

Calendar No. 328

116TH CONGRESS }
1st Session }

SENATE

{ REPORT
116-174

**BROADBAND DEPLOYMENT ACCURACY AND
TECHNOLOGICAL AVAILABILITY ACT**

R E P O R T

OF THE

**COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION**

ON

S. 1822



December 12, 2019.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

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FIRST SESSION

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DECEMBER 12, 2019.—Ordered to be printed

Mr. WICKER, from the Committee on Commerce, Science, and
Transportation, submitted the following

R E P O R T

[To accompany S. 1822]

[Including cost estimate of the Congressional Budget Office]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 1822) to require the Federal Communications Commission to issue rules relating to the collection of data with respect to the availability of broadband services, and for other purposes, having considered the same, reports favorably thereon with an amendment (in the nature of a substitute) and recommends that the bill (as amended) do pass.

PURPOSE OF THE BILL

S. 1822 would require the Federal Communications Commission (FCC or the Commission) to take certain steps designed to improve the FCC's broadband deployment data collection and its related maps documenting broadband deployment in the United States.

BACKGROUND AND NEEDS

The United States faces a persistent digital divide. Although more than 98 percent of Americans have access to high-speed broadband,¹ over 20 million Americans still lacked access to these

¹High-speed broadband is defined as fixed terrestrial service at 25 megabits per second (Mbps) upload speeds and 3 Mbps download speeds and mobile long-term evolution (LTE) service at 5 Mbps/1 Mbps.

services at the end of 2017.² A significant number of these unserved Americans live in rural and Tribal areas: 98.3 percent of those living in urban areas have access to high-speed broadband, while that number is 73.2 percent for rural areas, and 67.6 percent for Tribal lands.³

Mapping—graphically displaying where broadband is available at certain speeds—is a critical tool in closing this digital divide.⁴ For example, maps produced by the FCC are used to determine the unserved areas eligible for billions of Federal subsidy dollars for broadband deployment. Other broadband deployment programs at the Federal and State level also rely on the FCC’s maps, or alternatively try to develop their own maps of where broadband is and is not deployed. Thus, these maps must accurately display served and unserved areas. Flawed and inaccurate maps can result in wasted resources and the stifling of opportunities for economic development, especially in rural and Tribal areas.⁵

The FCC relies primarily on data reported by fixed and mobile broadband providers on Form 477 submissions to develop its maps. Fixed broadband providers, such as terrestrial fixed, fixed wireless, and satellite providers, identify the census blocks where they currently—or could within a standard service interval of approximately 7 to 10 days—provide service. Mobile broadband providers submit polygons in a shapefile format that represent the geographic areas where a customer could expect to receive the minimum speed the provider advertises for that area.⁶ Mobile providers also report the census blocks where their service is advertised and available to potential customers.⁷

However, the use of Form 477 data by the FCC to develop broadband maps has come under scrutiny. A general criticism of using this data to build broadband maps is that the way the FCC directs providers to report broadband deployment data is unreliable.⁸ Census blocks that fixed providers use to identify service areas vary significantly in size. Census blocks in urban areas can

² Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, 2019 Broadband Deployment Report, GN Docket No. 18–238 at para. 2. (rel. May 29, 2019) (<https://docs.fcc.gov/public/attachments/FCC-19-44A1.pdf>).

³ Id. at para. 36, Fig. 3a.

⁴ Broadband Mapping: Challenges and Solutions: Hearing Before the Committee on Commerce, Science, and Transportation, Senate, Apr. 10, 2019, hearing webcast (<https://www.commerce.senate.gov/public/index.cfm/2019/4/broadband-mapping-challenges-and-solutions>); written testimony of Tim Donovan, senior vice president, Competitive Carriers Association, at 1 (<https://www.commerce.senate.gov/services/files/335DCD54-07D6-4140-A286-0B59F6527F6B>) (“[W]e cannot close the digital divide if we do not know the size and location of our country’s existing coverage gaps.”); written testimony of Jonathan Spalter, president and CEO, US Telecom, at 2 (<https://www.commerce.senate.gov/services/files/1C4BBCD1-E586-4C1D-94EB-3D2FE7FF9360>) (“Today, it is equally true that when it comes to broadband, ‘if you can’t map it, you can’t deploy to it.’”)

⁵ See hearing webcast, Broadband Mapping: Challenges and Solutions (testimony of Mike Oblizalo, vice president and general manager, Hood Canal Communications) (“But the lack of accurate maps makes for a challenging process to determine potential areas for broadband deployment and availability of funding. . . . Accurate mapping data is critical to delivering and sustaining services in Rural America—and bad mapping data risks leaving rural consumers stranded without broadband for years to come.”).

⁶ FCC, FCC Form 477 Local Telephone Competition and Broadband Reporting Instructions (Dec. 5, 2016), section 5.3, “Fixed Broadband Deployment” at 17–18, section 5.8, “Mobile Broadband Deployment” at 24 (Dec. 5, 2016) (<https://transition.fcc.gov/form477/477inst.pdf>).

⁷ Id., section 5.9, “Mobile Broadband Service Availability” at 25.

