

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

In the Matter of)	
)	
Amendments to Part 4 of the Commission’s Rules)	PS Docket No. 15-80
Concerning Disruptions to Communications)	
)	
Improving 911 Reliability)	PS Docket No. 13-75
)	
New Part 4 of Commission’s Rules Concerning)	ET Docket No. 04-35
Disruptions to Communications)	

SECOND REPORT AND ORDER

Adopted: November 17, 2022

Released: November 18, 2022

By the Commission: Chairwoman Rosenworcel and Commissioner Starks issuing separate statements

TABLE OF CONTENTS

	Para.
I. INTRODUCTION.....	1
II. BACKGROUND.....	3
III. DISCUSSION.....	7
A. Require covered 911 service providers and OSPs to maintain up-to-date 911 special facility contact information.....	8
B. Harmonizing 911 special facility notification for covered 911 service providers and OSPs	10
C. Maintain the annual 911 certification reporting requirement.	27
D. Require covered 911 service providers who cease operations to notify the Commission.....	29
E. Codify previously adopted rule changes.....	30
F. Compliance timeframes	32
G. Benefits and costs	36
IV. PROCEDURAL MATTERS.....	41
V. ORDERING CLAUSES.....	45
APPENDIX A: Final Rules	
APPENDIX B: Final Regulatory Flexibility Analysis	

I. INTRODUCTION

1. In times of emergency, dialing 9-1-1 serves as a crucial life link for those in need of immediate help. Americans place more than an estimated 240,000,000 emergency calls each year to 911.¹ Call takers in the nation's approximately 5,748 primary and secondary Public Safety Answering Points (PSAPs)² answer these calls and connect callers to emergency services that can save lives and safeguard property.³ 911 systems, however, are vulnerable to communications service outages. Ensuring that communications services, such as 911, are restored quickly following network outages is a top public safety priority for the Commission.

2. In this Second Report and Order, the Commission adopts rules designed to ensure that 911 special facilities, including PSAPs, receive timely and actionable information about 911 service outages that potentially affect them. The rules we adopt today require providers that deliver traffic to 911 special facilities (*i.e.*, covered 911 service providers)⁴ and cable, satellite, wireless, wireline, and interconnected Voice-over Internet Protocol (VoIP) providers that handle other aspects of 911 call processing (Originating Service Providers (OSPs))⁵ to obtain and maintain up-to-date contact information for the 911 special facilities that offer service in their area to ensure that every potentially affected 911 special facility can receive notice about outages that potentially affect them. We also require covered 911 service providers' and OSPs' 911 special facility outage notifications to include the same content, and to be issued via the same means, and with the same timing and frequency to ensure that, when 911 special facilities receive these notifications, they are timely and actionable irrespective of where in the communications service network the outage occurs. Further, we maintain our annual cadence for covered 911 service

¹ *9-1-1 Statistics*, National Emergency Number Association (NENA), <https://www.nena.org/page/911Statistics> (last visited June 23, 2022).

² Based on February 2021 statistics. See National Emergency Number Association (NENA), <https://www.nena.org/page/911Statistics> (last visited June 23, 2022).

³ Under the Communications Act, a PSAP (which is a type of 911 special facility) is "a facility that has been designated to receive 9-1-1 calls and route them to emergency service personnel." 47 U.S.C. § 615b(3); *see also* 47 U.S.C. § 222(h)(4) (defining the term "public safety answering point" to mean a facility that has been designated to receive emergency calls and route them to emergency service personnel). Public safety entities may refer to PSAPs as Public Safety Answering Centers (PSACs), default answering points, 911 call centers and Emergency Call Centers. The Commission's Part 4 rules also uses the terms "PSAP," "911 special facility," and "911 facility" in its rules. *See, e.g.*, 47 CFR §§ 4.5(e), 4.9(a). We use the term "911 special facility" in this document for clarity and consistency except in cases where the term PSAP is more specific and correct.

⁴ 47 CFR § 9.19(a)(4) (defining a "covered 911 service provider as "[a]ny entity that [p]rovides 911, E911, or NG911 capabilities such as call routing, automatic location information (ALI), automatic number identification (ANI), or the functional equivalent of those capabilities, directly to a . . . [PSAP], statewide default answering point, or appropriate local emergency authority . . . ; and/or [o]perates one or more central offices that directly serve a PSAP"); *Improving 911 Reliability; Reliability and Continuity of Communications Networks, Including Broadband Technologies*, PS Docket Nos. 13-75 and 11-60, Report and Order, 28 FCC Rcd 17476, 17488-91, paras. 36-43 (2013) (*911 Reliability Report and Order*) (discussing the definition of a covered 911 service provider); *id.* at 17529-29, para. 147 (explicitly declining to apply covered 911 service providers' obligations to other service providers).

⁵ 47 CFR § 4.3(a), (d), (f), (g), (h). The *Third Notice* referred to cable, satellite, wireless, wireline, and interconnected VoIP providers collectively as "originating service providers." *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications, Improving 911 Reliability, New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, PS Docket No. 13-75, Third Notice of Proposed Rulemaking, 36 FCC Rcd 7860 (2021) (*Third Notice*). We continue to use that term here, but note that the communications services that they provide are not limited to call origination. *See* 47 CFR § 4.3 (identifying by type the various service providers covered by our Part 4 rules); 47 CFR § 4.9 (identifying outage reporting requirements by type of service provider). These providers are subject to our part 4 outage reporting rules including when they experience outage in a location other than their call origination networks (*e.g.*, in "middle mile" or wholesale transport network facilities).

providers' 911 reliability certifications and require covered 911 service providers to notify the Commission when they cease operations to allow the Commission to focus its 911 reliability certification process on active service providers.⁶ We find that these requirements, both individually and taken together, will help to preserve the public's continuity of access to 911.

II. BACKGROUND

3. The Commission oversees the integrity of 911 communications infrastructure primarily through three complementary mechanisms: 911 call transmission requirements,⁷ 911 reliability and certification requirements,⁸ and outage reporting requirements, including 911 outage notification requirements to 911 special facilities, a category that includes PSAPs, E-911 tandems, selective routers, end-office or Mobile Switching Centers, and host/remote clusters.⁹ The Commission requires covered 911 service providers and OSPs to notify both the Commission and 911 special facilities when they experience an outage that potentially affects 911.¹⁰

⁶ We also codify related and previously adopted rule changes as a clerical matter.

⁷ The Commission requires certain entities that offer the ability to originate 911 calls to transmit such calls with appropriate location information to a 911 special facility. *See* 47 CFR § 9.10(b) (requiring Commercial Mobile Radio Service (CMRS) providers to transmit all wireless 911 calls and provide certain location information to a PSAP, designated statewide default answering point, or appropriate local emergency authority); 47 CFR § 9.11(a)(2) (requiring Interconnected Voice over Internet Protocol (VoIP) providers to transmit all 911 calls and provide certain location information to a PSAP, designated statewide default answering point, or appropriate local emergency authority); 47 CFR § 9.18(a) (requiring providers of Mobile-Satellite Service to provide Emergency Call Center service, where the personnel must "determine the emergency caller's phone number and location and then transfer or otherwise redirect the call to an appropriate public safety answering point); *cf.* 47 CFR § 9.4 (requiring telecommunications providers (*e.g.*, wireline providers) to transmit all 911 calls to a PSAP, designated statewide default answering point, or appropriate local emergency authority; rule does not require wireline providers to transmit location information, because a physical address is associated with the calling party phone number from which the 911 call was initiated).

⁸ 47 CFR § 9.19.

⁹ The Commission monitors the reliability of 911 networks through mandatory outage reporting requirements that, among other things, enable statistical analysis of outage trends and inform recommendations to improve network reliability. When an outage potentially affects a 911 special facility, the Commission requires covered 911 and OSPs to notify the 911 special facility. 47 CFR § 4.5(e) ("An outage potentially affecting a 911 special facility occurs whenever: (1) There is a loss of communications to PSAP(s) potentially affecting 900,000 user minutes and the failure is not at the PSAP(s) nor on the premises of the PSAP(s); no reroute was available; and the outage lasted 30 minutes or more; or (2) There is a loss of 911 call processing capabilities in one or more E-911 tandem/selective routers for at least 30 minutes duration; or (3) One or more end-office or MSC switches or host/remote clusters is isolated from 911 service for at least 30 minutes and potentially affects at least 900,000 user minutes; or (4) there is a loss of ALI/ANI (associated name and location information) and/or a failure of location determination equipment, including Phase II equipment, for at least 30 minutes and potentially affecting at least 900,000 user minutes."); *see also* 47 CFR § 4.9(a), (c), (e), (f), (g), (h). When activated by the Commission, the Disaster Information Reporting System (DIRS) also provides a means for service providers to voluntarily report to the Commission their communications infrastructure status and situational awareness information during times of crisis. *Public Safety and Homeland Security Bureau Launches Disaster Information Reporting System (DIRS)*, DA 07-3871, Public Notice, 22 FCC Rcd 16757 (PSHSB 2007).

¹⁰ 47 CFR § 4.9(a), (c), (e), (f), (g), (h). The Commission has adopted threshold criteria for reporting outages that potentially affect 911, any of which would trigger a notification requirement. 47 CFR § 4.5(e); *see also New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, ET Docket No. 04-35, Notice of Proposed Rulemaking, 19 FCC Rcd 3373, 3393, para. 40 (2014) (seeking comment on wireless providers' 911 outage notification responsibilities because their provision of ALI/ANI denotes a special relationship to PSAPs); *New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, ET Docket No. 04-35, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 16830, 16835-36, para. 4 (2004) (*New Part 4 Report and Order*) (applying the PSAP notification requirement to wireline, satellite, and cable providers on which it sought

(continued....)

4. When an outage that potentially affects 911 occurs, the Commission's 911 special facility outage notification rules require covered 911 service providers and OSPs to notify "any official who has been designated by the management of the affected 911 special facility as the provider's contact person for communications outages at that facility."¹¹ The Commission currently has two different sets of requirements for the content, means, timing, and frequency of 911 special facility outage notification. The first set of rules was originally adopted for common carriers in 1994, and was subsequently expanded to govern a broader set of communications providers that we refer to in this item as OSPs.¹² The second set of rules, adopted in 2013, governs "covered 911 service providers," which are defined as "any entity that provides 911, E911, or NG911 capabilities, such as call routing, ALI, ANI, or the functional equivalent of those capabilities, to a PSAP, statewide default answering point, or appropriate local emergency authority, or that operates one or more central offices that directly serve a PSAP."¹³ As the Commission reasoned at the time, these entities were the "most likely to experience reportable outages affecting 911 service."¹⁴ Covered 911 service providers must notify 911 special facilities of outages that potentially affect them "as soon as possible, but no later than 30 minutes after discovering the outage," whereas OSPs are required to notify 911 special facilities "as soon as possible."¹⁵ Covered 911 service providers must convey to 911 special facilities "all available information that may be useful in mitigating the effects of the outage, as well as the name, telephone number, and email address at which the service provider can be reached," whereas OSPs are required to provide "all available information that may be useful to the management of the affected facility in mitigating the effects of the outage on callers to that facility."¹⁶ Covered 911 service providers must notify 911 special facilities "by telephone and in writing via electronic means in the absence of another method mutually agreed upon in advance by the 911 special facility and the covered 911 service provider" whereas OSPs are only required to notify 911 special facilities "by telephone or another electronic means."¹⁷ Finally, covered 911 service providers must follow up with 911 special facilities within two hours of making the initial outage notification, providing "additional material information" that includes "the nature of the outage, its best-known cause, the geographic scope of the outage, the estimated time for repairs, and any other information that may be

comment for wireless providers); 47 CFR § 4.9(a)(4), (c)(2)(iv), (e)(1)(v), (f)(4). ANI is "[i]nformation transmitted while providing E911 service that permits emergency service providers to identify the geographic location of the calling party." 47 CFR § 9.3. ALI "[i]dentifies the calling party and may be used as the callback number." 47 CFR § 9.3.

¹¹ 47 CFR § 4.9(a)(4), (c)(2)(iv), (e)(1)(v), (f)(4), (g)(1)(i), (h).

¹² *Amendment of Part 63 of the Commission's Rules to Provide for Notification by Common Carriers of Service Disruptions*, CC Docket No. 91-273, Second Report and Order, 9 FCC Rcd 3911, 3925-26, para. 35 (1994) (*Second Report and Order*) (establishing that a 911 outage is reportable to the Commission and PSAPs if more than 25% of lines to a PSAP are affected); *see also Amendment of Part 63 of the Commission's Rules to Provide for Notification by Common Carriers of Service Disruptions*, CC Docket No. 91-273, Order on Reconsideration, 10 FCC Rcd 11764, 11770-71, paras. 19-21 (1995) (revising the reporting threshold for outages that potentially affect 911 to remove the reference to the percentage of lines because the line-based threshold resulted in over-reporting among rural PSAPs served by fewer lines); *New Part 4 Report and Order*, 19 FCC Rcd at 16831, para. 4; *see generally Proposed Extension of Part 4 of the Commission's Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, PS Docket No. 11-82, Report and Order, 27 FCC Rcd 2650 (2012) (applying PSAP notification obligations to interconnected VoIP providers).

¹³ *911 Reliability Report and Order*, 28 FCC Rcd at 17488-89, para. 36.

¹⁴ *911 Reliability Report and Order*, 28 FCC Rcd at 17528, para. 147; *see also id.* at 17526, paras. 139-40; 47 CFR § 4.9(h).

¹⁵ Compare 47 CFR § 4.9(h) with 47 CFR § 4.9(a)(4), (c)(2)(iv), (e)(1)(v), (f)(4), (g)(1)(i).

¹⁶ Compare 47 CFR § 4.9(h) with 47 CFR § 4.9(a)(4), (c)(2)(iv), (e)(1)(v); *see also* 47 CFR § 4.9(f)(4), (g)(1)(i) (requiring wireline and interconnected VoIP providers to give 911 special facilities information all available information that may be useful "in mitigating the effects of the outage on efforts to communicate with that facility").

