

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

In the Matter of)
)
Completing the Transition to Electronic Filing,) WT Docket No. 19-212
Licenses and Authorizations, and Correspondence)
in the Wireless Radio Services)

REPORT AND ORDER

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By the Commission:

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I. INTRODUCTION

1. Now more than ever, the public and the Commission are acutely aware of the importance of electronic interactions between the agency, its applicants and licensees, and the American people. This is not just best practice—it is essential to ensure uninterrupted communications provided to, and coming from, the Commission. Even before the events of 2020, the Commission had made significant strides toward modernizing its legacy filing, communications, and information retention systems by improving access to electronic data and digitizing Commission communications in a wide variety of services.

2. Today, we finalize our transition to electronic interactions for licenses in the Wireless Radio Services¹—a transition that began more than two decades ago. By doing so, we decrease the costs for consumers and the Commission, enhance transparency of and access to data, significantly improve administrative efficiency, and save a substantial amount of paper annually—to the benefit of the Commission and those who interact with these systems alike.

II. BACKGROUND

3. The Commission manages applications for all Wireless Radio Service licenses through ULS. Related systems accept filings and work in conjunction with or alongside of ULS: the Antenna Structure Registration (ASR) System, the Tower Construction Notification System (TCNS), and the Electronic Section 106 (E-106) System. To promote safety in aircraft navigation, the Commission requires the owners of antenna structures to register with the ASR System if their structures are above 200 feet in height or are in close proximity to an airport’s runway.² TCNS and the E-106 System advance the goal of the National Historic Preservation Act to protect historic properties, including Tribal religious and cultural sites. Specifically, TCNS provides a mechanism for communications facility notifiers (i.e., applicants seeking to build or collocate on a tower, building, or other structure³) to notify and communicate with Tribal Nations and Native Hawaiian Organizations regarding a proposed construction or collocation, and the E-106 System works in conjunction with TCNS to enable real-time information referral and communication among the Commission, communications facility notifiers, and State Historic Preservation Officers. Collectively, these systems provide an efficient and transparent means to accept, review, and take action on the Commission’s Wireless Radio Service applications.

4. The majority of applications filed in ULS today are electronic, as required by rule,⁴ but exceptions to mandatory electronic filing remain for the following services: (i) part 90 Private Land Mobile Radio services for shared spectrum, spectrum in the public safety pool below 746 MHz, and spectrum in the public safety allocation above 746 MHz, except those filed by FCC-certified frequency coordinators; (ii) part 97 Amateur Radio Service, except those filed by Volunteer Examination Coordinators; (iii) part 95 General Mobile Service and Personal Radio Service, excluding 218-219 MHz service; (iv) part 80 Maritime Services, excluding VHF 156-162 MHz Public Coast Stations; (v) part 87 Aviation Services; (vi) part 13 Commercial Radio Operators (individual applicants only); and (vii) certain part 101 licensees who also fall under the exempted groups.⁵ Similarly, the overwhelming majority of ASR applications⁶ are filed electronically; however, applicants have the choice to file manually or electronically.⁷ Pleadings related to applications in ULS and ASR, such as petitions to deny, may be filed electronically through a pleadings portal in ULS, but there is no mandatory electronic filing requirement.

¹ Wireless Radio Services are “All radio services authorized in parts 13, 20, 22, 24, 26, 27, 30, 74, 80, 87, 90, 95, 96, 97 and 101 of this chapter, whether commercial or private in nature.” 47 CFR § 1.907.

² *Amendments to Modernize and Clarify Part 17 of the Commission’s Rules Concerning Construction Marking and Lighting of Antenna Structures*, Report and Order, 29 FCC Rcd 9787, 9788 (2014).

³ For this purpose, an “applicant” is defined as a “Commission licensee, permittee, or registration holder, or an applicant or prospective applicant for a wireless or broadcast license, authorization or antenna structure registration, and the duly authorized agents, employees, and contractors of any such person or entity. See 47 CFR Part 1, App. C, Nationwide Programmatic Agreement Regarding the Section 106 National Historic Preservation Act Review Process, §II.A.2 (Nationwide Programmatic Agreement).

⁴ 47 CFR § 1.913(b).

⁵ 47 CFR §§ 1.913(d)(1)(i)-(vii).

⁶ FCC Form 854, available at <https://www.fcc.gov/wireless/support/antenna-structure-registration-asr-resources/antenna-structure-registration-asr-1>.

⁷ See *id.* See also 47 CFR § 1.913(d)(i)-(vii).

TCNS is an electronic-only system, so all interactions with it are electronic by design.⁸ While communications facility notifiers generally use TCNS as the vehicle to fulfill their obligation to identify and contact Tribal Nations and Native Hawaiian Organizations, they are not required to use it if a Tribe or NHO expressed a preference for being contacted in another manner.⁹ In addition, while communications facility notifiers can provide information to State Historic Preservation Officers via certain FCC Forms, there is no requirement that they use the E-106 system to submit these forms or otherwise file them electronically.¹⁰

5. While the Commission corresponds electronically with applicants and licensees in some instances, there remains a large amount of paper communication generated by ULS and its supporting systems. The relevant applications and FCC Forms provide an opportunity for, but do not require, users to provide an e-mail address as part of their contact information. The Wireless Telecommunications and Public Safety and Homeland Security Bureaus (the Bureaus) by practice send paper correspondence generated by these systems to applicants and licensees, such as copies of licenses, reminder letters, and other courtesy notices. The Bureaus send thousands of these letters via U.S. Postal Mail each year.

6. Last year, we issued a *Notice of Proposed Rulemaking (Notice)*¹¹ proposing to make all filings to ULS completely electronic, expand electronic filing and correspondence elements, and require applicants to provide an e-mail address on the FCC Forms related to these systems.¹² The *Notice* also sought comment on additional rule changes that would further expand the use of electronic filing and electronic service.¹³ We received a limited number of comments, the vast majority of which supported the Commission's efforts to finalize our transition to electronic interactions to and from ULS and its related systems.¹⁴

III. DISCUSSION

7. Finalizing the Commission's transition to an electronic-only ULS and ASR, and reducing the paper created by other systems, requires us to take several remaining steps. *First*, we remove the remaining exemptions to mandatory electronic filing in ULS and require electronic filing in the ASR System. *Second*, we require electronic filing of pleadings related to Wireless Radio Services licenses and applications in these systems and require electronic service where service of such pleadings is required. *Third*, we require that all applicants, licensees, and registrants in the Wireless Radio Services include at least one valid e-mail address on the relevant FCC Forms. *Fourth*, we shift from U.S. Postal Service to electronic delivery of correspondence generated from these systems to applicants, licensees, and registrants in the Wireless Radio Services. And *finally*, we set a transition deadline of six months for these changes to take effect.

⁸ See *FCC Announces Voluntary Tower Construction Notification System to Provide Indian Tribes, Native Hawaiian Organizations, and State Historic Preservation Officers with Early Notification of Proposed Tower Sites*, Public Notice, 19 FCC Rcd 1998 (2004) (*TCNS PN*).

⁹ See *TCNS PN*, 19 FCC Rcd 1998.

¹⁰ See *The Wireless Telecommunications Bureau Announces the Introduction of a Streamlined Process and Automated System to Expedite the Commission's Review of Proposed Construction Projects*, Public Notice, 23 FCC Rcd 13560 (WTB 2008) ("E-Section 106 is a voluntary system designed to save users time and resources by automating and expediting the exchange of information and correspondence in the Section 106 process.") (*E-106 PN*).

¹¹ *Completing the Transition to Electronic Filing, Licenses and Authorizations, and Correspondence in the Wireless Radio Services*, Notice of Proposed Rulemaking, 34 FCC Rcd 8397 (2019) (*Notice*).

¹² *Notice*, 34 FCC Rcd at 8399-05, paras. 5-25.

¹³ *Notice*, 34 FCC Rcd at 8401-02, paras. 13-16.

¹⁴ Parties that filed comments and reply comments in the proceeding are listed in Appendix B.

A. Electronic Filing

1. Electronic Filing in ULS

8. We find it in the public interest to eliminate the exemptions in section 1.913 of our rules that allow manual filings by applicants and licensees, and we instead mandate electronic filing for all Wireless Radio Services.¹⁵ This action furthers several longstanding Commission goals, including reducing regulatory burdens and environmental waste while streamlining our wireless services application process. It is also consistent with our Commission-wide efforts to digitize our systems and create efficient, user-friendly interactions with the agency.

9. In 1998, the Commission adopted mandatory electronic filing for most applications and related filings in ULS, but left exemptions in place for certain categories of users.¹⁶ The Commission recognized this class of filers primarily as “individuals, small businesses, or public agencies that may lack resources to convert quickly to electronic filing” and determined that was sufficient justification to carve out an exemption to the electronic filing requirement.¹⁷ It also noted its expectation that electronic filing would eventually become achievable for all filers, and that it “may extend mandatory electronic filing to any wireless service where [it] find[s] that electronic filing is both operationally feasible and cost-effective for licensees and applicants.”¹⁸

10. Today, the vast majority of ULS applications are filed electronically, and the remaining number of paper filings is on a downward trend. For example, in 2018, the Commission received approximately 425,000 total applications, with fewer than 5,000 of those applications paper filings, which is less than 2% of total applications.¹⁹ In 2019, the Commission received a total of 480,209 applications with only 3,443 paper applications, which is less than 1% of total applications.²⁰ In light of this reality, and the drastic changes in the last twenty years regarding the ubiquity of the Internet and increased personal computer access, we proposed in the *Notice* elimination of the remaining exemptions to mandatory electronic filing by applicants and licensees.²¹

11. Virtually all commenters agree that we should mandate electronic filing of Wireless Radio Services applications and eliminate all remaining exceptions. For example, EWA observes that most exempted users file electronically anyway due to prior frequency coordination requirements and that

¹⁵ 47 CFR § 1.913.