⁸ See written testimony of Jonathan Spalter at 2 (<https://www.commerce.senate.gov/services/files/1C4BBCD1-E586-4C1D-94EB-3D2FE7FF9360>) (“The ‘one-served-all-served’ reporting is simply not a reliable tool to accurately understand broadband availability, nor is it a viable approach to identifying where scarce Federal support for broadband deployment should be allocated.”).

be compact, whereas census blocks covering rural areas can be very large.⁹ Because a provider can report that a census block is served if it provides broadband service in any part of that census block, regardless of how many consumers in the census block are not able to access the service, there are many areas of the country (especially in rural areas) that are reported as having broadband service, when in fact, they may not.¹⁰

Other criticisms of the FCC's current broadband data collection and mapping processing include that the data is self-reported by providers and does not undergo an independent validation or verification process; and the data may not be collected in a timely manner to reflect the current availability of broadband service in a particular area.¹¹

Alternate attempts by the FCC to collect broadband data outside of the Form 477 process have been criticized as well. In August 2017, the FCC conducted a one-time collection of fourth generation long-term evolution (4G LTE) coverage data to establish a map of areas eligible for Mobility Fund Phase II (MF II) support from the Universal Service Fund. The Commission required providers to file propagation maps and model details indicating their current 4G LTE coverage, based on prescribed parameters.¹² The FCC also included a challenge process, where a challenger had 150 days to challenge an area initially deemed ineligible in the Commission's map.¹³ However, one trade association, in testimony to the Committee, argued that the parameters the FCC set were inadequate,¹⁴ and the initial map of MF II-eligible areas overstated the availability of mobile broadband in the country.¹⁵ On December 7, 2018, the FCC launched an investigation, which remains ongoing, into whether certain carriers violated the MF II reverse auction's mapping rules by submitting incorrect coverage maps.¹⁶ The investigation, which is ongoing, came after a preliminary review of the 20,809,503 speed tests filed as part of the challenge process.¹⁷

⁹Improving Broadband Reporting and Mapping, NCTA–The Internet & Television Association (Mar. 21, 2019) (<https://www.ncta.com/whats-new/improving-broadband-reporting-and-mapping>).

¹⁰Id.; written testimony of Jonathan Spalter at 2 (<https://www.commerce.senate.gov/services/files/1C4BBCD1-E586-4C1D-94EB-3D2FE7FF9360>).

¹¹See, e.g., Rob Pegoraro, CITYLAB, “The Problem With America's New National Broadband Map,” February 28, 2018 (<https://www.citylab.com/life/2018/02/fcc-high-speed-broadband-internet-access-map/554516/>); Kelcee Griffis, Law360, “FCC's Broadband Maps Obscure Reality of National Coverage,” March 7, 2018 (<https://www.law360.com/articles/1017156/fcc-s-broadband-maps-obscure-reality-of-national-coverage>).

¹²Connect America Fund, Order on Reconsideration and Second Report and Order, 32 FCC Rcd 6282 para 28 (2017) (<https://docs.fcc.gov/public/attachments/FCC-17-102A1.pdf>).

¹³Id. at para 29.

¹⁴See hearing webcast, Broadband Mapping: Challenges and Solutions (testimony of Timothy Donovan) (“[A] primary flaw is that the parameters that the FCC asks carriers to report data are overstated, so that carriers can report data that is both correct in terms of what the FCC asks for, as well as not useful for what you or I would consider to be reliable.”).

¹⁵See, e.g., letter from Senator Roger F. Wicker et al to the Hon. Ajit Pai, Chairman, FCC (Mar. 8, 2018) (https://www.wicker.senate.gov/public/_cache/files/f03ebd53-a4fe-4b5d-b21e-594a3180d0f5/letter-to-fcc-re-mf-ii.pdf); see hearing webcast, Broadband Mapping: Challenges and Solutions (testimony of Timothy Donovan) (“You know that the representation of coverage in your States is overstated and, in some cases, substantially so . . . While taking steps to standardize the data should be commended, we now know that the parameters selected did not sufficiently improve the accuracy or credibility of the resulting coverage maps, which continue to dramatically overstate coverage, especially in rural areas.”).

¹⁶FCC, FCC Launches Investigation into Potential Violations of Mobility Fund Phase II Mapping Rules, press release, Dec. 7, 2018 (<https://docs.fcc.gov/public/attachments/DOC-355447A1.pdf>).

¹⁷Id.

Various telecommunications stakeholders agree that the FCC needs to improve its broadband data collection and maps.¹⁸ Fixed broadband stakeholders argue that the FCC needs to collect data that is more granular than the census-block data the agency currently collects.¹⁹ For example, USTelecom–The Broadband Association suggests that the FCC create a national dataset identifying all locations where broadband could be provided upon which providers would identify where they are providing service or could provide service within a standard service interval.²⁰ Alternatively, NCTA–The Internet & Television Association recommends that fixed providers submit polygon shapefiles that represent where the provider offers broadband service.²¹ Either of these proposals would result in maps more granular than those created today.