¹⁷ Compare 47 CFR § 4.9(h) with 47 CFR § 4.9(a)(4), (c)(2)(iv), (e)(1)(v), (f)(4), (g)(1)(i).

useful to the management of the affected facility” whereas OSPs are not required to follow up with 911 special facilities at all.¹⁸

5. In the *Third Notice*, the Commission proposed to develop and implement procedures to require covered 911 service providers and OSPs to gather, maintain, and update 911 special facility contact information;¹⁹ proposed to harmonize the information contained in outage notifications, and the means, timing, and frequency by which 911 special facilities are notified of network outages;²⁰ sought comment on whether less frequent 911 reliability certification would be an effective means of reducing compliance burdens, without sacrificing its benefits;²¹ proposed to require service providers to notify customers of 911 outages,²² and proposed to require covered 911 service providers that no longer provide covered 911 services or no longer operate one or more central offices that directly serve a 911 special facility to notify the Commission via affidavit and explain the basis for their change in status.²³

6. In response to the *Third Notice* the Commission received 18 comments and 13 reply comments representing 22 different entities and individuals, including a range of public safety organizations, state and local entities, service providers, and trade and advocacy organizations.

III. DISCUSSION

7. In this Report and Order, we adopt rules and procedures that (a) require covered 911 service providers and OSPs to maintain accurate contact information for the 911 special facilities in areas that they serve; (b) harmonize the 911 special facility outage notification requirement for both covered 911 service providers and OSPs; (c) continue to require covered 911 service providers to file an annual certification with the FCC addressing the reliability of their systems; and (d) direct covered 911 service providers who cease operations to notify the Commission.

A. **Require covered 911 service providers and OSPs to maintain up-to-date 911 special facility contact information**

8. We require both covered 911 service providers and OSPs to gather and maintain up to date contact information for the 911 special facilities in areas they serve. When 911 outages occur, 911 special facilities lead efforts to notify the public about the outage and establish alternative means of reaching emergency services, which can save lives.²⁴ 911 special facilities cannot play this important role, however, when they do not receive notification about 911 outages from service providers in their area, which can occur when the service provider does not have an effective point of contact for the 911 special facility. Based on our experience with 911 special facility outage notification over the years, we agree with APCO that “service providers possess the necessary resources, are already required under

¹⁸ *Id.*

¹⁹ *Id.* at 7873, para. 26.

²⁰ *Id.* at 7873, para. 26.

²¹ *Id.* at 7880, para. 48.

²² *Id.* at 7876, para. 36.

²³ *Id.* at 7881, para. 49.

²⁴ KING 5 Staff, *See Alternative Emergency Numbers in Washington if 911 Goes Down in Your Area* (Dec 9, 2021), <https://www.king5.com/article/news/local/911-outage-seattle-area/281-13829ea9-d88e-4173-8786-4faf1c63822f> (“The Seattle Police Department first announced 911 was down in city limits around 3:35 p.m. People were urged to call the non-emergency line for Seattle-based emergencies until 911 came back online.”); Sarah Irby and Janay Reece, WDBJ 7, *911 Service Back After Fiber Cut Causes Outages in Multiple Virginia Locations* (Jul 22, 2021) <https://www.wdbj7.com/2021/07/22/multiple-virginia-localities-reporting-911-outage/> (“Rockbridge County sent an alert, which indicated a multi-state 911 outage. Those in Rockbridge County, as well as the cities of Buena Vista and Lexington, can contact 540-572-4200 for emergency assistance. . . . The Galax Police Department informed residents some 911 calls were not working due to a CenturyLink outage. Those in the area can text 911 or call 276-920-4391 in the event of an emergency.”).

Commission rules to notify [911 special facilities] of outages, and already maintain their own databases for contacting [911 special facilities].”²⁵ It is critical that service providers maintain up-to-date contact information for 911 special facilities so that they can discharge their 911 outage notification obligations.²⁶

9. We require covered 911 service providers and OSPs to annually use special diligence to obtain a 911 special facility’s contact information and maintain it up to date. “Special diligence” is the diligence expected from a person practicing in a particular field of specialty under circumstances like those at issue.²⁷ The Commission has imposed this higher level of care in circumstances where a failure to take sufficient care can lead to particularly serious public harms.²⁸ In these circumstances, “special diligence” would require, for example, actively seeking to confirm the accuracy of contact information and not relying on the absence of a response. We disagree with CTIA and others that argue that special diligence should only require three attempts to contact the 911 special facility using at least two different types of media (e.g., email, phone, text).²⁹ We believe that this approach would defeat the purpose of this requirement, as instead of incentivizing providers to ascertain and update such contact information to prepare for anticipated natural disasters or other emergencies, it would allow 911 service providers and OSPs to satisfy their obligations during such emergencies by simply reaching out to what may well be an outdated point of contact. Obtaining, maintaining, and annually confirming up-to-date accurate contact information for 911 special facilities is the overarching goal of this requirement, so requiring a higher level of care than reaching out to the prior contact is imperative to ensure public safety.³⁰

B. Harmonizing 911 special facility notification for covered 911 service providers and OSPs

10. We conclude that, as proposed, we should harmonize OSPs’ notification requirements

²⁵ APCO Comments at 7.

²⁶ In light of the conflicting evidence in the record about the potential costs and benefits of such proposals, we defer for later consideration the proposals in the *Third Notice* related to the creation and maintenance of a centralized contact database for 911 special facilities. See *Third Notice*, 36 FCC Rcd at 7872-76, paras. 29-35. See also Letter from Michael Mullinix, Assistant Vice President, Regulatory Affairs, CTIA, Tom Goode, General Counsel, ATIS, Alexandra Mays, Assistant General Counsel & Director, Regulatory Affairs, CCA, Morgan Reeds, Director, Policy & Advocacy, USTelecom, to Marlene Dortch, Secretary, FCC, ET Docket No. 04-35; PS Docket Nos. 13-75, 15-80, at 6 (Nov. 10, 2022) (CTIA *et al. Ex Parte*) (arguing that the Commission should be responsible for obtaining PSAP contact information, not service providers, and that the Commission should provide that information to service providers through a two-way contact database); Letter from Jeffrey Cohen, Chief Counsel, APCO International, to Marlene Dortch, Secretary, FCC, ET Docket No. 04-35, PS Docket Nos. 13-75, 15-80 (Nov. 10, 2022) (APCO *Ex Parte*) (arguing that the Commission should require service providers to implement a two-way contact database). We note, however, that our actions today do not preclude any entity from establishing and maintaining such a database.

²⁷ See *Black’s Law Dictionary* (11th ed., 2019).

²⁸ See, e.g., *Revocation of License of CS WIGO, Inc.*, Decision, 85 FCC 2d 196, 202, para. 16, n.26 (1981) (“[A] broadcaster must . . . exercise special diligence to ensure that the promotion or contest is not in fact conducted as a lottery.”); *Application of KMAP, Inc.*, Memorandum Opinion and Order, 63 FCC 2d 470, 480, para. 34 (1977) (“special diligence” required to prevent “payola”); *Crowell-Collier Broadcasting Corp.*, 14 FCC 2d 358, 358 (1966) (“special diligence” required to prevent “conflict between . . . private interests and . . . roles as employees of the station”).

²⁹ See CTIA *et al. Ex Parte* at 6; see Letter from Jeanne Stockman, Associate General Counsel, Lumen, to Marlene Dortch, Secretary, FCC, ET Docket No. 04-35; PS Docket Nos. 13-75, 15-80 (Nov. 10, 2022) (Lumen *Ex Parte*).

³⁰ Providers may deem it appropriate to maintain documentation of their attempts to annually obtain and maintain up to date contact information from the 911 special facilities they serve, including by escalating their elicitation of contact information to state or local 911 authorities where a 911 special facility is not immediately responsive. These requirements do not relieve a provider from any requirement in current consent decrees with the Commission to obtain and maintain up to date contact information for 911 special facilities.

with those of covered 911 service providers.³¹ Providers and public safety organizations strongly suggest that a 911 special facility notification process with uniform content, means, timing, and frequency of notification will simplify compliance for providers and reduce confusion for 911 special facilities.³² Namely, we require covered 911 service providers and OSPs to notify 911 special facilities about outages by providing the same notification content, by the same means, and with the same timing and frequency. Covered 911 service providers and OSPs shall include the same industry-standard informational elements in their 911 special facility notifications.³³ As covered 911 service providers do today, OSPs shall transmit their 911 special facility notifications by telephone and in writing via electronic means in the absence of another method mutually agreed upon in writing in advance by the 911 special facility and the provider.³⁴ OSPs and covered 911 service providers shall transmit initial 911 special facility notifications as soon as possible, but no later than 30 minutes after discovering that they have experienced an outage that potentially affects a 911 special facility;³⁵ and will communicate additional material information to potentially affected 911 special facilities as the information becomes available, but no later than two hours after the initial notification.

11. Some commenters claim that the scope of the existing notification requirements do not include general network outages.³⁶ Specifically, some argue that the Commission's current rules require OSPs to notify 911 special facilities about outages that affect only 911 service, but not about outages that affect general calling, even if that outage prevents 911 calls from being transmitted to the PSAP.³⁷ The Commission's rules make clear, however, that notification to a 911 special facility is required when an outage "potentially affects a 911 special facility" under Section 4.5(e)(1) to the extent that the outage results in "a loss of communications to PSAP(s) potentially affecting at least 900,000 user-minutes and: The failure is neither at the PSAP(s) nor on the premises of the PSAP(s); no reroute for all end users was available; and the outage lasts 30 minutes or more."³⁸ CTIA argues that the Commission confirmed CTIA's interpretation of the outage reporting rules when adopting notification rules for interconnected VoIP providers because those rules distinguish between outages that "affect all interconnected VoIP calls,

³¹ *Third Notice*, 36 FCC Rcd at 7857, para. 14.

³² Notifications through a centralized electronic portal with standardized formats or alternatively by email or SMS will be most effective." Bandwidth Comments at 9; "Harmonization will provide [PSAPs] with more reliable, actionable information, and will streamline the channels and means by which [PSAPs] receive outage notifications." NENA Comments at 4; "ATIS NRSC believes that there is value to PSAPs and providers in standardizing the format of notifications." ATIS Comments at 6.

³³ ATIS, NRSC Task Force, Service Providers: Outage Reporting Structure and Potential Types of 911 Outages at 3 (2018), https://access.atis.org/apps/group_public/download.php/44352/ATIS-0100066.zip (*ATIS NRSC Task Force Outage Reporting Report and Template*).

³⁴ See 47 CFR § 4.9(h).

³⁵ 47 CFR § 4.9(h) (requiring covered 911 service providers to "notify as soon as possible but no later than 30 minutes after discovering the outage").

³⁶ See e.g., Verizon Comments at 6; USTelecom Comments at 3; T-Mobile Comments at 5; Letter from Michael Mullinix, Assistant Vice President, Regulatory Affairs, CTIA, to Marlene Dortch, Secretary, FCC, ET Docket No. 04-35; PS Docket Nos. 13-75, 15-80 (Nov. 10, 2022) (CTIA OGC *Ex Parte*).

³⁷ See CTIA OGC *Ex Parte* at 1-2.

³⁸ 47 CFR § 4.5(e)(1). In determining to "simplify" the language of this provision in 2004, the Commission also made clear that it applied to "all significant outages that affect PSAPs, regardless of the network(s) in which the underlying causal factors lie," and set reporting standards "consistent with the general threshold." *New Part 4 Report and Order*, 19 FCC Rcd 16830 para. 64 (2004) (emphasis added), adopting proposal in id., Notice of Proposed Rulemaking, 19 FCC Rcd 3373 para. 25 ("all" outages).

not just calls to 9-1-1” and those “that potentially affect a 9-1-1 special facility.”³⁹ The distinction that *Order* made was warranted because some general outages may not “potentially affect a 911 special facility.” When general outages do “potentially affect a 911 special facility,” however, service providers, including interconnected VoIP providers, must notify 911 special facilities.⁴⁰ This approach ensures that PSAPs stay informed about outages that affect their operations, as it would not serve the purpose of the rule to solely require PSAPs be notified about outages to a service provider’s 911-specific services but not require notification about more extensive outages that prevent the delivery of all calls (including 911 calls).⁴¹

12. The 911 special facility notification requirements we adopt today apply to all covered 911 service providers and OSPs. Whether the outage affects a covered 911 service provider, wireless, wireline, cable, satellite, or VoIP service provider, “to the public and PSAPs, the inability of people in need of emergency assistance to reach 911 is just as serious.”⁴² No commenter raises a concern about any particular type of service provider’s ability to comply with the harmonized 911 special facility outage notification requirements we adopt today except VON, who claims that because interconnected “VoIP providers rely on third party service providers . . . to manage and route 911 calls, . . . unless there is a complaint from an end user customer unable to complete a 911 call” a VoIP provider would be unaware of the outage and by then, more than likely, the affected PSAPs would already have notice of the outage.”⁴³ We note that VoIP providers are already required to notify 911 special facilities of outages that potentially affect them.⁴⁴ Reconsidering that rule is outside of the scope of this proceeding. Moreover, VoIP providers routinely file NORS reports with the Commission when reportable 911 outages in their systems occur.⁴⁵

13. Reliance upon a third-party service provider to manage, route, or otherwise contribute to 911 call processing does not relieve a covered 911 service provider or an OSP, including an interconnected VoIP provider, of the obligation to provide notification to 911 special facilities under this rule. It is the duty of covered 911 service providers and OSPs, including interconnected VoIP service providers, to provide 911 service in accordance with the Commission’s rules.⁴⁶ Where a covered 911 service provider or an OSP supports 911 calling through a contractual arrangement with a third-party, we will hold those service providers accountable for compliance with their notification obligations. In this regard, “[t]he Commission has long held that licensees and other regulatees are responsible for the acts and omissions of their employees and independent contractors,” and has recognized that “under long

³⁹ Compare 47 CFR § 4.9(g)(1)(i) (requiring notification to the Commission within 240 minutes) with 47 CFR § 4.9(g)(1)(ii) (requiring notification to the Commission within 24 hours); *Proposed Extension of Part 4 of the Commission’s Rules Regarding Outage Reporting to Interconnected Voice over Internet Protocol Service Providers*, Report and Order, 27 FCC Rcd 2650 para. 99 & n.214 (2012).

