to network capacity constraints. Further, some providers have indicated that they offer certain broadband services only on a seasonal basis. Should we amend the BDC fixed availability reporting requirements so that the various circumstances or conditions mentioned above, as well as others, can be captured in the collected data? How should such circumstances, conditions, or factors be reported? What type of burden does distinguishing service attributes place upon facilities-based providers who file data in the BDC?

56. We additionally propose to allow filers to request confidential treatment pursuant to 47 CFR § 0.459 for broadband availability data in the limited circumstance where the services are marked as grandfathered and for other analogous situations where the filed data would inherently disclose the coverage information of existing customers. We propose that all other filed broadband availability data submitted in the BDC would be available to the public. The Broadband DATA Act requires the Commission both to collect data from each provider reporting the areas to which it can and does make broadband services available and to allow for consumers and entities to challenge the accuracy of “any information submitted by a provider regarding the availability of broadband internet access services.”¹⁰⁷ The Commission has previously made clear that information filed in the BDC “will be presumed to be non-confidential unless the Commission specifically directs that it be withheld”¹⁰⁸ and has otherwise been skeptical of filer arguments about the confidentiality of broadband availability data generally.¹⁰⁹ We continue to conclude that, in most circumstances, the public interest in disclosure of BDC availability data outweighs any commercial or competitive harm to the provider. Clarifying the circumstances under which we would consider confidentiality requests for availability data would provide additional certainty to filers and challengers of broadband availability data alike, while further streamlining the process by which the Commission processes and publishes such data. To be clear, we do not propose to limit the circumstances under which filers may request confidential treatment of data other than broadband availability data that are submitted into the BDC, including subscription data or supporting data (including, e.g., link budget parameters or coverage methodology information). We seek comment on this proposal. Are there other categories of broadband availability data for which we should continue to entertain requests for confidential treatment? How can we best balance the goals of the Broadband DATA Act and our responsibilities in administering the BDC program with competing concerns about the sensitivity of required data?

57. We propose requiring service providers to report attributes about the nature of service availability in their location- or area-specific availability data submissions. We propose revising our Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data to enable filers to report, and the BDC system to collect, data reflecting services with a grandfathered status or any other attributes.¹¹⁰ We seek comment on these proposals.

¹⁰⁷ 47 U.S.C. § 642(b)(2), (b)(5)(A)(ii).

¹⁰⁸ *First Report and Order*, 34 FCC Rcd at 7517, para. 27.

¹⁰⁹ *See, e.g., Third Report and Order*, 36 FCC Rcd at 1132-33, paras. 13-15.

¹¹⁰ *See* Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data (Mar. 30, 2023), <https://us-fcc.app.box.com/v/bdc-availability-spec>.

2. Collecting Terrestrial Fixed Wireless Spectrum Authorization Information

58. We next seek comment on changing our rules to require terrestrial fixed wireless providers to submit additional information that would allow the Commission to better verify terrestrial fixed wireless service availability data submitted in the BDC.

59. *Background.* The Broadband DATA Act required the Commission to provide two methods for terrestrial fixed wireless broadband internet access service providers to file their availability data: (1) propagation maps and model details that “satisfy standards that are similar to those applicable to providers of mobile broadband internet access service . . . , taking into account material differences between fixed wireless and mobile broadband internet access service” or (2) as a list of locations that constitute the service area of the provider.¹¹¹ The Commission implemented these requirements in the *Second Report and Order*.¹¹² When submitting their availability data, fixed providers must disclose the details of how they generated their coverage polygons or list of locations.¹¹³ The *Second Report and Order* adopted categories of parameters and details that fixed wireless providers submitting availability coverage polygons based on propagation maps and model details must disclose to the FCC as part of their BDC submissions.¹¹⁴ Examples of these requirements include base station information (such as the frequency band(s) used to provide service being mapped, carrier aggregation information, the radio technologies used on each spectrum band, and site information such as the elevation above ground level for each base station), height and power values for receivers or other customer premises equipment, and terrain and clutter information.¹¹⁵ The Commission did not specify comparable disclosure requirements for supporting data that terrestrial fixed wireless providers that file location lists must submit as part of their biannual BDC submission.¹¹⁶

¹¹¹ 47 U.S.C. § 642(b)(2)(A)(iv)(I).

¹¹² *Second Report and Order*, 35 FCC Rcd at 7465, para. 12 (determining that terrestrial fixed wireless providers subject to the BDC must report their availability data “in the form of propagation maps and propagation model details that reflect the speeds and latency of their service, or a list of addresses or locations that reflect their service areas.”).

¹¹³ *Id.*

¹¹⁴ *Id.* at 7473, para. 29; *see also* Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data §§ 7 (Mar. 30, 2023).

¹¹⁵ *Second Report and Order*, 35 FCC Rcd at 7473, para. 29. In the *Third Report and Order*, the Commission made minor changes to the categories of supporting information terrestrial fixed wireless providers submitting propagation maps and propagation model details providers must file, including adopting a requirement that these filers submit the geographic coordinates (latitude and longitude) of each base station used to provide terrestrial fixed wireless service. *See Third Report and Order*, 36 FCC Rcd at 1140, para. 31.

¹¹⁶ *See* Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data §§ 7.0-7.1 (Mar. 30, 2023) (explaining that terrestrial fixed wireless providers that submit their availability using location list data are not required to submit the propagation model data but, rather, are only required to provide information on the methodology used to create their coverage data and an explanation of how the provider implemented the reported methodology). We note, however, that while terrestrial fixed wireless providers are not required to submit propagation model data as part of their biannual BDC submissions, OEA and WTB have developed data specifications for use when the Commission requests propagation modeling data for purposes of verifying or auditing the terrestrial fixed wireless availability data submitted as either address or polygon data. *See Establishing the Digital Opportunity Data Collection; Competitive Carriers Association and USTelecom – The Broadband Association Petition for Extension of Waiver Regarding the Requirement for a Certified Professional Engineer to Certify Broadband Data Collection Maps*, WC Docket No. 19-195, Order, DA 23-1123, paras. 7, 17-20 (WCB/OEA/WTB 2023) (*PE Waiver Extension Order*); Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes § 2.2 (Feb. 20, 2024).

60. In March 2022, prior to the opening of the initial BDC filing window, the Broadband Data Task Force released data specifications detailing the categories and format of data that broadband service providers must submit in the BDC system to satisfy their filing obligation.¹¹⁷ The data specifications originally included two technology codes to differentiate terrestrial fixed wireless services: technology code 70, used to report unlicensed terrestrial fixed wireless service, and technology code 71, used to report licensed terrestrial fixed wireless service.¹¹⁸ A third terrestrial fixed wireless technology code (72: Licensed-by-Rule Terrestrial Fixed Wireless) was added in January 2023.¹¹⁹ The codes are intended to characterize the last-mile fixed wireless technology used to deliver internet access services to end users.¹²⁰

61. The Commission has an affirmative obligation to verify providers' broadband availability data filed in the BDC.¹²¹ In verifying availability based on terrestrial fixed wireless service, we must also ensure that the reported availability is authorized based upon applicable FCC spectrum licenses or other forms of authorizations (as reported by technology category code), as a claim of terrestrial fixed wireless service availability would be invalid if the service provider's operations were unauthorized. There are three ways to be authorized to operate a terrestrial fixed wireless service in accordance with the FCC's rules: providers may possess a license; may be licensed-by-rule (LBR); or may operate via unlicensed spectrum in accordance with Part 15 of the Commission's rules.¹²²

62. *Discussion.* We seek comment on proposed rule changes that will allow the Commission to better verify the terrestrial fixed wireless service availability data submitted in the BDC. First, we propose that fixed wireless filers reporting licensed service (*i.e.*, technology code 71 – Licensed Terrestrial Fixed Wireless) in their biannual BDC filings be required to submit the following additional information: 1) all call signs¹²³ and lease IDs (including the call sign(s) of the license(s) being leased) associated with the licenses held or leased by the filer that were (or could have been) used to provide broadband service as of the relevant BDC filing date (*i.e.*, June 30 or December 31); and 2) the FCC

¹¹⁷ See Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data at 1 (Mar. 30, 2023) (noting the Change Log for the specification).

¹¹⁸ Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data § 4.1 (Mar. 30, 2023). As noted in the Change Log, the Task Force updated the description and example text for tech codes 70 and 71 in June 2022. *Id.* at 1.

¹¹⁹ Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data at 2 (Mar. 30, 2023) (noting change on January 3, 2023 to add a new technology code in Section 4.1). See also *id.* § 4.1.

¹²⁰ See Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data § 4.1 (Mar. 30, 2023); see also *id.* at 1 (noting July 29, 2022 update reflecting this clarification).

¹²¹ The Broadband DATA Act requires the Commission to verify the accuracy and reliability of the broadband coverage data that providers submit to the Commission. 47 U.S.C. § 642(b)(4)(B).

¹²² 47 CFR pt. 15. If a provider holds a valid Special Temporary Authority (STA) which it uses to provide last-mile terrestrial fixed wireless services to broadband serviceable locations, then the provider must file those locations served (comporting with BDC rules) pursuant to the STA using tech code 71 (Licensed). FCC, Technology Codes for Terrestrial Fixed Wireless – BDC Help Center, <https://help.bdc.fcc.gov/hc/en-us/articles/12271133620763-Technology-Codes-for-Terrestrial-Fixed-Wireless>. Locations a provider serves that fall outside of the area covered by the STA and does not otherwise serve using an active license should be reported using tech code 70 (unlicensed) or tech code 72 (licensed-by-rule), as appropriate. *Id.* Broadband service made available pursuant to an experimental authorization (to the extent permissible under the Commission's rules) should not be reported in the BDC. *Id.*

¹²³ A call sign is “[t]he combination of letters and numbers that serve to identify an FCC license.” Glossary, FCC, <https://wireless2.fcc.gov/helpfiles/licenseSearch/helpGlossary.html#C> (last visited Feb. 22, 2024). Call signs are assigned in accordance with the parameters set forth in section 2.302 of the Commission's rules. 47 CFR § 2.302.

Registration Number (FRN) of the entity holding the license or lease as recorded in the FCC’s Universal Licensing System (ULS). Collecting this information will provide the most direct way to verify the permissibility of these operations, as it will allow staff to compare the reported coverage with the geographic areas associated with spectrum licenses or leases, as well as any transmitter locations, in ULS. If a BDC coverage area is found to be incongruous with the geographic area associated with the provisioning authorization(s) as assessed via call sign data, this may prompt further review by staff, form a credible basis for a verification request,¹²⁴ or potentially trigger a future audit.¹²⁵ We propose updating the BDC data specifications to implement this requirement. We seek comment on this approach, as well as on potential alternatives to verify coverage of providers offering licensed terrestrial fixed wireless service.

63. We note that terrestrial fixed wireless services operating in the Citizens Broadband Radio Service (CBRS) may be authorized via either Priority Access Licenses or under General Authorized Access (LBR or GAA) rules, and therefore fall under either technology code 71 or 72, respectively, in BDC filings.¹²⁶ CBRS operators licensed under the former have associated call signs in ULS, and—as described above—we propose and seek comment on requiring them to report in their biannual BDC filings a comprehensive list of the call signs they use to provide the fixed broadband services reported in the BDC.¹²⁷ Service providers authorized using LBR / GAA (*i.e.*, technology code 72) do not receive call signs in ULS for that technology, but records of GAA registrations are maintained by automated frequency coordinators known as Spectrum Access Systems (SASs).¹²⁸ Given that the Commission has an obligation to verify all reported broadband coverage, regardless of whether the service is offered using licensed or LBR spectrum, we propose requiring operators that claim LBR / GAA terrestrial fixed wireless service availability in the BDC using GAA-authorized base stations to provide proof of authorization by a SAS for the relevant BDC filing date.¹²⁹ We propose collecting such data in structured formats to ease with its processing and evaluation, and seek comment on the most efficient way to do so. We also seek comment on whether there are other ways to verify the reported coverage of providers using GAA or any other LBR service.

64. Finally, we note that providers offering broadband service using unlicensed terrestrial fixed wireless technology(ies) do not receive call signs in ULS and do not require authorization from a SAS to operate their base stations, though they may be subject to other regulatory requirements, such as static or automated frequency coordination. It therefore is not possible to compare the locations or

¹²⁴ See *Third Report and Order*, 36 FCC Rcd 1146 at para. 47.

¹²⁵ See Section III.B, *supra*.

¹²⁶ See 3.5 GHz Band Overview, FCC, <https://www.fcc.gov/wireless/bureau-divisions/mobility-division/35-ghz-band/35-ghz-band-overview> (last visited Feb. 20, 2024); see also Broadband Data Collection Help Center, *Fixed Technology Codes*, FCC, <https://help.bdc.fcc.gov/hc/en-us/articles/5290793888795-Fixed-Technology-Codes> (last visited Feb. 22, 2024). Both tiers of the Citizens Broadband Radio Service are considered licensed under the service rules and the same services can be offered in the Priority Access and GAA tiers.

¹²⁷ Citizens Broadband Radio Service licensed services refer to Priority Access Licenses (PALs).

¹²⁸ 3.5 GHz Band Overview, FCC, <https://www.fcc.gov/wireless/bureau-divisions/mobility-division/35-ghz-band/35-ghz-band-overview> (last visited Feb. 20, 2024). We note the SASs are required to maintain both present and historical records of base station registrations and their technical characteristics. See 47 CFR § 96.55. The SAS administrators are required to “[e]nsure that the SAS shall be available at all times to immediately respond to requests from authorized Commission personnel for any and all information stored or retained by the SAS.” See 47 CFR § 96.63(k). In combination, those requirements could provide one means of obtaining information on GAA deployments. We ask whether there is a better or lighter touch means of acquiring that information and alternative methods to verify coverage.

¹²⁹ Base stations in the Citizens Broadband Radio Service are referred to as Citizens Broadband Service Devices (CBSDs) in the service rules. See 47 CFR § 96.3 (Citizens Broadband Service Device).

geographic areas where they report service availability with call signs (as is possible for licensed services) or using SAS database records (as is possible for LBR services). In cases where filers are authorized on an unlicensed basis under Part 15 of the FCC's rules, we propose requiring the provider to file the FCC ID(s) of all base station transmission equipment used, and seek comment on whether there are other methods for validating that the service is authorized under the Commission's Part 15 rules.¹³⁰ We seek comment on this proposal and any other ways, beyond those mentioned above, to verify coverage of terrestrial fixed wireless providers offering service using unlicensed fixed wireless technologies (*i.e.*, technology code 70).

3. Additional Certifications and Supporting Data from Satellite Providers

65. We also seek comment on requiring additional certifications and supporting data from satellite providers to improve the quality of data provided to the BDC and improve the Commission's data validation, verification, and audits of satellite availability data submitted in the BDC.

66. *Background.* The nature of satellite services presents unique challenges for ensuring the accuracy of data concerning satellite broadband service availability in the BDC. In 2019, the Commission sought comment on how it could "improve upon the existing [Form 477] satellite broadband data collection to reflect more accurately current satellite broadband service availability."¹³¹ At that time, the Commission "recognized there are issues with the quality of the satellite broadband data that are currently reported under the existing Form 477."¹³² The Commission sought comment on how to improve the satellite broadband availability data reported in its new data collection, including whether it should collect additional information from satellite service providers, such as the number and location of satellite beams and the capacity used to provide service by individual satellites to consumers at various speeds.¹³³ The Commission also sought comment on "[w]hat issues should be addressed for [non-geostationary orbit] satellite services in the new data collection as they begin to be offered."¹³⁴

67. In the *Second Report and Order*, the Commission "continue[d] to seek comment on how we could improve upon the existing satellite broadband data collection," including whether demand side data might assist the Commission in better ascertaining the availability of these services.¹³⁵ The Commission determined in the *Third Further Notice* that, "[i]f concrete proposals are not provided to more reasonably represent satellite broadband deployment, we would rely on other mechanisms . . . including standards for availability reporting, crowdsourced data checks, certifications, audits, and enforcement, potentially as well as currently reported subscriber data, in assessing the accuracy of satellite provider claims of broadband deployment."¹³⁶ The Commission did not obtain concrete proposals in response to the *Second Report and Order* and, accordingly, in the *Third Report and Order*, it determined that it would rely upon verification measures to help ensure the accuracy of satellite

¹³⁰ 47 CFR pt. 15.

¹³¹ *First Report and Order*, 34 FCC Rcd at 7540-41, para. 85.

¹³² *Id.*

¹³³ *Id.*

¹³⁴ *Id.* at 7541-42, para. 87.

¹³⁵ *Second Report and Order*, 35 FCC Rcd at 7499-7500, para. 94. The Satellite Industry Association and Hughes Network Systems, LLC (Hughes) opposed such reporting. The Commission recounted Hughes's objections that "[i]n designing their networks to reflect reasonable assumptions about network loading, satellite broadband providers are no different from other types of network providers who are not required to report on network capacity for this purpose." *Second Report and Order*, 35 FCC Rcd at 7499-7500, para. 94, n.276 (quoting Hughes Network Systems LLC Comments at 4); *see also id.* (citing Hughes Reply at 4-7).

¹³⁶ *Second Report and Order*, 35 FCC Rcd at 7499-500, para. 94.

broadband availability data.¹³⁷ The Commission did, however, “remind satellite providers that the standards for availability reporting that apply to all fixed services require that satellite providers include only locations that they are currently serving or meet the broadband installation standard. Satellite providers cannot report an ability to serve an area or location without a reasonable basis for claiming that deployment, taking into account current and expected locations of spot beams, capacity constraints, and other relevant factors.”¹³⁸

68. To enable Commission staff to verify availability data as required by the Broadband DATA Act, OEA and SB recently released updated verification data specifications that include common data fields for fixed broadband service providers, and include fields for satellite infrastructure data that satellite service providers use to estimate their service and coverage.¹³⁹ The Broadband Data Task Force notified service providers (including satellite providers) that they must maintain these supporting data for each reporting period, and that the Commission may collect these data in the context of the Commission’s statutory obligations to verify broadband service availability data.¹⁴⁰

69. *Discussion.* According to the BDC submissions as of June 30, 2023, satellite broadband service with speeds of at least 25 Mbps download and 3 Mbps upload is available to 164.7 million Broadband Serviceable Locations, or 99.95% of all Broadband Serviceable Locations in the United States.¹⁴¹ Satellite broadband service with speeds of at least 100/20 Mbps is available to 164.1 million Broadband Serviceable Locations, or 99.6% of all locations.¹⁴² In the context of recent reports under section 706 of the Communications Act, the Commission has found that both “FCC Form 477 deployment data and BDC service availability data for satellite broadband service may overstate the extent to which satellite broadband service is available.”¹⁴³ Given this, and the relatively low subscription rate and capacity limitations for satellite services indicated by available FCC Form 477 data, the Commission declined to include in its analysis of fixed broadband service availability any data on satellite services.¹⁴⁴

70. We propose that satellite providers must include, as a supporting data file accompanying their biannual availability submissions, the infrastructure data set forth in sections 2.3.1, 2.3.2, and 2.3.4

¹³⁷ *Third Report and Order*, 36 FCC Rcd at 1141, para. 35.

¹³⁸ *Id.*

¹³⁹ See Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes § 2.3 (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

¹⁴⁰ See *PE Waiver Extension Order*, DA 23-1123 at para. 22.

¹⁴¹ Area Summary – FCC National Broadband Map, <https://broadbandmap.fcc.gov/area-summary> (displaying data as of June 30, 2023 (last updated Feb. 21, 2024), filtered for “All Satellite” technologies).

¹⁴² Area Summary – FCC National Broadband Map, <https://broadbandmap.fcc.gov/area-summary> (displaying data as of June 30, 2023 (last updated Feb. 21, 2024), filtered for “All Satellite” technologies). Importantly, this near-ubiquitous availability reported as of June 30, 2023, is a significant departure from the availability reported as of December 31, 2022. The December 2022 BDC data indicate that satellite service offering 100/20 Mbps was available to approximately 16% of the U.S. population only. Area Summary – FCC National Broadband Map, <https://broadbandmap.fcc.gov/area-summary> (displaying data as of December 31, 2022 (last updated Feb. 1, 2024), filtered for “All Satellite” technologies).

¹⁴³ *E.g., Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 22-270, 2024 Section 706 Report, FCC 24-27, para. 58 (rel. Mar. 18, 2024).

¹⁴⁴ See *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 22-270, 2024 Section 706 Report, FCC 24-27, para. 58 (rel. Mar. 18, 2024).

of the BDC Infrastructure Data Specifications (including any subsequent modifications, amendments or successors to those sections).¹⁴⁵ We seek comment on this proposal.

71. Section 2.3.1 of the BDC Infrastructure Data Specifications specifies the format for the submission of records of general operating parameters of a satellite system. The data gathered pursuant to this section of the specifications include the network type (GSO, NGSO, or other), the total number of satellites in the active constellation, the number of orbital shells deployed in the active constellation, the overall system downlink capacity and the overall system uplink capacity.¹⁴⁶ Section 2.3.2 specifies the content and format for the submission of more detailed information for each constellation or orbital shell of space stations deployed by the satellite broadband service provider as of the applicable reporting period. The data gathered pursuant to this section include shell altitude, the orbital location (for GSO systems), inclination angle, orbital plane, number of satellites per orbital plane, shell orbital period, apogee, and perigee, among other data elements.¹⁴⁷ Section 2.3.4 specifies the content and format for the submission of system capacity information for specific geographic regions of the country.¹⁴⁸

72. We propose to require satellite providers to submit all of the information requested in sections 2.3.1 and 2.3.2 of the BDC Infrastructure Data Specifications (as applicable, depending upon the satellite system type), as well as the capacity data in section 2.3.4 for each state or territory for which the provider claims to make service available as part of its BDC filing. We do not propose requiring satellite providers to submit system capacity information on a county-by-county basis. Furthermore, we do not propose, at this time, that providers submit the detailed link budget parameters set forth in section 2.3.3 of the specification, but we seek comment on whether the Commission should collect link budget data from satellite providers as part of the availability data submission process, similar to data collected from mobile wireless service providers and terrestrial fixed wireless service providers who submit polygon coverage maps using propagation maps and model details.¹⁴⁹ We seek comment on these proposals and any potential alternatives.

73. We propose to (1) update the BDC Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data to include these categories of data from the BDC Infrastructure Data Specifications, and (2) publish these categories of data received from satellite providers in the Data Download section of the NBM platform, so that interested stakeholders may access the data (similar to supporting data published for other providers and technologies). We further propose that OEA and SB may analyze these data and use them for purposes of verifications and audits of satellite providers, consistent with our processes and procedures for conducting verifications and audits.¹⁵⁰

74. We seek comment on whether this proposal would place additional burdens upon satellite providers by requiring them to submit this information on a biannual basis. We note that the information included in the satellite provider infrastructure portion of the data specifications is largely based upon categories of data that each provider is required to submit as part of its FCC Form 312 (Application for Satellite Space and Earth Station Authorizations) and accompanying Schedule S (Technical and

¹⁴⁵ See Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

¹⁴⁶ See Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes § 2.3.1 (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

¹⁴⁷ See Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes § 2.3.2 (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

¹⁴⁸ See Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes § 2.3.4 (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

¹⁴⁹ See generally Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data (Mar. 30, 2023), <https://us-fcc.app.box.com/v/bdc-availability-spec>.

¹⁵⁰ See Section III.B, *supra*.

Operational Appendix).¹⁵¹ Are any additional burdens associated with this reporting outweighed by the benefits to the Commission, other federal agencies, state, local, and Tribal governments, researchers and academia, and the public from obtaining more detailed information on the assumptions and modeling parameters underlying satellite providers' coverage claims?

75. Because the data sought through the BDC Infrastructure Data Specifications are based upon information included in a satellite provider's publicly available FCC Form 312 and Schedule S, we tentatively conclude that, should the Commission adopt the requirement that satellite providers include these data with their biannual availability submissions, the data would be presumptively public. Similar to our treatment of most categories of terrestrial fixed wireless infrastructure data, "[w]e believe there is a strong public interest in having as much access to this information as possible in order to facilitate public review and input on its accuracy"¹⁵² We invite comment on whether some of these data raise commercial sensitivities and, if so, whether some categories of the data should be treated as presumptively non-public. Alternatively, should we treat all of these data as presumptively public, and permit individual requests for confidential treatment pursuant to the Commission's existing rules?¹⁵³

76. What other data could the Commission collect, or processes could the Commission adopt, to improve the accuracy of and insights into satellite providers' broadband availability data? What are the specific sources of such data, and who would be responsible for submitting those to the Commission? Are there additional standardized data specifications the Commission could or should release? What use restrictions or confidentiality concerns would apply to these data, if any? Commenters who advocate that the Commission adopt alternatives to our proposal to collect from satellite providers the existing information set forth in the pertinent sections of the BDC Infrastructure Data Specifications should provide detailed and specific information about their alternative proposals, how the Commission would administer them, and why any such alternative would yield better satellite availability data than gathering additional infrastructure information directly from satellite broadband service providers.

B. BDC Data Validation Processes

77. The Broadband DATA Act requires the Commission to verify the accuracy and reliability of data submitted in the BDC.¹⁵⁴ We seek comment on several proposed changes to our rules to improve the Commission's validation, audit, and Fabric challenge processes, as well as facilitate provider certification of BDC submissions.

1. Data Retention Requirements

78. We seek comment on establishing a set data-retention period for documentation supporting providers' BDC submissions to ensure the Commission has access to necessary documentation for purposes of conducting audits, verifications, and other reviews.

79. *Background.* Broadband service providers are required to submit information on how they generated their availability data for each technology included in their biannual BDC filings.¹⁵⁵ In particular, fixed service providers must include information on the methodology used to generate their

¹⁵¹ See Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes § 2.3 (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>. Notably, the data sought through the BDC Infrastructure Data Specification are data on actual, live operations as of the applicable reporting period (as opposed to authorized, but not yet operating, parameters as reported in the FCC Form 312 and Schedule S). *Id.*

¹⁵² *Second Report and Order*, 35 FCC Rcd at 7473-74, para. 31.

¹⁵³ See *id.* at 7494-95, para. 83; see also 47 CFR § 0.459.

¹⁵⁴ 47 U.S.C. § 642(a)(1)(B)(i).

¹⁵⁵ See generally Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data (Mar. 30, 2023).

availability data, along with an explanation of how the methodologies were implemented.¹⁵⁶ Terrestrial fixed wireless providers who file their availability data as a coverage polygon are required to submit information about their propagation models, base stations, carriers, link budgets, and clutter categories.¹⁵⁷ Similarly, mobile wireless service providers must include supporting data with their coverage maps, including propagation model details and link budget information.¹⁵⁸

80. In addition to their biannual submission, service providers must submit data and information to the Commission in response to challenges, verification inquiries, and audits.¹⁵⁹ As discussed above, the Commission has published data specifications detailing the types of infrastructure data, by service type and technology, that must be submitted in response to verification inquiries and audits (and challenges, in instances where mobile wireless service providers are able to respond to mobile challenges with infrastructure data).¹⁶⁰ In the context of most cognizable challenges to mobile broadband coverage data, service providers submit on-the-ground speed test data into the BDC system to rebut the challenge.¹⁶¹

81. The Commission maintains these data in the BDC system and supplemental data storage infrastructure. All of the public (i.e., non-confidential) data are made available for view and download from the NBM.¹⁶² However, the Commission has not adopted a set data-retention period for how long service providers must preserve their availability, subscription, and supporting data or data used to respond to challenges, verification inquiries or audits.