Mobile broadband stakeholders argue that more precise parameters for signal propagation are important to developing more reliable maps.²² As part of MF II, the Commission required providers to submit propagation maps and model details indicating the provider’s 4G LTE coverage, as defined by download speeds of 5 megabits per second (Mbps) and an upload speed of 1 Mbps at the cell edge with 80 percent probability, and a 30 percent cell loading factor.²³ ²⁴ However, an official from an industry trade association testified that the industry standard for commercial networks requires at least 90 percent cell edge probability to demonstrate more accurate service availability.²⁵ The 10 percent difference in cell-edge probability between the FCC’s parameters and industry standards results in a 60 percent increase in covered areas, creating maps that may show unserved areas as served.²⁶

Other tools also could help improve the data used to create broadband maps. Commercial and other third-party data is one such tool. Ookla, which provides broadband speed tests, collects data on performance, quality, and accessibility of broadband net-

¹⁸ See, eg., written testimony of Jonathan Spalter at 2 (<https://www.commerce.senate.gov/services/files/1C4BBCD1-E586-4C1D-94EB-3D2FE7FF9360>) (“There is broad agreement between industry and government on the deficiencies of current reporting methods.”); written testimony of Mike Oblizalo at 3 (<https://www.commerce.senate.gov/services/files/B2350064-BD5B-4AA8-91F2-186A8D66A700>) (“The accuracy of broadband availability maps is often in question as maps show service as available where consumers cannot get them at all and other places these maps show speeds available at levels that cannot be consistently delivered.”).

¹⁹ See hearing webcast, Broadband Mapping: Challenges and Solutions (testimony of Jonathan Spalter) (“All stakeholders, from the Administration to Congress to consumers to broadband companies to my fellow panelists this morning, agree that the current yardstick collecting data by census block is inadequate.”); id. (testimony of Mike McCormick, president, Mississippi Farm Bureau Federation) (“I think one of the keys is going to be to move away from the census block data and go to more granular data, smaller areas of use.”).

²⁰ Written testimony of Jonathan Spalter at 3 (<https://www.commerce.senate.gov/services/files/1C4BBCD1-E586-4C1D-94EB-3D2FE7FF9360>); letter from B. Lynn Follansbee, vice president—law & policy, US Telecom, to Ms. Marlene H. Dortch, Secretary, FCC, WC Docket No. 11–10 (filed Oct. 17, 2018).

²¹ Letter from Steve F. Morris, vice president and general counsel, NCTA–The Internet & Television Association, to Ms. Marlene H. Dortch, Secretary, FCC, WC Docket No. 11–10 (filed Feb. 27, 2019).

²² See hearing webcast, Broadband Mapping: Challenges and Solution (testimony of Tim Donovan) (“[A] primary flaw is that the parameters that the FCC asks carriers to report data are overstated, so that carriers can report data that is both correct in terms of what the FCC asks for, as well as not useful for what you or I would consider to be reliable.”).

²³ See Connect America Fund, Report and Order, Order on Reconsideration, 32 FCC Rcd 6282, para. 34 (2017).

²⁴ Written testimony of Tim Donovan at 8 (<https://www.commerce.senate.gov/services/files/335DCD54-07D6-4140-A286-0B59F6527F6B>) (“Cell edge probability determines the likelihood that the minimum speed will be possible at the furthest point from the base station and cell loading determines the extent to which available resources from a given base station may be used by consumers while providing minimum coverage speed.”)

²⁵ Id.

²⁶ Id.

works. This data could be used in the FCC’s mapping process.²⁷ Consumers also could have a role in collecting data for broadband maps. For example, crowdsourcing data from consumers could help improve the FCC’s data by providing on-the-ground information on the availability of broadband.²⁸

In addition to improving data collection, the Committee heard testimony on the need for a challenge process for all FCC data collection efforts, not just for MF II.²⁹ Challenge processes allow the public—consumers, private industry, government stakeholders, among other entities—to submit their own coverage data to challenge the accuracy of the data submitted by providers. Although a more granular map should reduce the need for a challenge process, such a process is still important as a way to help verify the data submitted to the FCC. The MF II included such a process, however it was criticized for being burdensome for challengers—both financially and logistically—with respect to what was required to initiate a challenge.³⁰ Less burdensome requirements could improve participation in this process.

The FCC has taken some action to improve its data collection. On August 6, 2019, the FCC released a Report and Order and Second Further Notice of Proposed Rulemaking (Second Further Notice) on data collection.³¹ The Report and Order calls for more granular information reporting for fixed providers via shapefiles, creates a process for crowdsourcing data, and makes changes to the Form 477 data collection to reduce reporting burdens. The Second Further Notice also seeks comment on the collection of more accurate, reliable mobile wireless voice and broadband coverage data, ways to incorporate location-specific fixed broadband deployment data in this new data collection, and sunseting the current Form 477 data collection as a result of the newly adopted process.

SUMMARY OF PROVISIONS

S. 1822, as enacted, would do the following:

²⁷ See generally, written testimony of Chip Strange, vice president, Strategic Initiatives, Ookla, LLC (<https://www.commerce.senate.gov/services/files/073F0773-F518-4625-8636-184225FDB6E3>).

²⁸ See hearing webcast, Broadband Mapping: Challenges and Solution (testimony of Chip Strange) (“[C]rowdsourcing can be a much more vital component to our national mapping initiatives than I think the Federal Government has utilized thus far. . . . If you simply downloaded our publicly accessible speedtest application, you could collect similar type of information and then all of that gets rolled up for use by a Federal agency that is licensing it. . . .”); id. (“With respect to crowdsourcing, I think that regardless of how we cut the data up, we have to get measurements in the field and crowdsourcing can be a huge activator for that.”); (testimony of Jonathan Spalter) (“We’re going to de-duplicate and improve the confidence score of that data through crowdsourcing.”).