⁴⁰ See 47 CFR § 4.9(a)(4), (c)(2)(iv), (e)(1)(v), (f)(4), (g)(1)(i), (h); *Third Notice*, 36 FCC Rcd 7860, 7868, para. 14.

⁴¹ Conversely, CTIA and others ask us to clarify that notification should not be required in those situations in which an OSP is able to determine that an outage in fact does not affect 911 service to a PSAP. See CTIA *et al. Ex Parte* at 7. As our rules state, service providers are only required to notify 911 special facilities about outages that potentially affect that facility. See, e.g., 47 CFR § 4.9(e)(1)(v). If an outage does not result in loss of communications to a PSAP, then no PSAP is required to be notified pursuant to section 4.5(e)(1) of our rules (although notification to the Commission may still be required under another provision).

⁴² BRESTABRETS Comments at 5-6.

⁴³ VON Comments at 2.

⁴⁴ See 47 CFR § 4.9(g)(1)(i).

⁴⁵ See, e.g., Charter Communications, Inc., NORS Report Nos. ON-00345439, Gainesville, GA; ON-00345919, Portland, ME; ON-00344423, Camp Lejeune, and Cox Communications, Inc., NORS Report Nos. ON-00345157, Irvine, CA; ON-00345036, Mesa, AZ; ON-00341748, Las Vegas, NV.

⁴⁶ 47 U.S.C. § 615a-1(a).

established principles of common law, statutory duties are nondelegable.”⁴⁷

14. *Content.* We conclude that, as proposed, we should require covered 911 service providers and OSPs to provide the following material informational elements in their 911 special facility outage notifications:

- An identifier unique to each outage;
- The name, telephone number, and email address at which the notifying service provider can be reached for follow-up;
- The name of the service provider(s) experiencing the outage;
- The date and time when the incident began (including a notation of the relevant time zone);
- The type of communications service(s) affected;
- The geographic area affected by the outage;
- A statement of the notifying service provider’s expectations for how the outage potentially affects the 911 special facility⁴⁸ (e.g., dropped calls or missing metadata);⁴⁹
- The expected date and time of restoration, including a notation of the relevant time zone;
- The best-known cause of the outage;⁵⁰ and
- A statement of whether the message is the notifying service provider’s initial notification to the 911 special facility, an update to an initial notification, or a message intended to be the notifying service provider’s final assessment of the outage.⁵¹

⁴⁷ See *Eure Family Limited Partnership, Memorandum Opinion and Order*, 17 FCC Rcd 21861, 21863-64 (2002), citing *MTD, Inc.*, 6 FCC Rcd 34, 35 (1991), *Wagenvoort Broadcasting Co.*, 35 F.C.C.2d 361 (1972). See also *Amendment of the Commission’s Rules to Provide Spectrum for the Operation of Medical Body Area Networks, First Report and Order and Further Notice of Proposed Rulemaking*, 17 FCC Rcd 6422, 6439 n.108 (2012); *Courier Communications Corp.*, 23 FCC Rcd 2593, 2595 n.25 (EB 2008).

⁴⁸ The standard in our rules requires covered 911 service providers to provide notice to 911 special facilities of “outages that potentially affect a 911 special facility,” so we will continue to utilize that standard. 47 CFR § 4.9(h).

⁴⁹ Missing metadata could include an intermittent, partial, or complete loss of ALI or ANI, the absence of which could prevent a 911 special facility from timely deploying first responders to the caller’s location.

⁵⁰ The NRSC Task Force, *infra*, uses the term “apparent cause” in its outage notification template to identify the same informational element as we have identified in this proceeding as “best known cause.”

⁵¹ These outage notification elements follow the template developed by the Alliance for Telecommunications Industry Solutions’ (ATIS) Network Reliability Steering Committee (NRSC) Situational Awareness for 9-1-1 Outages Task Force Subcommittee (NRSC Task Force), working together with public safety stakeholders. See, ATIS, NRSC Task Force, *Service Providers: Outage Reporting Structure and Potential Types of 911 Outages* at 3 (2018), https://access.atis.org/apps/group_public/download.php/44352/ATIS-0100066.zip (*ATIS NRSC Task Force Outage Reporting Report and Template*). We note that the NRSC Task Force also included an incident identifier among the various pieces of information that a service provider should convey to a 911 special facility during an outage. Several public safety organizations were included in NRSC’s collaborative effort, including APCO, NASNA, and NENA. See *ATIS, Network Reliability Steering Committee*, http://www.atis.org/01_committ_forums/nrsc/ (last visited Nov. 9, 2021). The NRSC Task Force’s template is intended to serve as a model for “all types of service providers that report service impacting outages to the PSAP community.” Letter from Thomas Goode, ATIS General Counsel, to Marlene H. Dortch, Secretary, FCC, PS Docket No. 13-75, at 1 (filed June 29, 2018).

These informational elements were developed by the Network Reliability Steering Committee Situational Awareness for 9-1-1 Outages Task Force Subcommittee (NRSC Task Force),⁵² and proposed in the *Third Notice*.⁵³ The unique outage identifier was proposed separately by the NRSC Task Force and included in the *Third Notice* with a request for comment.⁵⁴ Commenters overwhelmingly support covered 911 service providers' and OSPs' use of a standardized set of informational elements in their 911 outage reports so that 911 special facilities will receive timely, accurate, and actionable information in a consistent format from all of the providers within their service area.⁵⁵ T-Mobile expressed readiness "to modify its outage notification to PSAPs to include this information" when the new rule becomes effective.⁵⁶ Texas 911 Entities "urges the Commission to adopt the specific informational elements [proposed] as reasonable and potentially helpful; but [to] also include as a required specific information element the ATIS NRSC Task Force recommended Unique Incident Identifier."⁵⁷ NENA states "[h]armonization will provide 9-1-1 with more reliable, actionable information, and will streamline the channels and means by which 9-1-1 receives outage notifications" and also supports the use of a Unique Incident Identifier.⁵⁸

15. We defer action on our proposal to require covered 911 service providers and OSPs to include geographic information system (GIS) data relevant to the geographic area affected by a 911 outage in their 911 special facility outages notifications. We agree with Verizon, USTelecom, and Lumen that including such data at this time might involve potentially burdensome IT changes.⁵⁹ Moreover, some commenters argue that many 911 special facilities do not currently have the ability to receive or make use of GIS information.⁶⁰ However, other commenters argue that graphical outage information other than GIS information could be useful to 911 special facilities, which do "rely on GIS for a variety of mapping needs."⁶¹ In addition to a lack of clarity in the record as to the current capabilities of PSAPs, we do not have a sufficient record on alternative kinds of graphical information that would be useful to 911 special facilities. We direct the Public Safety and Homeland Security Bureau to gather for future consideration additional information on 911 special facilities' capabilities to use graphical outage information, the utility of that information for 911 outage remediation, and the formats in which the graphic information would be feasible for service providers to produce.

⁵² ATIS-NRSC-APCO-NENA, Service Providers: Outage Reporting Structure and Potential Types of 911 Outages, (2018), https://access.atis.org/apps/group_public/download.php/44352/ATIS-0100066.zip (last accessed June 19, 2022).

⁵³ *Third Notice*, 36 FCC Rcd at 7870, para. 19.

⁵⁴ *Id.* at 7871, para. 21.

⁵⁵ See, e.g., ATIS Comments at 6 ("ATIS-NRSC believes that there is value to PSAPs and providers in standardizing the format of notifications and encourages all stakeholders to consider use of the ATIS PSAP Notification Template."); APCO Comments at 6 ("APCO supports the Commission's proposed list of 'material' outage information."); 911 Directors Committee Comments at 2.

⁵⁶ T-Mobile Comments at 3.

⁵⁷ Texas 911 Entities Comments at 3.

⁵⁸ NENA Comments at 4.

⁵⁹ Verizon Comments at 14; USTelecom Comments at 5; Lumen Comments at 8.

⁶⁰ See USTelecom Comments at 5 ("Many providers, including smaller, regional providers, do not collect [GIS] information in real-time and therefore would have no way of immediately providing this type of information, or to convey it to PSAPs in that format. Moreover, in some cases, even if specific information is available to the reporting entity, it may not be useful to the PSAP"); ATIS Comments at 6 ("ATIS NRSC notes that originating service providers may not immediately know the precise geographical area or list of impacted PSAPs. Traditionally, telephone systems and deployments have not aligned with PSAP service areas, or with municipal boundaries and postal boundaries.").

⁶¹ See APCO *Ex Parte* at 2.

16. We disagree with the suggestions of USTelecom and Verizon that providers should not be required to share the “best known cause” of an outage due to national security and business competition concerns.⁶² Covered 911 service providers have been required to transmit “the nature of the outage [and] its best known cause” to 911 special facilities no later than two hours after their initial contact with the 911 special facility since 2013.⁶³ Until this proceeding, we have had no reason to address stakeholder concerns about confidentiality as a result of this disclosure until receiving the comments of USTelecom and Verizon. Including “best known cause” as an informational element is necessary because, “if known, [the cause of the outage] can provide guidance to the PSAP and/or 9-1-1 Authority” which might assist the 911 special facility in mitigating the effect of the outage.⁶⁴ To allow providers sufficient flexibility in their initial assessment of “best known cause,” the ATIS NRSC task force suggest simply stating whether the cause was hardware, software, or network related.⁶⁵ We endorse that approach in instances where disclosure of greater detail could implicate national security issues. We conclude that describing an outage’s “best known cause” at this level of generality in such instances will allow 911 special facilities to better determine whether they can play a role in outage management and remediation without disclosing information that implicates national security or business competition issues.

17. *Means.* We conclude that, as proposed, we should require OSPs to notify 911 special facilities of outages that potentially affect them by telephone and in writing by electronic means, as covered 911 service providers do. Some commenters showed a preference for electronic notification.⁶⁶ Others suggested that there is room for both electronic and telephonic notifications.⁶⁷ We will maintain the dual notification requirement to provide the greatest assurance that a 911 special facility, regardless of their size or capability, will receive the outage notification, whether administrative lines are affected by an outage preventing receipt of a telephone call, or internet service is down preventing receipt of an email.

18. Nevertheless, we also allow OSPs to notify 911 special facilities by alternative means if mutually agreed upon in writing in advance by the 911 special facility and the provider, as we currently allow covered 911 service providers to do. This also allows a 911 special facility to request delivery by an electronic means other than email, or solely by electronic means, as several commenters recommend.⁶⁸ For example, if a provider and a 911 special facility agree in writing in advance of an outage that outage notifications be provided only by text message, then no telephonic notice shall be required. Service

⁶² See Verizon Comments at 13-14 (“There may be law enforcement and national security reasons for not disclosing the cause of an outage.”); USTelecom Comments at 5 (“[A] provider should not be required to share the best known cause of an outage.”).

⁶³ 47 CFR § 4.9(h).

⁶⁴ See NRSC: Network Reliability Steering Committee – ATIS; ATIS-0100066: *Service Providers: Outage Reporting Structure and Potential Types of 9-1-1 Outages*, June 28, 2018 (“NRSC Outage Reporting Structure”), available at <https://www.atis.org/committees-forums/nrsc/>.

⁶⁵ *Id.*

⁶⁶ See Bandwidth Comments at 9 (“Outage notifications to PSAPs by telephone is not tenable.”); Lumen Comments at 9-10 (“Large volumes of email can be distributed more rapidly than large volumes of phone calls.”).

⁶⁷ See T-Mobile Comments at 10 ([911 special facilities] want either a telephone call or an email but not both.”); Verizon Comments at 12 (“The Commission should encourage but not require both email and telephone notification.”).

⁶⁸ NENA Comments at 5 (“NENA recommends the Commission alter its notification requirements to prioritize delivery by electronic means over telephonic means.”); Bandwidth Comments at 7 (“Outage notifications to PSAPs by telephone is not tenable.”); Lumen Comments at 9 (“Electronic notifications can be distributed to multiple recipients more quickly and efficiently than telephonic notifications.”).

providers can notify 911 special facilities in the manner described by their written agreement.⁶⁹ This approach recognizes that 911 special facilities have varying staff resources and degrees of technological sophistication. Thus, we will “provide [OSPs] the flexibility to provide notifications and related updates in the manner desired by the [911 special facility] (email, phone, or both), rather than mandate specific means of communicating an outage.”⁷⁰

19. *Timing.* We conclude that, as proposed, we should require covered 911 service providers and OSPs to notify 911 special facilities of outages as soon as possible, but no later than within 30 minutes of when the outage that potentially affects 911 service is discovered. These initial notifications are intended to provide preliminary notice of a potential problem to a 911 special facility so that the 911 special facility can, as quickly as possible, “mitigate the impacts of the outage of alert the public to alternative means of connecting to 9-1-1.”⁷¹ If a 911 special facility does not receive timely outage notification, it “cannot effectively initiate alternate means of communications and provide access for those populations impacted by the outage.”⁷² According to the Maryland NG911 Commission, when OSPs wait longer than 30 minutes to provide the initial notification of an outage, it limits the ability of 911 special facilities to timely publicize alternative methods for contacting emergency services during many 911 outages.⁷³ As we believe there is ample precedent that describes what constitutes “discovery” for purposes of this rule, we decline the request of CTIA and others to define “discovery” as the time when a provider both confirms that the service disruption constitutes a reportable outage and confirms the identities of the potentially affected PSAPs.⁷⁴ We believe that such a definition of discovery would disincentivize providers from learning as much about an outage as quickly as possible. This would undermine the requirement’s purpose of providing 911 special facilities with notice of a potential problem so they quickly take mitigating actions. It would also be inconsistent with the important goal of creating uniform notification requirements as between covered 911 service providers and OSPs. We also decline the request of CTIA and others to clarify that an OSP is under no obligation to notify a 911 special facility if the OSP discovers an outage only after it has been resolved,⁷⁵ as it also would disincentivize OSPs from rapidly investigating outages and would therefore be inconsistent with the purpose of the requirement.