82. *Discussion.* We propose that broadband service providers be required to retain the underlying data used to create their biannual submissions (including subscription data and supporting data) for at least three years from the applicable “as-of” date (e.g., data used to create a biannual submission for the June 30, 2024 reporting period would need to be retained until June 30, 2027). In addition, we propose that providers be required to retain the data used to respond to challenges, verification inquiries, and audits for a period of three years from the date the provider receives the challenge, verification inquiry, or notification of Commission initiation of an audit. These requirements, if adopted, would go into effect following the effective date of final rules implementing the new data retention periods. We seek comment on these proposals.

¹⁵⁶ See Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data § 7.1 (Mar. 30, 2023).

¹⁵⁷ See Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data § 7.0 (Mar. 30, 2023).

¹⁵⁸ See Broadband Data Collection, Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data § 9.0 (Mar. 30, 2023).

¹⁵⁹ See, e.g., 47 CFR § 1.7006(c), (d)(3)(ii), (e)(4), (f)(5); see also *Second Report and Order*, 35 FCC Rcd at 7485-86, paras. 58-60.

¹⁶⁰ See *supra* at para. 23.

¹⁶¹ See *MTRO*, 37 FCC Rcd at 3050-53, paras. 74-80. We note that, in some limited cases, providers may submit detailed infrastructure data instead of on-the-ground testing results.

¹⁶² Currently, availability and supporting data are available on the NBM for the following BDC filing periods: data as of June 30, 2022, December 31, 2022, June 30, 2023, and December 31, 2023. Updates to the data for the most recent filing period are published on the NBM approximately every two weeks, and only the data associated with the most current update or snapshot of a particular filing period are available for viewing and download/API access. In addition, summary data on fixed, mobile, and Fabric challenges are published monthly and made available for download and via API from the NBM. The Commission will retain availability, challenge, and other BDC data as required under the agency’s record retentions policy and system of records notice; however, the length of time the Commission retains the data may not be the same length of time that the public data are available for viewing and downloading on the map. The Broadband Data Task Force may issue future guidance as to the length of time for which BDC data for past filing rounds will be displayed in the NBM and accessible for public download.

83. The Commission requires entities to retain records for applicable data-retention periods in several of its programs. For example, entities that have equipment subject to the equipment authorization procedures must retain the records associated with the authorizations.¹⁶³ For equipment that must be certified, “records shall be retained for a one year period after the marketing of the associated equipment has been permanently discontinued.”¹⁶⁴ The equipment authorization rules require entities to retain all other records for a two-year period.¹⁶⁵ The rules specify what data must be collected and maintained.¹⁶⁶ Each of the Commission’s Universal Service Fund programs also include record retention requirements ranging from three to 10 years.¹⁶⁷

84. Just as with entities who participate in these other FCC programs, broadband service providers must know for how long they should retain their biannual submissions and the underlying data used to create them. We seek comment on a three-year data retention rule for these data. We believe that the needs of the BDC program support a three-year retention period, based upon the timeline from the relevant as-of date of a biannual availability filing to collection and publication of the data, followed by challenge and verification efforts by Commission staff and, finally, the downstream uses of the data in various funding programs. Do commenters agree? What are the benefits and burdens of retaining the data for three years? Should we adopt a different retention period, such as five years or possibly longer? Commenters advocating for a longer data-retention period should explain the benefits of a longer retention period and why the benefits outweigh the burdens on providers associated with a longer data-retention period. We propose to adopt a uniform data-retention period for all of the availability, subscription, and supporting data. Are there reasons to adopt different data-retention requirements for certain types of data or portions of the data collection and, if so, what would these be? Are the burdens on smaller providers disproportionately large compared to larger providers? Does the benefit of having uniform retention rules outweigh any such difference in burden on smaller providers?

85. We also seek comment on whether a three-year retention period for data involving challenges, verification inquiries, and audits is sufficient. We propose to adopt the same data-retention period for challenge, verification, and audit response data as for underlying biannual submission data in order to avoid confusion and to provide administrative ease for filers. But should we adopt a longer (or shorter) retention period for these data? As in the case of availability data, we seek comment on whether we should adopt a uniform data-retention period for all types of challenge, verification, and audit response data or if different requirements should apply to certain portions of the data. For example, mobile wireless service providers that respond to challenges or verification inquiries with infrastructure data are required to submit cell-loading data in 15-minute intervals for a one-week period.¹⁶⁸ Should we be concerned that this amount of cell-loading data would be so voluminous to store and maintain that requiring their retention for three years would be unduly burdensome? We also propose to adopt the same retention rules for all providers given that our need to verify and audit data and resolve challenges extends across all industry segments. But are there reasons why we should adopt different standards for some providers or for different technologies? Should the Commission adopt any additional requirements related to challenge, verification or audit response data?

¹⁶³ See 47 CFR § 2.938.

¹⁶⁴ 47 CFR § 2.938(f).

¹⁶⁵ *Id.*

¹⁶⁶ See 47 CFR § 2.938(a), (b).

¹⁶⁷ See, e.g., 47 CFR §§ 54.320(b) (adopting a 10-year record retention period for the high-cost program); 54.417(a) (implementing a three-year record retention period for the Lifeline program); 54.613 (adopting several recordkeeping requirements for the rural healthcare program); 54.516(a) (establishing a 10-year record retention period for the E-rate program).

¹⁶⁸ *MTRO*, 37 FCC Rcd at 3051-52, 3061, 3065-66, paras. 78 n.307, 97, 109 & n.419.

2. Sharing Fabric Challenges with Providers

86. To facilitate the development of new versions of the Fabric, we seek comment on the processes and timing for sharing Fabric challenges with providers.

87. *Background.* In September 2022, shortly after the close of the inaugural BDC filing window, the Broadband Data Task Force announced that Fabric licensees could begin submitting bulk Fabric challenges through the BDC system.¹⁶⁹ The Broadband Data Task Force limited these initial Fabric challenge submissions to bulk submissions because the NBM interface was not yet publicly available. For the same reason, only entities who had access to location data through a Fabric license could submit bulk challenges given that the FCC had not yet published location data points on a publicly accessible version of the NBM. The Commission subsequently began accepting Fabric challenges from individual consumers and entities that had not executed a Fabric license agreement when the pre-production draft of the NBM was published.¹⁷⁰ Using the NBM interface, consumers and other non-licensees were then able to submit data to challenge the information associated with Broadband Serviceable Locations (BSLs) reflected in the first version of the Fabric. The publication of the NBM also commenced the individual and bulk availability challenge processes.

88. The Commission accepts Fabric challenges on an ongoing basis throughout the year, and a new version of the Fabric is released in connection with a biannual BDC submission round for the collection of fixed availability data (either as of June 30 or December 31 of each year).¹⁷¹ Creating the Fabric is a complex process that involves analyzing many data sources, including aerial and satellite imagery, address databases, land and local tax records; reconciling determinations against Fabric challenge adjudications; and preparing data files for Fabric licensees sufficiently in advance of the opening of a biannual BDC submission round. Successful challenges received early in the process of creating the new Fabric version are incorporated in the next Fabric release; those received too late to be incorporated into the process will be evaluated for inclusion in the following version of the Fabric.¹⁷² The

¹⁶⁹ *Broadband Data Task Force Announces the Start of the Broadband Serviceable Location Fabric Bulk Challenge Process*, WC Docket Nos. 19-195 & 11-10, Public Notice, 37 FCC Rcd 10140 (2022).

¹⁷⁰ *Broadband Data Task Force Releases Pre-Production Draft of the National Broadband Map; Announces the Start of the Broadband Availability Challenge Processes*, WC Docket Nos. 19-195 & 11-10, Public Notice, 37 FCC Rcd 13348, 13350 (2022) (noting that “[s]ince September 12, 2022, the FCC has been receiving bulk challenges from state governments, service providers, and other entities [licensed into the Fabric data] to assist and augmenting the data used to populate the . . . Fabric dataset” and that “[w]ith the release of the [NBM], individuals can also file a location challenge directly through the map interface if they believe a location is missing or the information about a location point is incorrect.”).

¹⁷¹ See 47 U.S.C. § 642(b)(1)(B)(iv) (requiring that the Fabric shall “at a minimum, be updated every 6 months by the Commission”); FCC, Bulk Fabric Challenge FAQs – BDC Help Center, <https://help.bdc.fcc.gov/hc/en-us/articles/9200359586971-Bulk-Fabric-Challenge-FAQs>. Fabric licensees can submit bulk Fabric challenges at any time following receipt of a Fabric dataset. For example, licensees who received version two of the Fabric data in December 2022 (prior to the opening of the December 31, 2022 BDC data filing window) could submit bulk challenges against version two immediately upon receipt of their Fabric data files. Consumers and other entities without a license to the Fabric could submit challenges to the data in version one of the Fabric via the NBM interface starting on November 18, 2022, and could challenge the data in version two of the Fabric once the December 31, 2022 availability data were published on the NBM on May 30, 2023.

¹⁷² FCC, Bulk Fabric Challenge FAQs – BDC Help Center, <https://help.bdc.fcc.gov/hc/en-us/articles/9200359586971-Bulk-Fabric-Challenge-FAQs>. Fabric licensees submitting bulk Fabric challenges and consumers submitting Fabric challenges using the NBM interface are often challenging different versions of the Fabric. As described above (*see supra* n.168), Fabric licensees who obtained access to version two of the Fabric in December 2022 had until mid-March of 2023 to submit their challenges in order for the data to be reflected in version three of the Fabric made available in advance of the opening of the June 30, 2023 filing window. Consumer Fabric challenges (to version one) submitted via the NBM interface beginning on November 18, 2022 and through March 2023 were similarly processed with the bulk challenges to version two. Accordingly, the Commission

(continued....)

Commission and CostQuest Associates, the Fabric data vendor, have processed Fabric challenges in this manner for each iteration of the Fabric.

89. As noted in the *Report and Order* above, the IIA amended the Broadband DATA Act to require that “[t]he rules issued to establish the challenge process under subparagraph (A) shall include [] a process for the speedy resolution of challenges, which shall require that the Commission resolve a challenge not later than 90 days after the date on which a final response by a provider to a challenge to the accuracy of a map or information described in subparagraph (A) is complete.”¹⁷³ Subparagraph (A) of section 642(b)(5) directs the Commission to “establish a user-friendly challenge process . . . to challenge the accuracy of (i) the coverage maps; (ii) any information submitted by a provider regarding the availability of broadband internet access service; or (iii) the information included in the Fabric.”¹⁷⁴ In establishing the challenge processes, the Commission must both “allow providers to respond to challenges submitted through the challenge process” and “develop an online mechanism, which . . . makes challenge data available in both geographic information system and non-geographic information system formats.”¹⁷⁵

90. *Discussion.* Based on our experience with multiple cycles of Fabric challenges, allowing providers to directly respond to Fabric challenges while the most current Fabric is still being developed, rather than waiting until the next Fabric release, would require extensive resources and could lead to delays processing the Fabric. We therefore propose to amend our rules to eliminate the requirement that the BDC system alert a provider of accepted Fabric challenges¹⁷⁶ and that service providers be afforded an opportunity to directly respond to Fabric challenges.¹⁷⁷ Fabric challenge results are made available to providers upon final adjudication, and providers then have an opportunity to challenge any of the results with which they may disagree. Interposing a separate, in-cycle Fabric challenge process would, in most instances, require that the Commission and CostQuest delay the processing of the Fabric. We believe that any limited benefit of creating an in-cycle process for providers to directly respond to Fabric challenges does not outweigh the significant costs in terms of delaying the production of a subsequent iteration of the Fabric.

91. As a practical matter, Fabric challenges do not dispute availability information submitted by providers but, rather, dispute information used by CostQuest to identify locations and the attributes of BSLs. Having now processed several rounds of Fabric challenges, data show that while some providers have submitted Fabric challenges that have resulted in updates to subsequent versions of the Fabric, it is unclear that providers (as a group) have better or more reliable geospatial data on BSL attributes than other groups (e.g., state, local or Tribal governments, consumers). Additionally, while it may be relatively straightforward to identify Fabric challenges to locations where a provider has previously reported making broadband service available, the vast majority of challenges to date have been to add a new BSL, which, by definition, does not implicate previously reported availability data (at least as to fixed service providers who report availability using a list of (preexisting) BSLs). Since providers have not previously analyzed whether broadband is available at these *proposed* locations, and Commission staff could only guess as to which providers it should notify of such challenges, it is also impractical to have providers directly respond to Fabric challenges. For these reasons, the information the Commission

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adjudicated bulk Fabric challenges to version two and individual consumer challenges to version one submitted by mid-March prior to creation of version three of the Fabric.

¹⁷³ IIA § 60102(h)(2)(E)(i), 135 Stat. 429 (2021) (amending 47 U.S.C. § 642(b)(5)(C)(i)).

¹⁷⁴ 47 U.S.C. § 642(b)(5)(A).

¹⁷⁵ 47 U.S.C. § 642(b)(5)(B)(iii), (iv)(III).

¹⁷⁶ See 47 CFR § 1.7006(d)(2).

¹⁷⁷ See 47 CFR § 1.7006(d)(9). If adopted, these proposals would be codified in the proposed new rule subsection for Fabric challenges described below. See *infra* Section V.B.7.

collects through the Fabric challenge process, along with the methods used to create the Fabric dataset, do not effectively allow for a process for service providers to directly respond to these challenges. Rather, we believe that the best way for Internet service providers to “respond” to Fabric challenges within their availability footprints would be to continue to submit follow-on challenges to challenged or new Fabric locations in a subsequent version of the Fabric. We seek comment on this proposal.

92. We believe that this proposed Fabric challenge process is consistent with the Congressional intent in the Broadband DATA Act that we “allow providers to respond to challenges submitted through the challenge process”¹⁷⁸ In the first instance, we interpret this clause as primarily, if not exclusively, intended to apply to *availability* challenges filed against service providers. Nothing in our proposed changes today would alter the ability of service providers to respond directly to challenges to their fixed (and mobile) availability data. Moreover, unlike with availability challenges, where it is the provider’s data that are being challenged and where the provider has particular interest and specific knowledge, with Fabric challenges, it is unclear the extent to which providers have more or better information than local consumers or governments or others filing challenges to the location information in the Fabric. Finally (and importantly), the FCC publishes data on in-progress Fabric challenges monthly,¹⁷⁹ and on resolved Fabric challenges through the information it makes available when it publishes a new version of the Fabric.¹⁸⁰ Providers are thereby able to “respond” to these pending or resolved Fabric challenges by filing subsequent, follow-on challenges to such challenges. We seek comment on this interpretation of the Broadband DATA Act.

93. We seek comment on potential alternatives to this proposed process and specific proposals on how they might be implemented. For example, should we allow providers to view and directly respond to customized lists of non-Type-1 Fabric challenges to existing BSLs that fall within their service footprints? If so, then how could the Commission facilitate such a process without delaying the processing of Fabric challenges and the production schedule for subsequent iterations of the Fabric data? Should we also attempt to identify the ISP(s) that may have an interest in Type-1 Fabric challenges to add new BSLs to the Fabric? If so, then what process should the Commission use to identify ISP(s) interested in these challenges? In particular, how would staff identify areas of interest for non-polygon availability data filers? Could staff create a buffer around the to-be-added location point, and provide notice to all service providers who report service at locations within a certain distance from the point? How could such a process be implemented without delaying the processing of Fabric challenges and the production schedule for subsequent iterations of the Fabric? Should the Commission delay processing of any challenges presented to ISPs for response? Doing so would mean setting aside such challenges for, e.g., 60 days, for providers to respond. That delay would effectively require that any challenges be incorporated into the next version of the Fabric.¹⁸¹ Alternatively, if the Commission does not delay processing of Fabric challenges for providers to respond, challenges might already be in the process of adjudication—or already adjudicated—before the ISP responds. In such cases, any ISP response would need to be treated as an additional challenge to the same location. Is there any advantage to having an ISP-specific process for a response instead of allowing ISPs to file additional challenges (an option that is already available to ISPs today)? Are there any additional measures we could implement to avoid delays

¹⁷⁸ 47 U.S.C. § 642(b)(5)(B)(iii).

¹⁷⁹ See Data Download – Challenges | FCC National Broadband Map, <https://broadbandmap.fcc.gov/data-download/challenge-data> (last visited Apr. 22, 2024).

¹⁸⁰ See FCC, Fabric Change Reports, <https://us-fcc.app.box.com/v/FabricChangeReports> (last visited Apr. 22, 2024).

¹⁸¹ For example, the FCC announced March 8, 2024, as the date by when challenges to the Fabric data sent to licensees at the end of December 2023 should be submitted to the Commission in order for them to be included in the next iteration of the Fabric. See Broadband Data Collection | Federal Communications Commission, <https://www.fcc.gov/BroadbandData> (last visited Apr. 22, 2024) (providing a chart of 2024 key dates for the NBM). Delaying the processing of challenges by 60 days would mean that the Commission would have had to set a deadline around January 9, 2024 for challenges to be incorporated into the next version of the Fabric.

in the event we were to allow for ISPs to directly respond to Fabric challenges? For example, the Commission already creates Fabric challenge adjudication files and change logs for Fabric licensees indicating changes made to the Fabric as a result of the challenge process (as well as updates made by the Commission and CostQuest). Should (and, if so, then how could) the FCC and CostQuest prepare similar (but separate and distinct) data files to identify pending Fabric challenges for ISPs that they may want to respond to?

94. Finally, we propose to interpret section 60102(h)(2)(E)(i) of the IIJA as inapplicable to Fabric challenges and revise our rules to make this clear. The statute requires the Commission to resolve challenges “not later than 90 days after the date *on which a final response by a provider . . . is complete.*”¹⁸² To the extent we amend our rules to provide that an ISP does not “respond” to an initial Fabric challenge (and instead the Commission would resolve such challenges as part of its publication of a subsequent version of the Fabric), the deadline required under the statute would not apply to Fabric challenges. Do commenters agree with our proposed interpretation of the IIJA? We believe this approach to the Fabric challenge process would facilitate efficient resolution of challenges, consistent with the requirements of the IIJA, while maintaining the Commission’s flexibility to assess data that may be submitted by providers through a subsequent challenge to a later iteration of the Fabric. We note that the majority of Fabric challenges are processed and resolved well within 90 days of submission, particularly those that can be resolved based on the data submitted by filers without any need for manual or secondary review of satellite imagery.¹⁸³ Challenges that are deemed successful based on such processing need to be reconciled with and incorporated into the next version of the Fabric, and are therefore tied to the biannual cadence of Fabric releases (*i.e.*, a challenge is only fully accepted when incorporated into the next Fabric vintage). Moreover, the Broadband Data Task Force has historically announced target dates for submitting Fabric challenges that will be processed in time for inclusion in the next iteration of the Fabric.¹⁸⁴ Given that challenges submitted by this date are adjudicated in advance of the creation of the next release of Fabric data, these challenges are usually resolved approximately 90 days from the date of their filing.¹⁸⁵

3. Professional Engineering Certification

95. We next seek comment on whether we should eliminate the requirement in our rules that parties submitting verified broadband data in the BDC provide a certification by a licensed professional engineer if not submitted by a corporate engineering officer. To address concerns about licensed professional engineer shortages, WCB, OEA and WTB have waived this requirement for several filing periods and instead relied on other measures to ensure we receive accurate coverage maps that are based

¹⁸² IIJA § 60102(h)(2)(E)(i) (emphasis added).

¹⁸³ Challenges to add a BSL with a location that intersects the footprint of an existing BSL already in the Fabric, or that fall on a road, are rejected through an automated process. These are just a few examples.

¹⁸⁴ For example, the Broadband Data Task Force announced that bulk challenges to the June 2023 Fabric dataset would need to be submitted no later than September 8, 2023, in order to be reviewed and adjudicated in time to be accounted for in the next iteration of the Fabric (December 2023). *See Broadband Data Task Force Begins Accepting Challenges to June 2023 Broadband Serviceable Location Fabric*, WC Docket Nos. 19-195 & 11-10, Public Notice, DA 23-579 (BDTF July 3, 2023); *see also* note 181, *supra*.

¹⁸⁵ As a further example, the challenges to the June 2023 Fabric dataset filed on or before September 8, 2023 were adjudicated in time to be incorporated into the December 2023 (version 4) Fabric dataset released to licensees starting on December 27, 2023. *See Broadband Data Task Force Announces Opening of Broadband Data Collection Filing Window and Release of Updated Broadband Serviceable Location Fabric*, WC Docket Nos. 19-195 & 11-10, Public Notice, DA 23-1186 (BDTF Dec. 20, 2023). While challengers may not have had access to the results of their Fabric challenges until on or around December 27th (or 110 days following September 8th), the adjudications occurred prior to the final Fabric production and the creation of individual licensee Fabric data files, meaning that challenges were likely resolved close to 90 days from the date on which they were filed.

on data that are consistent with professional engineering standards. Accordingly, we seek comment on whether this requirement should be eliminated and replaced with other measures.

96. *Background.* The Broadband DATA Act requires that broadband service providers “shall include in each [BDC] submission a certification from a corporate officer of the provider that the officer has examined the information contained in the submission and that, to the best of the officer’s actual knowledge, information, and belief, all statements of fact contained in the submission are true and correct.”¹⁸⁶ In the *Third Report and Order*, the Commission expanded this requirement so that, in addition to a certification from a corporate officer, service providers must also submit a certification by a qualified engineer, who must be either a certified professional engineer or a corporate engineering officer.¹⁸⁷ The Commission noted that this engineering certification requirement also applies to government entities and third parties that submit verified broadband data.¹⁸⁸ The Commission explained that the purpose of the engineering certification is to “ensur[e] the accuracy of coverage maps and that they be based on data that are consistent with professional engineering standards.”¹⁸⁹

97. WCB, OEA, and WTB have waived this requirement several times over the past several years due to a shortage of professional engineers. In May 2022, the Competitive Carriers Association (CCA) filed a Petition for Declaratory Ruling or Limited Waiver, asking the Commission to clarify that BDC filings may be certified by either an engineer licensed by the relevant state licensure board (i.e., a Professional Engineer)¹⁹⁰ or an “otherwise qualified engineer.”¹⁹¹ In its Petition, CCA noted that “[t]he RF engineering community is characterized by a scarcity of licensed PEs” because “[s]tate professional licensing boards issue PE licenses based on the fulfillment of state-specific education, examination, and experience requirements [and] states have generally not required PE licensure for RF engineers.”¹⁹² CCA went on to assert that “[t]he experience and expertise developed by RF engineers through their work provides comprehensive skills relevant to broadband deployment [and] . . . provides skills comparable to, and perhaps more relevant than, general licensure through the PE . . . exam process.”¹⁹³

¹⁸⁶ 47 U.S.C. § 642(b)(4).

¹⁸⁷ *Third Report and Order*, 36 FCC Rcd at 1144-45, paras. 42-45 (codified at 47 CFR § 1.7004(d)). We noted at the time that, to the extent a corporate officer is also an engineer and has the requisite knowledge under the Broadband DATA Act, a provider may submit a single certification satisfying both requirements. *Id.* at para. 43.

¹⁸⁸ *Third Report and Order*, 36 FCC Rcd at 1152, para. 63 (stating that government entities and third parties that choose to file verified data “must file their broadband availability data in the same portal and under the same parameters as providers (e.g., formatting requirements, required information, *certifications*)”) (emphasis added).

¹⁸⁹ *Third Report and Order*, 36 FCC Rcd at 1145, para. 45; *accord id.* (“We find that requiring that an engineer review and certify the accuracy of a provider’s submissions is an appropriate measure to confirm that filers have in fact engaged in the analysis necessary to meet Congress’s objectives of developing more accurate data.”).

¹⁹⁰ A licensed Professional Engineer (PE) is an engineer possessing a professional license by virtue of completing or passing multiple educational and testing requirements so as to earn a license from a state licensure board. National Society of Professional Engineers, *What is a PE?*, <https://www.nspe.org/resources/licensure/what-pe> (last visited Feb. 20, 2024).

¹⁹¹ See *Establishing the Digital Opportunity Data Collection; Competitive Carriers Association Petition for Declaratory Ruling or Limited Waiver Regarding the Requirement for a Certified Professional Engineer to Certify Broadband Data Collection Maps*, WC Docket No. 19-195, Declaratory Ruling and Limited Waiver, 37 FCC Rcd 7836, 7836, para. 1 (WCB/OEA/WTB 2022) (*2022 BDC PE Order*) (citing Petition of Competitive Carriers Association (CCA) for Declaratory Ruling or Limited Waiver, WC Docket No. 19-195 at 8-9 (filed May 13, 2022) (CCA Petition)).

¹⁹² CCA Petition at 4.

¹⁹³ CCA Petition at 6-7.

98. WCB, OEA, and WTB subsequently issued the *2022 BDC PE Order* in which they (1) clarified that when a fixed or mobile provider submits a certification from a corporate engineering officer, such corporate engineering officer does not need to be a certified PE;¹⁹⁴ and (2) waived the requirement that a fixed or mobile provider submit a certification from a “certified professional engineer,” allowing instead the submission of a certification completed by an otherwise-qualified engineer.¹⁹⁵ In issuing the waiver, WCB, OEA, and WTB found that “the lack of certified professional engineers specializing in RF engineering and broadband network design constitutes ‘special circumstances’ that warrant a deviation from the general rule that certified professional engineers must certify the accuracy of providers’ biannual BDC broadband data submissions.”¹⁹⁶ The waiver specified that an “otherwise-qualified” engineer must meet certain minimum qualifications in lieu of state PE licensure in order to certify a BDC filing; specifically, the engineer must “possess either: (i) a bachelor’s or postgraduate degree in electrical engineering, electronic technology, or another similar technical discipline, and at least seven years of relevant experience in broadband network design and/or performance; or (ii) specialized training relevant to broadband network engineering and design, deployment, and/or performance, and at least ten years of relevant experience in broadband network engineering, design, and/or performance.”¹⁹⁷ The waiver applied to all mobile and fixed broadband service providers for each of the first three BDC filing cycles (i.e., data as of June 30, 2022, December 31, 2022, and June 30, 2023).¹⁹⁸

99. In August 2023, CCA and USTelecom–The Broadband Association jointly submitted a petition to extend the *2022 BDC PE Order*.¹⁹⁹ The Waiver Extension Petition reported that circumstances had not changed for the industry in the year since adoption of the *2022 BDC PE Order*.²⁰⁰ It further asserted that the minimum qualifications adopted for “otherwise-qualified” engineers in the *2022 BDC PE Order* required experience that “provides skills comparable to, and perhaps more relevant than, general PE licensure in the context of the BDC.”²⁰¹ On November 30, 2023, WCB, OEA, and WTB granted the Waiver Extension Petition for another three filing cycles (i.e., data as of December 31, 2023, June 30, 2024, and December 31, 2024), subject to certain conditions.²⁰²

¹⁹⁴ *2022 BDC PE Order*, 37 FCC Rcd at 7838-39, 7840, paras. 6, 7, 9. The Bureaus and Office concluded that the “corporate engineering officer” must be “a corporate officer possessing a B.S. in engineering degree with both ‘direct knowledge’ of, and responsibility for, the carrier’s network design and construction.” *Id.* at 7839, para. 7; *accord id.* at 7838-39, 7840, paras. 6, 9. The “corporate engineering officer” also must have “direct knowledge of, or responsibility for, the generation of the service provider’s BDC filing.” *Id.* at 7840, para. 9; *accord* 47 CFR § 1.7004(d).