²⁹ See hearing webcast, Broadband Mapping: Challenges and Solution (testimony of Mike Oblizalo) (“While getting more granular is useful, a meaningful challenge process is critical to validate the data prior to any map being used by the FCC or the RUS to make final decisions on funding or financing.”); (testimony of Tim Donovan) (“[T]here’s a reason why of the 106 entities that entered into the portal, only 21 were able to present valid challenges at the end.”); id. (“[H]aving some sort of a public feedback mechanism can certainly be a positive step in the right direction on how you fix this.”).

³⁰ See written testimony of Tim Donovan at 3–6 (<https://www.commerce.senate.gov/services/files/335DCD54-07D6-4140-A286-0B59F6527F6B>); see hearing webcast (testimony of Mike McCormick) (“We found very quickly that we were not equipped to be able to handle this challenge, that we didn’t even have the staffing or the capabilities of doing it. . . . [W]e wanted to show that this is so complicated for us that it was impossible and it was absolutely impossible for a consumer to do.”)

³¹ Digital Opportunity Data Collection, Report and Order and Second Further Notice of Proposed Rulemaking, WC Docket Nos. 19–195, 11–10 (rel. Aug. 6, 2019), (<https://docs.fcc.gov/public/attachments/FCC-19-79A1.pdf>).

- Require the FCC to issue final rules for the collection of granular data on the availability of terrestrial fixed, fixed wireless, satellite, and mobile broadband internet access service from providers that must meet certain benchmarks set forth in the legislation. The data collected, as well as data from other sources, would be used to create various broadband availability maps that could be used for several purposes, including distributing funds for the deployment of broadband.
- Require the rules to include processes for challenging the maps and submitted data, crowdsourcing data from the public, and verifying submitted data.
- Direct the FCC to provide technical assistance to Indian tribes and small entities, conduct audits of submitted data, develop enforcement mechanisms, and submit to Congress an annual report on implementation of this Act and associated enforcement activities.
- Prohibit the FCC from using the Universal Service Fund to pay for the costs associated with this bill and exempt the FCC's initial rulemaking from Office of Management and Budget and Paperwork Reduction Act review.

LEGISLATIVE HISTORY

S. 1822 was introduced on June 12, 2019, by Senator Wicker (for himself and Senators Peters, Thune, and Klobuchar) and was referred to the Committee on Commerce, Science, and Transportation of the Senate. There are 48 additional cosponsors. On July 24, 2019, the Committee met in open Executive Session and, by voice vote, ordered S. 1822 reported favorably with an amendment (in the nature of a substitute).

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

S. 1822, Broadband Deployment Accuracy and Technological Availability Act			
As ordered reported by the Senate Committee on Commerce, Science, and Transportation on July 24, 2019			
Millions of Dollars	2020	2020-2024	2020-2029
Direct Spending (Outlays)	0	0	0
Revenues	0	0	0
Deficit Effect	0	0	0
Spending Subject to Appropriation (Outlays)	*	*	not estimated
Pay-as-you-go procedures apply?	No	Mandate Effects	
Increases on-budget deficits in any of the four consecutive 10-year periods beginning in 2030?	No	Contains intergovernmental mandate?	No
		Contains private-sector mandate?	Yes, Cannot Determine Costs
* = between -\$500,000 and \$500,000.			

S. 1822 would require the Federal Communications Commission (FCC) to collect detailed data twice a year on the availability of broadband internet access services. That data would be reported by providers of those broadband services. Under the bill, the FCC would establish and maintain a comprehensive database and create detailed and publicly available broadband coverage maps. The bill also would require the FCC to develop processes for any person or entity to submit broadband availability data to verify or challenge the FCC's database or maps.

Using information from the FCC about the scope and complexity of the required work, CBO estimates that the FCC would spend \$28 million over the 2020–2021 period to issue rules, establish reporting requirements, and hire contractors to establish a comprehensive broadband database and maps. CBO estimates that maintaining and updating the database and maps would cost about \$9 million a year starting in 2021.

In total, CBO estimates that implementing the bill would have a gross cost of \$65 million over the 2020–2024 period. However, the FCC is authorized to collect fees sufficient to offset the costs of its regulatory activities each year; therefore, CBO estimates that the net effect on discretionary spending for those activities would be insignificant, assuming appropriation actions consistent with that authority.

S. 1822 contains private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) but CBO cannot determine whether the cost of those mandates would exceed the threshold established in UMRA (\$164 million in 2019, adjusted annually for inflation).

S. 1822 would direct the FCC to develop rules requiring broadband service providers (terrestrial fixed, satellite, mobile, and fixed wireless) to disclose data and information to the agency. Those disclosure requirements would vary based on the type of broadband provider and would include, among other things:

- Areas where providers have developed (or could potentially develop) infrastructure for a broadband network,

- Download and upload speeds for various thresholds as established by the FCC, and a
- List of addresses or locations for the service area of the provider.