¹⁶ *Biennial Regulatory Review—Amendment of Parts 0, 1, 13, 22, 24, 26, 27, 80, 87, 90, 95, 97, and 101 of the Commission’s Rules to Facilitate the Development and Use of the Universal Licensing System in the Wireless Telecommunications Services, et al.*, Report and Order, 13 FCC Rcd 21027, 21040-43, paras. 21-25 (1998) (*ULS Report and Order*); 47 C.F.R. § 1.913(b). Wireless service applications in these exempted categories filed by frequency coordinators or other Commission-certified entities such as Amateur Radio volunteer examiner-coordinators (VECs), however, were required to file electronically, *ULS Report and Order*, 13 FCC Rcd at 21044, para. 28.

¹⁷ *ULS Report and Order*, 13 FCC Rcd at 21044, para. 27.

¹⁸ *Id.*

¹⁹ In 2018, the Commission received a total of 4,435 manually filed applications. Of the total number of applications filed manually, Land Mobile filed 1,853 applications; Amateur filed 1,528 applications; Commercial Operators filed 304 applications; Ship filed 169 applications; GMRS filed 137 applications; and all other groups filed less than 100 applications manually.

²⁰ In 2019, the Commission received a total of 3,443 manually filed applications. Of the total number of applications filed manually, Land Mobile filed 1,464 applications; Amateur filed 1,339 applications; Commercial Operator filed 214 applications manually; GMRS filed 115 applications manually; Ship filed 102 applications manually; and other groups filed less than 100 applications manually.

²¹ *Notice*, 34 FCC Rcd at 8399, para. 6.

electronic filing is more error-proof than preparing a paper application.²² NTCA argues that electronic filings will benefit both the Commission and applicants through the ability to catch most application errors during the electronic filing process prior to submission, which will result in the improved use of Commission resources and faster processing of applications.²³ We agree with these commenters that elimination of all exemptions to the mandatory electronic filing requirement will reduce errors, allowing for more efficient use of Commission resources.

12. Tellingly, very few commenters oppose mandated electronic filing. The few opposing commenters cite potential problems, such as hacking, unauthorized access to electronic accounts, or lack of broadband Internet service, but none provides examples of actual problems that have arisen with electronic filing.²⁴ Accordingly, we find the concerns about the reliability of electronic filing systems unfounded and at odds with the Commission's experience. ULS has supported millions of licenses and application filings for more than two decades, while securing licensee data and preventing unauthorized access by complying with government IT standards and best practices. In addition, most applicants either have Internet service or reasonable access to Internet service and the Commission has continually upgraded its technology to improve functionality. In the event a filer is unable to file an application electronically, the Commission's existing waiver standard remains the appropriate vehicle to seek relief.²⁵

13. ULS currently provides licensees and applicants electronic filing capability for the vast majority of applications in the Wireless Radio Services, but there are a few limited categories of submissions that ULS is unable to accept electronically. These categories are: (1) Special Temporary Authority (STA) applications in certain market-based services, (2) sublease applications, and (3) multi-step transactions. Many commenters have encouraged the Commission to develop an electronic process for these categories of applications.²⁶ The Wireless Telecommunications Bureau recently has implemented a solution that allows all such applications to be filed in the Commission's Electronic Comment Filing System (ECFS).²⁷ Thus, it is now possible for all applications in the Wireless Radio Services to be submitted electronically through one of the appropriate Commission e-filing systems.

2. Electronic Filing in the ASR System

14. We also require mandatory electronic filing of all applications in the ASR system. While nearly all applicants currently use the ASR system to electronically file for new registrations, modifications to existing structures, notifications of construction, and ownership changes, there is no Commission rule that requires electronic filing. Despite the lack of a mandate, today almost all filings are done electronically. In 2018, for example, the Commission received a total of 30,595 applications, and only 14 of those applications were filed manually, which was less than 0.05%. And in 2019, the Commission received a total of 33,615 applications, and only 9 of those applications were filed manually,

²² See EWA Comments at 2, 3.

²³ See NTCA Reply Comments at 2.

²⁴ See, e.g., Charles Adkins Comments at 1; Blooston Comments at 2.

²⁵ 47 CFR § 1.925(b)(3) (grant of a waiver request requires a showing that “the underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative”).

²⁶ See Verizon Comments at 3 (suggesting the Commission should create a “new webform to accept non-standard applications filed as PDF forms). See also AT&T Reply Comments at 3; NTCA Reply Comments at 3 (both supporting Verizon's proposal).

²⁷ See Electronic Filing Now Available for All License Applications in the Wireless Radio Services, Public Notice, DA 20-463 (WTB rel. Apr. 29, 2020).

which was also less than 0.05%. The *Notice* sought comment on whether there were any limited circumstances in which paper filings should still be allowed.²⁸

15. We believe there are many benefits to relying exclusively on electronic filing in the ASR system. Electronic submission is faster and less burdensome for applicants, less prone to errors resulting from processing of paper submissions, and allows applicants to implement the two-step environmental notification process for the registration of antenna structures more easily.²⁹ Similarly, if a proposed antenna structure may have a significant environmental effect, as defined by sections 1.1307 of the rules,³⁰ which requires an environmental assessment to be submitted with the application, electronic submission of that environmental assessment significantly streamlines the review process. In addition, electronic filing better enables interested parties to monitor new filings and reduces burdens and opportunity for error associated with paper processes.

16. All commenters support the use of mandatory electronic filing in ASR.³¹ American Tower, for example, maintains that electronic filings provide near instantaneous record submission that increases operational efficiency for businesses.³² We agree that electronic filing in ASR is efficient, cost-effective, and reduces waste by eliminating unnecessary paper processes. Combined with the fact that the Commission already receives an overwhelming majority of ASR submissions electronically today, it is evident that a paper filing option is unnecessary. Accordingly, we revise the Commission's rules to specify mandatory electronic filing in the ASR system.³³

3. Reducing Paper Created by TCNS and E-106

17. The Commission developed TCNS and E-106 as tools for meeting its obligations under the National Historic Preservation Act.³⁴ The Commission delegates the responsibility to licensees and applicants for initiating the Section 106 review process for the proposed facilities and for identifying and assessing potential adverse effects on historic properties. This process requires the Commission to consult with the appropriate State Historic Preservation Officers and Tribal Nations that have expressed an interest in the area of potential effect of a proposed project. Tribal Historic Preservation Officers may act in lieu of State Historic Preservation Officers for projects on Tribal lands. TCNS provides Tribes with preliminary electronic notification of proposed tower projects that potentially could impact historic properties of religious and cultural significance to Tribal Nations and Native Hawaiian Organizations.³⁵

²⁸ *Notice*, 34 FCC Rcd at 8400, para. 8.

²⁹ Consistent with the Commission's obligations under federal environmental statutes, Applicants submitting applications in ASR are required to initiate local and national notice to ensure that environmental effects of proposed communications towers, including their effects on migratory birds, are fully considered prior to construction.

³⁰ 47 CFR §1.1307(a)(b).

³¹ *See, e.g.*, American Tower Corp. Reply Comments at 2; EWA Comments at 3; NTCA Reply Comments at 2.

³² *See* American Tower Corp. Reply Comments at 2.

³³ 47 CFR §§ 17.4-17.5, *see* App. A, Final Rules.

³⁴ *See, e.g.*, *TCNS PN*, 19 FCC Rcd 1998; *E-106 PN*, 23 FCC Rcd 13650. Section 106 of the National Historic Preservation Act requires federal agencies to "take into account" the effects of their "federal or federally assisted undertaking[s]" on historic properties. The regulations of the Advisory Council on Historic Preservation set out the overarching Section 106 procedures for federal agencies and State and Tribal Historic Preservation Officers, and establish participation requirements for other "consulting parties." Pursuant to those regulations, the Commission has adopted specific rules governing its Section 106 review of undertakings.

³⁵ The National Programmatic Agreement requires applicants to gather information from appropriate Tribal Nations or Native Hawaiian Organizations to assist in the identification of historic properties of religious and cultural significance to them and that may be affected by the tower project within the areas of potential effects for direct and visual effects.

The E-106 System supports TCNS by allowing applicants to electronically submit the forms and cultural resources reports necessary for participating State Historic Preservation Officers, Tribal Historic Preservation Officers and consulting parties to complete the review process, as provided for in the Commission's Nationwide Programmatic Agreement.

18. We find that the existing TCNS and E-106 electronic filing systems, although voluntary, already automate and expedite the exchange of information and correspondence. The development of the existing TCNS and E-106 electronic systems was born out of efforts to streamline and facilitate the efficient exchange of documents and correspondence among applicants, reviewers, and other interested parties, with careful consideration of the requirements of Section 106 of the National Historic Preservation Act³⁶ and the regulations of the Advisory Council on Historic Preservation,³⁷ as further implemented by the Nationwide Programmatic Agreement.³⁸ In an effort to maximize the numerous benefits associated with electronic communications, however, we find that we can further reduce paperwork associated with these electronic systems.

19. Accordingly, for State Historic Preservation Officers, we eliminate the paper mailing option for the Weekly Notice of Tower Construction Notification System Filings and will now deliver these courtesy notifications solely by e-mail. With respect to E-106, we eliminate the courtesy paper mailing option of the Informational Notice of Section 106 Filings that summarizes proposed projects for applicants, consultants, and State Historic Preservation Officers that choose to use the E-106 system to review FCC Forms 620 and 621 electronically. This notice will now be delivered solely by e-mail, except in instances where Tribes or Native Hawaiian Organizations have requested paper notification preferences.³⁹

20. Collectively these changes will reduce the paperwork generated as a result of interaction with the TCNS and E-106 systems and will promote the use of electronic communications. This will enable greater efficiency by reducing the time required to receive paper communications and reducing costs and resources associated with paper letters. Maximizing electronic communication within the TCNS and E-106 systems will further the goal of automating and expediting the exchange of documentation and correspondence required by the NPA among applicants, reviewers and other interested parties.⁴⁰

³⁶ *Changes and Enhancements to the FCC's Tower Construction Notification System (TCNS) for Indian Tribes, Native Hawaiian Organizations and the Communications Industry*, Public Notice, 21 FCC Rcd 2950 (WTB & CGB 2006); *Public Demonstration of the New Voluntary Electronic Section 106 Filing System (E-106) Will Take Place on Sept. 15, 2008*, Public Notice, 23 FCC Rcd 13273 (WTB 2008).