¹⁹⁵ *2022 BDC PE Order*, 37 FCC Rcd at 7838-39, para. 6.

¹⁹⁶ *2022 BDC PE Order*, 37 FCC Rcd at 7843, para. 14.

¹⁹⁷ *2022 BDC PE Order*, 37 FCC Rcd at 7846-47, para. 19. The “otherwise-qualified” engineer also must have “direct knowledge of, or responsibility for, the generation of the provider’s [BDC] filing.” 47 CFR § 1.7004(d).

¹⁹⁸ *2022 BDC PE Order*, 37 FCC Rcd at 7842, paras. 12-13. The Bureaus and Office also concluded that the same limited waiver of the requirement to submit an engineering certification from a certified professional engineer applied to government entities and third parties that submit verified broadband availability data. *Id.* at 7842, para. 13 n.45.

¹⁹⁹ Petition for Extension of Waiver of Competitive Carriers Association and USTelecom – The Broadband Association, WC Docket No. 19-195 (filed Aug. 4, 2023) (Waiver Extension Petition).

²⁰⁰ Waiver Extension Petition at 4.

²⁰¹ Waiver Extension Petition at 6.

²⁰² See *Establishing the Digital Opportunity Data Collection; Competitive Carriers Association and USTelecom – The Broadband Association Petition for Extension of Waiver Regarding the Requirement for a Certified Professional Engineer to Certify Broadband Data Collection Maps*, WC Docket No. 19-195, Order, DA 23-1123, para. 1 (WCB/OEA/WTB 2023) (*PE Waiver Extension Order*). These conditions are that “any provider availing itself of this waiver must: (1) have its BDC submissions certified by an engineering professional with the

(continued...)

100. *Discussion.* As noted above, since the inception of the BDC, we have granted multiple waivers of the certified PE requirement. We propose to permanently eliminate the requirement under section 1.7004(d) that an engineering certification, to the extent not submitted by a corporate engineering officer, must be submitted by a certified PE. In its place we propose to amend section 1.7004(d) to state that all providers must submit a certification to the accuracy of their submissions by a “qualified engineer,” and we propose to define “qualified engineer” consistent with the engineering qualifications that WCB, OEA, and WTB adopted in the *2022 BDC PE Order* and the *PE Waiver Extension Order*.²⁰³ We seek comment on our proposal.

101. Specifically, we propose to allow for the engineering certification to be submitted by (i) a corporate officer possessing a B.S. in engineering degree²⁰⁴ and who has direct knowledge of and responsibility for the carrier’s network design and construction; (ii) an engineer possessing a bachelor’s or postgraduate degree in electrical engineering, electronic technology, or another similar technical discipline, and at least seven years of relevant experience in broadband network design and/or performance; or (iii) an employee with specialized training relevant to broadband network engineering and design, deployment, and/or performance, and at least 10 years of relevant experience in broadband network engineering, design, and/or performance.²⁰⁵

102. We further propose to modify the rule to clarify that a certifying engineer does not necessarily need to be a full-time employee of the broadband service provider but instead could be an independent contractor or third-party consultant.²⁰⁶ We do, however, propose to maintain the remaining requirements in section 1.7004(d), including that the certifying engineer: (i) has direct knowledge of, or responsibility for, the generation of the provider’s BDC filing; and (ii) has examined the information contained in the BDC submission and that, to the best of the engineer’s actual knowledge, information, and belief, all statements of fact contained in the submission are true and correct, and in accordance with the service provider’s ordinary course of network design and engineering.²⁰⁷

103. In light of the other mechanisms available to the Commission, such as system validations and the existing corporate officer certification, we do not believe that a certification by a certified PE is necessary to ensure the submission of high-quality data as part of the BDC. Moreover, the Commission has other tools at its disposal to ensure the ongoing improvement in BDC data, including the challenge, verification, and audit processes. Given all of these other processes, we do not believe the certified

(Continued from previous page)

qualifications specified in the [*2022 BDC PE Order*]; (2) preserve, for the applicable “as-of” filing date(s), certain categories of underlying network information for each submission filed under the waiver; and (3) upon request, expeditiously provide this network information to the Commission.” *Id.* at 1, para. 1; *accord id.* at 9-10, paras. 16-22.

²⁰³ These same requirements would apply, by extension, to government entities and other third parties who seek to submit verified broadband availability data into the BDC system. *See Third Report and Order*, 36 FCC Rcd at 1152, para. 63.

²⁰⁴ We expect that a corporate officer with an engineering degree to have received such degree from a reputable institution of higher learning, such as an institution accredited by the Accreditation Board for Engineering and Technology. *See Accreditation – ABET*, <https://www.abet.org/accreditation/> (last visited Apr. 19, 2024).

²⁰⁵ WCB, OEA, and WTB noted in the *2022 BDC PE Order* that “[a]lthough there are likely to be variations among engineers based on the provider’s network and the types of services they work with, we expect that qualified engineers experienced in broadband network design and/or performance would have proficient knowledge of mobile and/or fixed broadband technologies, RF link budgets and propagation modeling, RF network design and optimization, and experience with field testing, remote testing, drive-test collection, and/or other data collection, data processing, and mapping tools.” *2022 BDC PE Order*, 37 FCC Rcd at 7847, para. 19.

²⁰⁶ 47 CFR § 1.7004(d).

²⁰⁷ *Id.*

professional engineer requirement—at least in its current form—is necessary. Rather, we believe that the potential costs and burdens of the certified PE requirement outweigh its potential benefits. We propose that, consistent with our actions in the *PE Waiver Extension Order*, all providers be required to retain their infrastructure data in support of their biannual submissions and produce those data upon request as part of the Commission’s efforts to validate availability data.²⁰⁸ We seek comment on these proposals and conclusions.

104. Does the limited availability of certified PE resources since the launch of the BDC support modifying the current requirement? Do commenters believe that state licensure requirements will change in the near term such that certified PEs with RF or fixed broadband network deployment experience will become more available? We seek updated data on the availability of licensed PEs. Commenters who assert that certified PEs will soon become available should provide evidence in support of their claims.

105. Assuming that we eliminate the requirement that a certified PE complete the engineering certification, do commenters agree that the alternative qualifications adopted in the *2022 BDC PE Order* and the *PE Waiver Extension Order* are sufficient to ensure reliable BDC data are submitted by service providers? If commenters believe we should adopt different qualifications, what should those qualifications be and why should we adopt these qualifications rather than the qualifications in the prior waiver orders?

4. Audit and Verification Determinations

106. We next seek comment on our rule and procedures governing determinations made as a result of audits and verifications, including the removal of locations or areas if an audit or verification determines the data are deficient or unverifiable.

107. *Background.* As discussed earlier, the Broadband DATA Act requires that the Commission conduct audits to ensure that providers are complying with their reporting requirements.²⁰⁹ The Act also requires the Commission to verify the accuracy and reliability of availability data submissions in accordance with measures established by the Commission.²¹⁰ In the *Fourth Report and Order* above, we delegate authority to OEA, in coordination with WTB, WCB, and SB to continue to perform audits and verifications using the tools currently available, including authority to establish methodologies and procedures for selecting service providers and locations or areas subject to verification or audit.²¹¹ At the conclusion of a verification or an audit, a provider must submit revised availability data to align with the conclusions of the verification or audit.²¹² In the case of mobile wireless coverage subject to a verification inquiry, we have also made clear that “we may treat any targeted [mobile wireless coverage] areas that . . . fail verification as a failure to file required data in a timely manner and that the Commission may make modifications to the data presented on the broadband map (i.e., by removing some or all of the targeted area from the provider’s coverage maps).”²¹³ But we have not been as explicit

²⁰⁸ See *PE Waiver Extension Order* para. 22. We propose that providers retain these data for the data-retention period we adopt for challenge, verification, and audit data. See section V.B.1, *supra*.

²⁰⁹ 47 U.S.C. § 644(a).

²¹⁰ 47 U.S.C. § 642(b)(4)(B).

²¹¹ See *supra* paras. 24-26.

²¹² See 47 CFR § 1.7009(d) (requiring providers to “file corrections within 30 days” of “when they discover inaccuracy, omission, or significant reporting error in the original data that they submitted, whether through self-discovery, the crowdsource process, the challenge process, the Commission verification process, or otherwise”); see also *Mobile Technical Requirements Order*, 37 FCC Rcd at 3059, para. 96 (noting that “[i]f [a mobile wireless service] provider fails to verify its coverage data, the provider will be required to submit revised coverage maps that reflect the lack of coverage in the targeted areas failing the verification within 30 days”).

²¹³ See *Mobile Technical Requirements Order*, 37 FCC Rcd at 3060, para. 96.

in announcing that similar procedures and remedies would apply in response to determinations made as a result of verification of fixed availability data or in the case of audits (of both fixed and mobile data).

108. *Discussion.* We seek comment on formalized procedures to govern determinations made as a result of audits and verifications of information submitted by fixed and mobile broadband service providers in their biannual BDC submissions.²¹⁴ Specifically, we seek comment on whether we should amend section 1.7009 of the Commission’s rules to explicitly state that Commission staff may remove locations or areas from a provider’s availability data should an audit or verification find that the data are deficient or unverifiable. While we seek comment on whether amendments to section 1.7009 would help to clarify for broadband service providers the potential ramifications stemming from a verification or audit, we emphasize that our doing so does not diminish our existing authority to remove locations or areas from a provider’s claimed availability data on a case-by-case basis as a result of a verification or an audit.²¹⁵

109. Section 1.7009(d) requires that providers “file corrected data when they discover inaccuracy, omission, or significant reporting error in the original data that they submitted, whether through self-discovery, the crowdsource process, the challenge process, the Commission verification process, or otherwise.”²¹⁶ We tentatively conclude that it would be beneficial to clarify in our rule that, in the event a provider’s response to a verification inquiry or an audit does not support its availability filing—whether due to an incomplete response or where the response demonstrates that service is not available—pursuant to section 1.7009(d)(1), the provider must correct its availability data within 30 days of OEA or WTB, WCB or SB (as relevant), notifying the provider of this finding. Consistent with our statutory obligations, and our processes for mobile wireless coverage verifications, in the event of an adverse audit or verification finding that is not appealed, or, in the event of an appeal, by a Commission decision resolving the appeal adversely to the provider, we propose that the failure to correct data within the 30-day timeframe may result in OEA, in coordination with WTB, WCB or SB (as relevant), amending or removing from the NBM the provider’s availability data. For example, an adverse audit determination would give the provider 30 days to either appeal the decision or to submit corrected data regarding specified areas; in the event the provider does not appeal the adverse audit decision, and does not submit corrected data within 30 days, OEA may remove the targeted areas subject to the audit from the NBM. Alternatively, OEA may determine that the provider’s data are so unreliable as to warrant removal of all of the provider’s availability data (not just for the targeted areas) from the NBM. In either scenario, the BDC will notify the provider in writing of either the alternation or removal of the provider’s data. We find that this procedure is consistent with our statutory obligation to publish verified data and the current Commission process. We additionally note that the Commission already has established rules to submit an application for review of action taken pursuant to delegated authority,²¹⁷ and a petition for reconsideration in a non-rulemaking proceeding that providers may avail themselves of in the event of an unfavorable bureau-level determination.²¹⁸ We seek comment on this proposal.

²¹⁴ See 47 U.S.C. §§ 642(b)(4)(B), 644; 47 CFR § 1.7006(a), (c).

²¹⁵ The ability of Commission staff to remove locations or areas that it cannot verify or reasonably believes to be inaccurate is fundamental to our statutory obligation to verify the accuracy of providers’ data. Regardless of whether or not this specific remedy is enumerated in our part I rules, courts have found that agencies may adopt new principles in the course of fact-specific adjudications, especially when doing so is needed to “resolv[e] disputes about what that law means.” *ITServe All., Inc. v. U.S. Dep’t of Homeland Sec.*, 71 F.4th 1028, 1035 (D.C. Cir. 2023); see also *Conference Grp. v. FCC*, 720 F.3d 957, 965 (D.C. Cir. 2013).

²¹⁶ 47 CFR § 1.7009(d).

²¹⁷ 47 CFR § 1.115.

²¹⁸ 47 CFR § 1.106.

5. Data Requirements for Restoration of Locations Lost or Conceded to Challenges

110. We seek comment on the data requirements for restoring locations or areas where infrastructure data under the existing data specifications are not relevant to the underlying fixed challenge code, and also seek comment on using speed test data for restoration of mobile coverage areas.

111. *Background.* In the *Declaratory Ruling* above, we clarify that in instances where a provider's claimed availability at a location or area was previously removed from the NBM as a result of a challenge, verification or audit, the provider may submit evidence in a subsequent BDC filing window demonstrating that it can make service available at that location or area and that the circumstances surrounding the previous removal no longer exist.²¹⁹ As discussed in further detail above, this process is consistent with providers' obligations to report accurate data about the broadband services that they make available on a biannual basis,²²⁰ and is necessary to advance the Commission's goal of publishing accurate and precise data about where internet services are, and are not, available across the United States.

112. *Fixed Availability Challenges.* As noted above, in the case of most types of fixed challenges, the Commission would evaluate infrastructure data, such as the information contained in the Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes, to confirm that the provider makes the claimed service available and therefore to substantiate a location restoration.²²¹ While infrastructure data is relevant to location restoration in most instances, there are specific fixed challenge reason codes where this type of data may not be as closely aligned with the reason for the challenge. For example, fixed service can be challenged based on a showing that the provider requested more than a standard installation fee to connect the location with service (*i.e.*, Challenge Category Code 3), or the provider failed to schedule a service installation within 10 business days (Challenge Category Code 1), or the provider did not install service at the agreed upon time (Challenge Category Code 2).²²² In these instances, infrastructure data may not adequately demonstrate that the location presently warrants being restored to the NBM. This may be particularly so in the case of individual challenges, since they are more likely to capture unique attributes of a single location (such as a long driveway, a large hill, unique topography or building materials, etc.), as compared to bulk challenges that typically implicate several locations in a community and more often relate to a lack of infrastructure.

113. We propose to implement these requirements through revisions and updates to the data specification to account for the information a provider must submit when seeking to restore a location lost or conceded to fixed Challenge Category Codes 1, 2, and 3 (or other cases where infrastructure data would not be informative of whether or not to restore the location). We seek comment on the types of data or evidence that should be considered to justify restoration of locations previously conceded or lost to fixed Challenge Category Codes 1, 2, and 3 or other cases where infrastructure data would not be informative of whether or not to restore the location. What type of information would sufficiently demonstrate that a provider can make service available with a standard installation fee, or within 10 business days? Should different types of evidence be provided for individual as compared to bulk challenges submitted under these Challenge Category Codes? What type of information supports a provider's ability to schedule installation within 10 business days of a request for service when it

²¹⁹ See *supra* Section IV.

²²⁰ See 47 CFR § 1.7004.

²²¹ See *supra* para. 42; Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

²²² See FCC, How to Format Bulk Fixed Challenge and Crowdsource Data – BDC Help Center, <https://help.bdc.fcc.gov/hc/en-us/articles/10390523851803-How-to-Format-Bulk-Fixed-Challenge-and-Crowdsource-Data>

previously could not do so at a particular location? Should we allow locations which were removed under these circumstances to be restored after a certain amount of time has passed? If so, what is the appropriate amount of time that must pass, and should we seek any supporting information to restore those locations aside from the passage of time?

114. *Mobile Availability Challenges.* Similarly, the Commission will consider infrastructure data to confirm that a mobile provider makes the claimed service available and therefore to substantiate restoration of a Removed Area resulting from a successful mobile challenge (or verification inquiry or audit).²²³ In addition to infrastructure data, we seek comment on whether we should also allow mobile providers to restore an area by providing on-the-ground speed test data. Could speed test data sufficiently support restoration of a previously removed hexagon? Under what circumstances should we accept on-the-ground speed test data (either in lieu of, or in addition to, infrastructure data) when a mobile provider seeks to restore a Removed Area? In the event we were to allow for submission of speed test data, should we require mobile service providers to collect these data using the parameters adopted for submittal of mobile challenge rebuttal speed test data,²²⁴ or are there different parameters to the speed testing methodology that we should seek for this type of data to support restoration? For additional speed test data to support restoration, is it necessary that the tests are conducted after the challenge has been upheld, or could the tests be collected any time after the as-of date of the relevant BDC data vintage? If commenters believe that tests should be conducted after the challenge has been resolved, should we require a certain amount of time to pass before we find such data compelling? We propose to implement these requirements through revisions and updates to the data specification for the information a mobile wireless service provider must submit when seeking to restore a previously Removed Area, should we allow for submission of speed test data. We seek comment on these proposals.

6. Aligning Reporting Requirements for Broadband Availability and Subscribership Data

115. *Background.* While broadband availability data are now gathered through the BDC, the Commission continues to collect counts of “broadband connections” in service—broadband *subscribership*—using the FCC Form 477. Facilities-based entities providing Internet access service currently submit information for both the BDC and Form 477 within a common online filing application.²²⁵ The data about broadband availability collected pursuant to the Broadband DATA Act and BDC rules, as well as the data about broadband connections (i.e., subscriptions) collected under the Form 477 rules, are separately validated as they are ingested by the BDC system, and then checked against each other to ensure consistency and accuracy after individual files are ingested and prior to entities certifying and submitting their biannual submissions.²²⁶

116. The operational definition of “broadband” in the context of FCC Form 477 subscribership is slightly different than that used in the BDC for broadband availability. As noted above, the Broadband

²²³ See Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes (Feb. 20, 2024), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

²²⁴ 47 CFR § 1.7006(c)(1)(i)-(ii), (e)(4), (f)(5); *Mobile Technical Requirements Order*, 37 FCC Rcd at 3045-49, paras. 64-70. See also Broadband Data Collection, Data Specifications for Mobile Speed Test Data § 4.1 (Nov. 18, 2022), <https://us-fcc.app.box.com/v/bdc-mobile-speedtest-spec>.

²²⁵ This common, joint application is identified as a “biannual submission” within the BDC system. The BDC availability and the Form 477 subscribership data have the same as-of dates and filing deadlines.

²²⁶ This is known as the “Final Data Checks” portion of the online form. See Federal Communications Commission, *Broadband Data Collection BDC System User Guide* § 14 (Mar. 12, 2024), <https://us-fcc.app.box.com/v/bdc-filer-user-guide>. Filers that report fixed broadband subscription data for a census tract must also report availability to at least one location in that census tract in order to submit the filing. For other Final Data Checks, filers are alerted about potential errors or anomalies in their data and required to either correct the data or provide an explanation in the form.

DATA Act defines “broadband internet access service” for purposes of the BDC as a “mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up internet access service.”²²⁷ The existing Form 477 rules define a “broadband connection” as a “wired line, wireless channel, or satellite service that terminates at an end user location or mobile device and enables the end user to receive information from and/or send information to the internet at information transfer rates exceeding 200 kilobits per second (kbps) in at least one direction.”²²⁸

117. *Discussion.* We propose to modify the definition of “broadband connection” used in Form 477 so that it aligns with the definition of “broadband internet access service” used in the BDC. Specifically, we propose to require facilities-based providers of broadband Internet access service to submit in Form 477 counts of “broadband internet access service connections” in service, with that term defined as connections that provide mass-market broadband internet access as defined and described in 47 CFR § 8.1(b). This change would put the Form 477 on the same definitional footing as the BDC, as well as Broadband Labeling.²²⁹ Taking this step would also be consistent with the Broadband DATA Act’s direction to the Commission to “harmonize reporting requirements and procedures regarding the deployment of broadband internet access service” for the FCC Form 477 with those adopted for the BDC.²³⁰ We believe our proposal will allow the Commission to streamline its rules, reduce confusion among filers, and impose consistency on the broadband data it collects in the BDC and FCC Form 477. We seek comment on this proposal.

118. We believe the definition of *broadband Internet access service* is, on net, narrower than the definition of a *broadband connection*. Broadband connections are not limited to include only “mass-market retail” services.²³¹ Such connections therefore include those providing types of internet access services that are not sold on a standardized basis. These non-mass market connections are currently in scope for reporting on FCC Form 477 but not in the BDC. Changing the Form 477 rules to focus solely on mass-market services would render custom internet access services out of scope for that collection, and providers specializing purely in such services would no longer be required to file. Within the Form 477, there is currently no way to determine the share of total reported broadband connections that are sold as non-mass market services, but our expectation is that it is small. In addition, such connections are arguably sold into a different market. Given that, we seek comment on whether no longer collecting data on such connections is worthwhile, particularly in light of the reduced filing burden to providers of such services and the benefits of data consistency.

119. An alternative to conforming the scope of the Form 477 to meet the BDC, is to instead change the Form 477 to capture mass market and non-mass market connections separately. That is, in addition to the current requirement to separately report “consumer” and “total” broadband connections in service, the Commission could require filers to further parse consumer, and by extension, non-consumer, connections based on whether the connections are mass market or not. This would likely increase the burden on filers but would make it possible to compare the Form 477 data on mass-market broadband connections in service to the BDC availability data, as well as other broadband data collections, while leaving the scope of the Form 477 unchanged. We invite comment on this alternative approach.

²²⁷ See para. 46, *supra*.

²²⁸ 47 CFR § 1.7001(a)(1).

²²⁹ See *Empowering Broadband Consumers Through Transparency*, CG Docket No. 22-2, Report and Order and Further Notice of Proposed Rulemaking, FCC 22-86, para. 2 (2022) (*Broadband Label Order*).

²³⁰ 47 U.S.C. § 642(b)(6)(A)(ii).

²³¹ See paras. 46-47, *supra*.

7. New Rule Subsection for Fabric Challenge Process

120. Finally, we seek comment on changes to our rules to better distinguish between fixed availability and Fabric challenge processes. The current rules for Fabric challenges are nested within a section of the BDC rules titled “Fixed service challenge process” (47 CFR § 1.7006(d)).²³² This section largely addresses the rules for the submission and processing of fixed availability challenges. But the fixed availability and Fabric challenge processes are different, and many of the provisions in rule 1.7006(d) are either inapplicable or not well suited to the Fabric challenge process. Further, the reference in the first sentence of the rule to “challenge[s] to] the accuracy of the coverage maps at a particular location, any information submitted by a provider regarding the availability of broadband internet access service, *or the Fabric*” creates a potential misconception that all provisions of the rule apply equally to both fixed availability and Fabric challenges.²³³

121. We propose amending section 1.7006 of the Commission’s rules to create a new subsection for the Fabric challenge process and to remove the Fabric challenge provisions in section 1.7006(d) from those pertinent to the fixed availability challenge process. We seek comment on our proposal to create a new subsection in rule 1.7006 for Fabric challenges.

122. *Promoting Digital Equity and Inclusion.* The Commission, as part of its continuing effort to advance digital equity for all, including people of color, persons with disabilities, persons who live in rural or Tribal areas, and others who are or have been historically underserved, marginalized, or adversely affected by persistent poverty or inequality, invites comment on any equity-related considerations, and invites comment on any benefits (if any) that may be associated with the proposals and issues discussed herein.²³⁴ Specifically, we seek comment on how our proposals may promote or inhibit advances in diversity, equity, inclusion, and accessibility, as well as the scope of the Commission’s relevant legal authority.

VI. PROCEDURAL MATTERS

123. *Ex Parte Rules.* This proceeding shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.²³⁵ Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or

²³² 47 CFR § 1.7006(d).

²³³ 47 CFR § 1.7006(d) (emphasis added).

²³⁴ Section 1 of the Communications Act of 1934 as amended provides that the FCC “regulat[es] interstate and foreign commerce in communication by wire and radio so as to make [such service] available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex.” 47 U.S.C. § 151. The term “equity” is used here consistent with Executive Order 13985 as the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. *See* Exec. Order No. 13985, 86 Fed. Reg. 7009, Executive Order on Advancing Racial Equity and Support for Underserved Communities Through the Federal Government (Jan. 20, 2021).

²³⁵ 47 C.F.R. § 1.1200 *et seq.*

other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (*e.g.*, .doc, .xml, .ppt, searchable .pdf). Participants in this proceeding should familiarize themselves with the Commission's *ex parte* rules.

124. *Comment Filing Procedures.* Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <https://www.fcc.gov/ecfs/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing.
- Filings can be sent by hand or messenger delivery, by commercial courier, or by the U.S. Postal Service. All filings must be addressed to the Secretary, Federal Communications Commission.
- Hand-delivered or messenger-delivered paper filings for the Commission's Secretary are accepted between 8:00 a.m. and 4:00 p.m. by the FCC's mailing contractor at 9050 Junction Drive, Annapolis Junction, MD 20701. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial courier deliveries (any deliveries not by the U.S. Postal Service) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- Filings sent by U.S. Postal Service First-Class Mail, Priority Mail, and Priority Mail Express must be sent to 45 L Street NE, Washington, DC 20554.

125. *People with Disabilities.* To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530.

126. *Regulatory Flexibility Act.* The Regulatory Flexibility Act of 1980, as amended (RFA),²³⁶ requires that an agency prepare a regulatory flexibility analysis for notice and comment rulemakings, unless the agency certifies that "the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."²³⁷ Accordingly, we have prepared a Final Regulatory Flexibility Analysis (FRFA) concerning the possible impact of the rule changes contained in this *Second Report and Order* on small entities. The FRFA is set forth in Appendix C.

127. We have also prepared an Initial Regulatory Flexibility Analysis (IRFA) concerning the potential impact of the rule and policy changes contained in the *Further Notice*. The IRFA is set forth in

²³⁶ 5 U.S.C. §§ 601–612. The RFA has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

²³⁶ 5 U.S.C. § 601 *et seq.*

²³⁷ 5 U.S.C. § 605(b).

Appendix D. Written public comments are requested on the IRFA. Comments must be filed by the deadlines for comments on the NPRM indicated on the first page of this document and must have a separate and distinct heading designating them as responses to the IRFA.

128. *Paperwork Reduction Act.* The *Fourth Report and Order* rulemaking required under the Broadband DATA Act is exempt from review by Office of Management and Budget (OMB) and from the requirements of the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13.²³⁸ As a result, the *Fourth Report and Order* will not be submitted to OMB for review under section 3507(d) of the PRA. The *Further Notice* may contain new and modified information collection requirements subject to the PRA, Public Law 104-13. OMB, the general public, and other federal agencies are invited to comment on new or modified information collection requirements contained in the *Further Notice*.