Because the rules defining content and threshold requirements (such as the frequency of data disclosures or the format for data submissions) are not complete, CBO cannot determine the cost for broadband providers to comply with the bill's requirements.

If the FCC increases annual fee collections to offset the costs to implement provisions in the bill, S. 1822 would increase the cost of an existing private-sector mandate on entities required to pay those fees. Using information from the FCC, CBO estimates that the incremental cost of the mandate would be small, about \$13 million annually, and would fall well below the annual threshold established in the UMRA.

The bill contains no intergovernmental mandates as defined in UMRA.

The CBO staff contacts for this estimate are David Hughes (for federal costs) and Rachel Austin (for mandates). The estimate was reviewed by H. Samuel Papenfuss, Deputy Assistant Director for Budget Analysis.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

NUMBER OF PERSONS COVERED

S. 1822 would direct the FCC to reform its broadband deployment data collection and mapping rules, processes, and procedures. The bill would affect the FCC and entities already subject to the jurisdiction of the FCC, so the number of persons covered by this legislation should be consistent with current levels already regulated under the Communications Act of 1934.

ECONOMIC IMPACT

S. 1822 is not expected to have an adverse impact on the Nation's economy. The legislation would promote access to broadband by improving the data collected by the FCC regarding broadband deployment, and in turn the maps used by the FCC and other Government agencies to target funding for broadband deployment to close the digital divide.

PRIVACY

S. 1822 would have a minimal impact on the personal privacy of individuals. The bill would require the collection and reporting of more granular information about broadband deployment, including potentially at the address level. But provisions in S. 1822 would require the FCC to develop processes and procedures to protect the security, privacy, and confidentiality of such information.

PAPERWORK

The Committee does not anticipate a major increase in paperwork burdens for private individuals or businesses resulting from the passage of this legislation. This legislation would reform the broadband data collection, validation, and mapping already conducted by the FCC. It would direct the FCC to develop systems by which individuals and third parties may challenge data submitted to the FCC or to submit their own broadband deployment information to the agency, but such actions would be voluntary. This bill also would require annual reports to Congress on the implementation of the Act and associated enforcement activities conducted during the previous fiscal year.

CONGRESSIONALLY DIRECTED SPENDING

In compliance with paragraph 4(b) of rule XLIV of the Standing Rules of the Senate, the Committee provides that no provisions contained in the bill, as reported, meet the definition of congressionally directed spending items under the rule.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title.

This section would provide that this bill may be cited as the “Broadband Deployment Accuracy and Technological Availability Act” or the “Broadband DATA Act”.

Section 2. Definitions.

This section would define 14 terms used throughout the bill. The following six definitions included in S. 1822 are of particular importance:

Broadband Internet Access Service.—The term “broadband internet access service” has the same meaning given the term in section 8.1(b) of title 47, Code of Federal Regulations, or any successor regulation.

Broadband Map.—The term “Broadband Map” means the map created by the Commission under section 3(c)(1)(A) of this bill.

Fabric.—The term “Fabric” means the Broadband Serviceable Location Fabric established under section 3(b)(1)(B) of this bill.

Provider.—The term “provider” means a provider of fixed or mobile broadband internet access service.

Shapefile.—The term “shapefile” means a digital storage format containing geospatial or location-based data and attribute information (1) regarding the availability of broadband internet access service; and (2) that can be viewed, edited, and mapped in geographic information system software.

Standard Broadband Installation.—The term “standard broadband installation” means the initiation by a provider of fixed broadband internet access service with no charges or delays attributable to the extension of the network of the provider; and includes the initiation of fixed broadband internet access service through routine installation that can be completed not later than 10 business days after the date on which the service request is submitted.

Section 3. Broadband maps.

Subsection (a)(1) of this section would require that, not later than 180 days after the date of enactment of this Act, the FCC issue final rules for the collection of accurate and granular data on the availability of terrestrial fixed, fixed wireless, satellite, and mobile broadband internet access service from providers on at least a biannual basis. The Commission would be required to use the data collected to compile publicly available coverage maps pursuant to section 3(c)(1) that show where broadband is and is not available. The rules adopted by the Commission also would be required to establish the following: (1) processes for verifying data submitted by providers pursuant to the bill; (2) challenging submitted data and maps consistent with section 3(b)(5) of the bill; and (3) processes for protecting the security, privacy and confidentiality of information in the Fabric, the data supporting the Fabric, and data collected under section 3(b)(2); and (4) develop a crowdsourcing system consistent with section 5(b).

Subsection (a)(2) of this section would direct the FCC to develop a process to collect verified data for use in the coverage maps from State, local, and Tribal government entities, other third-party sources; and other Federal agencies. With respect to third party data, the FCC would collect such data to the extent that the agency finds that it is in the public interest to use that data in the development of the coverage maps, or verification of data submitted under section 3(b). The Committee intends public interest to be interpreted as necessary for the creation of accurate and granular broadband availability maps. The FCC should not use data that does not help identify where broadband is or is not made available by providers. Finally, the FCC would collect data from other Federal agencies that collect information about broadband internet access service from providers, and from agencies that collect such information directly in the course of their primary work.

Subsection (a)(3) of this section would direct the Commission to update the rules it adopts pursuant to section 3 to reflect changes in technology, ensure the accuracy of propagation models, and improve the usefulness of the coverage maps.