³⁷ 36 CFR §§ 800.1-800.16.

³⁸ The FCC conducts National Historic Preservation Act Section 106 review of wireless tower and antenna undertakings in accordance with the Section 106 implementing regulations, 36 CFR part 800, as modified and supplemented by two Nationwide Programmatic Agreements in accordance with 36 CFR § 800.14(b).

³⁹ Tribal Nations, Native Hawaiian Organizations, and Tribal Historic Preservation Officers' notification preferences designated in TCNS will continue to govern how they receive E-106 system notifications. Recognizing the government-to-government relationship between Tribal Nations and the Commission, we decline to make any changes to the TCNS and E-106 systems options for Tribal Nations and Native Hawaiian Organizations at this time. Instead, we anticipate that the agency will conduct outreach with Tribal Nations and Native Hawaiian Organizations to develop and consider additional changes that would advance the Commission's goals of reducing paper filings, making TCNS and E-106 systems more accessible to Tribal Nations and Native Hawaiian Organizations, and streamlining the Section 106 review process.

⁴⁰ The Wireless Telecommunications Bureau is separately seeking comment on revisions to Forms 620 and 621. See *Wireless Telecommunications Bureau Seeks Comment on Revisions to Forms 620 and 621*, Public Notice, WT Docket No. 20-39, 35 FCC Rcd 917 (WTB 2020).

B. E-Pleadings and E-Service for Wireless Radio Services Applications and Licenses

21. As proposed in the *Notice*, we adopt rules mandating electronic filing for all pleadings related to ULS and ASR licenses and applications and requiring electronic service of those pleadings where service is mandated.⁴¹ We find that these rule changes streamline our electronic filing requirements and provide several benefits to our systems' users and to the Commission.

22. *Electronic Submission of Pleadings.* In the *Notice*, we sought comment on whether electronic submission of ULS and ASR-related pleadings—such as petitions to deny, petitions for reconsideration, and applications for review—should be mandatory, to the extent they are not already.⁴² Today, the non-docketed pleadings module on the ULS homepage allows for electronic submission of most ULS pleadings and ASR Environmental Notice pleadings, but such electronic submission is currently optional.⁴³ Pleadings filed through the non-docketed pleadings module in ULS automatically attach to the ULS application, ULS license, or ASR application. All other ASR pleadings are filed by e-mail or letter and are attached manually to the corresponding ASR application by Commission staff.

23. We find that requiring electronic filing of pleadings will provide several benefits to wireless licensees, applicants, and stakeholders, including cost savings, convenience, and speed. Electronic filing reduces paper, printing, and delivery expenses. It also is more convenient: users can file documents nearly 24 hours a day, 7 days a week through the non-docketed pleadings module on the ULS homepage. In addition, electronic filings are transmitted nearly instantaneously, which facilitates faster communications with the Commission and makes those pleadings simultaneously available to other interested parties. Electronic filing also allows users to create a digital record and establish proof of delivery.

24. The record demonstrates that the vast majority of our systems' users have the resources to submit and receive documents electronically, and we find that it is neither burdensome nor cost-prohibitive to mandate electronic filing of pleadings at this time.⁴⁴ As commenters note, the Commission's rules already allow electronic pleading and electronic service.⁴⁵ And today, approximately 98% of pleadings, including ULS pleadings and ASR Environmental Notice pleadings, are filed electronically through the non-docketed pleadings module on the ULS homepage.

25. Mandating electronic filing of pleadings not only aligns with Commission efforts to transition our systems to electronic interactions, but also is consistent with electronic filing mechanisms adopted by a growing number of judicial systems and federal agencies. For example, the Supreme Court of the United States requires that "all filers who are represented by counsel must submit documents to the Court's electronic filing system,"⁴⁶ and the Federal Rules of Civil Procedure have established electronic filing as the default for represented persons.⁴⁷ Our transition is thus timely and appropriate, and

⁴¹ *Notice*, 34 FCC Rcd at 8400, para. 10.

⁴² *Notice*, 34 FCC Rcd at 8400, para. 10.

⁴³ See 47 CFR § 1.49(e) ("Petitions, pleadings, and other documents associated with licensing matters in the Wireless Radio Services may be filed electronically in ULS."). The non-docketed pleadings module is accessed through the ULS homepage and not through the ULS portal.

⁴⁴ NTCA Reply Comments at 1. EWA Comments at 3, Verizon Comments at 3.

⁴⁵ See, e.g., generally, AT&T Comments; EWA Comments; NTCA Reply Comments; Verizon Comments.

⁴⁶ Rule 29(7) of the Supreme Court of the United States ("In addition to the filing requirements set forth in this Rule, all filers who are represented by counsel must submit documents to the Court's electronic filing system in conformity with the "Guidelines for the Submission of Documents to the Supreme Court's Electronic Filing System" issued by the Clerk.").

⁴⁷ Fed. R. Civ. P. 5(d)(3)(A) ("A person represented by an attorney must file electronically, unless nonelectronic filing is allowed by the court for good cause or is allowed or required by local rule.").

consistent with government-wide efforts to ensure that pleadings are submitted and accessible electronically.

26. To effectuate these changes, we revise various Part 1 rules. Some of these rules are specific to pleadings related to Wireless Radio Services,⁴⁸ while others are more generally applicable to pleadings filed in any Commission proceeding.⁴⁹ With respect to the latter, we revise these rules only to the extent they relate to pleadings for Wireless Radio Service applications.

27. Consistent with changes we make for electronic pleadings, we also require interested parties to submit electronically petitions, complaints, and requests for environmental review of proposed wireless communications facilities filed in accordance with the Commission's NEPA rules.⁵⁰ While we are confident that the vast majority of participants in the NEPA review process will have the capability to participate electronically, we recognize that some members of the public may lack Internet access. We believe that the Commission's waiver process is sufficient to provide relief from the requirement to electronically file such documents where parties are unable to file electronically or would be otherwise unreasonably burdened by such a requirement. Parties seeking such a waiver should include as part of their paper submission a request for waiver of the electronic filing requirement, and send that submission to the appropriate mailing address for the Commission Secretary. Parties should explain in their waiver requests why they are unable to file electronically or why it would be unreasonably burdensome for them to do so. We have added a general rule to our NEPA rules (new section 1.1304(b)) stating that the Commission will waive the electronic filing and service requirements for any of our NEPA procedures for parties that make this showing in a waiver request. The rule also allows parties to seek a waiver—with the same explanation—of NEPA requirements to serve electronically comments or other documents on other parties. There is no fee or specified form for doing this. Information regarding this waiver process will be included on the Commission's NEPA website and as part of any outreach material provided to Tribal Nations.

28. *Electronic Service.*—The *Notice* also asked whether the Commission's service requirements should be revised to permit electronic service of pleadings where service is required.⁵¹ Currently, the Commission's rules require such service in paper form, unless parties agree otherwise.⁵² Consistent with our decision to mandate electronic filings of pleadings, we adopt rules mandating electronic service, where service is required. Specifically, we require all petitions, pleadings, and other documents associated with licensing matters in the Wireless Radio Services to be served electronically upon a party, his attorney, or other duly constituted agent to the e-mail address listed in ULS. Given that all parties will be required to provide valid e-mail addresses, service by e-mail to such an address may be considered complete upon sending. A party that has failed to provide a valid e-mail address may not object to the adequacy of service. We revise various Part 1 rules to effectuate these changes.

29. The e-service rule changes we adopt today further the Commission's efforts to implement modern and efficient electronic communications methods. Electronic service provides several benefits, including greater efficiencies and significant cost savings. Unlike traditional service of process, which

⁴⁸ See, e.g., 47 CFR § 1.939 (establishing rules for pleadings associated with Wireless Radio Service applications and proceedings).

⁴⁹ See, e.g., 47 CFR §§ 1.45, 1.49, 1.51 (establishing rules for pleadings filed in Commission proceedings).

⁵⁰ 47 CFR §§ 1.1307(c), 17.4(c)(5); see also 40 CFR § 1500, *et seq.* As discussed above, this change does not affect the ability of Tribes or State Historic Preservation Officers to require the non-electronic submission of applications for review of proposed undertakings.

⁵¹ *Notice*, 34 FCC Rcd at 8400-01, para. 10.

⁵² See 47 CFR § 1.47(d) (“Documents that are required to be served must be served in paper form, even if documents are filed in electronic form with the Commission, unless the party to be served agrees to accept service in some other form.”).

can be effectuated only during limited business hours, electronic service can be made at nearly any hour and affords parties enhanced flexibility and greater convenience.

30. Moreover, electronic delivery is nearly instantaneous, which enables faster communications and more efficient transactions. Verizon explains that paper service delays an applicant's receipt of pleadings and that electronic service "will allow applicants and filers to more quickly and efficiently receive, consider, and respond to such pleadings without imposing a hardship on the vast majority of filers."⁵³ While Blooston claims that the Commission's pleading cycles are "relatively quick and a missed service copy that was sent via email could . . . prejudic[e] a party's rights,"⁵⁴ we find that short pleading cycles underscore the value in adopting electronic service. The Commission's rules already permit electronic service,⁵⁵ and we find that mandating electronic service will not pose an unreasonable burden on the majority of filers.⁵⁶ A party that has participated in a proceeding will be able to monitor all filings related to the application or license in ULS, which attaches instantaneously to the online record and reduces the risk of missing a service copy sent by e-mail. This feature always has been available and will continue to be available.