129. *Congressional Review Act.* The Commission has determined, and the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, concurs, that this rule is “non-major” under the Congressional Review Act, 5 U.S.C. § 804(2). The Commission will send a copy of this *Fourth Report and Order* and *Declaratory Ruling* to Congress and the Government Accountability Office pursuant to 5 U.S.C. § 801(a)(1)(A). The Commission will submit this draft *Fourth Report and Order* and *Declaratory Ruling* to the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, for concurrence as to whether this rule is “major” or “non-major” under the Congressional Review Act, 5 U.S.C. § 804(2).

130. *Providing Accountability Through Transparency Act.* Consistent with the Providing Accountability Through Transparency Act, Public Law 118-9, a summary of this document will be available on <https://www.fcc.gov/proposed-rulemakings>.

VII. ORDERING CLAUSES

131. Accordingly, IT IS ORDERED, pursuant to sections 1-4, 7, 201, 254, 301, 303, 309, 319, 332, 403, and 641-646 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151-154, 157, 201, 254, 301, 303, 309, 319, 332, 403, 641-646, this *Fourth Report and Order*, *Declaratory Ruling*, and *Fourth Further Notice of Proposed Rulemaking* IS ADOPTED.

132. IT IS FURTHER ORDERED that part 1 of the Commission’s rules IS AMENDED as set forth in Appendix A.

133. IT IS FURTHER ORDERED that the *Fourth Report and Order* SHALL BE effective 30 days after publication in the Federal Register.

134. IT IS FURTHER ORDERED that the *Declaratory Ruling* SHALL BE effective upon adoption by the Commission.

135. IT IS FURTHER ORDERED that, pursuant to applicable procedures set forth in sections 1.415 and 1.419 of the Commission’s rules, 47 CFR §§ 1.415, 1.419, interested parties may file comments on the *Fourth Further Notice of Proposed Rulemaking* on or before 30 days following publication in the Federal Register, and reply comments on or before 60 days following publication in the Federal Register.

136. IT IS FURTHER ORDERED that the Office of the Managing Director, Performance Program Management, SHALL SEND a copy of this *Fourth Report and Order* and *Declaratory Ruling* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, 5 U.S.C. § 801(a)(1)(A).

137. IT IS FURTHER ORDERED that the Office of the Secretary SHALL SEND a copy of the *Fourth Report and Order* and *Fourth Further Notice of Proposed Rulemaking*, including the Final

²³⁸ 47 U.S.C. § 646(b).

Regulatory Flexibility Analysis and the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Final Rules

Part 1 – Practice and Procedure

1. The authority citation for part 1 continues to read as follows:

Authority: 47 U.S.C. chs. 2, 5, 9, 13; 28 U.S.C. 2461 note; 47 U.S.C. 1754, unless otherwise noted.

2. In part 1, subpart V, remove the text “Digital Opportunity Data Collection”, wherever it appears, and add, in its place, the text “Broadband Data Collection”.

3. Amend § 1.7006 by revising paragraph 1.7006(a), by adding a new clause to the first sentence of paragraph (d)(6), by redesignating paragraphs (e)(5) through (7) as paragraphs (e)(6) through (8), by adding a new paragraph (e)(5), by redesignating paragraphs (f)(6) and (7) as (f)(7) and (8), and by adding a new paragraph (f)(6), as follows:

§ 1.7006 Data Verification

(a) *Audits.* The Office of Economics and Analytics, in coordination with the Wireless Telecommunications Bureau, Wireline Competition Bureau, and Space Bureau, shall conduct regular audits of the information submitted by providers in their Broadband Data Collection filings. The audits:

- (1) May be random, as determined by the Office of Economics and Analytics; or
- (2) Can be required in cases where there may be patterns of filing incorrect information, as determined by the Office of Economics and Analytics.

* * * * *

(d) * * *

- (6) If the parties are unable to reach consensus within 60 days after submission of the provider’s reply in the portal, then the affected provider shall report the status of efforts to resolve the challenge in the online portal. After the affected provider reports on the status of these efforts (including any amended report submitted prior to the 60-day deadline), the Commission shall have 90 days to review the evidence and make a determination, either:

* * * * *

(e) * * *

- (5) Commission staff will resolve the challenge within 90 days following the 60th day after which the provider is notified of the challenge (i.e., the deadline for submitting challenge rebuttal data), except that, should the Office of Economics and Analytics request supplemental information from a provider after receiving the provider’s initial challenge response, the Commission will resolve the challenge within 90 days following the 60th day after which staff request such supplemental data (i.e., 90 days after the deadline for when the supplemental data is due to OEA).

* * * * *

(f) * * *

- (6) Commission staff will resolve the challenge within 90 days following the 60th day after which the provider is notified of the challenge (i.e., the deadline for submitting challenge rebuttal data), except that, should the Office of Economics and Analytics request supplemental information from a provider after receiving the provider’s initial challenge response, the Commission will resolve the challenge within 90 days following the 60th day after which staff request such supplemental data (i.e., 90 days after the deadline for when the supplemental data is due to OEA).

APPENDIX B**Proposed Rules****Part 1 – Practice and Procedure**

1. Amend § 1.7001 by striking section (a)(1) (and renumbering subsequent sections), adding a new paragraph (a)(20), and adding a new paragraph (f) (and renumbering subsequent paragraphs), as follows:

§ 1.7001 Scope and content of filed reports.

(a) * * * * *

(20) *Grandfathered Service*. A broadband internet access service that is currently provided to an existing end user at a broadband serviceable location, but that a facilities-based provider has permanently ceased to advertise or market to new or potential subscribers and would not make available to a new or potential subscriber at the broadband serviceable location.

* * * * *

(f) Facilities-based providers shall retain the underlying data used to create their biannual FCC Form 477 submissions (including supporting data) for at least three years after the applicable “as-of” reporting date (i.e., June 30 or December 31).

2. Amend § 1.7004 by adding new paragraphs (3) and (4) to paragraph (c) (and renumbering subsequent paragraphs), and revising and republishing paragraph (d), as follows:

§ 1.7004 Scope, content, and frequency of Broadband Data Collection filings.

* * * * *

(c) * * * * *

(3) Fixed wireless broadband internet access service providers must disclose the following spectrum authorization information related to their broadband availability data:

(i) For broadband internet access services provided using licensed spectrum:

(A) All call signs and lease IDs (including the call sign(s) of the license(s) being leased) associated with the licenses held or leased by the filer and were (or could have been) used to provide broadband service as of the relevant BDC filing date; and

(B) The FCC Registration Number of the entity holding the license or lease as recorded in the FCC’s Universal Licensing System.

(ii) For broadband internet access services provided using licensed-by-rule spectrum:

(A) Proof of authorization by a Spectrum Access System pursuant to part 96 of this chapter as of the relevant BDC filing date.

(B) [Reserved.]

(iii) For broadband internet access services provided using unlicensed operations pursuant to part 15 of this chapter:

(A) The FCC ID(s) of all base station transmission equipment used to provide the service as of the relevant BDC filing date.

(B) [Reserved.]

(4) Satellite broadband internet access service providers must disclose the following information related to their broadband availability data:

- (i) Information on the general operating parameters of the satellite system active as-of the relevant filing period, including network type, the total number of satellites in the active constellation, the number of orbital shells deployed in the active constellation, the overall system downlink capacity, and the overall system uplink capacity;
- (ii) Information on each constellation or orbital shell of space stations deployed by the satellite system active as-of the relevant filing period, including shell altitude, orbital location (for GSO systems), inclination angle, orbital plane, number of satellites per orbital plane, shell orbital period, apogee, and perigee; and
- (iii) For each state or territory for which the facilities-based provider of satellite broadband internet access service claims coverage, system capacity information for each state or territory.

* * * * *

- (d) Providers shall include in each Broadband Data Collection filing a certification signed by a corporate officer of the provider that the officer has examined the information contained in the submission and that, to the best of the officer's actual knowledge, information, and belief, all statements of fact contained in the submission are true and correct. All providers also shall submit a certification of the accuracy of its submissions by a qualified engineer. The engineering certification shall state that the qualified engineer is employed by the provider and has direct knowledge of, or responsibility for, the generation of the provider's Broadband Data Collection filing. The qualified engineer shall also certify that he or she has examined the information contained in the submission and that, to the best of the engineer's actual knowledge, information, and belief, all statements of fact contained in the submission are true and correct, and in accordance with the service provider's ordinary course of network design and engineering. If a corporate officer is also an engineer and has the requisite knowledge required under the Broadband DATA Act, a provider may submit a single certification that fulfills both requirements. A "qualified engineer," for purposes of this certification, shall be:
 - (i) A corporate officer possessing a B.S. in engineering degree and who has direct knowledge of and responsibility for the carrier's network design and construction;
 - (ii) An engineer possessing a bachelor's or postgraduate degree in electrical engineering, electronic technology, or another similar technical discipline, and at least seven years of relevant experience in broadband network design and/or performance; or
 - (iii) An employee with specialized training relevant to broadband network engineering and design, deployment, and/or performance, and at least 10 years of relevant experience in broadband network engineering, design, and/or performance.

3. Amend § 1.7005 by revising paragraph (a)(1) to read as follows:

§ 1.7005 Disclosure of data in the Fabric and Broadband Data Collection filings.

(a) * * *

(1) Withholding from public inspection all data required to be kept confidential pursuant to § 0.457 of this chapter, location-specific data on grandfathered services (though the Office of Economics and Analytics may make publicly available aggregated information or data related to such services), and all personally identifiable information submitted in connection with the information contained in the Fabric, the dataset supporting the Fabric, and availability data submitted pursuant to § 1.7004; and

* * * * *

4. Amend § 1.7006 by revising the section heading, adding new paragraph (a) (and renumbering subsequent paragraphs), revising the introductory text of paragraph (d), removing paragraph

(1)(vii) of paragraph (d) (and renumbering subsequent paragraphs), removing paragraph (9) of paragraph (d) (and renumbering subsequent paragraphs), and adding new paragraph (h), as follows:

§ 1.7006 Data retention and verification.

(a) *Data Retention.* Facilities-based providers shall retain the underlying data used to create their biannual Broadband Data Collection submissions (including supporting data) for at least three years after the applicable “as-of” reporting date (i.e., June 30 or December 31). In addition, facilities-based providers shall also retain any and all data related to responses to the data verification efforts set forth in paragraphs (b) through (g) of this section for at least three years from the date the provider receives notice of a challenge, verification inquiry or initiation of an audit.

* * * * *

(d) *Fixed service challenge process.* State, local, and Tribal governmental entities, consumers, and other entities or individuals may submit data in an online portal to challenge the accuracy of the coverage maps at a particular location and any information submitted by a provider regarding the availability of broadband internet access service.

* * * * *

(h) *Broadband Serviceable Location Fabric challenge process.* State, local, and Tribal governmental entities, consumers, and other entities or individuals may submit data in an online portal to challenge the accuracy of the information in the Fabric.

(1) Fabric challengers must provide in their submissions:

(i) Name and contact information (e.g., address, phone number, email);

(ii) For a missing broadband-serviceable location, the geographic coordinates (latitude/longitude) of the location, along with an address for the location (if an address is available), a unit count, and the building type (selected from pre-established options on the portal);

(iii) For an existing broadband-serviceable location, category of dispute, selected from pre-established options on the portal;

(iv) Details and evidence about the challenged location; and

(v) A certification from an individual or an authorized officer or signatory of a challenger that the person examined the information contained in the challenge and that, to the best of the person’s actual knowledge, information, and belief, all statements of fact contained in the challenge are true and correct.

(2) The Commission shall seek to resolve such challenges within 90 days of receiving the challenge filing in the online portal.

(3) Government entities or other entities may file challenges at multiple locations in a single challenge, but each challenge must contain all of the requirements set forth in paragraph (h)(1) of this section.

(4) Once a challenge containing all the required elements is submitted in the online portal, the location shall be identified on the coverage maps as “in dispute/pending resolution.” The Commission shall make public information about the location that is the subject of the challenge, including the street address and/or coordinates (latitude and longitude) and any relevant details concerning the basis for the challenge.

5. Amend § 1.7009 by adding new paragraph (e), as follows:

§ 1.7009 Enforcement.

* * * * *

- (e) If, as a result of a verification inquiry or audit performed pursuant to § 1.7006, Commission staff request that a provider submit corrected availability data, and the provider fails to submit corrected data by the required date, then the Office of Economics and Analytics (OEA), in coordination with the Wireless Telecommunications Bureau, Wireline Competition Bureau or Space Bureau (as appropriate), may remove locations or areas from the availability data published in the National Broadband Map pursuant to 47 U.S.C. 642(c). In such an instance, the BDC system will notify the provider in writing that some or all of its availability data have been altered on or removed from the National Broadband Map. OEA will abstain from altering or removing locations or areas subject to an audit or verification for which the provider has filed an application for review or petition for reconsideration until such time as the Commission rules upon any such application or petition. During this period the locations or areas may be indicated as “in dispute” on the National Broadband Map.

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program, Digital Opportunity Data Collection Second Report and Order and Third Further Notice of Proposed Rulemaking* released in July 2020.² The Federal Communications Commission (Commission) sought written public comment on the proposals in the *Third Notice*, including comments on the IRFA. No comments were filed addressing the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.³

A. Need for, and Objectives of, the Proposed Rules

2. In the *Fourth Report and Order*, the Commission takes steps to adopt certain requirements mandated by the Broadband DATA Act,⁴ as well as adopting improvements to the data collection. Specifically, the *Fourth Report and Order* modifies the Broadband Data Collection (BDC) rules to codify expedited challenge adjudication deadlines as required by the Infrastructure Investment and Jobs Act⁵ (IIJA), such as a 90-day deadline for fixed services challenges, as well as provide a specific delegation of authority to the Office of Economics and Analytics (OEA), in coordination with certain other bureaus and offices, to conduct audits of broadband data submitted by providers (as required under the Broadband DATA Act). Through the adoption of these rules, the Commission is implementing targeted changes that further address its long-standing objective of working towards closing the digital divide by improving the processes for filers, some of whom consist of small entities.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

3. There were no comments filed that specifically addressed the rules and policies proposed in the IRFA.

C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration

4. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.⁶ The Chief Counsel did not file comments in response to the proposed rules in this proceeding.

¹ 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601-612, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² *Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program*, WC Docket Nos. 19-195, 11-10, Second Report and Order and Third Further Notice of Proposed Rulemaking, 35 FCC Rcd 7460 (2020).

³ 5 U.S.C. § 604.

⁴ Broadband Deployment Accuracy and Technology Availability Act, Pub. L. No. 116-130, 134 Stat. 228 (2020) (codified at 47 U.S.C. §§ 641-646) (Broadband DATA Act).

⁵ Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 60102(h)(2)(E)(i), 135 Stat. 429, 1198 (2021) (codified at 47 U.S.C. § 642(b)(5)(C)(i)), available at <https://www.govinfo.gov/content/pkg/BILLS-117hr3684enr/pdf/BILLS-117hr3684enr.pdf> (IIJA).

⁶ 5 U.S.C. § 604(a)(3).

D. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply

5. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the rules adopted herein.⁷ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁸ In addition, the term “small business” has the same meaning as the term “small-business concern” under the Small Business Act.⁹ A “small-business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹⁰

6. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe, at the outset, three broad groups of small entities that could be directly affected herein.¹¹ First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the Small Business Administration’s (SBA) Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.¹² These types of small businesses represent 99.9% of all businesses in the United States, which translates to 33.2 million businesses.¹³

7. Next, the type of small entity described as a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”¹⁴ The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations.¹⁵ Nationwide, for tax year 2022, there were approximately 530,109 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.¹⁶

⁷ 5 U.S.C. § 604(a)(4).

⁸ 5 U.S.C. § 601(6).

⁹ 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

¹⁰ 15 U.S.C. § 632.

¹¹ 5 U.S.C. § 601(3)-(6).

¹² See SBA, Office of Advocacy, “What’s New With Small Business?,” <https://advocacy.sba.gov/wp-content/uploads/2023/03/Whats-New-Infographic-March-2023-508c.pdf> (Mar. 2023).

¹³ *Id.*

¹⁴ 5 U.S.C. § 601(4).

¹⁵ The IRS benchmark is similar to the population of less than 50,000 benchmark in 5 U.S.C § 601(5) that is used to define a small governmental jurisdiction. Therefore, the IRS benchmark has been used to estimate the number of small organizations in this small entity description. See Annual Electronic Filing Requirement for Small Exempt Organizations – Form 990-N (e-Postcard), “Who must file,” <https://www.irs.gov/charities-non-profits/annual-electronic-filing-requirement-for-small-exempt-organizations-form-990-n-e-postcard>. We note that the IRS data does not provide information on whether a small exempt organization is independently owned and operated or dominant in its field.

¹⁶ See Exempt Organizations Business Master File Extract (EO BMF), “CSV Files by Region,” <https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-ao-bmf>. The IRS Exempt Organization Business Master File (EO BMF) Extract provides information on all registered tax-exempt/non-profit organizations. The data utilized for purposes of this description was extracted from the IRS EO

(continued....)

8. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”¹⁷ U.S. Census Bureau data from the 2022 Census of Governments¹⁸ indicate there were 90,837 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.¹⁹ Of this number, there were 36,845 general purpose governments (county,²⁰ municipal, and town or township²¹) with populations of less than 50,000 and 11,879 special purpose governments (independent school districts²²) with enrollment populations of less than 50,000.²³ Accordingly, based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 entities fall into the category of “small governmental jurisdictions.”²⁴

1. Broadband Internet Access Service Providers

9. The broadband Internet access service provider industry has changed since the definition was introduced in 2007. The data cited below may therefore include entities that no longer provide broadband Internet access service and may exclude entities that now provide such service. To ensure that this FRFA describes the universe of small entities that our action might affect, we discuss in turn several different types of entities that might be providing broadband Internet access service. We note that,

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BMF data for businesses for the tax year 2022 with revenue less than or equal to \$50,000 for Region 1-Northeast Area (71,897), Region 2-Mid-Atlantic and Great Lakes Areas (197,296), and Region 3-Gulf Coast and Pacific Coast Areas (260,447) that includes the continental U.S., Alaska, and Hawaii. This data includes information for Puerto Rico (469).

¹⁷ 5 U.S.C. § 601(5).

¹⁸ 13 U.S.C. § 161. The Census of Governments survey is conducted every five (5) years compiling data for years ending with “2” and “7”. *See also* Census of Governments, <https://www.census.gov/programs-surveys/economic-census/year/2022/about.html>.

¹⁹ *See* U.S. Census Bureau, 2022 Census of Governments – Organization Table 2. Local Governments by Type and State: 2022 [CG2200ORG02], <https://www.census.gov/data/tables/2022/econ/gus/2022-governments.html>. Local governmental jurisdictions are made up of general purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). *See also* tbl.2. CG2200ORG02 Table Notes_Local Governments by Type and State_2022.

²⁰ *See id.* at tbl.5. County Governments by Population-Size Group and State: 2022 [CG2200ORG05], <https://www.census.gov/data/tables/2022/econ/gus/2022-governments.html>. There were 2,097 county governments with populations less than 50,000. This category does not include subcounty (municipal and township) governments.

²¹ *See id.* at tbl.6. Subcounty General-Purpose Governments by Population-Size Group and State: 2022 [CG2200ORG06], <https://www.census.gov/data/tables/2022/econ/gus/2022-governments.html>. There were 18,693 municipal and 16,055 town and township governments with populations less than 50,000.

²² *See id.* at tbl.10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2022 [CG2200ORG10], <https://www.census.gov/data/tables/2022/econ/gus/2022-governments.html>. There were 11,879 independent school districts with enrollment populations less than 50,000. *See also* tbl.4. Special-Purpose Local Governments by State Census Years 1942 to 2022 [CG2200ORG04], CG2200ORG04 Table Notes_Special Purpose Local Governments by State_Census Years 1942 to 2022.

²³ While the special purpose governments category also includes local special district governments, the 2022 Census of Governments data does not provide data aggregated based on population size for the special purpose governments category. Therefore, only data from independent school districts is included in the special purpose governments category.

²⁴ This total is derived from the sum of the number of general purpose governments (county, municipal and town or township) with populations of less than 50,000 (36,845) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (11,879), from the 2022 Census of Governments - Organizations tbls. 5, 6 & 10.

although we have no specific information on the number of small entities that provide broadband Internet access service over unlicensed spectrum, we included these entities in our Initial Regulatory Flexibility Analysis.

10. *Wired Broadband Internet Access Service Providers (Wired ISPs).*²⁵ Providers of wired broadband Internet access service include various types of providers except dial-up Internet access providers. Wireline service that terminates at an end user location or mobile device and enables the end user to receive information from and/or send information to the Internet at information transfer rates exceeding 200 kilobits per second (kbps) in at least one direction is classified as a broadband connection under the Commission's rules.²⁶ Wired broadband Internet services fall in the Wired Telecommunications Carriers industry.²⁷ The SBA small business size standard for this industry classifies firms having 1,500 or fewer employees as small.²⁸ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.²⁹ Of this number, 2,964 firms operated with fewer than 250 employees.³⁰

11. Additionally, according to Commission data on Internet access services as of June 30, 2019, nationwide there were approximately 2,747 providers of connections over 200 kbps in at least one direction using various wireline technologies.³¹ The Commission does not collect data on the number of employees for providers of these services, therefore, at this time we are not able to estimate the number of providers that would qualify as small under the SBA's small business size standard. However, in light of the general data on fixed technology service providers in the Commission's *2022 Communications Marketplace Report*,³² we believe that the majority of wireline Internet access service providers can be considered small entities.

12. *Internet Service Providers (Non-Broadband).* Internet access service providers using client-supplied telecommunications connections (e.g., dial-up ISPs) as well as VoIP service providers using client-supplied telecommunications connections fall in the industry classification of All Other Telecommunications.³³ The SBA small business size standard for this industry classifies firms with

²⁵ Formerly included in the scope of the Internet Service Providers (Broadband), Wired Telecommunications Carriers and All Other Telecommunications small entity industry descriptions.

²⁶ See 47 CFR § 1.7001(a)(1).

²⁷ See U.S. Census Bureau, 2017 NAICS Definition, "517311 Wired Telecommunications Carriers," <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

²⁸ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

²⁹ See U.S. Census Bureau, 2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017, Table ID: EC1700SIZEEMPFIIRM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIIRM&hidePreview=false>.

³⁰ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

³¹ See Federal Communications Commission, Internet Access Services: Status as of June 30, 2019 at 27, Fig. 30 (*IAS Status 2019*), Industry Analysis Division, Office of Economics & Analytics (March 2022). The report can be accessed at <https://www.fcc.gov/economics-analytics/industry-analysis-division/iad-data-statistical-reports>. The technologies used by providers include aDSL, sDSL, Other Wireline, Cable Modem and FTTP). Other wireline includes: all copper-wire based technologies other than xDSL (such as Ethernet over copper, T-1/DS-1 and T3/DS-1) as well as power line technologies which are included in this category to maintain the confidentiality of the providers.

³² See *Communications Marketplace Report*, GN Docket No. 22-203, 2022 WL 18110553 at 10, paras. 26-27, Figs. II.A.5-7. (2022) (*2022 Communications Marketplace Report*).

³³ See U.S. Census Bureau, 2017 NAICS Definition, "517919 All Other Telecommunications," <https://www.census.gov/naics/?input=517919&year=2017&details=517919>.

annual receipts of \$35 million or less as small.³⁴ For this industry, U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year.³⁵ Of those firms, 1,039 had revenue of less than \$25 million.³⁶ Consequently, under the SBA size standard a majority of firms in this industry can be considered small.

2. Wireline Providers

13. *Wired Telecommunications Carriers.* The U.S. Census Bureau defines this industry as establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired communications networks.³⁷ Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband Internet services.³⁸ By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.³⁹ Wired Telecommunications Carriers are also referred to as wireline carriers or fixed local service providers.⁴⁰

14. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁴¹ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.⁴² Of this number, 2,964 firms operated with fewer than 250 employees.⁴³ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 4,590 providers that reported they were engaged in the provision of fixed local services.⁴⁴ Of these providers, the Commission estimates that 4,146

³⁴ See 13 CFR § 121.201, NAICS Code 517919 (as of 10/1/22, NAICS Code 517810).

³⁵ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 517919, <https://data.census.gov/cedsci/table?y=2017&n=517919&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false>.

³⁶ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, see https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

³⁷ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ Fixed Local Service Providers include the following types of providers: Incumbent Local Exchange Carriers (ILECs), Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs), Cable/Coax CLECs, Interconnected VOIP Providers, Non-Interconnected VOIP Providers, Shared-Tenant Service Providers, Audio Bridge Service Providers, and Other Local Service Providers. Local Resellers fall into another U.S. Census Bureau industry group and therefore data for these providers is not included in this industry.

⁴¹ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁴² See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁴³ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

providers have 1,500 or fewer employees.⁴⁵ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

15. *Local Exchange Carriers (LECs)*. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. Providers of these services include both incumbent and competitive local exchange service providers. Wired Telecommunications Carriers⁴⁶ is the closest industry with an SBA small business size standard.⁴⁷ Wired Telecommunications Carriers are also referred to as wireline carriers or fixed local service providers.⁴⁸ The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁴⁹ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.⁵⁰ Of this number, 2,964 firms operated with fewer than 250 employees.⁵¹ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 4,590 providers that reported they were fixed local exchange service providers.⁵² Of these providers, the Commission estimates that 4,146 providers have 1,500 or fewer employees.⁵³ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

16. *Incumbent Local Exchange Carriers (Incumbent LECs)*. Neither the Commission nor the SBA have developed a small business size standard specifically for incumbent local exchange carriers. Wired Telecommunications Carriers⁵⁴ is the closest industry with an SBA small business size standard.⁵⁵ The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁵⁶ U.S. Census Bureau data for 2017 show that there were 3,054 firms

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⁴⁴ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>, <https://docs.fcc.gov/public/attachments/DOC-379181A1.pdf>

⁴⁵ *Id.*

⁴⁶ See U.S. Census Bureau, 2017 NAICS Definition, "517311 Wired Telecommunications Carriers," <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁴⁷ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁴⁸ Fixed Local Exchange Service Providers include the following types of providers: Incumbent Local Exchange Carriers (ILECs), Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs), Cable/Coax CLECs, Interconnected VOIP Providers, Non-Interconnected VOIP Providers, Shared-Tenant Service Providers, Audio Bridge Service Providers, Local Resellers, and Other Local Service Providers.

⁴⁹ *Id.*

⁵⁰ See U.S. Census Bureau, 2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁵¹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁵² Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

⁵³ *Id.*

⁵⁴ See U.S. Census Bureau, 2017 NAICS Definition, "517311 Wired Telecommunications Carriers," <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁵⁵ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁵⁶ *Id.*

in this industry that operated for the entire year.⁵⁷ Of this number, 2,964 firms operated with fewer than 250 employees.⁵⁸ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 1,212 providers that reported they were incumbent local exchange service providers.⁵⁹ Of these providers, the Commission estimates that 916 providers have 1,500 or fewer employees.⁶⁰ Consequently, using the SBA's small business size standard, the Commission estimates that the majority of incumbent local exchange carriers can be considered small entities.