⁶⁹ See, e.g., T-Mobile Comments at 10 (“Many PSAPs do not want notification sent in multiple forms. They want either a telephone call or an email, but not both.”); NCTA Comments at 5-6 (“Given the potential volume of reports that a PSAP may receive, this double notification system (*i.e.*, e-mail and telephonic) is likely to make it more difficult for the PSAP to identify information that is particularly important or that might require the PSAP to follow up with an [OSP].”).

⁷⁰ T-Mobile Comments at 3.

⁷¹ NENA Comments at 4. Every outage report contains data relevant to the Commission’s mission of maintaining a robust and reliable nationwide communications network. We are not persuaded by VON that VoIP providers cannot timely discover outages because they rely on third party providers for aspects of 911 call processing and transmission. See VON Comments at 2. Most service providers rely on third party providers for 911 call processing and VON has not articulated reasons why VoIP providers should be treated differently from other providers in such a position. For example, a VoIP provider can discover an outage on a third-party covered 911 service provider network when it receives bounce-back notifications that 911 calls to that covered 911 service provider are not completing. A VoIP provider can discover an outage on a third-party transport provider’s facilities when its network alarms to indicate problems on the data transport path. A VoIP provider must report that outage to the Commission and to affected 911 special facilities as specified in our rules. In any event, as explained *infra* para. 20, a VoIP provider, like other service providers covered by our rules, is responsible for completing each 911 call, and therefore any discovery made by downstream providers will be imputed to the VoIP provider.

⁷² Maryland NG911 Commission Comments at 5.

⁷³ *Id.*

⁷⁴ CTIA *et al.* *Ex Parte* at 5.

⁷⁵ See CTIA *et al.* *Ex Parte* at 4.

20. Consistent with our reasoning above, reliance upon a third-party service provider to manage, route, or otherwise contribute to 911 call processing does not relieve a service provider of its obligation to notify 911 special facilities about outages that potentially affect them within 30 minutes of when the outage is discovered—even if the discovery is first made by the third party. Service providers, including providers of interconnected VoIP service, are responsible for providing 911 service in accordance with the Commission’s rules, and this includes responsibility for transmitting the required information to a PSAP, designated statewide default answering point, or appropriate local emergency authority.⁷⁶ Thus, the obligation to notify a 911 special facility within 30 minutes is triggered when the outage is discovered, regardless of whether it is discovered by a third-party transport provider or covered 911 service provider. We expect service providers to address these responsibilities within their 911 service contracts with third parties as needed.

21. Service providers must provide 911 special facilities with all available material information they have about the outage 30 minutes from the time of discovery, even if the service provider does not have available all the informational elements described above. We agree with NENA that “a notification’s utility to 9-1-1 diminishes significantly as time passes.”⁷⁷ At the same time, we acknowledge CTIA’s point that wireless providers may not have the all the required information to transmit the outage notification to 911 special facilities within 30 minutes.⁷⁸ We disagree with CTIA, Lumen, and others who request that the Commission apply this 30-minute notification deadline flexibly by allowing providers to merely begin, and not complete, the notification 911 special facilities within 30 minutes.⁷⁹ As the record demonstrates, all 911 special facilities need outage notifications as soon as possible and an approach that would potentially allow service providers – contrary to our established requirement for covered 911 service providers -- to delay some 911 special facilities’ outage notifications for hours after discovery would not serve the public safety purposes of the rule.⁸⁰

22. We decline to mandate a period of fewer than 30 minutes for covered 911 service providers and OSPs to notify 911 special facilities about outages that potentially affect them, as some commenters request.⁸¹ While we require covered 911 service providers and OSPs to notify 911 special facilities about outages that potentially affect 911 as soon as possible – which could be less than 30 minutes in some circumstances – we are persuaded by the comments of providers that a deadline of less than 30 minutes would not allow sufficient time for covered 911 service providers or OSPs to gather and transmit meaningful information to potentially affected 911 special facilities in all instances.⁸² In this connection, we disagree with AT&T that “the Commission is elevating the speed of [911 special facility]

⁷⁶ See 47 U.S.C. § 615a-1(a); 47 CFR §§ 9.4, 9.10(b), 9.11(b)(2).

⁷⁷ NENA Comments at 4.

⁷⁸ CTIA Comments at 7.

⁷⁹ See CTIA *et al. Ex Parte* at 2; Lumen *Ex Parte* at 2-3.

⁸⁰ Lumen additionally argues that the non-fixed nature of VoIP services makes it particularly challenging for interconnected VoIP providers to notify PSAPs of outages within 30 minutes and risks “over-notifying PSAPs out of an abundance of caution.” Lumen *Ex Parte* at 2-3 citing *VoIP Outage Reporting R&O*, 27 FCC Rcd at para. 95 (setting a longer initial notification deadline for interconnected VoIP outages because such services operate differently than voice networks and shorter deadlines may lead to inaccurate reporting or over-reporting). On balance, we believe the public safety interests served by PSAPs quickly receiving outage notifications outweigh the risk of inaccuracies or over-notification.

⁸¹ See APCO Comments at 4 (proposing a 15-minute time limit); *accord* 911 Directors’ Committee Comments at 1-2.

⁸² See, e.g., NCTA Comments at 3 (“The accelerated timing often will not provide sufficient time for originating service providers to conduct a preliminary investigation to determine whether a service disruption has affected 911 or qualifies as a reportable outage.”); ATIS Comments at 3 (“[T]here is limited information available within 30 minutes of discovery.”)

notifications over accuracy.”⁸³ Rather, with the approach we adopt today, we strike a balance between the need for timely and actionable 911 outage information and the accuracy of that information.

23. *Frequency.* We conclude that, as proposed, OSPs should update 911 special facilities with additional, material outage information as soon as possible after it becomes available and no later than two hours after the provider’s initial notification, as covered 911 service providers already do. Material information for the purpose of this follow up notification consists of the same informational elements that we require covered 911 service providers and OSPs to disclose in their initial notification, if available. We agree with NENA that the two-hour follow-up deadline will produce “predictability in notification frequency [which] will significantly assist [911 special facilities] in analysis and mitigation of network outages.”⁸⁴ NCTA opposes a follow up notification requirement for OSPs because it could make it harder to notify relevant 911 special facilities and “would likely not lead to the sharing of useful information.”⁸⁵ The follow-up notification requirement we adopt today, however, does not introduce any additional complexity into the determination of which 911 special facilities should receive notice of an outage. Even where a 911 outage remains unresolved after two hours without any new, material information becoming available in the intervening period, an obligation to provide an update no later than two hours after initial contact provides better information to 911 special facilities than having them assume there is no news if they do not have an update from the service providers.⁸⁶

24. In this connection, we note that, for outages that last longer than two hours, a service provider’s obligation to continue to follow up with additional material information as soon as possible after it becomes available continues until the outage is completely repaired and service is fully restored. This ongoing cadence of notifications ensures that speed and accuracy of 911 special facility notifications are not mutually exclusive. After providing initial notification no later than 30 minutes after discovering the outage, service providers have an opportunity to provide more information and make any corrections that may be necessary to their prior statements about the outage. Under the rules we adopt today, the conclusion of any outage would constitute material information because it would represent a change in at least “the expected date and time of restoration.” Such a notification would likely represent “a service provider’s final assessment of the outage,” and should be described as such, if appropriate. Just as timely and accurate information is needed for 911 special facilities to assist service providers in mitigating the disruptions caused by network outages, it is equally important for 911 special facilities to know when the outage has been resolved so that normal services and processes can be restored as soon as possible.

25. *Outage notifications directly to customers.* We decline to adopt our proposal that OSPs and covered 911 service providers directly notify their customers about 911 outages. ATIS states that disclosing information about where 911 service is unavailable would provide bad actors with information

⁸³ AT&T Comments at 9.

⁸⁴ NENA Comments at 5; *see also* T-Mobile Comments at 3; Verizon Comments at 10.

⁸⁵ NCTA Comments at 3.

⁸⁶ CTIA and others encourage the Commission to prepare 911 special facilities for an increased volume and frequency of notifications by OSPs. *See also* CTIA *et al. Ex Parte* at 7. We decline this suggestion because, to the contrary, APCO states the problem with 911 special facility outage notification today is not too many notifications, but too few. *See APCO Ex Parte* at 1. Indeed, APCO asks the Commission to lower the threshold for a reportable outage. *See id. (citing MD 911 Board Comments at 5 (stating that they would like the thirty (30) minute recommendation considered a maximum duration, with the user minutes defined and lowered to 600,000 user-minutes); NENA Comments at 3 (“[L]ower notification thresholds will neither overburden the providers sending them nor overwhelm the public safety entities on the receiving end.”))*. Providers argue that such a change to the current trigger for these outage notification requirements would require extensive changes to their systems whose benefits would not outweigh the costs. We direct the Public Safety and Homeland Security Bureau to gather for future consideration information on the volume of 911 outages that may go unreported under the Commission’s existing outage notification thresholds and seek additional comment on possible alternative outage reporting thresholds.

on vulnerable locations.⁸⁷ Several commenters state that direct customer notification from service providers has the potential to cause confusion and result in notification fatigue to customers.⁸⁸ Several commenters suggested that notice of 911 service outages should come from 911 special facilities and state or local governments, not providers, because public organizations have accountability for public safety.⁸⁹

26. We also note that the Commission has adopted and implemented new information sharing rules that allow state and local officials access to the information in outage reports filed with the Commission in NORS and DIRS.⁹⁰ This access will provide public safety agencies with situational awareness never before available, allowing for these state and local agencies to keep their communities aware of the status of 911 services in their communities.

C. Maintain the annual 911 certification reporting requirement.

27. We decline to reduce the frequency by which covered 911 service providers file 911 reliability certifications, as proposed, in light of the limited record that the Commission received on this issue.⁹¹ We instead continue to require covered 911 service providers to file 911 reliability certifications annually.⁹² We find that maintaining an annual frequency for 911 reliability certification is necessary to ensure that our 911 network remains resilient and robust as the use of our 911 network continues to expand. As the transition to NG911 continues, more and more 911 special facilities are swapping out legacy systems for new equipment and these annual certifications enable the Commission to monitor implementation and performance of the new equipment. Also, the number of 911 calls annually continue to increase. In fact, in 2019 alone, over 200 million emergency calls were placed to 911, and of those calls, 70% were from wireless phones.⁹³ As APCO states, “[a]ny burden on submitting the annual certification . . . is outweighed by the interest in continuing to promote the seriousness and significance of ensuring reliable and resilient 9-1-1 networks.”⁹⁴ Given all of these factors, and the overall importance of maintaining the reliability of 911 networks despite all these changes, we agree with BRETSA that “[i]t should not be too much to expect covered 9-1-1 providers to make the annual certifications required by the Commission.”⁹⁵ The three commenters supporting a reduction in the frequency of the filing of the reliability certifications did not provide evidence that this change would reduce the providers’ regulatory burden substantially without negatively impacting 911 system reliability.⁹⁶

⁸⁷ ATIS Comments at 9.

⁸⁸ See Lumen Comments at 11; NCTA Comments at 8; ATIS Comments at 9; CTIA Comments at 6.

⁸⁹ See Verizon Comments at 15; USTelecom Comments at 9-10; Lumen Comments at 11; 911 Directors Committee Comments at 3-4.

⁹⁰ See FCC, Outage Information Sharing, <https://www.fcc.gov/outage-information-sharing> (last visited Nov. 15, 2022).

⁹¹ *Third Notice*, 36 FCC Rcd at 7880, para. 48; see APCO Comments at 9; BRETSA Comments at 9-10; but see AT&T Comments at 16 (supporting less frequent certification); Verizon Comments at 26; USTelecom at 12.

⁹² 47 CFR § 9.19(c).

⁹³ See NENA, NG9-1-1 Project: Overall NG9-1-1 Status (last visited Jun. 24, 2022), https://www.nena.org/page/NG911_OverallStatus; 911.gov, National 911 Progress Report: 2020 Data, released February 2022, https://www.911.gov/pdf/National_911_Annual_Report_2020_Data.pdf.

⁹⁴ APCO Comments at 9.

⁹⁵ BRETSA Comments at 9.

⁹⁶ See, e.g., USTelecom Comments at 12 (“By requiring providers to certify data on biennial basis rather than the current annual basis, the Commission would help make sure that limited resources are focused on delivering greatest public safety benefit”); AT&T Comments at 16 (“AT&T supports the Commission proposal to decrease this burden on service providers and supports making this filing a biennial submission. An alternative to biennial filings is to continue requiring covered 911 service providers to certify compliance each year but only require providers to file

(continued....)

28. The record suggests that making the obligation to file 911 reliability certification less frequent would not meaningfully reduce the burden of compliance for covered 911 service providers. The commenters who proposed filing 911 reliability certifications less often than annually did not offer a compelling analysis of what specific cost reduction would result from the change in filing frequency.⁹⁷ AT&T does estimate that “it requires more than 2,000 hours per year to review and validate the information it includes on these [certification] worksheets.”⁹⁸ However, even if we could estimate the costs associated with those 2,000 hours, it is unclear how many of those 2,000 hours would be saved if filing the certification was required biennially or triennially. Whether or not a covered 911 service provider is required to file an annual certification in a given year, it would still be required to create and maintain records supporting compliance with the elements of the 911 reliability certification and retain those records for two years.⁹⁹ Given that the records still must be created and maintained, we conclude that any cost savings realized in changing the frequency of the filing of 911 reliability certification would be outweighed by the value of maintaining the annual filing.