C. E-Mail Address for Applications, Registrations, and Notifications

31. We find it in the public interest to require the inclusion of e-mail addresses for all new ULS and ASR applicants and all existing ULS licensees and ASR registrants that modify, renew, or otherwise touch their existing licenses and registrations. We encourage existing licensees and tower owners to update their licenses and registrations with an email address in order to receive electronically courtesy letters from the Commission going forward. This approach is consistent with the Commission's efforts to modernize its legacy filing, communications, and information retention systems⁵⁷ and is necessary to effectuate the rules we adopt today requiring electronic delivery of all correspondence between the Commission and ULS and ASR applicants and registrants.⁵⁸

32. It has been optional—not mandatory—for applicants, licensees, and ASR registrants to provide an e-mail address on the relevant FCC Forms submitted to ULS and the ASR System. Despite this, most already furnish voluntarily an e-mail address on the appropriate FCC Form. In fact, through this optional process, the Commission has an e-mail address on file for roughly 83% of the more than 2.2 million active Wireless Radio Service licenses and 93% of granted and constructed antenna registrations.⁵⁹ In the *Notice*, we proposed to require inclusion of an e-mail address going forward to

⁵³ Verizon Comments at 4.

⁵⁴ Blooston Comments at 7.

⁵⁵ See 47 CFR § 1.47.

⁵⁶ As with the other electronic filing provisions we adopt today, parties that are unable to use electronic service can file a request for waiver of the applicable rule.

⁵⁷ See, e.g., *Wireless Telecommunications Bureau Implements Enhancements to the Commission's Universal Licensing System and Antenna Structure Registration System and Adopts Final Procedures for Providing Access to Official Electronic Authorizations*, Public Notice, 29 FCC Rcd 15252 (WTB 2014) (*2014 Electronic Authorization Public Notice*) (providing electronic access to official ULS and ASR authorizations); *Wireless Telecommunications Bureau and Public Safety and Homeland Security Bureau Announce Elimination of Certain Paper Notices as an Initial Step Toward Providing Electronic Access to Correspondence Notices Currently Generated by the Commission's Universal Licensing System and Antenna Structure Registration System*, Public Notice, 31 FCC Rcd 9816 (WTB and PSHSB 2016) (*2016 Electronic Correspondence Public Notice*) (eliminating several categories of ULS and ASR correspondence).

⁵⁸ American Tower Corp. Reply Comments at 4 (explaining that "a transition to mandatory electronic filing will require reliable, up-to-date electronic contact information").

⁵⁹ In ULS, 1.86 million of 2.25 million licenses already have an e-mail addresses, which includes 1.21 million licensee e-mail addresses, 163,350 contact e-mail addresses, and 499,636 with both licensee and contact e-mail

(continued....)

close this gap and to finalize our transition to electronic correspondence and outgoing notices from these systems.⁶⁰

33. We find that requiring an e-mail address on applications is appropriate and timely given widespread technological developments that have occurred since implementation of ULS.⁶¹ Indeed, the record reflects that the vast majority of businesses today maintain e-mail addresses and correspond or otherwise operate electronically.⁶² We agree with EWA that e-mail has become “equivalent to or perhaps even more reliable and relevant than a mailing address.”⁶³

34. Having valid, up-to-date e-mail addresses on file will ensure that the Commission can shift its current process of delivering correspondence generated by ULS and the ASR System from postal mail to e-mail. As NTCA notes, a mandatory e-mail requirement “will allow for easier, more immediate communication with parties by the Commission and by parties seeking to serve copies of pleadings on applicants electronically.”⁶⁴

35. We also find that requiring an e-mail address is not unduly burdensome for applicants and licensees. Rather, this action reflects a practice already adopted by the vast majority of our system’s users and would otherwise pose a minor change in practices for the few filers who have not yet adopted such practices.⁶⁵ While some commenters urge the Commission to adopt exemptions for certain classes of filers,⁶⁶ we find that requiring e-mail addresses is necessary to effectuate the rules we adopt today and is reasonable for the vast majority of our system’s users. Moreover, the Commission’s standard waiver process is sufficient to handle the limited instances where exemptions may be warranted.⁶⁷

36. As proposed in the *Notice*, once an e-mail address is required on the relevant FCC Forms, the Commission may dismiss as defective an application if an e-mail address is not included.⁶⁸ Section 1.934 of the Commission’s rules permits dismissal of an application as defective if it is “incomplete with respect to the required answers to questions.”⁶⁹ Thus once inclusion of an e-mail address is mandatory under our rules, it will become a required application component.

37. *Related Rule Changes.*—In the *Notice*, the Commission sought comment on whether additional, related rule changes were warranted to effectuate a mandatory e-mail requirement.⁷⁰ For instance, section 1.923(i) of the Commission’s rules requires applications to specify a U.S. Postal Mail

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addresses. In ASR, 135,792 of 146,163 registrations have e-mail addresses, of which 8,347 are registrant e-mail addresses, 5,204 are contact e-mail addresses, and 122,241 are both.

⁶⁰ *Notice*, 34 FCC Rcd at 8402, para. 15.

⁶¹ Blooston Comments at 1 (noting the substantial technological changes that have occurred over the past 20 years since implementation of ULS).

⁶² *See, e.g.*, American Tower Corp. Reply Comments; EWA Comments; Verizon Comments.

⁶³ EWA Comments at 4-5.

⁶⁴ NTCA Reply Comments at 7.

⁶⁵ *See, e.g.*, American Tower Corp. Reply Comments at 2, 4-5; AT&T Comments; EWA Comments at 4-5; NTCA Reply Comments at 7; Verizon Comments at 4-5.

⁶⁶ *See* Blooston Comments; Robert Kubinski Comments (supporting an exemption for Part 97 amateur radio operators).

⁶⁷ 47 CFR §§ 1.3, 1.925; *see* EWA Comments at 7.

⁶⁸ *Notice*, 34 FCC Rcd at 8402, para. 16.

⁶⁹ 47 CFR § 1.934(a)(2)(d).

⁷⁰ *Notice*, 34 FCC Rcd at 8402, para. 16.

address,⁷¹ and the *Notice* proposed to amend this rule section to require that applications also specify an e-mail address.⁷² The *Notice* also sought comment alternatively on whether to remove section 1.923(i) altogether.⁷³ We find that we should amend section 1.923(i) to require the inclusion of an e-mail address on all applications. We find that amending section 1.923(i) aligns with the rules we adopt today and provides greater clarity and consistency regarding required application components.

38. We also amend section 1.5 of the Commission's rules, which requires licensees and applicants for a license to provide the Commission with an address where the Commission can direct correspondence.⁷⁴ Specifically, we revise this rule to also require inclusion of an e-mail address where the Commission can direct correspondence with regard to applicants and licensees in the wireless radio services.

39. The Commission also sought comment on whether it should add "change of e-mail address" to the non-exhaustive list of minor modifications in section 1.929(k), allowing applicants, licensees, and registrants to make such changes without prior Commission approval.⁷⁵ We find it in the public interest and necessary to revise section 1.929(k)'s list of minor modifications to ensure that applicants, licensees, and registrants keep their e-mail addresses current. We agree with American Tower Corporation that this change is "consistent with current law because an e-mail address is directly analogous to the classes of information already listed in section 1.929(k), such as addresses and telephone numbers."⁷⁶

40. *Keeping E-mail Addresses Updated.*—In the *Notice*, we sought comment on ways to ensure that applicants, licensees, and registrants maintain up-to-date e-mail addresses.⁷⁷ For example, we asked whether the Commission's existing rules for keeping contact information current would be sufficient to encompass e-mail addresses.⁷⁸ Section 1.5 of the Commission's rules, as amended here, requires each licensee to furnish an e-mail address to be used for correspondence with the licensee, and section 1.65 of the Commission's rules requires applicants to ensure "the continuing accuracy and completeness of the information furnished in a pending application."⁷⁹ Section 1.947, as amended, further requires that licensees notify the Commission within 30 days of updating an email address of record. We find these sections are sufficient to ensure applicants and licensees keep their e-mails up to date. Just as applicants and licensees are obligated to update their mailing addresses when that information changes, they will likewise be required to update their e-mail address under this rule to ensure that they receive electronic correspondence from the Commission.⁸⁰ Although section 1.947 of the rules allows minor modifications to be made up to 30 days after implementing such changes, any notice sent to the e-mail address currently on file will be deemed to have been served.⁸¹

⁷¹ 47 CFR § 1.923(i).

⁷² *Notice*, 34 FCC Rcd at 8402, para. 16.

⁷³ *Notice*, 34 FCC Rcd at 8402, para. 16.

⁷⁴ 47 CFR § 1.5.

⁷⁵ 47 CFR § 1.929(k); *Notice*, 34 FCC Rcd at 8402-03, para. 17.

⁷⁶ American Tower Corp. Reply Comments at 4-5.

⁷⁷ *Notice*, 34 FCC Rcd at 8402-03, para. 17.

⁷⁸ *Notice*, 34 FCC Rcd at 8402-03, para. 17.

⁷⁹ 47 CFR § 1.65(a).

⁸⁰ See EWA Comments at 5.

⁸¹ See *infra* Appendix A, §§ 1.5, 1.923.