17. *Competitive Local Exchange Carriers (CLECs)*. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. Providers of these services include several types of competitive local exchange service providers.⁶¹ Wired Telecommunications Carriers⁶² is the closest industry with a SBA small business size standard. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁶³ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.⁶⁴ Of this number, 2,964 firms operated with fewer than 250 employees.⁶⁵ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 3,378 providers that reported they were competitive local exchange service providers.⁶⁶ Of these providers, the Commission estimates that 3,230 providers have 1,500 or fewer employees.⁶⁷ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

18. *Interexchange Carriers (IXCs)*. Neither the Commission nor the SBA have developed a small business size standard specifically for Interexchange Carriers. Wired Telecommunications

⁵⁷ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁵⁸ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁵⁹ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

⁶⁰ *Id.*

⁶¹ Competitive Local Exchange Service Providers include the following types of providers: Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs), Cable/Coax CLECs, Interconnected VOIP Providers, Non-Interconnected VOIP Providers, Shared-Tenant Service Providers, Audio Bridge Service Providers, Local Resellers, and Other Local Service Providers.

⁶² See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁶³ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁶⁴ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁶⁵ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁶⁶ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

⁶⁷ *Id.*

Carriers⁶⁸ is the closest industry with a SBA small business size standard.⁶⁹ The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁷⁰ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.⁷¹ Of this number, 2,964 firms operated with fewer than 250 employees.⁷² Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 127 providers that reported they were engaged in the provision of interexchange services. Of these providers, the Commission estimates that 109 providers have 1,500 or fewer employees.⁷³ Consequently, using the SBA's small business size standard, the Commission estimates that the majority of providers in this industry can be considered small entities.

19. *Operator Service Providers (OSPs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for operator service providers. The closest applicable industry with a SBA small business size standard is Wired Telecommunications Carriers.⁷⁴ The SBA small business size standard classifies a business as small if it has 1,500 or fewer employees.⁷⁵ U.S. Census Bureau data for 2017 show that there were 3,054 firms in this industry that operated for the entire year.⁷⁶ Of this number, 2,964 firms operated with fewer than 250 employees.⁷⁷ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 20 providers that reported they were engaged in the provision of operator services.⁷⁸ Of these providers, the Commission estimates that all 20 providers have 1,500 or fewer employees.⁷⁹ Consequently, using the SBA's small business size standard, all of these providers can be considered small entities.

20. *Other Toll Carriers*. Neither the Commission nor the SBA has developed a definition for small businesses specifically applicable to Other Toll Carriers. This category includes toll carriers that do

⁶⁸ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁶⁹ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁷⁰ *Id.*

⁷¹ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁷² *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁷³ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

⁷⁴ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁷⁵ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁷⁶ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁷⁷ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁷⁸ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>, <https://docs.fcc.gov/public/attachments/DOC-379181A1.pdf>

⁷⁹ *Id.*

not fall within the categories of interexchange carriers, operator service providers, prepaid calling card providers, satellite service carriers, or toll resellers. Wired Telecommunications Carriers⁸⁰ is the closest industry with a SBA small business size standard.⁸¹ The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁸² U.S. Census Bureau data for 2017 show that there were 3,054 firms in this industry that operated for the entire year.⁸³ Of this number, 2,964 firms operated with fewer than 250 employees.⁸⁴ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 90 providers that reported they were engaged in the provision of other toll services.⁸⁵ Of these providers, the Commission estimates that 87 providers have 1,500 or fewer employees.⁸⁶ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

3. Wireless Providers—Fixed and Mobile

21. The broadband Internet access service provider category covered by these new rules may cover multiple wireless firms and categories of regulated wireless services.⁸⁷ Thus, to the extent the wireless services listed below are used by wireless firms for broadband Internet access service, the actions may have an impact on those small businesses as set forth above and further below. In addition, for those services subject to auctions, we note that, as a general matter, the number of winning bidders that claim to qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments and transfers or reportable eligibility events, unjust enrichment issues are implicated.

22. *Wireless Telecommunications Carriers (except Satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves.⁸⁸ Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless Internet access, and wireless video services.⁸⁹ The SBA size standard for this industry classifies a business as small if it has

⁸⁰ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁸¹ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁸² *Id.*

⁸³ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFI, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&t=ECNSIZE2017.EC1700SIZEEMPFI&hidePreview=false>.

⁸⁴ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁸⁵ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>, <https://docs.fcc.gov/public/attachments/DOC-379181A1.pdf>

⁸⁶ *Id.*

⁸⁷ This includes, among others, the approximately 800 members of WISPA, including those entities who provide fixed wireless broadband service using unlicensed spectrum. See WISPA, *About WISPA*, <https://www.wispa.org/About-Us/Mission-and-Goals> (last visited June 27, 2019). We also consider the impact to these entities today for the purposes of this IRFA, by including them under the "Wireless Providers – Fixed and Mobile" category.

⁸⁸ See U.S. Census Bureau, *2017 NAICS Definition, "517312 Wireless Telecommunications Carriers (except Satellite),"* <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

⁸⁹ *Id.*

1,500 or fewer employees.⁹⁰ U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year.⁹¹ Of that number, 2,837 firms employed fewer than 250 employees.⁹² Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 594 providers that reported they were engaged in the provision of wireless services.⁹³ Of these providers, the Commission estimates that 511 providers have 1,500 or fewer employees.⁹⁴ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

23. *Wireless Communications Services.* Wireless Communications Services (WCS) can be used for a variety of fixed, mobile, radiolocation, and digital audio broadcasting satellite services. Wireless spectrum is made available and licensed for the provision of wireless communications services in several frequency bands subject to Part 27 of the Commission's rules.⁹⁵ Wireless Telecommunications Carriers (*except* Satellite)⁹⁶ is the closest industry with an SBA small business size standard applicable to these services. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.⁹⁷ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.⁹⁸ Of this number, 2,837 firms employed fewer than 250 employees.⁹⁹ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

24. The Commission's small business size standards with respect to WCS involve eligibility for bidding credits and installment payments in the auction of licenses for the various frequency bands included in WCS. When bidding credits are adopted for the auction of licenses in WCS frequency bands, such credits may be available to several types of small businesses based average gross revenues (small, very small and entrepreneur) pursuant to the competitive bidding rules adopted in conjunction with the requirements for the auction and/or as identified in the designated entities section in Part 27 of the Commission's rules for the specific WCS frequency bands.¹⁰⁰

⁹⁰ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

⁹¹ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?v=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁹² *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁹³ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

⁹⁴ *Id.*

⁹⁵ See 47 CFR §§ 27.1 – 27.1607.

⁹⁶ See U.S. Census Bureau, *2017 NAICS Definition, "517312 Wireless Telecommunications Carriers (except Satellite),"* <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

⁹⁷ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

⁹⁸ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?v=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁹⁹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁰⁰ See 47 CFR §§ 27.201 – 27.1601. The Designated entities sections in Subparts D – Q each contain the small business size standards adopted for the auction of the frequency band covered by that subpart.

25. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

26. *1670–1675 MHz Services.* These wireless communications services can be used for fixed and mobile uses, except aeronautical mobile.¹⁰¹ Wireless Telecommunications Carriers (except Satellite)¹⁰² is the closest industry with an SBA small business size standard applicable to these services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁰³ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁰⁴ Of this number, 2,837 firms employed fewer than 250 employees.¹⁰⁵ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

27. According to Commission data as of November 2021, there were three active licenses in this service.¹⁰⁶ The Commission's small business size standards with respect to 1670–1675 MHz Services involve eligibility for bidding credits and installment payments in the auction of licenses for these services. For licenses in the 1670-1675 MHz service band, a "small business" is defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" is defined as an entity that, together with its affiliates and controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years.¹⁰⁷ The 1670-1675 MHz service band auction's winning bidder did not claim small business status.¹⁰⁸

28. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect

¹⁰¹ See 47 CFR § 27.902.

¹⁰² See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (except Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁰³ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁰⁴ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPfirm, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

¹⁰⁵ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁰⁶ Based on a FCC Universal Licensing System search on November 8, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = BC; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁰⁷ See 47 CFR § 27.906(a).

¹⁰⁸ See *1670–1675 MHz Band Auction Closes; Winning Bidder Announced; FCC Form 600s Due May 12, 2003*, Public Notice, DA-03-1472, Report No. AUC-03-46-H (Auction No.46) (May 2, 2003).

data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

29. *Wireless Telephony.* Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. The closest applicable industry with an SBA small business size standard is Wireless Telecommunications Carriers (except Satellite).¹⁰⁹ The size standard for this industry under SBA rules is that a business is small if it has 1,500 or fewer employees.¹¹⁰ For this industry, U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated for the entire year.¹¹¹ Of this number, 2,837 firms employed fewer than 250 employees.¹¹² Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 331 providers that reported they were engaged in the provision of cellular, personal communications services, and specialized mobile radio services.¹¹³ Of these providers, the Commission estimates that 255 providers have 1,500 or fewer employees.¹¹⁴ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

30. *Broadband Personal Communications Service.* The broadband personal communications services (PCS) spectrum encompasses services in the 1850-1910 and 1930-1990 MHz bands.¹¹⁵ The closest industry with a SBA small business size standard applicable to these services is Wireless Telecommunications Carriers (except Satellite).¹¹⁶ The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹¹⁷ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹¹⁸ Of this number, 2,837 firms employed fewer than 250 employees.¹¹⁹ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

¹⁰⁹ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (except Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹¹⁰ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹¹¹ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

¹¹² *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹¹³ Federal-State Joint Board on Universal Service, *Universal Service Monitoring Report* at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

¹¹⁴ *Id.*

¹¹⁵ See 47 CFR § 24.200.

¹¹⁶ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (except Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹¹⁷ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹¹⁸ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

¹¹⁹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

31. Based on Commission data as of November 2021, there were approximately 5,060 active licenses in the Broadband PCS service.¹²⁰ The Commission’s small business size standards with respect to Broadband PCS involve eligibility for bidding credits and installment payments in the auction of licenses for these services. In auctions for these licenses, the Commission defined “small business” as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and a “very small business” as an entity that, together with its affiliates and controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years.¹²¹ Winning bidders claiming small business credits won Broadband PCS licenses in C, D, E, and F Blocks.¹²²

32. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA’s small business size standard.

33. *Specialized Mobile Radio Licenses.* Special Mobile Radio (SMR) licenses allow licensees to provide land mobile communications services (other than radiolocation services) in the 800 MHz and 900 MHz spectrum bands on a commercial basis including but not limited to services used for voice and data communications, paging, and facsimile services, to individuals, Federal Government entities, and other entities licensed under Part 90 of the Commission’s rules. Wireless Telecommunications Carriers (except Satellite)¹²³ is the closest industry with a SBA small business size standard applicable to these services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹²⁴ For this industry, U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year.¹²⁵ Of this number, 2,837 firms employed fewer than 250 employees.¹²⁶ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 95 providers that reported they were of SMR (dispatch) providers.¹²⁷ Of this number, the Commission estimates that all 95

¹²⁰ Based on a FCC Universal Licensing System search on November 16, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, “Match only the following radio service(s)”, Radio Service = CW; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹²¹ See 47 CFR § 24.720(b).

¹²² See Federal Communications Commission, Office of Economics and Analytics, Auctions, Auctions 4, 5, 10, 11, 22, 35, 58, 71 and 78, <https://www.fcc.gov/auctions>.

¹²³ See U.S. Census Bureau, 2017 NAICS Definition, “517312 Wireless Telecommunications Carriers (except Satellite),” <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹²⁴ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹²⁵ See U.S. Census Bureau, 2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017, Table ID: EC1700SIZEEMPFFIRM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFFIRM&hidePreview=false>.

¹²⁶ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹²⁷ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>, <https://docs.fcc.gov/public/attachments/DOC-379181A1.pdf>

providers have 1,500 or fewer employees.¹²⁸ Consequently, using the SBA's small business size standard, these 119 SMR licensees can be considered small entities.¹²⁹

34. Based on Commission data as of December 2021, there were 3,924 active SMR licenses.¹³⁰ However, since the Commission does not collect data on the number of employees for licensees providing SMR services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard. Nevertheless, for purposes of this analysis the Commission estimates that the majority of SMR licensees can be considered small entities using the SBA's small business size standard.

35. *Lower 700 MHz Band Licenses.* The lower 700 MHz band encompasses spectrum in the 698-746 MHz frequency bands. Permissible operations in these bands include flexible fixed, mobile, and broadcast uses, including mobile and other digital new broadcast operation; fixed and mobile wireless commercial services (including FDD- and TDD-based services); as well as fixed and mobile wireless uses for private, internal radio needs, two-way interactive, cellular, and mobile television broadcasting services.¹³¹ Wireless Telecommunications Carriers (*except Satellite*)¹³² is the closest industry with a SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹³³ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹³⁴ Of this number, 2,837 firms employed fewer than 250 employees.¹³⁵ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

36. According to Commission data as of December 2021, there were approximately 2,824 active Lower 700 MHz Band licenses.¹³⁶ The Commission's small business size standards with respect to Lower 700 MHz Band licensees involve eligibility for bidding credits and installment payments in the

¹²⁸ *Id.*

¹²⁹ We note that there were also SMR providers reporting in the "Cellular/PCS/SMR" classification, therefore there are maybe additional SMR providers that have not been accounted for in the SMR (dispatch) classification.

¹³⁰ Based on a FCC Universal Licensing System search on December 15, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match radio services within this group", Radio Service = SMR; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹³¹ See Federal Communications Commission, Economics and Analytics, Auctions, Auctions 44, 49, 60: Lower 700 MHz Band, Fact Sheet, Permissible Operations, <https://www.fcc.gov/auction/44/factsheet>, <https://www.fcc.gov/auction/49/factsheet>, <https://www.fcc.gov/auction/60/factsheet>.

¹³² See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (*except Satellite*)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹³³ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹³⁴ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPfirm, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

¹³⁵ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹³⁶ Based on a FCC Universal Licensing System search on December 14, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = WY, WZ; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

auction of licenses. For auctions of Lower 700 MHz Band licenses the Commission adopted criteria for three groups of small businesses. A very small business was defined as an entity that, together with its affiliates and controlling interests, has average annual gross revenues not exceeding \$15 million for the preceding three years, a small business was defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and an entrepreneur was defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$3 million for the preceding three years.¹³⁷ In auctions for Lower 700 MHz Band licenses seventy-two winning bidders claiming a small business classification won 329 licenses,¹³⁸ twenty-six winning bidders claiming a small business classification won 214 licenses,¹³⁹ and three winning bidders claiming a small business classification won all five auctioned licenses.¹⁴⁰

37. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

38. *Upper 700 MHz Band Licenses.* The upper 700 MHz band encompasses spectrum in the 746-806 MHz bands. Upper 700 MHz D Block licenses are nationwide licenses associated with the 758-763 MHz and 788-793 MHz bands.¹⁴¹ Permissible operations in these bands include flexible fixed, mobile, and broadcast uses, including mobile and other digital new broadcast operation; fixed and mobile wireless commercial services (including FDD- and TDD-based services); as well as fixed and mobile wireless uses for private, internal radio needs, two-way interactive, cellular, and mobile television broadcasting services.¹⁴² Wireless Telecommunications Carriers (*except* Satellite)¹⁴³ is the closest industry with a SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁴⁴ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁴⁵ Of that number, 2,837 firms employed fewer than 250 employees.¹⁴⁶ Thus,

¹³⁷ See 47 CFR § 27.702(a)(1)-(3).

¹³⁸ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 44: Lower 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/44/charts/44cls2.pdf>.

¹³⁹ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 49: Lower 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/49/charts/49cls2.pdf>.

¹⁴⁰ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 60: Lower 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/60/charts/60cls2.pdf>.

¹⁴¹ See 47 CFR § 27.4.

¹⁴² See Federal Communications Commission, Economics and Analytics, Auctions, Auction 73: 700 MHz Band, Fact Sheet, Permissible Operations, <https://www.fcc.gov/auction/73/factsheet>. We note that in Auction 73, Upper 700 MHz Band C and D Blocks as well as Lower 700 MHz Band A, B, and E Blocks were auctioned.

¹⁴³ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (*except* Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁴⁴ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁴⁵ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPfirm, NAICS Code 517312,

(continued....)

under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

39. According to Commission data as of December 2021, there were approximately 152 active Upper 700 MHz Band licenses.¹⁴⁷ The Commission's small business size standards with respect to Upper 700 MHz Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For the auction of these licenses, the Commission defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.¹⁴⁸ Pursuant to these definitions, three winning bidders claiming very small business status won five of the twelve available licenses.¹⁴⁹

40. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

41. *700 MHz Guard Band Licensees.* The 700 MHz Guard Band encompasses spectrum in 746-747/776-777 MHz and 762-764/792-794 MHz frequency bands. Wireless Telecommunications Carriers (*except* Satellite)¹⁵⁰ is the closest industry with a SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁵¹ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁵² Of this number,

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<https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

¹⁴⁶ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁴⁷ Based on a FCC Universal Licensing System search on December 14, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = WP, WU; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁴⁸ See 47 CFR § 27.502(a).

¹⁴⁹ See *Auction of 700 MHz Band Licenses Closes; Winning Bidders Announced for Auction 73*, Public Notice, DA-08-595, Attachment A, Report No. AUC-08-73-I (Auction 73) (March 20, 2008). The results for Upper 700 MHz Band C Block can be found on pp. 62-63.

¹⁵⁰ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (*except* Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁵¹ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁵² See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPfirm, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

2,837 firms employed fewer than 250 employees.¹⁵³ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

42. According to Commission data as of December 2021, there were approximately 224 active 700 MHz Guard Band licenses.¹⁵⁴ The Commission's small business size standards with respect to 700 MHz Guard Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For the auction of these licenses, the Commission defined a "small business" as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.¹⁵⁵ Pursuant to these definitions, five winning bidders claiming one of the small business status classifications won 26 licenses, and one winning bidder claiming small business won two licenses.¹⁵⁶ None of the winning bidders claiming a small business status classification in these 700 MHz Guard Band license auctions had an active license as of December 2021.¹⁵⁷

43. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

44. *Air-Ground Radiotelephone Service.* Air-Ground Radiotelephone Service is a wireless service in which licensees are authorized to offer and provide radio telecommunications service for hire to subscribers in aircraft.¹⁵⁸ A licensee may provide any type of air-ground service (i.e., voice telephony, broadband Internet, data, etc.) to aircraft of any type, and serve any or all aviation markets (commercial, government, and general). A licensee must provide service to aircraft and may not provide ancillary land mobile or fixed services in the 800 MHz air-ground spectrum.¹⁵⁹

¹⁵³ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁵⁴ Based on a FCC Universal Licensing System search on December 14, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = WX; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁵⁵ See 47 CFR § 27.502(a).

¹⁵⁶ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 33: Upper 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/33/charts/33cls2.pdf>, Auction 38: Upper 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/38/charts/38cls2.pdf>.

¹⁵⁷ Based on a FCC Universal Licensing System search on December 14, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = WX; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁵⁸ 47 CFR § 22.99.

¹⁵⁹ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 65: 800 MHz Air-Ground Radiotelephone Service, Fact Sheet, Permissible Operations, <https://www.fcc.gov/auction/65/factsheet>.

45. The closest industry with an SBA small business size standard applicable to these services is Wireless Telecommunications Carriers (*except* Satellite).¹⁶⁰ The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁶¹ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁶² Of this number, 2,837 firms employed fewer than 250 employees.¹⁶³ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

46. Based on Commission data as of December 2021, there were approximately four licensees with 110 active licenses in the Air-Ground Radiotelephone Service.¹⁶⁴ The Commission's small business size standards with respect to Air-Ground Radiotelephone Service involve eligibility for bidding credits and installment payments in the auction of licenses. For purposes of auctions, the Commission defined "small business" as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" as an entity that, together with its affiliates and controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years.¹⁶⁵ In the auction of Air-Ground Radiotelephone Service licenses in the 800 MHz band, neither of the two winning bidders claimed small business status.¹⁶⁶

47. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, the Commission does not collect data on the number of employees for licensees providing these services therefore, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

48. *Advanced Wireless Services (AWS) - (1710–1755 MHz and 2110–2155 MHz bands (AWS-1); 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz bands (AWS-2); 2155–2175 MHz band (AWS-3); 2000-2020 MHz and 2180-2200 MHz (AWS-4)).* Spectrum is made available and licensed in these bands for the provision of various wireless communications services.¹⁶⁷

¹⁶⁰ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (*except* Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁶¹ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁶² See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIIRM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIIRM&hidePreview=false>.

¹⁶³ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁶⁴ Based on a FCC Universal Licensing System search on December 20, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = CG, CJ; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁶⁵ See 47 CFR § 22.223(b).

¹⁶⁶ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 65: 800 MHz Air-Ground Radiotelephone Service, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/65/charts/65cls2.pdf>.

¹⁶⁷ See 47 CFR § 27.1(b).

Wireless Telecommunications Carriers (*except* Satellite)¹⁶⁸ is the closest industry with a SBA small business size standard applicable to these services. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁶⁹ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁷⁰ Of this number, 2,837 firms employed fewer than 250 employees.¹⁷¹ Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

49. According to Commission data as of December 2021, there were approximately 4,472 active AWS licenses.¹⁷² The Commission’s small business size standards with respect to AWS involve eligibility for bidding credits and installment payments in the auction of licenses for these services. For the auction of AWS licenses, the Commission defined a “small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a “very small business” as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million.¹⁷³ Pursuant to these definitions, 57 winning bidders claiming status as small or very small businesses won 215 of 1,087 licenses.¹⁷⁴ In the most recent auction of AWS licenses 15 of 37 bidders qualifying for status as small or very small businesses won licenses.¹⁷⁵

50. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA’s small business size standard.

51. *3650–3700 MHz band.* Wireless broadband service licensing in the 3650-3700 MHz band provides for nationwide, non-exclusive licensing of terrestrial operations, utilizing contention-based technologies, in the 3650 MHz band (i.e., 3650–3700 MHz).¹⁷⁶ Licensees are permitted to provide

¹⁶⁸ See U.S. Census Bureau, *2017 NAICS Definition*, “517312 Wireless Telecommunications Carriers (*except* Satellite),” <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁶⁹ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁷⁰ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

¹⁷¹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁷² Based on a FCC Universal Licensing System search on December 10, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, “Match only the following radio service(s)”, Radio Service = AD, AH, AT, AW; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁷³ See 47 CFR §§ 27.1002, 27.1102, 27.1104, 27.1106.

¹⁷⁴ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 66: Advanced Wireless Services (AWS-1), Summary, Spreadsheets, <https://www.fcc.gov/sites/default/files/wireless/auctions/66/charts/66cls2.pdf>.

¹⁷⁵ See Auction of Advanced Wireless Services (AWS-3) Licenses Closes; Winning Bidders Announced for Auction 97, Public Notice, DA-15-131, Attachments A-B, (Auction No. 97) (January 30, 2015).

¹⁷⁶ See 47 CFR §§ 90.1305, 90.1307.

services on a non-common carrier and/or on a common carrier basis.¹⁷⁷ Wireless broadband services in the 3650-3700 MHz band fall in the Wireless Telecommunications Carriers (*except* Satellite)¹⁷⁸ industry with an SBA small business size standard that classifies a business as small if it has 1,500 or fewer employees.¹⁷⁹ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁸⁰ Of this number, 2,837 firms employed fewer than 250 employees.¹⁸¹ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

52. The Commission has not developed a small business size standard applicable to 3650–3700 MHz band licensees. Based on the licenses that have been granted, however, we estimate that the majority of licensees in this service are small Internet Access Service Providers (ISPs). As of November 2021, Commission data shows that there were 902 active licenses in the 3650–3700 MHz band.¹⁸² However, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA’s small business size standard.

53. *Fixed Microwave Services.* Fixed microwave services include common carrier,¹⁸³ private-operational fixed,¹⁸⁴ and broadcast auxiliary radio services.¹⁸⁵ They also include the Upper Microwave Flexible Use Service (UMFUS),¹⁸⁶ Millimeter Wave Service (70/80/90 GHz),¹⁸⁷ Local Multipoint Distribution Service (LMDS),¹⁸⁸ the Digital Electronic Message Service (DEMS),¹⁸⁹ 24 GHz Service,¹⁹⁰ Multiple Address Systems (MAS),¹⁹¹ and Multichannel Video Distribution and Data Service

¹⁷⁷ See *id.* § 90.1309.

¹⁷⁸ See U.S. Census Bureau, 2017 NAICS Definition, “517312 Wireless Telecommunications Carriers (*except* Satellite),” <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁷⁹ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁸⁰ See U.S. Census Bureau, 2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

¹⁸¹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁸² Based on a FCC Universal Licensing System search on November 19, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, “Match only the following radio service(s)”, Radio Service = NN; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁸³ See 47 CFR Part 101, Subparts C and I.

¹⁸⁴ See *id.* Subparts C and H.

¹⁸⁵ Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission’s Rules. See 47 CFR Part 74. Available to licensees of broadcast stations and to broadcast and cable network entities, broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile TV pickups, which relay signals from a remote location back to the studio.

¹⁸⁶ See 47 CFR Part 30.

¹⁸⁷ See 47 CFR Part 101, Subpart Q.

¹⁸⁸ See *id.* Subpart L.

¹⁸⁹ See *id.* Subpart G.

¹⁹⁰ See *id.*

¹⁹¹ See *id.* Subpart O.

(MVDDS),¹⁹² where in some bands licensees can choose between common carrier and non-common carrier status.¹⁹³ Wireless Telecommunications Carriers (*except* Satellite)¹⁹⁴ is the closest industry with a SBA small business size standard applicable to these services. The SBA small size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁹⁵ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁹⁶ Of this number, 2,837 firms employed fewer than 250 employees.¹⁹⁷ Thus under the SBA size standard, the Commission estimates that a majority of fixed microwave service licensees can be considered small.

54. The Commission's small business size standards with respect to fixed microwave services involve eligibility for bidding credits and installment payments in the auction of licenses for the various frequency bands included in fixed microwave services. When bidding credits are adopted for the auction of licenses in fixed microwave services frequency bands, such credits may be available to several types of small businesses based average gross revenues (small, very small and entrepreneur) pursuant to the competitive bidding rules adopted in conjunction with the requirements for the auction and/or as identified in Part 101 of the Commission's rules for the specific fixed microwave services frequency bands.¹⁹⁸

55. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

56. *Broadband Radio Service and Educational Broadband Service.* Broadband Radio Service systems, previously referred to as Multipoint Distribution Service (MDS) and Multichannel Multipoint Distribution Service (MMDS) systems, and "wireless cable,"¹⁹⁹ transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) (previously referred to as the Instructional Television Fixed Service (ITFS)).²⁰⁰ Wireless cable operators that use spectrum in the BRS

¹⁹² See *id.* Subpart P.

¹⁹³ See 47 CFR §§ 101.533, 101.1017.

¹⁹⁴ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (*except* Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁹⁵ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁹⁶ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

¹⁹⁷ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁹⁸ See 47 CFR §§ 101.538(a)(1)-(3), 101.1112(b)-(d), 101.1319(a)(1)-(2), and 101.1429(a)(1)-(3).