D. Require covered 911 service providers who cease operations to notify the Commission.

29. The Commission adopts its proposal requiring covered 911 service providers that cease operations to notify the FCC by filing a notification no later than 60 days after the cessation of service, except that we will allow for the notification to be a declaration under penalty of perjury rather than affidavit, as AT&T suggests, which is consistent with our rules.¹⁰⁰ The Commission received no opposition to this proposal. We emphasize that the notification is required only when a covered 911 service provider completely ceases providing covered 911 services as opposed to a situation where a covered 911 service provider might cease service to a particular 911 special facility. We adopt this measure “to ensure that the Commission does not expend time and resources to investigate why a covered 911 service provider has failed to file its 911 certification in a timely manner, when the reason is simply because the provider is no longer a covered 911 service provider and is therefore no longer required to file the required certifications,” as proposed.¹⁰¹

E. Codify previously adopted rule changes.

30. Section 4.9 of the Commission’s rules sets forth the outage reporting requirements for different service providers including wireless and satellite providers.¹⁰² Initially, the rules exempted wireless and satellite providers from having to report on outages at airports.¹⁰³ The rationale was that wireless and satellite providers did not have dedicated equipment in place at airports because much of the

the detailed worksheets on a triennial basis but, certainly no more frequently than on a biennial basis.”); Verizon Comments at 26 (“Verizon thus supports a less frequent (e.g. biennial or triennial) cycle for Covered 911 Providers’ reliability certifications combined with the proposed periodic affidavit requirement addressing service changes.”).

⁹⁷ See, e.g., Verizon Comments at 26 (proposing biennial or triennial filings to “ease paperwork and administrative burdens for Covered 911 Providers.”); USTelecom Comments at 12 (By requiring providers to certify data on biennial basis rather than the current annual basis, the Commission would help make sure that limited resources are focused on delivering greatest public safety benefit.”); AT&T Comments at 16 (“AT&T supports the Commission proposal to decrease this burden on service providers and supports making this filing a biennial submission. . . . AT&T spends approximately 240-280 hours each year extracting and compiling responsive data from different systems and reformatting these data to shoehorn the information into the Commission’s worksheets.”).

⁹⁸ AT&T Comments at 15-16.

⁹⁹ *911 Reliability Report and Order*, 28 FCC Rcd at 17492-93, paras. 48-49.

¹⁰⁰ See AT&T Comments at 17. See also 47 CFR §1.16.

¹⁰¹ *Third Notice*, 36 FCC Rcd at 7881, para. 49.

¹⁰² 47 CFR § 4.9(c), (e).

¹⁰³ *2004 Part 4 Order*, 19 FCC Rcd at 16867, para. 66.

communications was conducted through wireline facilities.¹⁰⁴ In 2016, the Commission adopted the *2016 Part 4 Order* that expanded the reporting exemption for satellite and wireless providers to include “all special offices and facilities” as that term is defined in Section 4.5(b) of the Rules (i.e., to “entities enrolled in the Telecommunications Service Priority (TSP) Program at priority Levels 1 and 2, which may include, but are not limited to, major military installations, key government facilities, nuclear power plants, and those airports that are listed as current primary (PR) airports in the FAA’s National Plan of Integrated Airports Systems (NPIAS)).”¹⁰⁵ The changes to Section 4.9 of the rules adopted in the *2016 Part 4 Order* were not codified into our rules. In the *Third Notice*, we proposed to codify the rule as previously adopted.¹⁰⁶

31. In the absence of comments on this issue, we amend our Part 4 rules to expand the outage reporting exemption for satellite and wireless providers to include all “special offices and facilities” as defined in Section 4.5(b), as adopted in the *2016 Part 4 Order*. While wireless service has become ubiquitous throughout the United States, it has not yet been adopted by special offices and facilities for their critical communications.¹⁰⁷

F. Compliance timeframes

32. *New rules for collecting and maintaining 911 special facility contact information.* The rules we adopt today requiring covered 911 service providers and OSPs to gather, update, and maintain accurate contact information for officials designated to receive outage notification at each 911 special facility in areas that they serve require review by the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act (PRA). Following the completion of that review, the Bureau will publish a notice in the *Federal Register* announcing the relevant effective date, which will be 120 days after such publication.¹⁰⁸ The record shows that many service providers already have accurate contact information for the 911 special facilities in their service areas enabling accurate outage reporting.¹⁰⁹ For those service providers that do not already have up-to-date contact information for 911 special facilities in areas that they serve, we anticipate they will use the time between now and the expiration of the 120-day period to develop and implement procedures needed to initially obtain accurate contact information through the special diligence process. Once providers have a contact list in place, special diligence would require them to annually verify the accuracy of their 911 special facility contact list to maintain it up-to-date.

33. *New rules to harmonize reporting requirements for part 4 and covered 911 service providers.* The rules we adopt today requiring OSPs to modify the means, timing, and frequency of their outage notification templates to conform with those provided by covered 911 service providers, and for covered 911 service providers and OSPs to adjust the content of their outage notifications to conform with the information template designed by ATIS, will require review of the new and modified information

¹⁰⁴ *Id.*

¹⁰⁵ *Amendments to Part 4 of the Commission’s Rules Concerning Disruptions to Communications; New Part 4 of the Commission’s Rules Concerning Disruptions to Communications; The Proposed Extension of Part 4 of the Commission’s Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, PS Docket Nos. 18-80 and 11-82, ET Docket No. 04-35, Report and Order, Further Notice of Proposed Rulemaking, and Order on Reconsideration, 31 FCC Rcd 5817, 5848, para. 80 (2016) (*2016 Part 4 Order*); 47 CFR § 4.5(b).

¹⁰⁶ *Third Notice*, 36 FCC Rcd at 7882, para. 51.

¹⁰⁷ *2016 Part 4 Order* at 5849, para. 80.

¹⁰⁸ See CTIA *et al. Ex Parte* at 5 (requesting sufficient time to comply with this requirement to allow time for employee training and process reform); Lumen *Ex Parte* at 3.

¹⁰⁹ APCO Comments at 7 (“Given that service providers possess the necessary resources. . . and already maintain their own databases for contacting ECCs (in some cases pursuant to consent decrees with the Commission), they are well-suited to fund, establish, and maintain a contact database.”); AT&T Comments at 14 (“AT&T already maintains nationwide PSAP contact information and updates that information each year.”).

collection requirements by OMB under the PRA. Following the completion of that review, the Bureau will publish a notice in the *Federal Register* announcing the relevant effective date, which will be 120 days after such publication.¹¹⁰ This compliance period will allow covered 911 service providers and OSPs to modify and standardize the informational elements that they provide to 911 special facilities, including through use of the preexisting and freely available ATIS PSAP notification template. It will allow OSPs to, in parallel, make any procedural changes that may be necessary to notify 911 special facilities in areas they serve about outages that potentially affect them within 30 minutes of discovery, including by automating their notification processes to the extent warranted. It will allow OSPs to develop procedures to notify 911 special facilities by telephone and electronic means, or to establish in writing another mutually agreeable notification method, including through the contact information elicitation process described above. T-Mobile said that it “stands ready to modify its outage notifications to PSAPs to include this information by the effective date proposed in the [*Third Notice*],”¹¹¹ and we suspect many other providers are similarly prepared for the changes adopted here. We do not anticipate that OSPs will need to expend substantial time or resources to come into compliance with our follow-up notification requirement because service providers can use the same procedures to follow up with 911 special facilities as they use to notify 911 special facilities in the first instance.

34. We require covered 911 service providers to notify the FCC when they cease operations as of the date 30 days after publication in the *Federal Register* announcing the completion of OMB review. We anticipate that any additional time and resources that covered 911 service providers might expend to comply with this requirement would be negligible because service providers winding down their businesses already provide notification of the occurrence to their stakeholders, and the Commission does not require this notice to contain any particular content that might pose an additional burden to compile.

35. Finally, the exemption that we have decided today to codify for reporting outages at special offices and facilities in addition to airports will be effective 30 days after the Bureau publishes a document in the *Federal Register* announcing the codification of this already adopted rule. The codification of this existing exemption eliminates any burden that may have been attendant to the provision of these reports.

G. Benefits and costs

36. We determine that the rules we adopt today concerning the creation and maintenance of a 911 special facility contact list will result in a one-time compliance cost of \$149,000 and an annual recurring cost of \$1,652,000. We sought comment on these cost estimates in the *Third Notice* and received no persuasive objection or alternative calculation in response.¹¹² We conclude that the one-time cost for covered 911 service providers and OSPs to create an email survey to elicit 911 special facility contact information that operate in the areas they serve will be \$50,000, and the one-time cost to harmonize the covered 911 service provider and OSP 911 special facility outage notification templates will be \$99,000.¹¹³ We believe the majority of 911 special facilities will respond to the email survey, limiting the number of follow-up calls necessary to establish the initial contact list. The rules we adopt here will result in annual recurring costs for covered 911 service providers and OSPs of \$197,000 for identifying 911 special facilities that could potentially be affected by a service outage, \$197,000 for

¹¹⁰ See CTIA *et al. Ex Parte* at 5 (requesting sufficient time to comply with this requirement to allow time for employee training and process reform).

¹¹¹ T-Mobile Comments at 3.

¹¹² *Third Notice*, 36 FCC Rcd at 7883-84, paras. 55-56. AT&T broadly asserts that “the Commission’s proposed time and cost estimate is woefully inadequate.” See AT&T Comments at 14. We note, however, that our analysis is based on averages across all providers and that, whereas some nationwide providers like AT&T likely have higher costs than the average cost we estimate, others, such as local providers, are expected to have lower costs.

¹¹³ *Id.* at 7884, para. 56, n. 118 and 119.

maintaining and updating 911 special facility contact information for those 911 special facilities that could potentially be affected by a service outage, and \$1,258,000 for notifying 911 special facilities of outages that potentially affect them pursuant to the harmonized notification framework we adopt today.¹¹⁴

37. We recognize that it is difficult to quantify the value of continuity of access to 911 service, which includes its capacity to save lives and mitigate and prevent injuries. In this case, it is only necessary to demonstrate that the public safety value of the proposals adopted today is reasonably likely to exceed the costs of implementation. People who dial 911 are often in perilous situation where time and accuracy are critical. As we stated in the *Third Notice*, “the benefits attributable to outage notification are substantial and may have significant positive effects on the abilities of 911 special facilities to safeguard the health and safety of residents during outages that threaten residents’ ability to reach 911.”¹¹⁵ When 911 service providers and OSPs have timely, actionable information about 911 outages that affect the 911 special facilities including the PSAPs they serve, they are the best able to maintain the public’s access to emergency services when it would otherwise be interrupted. We agree with the Maryland NG911 Commission that “[w]hen the PSAP does not get timely or complete notification of outages, they cannot effectively initiate alternate means of communication and provide access for those populations impacted by the outage. Public service messaging, crisis communications options, and back-up operations all require time to activate. When the 911 special facility is not informed in a thorough or punctual manner, their ability to trigger alternative methods for their populations to contact emergency services is severely compromised.”¹¹⁶ The rules we adopt today, both individually and taken together, will serve to improve communications between providers and 911 special facilities by requiring providers to maintain develop and maintain an accurate contact list for the 911 special facilities they serve. Consequently, they will also facilitate the prompt ability of 911 special facilities to manage those outages’ impacts on operations and on the public, resulting in more prompt dispatch of service.

38. In the *Third Notice* we sought comment on what costs savings would be realized if less frequent 911 reliability certifications were required.¹¹⁷ While there were general suggestions of cost savings if the annual certification requirement was changed to biennial or triennial, the record offered no evidence of specific cost savings. We conclude that there will be no additional costs resulting from our decision to maintain the existing annual certification requirement.

39. We adopt the new rule requiring covered 911 service providers to notify the FCC when they cease operations “to ensure that the Commission does not expend time and resources to investigate why a covered 911 service provider has failed to file its 911 certification in a timely manner, when the reason is simply because the provider is no longer a covered 911 service provider and is therefore no longer required to file the required certifications”.¹¹⁸ We sought comment on the costs and benefits of this proposal, but commenters were silent on this issue. We conclude that our presumption in the *Third Notice* is correct and that because there will be few companies that cease their covered 911 service provider operations from year to year, the filings costs will be minimal, while the benefits will be much greater.¹¹⁹

40. Finally, our proposal to codify the rule that we adopted in 2016 to extend the exemption

¹¹⁴ *Id.* at 7884, para. 56, n. 121-123 (The \$1,258,000 recurring cost presented in the NPRM was calculated as follows: To notify 911 special facilities, we propose that a communications equipment operator, earning \$34/hour, would spend a total of one hour per outage to send out two notifications for each of an estimated 37,000 outages, for a total of \$1,258,000 [\$34/hour x 1 hour x 37,000]. Our estimate of 37,000 outages is based on the incidence of outages that potentially affected 911 in NORS reports during 2020.).

¹¹⁵ *Id.* at 7883, para. 55.

¹¹⁶ Maryland NG 911 Commission Comments at 5.

¹¹⁷ *Third Notice*, 36 FCC Rcd at 7880, para. 48.

¹¹⁸ *Id.* at 7881, para. 49.

¹¹⁹ *Id.*

for filing network outage reports to all special offices and facilities should not result in any additional costs. It will result in the filing of fewer reports. The record was silent on the issue of cost for this proposal, so we conclude our analysis is correct.

IV. PROCEDURAL MATTERS

41. *Regulatory Flexibility Act Analysis.* The Regulatory Flexibility Act of 1980, as amended (RFA),¹²⁰ 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.”¹²¹ Accordingly, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) concerning the potential impact of rule and policy changes adopted in this Report and Order on small entities. The FRFA is set forth in Appendix B.

42. *Paperwork Reduction Act Analysis.* These requirements constitute new and modified information collections. They will be submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the Paperwork Reduction Act of 1995 (PRA).¹²² OMB, the general public, and other Federal agencies are invited to comment on the new or modified information collection requirements contain in this proceeding. This document will be submitted to OMB for review under Section 3507(d) of the PRA. In addition, we note that, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4), we previously sought, but did not receive, specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees. The Commission does not believe that the new or modified information collection requirements we adopt here will be unduly burdensome on small businesses.

43. *Congressional Review Act.* [The Commission will submit this draft Report & Order 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).] The Commission will send a copy of this Report and Order to Congress and the Government Accountability Office pursuant to 5 U.S.C. § 801(a)(1)(A).

44. *Further Information.* For further information, contact Scott Cinnamon, Attorney-Advisor, Cybersecurity and Communications Reliability Division, Public Safety and Homeland Security Bureau, (202) 418-2319 or via e-mail at Scott.Cinnamon@fcc.gov.