41. *Privacy Issues.*—The *Notice* sought comment on possible privacy issues related to the collection of email addresses and asked whether e-mail addresses provided to ULS should continue to be made publicly available.⁸² While two commenters raise privacy concerns related to the e-mail requirement,⁸³ e-mail addresses provided to ULS have always been publicly available, and users have not expressed privacy issues related to this practice. EWA maintains that it is “not aware that its members who include e-mail addresses on their applications have experienced problems of any significance with regard to unwanted solicitations or other communications.”⁸⁴ EWA explains that most such solicitations continue to be delivered to its members’ mailing addresses through USPS.⁸⁵ Moreover, to the extent privacy concerns remain, users may choose to establish an e-mail address specifically for FCC correspondence, as some commenters suggest.⁸⁶

42. *Administrative Update for Existing Licensees.*—To increase the number of e-mail addresses on file and expand the Commission’s use of electronic correspondence, we encourage existing licensees and tower owners to complete administrative updates to existing licenses and registrations in order to receive courtesy letters from the Commission. Currently, the Commission prints and mails more than 61,403 hard copy courtesy letters a year, such as letters reminding licensees of important dates like renewal and construction deadlines. Last year, the Commission printed and mailed 34,997 renewal reminders, 18,392 cancellation letters, 7,842 ASR and ULS construction reminders, and 172 consummation reminders. With the rules we adopt today, courtesy letters will only be sent electronically to licensees and tower owners with e-mail addresses on file; those without e-mail addresses on file will not receive any courtesy letters. Licensees and tower owners seeking to receive such courtesy letters should therefore complete administrative updates to their existing licenses and registrations to continue receiving such correspondence. Beyond courtesy letters, we also find that encouraging licensees and tower owners to update their existing licenses and registrations will facilitate the Commission’s transition to electronic correspondence more broadly. We note that administrative updates do not have an associated fee, and licensees can provide an update for all licenses/applications in one update. In other words, we do not anticipate that completing an administrative update will be onerous or timely for the vast majority of filers.

D. Electronic Notices, Correspondence, and Alerts

43. By this *Report and Order*, the Commission adopts rules mandating electronic delivery for all ULS and ASR compulsory and courtesy correspondence and eliminating the ability to request the Commission to mail hard copies of authorization and letters. We find it in the public interest to transition to electronic correspondence, which reduces regulatory burdens and environmental waste and makes interactions with the Commission more accessible and efficient. Mandating e-correspondence and eliminating the ability to request that Bureaus mail hard copies of authorizations produces several benefits with no offsetting costs, given that users can access and download their official authorizations, leases, registrations, and all related correspondence from the ULS and ASR System at any time.⁸⁷

44. The Commission already has taken significant steps to transition its systems from paper to electronic, and the rules we adopt today build upon these efforts. In 2014 and 2016, the Bureaus adopted procedures that reduced the amount of paper correspondence generated by the ULS and ASR

⁸² *Notice*, 34 FCC Rcd at 8402-03, para. 17.

⁸³ See generally Charles P. Adkins Comments; Victor Magana Comments.

⁸⁴ EWA Comments at 5.

⁸⁵ See EWA Comments at 5.

⁸⁶ See EWA Comments at 5; NTCA Reply Comments at 6.

⁸⁷ We note that we eliminate both the opt-in feature for paper authorizations and the duplicate license feature in ULS.

System. The Bureaus converted to official electronic records for authorizations and mailed hard copies of such authorizations only when an entity “opted in,”⁸⁸ and they eliminated several categories of notices generated by these systems and sent to users through the U.S. Postal Service.⁸⁹ In adopting these practices, the Bureaus cited several benefits to electronic correspondence, including saving money in terms of staff resources, paper supplies, and mailing costs, and eliminating the risk of notices getting lost or damaged in delivery.⁹⁰

45. Despite these efforts, the Bureaus in 2019 still printed and mailed 145,974 total letters, including: 36,151 courtesy letters; 20,278 return letters; 10,140 ASR ownership change letters; 9,718 registration letters; 7,640 lease letters; and 644 termination letters. Even though official copies of licenses are available and may be downloaded through ULS at any time, the Bureaus also mail thousands of authorizations out each year in response to opt in requests (56,317 in 2019 alone).

46. The rules we adopt today are informed by Federal Government directives and Commission policies endorsing the transition to electronic communications. The Office of Management and Budget’s 2018 Plan, *Delivering Government Solutions in the 21st Century*, aimed to “[t]ransition Federal agencies’ business processes and recordkeeping to a fully electronic environment.”⁹¹ And in 2014, the FCC Staff Working Group’s *Report on Process Reform* recommended that licensing Bureaus eliminate paper copies of licenses to the extent permitted by federal records retention requirements.⁹²

47. The Commission’s previous actions transitioning to e-correspondence produced several benefits, which we expand upon today by shifting from mail to electronic delivery of correspondence generated by ULS and the ASR system. *First*, given that most businesses today maintain e-mail addresses and operate electronically, we find that shifting to electronic correspondence is timely and reasonable. As American Tower Corporation explains, “[c]onducting business electronically is ubiquitous in almost every industry and government,” and encourages the Commission to take actions necessary to “meet the challenges of an increasingly demanding virtual world.”⁹³ Commenters note that technological developments have occurred since adoption of ULS, and urge the Commission to adopt rules to account for these changes.⁹⁴

48. *Second*, e-correspondence reduces costs and increases efficiency.⁹⁵ Most businesses operate electronically, and electronic correspondence ensures a streamlined and efficient process. As Verizon notes, “[p]aper notices are also difficult to incorporate into any electronic systems that applicants

⁸⁸ See 2014 *Electronic Authorization Public Notice*, 29 FCC Rcd at 15258-59.

⁸⁹ See 2016 *Electronic Correspondence Public Notice*, 31 FCC Rcd at 9816-17 (eliminating paper correspondence notices that provided information about Bureau actions that did not require a response from a system user and the information from those notices was available by other means in the ULS or ASR System).

⁹⁰ See 2016 *Electronic Correspondence Public Notice*, 31 FCC Rcd at 9819.

⁹¹ See Office of Management and Budget, *Delivering Government Solutions in the 21st Century* at 18, Office of Management and Budget, page 18, <https://www.whitehouse.gov/wp-content/uploads/2018/06/Government-Reform-and-Reorg-Plan.pdf>.

⁹² FCC Staff Working Group, *Report on FCC Process Reform Rec. 2.6*, at 17 (Feb. 14, 2014).

⁹³ American Tower Corp. Reply Comments at 2, 6.

⁹⁴ See generally American Tower Corp. Reply Comments; AT&T Comments; Blooston Comments at 1 (appreciating the Commission’s efforts to modernize its licensing systems, given the substantial technological changes that have occurred since implementation of ULS); EWA Comments; Jim Gerke Comments (stating that the Commission’s proposal to transition to electronic is “long overdue”); Robert F. Olszewski, Jr. Comments.

⁹⁵ See generally American Tower Corp. Reply Comments; AT&T Comments at 1; EWA Comments; Verizon Comments at 4.

may use for licensing compliance and application monitoring.”⁹⁶ American Tower explains that “[e]lectronic communications ease the administrative burden that accompanies traditional, non-electronic recordkeeping and allows for the creation of a more robust record for each transaction at a lower cost.”⁹⁷ EWA agrees that “[e]lectronic communications between the FCC and its constituents should be the standard in the third decade of the 21st century.”⁹⁸

49. *Third*, we find it in the public interest to replace our traditional physical mailing processes with less expensive electronic alternatives to reduce the Commission’s expenses. Commenters agree that the rules we adopt today will allow the Commission to make better use of its resources and reduce its expenses.⁹⁹ As Verizon explains, “the manual paper process not only imposes significant costs on the Commission, but also on applicants and on the environment.”¹⁰⁰ The Bureau’s previous actions to reduce the amount of paper correspondence generated by the ULS and ASR System did, in fact, reduce staff resources, paper supplies, and mailing costs.¹⁰¹

50. *Fourth*, e-correspondence enables faster communications, which generates significant efficiencies. Correspondence sent by physical mail is inherently subject to delays. As Verizon explains, applicants that receive paper notices typically receive them at a central mail facility and “it can take days (or longer) for a notice to make its way to the appropriate employee for handling.”¹⁰² By contrast, e-mails are sent nearly instantaneously.¹⁰³ Verizon explains that electronic delivery of these notices and letters will allow applicants to “immediately receive and then, if necessary, route the notice to the appropriate employee so they can quickly and appropriately respond to the FCC communication.”¹⁰⁴

51. *Fifth*, we find that e-mail is an expedient and reliable form of communication. As previously mentioned, e-mails *are* delivered nearly instantaneously; e-correspondence therefore is more likely than physical mail to be delivered in a timely manner.¹⁰⁵ Contrary to claims by one commenter,¹⁰⁶ automated entry features on e-mail platforms offer the benefit of automatically correcting and saving verified addresses, which reduces the risk of mis-delivery due to a misspelled address in the electronic context. Typographical errors due to human error are no more likely to result in electronic mailing than in physical mailing contexts.

52. Blooston raises the concern that, even if an e-mail is delivered to a correct address, the message may be sent to a recipient who is “unavailable,” “no-longer employed by the organization,” or

⁹⁶ Verizon Comments at 4.

⁹⁷ American Tower Corp. Reply Comments at 2.

⁹⁸ EWA Comments at 7.

⁹⁹ See AT&T Comments at 2; American Tower Corp. Reply Comments; Blooston Comments at 3; EWA Comments at 5; Robert F. Olszowski, Jr. Comments; Verizon Comments at 1, 4.

¹⁰⁰ Verizon Comments at 4.

¹⁰¹ See *2016 Electronic Correspondence Public Notice*, 31 FCC Rcd at 9819.

¹⁰² Verizon Comments at 4.

¹⁰³ As American Tower Corporation notes, electronic communications are “near-instantaneous,” which “increase[s] operational efficiency for businesses and individuals alike.” American Tower Corp. Reply at 2. See also Blooston Comments at 4 (stating that electronic communications are instantaneous with minimal cost).

¹⁰⁴ Verizon Comments at 4.