¹⁹⁹ The use of the term "wireless cable" does not imply that it constitutes cable television for statutory or regulatory purposes.

²⁰⁰ See 47 CFR § 27.4; see also *Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act—Competitive Bidding*, Report and Order, 10 FCC Rcd 9589, 9593, para. 7 (1995).

often supplemented with leased channels from the EBS, provide a competitive alternative to wired cable and other multichannel video programming distributors. Wireless cable programming to subscribers resembles cable television, but instead of coaxial cable, wireless cable uses microwave channels.²⁰¹

57. In light of the use of wireless frequencies by BRS and EBS services, the closest industry with a SBA small business size standard applicable to these services is Wireless Telecommunications Carriers (*except* Satellite).²⁰² The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.²⁰³ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.²⁰⁴ Of this number, 2,837 firms employed fewer than 250 employees.²⁰⁵ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

58. According to Commission data as December 2021, there were approximately 5,869 active BRS and EBS licenses.²⁰⁶ The Commission's small business size standards with respect to BRS involves eligibility for bidding credits and installment payments in the auction of licenses for these services. For the auction of BRS licenses, the Commission adopted criteria for three groups of small businesses. A very small business is an entity that, together with its affiliates and controlling interests, has average annual gross revenues exceed \$3 million and did not exceed \$15 million for the preceding three years, a small business is an entity that, together with its affiliates and controlling interests, has average gross revenues exceed \$15 million and did not exceed \$40 million for the preceding three years, and an entrepreneur is an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$3 million for the preceding three years.²⁰⁷ Of the ten winning bidders for BRS licenses, two bidders claiming the small business status won 4 licenses, one bidder claiming the very small business status won three licenses and two bidders claiming entrepreneur status won six licenses.²⁰⁸

²⁰¹ Generally, a wireless cable system may be described as a microwave station transmitting on a combination of BRS and EBS channels to numerous receivers with antennas, such as single-family residences, apartment complexes, hotels, educational institutions, business entities and governmental offices. The range of the transmission depends upon the transmitter power, the type of receiving antenna and the existence of a line-of-sight path between the transmitter or signal booster and the receiving antenna.

²⁰² See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (*except* Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

²⁰³ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

²⁰⁴ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

²⁰⁵ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

²⁰⁶ Based on a FCC Universal Licensing System search on December 10, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service=BR, ED; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

²⁰⁷ See 47 CFR § 27.1218(a).

²⁰⁸ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 86: Broadband Radio Service, Summary, Reports, All Bidders, <https://www.fcc.gov/sites/default/files/wireless/auctions/86/charts/86bidder.xls>.

One of the winning bidders claiming a small business status classification in the BRS license auction has an active licenses as of December 2021.²⁰⁹

59. The Commission's small business size standards for EBS define a small business as an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than \$55 million for the preceding five (5) years, and a very small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than \$20 million for the preceding five (5) years.²¹⁰ In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

4. Satellite Service Providers

60. *Satellite Telecommunications.* This industry comprises firms "primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications."²¹¹ Satellite telecommunications service providers include satellite and earth station operators. The SBA small business size standard for this industry classifies a business with \$38.5 million or less in annual receipts as small.²¹² U.S. Census Bureau data for 2017 show that 275 firms in this industry operated for the entire year.²¹³ Of this number, 242 firms had revenue of less than \$25 million.²¹⁴ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 65 providers that reported they were engaged in the provision of satellite telecommunications services.²¹⁵ Of these providers, the Commission estimates that approximately 42 providers have 1,500 or fewer employees.²¹⁶ Consequently, using the SBA's small business size standard, a little more than half of these providers can be considered small entities.

²⁰⁹ Based on a FCC Universal Licensing System search on December 10, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service=BR; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

²¹⁰ See 47 CFR § 27.1219(a).

²¹¹ See U.S. Census Bureau, *2017 NAICS Definition, "517410 Satellite Telecommunications,"* <https://www.census.gov/naics/?input=517410&year=2017&details=517410>.

²¹² See 13 CFR § 121.201, NAICS Code 517410.

²¹³ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 517410, <https://data.census.gov/cedsci/table?v=2017&n=517410&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false>.

²¹⁴ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, see https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

²¹⁵ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

²¹⁶ *Id.*

61. *All Other Telecommunications.* This industry is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation.²¹⁷ This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.²¹⁸ Providers of Internet services (e.g. dial-up ISPs) or Voice over Internet Protocol (VoIP) services, via client-supplied telecommunications connections are also included in this industry.²¹⁹ The SBA small business size standard for this industry classifies firms with annual receipts of \$35 million or less as small.²²⁰ U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year.²²¹ Of those firms, 1,039 had revenue of less than \$25 million.²²² Based on this data, the Commission estimates that the majority of “All Other Telecommunications” firms can be considered small.

5. Cable Service Providers

62. Because section 706 of the Act requires us to monitor the deployment of broadband using any technology, we anticipate that some broadband service providers may not provide telephone service. Accordingly, we describe below other types of firms that may provide broadband services, including cable companies, MDS providers, and utilities, among others.

63. *Cable and Other Subscription Programming.* The U.S. Census Bureau defines this industry as establishments primarily engaged in operating studios and facilities for the broadcasting of programs on a subscription or fee basis.²²³ The broadcast programming is typically narrowcast in nature (e.g., limited format, such as news, sports, education, or youth-oriented). These establishments produce programming in their own facilities or acquire programming from external sources.²²⁴ The programming material is usually delivered to a third party, such as cable systems or direct-to-home satellite systems, for transmission to viewers.²²⁵ The SBA small business size standard for this industry classifies firms with annual receipts less than \$41.5 million as small.²²⁶ Based on U.S. Census Bureau data for 2017, 378 firms operated in this industry during that year.²²⁷ Of that number, 149 firms operated with revenue of less than

²¹⁷ See U.S. Census Bureau, *2017 NAICS Definition*, “517919 All Other Telecommunications,” <https://www.census.gov/naics/?input=517919&year=2017&details=517919>.

²¹⁸ *Id.*

²¹⁹ *Id.*

²²⁰ See 13 CFR § 121.201, NAICS Code 517919 (as of 10/1/22, NAICS Code 517810).

²²¹ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 517919, <https://data.census.gov/cedsci/table?y=2017&n=517919&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false>.

²²² *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, see https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

²²³ See U.S. Census Bureau, *2017 NAICS Definition*, “515210 Cable and Other Subscription Programming,” <https://www.census.gov/naics/?input=515210&year=2017&details=515210>.

²²⁴ *Id.*

²²⁵ *Id.*

²²⁶ See 13 CFR § 121.201, NAICS Code 515210 (as of 10/1/22, NAICS Code 516210).

²²⁷ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 515210, <https://data.census.gov/cedsci/table?y=2017&n=515210&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false>

(continued....)

\$25 million a year and 44 firms operated with revenue of \$25 million or more.²²⁸ Based on this data, the Commission estimates that a majority of firms in this industry are small.

64. *Cable Companies and Systems (Rate Regulation)*. The Commission has developed its own small business size standard for the purpose of cable rate regulation. Under the Commission’s rules, a “small cable company” is one serving 400,000 or fewer subscribers nationwide.²²⁹ Based on industry data, there are about 420 cable companies in the U.S.²³⁰ Of these, only seven have more than 400,000 subscribers.²³¹ In addition, under the Commission’s rules, a “small system” is a cable system serving 15,000 or fewer subscribers.²³² Based on industry data, there are about 4,139 cable systems (headends) in the U.S.²³³ Of these, about 639 have more than 15,000 subscribers.²³⁴ Accordingly, the Commission estimates that the majority of cable companies and cable systems are small.

65. *Cable System Operators (Telecom Act Standard)*. The Communications Act of 1934, as amended, contains a size standard for a “small cable operator,” which is “a cable operator that, directly or through an affiliate, serves in the aggregate fewer than one percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000.”²³⁵ For purposes of the Telecom Act Standard, the Commission determined that a cable system operator that serves fewer than 498,000 subscribers, either directly or through affiliates, will meet the definition of a small cable operator.²³⁶ Based on industry data, only six cable system operators have more than 498,000 subscribers.²³⁷ Accordingly, the Commission estimates that the majority of cable system operators are small under this size standard. We note however, that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose

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[w=false](#). The US Census Bureau withheld publication of the number of firms that operated for the entire year to avoid disclosing data for individual companies (see Cell Notes for this category).

²²⁸ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We note that the U.S. Census Bureau withheld publication of the number of firms that operated with sales/value of shipments/revenue in all categories of revenue less than \$500,000 to avoid disclosing data for individual companies (see Cell Notes for the sales/value of shipments/revenue in these categories). Therefore, the number of firms with revenue that meet the SBA size standard would be higher than noted herein. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, see https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

²²⁹ 47 CFR § 76.901(d).

²³⁰ S&P Global Market Intelligence, S&P Capital IQ Pro, U.S. MediaCensus, *Operator Subscribers by Geography* (last visited May 26, 2022).

²³¹ S&P Global Market Intelligence, S&P Capital IQ Pro, *Top Cable MSOs 12/21Q* (last visited May 26, 2022); S&P Global Market Intelligence, *Multichannel Video Subscriptions, Top 10* (April 2022).

²³² 47 CFR § 76.901(c).

²³³ S&P Global Market Intelligence, S&P Capital IQ Pro, U.S. MediaCensus, *Operator Subscribers by Geography* (last visited May 26, 2022).

²³⁴ S&P Global Market Intelligence, S&P Capital IQ Pro, *Top Cable MSOs 12/21Q* (last visited May 26, 2022).

²³⁵ 47 U.S.C. § 543(m)(2).

²³⁶ *FCC Announces Updated Subscriber Threshold for the Definition of Small Cable Operator*, Public Notice, DA 23-906 (MB 2023) (2023 *Subscriber Threshold PN*). In this Public Notice, the Commission determined that there were approximately 49.8 million cable subscribers in the United States at that time using the most reliable source publicly available. *Id.* This threshold will remain in effect until the Commission issues a superseding Public Notice.. See 47 CFR § 76.901(e)(1).

²³⁷ S&P Global Market Intelligence, S&P Capital IQ Pro, *Top Cable MSOs 06/23Q* (last visited Sept. 27, 2023); S&P Global Market Intelligence, *Multichannel Video Subscriptions, Top 10* (April 2022).

gross annual revenues exceed \$250 million.²³⁸ Therefore, we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under the definition in the Communications Act.

6. All Other Telecommunications

66. *Electric Power Generators, Transmitters, and Distributors.* The U.S. Census Bureau defines the utilities sector industry as comprised of “establishments, primarily engaged in generating, transmitting, and/or distributing electric power.”²³⁹ Establishments in this industry group may perform one or more of the following activities: (1) operate generation facilities that produce electric energy; (2) operate transmission systems that convey the electricity from the generation facility to the distribution system; and (3) operate distribution systems that convey electric power received from the generation facility or the transmission system to the final consumer.”²⁴⁰ This industry group is categorized based on fuel source and includes Hydroelectric Power Generation, Fossil Fuel Electric Power Generation, Nuclear Electric Power Generation, Solar Electric Power Generation, Wind Electric Power Generation, Geothermal Electric Power Generation, Biomass Electric Power Generation, Other Electric Power Generation, Electric Bulk Power Transmission and Control and Electric Power Distribution.²⁴¹

67. The SBA has established a small business size standard for each of these groups based on the number of employees which ranges from having fewer than 250 employees to having fewer than 1,000 employees.²⁴² U.S. Census Bureau data for 2017 indicate that for the Electric Power Generation, Transmission and Distribution industry there were 1,693 firms that operated in this industry for the entire year.²⁴³ Of this number, 1,552 firms had less than 250 employees.²⁴⁴ Based on this data and the associated SBA size standards, the majority of firms in this industry can be considered small entities.

E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

68. We expect that some of the rules adopted in the *Fourth Report and Order* will impose new or additional reporting, recordkeeping, and/or other compliance obligations on small entities. The *Fourth Report and Order* modifies the BDC rules to codify the expedited availability challenge adjudication deadlines to implement the IIJA mandate. Commission staff already functionally implemented this deadline for the availability challenge process as required by the IIJA. In an effort to comply with the Broadband DATA Act, we now memorialize in our rules the procedures that Commission staff have followed since the start of the challenge process. The *Fourth Report and Order* also delegates authority to OEA to collect any and all data required to conduct a thorough and complete

²³⁸ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority’s finding that the operator does not qualify as a small cable operator pursuant to § 76.901(e) of the Commission’s rules. See 47 CFR § 76.910(b).

²³⁹ See U.S. Census Bureau, *2017 NAICS Definition, “Sector 22- Utilities, 2211 Electric Power Generation, Transmission and Distribution,”* <https://www.census.gov/naics/?input=2211&year=2017&details=2211>.

²⁴⁰ See *id.*

²⁴¹ *Id.* <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=2211&search=2017+NAICS+Search&search=2017>.

²⁴² See 13 CFR § 121.201, NAICS Codes 221111, 221112, 221113, 221114, 221115, 221116, 221117, 221118, 221121, 221122.

²⁴³ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIRM, NAICS Code 2211, <https://data.census.gov/cedsci/table?y=2017&n=2211&tid=ECNSIZE2017.EC1700SIZEEMPFIRM&hidePreview=false>.

²⁴⁴ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

audit process. Finally, we formally amend the name given to the data collection from the “Digital Opportunity Data Collection” to the “Broadband Data Collection.” As to the cost of compliance, at present, the record contains insufficient information to either quantify compliance costs for small entities as a result of the adopted rules, or determine whether there will be a need for small entities to hire attorneys, engineers, consultants, or other professionals.

69. The Commission believes that any additional burdens imposed by our audit of provider data are outweighed by the significant benefit to be gained from more precise broadband deployment data. As discussed above, although the Commission cannot quantify the cost of compliance with the requirements in the *Fourth Report and Order*, we believe the modifications to the BDC rules are necessary to comply with the Broadband DATA Act and complete accurate broadband coverage maps.

F. Steps Taken to Minimize the Significant Economic Impact on Small Entities, and Significant Alternatives Considered

70. The RFA requires an agency to provide, “a description of the steps the agency has taken to minimize the significant economic impact on small entities . . . including a statement of the factual, policy, and legal reasons for selecting the alternative adopted in the final rule and why each one of the other significant alternatives to the rule considered by the agency which affect the impact on small entities was rejected.”²⁴⁵

71. The Commission’s actions in the *Fourth Report and Order* are primarily in response to the legislative enactment of the Broadband DATA Act to develop better quality, more useful, and more granular broadband deployment data, as well as our mandate to codify expedited challenge adjudication deadlines as required by the IJA. In considering the comments in the record, we were mindful of the time, money, and resources that some small entities incur to complete these requirements.

72. For example, in implementing the IJA’s requirements, we considered alternatives for how the Commission could address situations where a challenger and a challenged provider cannot reach a consensus as section 1.7006(d)(6) requires. In the *Fourth Report and Order*, we set forth that the shot-clock for Commission action should begin once the provider has reported on the status of the parties’ efforts to resolve the challenge. Taking this step allows small and other entities to have sufficient time to resolve challenges on their own, where possible, before Commission staff become involved while helping the Commission adjudicate challenges more efficiently.

G. Report to Congress

73. The Commission will send a copy of the *Fourth Report and Order*, including this FRFA, in a report to Congress pursuant to the Congressional Review Act.²⁴⁶ In addition, the Commission will send a copy of the *Fourth Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Fourth Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register.²⁴⁷

²⁴⁵ 5 U.S.C. § 604(a)(6).

²⁴⁶ 5 U.S.C. § 801(a)(1)(A).

²⁴⁷ 5 U.S.C. § 604(b).

APPENDIX D**Initial Regulatory Flexibility Analysis**

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ the Federal Communications Commission (Commission) has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities from the policies and rules proposed in this *Fourth Notice*. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *Fourth Notice*. The Commission will send a copy of the *Fourth Notice*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA).² In addition, the *Fourth Notice* and IRFA (or summaries thereof) will be published in the Federal Register.³

A. Need for, and Objectives of, the Proposed Rules

2. The Commission continues its ongoing efforts to collect accurate and granular broadband deployment data so that we can bring broadband to those areas most in need of it. In the *Fourth Notice*, the Commission proposes targeted changes designed to either improve the processes for filers or to further ensure that we continue to receive high-quality data through our data collection efforts and seeks comment on additional steps we can take to obtain more reliable data on the availability and quality of service of broadband Internet access. Specifically, we seek comment on proposed enhancements to the availability data filing process, as well as possible clarifications to several of our data-validation tools. This includes revising our definition of broadband availability to exclude legacy services, collecting terrestrial fixed wireless call sign data, obtaining supporting data from satellite service providers, data retention requirements, and audit rules and processes.

B. Legal Basis

3. The proposed action is authorized pursuant to sections 1-5, 201-206, 214, 218-220, 251, 252, 254, 256, 303(r), 332, 403, 405, and 641-646 of the Communications Act of 1934.⁴

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Would Apply

4. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.⁵ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁶ In addition, the term “small business” has the same meaning as the term “small-business concern” under the Small Business Act.⁷ A “small-business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See 5 U.S.C. § 603(a).

³ *Id.*

⁴ 47 U.S.C. §§ 151-155, 201-206, 214, 218-220, 251, 252, 254, 256, 303(r), 332, 403, 405, 641-646.

⁵ See 5 U.S.C. § 603(b)(3).

⁶ See 5 U.S.C. § 601(6).

⁷ See 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).⁸

1. Total Small Entities

5. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* Our actions, over time, may affect small entities that are not easily categorized at present. We therefore describe, at the outset, three broad groups of small entities that could be directly affected herein.⁹ First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the Small Business Administration's (SBA) Office of Advocacy, in general a small business is an independent business having fewer than 500 employees.¹⁰ These types of small businesses represent 99.9% of all businesses in the United States, which translates to 33.2 million businesses.¹¹

6. Next, the type of small entity described as a "small organization" is generally "any not-for-profit enterprise which is independently owned and operated and is not dominant in its field."¹² The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations.¹³ Nationwide, for tax year 2022, there were approximately 530,109 small exempt organizations in the U.S. reporting revenues of \$50,000 or less according to the registration and tax data for exempt organizations available from the IRS.¹⁴

7. Finally, the small entity described as a "small governmental jurisdiction" is defined generally as "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand."¹⁵ U.S. Census Bureau data from the 2022 Census of Governments¹⁶ indicate there were 90,837 local governmental jurisdictions consisting of general

⁸ See 15 U.S.C. § 632.

⁹ 5 U.S.C. § 601(3)-(6).

¹⁰ See SBA, Office of Advocacy, "What's New With Small Business?," <https://advocacy.sba.gov/wp-content/uploads/2023/03/Whats-New-Infographic-March-2023-508c.pdf> (Mar. 2023).

¹¹ *Id.*

¹² 5 U.S.C. § 601(4).

¹³ The IRS benchmark is similar to the population of less than 50,000 benchmark in 5 U.S.C § 601(5) that is used to define a small governmental jurisdiction. Therefore, the IRS benchmark has been used to estimate the number of small organizations in this small entity description. See Annual Electronic Filing Requirement for Small Exempt Organizations – Form 990-N (e-Postcard), "Who must file," <https://www.irs.gov/charities-non-profits/annual-electronic-filing-requirement-for-small-exempt-organizations-form-990-n-e-postcard>. We note that the IRS data does not provide information on whether a small exempt organization is independently owned and operated or dominant in its field.

¹⁴ See Exempt Organizations Business Master File Extract (EO BMF), "CSV Files by Region," <https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-eo-bmf>. The IRS Exempt Organization Business Master File (EO BMF) Extract provides information on all registered tax-exempt/non-profit organizations. The data utilized for purposes of this description was extracted from the IRS EO BMF data for businesses for the tax year 2022 with revenue less than or equal to \$50,000 for Region 1 -Northeast Area (71,897), Region 2-Mid-Atlantic and Great Lakes Areas (197,296), and Region 3-Gulf Coast and Pacific Coast Areas (260,447) that includes the continental U.S., Alaska, and Hawaii. This data includes information for Puerto Rico (469).

¹⁵ 5 U.S.C. § 601(5).

¹⁶ 13 U.S.C. § 161. The Census of Governments survey is conducted every five (5) years compiling data for years ending with "2" and "7". See also Census of Governments, <https://www.census.gov/programs-surveys/economic-census/year/2022/about.html>.

purpose governments and special purpose governments in the United States.¹⁷ Of this number, there were 36,845 general purpose governments (county,¹⁸ municipal, and town or township¹⁹) with populations of less than 50,000 and 11,879 special purpose governments (independent school districts²⁰) with enrollment populations of less than 50,000.²¹ Accordingly, based on the 2022 U.S. Census of Governments data, we estimate that at least 48,724 entities fall into the category of “small governmental jurisdictions.”²²

2. Broadband Internet Access Service Providers

8. To ensure that this IRFA describes the universe of small entities that our action might affect, we discuss in turn several different types of entities that might be providing broadband Internet access service.

9. *Wired Broadband Internet Access Service Providers (Wired ISPs).*²³ Providers of wired broadband Internet access service include various types of providers except dial-up Internet access providers. Wireline service that terminates at an end user location or mobile device and enables the end user to receive information from and/or send information to the Internet at information transfer rates exceeding 200 kilobits per second (kbps) in at least one direction is classified as a broadband connection under the Commission’s rules.²⁴ Wired broadband Internet services fall in the Wired Telecommunications Carriers industry.²⁵ The SBA small business size standard for this industry classifies firms having 1,500 or fewer employees as small.²⁶ U.S. Census Bureau data for 2017 show that

¹⁷ See U.S. Census Bureau, 2022 Census of Governments – Organization Table 2. Local Governments by Type and State: 2022 [CG2200ORG02], <https://www.census.gov/data/tables/2022/econ/gus/2022-governments.html>. Local governmental jurisdictions are made up of general purpose governments (county, municipal and town or township) and special purpose governments (special districts and independent school districts). See also tbl.2. CG2200ORG02 Table Notes_Local Governments by Type and State_2022.

¹⁸ See *id.* at tbl.5. County Governments by Population-Size Group and State: 2022 [CG2200ORG05], <https://www.census.gov/data/tables/2022/econ/gus/2022-governments.html>. There were 2,097 county governments with populations less than 50,000. This category does not include subcounty (municipal and township) governments.

¹⁹ See *id.* at tbl.6. Subcounty General-Purpose Governments by Population-Size Group and State: 2022 [CG2200ORG06], <https://www.census.gov/data/tables/2022/econ/gus/2022-governments.html>. There were 18,693 municipal and 16,055 town and township governments with populations less than 50,000.

²⁰ See *id.* at tbl.10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2022 [CG2200ORG10], <https://www.census.gov/data/tables/2022/econ/gus/2022-governments.html>. There were 11,879 independent school districts with enrollment populations less than 50,000. See also tbl.4. Special-Purpose Local Governments by State Census Years 1942 to 2022 [CG2200ORG04], CG2200ORG04 Table Notes_Special Purpose Local Governments by State_Census Years 1942 to 2022.

²¹ While the special purpose governments category also includes local special district governments, the 2022 Census of Governments data does not provide data aggregated based on population size for the special purpose governments category. Therefore, only data from independent school districts is included in the special purpose governments category.

²² This total is derived from the sum of the number of general purpose governments (county, municipal and town or township) with populations of less than 50,000 (36,845) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (11,879), from the 2022 Census of Governments - Organizations tbls. 5, 6 & 10.

²³ Formerly included in the scope of the Internet Service Providers (Broadband), Wired Telecommunications Carriers and All Other Telecommunications small entity industry descriptions.

²⁴ See 47 CFR § 1.7001(a)(1).

²⁵ See U.S. Census Bureau, 2017 NAICS Definition, “517311 Wired Telecommunications Carriers,” <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

²⁶ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

there were 3,054 firms that operated in this industry for the entire year.²⁷ Of this number, 2,964 firms operated with fewer than 250 employees.²⁸

10. Additionally, according to Commission data on Internet access services as of June 30, 2019, nationwide there were approximately 2,747 providers of connections over 200 kbps in at least one direction using various wireline technologies.²⁹ The Commission does not collect data on the number of employees for providers of these services, therefore, at this time we are not able to estimate the number of providers that would qualify as small under the SBA's small business size standard. However, in light of the general data on fixed technology service providers in the Commission's 2022 *Communications Marketplace Report*,³⁰ we believe that the majority of wireline Internet access service providers can be considered small entities.

11. *Internet Service Providers (Non-Broadband)*. Internet access service providers using client-supplied telecommunications connections (e.g., dial-up ISPs) as well as VoIP service providers using client-supplied telecommunications connections fall in the industry classification of All Other Telecommunications.³¹ The SBA small business size standard for this industry classifies firms with annual receipts of \$35 million or less as small.³² For this industry, U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year.³³ Of those firms, 1,039 had revenue of less than \$25 million.³⁴ Consequently, under the SBA size standard a majority of firms in this industry can be considered small.

3. Wireline Providers

12. *Wired Telecommunications Carriers*. The U.S. Census Bureau defines this industry as establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using

²⁷ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

²⁸ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

²⁹ See Federal Communications Commission, *Internet Access Services: Status as of June 30, 2019* at 27, Fig. 30 (*IAS Status 2019*), Industry Analysis Division, Office of Economics & Analytics (March 2022). The report can be accessed at <https://www.fcc.gov/economics-analytics/industry-analysis-division/iad-data-statistical-reports>. The technologies used by providers include aDSL, sDSL, Other Wireline, Cable Modem and FTTP). Other wireline includes: all copper-wire based technologies other than xDSL (such as Ethernet over copper, T-1/DS-1 and T3/DS-1) as well as power line technologies which are included in this category to maintain the confidentiality of the providers.

³⁰ See *Communications Marketplace Report*, GN Docket No. 22-203, 2022 WL 18110553 at 10, paras. 26-27, Figs. II.A.5-7. (2022) (*2022 Communications Marketplace Report*).

³¹ See U.S. Census Bureau, *2017 NAICS Definition*, "517919 All Other Telecommunications," <https://www.census.gov/naics/?input=517919&year=2017&details=517919>.

³² See 13 CFR § 121.201, NAICS Code 517919 (as of 10/1/22, NAICS Code 517810).

³³ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 517919, <https://data.census.gov/cedsci/table?y=2017&n=517919&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false>.

³⁴ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, see https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

wired communications networks.³⁵ Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband Internet services.³⁶ By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.³⁷ Wired Telecommunications Carriers are also referred to as wireline carriers or fixed local service providers.³⁸

13. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.³⁹ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.⁴⁰ Of this number, 2,964 firms operated with fewer than 250 employees.⁴¹ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 4,590 providers that reported they were engaged in the provision of fixed local services.⁴² Of these providers, the Commission estimates that 4,146 providers have 1,500 or fewer employees.⁴³ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

14. *Local Exchange Carriers (LECs)*. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. Providers of these services include both incumbent and competitive local exchange service providers. Wired Telecommunications Carriers⁴⁴ is the closest industry with an SBA small business size standard.⁴⁵ Wired Telecommunications Carriers are also referred to as wireline carriers or fixed local service providers.⁴⁶

³⁵ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

³⁶ *Id.*

³⁷ *Id.*

³⁸ Fixed Local Service Providers include the following types of providers: Incumbent Local Exchange Carriers (ILECs), Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs), Cable/Coax CLECs, Interconnected VOIP Providers, Non-Interconnected VOIP Providers, Shared-Tenant Service Providers, Audio Bridge Service Providers, and Other Local Service Providers. Local Resellers fall into another U.S. Census Bureau industry group and therefore data for these providers is not included in this industry.