V. ORDERING CLAUSES

45. ACCORDINGLY IT IS ORDERED that, pursuant to the authority contained in sections 1, 4(i), 4(j), 4(n), 201(b), 214, 218, 251(e)(3), 301, 303(b), 303(g), 303(r), 307, 309(a), 332, and 403, of the Communications Act of 1934, as amended, and sections 3(b) and 6 of the Wireless Communications and Public Safety Act of 1999, as amended, 47 U.S.C. §§ 151, 154(i), 154(j) 154(n), 201(b), 214, 218, 251(e)(3), 301, 303(b), 303(g), 303(r), 307, 309(a), 332, 403, 615, 615a-1, this Report and Order is ADOPTED.

46. IT IS FURTHER ORDERED that the amendments of the Commission’s Rules as set forth in Appendix A are ADOPTED, effective as of the dates set forth in § III.F, above.

47. IT IS FURTHER ORDERED that the Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Report and Order, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

¹²⁰ *See* 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601-12, was amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

¹²¹ 5 U.S.C. § 605(b).

¹²² 44 U.S.C. § 3507(d).

48. IT IS FURTHER ORDERED that the Office of the Managing Director, Performance Evaluation and Records Management, SHALL SEND a copy of this Report & Order 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).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A—Final Rules

For the reasons set forth above. Parts 4 and 9 of title 47 of the Code of Federal Regulations are amended as follows:

PART 4 – DISRUPTIONS TO COMMUNICATIONS

1. The authority citation for part 4 continues to read as follows:

Authority: [TO BE INSERTED PRIOR TO FEDERAL REGISTER SUMMARY PUBLICATION]

2. Effective [INSERT DATE 30 DAYS AFTER FEDERAL REGISTER PUBLICATION], amend § 4.9 by revising paragraph (e)(1)(iv) to read as follows:

§ 4.9 Outage reporting requirements - threshold criteria.

* * * * *

(e)

(1) * * *

(iv) That potentially affects any special offices and facilities (in accordance with § 4.5(a) through (d)) other than airports through direct service facility agreements; or

* * * * *

3. Delayed indefinitely, § 4.9 is amended by revising paragraph (a)(4), removing and reserving paragraph (c)(2)(iii), revising paragraph (c)(2)(iv), removing and reserving paragraph (e)(1)(iv), and revising paragraphs (e), (e)(1)(v), (f)(4), (g)(1)(i), and (h) to read as follows:

§ 4.9 Outage reporting requirements - threshold criteria.

(a) *Cable.*

* * *

(4) Potentially affects a 911 special facility (as defined in § 4.5(e)), in which case they also shall notify the affected 911 facility in the manner described in paragraph (h) of this section. Not later than 72 hours after discovering the outage, the provider shall submit electronically an Initial Communications Outage Report to the Commission. Not later than 30 days after discovering the outage, the provider shall submit electronically a Final Communications Outage Report to the Commission. The Notification and the Initial and Final reports shall comply with all of the requirements of § 4.11.

* * * * *

(c) *Satellite.*

* * *

(2)

* * *

(iii) [Reserved.]

(iv) Potentially affecting a 911 special facility (as defined in § 4.5(e)), in which case the affected 911 facility shall be notified in the manner described in paragraph (h) of this section.

* * * * *

(e) *Wireless.*

* * *

(1) * * *

(iv) [Reserved.]

(v) That potentially affects a 911 special facility (as defined in § 4.5(e)), in which case they also shall notify the affected 911 facility in the manner described in paragraph (h) of this section.

* * * * *

(f) *Wireline.*

* * *

(4) Potentially affects a 911 special facility (as defined in § 4.5(e)), in which case they also shall notify the affected 911 facility in the manner described in paragraph (h) of this section. Not later than 72 hours after discovering the outage, the provider shall submit electronically an Initial Communications Outage Report to the Commission. Not later than 30 days after discovering the outage, the provider shall submit electronically a Final Communications Outage Report to the Commission. The Notification and the Initial and Final reports shall comply with all of the requirements of § 4.11.

(g) *Interconnected VoIP Service Providers.* (1) All interconnected VoIP service providers shall submit electronically a Notification to the Commission:

(i) Within 240 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, an outage of at least 30 minutes duration that potentially affects a 911 special facility (as defined in § 4.5(e)), in which case they also shall notify the affected 911 facility in the manner described in paragraph (h) of this section; or

* * *

(h) *911 Special Facility Outage Notification.* All cable, satellite, wireless, wireline, interconnected VoIP, and covered 911 service providers (as defined in § 9.19(a)(4) of this chapter) shall notify any official at a 911 special facility who has been designated by the affected 911 special facility as the provider's contact person(s) for communications outages at the facility of any outage that potentially affects that 911 special facility (as defined in § 4.5(e)) in the following manner:

(1) *Appropriate Contact Information.* To ensure prompt delivery of outage notifications to 911 special facilities, cable, satellite, wireless, wireline, interconnected VoIP, and covered 911 service providers shall exercise special diligence to identify, maintain, and, on an annual basis, - confirm current contact information appropriate for 911 outage notification for each 911 special facility that serves areas that the service provider serves.

(2) *Content of Notification.* Cable, satellite, wireless, wireline, interconnected VoIP, and covered 911 service providers' 911 outage notifications must convey all available material information about the outage. For the purpose of this paragraph (h), "material information" includes the following, where available:

(A) An identifier unique to each outage;

(B) The name, telephone number, and email address at which the notifying cable, satellite, wireless, wireline, interconnected VoIP, or covered 911 service provider can be reached for follow up;

(C) The name of the cable, satellite, wireless, wireline, interconnected VoIP, or covered 911 service provider(s) experiencing the outage;

(D) The date and time when the incident began (including a notation of the relevant time zone);

(E) The types of communications service(s) affected;

(F) The geographic area affected by the outage;

(G) A statement of the notifying cable, satellite, wireless, wireline, interconnected VoIP, or covered 911 service provider's expectations for how the outage potentially affects the 911 special facility (*e.g.*, dropped calls or missing metadata);

(H) Expected date and time of restoration, including a notation of the relevant time zone;

(I) The best-known cause of the outage; and

(J) A statement of whether the message is the notifying cable, satellite, wireless, wireline, interconnected VoIP, or covered 911 service provider's initial notification to the 911 special facility, an update to an initial notification, or a message intended to be the service provider's final assessment of the outage.

(3) *Means of Notification.* Cable, satellite, wireless, wireline, interconnected VoIP, and covered 911 service providers' 911 outage notifications must be transmitted by telephone and in writing via electronic means in the absence of another method mutually agreed upon in writing in advance by the 911 special facility and the covered 911 service provider.

(4) *Timing of Initial Notification.* Cable, satellite, wireless, wireline, interconnected VoIP, and covered 911 service providers shall provide a 911 outage notification to a potentially affected 911 special facility as soon as possible, but no later than within 30 minutes of discovering that they have experienced on any facilities that they own, operate, lease, or otherwise utilize, an outage that potentially affects a 911 special facility, as defined in § 4.5(e).

(5) *Follow-up Notification.* Cable, satellite, wireless, wireline, interconnected VoIP, and covered 911 service providers shall communicate additional material information to potentially affected 911 special facilities in notifications subsequent to the initial notification as soon as possible after that information becomes available, but cable, satellite, wireless, wireline and interconnected VoIP providers shall send the first follow-up notification to potentially affected 911 special facilities no later than two hours after the initial contact. After that, cable, satellite, wireless, wireline, interconnected VoIP, and covered 911 service providers are required to continue to provide material information to 911 special facilities as soon as possible after discovery of the new material information until the outage is completely repaired and service is fully restored.

PART 9 – 911 REQUIREMENTS

1. The authority citation for part 9 continues to read as follows:

Authority: [TO BE INSERTED PRIOR TO FEDERAL REGISTER SUMMARY PUBLICATION]

2. Delayed indefinitely, add § 9.19(d)(4) to read as follows:

§ 9.19 – Reliability of covered 911 service providers.

* * * * *

(d) *Other matters.*

* * *

(4) Covered 911 service providers that cease operations must notify the FCC by filing a notification under penalty of perjury no later than 60 days after the cessation of service.

APPENDIX B

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹²³ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications, Third Notice of Proposed Rulemaking (Third Notice)*.¹²⁴ The Commission sought written public comments on the proposals in the *Third Notice*, including comments on the IRFA. No comments were received specifically addressing the IRFA. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.¹²⁵

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

2. In this proceeding, the Commission adopts rules and procedures to improve the reliability and resiliency of telecommunications networks nationwide and 911 networks specifically so that the American public can continue to reach emergency services without undue delay or disruption. In particular, the *Third Notice* proposed and sought comment on measures to harmonize the Commission's Public Safety Answering Points (PSAP) outage notification rules such that all service providers must notify all potentially affected 911 special facilities, including PSAPs, of outages in the same manner and with more specific information.¹²⁶ These new rules apply to all cable, satellite, wireless, wireline, interconnected VoIP service providers (originating service providers) as well as to all covered 911 service providers and make the nation's 911 service more reliable and the public safer, while striking an appropriate balance between costs and benefits of such regulation.¹²⁷ We also adopt a rule that requires covered 911 service providers to notify the Commission within 60 days of the day they cease operations. This will conserve Commission resources by avoiding unnecessary pursuit of covered 911 service providers no longer providing service. We also codify rules adopted in 2016 extending the exemption of satellite and terrestrial wireless providers from reporting outages potentially affecting special offices and facilities.¹²⁸

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

3. No comments were submitted specifically in response to the IRFA, with the exception of AT&T, who provided comments on the Commission's cost estimates in accordance with the

¹²³ See 5 U.S.C. § 603. The RFA, 5 U.S.C. §§ 601-12, 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).

¹²⁴ *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications, Third Notice of Proposed Rulemaking*, 36 FCC Rcd 7860 (2021), Appendix B, Initial Regulatory Flexibility Analysis.

¹²⁵ See 5 U.S.C. § 604.

¹²⁶ The Commission's current rules for 911 special facility outage reporting differentiates between "covered 911 service providers" that provide service directly to 911 special facilities and "originating" or "part 4" service providers that only provide the capability for consumers to originate 911 calls.

¹²⁷ We note that cable providers and interconnected VoIP providers often are also wireline providers. The references to providers of these types of services in this Notice correspond to references in the Part 4 outage reporting rules. 47 CFR § 4.3.

¹²⁸ *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications; New Part 4 of the Commission's Rules Concerning Disruptions to Communications; The Proposed Extension of Part 4 of the Commission's Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, PS Docket Nos. 18-80 and 11-82, ET Docket No. 04-35, Report and Order, Further Notice of Proposed Rulemaking, and Order on Reconsideration, 31 FCC Rcd 5817, 5902, para. 216 (2016).

Commission's request for such data in the *Third Notice*.¹²⁹ Similarly, some service providers expressed concerns about the increased burdens required to harmonize the 911 special facility notification process, but none of these entities attempted to quantify the costs associated with these activities.¹³⁰

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

4. The SBA Chief Counsel did not file comments on the IRFA.

D. Description and Estimate of the Number of Small Entities to Which the Final 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.¹³¹ The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small governmental jurisdiction."¹³² In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.¹³³ 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.¹³⁴

6. *Small Businesses, Small Organizations, and 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.¹³⁵ 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.¹³⁶ These types of small businesses represent 99.9% of all businesses in the United States, which translates to 32.5 million businesses.¹³⁷

¹²⁹ AT&T Comments at 14 ("Commission's proposed time and cost estimate (for maintaining nationwide PSAP contact information) is woefully inadequate.").

¹³⁰ CTIA Comments at 4-5 ("[T]he transmission of multiple outage reports in different formats [due to possible state-level outage notification requirements], by telephone and in writing via electronic means, could potentially overburden PSAP personnel, especially in the midst of a widespread emergency in which multiple providers are sending PSAPs notification over short time intervals."); Lumen Comments at 7 ("Lumen recommends that the Commission maintain its current notification requirements and thresholds and not require that additional information be provided."); NCTA Comments at 5 ("The only relevant information that PSAPs need to effectively notify the public consists of the identity of the providers reporting outages, a general description of the location, and alternative methods of calling for emergency help."); USTelecom Comments at 4 ("Thus, in harmonizing the rules, it is essential that the Commission continue to recognize the importance of limiting notification responsibility only to the provider experiencing the outage (or having direct knowledge of the outage based on the responsibility).").

¹³¹ 5 U.S.C. § 603(b)(3).

¹³² 5 U.S.C. § 601(6).

¹³³ 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."

¹³⁴ 15 U.S.C. § 632.

¹³⁵ See 5 U.S.C. § 601(3)-(6).

¹³⁶ See SBA, Office of Advocacy, Frequently Asked Questions, "What is a small business?," <https://cdn.advocacy.sba.gov/wp-content/uploads/2021/11/03093005/Small-Business-FAQ-2021.pdf> (Nov 2021).

¹³⁷ *Id.*

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.”¹³⁸ 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.¹³⁹ Nationwide, for tax year 2020, there were approximately 447,689 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.¹⁴⁰

8. Finally, the same 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.”¹⁴¹ U.S. Census Bureau data from the 2017 Census of Governments¹⁴² indicate there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.¹⁴³ Of this number, there were 36,931 general purpose governments (county,¹⁴⁴ municipal, and town or township¹⁴⁵) with populations of less than 50,000 and 12,040 special purpose governments—independent school districts¹⁴⁶

¹³⁸ See 5 U.S.C. § 601(4).

¹³⁹ 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 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.

¹⁴⁰ *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 2020 with revenue less than or equal to \$50,000 for Region 1-Northeast Area (58,577), Region 2-Mid-Atlantic and Great Lakes Areas (175,272), and Region 3-Gulf Coast and Pacific Coast Areas (213,840) that includes the continental U.S., Alaska, and Hawaii. This data does not include information for Puerto Rico.

¹⁴¹ *See* 5 U.S.C. § 601(5).

¹⁴² *See* 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/cog/about.html>.

¹⁴³ *See* U.S. Census Bureau, 2017 Census of Governments – Organization Table 2. Local Governments by Type and State: 2017 [CG1700ORG02], <https://www.census.gov/data/tables/2017/econ/gus/2017-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. CG1700ORG02 Table Notes_Local Governments by Type and State_2017.