¹⁰⁵ American Tower Corp. Reply Comments at 2; Blooston Comments at 5; Verizon Comments at 1, 4 (explaining that, because physical mail is typically sent to a central mail facility, “it can take days (or longer) for a notice to make its way to the appropriate employee for handling.”)

¹⁰⁶ See Blooston Comments at 4-5.

“out of office.”¹⁰⁷ While we anticipate that most businesses today have policies for handling e-mails of a recently terminated employee, section 1.5(b) of the Commission’s rules requires that licensees and applicants adopt practices to ensure that Commission documents and correspondence will promptly reach them or any person authorized by them to act on their behalf.¹⁰⁸ For instance, entities may establish or designate e-mail addresses to receive correspondence from the Commission, which can be accessed by any responsible employee at the company.¹⁰⁹ As NTCA explains, “[a] generic e-mail address could be accessible to multiple people within an organization to ensure that if one employee is out of the office or leaves the company, the correspondence can still be accessed, while also not revealing a specific employee’s e-mail address.”¹¹⁰ In addition, ULS already allows applicants to provide two e-mail addresses – one for the licensee and one for a contact representative.

53. Only Blooston supports physical mailing for certain official correspondence, claiming that the Commission’s use of commercial overnight delivery for correspondence in the auction context should inform the Wireless Telecommunications Bureau’s decisions regarding wireless licensing practices. We disagree. We have analyzed the wireless licensing systems and find that the approach we adopt is appropriate given the nature of the correspondence in the wireless licensing context and the specific needs in licensing wireless spectrum, which are distinct in several respects from the particular needs in conducting a spectrum auction. Further, we find that Blooston’s reasoning is misguided. For example, contrary to Blooston’s claims, the Commission uses commercial overnight delivery for auction communications and materials for several reasons, including that they contain non-public, auction-related information and because authentication tokens necessary to bid in auctions require physical delivery. The correspondence subject to this proceeding, by contrast, contains only publicly available information and therefore does not justify the continued use of physical delivery of paper documents. Moreover, while NTCA argues that users should have the option of choosing whether to receive electronic or paper delivery of communications,¹¹¹ we find that the Commission’s waiver process is sufficient to handle instances where exemptions may be warranted.¹¹²

54. *Substance of E-mail Delivery.*—We find that including the actual substance of the correspondence in the e-mail is the most efficient way to transmit critical Commission communications and will increase the accessibility and speed of communications with our systems’ users.¹¹³ Commenters agree that including “all pertinent information” in the e-mail itself is preferable to alternatives proposed in the *Notice*.¹¹⁴ For instance, the *Notice* asked whether the e-mail should simply alert the user to log-in to the respective system to check an electronic mailbox or administrative tab that hosts the electronic correspondence, rather than include the actual substance in the e-mail itself.¹¹⁵ The *Notice* also sought comment on other vehicles for electronic communications, such as online portals used by some court systems.¹¹⁶

¹⁰⁷ See Blooston Comments at 4-5.

¹⁰⁸ See 47 CFR § 1.5(b) (“The licensee is responsible for making any arrangements which may be necessary in his particular circumstances to assure that Commission documents or correspondence delivered to this address will promptly reach him or some person authorized by him to act in [sic] his behalf.”).

¹⁰⁹ See EWA Comments at 5; NTCA Reply Comments at 6.

¹¹⁰ NTCA Reply Comments at 6.

¹¹¹ See generally NTCA Reply Comments.

¹¹² See generally Blooston Comments; NTCA Reply Comments; Robert Kubinski Comments.

¹¹³ See American Tower Corp. Reply Comments at 5; EWA Comments at 5; Verizon Comments at 5.

¹¹⁴ See American Tower Corp. Reply Comments at 5; EWA Comments at 6; Verizon Comments at 4-5.

¹¹⁵ *Notice*, 34 FCC Rcd at 8404, para. 21.

¹¹⁶ *Notice*, 34 FCC Rcd at 8404, para. 21.

55. We find that including the actual substance of the communications in the e-mail itself is more efficient than proposed alternatives, and is supported by the record.¹¹⁷ Therefore, all e-mail correspondence will include the in the body of the message: (1) Applicant name(s), (2) FCC Registration Numbers, (3) any applicable file numbers, (4) a list of any applicable call signs, (5) the subject of the communication (e.g. application return, construction notification reminder, etc.), and (6) the disposition of the action. In other words, the Commission is taking the same correspondence that was previously in a mailed letter and shifting the content of that letter to the e-mail message.

56. *Ensuring E-mail Delivery.*—To ensure that an e-mail is received by the appropriate recipient, users may list up to two e-mail addresses associated with their license or application.¹¹⁸ American Tower Corporation explains that including multiple e-mail addresses is warranted in some instances, and we agree that the inclusion of two e-mail addresses “would not be overly burdensome for the FCC and would actually increase efficiency by including the contact information for the most relevant representative at the outset.”¹¹⁹ We agree with NTCA that the ability to include multiple e-mail addresses will help “ensure important communications are not missed.”¹²⁰ Allowing up to two e-mail addresses is consistent with the current practice in ULS today; as the Commission continues to modernize its ULS platform going forward, it will consider the ability to allow more than two e-mail addresses, as some commenters recommend.¹²¹ For the same reasons, we also will continue to allow users to designate a “primary” and “secondary” address for all or certain correspondence.¹²²

57. To reduce the risk that a message is mistaken as phishing or junk mail, the subject line of the e-mail will include the description of the action and application type. We find that providing this information in the subject line, along with the Sender’s address ending in “fcc.gov,” will help assure recipients that the message is official Commission correspondence and reduce the risk that an e-mail is mistaken as phishing or junk mail.¹²³ Verizon explains that including as much information as possible in the subject line will facilitate an applicant’s “ability to process and respond to Commission communications.”¹²⁴ Moreover, we agree with EWA that “today’s firewalls and other filters should keep these problems to a minimum,”¹²⁵ and we remind users that they may adjust their e-mail settings to recognize Commission messages to ensure that Commission messages are not erroneously diverted to junk mail. The information contained in these e-mails can also be independently verified by logging into ULS, and consumers are familiar with these practices through dealings with all major banks and businesses. Copies of all such correspondence are contained in ULS or ASR under “Automated Letters” or “Letters” for the relevant application or license, which provides another way for users to verify their authenticity. Users responding to such Commission communication will do so by filing applications (or amending pending applications) in ULS and ASR, not via e-mail.

58. *Technical Issues.*—In the *Notice*, the Commission sought comment on technical issues relating to the transition to electronic correspondence. Specifically, the Commission sought comment on

¹¹⁷ American Tower Corp. Reply Comments at 5; EWA Comments at 6; Verizon Comments at 4.

¹¹⁸ See American Tower Corp. Reply Comments at 5; NTCA Reply Comments at 6.

¹¹⁹ American Tower Corp. Reply Comments at 5 (explaining that third parties often handle the backhaul licenses for their sites and, in those instances, it would be appropriate to include their FCC contact, the environmental contact, and the third-party backhaul contact to receive Commission correspondence).

¹²⁰ NTCA Reply Comments at 6.

¹²¹ See, e.g., American Tower Corp. Reply Comments at 5; EWA Comments at 5.

¹²² See American Tower Corp. Reply Comments at 5; EWA Comments at 4-5; NTCA Reply Comments.

¹²³ Blooston Comments at 4-5.

¹²⁴ Verizon Comments at 4-5.

¹²⁵ EWA Comments at 5.

how it should handle messages that are returned as undeliverable.¹²⁶ The Commission asked whether it should check for any error (e.g., misspelling) and attempt to send the message a second time, as it does for undeliverable physical mail.¹²⁷ The Commission's longstanding practice of reviewing the message for errors and attempting to deliver the message a second time has proven successful when physical mail is returned as undeliverable, and we find that the same approach is appropriate for handling undeliverable e-mails. Commenters like American Tower Corporation suggest that we adopt alerting mechanisms inside the ULS and ASR system to notify users that correspondence was sent to their on-file e-mail address.¹²⁸ We agree that this is a promising idea, but our systems are not yet set up to offer these capabilities. Today, we are putting in place rules that will allow the Bureaus to offer enhanced capabilities in the future. We will consider and weigh the benefits and costs of such an alerting system or other mechanisms going forward as we continue to modernize ULS.

E. Transition Deadline

59. As of the effective date of this Order, we will no longer print and mail paper authorizations. All notification preferences will be automatically set or reset to receive electronic licenses, and all licensees can download and print official copies of their licenses in ULS License Manager. We otherwise set a transition deadline for the decisions today regarding mandatory e-filing, mandatory e-mail address submission, and the Bureaus' shift to electronic correspondence, of six months from the effective date of this Report and Order. We believe that this deadline provides more than sufficient time for licensees and applicants to prepare and change their practices, if needed. We expect there will be no impact for the vast majority of users, due to the nearly universal adoption of the electronic filing capabilities in ULS and ASR that exist today. Similarly, electronic correspondence is widely embraced as the leading business communication tool, and a transition should be easily accomplished. Absent a waiver, any manually filed applications for wireless services submitted after the transition deadline will be dismissed without prejudice, and any service not effectuated electronically will be deemed ineffective.

IV. PROCEDURAL MATTERS

60. *Regulatory Flexibility Analysis.* The Regulatory Flexibility Act of 1980, as amended (RFA)¹²⁹ 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." Accordingly, the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) relating to the possible impact of the rule changes contained in the Report and Order. The FRFA is set forth in Appendix C.

61. *Paperwork Reduction Analysis.* This *Report and Order* does not contain new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified information collection burden for small business concerns with fewer than 25 employees, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4).

62. *Congressional Review Act.* The Commission has determined, and the Administrator of the Office of Information and Regulatory Affairs, Office of Management and Budget, concurs that this rule is non-major under the Congressional Review Act, 5 U.S.C. § 804(2). The Commission will send a copy of this Report & Order to Congress and the Government Accountability Office pursuant to 5 U.S.C. § 801(a)(1)(A).