Subsection (b) generally would set forth a further explanation of the content of some of the rules the FCC must adopt pursuant to the general rulemaking required under section 3(a).

Subsection (b)(1) would establish the Broadband Serviceable Location Fabric for fixed broadband internet access service. Under paragraph (A) of this subsection, the Commission would need to create a common dataset of all U.S. locations where fixed broadband internet access service can be installed (as determined by the Commission). The paragraph would permit the FCC to contract with an entity with expertise on geographic information systems (GIS) to create and maintain this dataset. Such a contract would last for a maximum term of 5 years before being rebid and must comply with the Federal Acquisition Regulation. The bidding process for the contract would be required to be open, transparent, and competitive.

Subparagraph (B) of this subsection would provide more details about the Fabric itself. The Fabric would contain geocoded information for each fixed broadband internet access service serviceable location identified by the FCC under paragraph (A). It also would do

the following: (1) serve as the foundation upon which all information about the availability of fixed broadband service would be overlaid, (2) be compatible with commonly used GIS software, and (3) be updated at least annually. Paragraph (c) of this subsection would direct the FCC to prioritize its implementation of the Fabric for rural and insular areas in the United States. The Committee intends for this provision to direct the FCC to focus initial implementation of the Fabric on high-cost, unserved parts of the country that would be eligible for Federal Universal Service Fund high-cost support—where supplemental information about fixed broadband internet access service serviceable locations could be most relevant and useful when distributing funds. But at the same time, the Committee does not intend for this language to preclude implementation of the Fabric in other areas to the extent that the dataset permits such implementation.

Subsection (b)(2) would require the FCC to adopt rules setting forth mandatory standards for the reporting of broadband internet access service by providers, and would provide further details about such standards.

Subparagraph (A) of this subsection would pertain to providers of terrestrial fixed, fixed wireless, and satellite broadband internet access service. The FCC would need to create standards for the collection of the following information from such providers:

- Data that documents where the provider has actually built out its broadband network infrastructure such that the provider is able to provide service.
- Data that documents where the provider is capable of performing a standard broadband installation.
- Data on the download and upload speeds, at various thresholds established by the Commission, and if applicable, latency for the broadband internet access service the provider makes available. (The Committee intends that the latency requirement only apply to fixed wireless and satellite providers.)
- Data that the agency determines is appropriate for specific technologies to ensure the Broadband Map is granular and accurate.

The Committee understands that there may be no material difference between the area where a fixed broadband provider has actually built out its broadband network infrastructure to the point of being able to provide broadband service and the area where the provider could provide service within a standard broadband installation interval. In such circumstances, a single shapefile would accurately represent the provider's service area. To the extent there is a material difference between these two areas for a provider, the FCC may require the provider to report each area with a separate shapefile. But, as stated later in this subsection, the Act would prohibit the Commission from requiring any provider of terrestrial fixed, fixed wireless, or satellite broadband internet access service to identify or report addresses or locations for any part of this Act.

Subparagraph (A) also would require that data collected from fixed broadband internet access service providers would need to be georeferenced to the GIS data in the Fabric.

Subparagraph (A) would further direct the FCC to adopt specific rules by which fixed broadband internet access service providers must report the data required by the paragraph. Fixed wireless

broadband internet access service providers would be permitted to submit the relevant data by the following means: (1) propagation maps, along with details about the propagation models those maps are based on; or (2) a list of addresses or locations that constitute the provider's service area. Paragraph (A) would require fixed wireless broadband internet access service propagation maps and models to satisfy standards that are similar to those applicable to mobile broadband internet access service providers under section (3)(b)(2)(B), taking into account material differences between the two technologies. With respect to any reporting by addresses, the Commission may only permit but not require such reporting and the agency must provide a mechanism for using that method of reporting for Tribal areas.

Terrestrial fixed and satellite broadband internet access service providers would be permitted to submit the relevant data by the following means: (1) polygon shapefiles, or (2) a list of addresses or locations that constitute the provider's service area. With respect to any reporting by addresses, the Commission may only permit but not require such reporting and the agency must provide a mechanism for using that method of reporting for Tribal areas.

Subparagraph (A) would further permit the Commission to request additional data that it determines is appropriate for specific technologies to ensure the Broadband Map is granular and accurate. The Committee expects that the FCC, in establishing uniform standards for the reporting of data from fixed providers, would seek to improve the accuracy of existing maps while minimizing the reporting burdens on providers.

Subparagraph (B) of this subsection would pertain to providers of mobile broadband internet access service. The FCC would need to collect from such providers propagation maps depicting the provider's current (as of the date on which the information is collected) 4G LTE mobile broadband coverage, along with details about the propagation models those maps are based on. The propagation maps and models would be required to comply with the following rules:

- They would be required to take into consideration the effect of clutter.
- They would be required to show where the provider can provide 4G LTE mobile broadband service with a download speed of 5 Mbps and an upload speed of 1 Mbps with a cell edge probability of not less than 90 percent and cell loading of 50 percent. These parameters are more stringent than those used for the MF II information collection,³² and should create a more precise and reliable mobile broadband map.
- They would be required to comply with any other parameter the FCC determines is necessary to create a map under section 3(c)(1)(C) that is more precise than the map produced under the MF II information collection.