¹⁴⁴ *See id.* at tbl.5. County Governments by Population-Size Group and State: 2017 [CG1700ORG05], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 2,105 county governments with populations less than 50,000. This category does not include subcounty (municipal and township) governments.

¹⁴⁵ *See id.* at tbl.6. Subcounty General-Purpose Governments by Population-Size Group and State: 2017 [CG1700ORG06], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. Error! Hyperlink reference not valid. There were 18,729 municipal and 16,097 town and township governments with populations less than 50,000.

¹⁴⁶ *See id.* at tbl.10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2017 [CG1700ORG10], <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 12,040 independent school districts with enrollment populations less than 50,000. *See also* tbl.4. Special-Purpose Local

(continued....)

with enrollment populations of less than 50,000.¹⁴⁷ Accordingly, based on the 2017 U.S. Census of Governments data, we estimate that at least 48,971 entities fall into the category of “small governmental jurisdictions.”¹⁴⁸

9. *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.¹⁴⁹ 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.¹⁵⁰ The programming material is usually delivered to a third party, such as cable systems or direct-to-home satellite systems, for transmission to viewers.¹⁵¹ The SBA small business size standard for this industry classifies firms with annual receipts less than \$41.5 million as small.¹⁵² Based on U.S. Census Bureau data for 2017, 378 firms operated in this industry during that year.¹⁵³ 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.¹⁵⁴ Based on this data, the Commission estimates that a majority of firms in this industry are small.

10. *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.”¹⁵⁵ For purposes of the Telecom Act Standard, the Commission determined that a cable system operator that serves fewer than 677,000 subscribers, either directly or through affiliates, will meet the definition of a small cable operator based on the cable subscriber count established in a

Governments by State Census Years 1942 to 2017 [CG1700ORG04], CG1700ORG04 Table Notes_Special Purpose Local Governments by State_Census Years 1942 to 2017.

¹⁴⁷ While the special purpose governments category also includes local special district governments, the 2017 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.

¹⁴⁸ 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 (36,931) and the number of special purpose governments - independent school districts with enrollment populations of less than 50,000 (12,040), from the 2017 Census of Governments - Organizations tbls.5, 6 & 10.

¹⁴⁹ 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>.

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² See 13 CFR § 121.201, NAICS Code 515210.

¹⁵³ 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).

¹⁵⁴ *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.

¹⁵⁵ 47 U.S.C. § 543(m)(2).

2001 Public Notice.¹⁵⁶ Based on industry data, only six cable system operators have more than 677,000 subscribers.¹⁵⁷ 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.¹⁵⁸ 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.

11. *Incumbent Local Exchange Carriers.* Neither the Commission nor the SBA have developed a small business size standard specifically for incumbent local exchange carriers. Wired Telecommunications Carriers¹⁵⁹ is the closest industry with an SBA small business size standard.¹⁶⁰ The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.¹⁶¹ U.S. Census Bureau data for 2017 show that there were 3,054 firms in this industry that operated for the entire year.¹⁶² Of this number, 2,964 firms operated with fewer than 250 employees.¹⁶³ Additionally, based on Commission data in the 2021 Universal Service Monitoring Report, as of December 31, 2020, there were 1,227 providers that reported they were incumbent local exchange service providers.¹⁶⁴ Of these providers, the Commission estimates that 929 providers have 1,500 or fewer employees.¹⁶⁵ 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.

12. *Local Exchange Carriers.* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. Providers of these

¹⁵⁶ *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, Public Notice, 16 FCC Rcd 2225 (CSB 2001) (2001 Subscriber Count PN). In this Public Notice, the Commission determined that there were approximately 67.7 million cable subscribers in the United States at that time using the most reliable source publicly available. *Id.* We recognize that the number of cable subscribers changed since then and that the Commission has recently estimated the number of cable subscribers to be approximately 58.1 million. *See Communications Marketplace Report*, GN Docket No. 20-60, 2020 Communications Marketplace Report, 36 FCC Rcd 2945, 3049, para. 156 (2020) (2020 Communications Marketplace Report). However, because the Commission has not issued a public notice subsequent to the 2001 Subscriber Count PN, the Commission still relies on the subscriber count threshold established by the 2001 Subscriber Count PN for purposes of this rule. *See* 47 CFR § 76.901(e)(1).

¹⁵⁷ 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).

¹⁵⁸ 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).

¹⁵⁹ *See* U.S. Census Bureau, 2017 NAICS Definition, "517311 Wired Telecommunications Carriers," <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

¹⁶⁰ *See* 13 CFR § 121.201, NAICS Code 517311.

¹⁶¹ *Id.*

¹⁶² *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>.

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 Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2021), <https://docs.fcc.gov/public/attachments/DOC-379181A1.pdf>.

¹⁶⁵ *Id.*

services include both incumbent and competitive local exchange service providers. Wired Telecommunications Carriers¹⁶⁶ is the closest industry with an SBA small business size standard.¹⁶⁷ Wired Telecommunications Carriers are also referred to as wireline carriers or fixed local service providers.¹⁶⁸ The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.¹⁶⁹ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.¹⁷⁰ Of this number, 2,964 firms operated with fewer than 250 employees.¹⁷¹ Additionally, based on Commission data in the 2021 Universal Service Monitoring Report, as of December 31, 2020, there were 5,183 providers that reported they were fixed local exchange service providers.¹⁷² Of these providers, the Commission estimates that 4,737 providers have 1,500 or fewer employees.¹⁷³ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

13. *All Other Telecommunications.* The "All Other Telecommunications" category is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation.¹⁷⁴ 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.¹⁷⁵ 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.¹⁷⁶ The SBA small business size standard for this industry classifies firms with annual receipts of \$38.5 million or less as small.¹⁷⁷ U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year.¹⁷⁸ Of those

¹⁶⁶ See U.S. Census Bureau, *2017 NAICS Definition, "517311 Wired Telecommunications Carriers,"* <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

¹⁶⁷ See 13 CFR § 121.201, NAICS Code 517311.

¹⁶⁸ 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.

¹⁶⁹ *Id.*

¹⁷⁰ 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 517311, <https://data.census.gov/cedsci/table?y=2017&n=517311&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePrevious=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 Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2021), <https://docs.fcc.gov/pubId.lic/attachments/DOC-379181A1.pdf>.

¹⁷³ *Id.*

¹⁷⁴ See U.S. Census Bureau, *2017 NAICS Definition, "517919 All Other Telecommunications,"* <https://www.census.gov/naics/?input=517919&year=2017&details=517919>.

¹⁷⁵ *Id.*

¹⁷⁶ *Id.*

¹⁷⁷ See 13 CFR § 121.201, NAICS Code 517919.

¹⁷⁸ 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: EC1700SIZEREFirm, NAICS Code 517919, <https://data.census.gov/cedsci/table?y=2017&n=517919&tid=ECNSIZE2017.EC1700SIZEREFirm&hidePrevious=false>.

firms, 1,039 had revenue of less than \$25 million.¹⁷⁹ Based on this data, the Commission estimates that the majority of “All Other Telecommunications” firms can be considered small.

14. *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.”¹⁸⁰ Satellite telecommunications service providers include satellite and earth station operators. The SBA small business size standard for this industry classifies a business with \$35 million or less in annual receipts as small.¹⁸¹ U.S. Census Bureau data for 2017 show that 275 firms in this industry operated for the entire year.¹⁸² Of this number, 242 firms had revenue of less than \$25 million.¹⁸³ Additionally, based on Commission data in the 2021 Universal Service Monitoring Report, as of December 31, 2020, there were 71 providers that reported they were engaged in the provision of satellite telecommunications services.¹⁸⁴ Of these providers, the Commission estimates that approximately 48 providers have 1,500 or fewer employees.¹⁸⁵ Consequently using the SBA’s small business size standard, a little more than of these providers can be considered small entities.

15. *Telecommunications Resellers.* The Telecommunications Resellers industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households.¹⁸⁶ Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure.¹⁸⁷ Mobile virtual network operators (MVNOs) are included in this industry.¹⁸⁸ The SBA small business size standard for this industry classifies a business as small if it has 1,500 or fewer employees.¹⁸⁹ U.S. Census Bureau data for 2017 show that 1,386 firms operated in this industry for the entire year.¹⁹⁰ Of that number, 1,375 firms

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. 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.

¹⁸⁰ See U.S. Census Bureau, *2017 NAICS Definition*, “517410 Satellite Telecommunications,” <https://www.census.gov/naics/?input=517410&year=2017&details=517410>.

¹⁸¹ See 13 CFR § 121.201, NAICS Code 517410.

¹⁸² 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>.

¹⁸³ *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.

¹⁸⁴ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2021), <https://docs.fcc.gov/pubId.lic/attachments/DOC-379181A1.pdf>.

¹⁸⁵ *Id.*

¹⁸⁶ See U.S. Census Bureau, *2017 NAICS Definition*, “517911 Telecommunications Resellers,” <https://www.census.gov/naics/?input=517911&year=2017&details=517911>.

¹⁸⁷ *Id.*

¹⁸⁸ *Id.*

¹⁸⁹ See 13 CFR § 121.201, NAICS Code 517911.

¹⁹⁰ 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 517911, <https://data.census.gov/cedsci/table?y=2017&n=517911&tid=ECNSIZE2017.EC1700SIZEEMPfirm&hidePreview=false>.

operated with fewer than 250 employees.¹⁹¹ Additionally, based on Commission data in the 2021 Universal Service Monitoring Report, as of December 31, 2020, there were 811 providers that reported they were engaged in the provision of local or toll resale services.¹⁹² Of these providers, the Commission estimates that 784 providers have 1,500 or fewer employees.¹⁹³ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

16. *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.¹⁹⁴ 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.¹⁹⁵ By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.¹⁹⁶ Wired Telecommunications Carriers are also referred to as wireline carriers or fixed local service providers.¹⁹⁷

17. The SBA small business size standard for Wired Telecommunications Carriers classifies firms having 1,500 or fewer employees as small.¹⁹⁸ U.S. Census Bureau data for 2017 show that there were 3,054 firms that operated in this industry for the entire year.¹⁹⁹ Of this number, 2,964 firms operated with fewer than 250 employees.²⁰⁰ Additionally, based on Commission data in the 2021 Universal Service Monitoring Report, as of December 31, 2020, there were 5,183 providers that reported they were engaged in the provision of fixed local services.²⁰¹ Of these providers, the Commission

¹⁹¹ *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.

¹⁹² Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2021), <https://docs.fcc.gov/pub/Id.lic/attachments/DOC-379181A1.pdf>.

¹⁹³ *Id.*

¹⁹⁴ See U.S. Census Bureau, 2017 NAICS Definition, "517311 Wired Telecommunications Carriers," <https://www.census.gov/naics/?input=517311&year=2017&details=517311>.

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

¹⁹⁷ 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.

¹⁹⁸ See 13 CFR § 121.201, NAICS Code 517311.

¹⁹⁹ 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&hidePrevious=false>.

²⁰⁰ *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.

²⁰¹ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2021), <https://docs.fcc.gov/pub/Id.lic/attachments/DOC-379181A1.pdf>.

estimates that 4,737 providers have 1,500 or fewer employees.²⁰² Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

18. *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.²⁰³ Wireless Telecommunications Carriers (*except Satellite*)²⁰⁴ 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.²⁰⁵ U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year.²⁰⁶ Of this number, 2,837 firms employed fewer than 250 employees.²⁰⁷ Thus under the SBA size standard, the Commission estimates that a majority of licensees in this industry can be considered small.

19. 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.²⁰⁸

20. 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.

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.²⁰⁹ Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless internet access, and

²⁰² *Id.*

²⁰³ See 47 CFR §§ 27.1 – 27.1607.

²⁰⁴ 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>.

²⁰⁵ See 13 CFR § 121.201, NAICS Code 517312.

²⁰⁶ 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>.

²⁰⁷ *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.

²⁰⁸ 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.

²⁰⁹ 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>.

wireless video services.²¹⁰ The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees.²¹¹ U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year.²¹² Of that number, 2,837 firms employed fewer than 250 employees.²¹³ Additionally, based on Commission data in the 2021 Universal Service Monitoring Report, as of December 31, 2020, there were 797 providers that reported they were engaged in the provision of wireless services.²¹⁴ Of these providers, the Commission estimates that 715 providers have 1,500 or fewer employees.²¹⁵ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

22. *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).²¹⁶ The size standard for this industry under SBA rules is that a business is small if it has 1,500 or fewer employees.²¹⁷ For this industry, U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated for the entire year.²¹⁸ Of this number, 2,837 firms employed fewer than 250 employees.²¹⁹ Additionally, based on Commission data in the 2021 Universal Service Monitoring Report, as of December 31, 2020, there were 407 providers that reported they were engaged in the provision of cellular, personal communications services, and specialized mobile radio services.²²⁰ Of these providers, the Commission estimates that 333 providers have 1,500 or fewer employees.²²¹ Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

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

23. The rules adopted in the Second Report and Order impose new and additional reporting, recordkeeping, and/or other compliance requirements on small entities and entities of all sizes that

²¹⁰ *Id.*

²¹¹ See 13 CFR § 121.201, NAICS Code 517312.

²¹² 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>.

²¹³ *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.

²¹⁴ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2021), <https://docs.fcc.gov/pubId.lic/attachments/DOC-379181A1.pdf>.

²¹⁵ *Id.*

²¹⁶ 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>.

²¹⁷ See 13 CFR § 121.201, NAICS Code 517312.

²¹⁸ 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>.

²¹⁹ *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.

²²⁰ Federal-State Joint Board on Universal Service, Universal Service Monitoring Report at 26, Table 1.12 (2021), <https://docs.fcc.gov/pubId.lic/attachments/DOC-379181A1.pdf>.