¹²⁶ Notice, 34 FCC Rcd at 8404, para. 22.

¹²⁷ Notice, 34 FCC Rcd at 8404, para. 22.

¹²⁸ American Tower Corp. Reply Comments at 5-6.

¹²⁹ 5 U.S.C. § 603.

V. ORDERING CLAUSES

63. Accordingly, IT IS ORDERED that, pursuant to the authority found in sections 1, 4(i), and 303 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 154(i), 303, this *Report and Order* IS HEREBY ADOPTED.

64. IT IS FURTHER ORDERED that parts 1, 13, 17, and 97 of the Commission's rules, 47 CFR parts 1, 13, 17, and 97, ARE AMENDED as set forth in Appendix A, and such rule amendments shall be effective six months after the date of publication in the Federal Register.

65. 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.

66. IT IS FURTHER ORDERED that the Commission SHALL SEND a copy of this *Report and Order* in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. § 801(a)(1)(A).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A**Final Rules**

The Federal Communications Commission amends 47 CFR parts 1, 13, 17, and 97 as follows:

PART 1 – PRACTICE AND PROCEDURE

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

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

Subpart A—GENERAL RULES OF PRACTICE AND PROCEDURE

2. Amend section 1.5 by revising paragraph (a) to read as follows:

§ 1.5 Mailing address furnished by licensee.

(a) Each licensee shall furnish the Commission with an address to be used by the Commission in serving documents or directing correspondence to that licensee. Unless any licensee advises the Commission to the contrary, the address contained in the licensee's most recent application will be used by the Commission for this purpose. For licensees in the Wireless Radio Services, each licensee shall also furnish the Commission with an e-mail address to be used by Commission for serving documents or directing correspondence to that licensee; correspondence sent to such e-mail address is deemed to have been served on the licensee.

* * * * *

3. Revise section 1.12 to read as follows:

§ 1.12 Notice to attorneys of Commission documents.

In any matter pending before the Commission in which an attorney has appeared for, submitted a document on behalf of or been otherwise designated by a person, any notice or other written communication pertaining to that matter issued by the Commission and which is required or permitted to be furnished to the person will be communicated to the attorney, or to one of such attorneys if more than one is designated. If direct communication with the party is appropriate, a copy of such communication will be mailed to the attorney; or for matters involving Wireless Radio Services, e-mailed to the attorney instead of mailed.

4. Revise section 1.41 to read as follows:

§ 1.41 Informal requests for Commission action.

Except where formal procedures are required under the provisions of this chapter, requests for action may be submitted informally. Requests should set forth clearly and concisely the facts relied upon, the relief sought, the statutory and/or regulatory provisions (if any) pursuant to which the request is filed and under which relief is sought, and the interest of the person submitting the request. In application and licensing matters pertaining to the Wireless Radio Services, as defined in § 1.904 of this part, such requests must be submitted electronically, via the ULS, and the request must include an e-mail address for receiving electronic service. See section 1.47(d).

5. Revise the introductory text of section 1.45 to read as follows:

§ 1.45 Pleadings; filing periods.

Except as otherwise provided in this chapter, pleadings in Commission proceedings shall be filed in accordance with the provisions of this section. Pleadings associated with licenses, applications, waivers and other documents in the Wireless Radio Services must be filed via the ULS, and persons other than applicants or licensees filing pleadings in ULS must provide an e-mail address to receive electronic

service. See section 1.47(d).

* * * * *

6. Amend section 1.47 by revising paragraphs (a) and (d)-(g) to read as follows:

§ 1.47 Service of documents and proof of service.

(a) Where the Commission or any person is required by statute or by the provisions of this chapter to serve any document upon any person, service shall (in the absence of specific provisions in this chapter to the contrary) be made in accordance with the provisions of this section. Documents that are required to be served by the Commission in agency proceedings (*i.e.*, not in the context of judicial proceedings, Congressional investigations, or other proceedings outside the Commission) may be served in electronic form. Documents associated with licenses, applications, waivers and other requests in the Wireless Radio Services that are required to be served by the Commission in agency proceedings must be served in electronic form. In proceedings involving a large number of parties, and unless otherwise provided by statute, the Commission may satisfy its service obligation by issuing a public notice that identifies the documents required to be served and that explains how parties can obtain copies of the documents.

* * * * *

(d) Except in formal complaint proceedings against common carriers under §§ 1.720 through 1.740 of this chapter and proceedings related to the Wireless Radio Services under § 1.900 *et seq.* of this chapter, documents may be served upon a party, his attorney, or other duly constituted agent by delivering a copy or by mailing a copy to the last known address. Documents that are required to be served must be served in paper form, even if documents are filed in electronic form with the Commission, unless the party to be served agrees to accept service in some other form. Petitions, pleadings, and other documents associated with licensing matters in the Wireless Radio Services must be served electronically upon a party, his attorney, or other duly constituted agent by delivering a copy by e-mail to the e-mail address listed in the Universal Licensing System (ULS). If a filer is not an applicant or licensee, the document must include an e-mail address for receiving electronic service.

(e) Delivery of a copy pursuant to this section means handing it to the party, his attorney, or other duly constituted agent; or leaving it with the clerk or other person in charge of the office of the person being served; or, if there is no one in charge of such office, leaving it in a conspicuous place therein; or, if such office is closed or the person to be served has no office, leaving it at his dwelling house or usual place of abode with some person of suitable age and discretion then residing therein. For pleadings, petitions, and other documents associated with licensing matters in the Wireless Radio Services, delivery of a copy pursuant to this section is complete by sending it by e-mail to the e-mail addresses listed in the ULS, or to the e-mail address of the applicant's or licensee's attorney provided in a pleading or other document served on the filer.

(f) Service by mail is complete upon mailing. Service by e-mail is complete upon sending to the e-mail address listed in the ULS for a particular license, application, or filing.

(g) Proof of service, as provided in this section, shall be filed before action is taken. The proof of service shall show the time and manner of service, and may be by written acknowledgement of service, by certificate of the person effecting the service, or by other proof satisfactory to the Commission. Failure to make proof of service will not affect the validity of the service. The Commission may allow the proof to be amended or supplied at any time, unless to do so would result in material prejudice to a party. Proof of electronic service shall show the e-mail address of the person making the service, in addition to that person's residence or business address; the date and time of the electronic service; the name and e-mail address of the person served; and that the document was served electronically.

* * * * *

7. Amend section 1.49 by revising paragraph (e) to read as follows:

§ 1.49 Specifications as to pleadings and documents.

* * * * *

(e) Petitions, pleadings, and other documents associated with licensing matters in the Wireless Radio Services must be filed electronically in ULS. See § 22.6 for specifications.

* * * * *

8. Amend section 1.51 by revising paragraphs (f) and (h) to read as follows:

§ 1.51 Number of copies of pleadings, briefs, and other papers.

* * * * *

(f) For application and licensing matters involving the Wireless Radio Services, pleadings, briefs or other documents must be filed electronically in ULS.

* * * * *

(h) Pleadings, briefs or other documents filed electronically in ULS by a party represented by an attorney shall include the name, street address, e-mail address, and telephone number of at least one attorney of record. Parties not represented by an attorney that files electronically in ULS shall provide their name, street address, e-mail address, and telephone number.

9. In section 1.52, add a new third sentence after the second sentence to read as follows:

§ 1.52 Subscription and verification.

The original of all petitions, motions, pleadings, briefs, and other documents filed by any party represented by counsel shall be signed by at least one attorney of record in his individual name, whose address shall be stated. A party who is not represented by an attorney shall sign and verify the document and state his address. Pleadings, petitions, and other documents related to licensing matters in the Wireless Radio Services shall be signed by at least one attorney of record in his individual name or by the party who is not represented by an attorney and shall include his e-mail and physical mailing address. * *

10. Revise section 1.85 to read as follows:

§ 1.85 Suspension of operator licenses.

Whenever grounds exist for suspension of an operator license, as provided in § 303(m) of the Communications Act, the Chief of the Wireless Telecommunications Bureau, with respect to amateur and commercial radio operator licenses, may issue an order suspending the operator license. No order of suspension of any operator's license shall take effect until 15 days' notice in writing of the cause for the proposed suspension has been given to the operator licensee, who may make written application to the Commission at any time within the said 15 days for a hearing upon such order. The notice to the operator licensee shall not be effective until actually received by him, and from that time he shall have 15 days in which to e-mail the said application. In the event that conditions prevent e-mailing of the application before the expiration of the 15-day period, the application shall then be e-mailed as soon as possible thereafter, accompanied by a satisfactory explanation of the delay. Upon receipt by the Commission of such application for hearing, said order of suspension shall be designated for hearing by the Chief, Wireless Telecommunications Bureau and said suspension shall be held in abeyance until the conclusion of the hearing. Upon the conclusion of said hearing, the Commission may affirm, modify, or revoke said order of suspension. If the license is ordered suspended, the operator shall send his operator license to the Mobility Division, Wireless Telecommunications Bureau, in Washington, DC, on or before the effective date of the order, or, if the effective date has passed at the time notice is received, the license shall be sent to the Commission forthwith.

11. Amend section 1.87 by revising paragraphs (a) and (b) to read as follows:

§ 1.87 Modification of license or construction permit on motion of the Commission.

(a) Whenever it appears that a station license or construction permit should be modified, the Commission shall notify the licensee or permittee in writing of the proposed action and reasons therefor, and afford the licensee or permittee at least thirty days to protest such proposed order of modification, except that, where safety of life or property is involved, the Commission may by order provide a shorter period of time.