Subsection (b)(3) would direct the Commission to immediately commence a rulemaking to update the prescribed reporting stand-

³²In the MF II information collection, the Commission required providers to file propagation maps and model details indicating their current 4G LTE coverage, as defined by download speeds of 5 Mbps at the cell edge with 80 percent probability and a 30 percent cell loading factor. See Connect America Fund, Report and Order, Order on Reconsideration, 32 FCC Rcd 6282, para. 34 (2017).

ards for providers of mobile broadband internet access service if it determines that the standards set forth in section 3(b)(2)(B) are insufficient to collect accurate propagation maps and propagation model details for future generations of mobile broadband internet access service technology. Any new reporting standards would have to be (1) the functional equivalent of those in section 3(b)(2)(B); and (2) allow for the collection of propagation maps and propagation model details that are as accurate and granular as, or more accurate and granular than, the maps and model details collected under section 3(b)(2)(B).

Subsection (b)(4) would direct that each provider submitting data to the FCC pursuant to section 3(b)(2) include with that submission a certification from a corporate officer of the provider that such officer has examined the information contained in the submission and that, to the best of his or her knowledge, information, and belief, all statements of fact contained in the submission are true and correct. Subsection (b)(4) also would require that the Commission verify the accuracy and reliability of the information submitted to the agency under section (3)(b)(2) in accordance with the measures established by the Commission in the rulemaking under section 3(a).

Subsection (b)(5) would direct the Commission to adopt rules creating a user-friendly challenge process as part of the rulemaking under section 3(a). This challenge process would provide a process by which consumers; State, local, and Tribal governmental entities; and other entities could submit coverage data to the Commission to challenge the coverage maps, information submitted by providers regarding the availability of broadband internet access service, and information in the Fabric.

The Committee believes that the reforms mandated by S. 1822 will substantially improve the granularity and accuracy of the information being collected by the FCC. Nonetheless, the Committee recognizes that the data submitted will be self-prepared and self-certified by broadband internet access providers, and that there is a need to verify such data. The Committee therefore urges the Commission to use the challenge process not just as a way to collect information from the public, but also to provide timely opportunities for input and evidence-based corrections to, or updates of, the coverage maps as the agency prepares to distribute funding for broadband based upon the availability of broadband internet access service. Similarly, the Committee intends for the crowdsourcing process created in section 5 of the bill, as well as the Commission's own verification obligations pursuant to the bill, to serve as important ongoing checks on the accuracy of the information being submitted to the agency and used in the coverage maps.

Subsection (b)(5) would direct the Commission, in establishing the challenge process, to ensure that the process is not unduly burdensome for challengers or those responding to challenges. To do so, the Commission would be required to consider: (1) the types of information that an entity submitting a challenge should provide to the Commission; (2) the appropriate level of granularity for that information; (3) the need to mitigate the time and expense incurred by, and the administrative burdens placed on, both the entities submitting challenges and those responding to challenges; and (4) the costs to consumers and providers resulting from a misallocation

of funds because of a reliance on outdated or otherwise inaccurate information in the coverage maps.

In addition, subsection (b)(5) also would direct the Commission to include in the challenge process a process for verifying the data submitted to ensure reliability; allow providers to respond to challenges; and include an online mechanism for submitting challenges that is integrated into the coverage maps. The Commission also would be directed to include a process for the speedy resolution of challenges, as well as a process for regularly and expeditiously updating the coverage maps as challenges are resolved. With respect to the process for resolving challenges, the Committee understands that the Commission may decide to prioritize certain challenges or groups of challenges over others in light of their impact on the coverage maps.

Finally, subsection (b)(6) would require that, not later than 180 days after the new rules take effect, the FCC reform its Form 477 broadband deployment service availability collection process to make that process consistent with the bill and rules issued pursuant to the bill, and to remove duplicative reporting requirements and procedures regarding the deployment of broadband internet access service. Subsection (b)(6) further provides that the Commission shall continue to collect and publicly report the subscription data that the Commission collected through the Form 477 process as in effect on July 1, 2019.

Subsection (c) generally sets forth the actions the Commission would be required to take regarding the creation of maps using the information collected by the agency pursuant to subsection 3(b).

Subsection (c)(1) would direct the Commission to create three different maps (collectively termed the “coverage maps” in S. 1822) concerning the availability of broadband internet access service as follows:

- The Broadband Map, which would depict the availability of broadband internet access service in the United States—both fixed and mobile—based on the data collected from providers and show the areas that remain unserved.
- A broadband availability map for fixed broadband internet access service, based on the data collected from providers.
- A broadband availability map for mobile broadband internet access service, based on the data collected from providers.

Subsection (c)(2) would direct the FCC to use these coverage maps (1) to determine the areas where broadband internet access service is and is not available, and (2) when making any new award of funding with respect to the deployment of broadband internet access service.

Subsection (c)(3) would direct the Commission to update the coverage maps not less than biannually using the most recent information collected by providers under section 3(b).