²²¹ *Id.*

provide and support 911 services. Specifically, the new rules will (1) harmonize the rules under which originating service providers and covered 911 service providers notify 911 special facilities of outages; (2) require originating service providers and covered 911 service providers to provide more specific and uniform material information to 911 special facilities in outage notifications as defined in Section 4.9(h)(6) of the Commission's rules; (3) require originating service and covered 911 service providers to exercise special diligence to obtain accurate contact information for the 911 special facilities they serve and maintain it up to date; and (4) require covered 911 service providers notify the Commission that they no longer provide covered 911 services to 911 special facilities. The Second Report and Order also codifies an amendment to a rule that the Commission adopted in 2016 that extends the exemption of satellite and terrestrial wireless providers from reporting outages potentially affecting special offices and facilities.²²²

24. The Commission is not in a position to determine whether these new rules will require small entities to hire attorneys, engineers, consultants, or other professionals, but we note that service providers already perform measures that contribute to their ability to comply with these requirements. For example, some originating service providers may already offer 911 special facilities follow-up notifications if additional material information becomes available. In addition, many service providers are likely to already have documented procedures for notifying 911 special facilities of outages that potentially affect them, and for those that do not, Alliance for Telecommunications Industry Solutions (ATIS) Network Reliability Steering Committee (NRSC) Task Force documents can serve as a useful guide. Furthermore, many service providers already regularly elicit and verify 911 special facilities outage contact information.

25. There is nothing in the record to suggest our initial time and cost estimate was incorrect. We estimated the timeframe and incremental cost for originating service providers to notify potentially affected 911 special facilities about 911 outages within the same timeframe, by the same means, and with the same frequency that covered 911 service providers would be 30 minutes at a rate of \$34 per hour per notification (initial and follow-up) per outage. We conclude that the actual cost that originating service providers to comply with this requirement may be substantially lower because, among other things, some originating service providers service providers may have automated their 911 special facility outage notification processes.²²³ With no evidence to the contrary, we conclude that the one-time cost for originating service providers and covered 911 service providers to report the same specific, actionable content in their 911 special facility outage notifications will require 60 minutes at a one-time cost of \$34 per hour per provider. This activity would allow a provider to incorporate additional informational elements into their existing mechanisms for gathering, approving, and transmitting information about 911 outages to 911 special facilities.²²⁴ We conclude that the actual cost that

²²² *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications; New Part 4 of the Commission's Rules Concerning Disruptions to Communications; The Proposed Extension of Part 4 of the Commission's Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, PS Docket Nos. 18-80, 11-82, ET Docket No. 04-35, Report and Order, Further Notice of Proposed Rulemaking, and Order on Reconsideration, 31 FCC Rcd 5817, 5902, para. 216 (2016).

²²³ See, e.g., Verizon July 16, 2018 Comments at 4.

²²⁴ We estimate that there are 2,890 cable, satellite, wireless, wireline, and interconnected VoIP providers in the United States. This consists of five satellite providers, 967 wireline providers, 461 wireless providers, and 1,457 interconnected VoIP-related entities. Our satellite figure consists only of those service providers that offer service that could potentially affect 911. See generally, *Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, CC Docket No. 94-102 (including five satellite providers' 911 Post-Implementation Status Report filings in the Commission's Electronic Comment Filing System regarding the deployment of 911 call center service and the forwarding of 911 calls to 911 special facilities). Our wireless figure is calculated based on staff analysis of 2019 Form 499 data, consisting of holding companies and affiliated entities who report end-user mobile telecommunication revenue. See *Wireline Competition Bureau Releases the 2020 Telecommunications Reporting Worksheets and Accompanying Instructions*, WC Docket No. 06-122, Public Notice, (continued....)

originating service providers and covered 911 service providers will incur to comply with these rules will be substantially lower than our estimate because our estimated number of service providers that need to comply is conservatively broad.²²⁵

26. Having received no comments to the contrary, we conclude that the cost for originating service providers and covered 911 service providers to obtain and maintain up-to-date contact information for 911 special facilities in areas they serve would take 30 minutes with a one-time cost of \$34 per hour per provider to develop a mechanism to elicit 911 special facility contact information.²²⁶ Working internally and with other network operators to identify 911 special facilities that could potentially be affected by an outage would take an estimated 120 minutes with an annual recurring rate of \$34 per hour per provider.²²⁷ Likewise, eliciting the appropriate contact information for outage notification using the service provider's chosen 911 special facility contact information collection mechanism would take an estimated 120 minutes with an annual recurring cost of \$34 per provider.²²⁸ Compliance with this requirement may be substantially lower than our estimates because the

35 FCC Rcd 1350 (2020). Our wireline and interconnected VoIP-related figures are calculated from the December 2019 Form 477. *See also* FCC, *Voice Telephone Services Report*, <https://www.fcc.gov/voice-telephone-services-report> (last visited Mar. 3, 2021). Because cable providers generally rely on either (wireline) switched access or interconnected VoIP to provide 911-related services, these providers are already subsumed by our other estimates. Similarly, as noted above, the overwhelming majority of covered 911 service providers are considered to be wireline providers.

²²⁵ Our estimate of the number of wireless providers includes resellers who do not operate their own facilities; our estimate of interconnected VoIP providers includes entities that have worked together or contracted-out services to meet the Commission's regulatory requirements. As a result, we have previously estimated that 12 organizations in total serve this purpose for thousands of interconnected VoIP service providers. *See Implementing Kari's Law; Section 506 of Ray Baum's Act*, PS Docket Nos. 18-261 and 17-239, Notice of Proposed Rulemaking, 33 FCC Rcd 8984, 9019, para. 99, n.161 (2018). Also, our estimate may double-count entities that derive revenue or report subscribers from more than one service that potentially affects 911. For example, based on the December 2019 Form 477, there were a total of 2,022 service providers who provided (wireline) switched access telephone service, interconnected VoIP, or both, whereas our sum of switched access telephone service and interconnected VoIP providers equals 2,424.

²²⁶ While we do not propose to require originating service providers and covered 911 service providers to use a specific method to elicit 911 special facility contact information, we estimate the one-time cost for developing a mechanism to collect 911 special facility contact information as the cost of developing an e-mail survey using common e-mail clients. *See, e.g.,* Anthony Smith, *How to Create a Survey in Outlook*, <https://www.techwalla.com/articles/how-to-create-a-survey-in-outlook> (last visited Mar. 12, 2020) (requiring five steps to create an e-mail survey). We estimate that it would take a communications equipment operator 30 minutes to design this survey. We believe that ATIS' *Standard Operating Procedures for Updating PSAP Contact Information* will save these employees significant time and effort because it defines relevant informational fields. Thus, our estimate of \$50,000 consists of the hourly rate of \$34 multiplied by 0.5 (or a half hour) multiplied by 2,890, which yields \$49,130.

²²⁷ We estimate that one communications equipment operator would annually spend two hours reviewing existing service agreements and collaborating with the operators of other networks, confirming the identity of the 911 special facilities that could be potentially affected by outages on the service provider's network and making any necessary changes to the service provider's network. Thus, our annual estimate of \$197,000 consists of the hourly rate of \$34 multiplied by 2 (hours) multiplied by 2,890, which yields \$196,520. We recognize that for certain nationwide or large regional service providers, 2 hours may be an underestimate, but also emphasize that the substantial majority of service providers we have included in our calculation offer services at the local level and could be anticipated to need fewer than 2 hours due to the limited number of 911 special facilities that they would need to contact.

²²⁸ We estimate that it would take a communications equipment operator an additional 2 hours, each year, to transmit the e-mail survey of contact information to the e-mail contacts of the 911 special facilities that they serve using bulk e-mails, and to follow up with those 911 special facilities as appropriate if the first attempt is not successful. Thus, our annual estimate of \$193,000 consists of the hourly rate of \$34 multiplied by 2 (hours) multiplied by 2,890, which yields \$196,520. We round up to \$197,000 to avoid the false appearance of precision.

Commission's rules already require these service providers to notify 911 special facilities of 911 outages and, as such, they should already have accurate 911 special facility outage contact information. To the extent that service providers already have up to date 911 special facility contact information, we do not anticipate that obtaining that information would impose any incremental costs.

27. Based on the above discussion, we do not believe that the costs and/or administrative burdens associated with any of the proposal rule changes will unduly burden small entities. Furthermore, we believe the value of the public safety benefits generated by our 911 special facility outage notification proposals outweigh the estimated costs. These rule changes will enable 911 special facilities to accelerate the public's ability to reach 911 call takers during an outage, reducing the probability of lives lost during any such outage. These rules will also generate an additional, incremental benefit by helping people reach 911 call takers more quickly and by reducing first responder response times.

28. In the Third Notice, we sought comments from the parties in the proceeding requesting cost and benefit information to help the Commission identify and evaluate relevant matters for small entities, but received no comments on this issue.

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

29. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its approach, which may include the following four alternatives (among others): "(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 and 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."²²⁹

30. The Commission continues to adopt measures to facilitate the reliability of the 911 system and meet its public safety obligations for oversight of the integrity of the 911 communications infrastructure so that 911 special facilities can expect consistent and timely outage notifications whenever there is an outage that potentially affects 911 service. While doing so, the Commission recognizes that small entities and other 911 service providers may incur costs, but we do our best to make sure that the public interest benefits of new obligations outweigh the costs.

31. The Commission has taken several steps that could reduce the economic impact for small entities. First, the elements for 911 special facility outage notifications that we adopt largely track the NRSC Task Force's template. Therefore, to the extent small entities have or will implement the ATIS NRSC Task Force's template, compliance with our rules should not impose significant additional costs. Next, we adopt an approach that establishes a baseline expectation of shared information while otherwise preserving flexibility for service providers to determine the means by which they present this information to 911 special facilities. Similarly, we do not specify the particular procedures that service providers must develop or follow to elicit 911 special facility contact information.

32. Following review of the record in this proceeding, the Commission has decided not to change the frequency with which covered 911 service providers are required to file 911 reliability certifications. The current annual filing requirement strikes the appropriate balance between maintaining 911 network reliability and public awareness of 911 unavailability.

²²⁹ 5 U.S.C. § 603(c)(1)-(4).

**STATEMENT OF
CHAIRWOMAN JESSICA ROSENWORCEL**

Re: *Improving 911 Reliability*, PS Docket No. 13-75; *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications*, PS Docket No. 15-80; *New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, ET Docket No. 04-35, Second Report and Order (November 17, 2022).

In the Summer of 2020, there was a 911 outage across the country. It lasted more than twelve hours. During this outage, more than 23,000 calls to emergency call centers failed to connect. That's 23,000 people calling because they witnessed an accident, a life was in danger, or the straight-up unthinkable had occurred and they had nowhere else to turn. Now according to a report from the Federal Communications Commission, this outage was the result of "an equipment failure" that was "exacerbated by a network routing misconfiguration" and also "magnified by a software flaw." In other words, this was what we call a sunny day outage. Those are the outages that we don't see coming. They occur when the public least expects them. It is so important for carriers to work to prevent these outages and if they do occur it is absolutely vital that our 911 call centers get accurate information about just what is happening in a timely way.

That is why today we are adopting rules to harmonize reporting requirements involving 911 call centers. We are standardizing the information that providers need to share with public safety answering points so that our 911 facilities are in the know when service outages occur. The steps we take here are important because when it comes to 911, acting quickly matters and being accurate matters. This is true in all circumstances, but especially valuable with sunny day outages. Our actions will help get more information out more rapidly and more consistently. It will speed service restoration and save lives.

There's more work ahead, but a big thank you to the staff responsible for this effort, including Brenda Boykin, Justin Cain, Scott Cinnamon, John Evanoff, David Furth, Lauren Kravetz, Nicole McGinnis, Saswat Misra, Erika Olsen, Austin Randazzo, and James Wiley of the Public Safety and Homeland Security Bureau; Andrea Kearney, Doug Klein, Joel Rabinowitz, and Bill Richardson of the Office of General Counsel; Eric Ehrenreich, Matthew Gibson, Jason Koslofsky, Jeremy Marcus, Elizabeth Mumaw, Raphael Sznajder, and Ashley Tyson of the Enforcement Bureau; Mark Mantano, Emily Talaga, and Aleks Yankelevich from the Office of Economics and Analytics; Heather Hendrickson, Ethan Jeans, Charles Matthias, and Heyley Steffen from the Wireless Telecommunications Bureau; Elizabeth Drogula and Zachary Ross from the Wireline Competition Bureau; and Maura McGowan, Joy Ragsdale, and Chana Wilkerson for the Office of Communications Business Opportunities.

**STATEMENT OF
COMMISSIONER GEOFFREY STARKS**

Re: *Improving 911 Reliability*, PS Docket No. 13-75; *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications*, PS Docket No. 15-80; *New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, ET Docket No. 04-35, Second Report and Order

Americans need and deserve reliable access to emergency services. That's why we've worked so hard at the Commission to expand access to 911, improve location and callback information, strengthen network resilience, and enhance situational awareness when our networks do come down.

There's plenty to do to make 911 state-of-the-art. But as we reimagine the 911 services of tomorrow, we must continue to find ways to improve the system as it works today. That's exactly what we're doing with this order. We're enhancing speed—by making sure all providers know to report outages as soon as possible, but no later than 30 minutes after discovery. We're saving effort—by ensuring that public safety officials receive outage notifications the same way, and with more actionable content. We're increasing awareness—by requiring providers to keep public safety officials in the loop as they work to restore the network. And we're also avoiding error—by requiring providers to maintain up-to-date contact information before realizing, in the throes of an actual outage, that they have a message delivery problem.

These steps are important. Just last week, I visited a public safety answering point in Kansas City. And let me tell you, they're working hard—improving emergency call routing, migrating to next-generation infrastructure, and enhancing address data and mapping capabilities for 911 call-takers. They're training up their workforce—and in many areas, dealing with significant staff shortages. They're also working to secure their networks in the face of cyber threats, including ransomware attacks.

The last thing they need is to be left in the dark when a carrier's network comes down. Just imagine. You are a public safety official responsible for dispatching potentially lifesaving assistance to the public. And yet, you don't even know that the public can't reach you, and when communications will be restored, because a provider failed its obligation to act with the urgency that a network outage deserves. Or perhaps you learn about the outage in time, but find yourself scrambling to get more information, or an update from the carrier, as you're simultaneously figuring out how to adapt. All of this may seem unthinkable but, unfortunately, the unthinkable here has happened before. We must continue to fine-tune our rules until scenarios like these become a thing of the past.

I thank the Public Safety and Homeland Security Bureau for its excellent work on this item.