³⁹ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁴⁰ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?v=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁴¹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁴² Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>, <https://docs.fcc.gov/public/attachments/DOC-379181A1.pdf>

⁴³ *Id.*

⁴⁴ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁴⁵ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁴⁶ Fixed Local Exchange Service Providers include the following types of providers: Incumbent Local Exchange Carriers (ILECs), Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs), Cable/Coax CLECs, Interconnected VOIP Providers, Non-Interconnected VOIP Providers, Shared-Tenant Service Providers, Audio Bridge Service Providers, Local Resellers, and Other Local Service Providers.

The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁴⁷ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.⁴⁸ Of this number, 2,964 firms operated with fewer than 250 employees.⁴⁹ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 4,590 providers that reported they were fixed local exchange service providers.⁵⁰ Of these providers, the Commission estimates that 4,146 providers have 1,500 or fewer employees.⁵¹ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

15. *Incumbent Local Exchange Carriers (Incumbent LECs)*. Neither the Commission nor the SBA have developed a small business size standard specifically for incumbent local exchange carriers. Wired Telecommunications Carriers⁵² is the closest industry with an SBA small business size standard.⁵³ The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁵⁴ U.S. Census Bureau data for 2017 show that there were 3,054 firms in this industry that operated for the entire year.⁵⁵ Of this number, 2,964 firms operated with fewer than 250 employees.⁵⁶ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 1,212 providers that reported they were incumbent local exchange service providers.⁵⁷ Of these providers, the Commission estimates that 916 providers have 1,500 or fewer employees.⁵⁸ Consequently, using the SBA's small business size standard, the Commission estimates that the majority of incumbent local exchange carriers can be considered small entities.

16. *Competitive Local Exchange Carriers (CLECs)*. Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services.

⁴⁷ *Id.*

⁴⁸ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?v=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁴⁹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁵⁰ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

⁵¹ *Id.*

⁵² See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁵³ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁵⁴ *Id.*

⁵⁵ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?v=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁵⁶ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁵⁷ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

⁵⁸ *Id.*

Providers of these services include several types of competitive local exchange service providers.⁵⁹ Wired Telecommunications Carriers⁶⁰ is the closest industry with a SBA small business size standard. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁶¹ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.⁶² Of this number, 2,964 firms operated with fewer than 250 employees.⁶³ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 3,378 providers that reported they were competitive local exchange service providers.⁶⁴ Of these providers, the Commission estimates that 3,230 providers have 1,500 or fewer employees.⁶⁵ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

17. *Interexchange Carriers (IXCs)*. Neither the Commission nor the SBA have developed a small business size standard specifically for Interexchange Carriers. Wired Telecommunications Carriers⁶⁶ is the closest industry with a SBA small business size standard.⁶⁷ The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁶⁸ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.⁶⁹ Of this number, 2,964 firms operated with fewer than 250 employees.⁷⁰ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 127 providers that reported they were engaged in the provision of interexchange services. Of these providers, the Commission estimates that 109 providers have 1,500 or

⁵⁹ Competitive Local Exchange Service Providers include the following types of providers: Competitive Access Providers (CAPs) and Competitive Local Exchange Carriers (CLECs), Cable/Coax CLECs, Interconnected VOIP Providers, Non-Interconnected VOIP Providers, Shared-Tenant Service Providers, Audio Bridge Service Providers, Local Resellers, and Other Local Service Providers.

⁶⁰ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁶¹ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁶² See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFI, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFI&hidePreview=false>.

⁶³ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁶⁴ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

⁶⁵ *Id.*

⁶⁶ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁶⁷ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁶⁸ *Id.*

⁶⁹ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFI, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFI&hidePreview=false>.

⁷⁰ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

fewer employees.⁷¹ Consequently, using the SBA's small business size standard, the Commission estimates that the majority of providers in this industry can be considered small entities.

18. *Operator Service Providers (OSPs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for operator service providers. The closest applicable industry with a SBA small business size standard is Wired Telecommunications Carriers.⁷² The SBA small business size standard classifies a business as small if it has 1,500 or fewer employees.⁷³ U.S. Census Bureau data for 2017 show that there were 3,054 firms in this industry that operated for the entire year.⁷⁴ Of this number, 2,964 firms operated with fewer than 250 employees.⁷⁵ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 20 providers that reported they were engaged in the provision of operator services.⁷⁶ Of these providers, the Commission estimates that all 20 providers have 1,500 or fewer employees.⁷⁷ Consequently, using the SBA's small business size standard, all of these providers can be considered small entities.

19. *Other Toll Carriers*. Neither the Commission nor the SBA has developed a definition for small businesses specifically applicable to Other Toll Carriers. This category includes toll carriers that do not fall within the categories of interexchange carriers, operator service providers, prepaid calling card providers, satellite service carriers, or toll resellers. Wired Telecommunications Carriers⁷⁸ is the closest industry with a SBA small business size standard.⁷⁹ The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.⁸⁰ U.S. Census Bureau data for 2017 show that there were 3,054 firms in this industry that operated for the entire year.⁸¹ Of this number, 2,964 firms operated with fewer than 250 employees.⁸² Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were

⁷¹ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

⁷² See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁷³ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁷⁴ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁷⁵ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁷⁶ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>, <https://docs.fcc.gov/public/attachments/DOC-379181A1.pdf>

⁷⁷ *Id.*

⁷⁸ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

⁷⁹ See 13 CFR § 121.201, NAICS Code 517311 (as of 10/1/22, NAICS Code 517111).

⁸⁰ *Id.*

⁸¹ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

⁸² *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

90 providers that reported they were engaged in the provision of other toll services.⁸³ Of these providers, the Commission estimates that 87 providers have 1,500 or fewer employees.⁸⁴ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

4. Wireless Providers – Fixed and Mobile

20. The broadband Internet access service provider category covered by this Order may cover multiple wireless firms and categories of wireless services.⁸⁵ Thus, to the extent the wireless services listed below are used by wireless firms for broadband Internet access service, the proposed actions may have an impact on those small businesses as set forth above and further below. In addition, for those services subject to auctions, we note that, as a general matter, the number of winning bidders that claim to qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments and transfers or reportable eligibility events, unjust enrichment issues are implicated.

21. *Wireless Telecommunications Carriers (except Satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves.⁸⁶ Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless Internet access, and wireless video services.⁸⁷ The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees.⁸⁸ U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year.⁸⁹ Of that number, 2,837 firms employed fewer than 250 employees.⁹⁰ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 594 providers that reported they were engaged in the provision of wireless services.⁹¹ Of these providers, the Commission estimates that 511 providers have 1,500 or fewer

⁸³ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>, <https://docs.fcc.gov/public/attachments/DOC-379181A1.pdf>

⁸⁴ *Id.*

⁸⁵ This includes, among others, the approximately 800 members of WISPA, including those entities who provide fixed wireless broadband service using unlicensed spectrum. *See* WISPA, *About WISPA*, <https://www.wispa.org/About-Us/Mission-and-Goals> (last visited June 27, 2019). We also consider the impact to these entities today for the purposes of this IRFA, by including them under the “Wireless Providers – Fixed and Mobile” category.

⁸⁶ *See* U.S. Census Bureau, *2017 NAICS Definition, “517312 Wireless Telecommunications Carriers (except Satellite)”*, <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

⁸⁷ *Id.*

⁸⁸ *See* 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

⁸⁹ *See* U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFI, NAICS Code 517312, <https://data.census.gov/cedsci/table?v=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFI&hidePreview=false>.

⁹⁰ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁹¹ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

employees.⁹² Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

22. *Wireless Communications Services.* Wireless Communications Services (WCS) can be used for a variety of fixed, mobile, radiolocation, and digital audio broadcasting satellite services. Wireless spectrum is made available and licensed for the provision of wireless communications services in several frequency bands subject to Part 27 of the Commission's rules.⁹³ Wireless Telecommunications Carriers (*except* Satellite)⁹⁴ is the closest industry with an SBA small business size standard applicable to these services. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.⁹⁵ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.⁹⁶ Of this number, 2,837 firms employed fewer than 250 employees.⁹⁷ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

23. The Commission's small business size standards with respect to WCS involve eligibility for bidding credits and installment payments in the auction of licenses for the various frequency bands included in WCS. When bidding credits are adopted for the auction of licenses in WCS frequency bands, such credits may be available to several types of small businesses based average gross revenues (small, very small and entrepreneur) pursuant to the competitive bidding rules adopted in conjunction with the requirements for the auction and/or as identified in the designated entities section in Part 27 of the Commission's rules for the specific WCS frequency bands.⁹⁸

24. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

25. *1670–1675 MHz Services.* These wireless communications services can be used for fixed and mobile uses, except aeronautical mobile.⁹⁹ Wireless Telecommunications Carriers (*except* Satellite)¹⁰⁰ is the closest industry with an SBA small business size standard applicable to these services.

⁹² *Id.*

⁹³ See 47 CFR §§ 27.1 – 27.1607.

⁹⁴ See U.S. Census Bureau, *2017 NAICS Definition*, “517312 Wireless Telecommunications Carriers (*except* Satellite),” <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

⁹⁵ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

⁹⁶ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPfirm, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

⁹⁷ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

⁹⁸ See 47 CFR §§ 27.201 – 27.1601. The Designated entities sections in Subparts D – Q each contain the small business size standards adopted for the auction of the frequency band covered by that subpart.

⁹⁹ See 47 CFR § 27.902.

¹⁰⁰ See U.S. Census Bureau, *2017 NAICS Definition*, “517312 Wireless Telecommunications Carriers (*except* Satellite),” <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁰¹ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁰² Of this number, 2,837 firms employed fewer than 250 employees.¹⁰³ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

26. According to Commission data as of November 2021, there were three active licenses in this service.¹⁰⁴ The Commission's small business size standards with respect to 1670–1675 MHz Services involve eligibility for bidding credits and installment payments in the auction of licenses for these services. For licenses in the 1670-1675 MHz service band, a “small business” is defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and a “very small business” is defined as an entity that, together with its affiliates and controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years.¹⁰⁵ The 1670-1675 MHz service band auction's winning bidder did not claim small business status.¹⁰⁶

27. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

28. *Wireless Telephony.* Wireless telephony includes cellular, personal communications services, and specialized mobile radio telephony carriers. The closest applicable industry with an SBA small business size standard is Wireless Telecommunications Carriers (except Satellite).¹⁰⁷ The size standard for this industry under SBA rules is that a business is small if it has 1,500 or fewer employees.¹⁰⁸ For this industry, U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated for the entire year.¹⁰⁹ Of this number, 2,837 firms employed fewer than 250 employees.¹¹⁰ Additionally, based

¹⁰¹ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁰² See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

¹⁰³ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁰⁴ Based on a FCC Universal Licensing System search on November 8, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, “Match only the following radio service(s)”, Radio Service = BC; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁰⁵ See 47 CFR § 27.906(a).

¹⁰⁶ See *1670–1675 MHz Band Auction Closes; Winning Bidder Announced; FCC Form 600s Due May 12, 2003*, Public Notice, DA-03-1472, Report No. AUC-03-46-H (Auction No.46) (May 2, 2003).

¹⁰⁷ See U.S. Census Bureau, *2017 NAICS Definition, “517312 Wireless Telecommunications Carriers (except Satellite)”*, <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁰⁸ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁰⁹ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312,

(continued....)

on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 331 providers that reported they were engaged in the provision of cellular, personal communications services, and specialized mobile radio services.¹¹¹ Of these providers, the Commission estimates that 255 providers have 1,500 or fewer employees.¹¹² Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

29. *Broadband Personal Communications Service.* The broadband personal communications services (PCS) spectrum encompasses services in the 1850-1910 and 1930-1990 MHz bands.¹¹³ The closest industry with a SBA small business size standard applicable to these services is Wireless Telecommunications Carriers (except Satellite).¹¹⁴ The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹¹⁵ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹¹⁶ Of this number, 2,837 firms employed fewer than 250 employees.¹¹⁷ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

30. Based on Commission data as of November 2021, there were approximately 5,060 active licenses in the Broadband PCS service.¹¹⁸ The Commission's small business size standards with respect to Broadband PCS involve eligibility for bidding credits and installment payments in the auction of licenses for these services. In auctions for these licenses, the Commission defined "small business" as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and a "very small business" as an entity that, together with its affiliates and controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years.¹¹⁹ Winning bidders claiming small business credits won Broadband PCS licenses in C, D, E, and F Blocks.¹²⁰

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<https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

¹¹⁰ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹¹¹ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

¹¹² *Id.*

¹¹³ See 47 CFR § 24.200.

¹¹⁴ See U.S. Census Bureau, 2017 NAICS Definition, "517312 Wireless Telecommunications Carriers (except Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹¹⁵ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹¹⁶ See U.S. Census Bureau, 2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017, Table ID: EC1700SIZEEMPfirm, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

¹¹⁷ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹¹⁸ Based on a FCC Universal Licensing System search on November 16, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = CW; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹¹⁹ See 47 CFR § 24.720(b).

¹²⁰ See Federal Communications Commission, Office of Economics and Analytics, Auctions, Auctions 4, 5, 10, 11, 22, 35, 58, 71 and 78, <https://www.fcc.gov/auctions>.

31. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

32. *Specialized Mobile Radio Licenses.* Special Mobile Radio (SMR) licenses allow licensees to provide land mobile communications services (other than radiolocation services) in the 800 MHz and 900 MHz spectrum bands on a commercial basis including but not limited to services used for voice and data communications, paging, and facsimile services, to individuals, Federal Government entities, and other entities licensed under Part 90 of the Commission's rules. Wireless Telecommunications Carriers (except Satellite)¹²¹ is the closest industry with a SBA small business size standard applicable to these services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹²² For this industry, U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year.¹²³ Of this number, 2,837 firms employed fewer than 250 employees.¹²⁴ Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 95 providers that reported they were of SMR (dispatch) providers.¹²⁵ Of this number, the Commission estimates that all 95 providers have 1,500 or fewer employees.¹²⁶ Consequently, using the SBA's small business size standard, these 119 SMR licensees can be considered small entities.¹²⁷

33. Based on Commission data as of December 2021, there were 3,924 active SMR licenses.¹²⁸ However, since the Commission does not collect data on the number of employees for licensees providing SMR services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard. Nevertheless, for purposes of this analysis the Commission estimates that the majority of SMR licensees can be considered small entities using the SBA's small business size standard.

¹²¹ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (except Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹²² See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹²³ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFFIRM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFFIRM&hidePreview=false>.

¹²⁴ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹²⁵ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>, <https://docs.fcc.gov/public/attachments/DOC-379181A1.pdf>

¹²⁶ *Id.*

¹²⁷ We note that there were also SMR providers reporting in the "Cellular/PCS/SMR" classification, therefore there are maybe additional SMR providers that have not been accounted for in the SMR (dispatch) classification.

¹²⁸ Based on a FCC Universal Licensing System search on December 15, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match radio services within this group", Radio Service = SMR; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

34. *Lower 700 MHz Band Licenses.* The lower 700 MHz band encompasses spectrum in the 698-746 MHz frequency bands. Permissible operations in these bands include flexible fixed, mobile, and broadcast uses, including mobile and other digital new broadcast operation; fixed and mobile wireless commercial services (including FDD- and TDD-based services); as well as fixed and mobile wireless uses for private, internal radio needs, two-way interactive, cellular, and mobile television broadcasting services.¹²⁹ Wireless Telecommunications Carriers (*except* Satellite)¹³⁰ is the closest industry with a SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹³¹ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹³² Of this number, 2,837 firms employed fewer than 250 employees.¹³³ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

35. According to Commission data as of December 2021, there were approximately 2,824 active Lower 700 MHz Band licenses.¹³⁴ The Commission's small business size standards with respect to Lower 700 MHz Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For auctions of Lower 700 MHz Band licenses the Commission adopted criteria for three groups of small businesses. A very small business was defined as an entity that, together with its affiliates and controlling interests, has average annual gross revenues not exceeding \$15 million for the preceding three years, a small business was defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and an entrepreneur was defined as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$3 million for the preceding three years.¹³⁵ In auctions for Lower 700 MHz Band licenses seventy-two winning bidders claiming a small business classification won 329 licenses,¹³⁶ twenty-six winning bidders claiming a small business classification won 214 licenses,¹³⁷ and three winning bidders claiming a small business classification won all five auctioned licenses.¹³⁸

¹²⁹ See Federal Communications Commission, Economics and Analytics, Auctions, Auctions 44, 49, 60: Lower 700 MHz Band, Fact Sheet, Permissible Operations, <https://www.fcc.gov/auction/44/factsheet>, <https://www.fcc.gov/auction/49/factsheet>, <https://www.fcc.gov/auction/60/factsheet>.

¹³⁰ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (*except* Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹³¹ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹³² See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFFIRM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFFIRM&hidePreview=false>.

¹³³ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹³⁴ Based on a FCC Universal Licensing System search on December 14, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = WY, WZ; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹³⁵ See 47 CFR § 27.702(a)(1)-(3).

¹³⁶ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 44: Lower 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/44/charts/44cls2.pdf>.

36. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

37. *Upper 700 MHz Band Licenses.* The upper 700 MHz band encompasses spectrum in the 746-806 MHz bands. Upper 700 MHz D Block licenses are nationwide licenses associated with the 758-763 MHz and 788-793 MHz bands.¹³⁹ Permissible operations in these bands include flexible fixed, mobile, and broadcast uses, including mobile and other digital new broadcast operation; fixed and mobile wireless commercial services (including FDD- and TDD-based services); as well as fixed and mobile wireless uses for private, internal radio needs, two-way interactive, cellular, and mobile television broadcasting services.¹⁴⁰ Wireless Telecommunications Carriers (*except* Satellite)¹⁴¹ is the closest industry with a SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁴² U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁴³ Of that number, 2,837 firms employed fewer than 250 employees.¹⁴⁴ Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

38. According to Commission data as of December 2021, there were approximately 152 active Upper 700 MHz Band licenses.¹⁴⁵ The Commission's small business size standards with respect to

(Continued from previous page) _____

¹³⁷ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 49: Lower 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/49/charts/49cls2.pdf>.

¹³⁸ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 60: Lower 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/60/charts/60cls2.pdf>.

¹³⁹ See 47 CFR § 27.4.

¹⁴⁰ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 73: 700 MHz Band, Fact Sheet, Permissible Operations, <https://www.fcc.gov/auction/73/factsheet>. We note that in Auction 73, Upper 700 MHz Band C and D Blocks as well as Lower 700 MHz Band A, B, and E Blocks were auctioned.

¹⁴¹ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (*except* Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁴² See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁴³ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPfirm, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

¹⁴⁴ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁴⁵ Based on a FCC Universal Licensing System search on December 14, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = WP, WU; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

Upper 700 MHz Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For the auction of these licenses, the Commission defined a “small business” as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years, and a “very small business” an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the preceding three years.¹⁴⁶ Pursuant to these definitions, three winning bidders claiming very small business status won five of the twelve available licenses.¹⁴⁷

39. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA’s small business size standard.

40. *700 MHz Guard Band Licensees.* The 700 MHz Guard Band encompasses spectrum in 746-747/776-777 MHz and 762-764/792-794 MHz frequency bands. Wireless Telecommunications Carriers (*except* Satellite)¹⁴⁸ is the closest industry with a SBA small business size standard applicable to licenses providing services in these bands. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁴⁹ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁵⁰ Of this number, 2,837 firms employed fewer than 250 employees.¹⁵¹ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

41. According to Commission data as of December 2021, there were approximately 224 active 700 MHz Guard Band licenses.¹⁵² The Commission’s small business size standards with respect to 700 MHz Guard Band licensees involve eligibility for bidding credits and installment payments in the auction of licenses. For the auction of these licenses, the Commission defined a “small business” as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$40 million for the preceding three years, and a “very small business” an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$15 million for the

¹⁴⁶ See 47 CFR § 27.502(a).

¹⁴⁷ See *Auction of 700 MHz Band Licenses Closes; Winning Bidders Announced for Auction 73*, Public Notice, DA-08-595, Attachment A, Report No. AUC-08-73-I (Auction 73) (March 20, 2008). The results for Upper 700 MHz Band C Block can be found on pp. 62-63.

¹⁴⁸ See U.S. Census Bureau, *2017 NAICS Definition*, “517312 Wireless Telecommunications Carriers (*except* Satellite),” <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁴⁹ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁵⁰ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

¹⁵¹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁵² Based on a FCC Universal Licensing System search on December 14, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, “Match only the following radio service(s)”, Radio Service = WX; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

preceding three years.¹⁵³ Pursuant to these definitions, five winning bidders claiming one of the small business status classifications won 26 licenses, and one winning bidder claiming small business won two licenses.¹⁵⁴ None of the winning bidders claiming a small business status classification in these 700 MHz Guard Band license auctions had an active license as of December 2021.¹⁵⁵

42. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

43. *Air-Ground Radiotelephone Service.* Air-Ground Radiotelephone Service is a wireless service in which licensees are authorized to offer and provide radio telecommunications service for hire to subscribers in aircraft.¹⁵⁶ A licensee may provide any type of air-ground service (i.e., voice telephony, broadband Internet, data, etc.) to aircraft of any type, and serve any or all aviation markets (commercial, government, and general). A licensee must provide service to aircraft and may not provide ancillary land mobile or fixed services in the 800 MHz air-ground spectrum.¹⁵⁷

44. The closest industry with an SBA small business size standard applicable to these services is Wireless Telecommunications Carriers (*except* Satellite).¹⁵⁸ The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁵⁹ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁶⁰ Of this number, 2,837 firms employed fewer than 250 employees.¹⁶¹ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

¹⁵³ See 47 CFR § 27.502(a).

¹⁵⁴ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 33: Upper 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/33/charts/33cls2.pdf>, Auction 38: Upper 700 MHz Guard Bands, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/38/charts/38cls2.pdf>.

¹⁵⁵ Based on a FCC Universal Licensing System search on December 14, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = WX; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁵⁶ 47 CFR § 22.99.

¹⁵⁷ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 65: 800 MHz Air-Ground Radiotelephone Service, Fact Sheet, Permissible Operations, <https://www.fcc.gov/auction/65/factsheet>.

¹⁵⁸ See U.S. Census Bureau, 2017 NAICS Definition, "517312 Wireless Telecommunications Carriers (*except* Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁵⁹ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁶⁰ See U.S. Census Bureau, 2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

¹⁶¹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

45. Based on Commission data as of December 2021, there were approximately four licensees with 110 active licenses in the Air-Ground Radiotelephone Service.¹⁶² The Commission’s small business size standards with respect to Air-Ground Radiotelephone Service involve eligibility for bidding credits and installment payments in the auction of licenses. For purposes of auctions, the Commission defined “small business” as an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$40 million for the preceding three years, and a “very small business” as an entity that, together with its affiliates and controlling interests, has had average annual gross revenues not exceeding \$15 million for the preceding three years.¹⁶³ In the auction of Air-Ground Radiotelephone Service licenses in the 800 MHz band, neither of the two winning bidders claimed small business status.¹⁶⁴

46. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, the Commission does not collect data on the number of employees for licensees providing these services therefore, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA’s small business size standard.

47. *Advanced Wireless Services (AWS) - (1710–1755 MHz and 2110–2155 MHz bands (AWS-1); 1915–1920 MHz, 1995–2000 MHz, 2020–2025 MHz and 2175–2180 MHz bands (AWS-2); 2155–2175 MHz band (AWS-3); 2000–2020 MHz and 2180–2200 MHz (AWS-4)).* Spectrum is made available and licensed in these bands for the provision of various wireless communications services.¹⁶⁵ Wireless Telecommunications Carriers (*except* Satellite)¹⁶⁶ is the closest industry with a SBA small business size standard applicable to these services. The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁶⁷ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁶⁸ Of this number, 2,837 firms employed fewer than 250 employees.¹⁶⁹ Thus, under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

¹⁶² Based on a FCC Universal Licensing System search on December 20, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, “Match only the following radio service(s)”, Radio Service = CG, CJ; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁶³ See 47 CFR § 22.223(b).

¹⁶⁴ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 65: 800 MHz Air-Ground Radiotelephone Service, Summary, Closing Charts, Licenses by Bidder, <https://www.fcc.gov/sites/default/files/wireless/auctions/65/charts/65cls2.pdf>.

¹⁶⁵ See 47 CFR § 27.1(b).

¹⁶⁶ See U.S. Census Bureau, *2017 NAICS Definition*, “517312 Wireless Telecommunications Carriers (*except* Satellite),” <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁶⁷ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁶⁸ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFI, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFI&hidePreview=false>.

¹⁶⁹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

48. According to Commission data as of December 2021, there were approximately 4,472 active AWS licenses.¹⁷⁰ The Commission's small business size standards with respect to AWS involve eligibility for bidding credits and installment payments in the auction of licenses for these services. For the auction of AWS licenses, the Commission defined a "small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$40 million, and a "very small business" as an entity with average annual gross revenues for the preceding three years not exceeding \$15 million.¹⁷¹ Pursuant to these definitions, 57 winning bidders claiming status as small or very small businesses won 215 of 1,087 licenses.¹⁷² In the most recent auction of AWS licenses 15 of 37 bidders qualifying for status as small or very small businesses won licenses.¹⁷³

49. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

50. *3650–3700 MHz band.* Wireless broadband service licensing in the 3650-3700 MHz band provides for nationwide, non-exclusive licensing of terrestrial operations, utilizing contention-based technologies, in the 3650 MHz band (i.e., 3650–3700 MHz).¹⁷⁴ Licensees are permitted to provide services on a non-common carrier and/or on a common carrier basis.¹⁷⁵ Wireless broadband services in the 3650-3700 MHz band fall in the Wireless Telecommunications Carriers (*except Satellite*)¹⁷⁶ industry with an SBA small business size standard that classifies a business as small if it has 1,500 or fewer employees.¹⁷⁷ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁷⁸ Of this number, 2,837 firms employed fewer than 250 employees.¹⁷⁹ Thus

¹⁷⁰ Based on a FCC Universal Licensing System search on December 10, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service = AD, AH, AT, AW; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁷¹ See 47 CFR §§ 27.1002, 27.1102, 27.1104, 27.1106.

¹⁷² See Federal Communications Commission, Economics and Analytics, Auctions, Auction 66: Advanced Wireless Services (AWS-1), Summary, Spreadsheets, <https://www.fcc.gov/sites/default/files/wireless/auctions/66/charts/66cls2.pdf>.

¹⁷³ See Auction of Advanced Wireless Services (AWS-3) Licenses Closes; Winning Bidders Announced for Auction 97, Public Notice, DA-15-131, Attachments A-B, (Auction No. 97) (January 30, 2015).

¹⁷⁴ See 47 CFR §§ 90.1305, 90.1307.

¹⁷⁵ See *id.* § 90.1309.