Subsection (c)(4) would mandate that the Commission develop a process requiring the Department of Agriculture and the National Telecommunications and Information Administration (NTIA) to consult the coverage maps when distributing funds for broadband internet access service deployment under programs administered by those agencies. Subsection (b)(5) would further require the Commission to establish a process for sharing the data it collects under section 3(b)(2) with the NTIA.

Section 4. Enforcement.

Subsection (a) of this section would make it unlawful for a person to willfully and knowingly, or recklessly, submit broadband internet access service availability information or data that is materially inaccurate or incomplete.

The Committee recognizes that data submitted by providers under this Act may contain minor mistakes or omissions, which is why crowdsourcing and challenge processes are included to check and refine the accuracy of providers' data submissions and the maps created pursuant to S. 1822. Thus, the standard set forth in this provision, including the word "recklessly," is not intended to apply to providers who submit information or data under this Act that contains minor mistakes, small omissions or overstatements, or other unintentional errors. As a result, this subsection makes clear that FCC enforcement action should focus on situations where a provider submits data that is materially inaccurate or incomplete, meaning it would have a significant impact on the Commission's collection and use of the information and data under this Act. The Committee intends that the focus of this inquiry should be on the nature of the inaccuracy or incompleteness, and that the agency should issue enforcement guidance to providers.

Subsection (b) of this section would deem violations of the bill to be violations of the Communications Act of 1934 and would direct the FCC to enforce S. 1822 in the same manner and with the same jurisdiction, powers, and duties as if the provisions of the bill were incorporated into and made a part of the Communications Act of 1934.

Section 5. Improving data accuracy.

Subsection (a) of this section would require the Commission to conduct regular audits of the information submitted by providers under S. 1822 to ensure that providers are complying with the bill. The Committee believes that this subsection is a necessary corollary to section 3(b)(4), which requires that providers certify the accuracy of the data being submitted to the FCC pursuant to the requirements of this bill, and section 4(a), which establishes standards and penalties for the submission of inaccurate or incomplete information to the FCC. Thus, the Committee intends for the FCC to implement this requirement in a rigorous fashion such that the agency can judge the validity of such certifications and avoid past issues related to the submission of inaccurate broadband internet access service deployment and availability information to the agency.

Subsection (b) of this section would require the FCC to develop a process through which the public could submit specific information about the deployment and availability of broadband internet access service to verify or supplement the information collected from providers and used in the maps. The subsection would further require the Commission to develop guidance and other information to make sure that the information submitted through this crowdsourcing process is uniform and consistent with the data submitted by providers under section 3 of the bill. The Committee intends for the Commission to implement this latter directive in a flexible manner, balancing the need for consistent data with the need to make this crowdsourcing process useful for consumers and

third parties who may not have sophisticated tools at their disposal to collect such data. The Committee recognizes, however, that a variety of factors outside of a broadband internet access provider's control, such as equipment, software, or viruses and malware, may affect a person's broadband internet access service. The Committee expects the Commission to account for these factors when developing this process. The Committee also intends for the FCC to seek specific recommendations from the public on how best to craft this crowdsourcing system as part of the rulemaking required by section 3 of S. 1822.

Subsection (c) of this section would direct the Commission to hold workshops for Tribal governments in each of the 12 Bureau of Indian Affairs regions to provide technical assistance with the collection and submission of data under S. 1822. The subsection also would direct the FCC, in consultation with Indian Tribes, to review the need for such workshops.

Subsection (d) of this section would direct the Commission to provide technical assistance to small service providers, which is defined as those providers with fewer than 100,000 active broadband internet access service connections. This technical assistance would pertain to GIS data processing so that the small provider can comply with the data collection requirements of the bill.

Section 6. Cost.

Subsection (a) of this section would require the Commission to include in its annual budget submission to the President an amount sufficient to ensure proper and continued functioning of its responsibilities under S. 1822. The Committee intends for the Commission to use the annual appropriations process as the means by which the agency shall pay for the costs of implementing the bill.

Subsection (b) of this section would prohibit the Commission from using monies for Universal Service Fund programs collected pursuant to section 254 of the Communications Act of 1934, and the regulations issued by the FCC pursuant to that section, to pay for the costs associated with this Act. The Commission would, however, be allowed to recover costs associated with the implementation of S. 1822 under section 9 of the Communications Act of 1934, to the extent provided for in an appropriations Act.

Section 7. Other provisions.

Subsections (a) and (b) of this section would exempt the initial rulemaking under section 3(a)(1) of the bill from review by the Office of Management and Budget (OMB) and under the Paperwork Reduction Act (PRA). This is intended to ensure that the first rulemaking is completed expeditiously. Future rulemakings, however, would be subject to both OMB review and the PRA.

Subsection (c) of this section would provide a limitation that, aside from the ability of the FCC to enter into a contract related to the Fabric under section 3(b)(1)(A)(ii), the Commission, including the offices of the Commission, must carry out the responsibilities assigned to it under this bill. The FCC would not be permitted to delegate any of its assigned responsibilities to third parties, including the Universal Service Administrative Company.

Finally, subsection (d) of this section would direct the Commission to submit to the Committee on Commerce, Science, and Trans-

portation of the Senate and the Committee on Energy and Commerce of the House of Representatives a yearly report that summarizes its implementation of the bill and associated enforcement activities conducted during the previous fiscal year.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee states that the bill as reported would make no change to existing law.