¹⁷⁶ See U.S. Census Bureau, *2017 NAICS Definition*, "517312 Wireless Telecommunications Carriers (*except Satellite*)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁷⁷ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁷⁸ See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPfirm, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

¹⁷⁹ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

51. The Commission has not developed a small business size standard applicable to 3650–3700 MHz band licensees. Based on the licenses that have been granted, however, we estimate that the majority of licensees in this service are small Internet Access Service Providers (ISPs). As of November 2021, Commission data shows that there were 902 active licenses in the 3650–3700 MHz band.¹⁸⁰ However, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA’s small business size standard.

52. *Fixed Microwave Services.* Fixed microwave services include common carrier,¹⁸¹ private-operational fixed,¹⁸² and broadcast auxiliary radio services.¹⁸³ They also include the Upper Microwave Flexible Use Service (UMFUS),¹⁸⁴ Millimeter Wave Service (70/80/90 GHz),¹⁸⁵ Local Multipoint Distribution Service (LMDS),¹⁸⁶ the Digital Electronic Message Service (DEMS),¹⁸⁷ 24 GHz Service,¹⁸⁸ Multiple Address Systems (MAS),¹⁸⁹ and Multichannel Video Distribution and Data Service (MVDDS),¹⁹⁰ where in some bands licensees can choose between common carrier and non-common carrier status.¹⁹¹ Wireless Telecommunications Carriers (*except* Satellite)¹⁹² is the closest industry with a SBA small business size standard applicable to these services. The SBA small size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁹³ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.¹⁹⁴ Of this number,

¹⁸⁰ Based on a FCC Universal Licensing System search on November 19, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, “Match only the following radio service(s)”, Radio Service = NN; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

¹⁸¹ See 47 CFR Part 101, Subparts C and I.

¹⁸² See *id.* Subparts C and H.

¹⁸³ Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission’s Rules. See 47 CFR Part 74. Available to licensees of broadcast stations and to broadcast and cable network entities, broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile TV pickups, which relay signals from a remote location back to the studio.

¹⁸⁴ See 47 CFR Part 30.

¹⁸⁵ See 47 CFR Part 101, Subpart Q.

¹⁸⁶ See *id.* Subpart L.

¹⁸⁷ See *id.* Subpart G.

¹⁸⁸ See *id.*

¹⁸⁹ See *id.* Subpart O.

¹⁹⁰ See *id.* Subpart P.

¹⁹¹ See 47 CFR §§ 101.533, 101.1017.

¹⁹² See U.S. Census Bureau, 2017 NAICS Definition, “517312 Wireless Telecommunications Carriers (*except* Satellite),” <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

¹⁹³ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

¹⁹⁴ See U.S. Census Bureau, 2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?y=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

2,837 firms employed fewer than 250 employees.¹⁹⁵ Thus under the SBA size standard, the Commission estimates that a majority of fixed microwave service licensees can be considered small.

53. The Commission's small business size standards with respect to fixed microwave services involve eligibility for bidding credits and installment payments in the auction of licenses for the various frequency bands included in fixed microwave services. When bidding credits are adopted for the auction of licenses in fixed microwave services frequency bands, such credits may be available to several types of small businesses based average gross revenues (small, very small and entrepreneur) pursuant to the competitive bidding rules adopted in conjunction with the requirements for the auction and/or as identified in Part 101 of the Commission's rules for the specific fixed microwave services frequency bands.¹⁹⁶

54. In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

55. *Broadband Radio Service and Educational Broadband Service.* Broadband Radio Service systems, previously referred to as Multipoint Distribution Service (MDS) and Multichannel Multipoint Distribution Service (MMDS) systems, and "wireless cable,"¹⁹⁷ transmit video programming to subscribers and provide two-way high speed data operations using the microwave frequencies of the Broadband Radio Service (BRS) and Educational Broadband Service (EBS) (previously referred to as the Instructional Television Fixed Service (ITFS)).¹⁹⁸ Wireless cable operators that use spectrum in the BRS often supplemented with leased channels from the EBS, provide a competitive alternative to wired cable and other multichannel video programming distributors. Wireless cable programming to subscribers resembles cable television, but instead of coaxial cable, wireless cable uses microwave channels.¹⁹⁹

56. In light of the use of wireless frequencies by BRS and EBS services, the closest industry with a SBA small business size standard applicable to these services is Wireless Telecommunications Carriers (*except* Satellite).²⁰⁰ The SBA small business size standard for this industry classifies a business

¹⁹⁵ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

¹⁹⁶ See 47 CFR §§ 101.538(a)(1)-(3), 101.1112(b)-(d), 101.1319(a)(1)-(2), and 101.1429(a)(1)-(3).

¹⁹⁷ The use of the term "wireless cable" does not imply that it constitutes cable television for statutory or regulatory purposes.

¹⁹⁸ See 47 CFR § 27.4; see also Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act—Competitive Bidding, Report and Order, 10 FCC Rcd 9589, 9593, para. 7 (1995).

¹⁹⁹ Generally, a wireless cable system may be described as a microwave station transmitting on a combination of BRS and EBS channels to numerous receivers with antennas, such as single-family residences, apartment complexes, hotels, educational institutions, business entities and governmental offices. The range of the transmission depends upon the transmitter power, the type of receiving antenna and the existence of a line-of-sight path between the transmitter or signal booster and the receiving antenna.

²⁰⁰ See U.S. Census Bureau, 2017 NAICS Definition, "517312 Wireless Telecommunications Carriers (*except* Satellite)," <https://www.census.gov/naics/?input=517312&year=2017&details=517312>.

as small if it has 1,500 or fewer employees.²⁰¹ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.²⁰² Of this number, 2,837 firms employed fewer than 250 employees.²⁰³ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

57. According to Commission data as December 2021, there were approximately 5,869 active BRS and EBS licenses.²⁰⁴ The Commission's small business size standards with respect to BRS involves eligibility for bidding credits and installment payments in the auction of licenses for these services. For the auction of BRS licenses, the Commission adopted criteria for three groups of small businesses. A very small business is an entity that, together with its affiliates and controlling interests, has average annual gross revenues exceed \$3 million and did not exceed \$15 million for the preceding three years, a small business is an entity that, together with its affiliates and controlling interests, has average gross revenues exceed \$15 million and did not exceed \$40 million for the preceding three years, and an entrepreneur is an entity that, together with its affiliates and controlling interests, has average gross revenues not exceeding \$3 million for the preceding three years.²⁰⁵ Of the ten winning bidders for BRS licenses, two bidders claiming the small business status won 4 licenses, one bidder claiming the very small business status won three licenses and two bidders claiming entrepreneur status won six licenses.²⁰⁶ One of the winning bidders claiming a small business status classification in the BRS license auction has an active licenses as of December 2021.²⁰⁷

58. The Commission's small business size standards for EBS define a small business as an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than \$55 million for the preceding five (5) years, and a very small business is an entity that, together with its affiliates, its controlling interests and the affiliates of its controlling interests, has average gross revenues that are not more than \$20 million for the preceding five (5) years.²⁰⁸ In frequency bands where licenses were subject to auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or

²⁰¹ See 13 CFR § 121.201, NAICS Code 517312 (as of 10/1/22, NAICS Code 517112).

²⁰² See U.S. Census Bureau, *2017 Economic Census of the United States, Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFIEM, NAICS Code 517312, <https://data.census.gov/cedsci/table?v=2017&n=517312&tid=ECNSIZE2017.EC1700SIZEEMPFIEM&hidePreview=false>.

²⁰³ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

²⁰⁴ Based on a FCC Universal Licensing System search on December 10, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service=BR, ED; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

²⁰⁵ See 47 CFR § 27.1218(a).

²⁰⁶ See Federal Communications Commission, Economics and Analytics, Auctions, Auction 86: Broadband Radio Service, Summary, Reports, All Bidders, <https://www.fcc.gov/sites/default/files/wireless/auctions/86/charts/86bidder.xls>.

²⁰⁷ Based on a FCC Universal Licensing System search on December 10, 2021, <https://wireless2.fcc.gov/UlsApp/UlsSearch/searchAdvanced.jsp>. Search parameters: Service Group = All, "Match only the following radio service(s)", Radio Service=BR; Authorization Type = All; Status = Active. We note that the number of active licenses does not equate to the number of licensees. A licensee can have one or more licenses.

²⁰⁸ See 47 CFR § 27.1219(a).

transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time we are not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

5. Satellite Service Providers

59. *Satellite Telecommunications.* This industry comprises firms “primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”²⁰⁹ Satellite telecommunications service providers include satellite and earth station operators. The SBA small business size standard for this industry classifies a business with \$38.5 million or less in annual receipts as small.²¹⁰ U.S. Census Bureau data for 2017 show that 275 firms in this industry operated for the entire year.²¹¹ Of this number, 242 firms had revenue of less than \$25 million.²¹² Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 65 providers that reported they were engaged in the provision of satellite telecommunications services.²¹³ Of these providers, the Commission estimates that approximately 42 providers have 1,500 or fewer employees.²¹⁴ Consequently, using the SBA's small business size standard, a little more than half of these providers can be considered small entities.

60. *All Other Telecommunications.* This industry is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation.²¹⁵ This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems.²¹⁶ Providers of Internet services (e.g. dial-up ISPs) or Voice over Internet Protocol (VoIP) services, via client-supplied telecommunications connections are also included in this industry.²¹⁷ The SBA small business size standard for this industry classifies firms with annual receipts of \$35 million or less as small.²¹⁸ U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry

²⁰⁹ See U.S. Census Bureau, *2017 NAICS Definition, “517410 Satellite Telecommunications,”* <https://www.census.gov/naics/?input=517410&year=2017&details=517410>.

²¹⁰ See 13 CFR § 121.201, NAICS Code 517410.

²¹¹ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 517410, <https://data.census.gov/cedsci/table?y=2017&n=517410&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false>.

²¹² *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, see https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

²¹³ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2022), <https://docs.fcc.gov/public/attachments/DOC-391070A1.pdf>.

²¹⁴ *Id.*

²¹⁵ See U.S. Census Bureau, *2017 NAICS Definition, “517919 All Other Telecommunications,”* <https://www.census.gov/naics/?input=517919&year=2017&details=517919>.

²¹⁶ *Id.*

²¹⁷ *Id.*

²¹⁸ See 13 CFR § 121.201, NAICS Code 517919 (as of 10/1/22, NAICS Code 517810).

that operated for the entire year.²¹⁹ Of those firms, 1,039 had revenue of less than \$25 million.²²⁰ Based on this data, the Commission estimates that the majority of “All Other Telecommunications” firms can be considered small.

6. Cable Service Providers

61. Because section 706 of the Act requires us to monitor the deployment of broadband using any technology, we anticipate that some broadband service providers may not provide telephone service. Accordingly, we describe below other types of firms that may provide broadband services, including cable companies, MDS providers, and utilities, among others.

62. *Cable and Other Subscription Programming.* The U.S. Census Bureau defines this industry as establishments primarily engaged in operating studios and facilities for the broadcasting of programs on a subscription or fee basis.²²¹ The broadcast programming is typically narrowcast in nature (e.g., limited format, such as news, sports, education, or youth-oriented). These establishments produce programming in their own facilities or acquire programming from external sources.²²² The programming material is usually delivered to a third party, such as cable systems or direct-to-home satellite systems, for transmission to viewers.²²³ The SBA small business size standard for this industry classifies firms with annual receipts less than \$41.5 million as small.²²⁴ Based on U.S. Census Bureau data for 2017, 378 firms operated in this industry during that year.²²⁵ Of that number, 149 firms operated with revenue of less than \$25 million a year and 44 firms operated with revenue of \$25 million or more.²²⁶ Based on this data, the Commission estimates that a majority of firms in this industry are small.

63. *Cable Companies and Systems (Rate Regulation).* The Commission has developed its own small business size standard for the purpose of cable rate regulation. Under the Commission’s rules, a “small cable company” is one serving 400,000 or fewer subscribers nationwide.²²⁷ Based on industry

²¹⁹ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 517919, <https://data.census.gov/cedsci/table?y=2017&n=517919&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false>.

²²⁰ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, see https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

²²¹ See U.S. Census Bureau, *2017 NAICS Definition, “515210 Cable and Other Subscription Programming,”* <https://www.census.gov/naics/?input=515210&year=2017&details=515210>.

²²² *Id.*

²²³ *Id.*

²²⁴ See 13 CFR § 121.201, NAICS Code 515210 (as of 10/1/22, NAICS Code 516210).

²²⁵ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Sales, Value of Shipments, or Revenue Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEREVFIRM, NAICS Code 515210, <https://data.census.gov/cedsci/table?y=2017&n=515210&tid=ECNSIZE2017.EC1700SIZEREVFIRM&hidePreview=false>. The US Census Bureau withheld publication of the number of firms that operated for the entire year to avoid disclosing data for individual companies (see Cell Notes for this category).

²²⁶ *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard. We note that the U.S. Census Bureau withheld publication of the number of firms that operated with sales/value of shipments/revenue in all categories of revenue less than \$500,000 to avoid disclosing data for individual companies (see Cell Notes for the sales/value of shipments/revenue in these categories). Therefore, the number of firms with revenue that meet the SBA size standard would be higher than noted herein. We also note that according to the U.S. Census Bureau glossary, the terms receipts and revenues are used interchangeably, see https://www.census.gov/glossary/#term_ReceiptsRevenueServices.

²²⁷ 47 CFR § 76.901(d).

data, there are about 420 cable companies in the U.S.²²⁸ Of these, only seven have more than 400,000 subscribers.²²⁹ In addition, under the Commission’s rules, a “small system” is a cable system serving 15,000 or fewer subscribers.²³⁰ Based on industry data, there are about 4,139 cable systems (headends) in the U.S.²³¹ Of these, about 639 have more than 15,000 subscribers.²³² Accordingly, the Commission estimates that the majority of cable companies and cable systems are small.

64. *Cable System Operators (Telecom Act Standard)*. The Communications Act of 1934, as amended, contains a size standard for a “small cable operator,” which is “a cable operator that, directly or through an affiliate, serves in the aggregate fewer than one percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000.”²³³ For purposes of the Telecom Act Standard, the Commission determined that a cable system operator that serves fewer than 498,000 subscribers, either directly or through affiliates, will meet the definition of a small cable operator.²³⁴ Based on industry data, only six cable system operators have more than 498,000 subscribers.²³⁵ Accordingly, the Commission estimates that the majority of cable system operators are small under this size standard. We note however, that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million.²³⁶ Therefore, we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under the definition in the Communications Act.

7. All Other Telecommunications

65. *Electric Power Generators, Transmitters, and Distributors*. The U.S. Census Bureau defines the utilities sector industry as comprised of “establishments, primarily engaged in generating, transmitting, and/or distributing electric power.”²³⁷ Establishments in this industry group may perform one or more of the following activities: (1) operate generation facilities that produce electric energy; (2) operate transmission systems that convey the electricity from the generation facility to the distribution system; and (3) operate distribution systems that convey electric power received from the generation

²²⁸ S&P Global Market Intelligence, S&P Capital IQ Pro, U.S. MediaCensus, *Operator Subscribers by Geography* (last visited May 26, 2022).

²²⁹ S&P Global Market Intelligence, S&P Capital IQ Pro, *Top Cable MSOs 12/21Q* (last visited May 26, 2022); S&P Global Market Intelligence, *Multichannel Video Subscriptions, Top 10* (April 2022).

²³⁰ 47 CFR § 76.901(c).

²³¹ S&P Global Market Intelligence, S&P Capital IQ Pro, U.S. MediaCensus, *Operator Subscribers by Geography* (last visited May 26, 2022).

²³² S&P Global Market Intelligence, S&P Capital IQ Pro, *Top Cable MSOs 12/21Q* (last visited May 26, 2022).

²³³ 47 U.S.C. § 543(m)(2).

²³⁴ *FCC Announces Updated Subscriber Threshold for the Definition of Small Cable Operator*, Public Notice, DA 23-906 (MB 2023) (2023 *Subscriber Threshold PN*). In this Public Notice, the Commission determined that there were approximately 49.8 million cable subscribers in the United States at that time using the most reliable source publicly available. *Id.* This threshold will remain in effect until the Commission issues a superseding Public Notice.. See 47 CFR § 76.901(e)(1).

²³⁵ S&P Global Market Intelligence, S&P Capital IQ Pro, *Top Cable MSOs 06/23Q* (last visited Sept. 27, 2023); S&P Global Market Intelligence, *Multichannel Video Subscriptions, Top 10* (April 2022).

²³⁶ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority’s finding that the operator does not qualify as a small cable operator pursuant to § 76.901(e) of the Commission’s rules. See 47 CFR § 76.910(b).

²³⁷ See U.S. Census Bureau, *2017 NAICS Definition, “Sector 22- Utilities, 2211 Electric Power Generation, Transmission and Distribution,”* <https://www.census.gov/naics/?input=2211&year=2017&details=2211>.

facility or the transmission system to the final consumer.”²³⁸ This industry group is categorized based on fuel source and includes Hydroelectric Power Generation, Fossil Fuel Electric Power Generation, Nuclear Electric Power Generation, Solar Electric Power Generation, Wind Electric Power Generation, Geothermal Electric Power Generation, Biomass Electric Power Generation, Other Electric Power Generation, Electric Bulk Power Transmission and Control and Electric Power Distribution.²³⁹

66. The SBA has established a small business size standard for each of these groups based on the number of employees which ranges from having fewer than 250 employees to having fewer than 1,000 employees.²⁴⁰ U.S. Census Bureau data for 2017 indicate that for the Electric Power Generation, Transmission and Distribution industry there were 1,693 firms that operated in this industry for the entire year.²⁴¹ Of this number, 1,552 firms had less than 250 employees.²⁴² Based on this data and the associated SBA size standards, the majority of firms in this industry can be considered small entities.

D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

67. Certain potential modifications proposed in the *Fourth Notice*, if adopted, would impose new reporting, recordkeeping, or other compliance requirements on some small entities while others would reduce the burden on such entities. Specifically, in the *Fourth Notice*, we propose enhancements to the availability data collection requirements that, if adopted, would amend our rules to continue to collect availability data on legacy services but to not include such services in the location-specific availability information published on the National Broadband Map. Once broadband internet access service has actually been discontinued, the filer would not be required to submit broadband availability data for the service upon the next subsequent BDC filing period following the grant of the discontinuance petition.

68. In addition, the Commission proposes that fixed wireless filers reporting licensed service in their biannual BDC filings also be required to provide call sign data. We also propose updates to the BDC reporting requirements, that if adopted, would improve the quality of satellite service provider availability data submitted as part of the biannual data submission process. Specifically, we propose that satellite service providers must include, as a supporting data file accompanied with their biannual availability submissions, the infrastructure data set forth in BDC Infrastructure Data Specification.²⁴³

69. In addition, as a means of improving the accuracy and reliability of broadband Internet access service data, the Commission proposes a number of methods to verify the information in the providers’ filings, including adoption of data retention requirements and more specific audit procedures. Specifically, we propose that broadband service providers retain the underlying data used to create their availability filings (including supporting data) for three years from the applicable “as-of” date. Data used

²³⁸ See *id.*

²³⁹ *Id.* <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=2211&search=2017+NAICS+Search&search=2017>.

²⁴⁰ See 13 CFR § 121.201, NAICS Codes 221111, 221112, 221113, 221114, 221115, 221116, 221117, 221118, 221121, 221122.

²⁴¹ See U.S. Census Bureau, *2017 Economic Census of the United States, Selected Sectors: Employment Size of Firms for the U.S.: 2017*, Table ID: EC1700SIZEEMPFI, NAICS Code 2211, <https://data.census.gov/cedsci/table?v=2017&n=2211&tid=ECNSIZE2017.EC1700SIZEEMPFI&hidePreview=false>.

²⁴² *Id.* The available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that meet the SBA size standard.

²⁴³ See Broadband Data Collection, Data Specifications for Provider Infrastructure Data in the Challenge, Verification, and Audit Processes (December 21, 2023), <https://us-fcc.app.box.com/v/bdc-infrastructure-spec>.

to rebut challenges or respond to verifications inquiries or audits would be retained for three years as well. In response to a BDC audit request, providers would have 60 days to submit the applicable supporting documentation. The adoption of any of these verification processes could subject small entities and other providers to additional submission, recordkeeping, and compliance requirements.

70. In addition, we propose to eliminate the requirement under rule 1.7004(d) that an engineering certification, to the extent not submitted by a corporate engineering officer, must be submitted by a licensed PE. Instead, we propose to amend rule 1.7004(d) to require that providers submit certifications by a “qualified engineer,” as defined by the engineering qualifications the BDTF adopted in previous orders.²⁴⁴ This certifying engineer would not need to be a full time employee, but would be required to have direct knowledge and familiarity with the BDC filing. We believe that the potential costs and burdens of the licensed PE requirement outweigh its potential benefits, and thus propose to eliminate the requirement.

71. The issues raised for consideration and comment in the *Fourth Notice* may require small entities to hire attorneys, engineers, consultants, or other professionals. At this time, however, the Commission cannot quantify the cost of compliance with any potential rule changes and compliance obligations for small entities that may result from the *Fourth Notice*. We expect our requests for information on potential burdens on small entities associated with matters raised in the *Fourth Notice* will provide us with information to assist with our evaluation of the cost of compliance on small entities of any reporting, recordkeeping, or other compliance requirements we adopt.

E. Steps Taken to Minimize the Significant Economic Impact on Small Entities and Significant Alternatives Considered

72. The RFA requires an agency to describe any significant, specifically small business, alternatives that could minimize impacts to small entities that it has considered in reaching its proposed approach, which may include (among others) the following four alternatives: “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for such small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”²⁴⁵

73. As an initial matter, several of the proposals in the *Fourth Notice* are unlikely to negatively impact small businesses. For example, we propose to eliminate the licensed professional engineering certification and instead propose to require certifications by a “qualified engineer,” as defined in previous BDC orders. This proposal, if adopted, will save some small entities from having to pay a professional engineer to certify their filings. The *Fourth Notice* additionally proposes to keep confidential certain legacy availability data to protect customers’ identity while still enabling the Commission to continue to analyze availability on “grandfathered” services.

74. To assist the Commission’s evaluation of the economic impact on small entities as a result of actions that may result from proposals and issues raised for consideration in the *Fourth Notice*,

²⁴⁴ *Establishing the Digital Opportunity Data Collection; Competitive Carriers Association Petition for Declaratory Ruling or Limited Waiver Regarding the Requirement for a Certified Professional Engineer to Certify Broadband Data Collection Maps*, WC Docket No. 19-195, Declaratory Ruling and Limited Waiver, 37 FCC Rcd 7836, 7836 para. 1 (WCB/OEA/WTB 2022) (*2022 BDC PE Order*) (allowing certifications by a certified PE or alternately by a corporate officer with specific engineering qualifications); *Establishing the Digital Opportunity Data Collection; Competitive Carriers Association and USTelecom – The Broadband Association Petition for Extension of Waiver Regarding the Requirement for a Certified Professional Engineer to Certify Broadband Data Collection Maps*, WC Docket No. 19-195, Order, DA 23-1123, para. 1 (WCB/OEA/WTB 2023) (allowing waiver for providers that comply with the with the PE qualifications in the 2022 Waiver, retain certain network information, and provide this information to the Commission upon request).

²⁴⁵ 5 U.S.C. § 603(c).

and to better explore options and alternatives, the Commission has sought comment from the public on how best to implement the requirements in the Broadband DATA Act. More specifically, the Commission seeks comment on what additional burdens are associated with implementing more specific audit provisions, and seeks to balance our statutory obligation to ensure accurate data with minimizing the burden on providers. In addition, we sought comment on whether the proposed three-year data retention policy places a burden on smaller providers disproportionately compared to larger ISPs, and, alternatively, whether we should consider a five-year retention period. We also sought comment on the burdens that would be placed on satellite service providers by requiring them to submit additional infrastructure information on a biannual basis, and any additional or alternative data that we could collect to improve the accuracy and granularity of satellite providers' broadband availability data.

75. More generally, the proposals and questions set forth in the *Fourth Notice* were designed to enable the Commission to understand the benefits, impact, and potential burdens associated with the different approaches that the Commission can pursue to achieve its objective of improving accuracy and reliability of its data collections. Before reaching its final conclusions and taking action in this proceeding, the Commission expects to review the comments filed in response to the *Fourth Notice* and more fully consider the economic impact on small entities and how any impact can be minimized.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

76. None.

**STATEMENT OF
CHAIRWOMAN JESSICA ROSENWORCEL**

Re: *Establishing the Digital Opportunity Data Collection, Modernizing the FCC Form 477 Data Program*; WC Docket Nos. 19-195, 11-10 Fourth Report and Order, Declaratory Ruling, and Fourth Further Notice of Proposed Rulemaking

We are building a digital future that works for everyone. To do this, we need to have accurate data that makes clear where broadband is and is not available nationwide.

Over the last three years, the Federal Communications Commission has worked diligently to implement the Broadband DATA Act. As a result, we now have the most granular information regarding broadband availability in our history. In the past, the agency simply collected data on a census block basis, and if a single household was served in a block we assumed that service was available throughout. This system overstated deployment and made it difficult to discern what places were truly unserved and underserved. That is no longer the case because using the authority in this law we now collect data about where broadband is available on a location-by-location basis and publicly disclose it on the National Broadband Map. Then, state, local, and Tribal governments, as well as consumers and other interested stakeholders with boots-on-the ground knowledge about service in their communities can challenge this data and we regularly update the information we have on the map to reflect these challenges. On top of this, the Commission conducts its own verification and audits of the data to ensure accuracy.

Thanks to this iterative process, the map is always improving. Moreover, since this effort began we have learned some important lessons and see opportunities for improvement going forward. That is why in this rulemaking we seek comment on a variety of changes we can make to our process to make it more user friendly and more precise. We also take important steps to strengthen our audit and verification processes. In the end, we strive to have even more accurate data to inform our work to build a digital future that works for everyone and connect us all with high-speed broadband.

**STATEMENT OF
COMMISSIONER GEOFFREY STARKS**

Re: *Establishing the Digital Opportunity Data Collection, Modernizing the FCC Form 477 Data Program*; WC Docket Nos. 19-195, 11-10 Fourth Report and Order, Declaratory Ruling, and Fourth Further Notice of Proposed Rulemaking

The Commission has made impressive progress to create, and continually improve, our Broadband Data Collection maps since Congress adopted the Broadband DATA Act in 2020. Working together, the Commission, along with service providers, states, and the public, have built a fabric of broadband serviceable locations throughout the United States, and identified millions of locations that are served and those that are not. The programs that rely on our maps, such as the Universal Service Fund high-cost program and NTIA's \$42 billion Broadband Equity Access and Deployment (BEAD) program, are unquestionably more effective as a result.

This Order, Declaratory Ruling, and Fourth Further Notice is another smart step toward our goal to make our maps even more accurate. We codify the challenge process deadline as required by statute; clarify that our rules allow a provider to demonstrate that it now serves a location that was previously removed from our map through the challenge, verification, or audit process; and seek comment on rules to further improve our data validation, among other things. I am particularly interested to see the record develop on improving our data surrounding satellite broadband coverage and how to better identify where terrestrial fixed wireless providers are providing service.