(b) The notification required in paragraph (a) of this section may be effectuated by a notice of proposed rulemaking in regard to a modification or addition of an FM or television channel to the Table of Allotments (§§ 73.202 and 73.504) or Table of Assignments (§ 73.606). The Commission shall send a copy of any such notice of proposed rulemaking to the affected licensee or permittee by e-mail. For modifications involving Wireless Radio Services, the Commission shall notify the licensee or permittee by e-mail of the proposed action and reasons therefor, and afford the licensee or permittee at least thirty days to protest such proposed order of modification, except that, (1) where safety of life or property is involved, the Commission may by order provide a shorter period of time, and (2) where the notification required in paragraph (a) of this section is effectuated by publication in the Federal Register, the Commission shall afford the licensee or permittee at least thirty days after publication in the Federal Register to protest such proposed order of modification.

* * * * *

12. Amend section 1.106 by revising paragraphs (i) and (o) to read as follows:

§ 1.106 Petitions for reconsideration in non-rulemaking proceedings.

* * * * *

(i) Petitions for reconsideration, oppositions, and replies shall conform to the requirements of §§ 1.49, 1.51, and 1.52 and, except for those related to licensing matters in the Wireless Radio Service and addressed in paragraph (o) of this section, shall be submitted to the Secretary, Federal Communications Commission, Washington, DC 20554, by mail, by commercial courier, by hand, or by electronic submission through the Commission's Electronic Comment Filing System or other electronic filing system (such as ULS). Petitions submitted only by electronic mail and petitions submitted directly to staff without submission to the Secretary shall not be considered to have been properly filed. Parties filing in electronic form need only submit one copy.

* * * * *

(o) Petitions for reconsideration of licensing actions, as well as oppositions and replies thereto, that are filed with respect to the Wireless Radio Services, must be filed electronically via ULS.

* * * * *

Subpart F—WIRELESS RADIO SERVICES APPLICATIONS AND PROCEEDINGS

13. Amend section 1.913 by removing and reserving paragraph (d) and revising paragraphs (e) and (f), to read as follows:

§ 1.913 Applications and notification forms; electronic filing.

* * * * *

(d) [Reserved].

(e) *Applications requiring prior coordination.* Parties filing applications that require frequency coordination shall, prior to filing, complete all applicable frequency coordination requirements in service-specific rules contained within this chapter. After appropriate frequency coordination, such applications must be electronically filed via ULS. Applications filed by the frequency coordinator on behalf of the applicant must be filed electronically.

(f) *Applications for Amateur licenses.* Each candidate for an amateur radio operator license

which requires the applicant to pass one or more examination elements must present the administering Volunteer Examiners (VE) with all information required by the rules prior to the examination. The VEs may collect the information required by these rules in any manner of their choosing, including creating their own forms. Upon completion of the examination, the administering VEs will immediately grade the test papers and will then issue a certificate for successful completion of an amateur radio operator examination (CSCE) if the applicant is successful. The VEs will send all necessary information regarding a candidate to the Volunteer-Examiner Coordinator (VEC) coordinating the examination session. Applications filed with the Commission by VECs and all other applications for amateur service licenses must be filed electronically via ULS. Feeable requests for vanity call signs must be filed in accordance with § 0.401 of this chapter or electronically filed via ULS.

* * * * *

14. Amend section 1.917 by revising paragraph (d) to read as follows:

§ 1.917 Who may sign applications.

* * * * *

(d) “Signed,” as used in this section, means, for manually filed applications only, an original hand-written signature or, for electronically filed applications only, an electronic signature. An electronic signature shall consist of the name of the applicant transmitted electronically via ULS or any other electronic filing interface the Commission may designate and entered on the application as a signature.

15. Amend section 1.923 by revising paragraph (i) to read as follows:

§ 1.923 Content of applications.

* * * * *

(i) Unless an exception is set forth elsewhere in this chapter, each applicant must specify an e-mail address where the applicant can receive electronic correspondence. This e-mail address will be used by the Commission to serve documents or direct correspondence to the applicant. Any correspondence sent to the e-mail address currently on file shall be deemed to have been served on the applicant. Each applicant should also provide a United States Postal Service address,

16. Amend section 1.929 by revising paragraph (k)(3) to read as follows:

§ 1.929 Classification of filings as major or minor.

* * * * *

(k) * * *

(3) Any e-mail or physical mailing address and/or telephone number changes;

* * * * *

17. Amend section 1.939 by revising paragraph (b) to read as follows:

§ 1.939 Petitions to deny.

* * * * *

(b) *Filing of petitions.* Petitions to deny and related pleadings must be filed electronically via ULS. Petitions to deny and related pleadings must reference the file number of the pending application that is the subject of the petition.

* * * * *

18. Amend section 1.947 by revising paragraph (b) to read as follows:

§ 1.947 Modification of licenses.

* * * * *

(b) Licensees may make minor modifications to station authorizations, as defined in § 1.929 of this part (other than pro forma transfers and assignments), as a matter of right without prior Commission approval. Where other rule parts permit licensees to make permissive changes to technical parameters without notifying the Commission (e.g., adding, modifying, or deleting internal sites), no notification is required. For all other types of minor modifications (e.g., name, e-mail or physical mailing address, point of contact changes), licensees must notify the Commission by filing FCC Form 601 within thirty (30) days of implementing any such changes.

* * * * *

Subpart I—PROCEDURES IMPLEMENTING THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

19. Revise section 1.1304 to read as follows:

§ 1.1304 Information, assistance, and waiver of electronic filing and service requirements

(a) For general information and assistance concerning the provisions of this subpart, the Office of General Counsel may be contacted, (202) 418-1700. For more specific information, the Bureau responsible for processing a specific application should be contacted.

(b) All submissions relating to this subpart shall be made electronically. If an interested party is unable to submit or serve a filing electronically, or if it would be unreasonably burdensome to do so, such party may submit its filing on paper to the appropriate address for the Commission Secretary and serve the filing on other parties by mail. Such party should include as part of its paper submission a request for waiver of the electronic filing requirement. Such waiver request must contain an explanation addressing the requestor's inability to file electronically or why electronic filing would be unreasonably burdensome. Either showing will be sufficient to obtain a waiver under this section.

20. Amend section 1.1307 by revising paragraphs (b), (c), and (d) to read as follows:

§ 1.1307 Actions that may have a significant environmental effect, for which Environmental Assessments (EAs) must be prepared.

* * * * *

(b) In addition to the actions listed in paragraph (a) of this section, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA) if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency radiation in excess of the limits in §§ 1.1310 and 2.1093 of this chapter. Applications to the Commission for construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities must contain a statement confirming compliance with the limits unless the facility, operation, or transmitter is categorically excluded, as discussed below. Technical information showing the basis for this statement must be electronically submitted to the Commission upon request. Such compliance statements may be omitted from license applications for transceivers subject to the certification requirement in § 25.129 of this chapter.

* * * * *

(c) If an interested person alleges that a particular action, otherwise categorically excluded, will have a significant environmental effect, the person shall electronically submit to the Bureau responsible for processing that action a written petition setting forth in detail the reasons justifying or circumstances necessitating environmental consideration in the decision-making process. If an interested person is unable to submit electronically or if filing electronically would be unreasonably burdensome, such person may submit the petition by mail, with a request for waiver under 1.1304(b). (See § 1.1313). * * *

(d) If the Bureau responsible for processing a particular action, otherwise categorically excluded, determines that the proposal may have a significant environmental impact, the Bureau, on its own motion, shall require the applicant to electronically submit an EA. * * *

* * * * *

21. Revise section 1.1309 to read as follows:

§ 1.1309 Application amendments.

Applicants are permitted to amend their applications to reduce, minimize or eliminate potential environmental problems. Amendments shall be made electronically. As a routine matter, an applicant will be permitted to amend its application within thirty (30) days after the Commission or the Bureau informs the applicant that the proposal will have a significant impact upon the quality of the human environment (see § 1.1308(c)). The period of thirty (30) days may be extended upon a showing of good cause.

22. Amend section 1.1312 by revising paragraph (b) to read as follows:

§ 1.1312 Facilities for which no preconstruction authorization is required.

* * * * *

(b) If a facility covered by paragraph (a) of this section may have a significant environmental impact, the information required by § 1.1311 of this part shall be submitted electronically by the licensee or applicant and ruled on by the Commission, and environmental processing (if invoked) shall be completed, see § 1.1308 of this part, prior to the initiation of construction of the facility.

* * * * *

23. Revise section 1.1313 to read as follows:

§ 1.1313 Objections.

(a) In the case of an application to which section 309(b) of the Communications Act applies, objections based on environmental considerations shall be filed electronically as petitions to deny. If the interested person is unable to file electronically or if filing electronically would be unreasonably burdensome, such person may submit the petition by mail, with a request for waiver under section 1.1304(b).

(b) Informal objections which are based on environmental considerations must be filed electronically prior to grant of the construction permit, or prior to authorization for facilities that do not require construction permits, or pursuant to the applicable rules governing services subject to lotteries. If the interested person is unable to file electronically or if filing electronically would be unreasonably burdensome, such person may submit the objection by mail, with a request for waiver under section 1.1304(b).

24. Amend section 1.1314 by revising paragraph (f) to read as follows:

§ 1.1314 Environmental impact statements (EISs).

* * * * *

(f) The Application, the EA, the DEIS, and the FEIS and all related documents, including the comments filed by the public and any agency, shall be part of the administrative record and will be routinely available for public inspection. The Commission shall make all documents and comments available electronically.

* * * * *

25. Amend Section 1.1315 by revising paragraphs (b)-(e) to read as follows:

§ 1.1315 The Draft Environmental Impact Statement (DEIS); Comments.

* * * * *

(b) When a DEIS and supplements, if any, are prepared, the Commission shall file the Statement with the Office of Federal Activities, Environmental Protection Agency, consistent with its procedures. Public Notice of the availability of the DEIS will be published in the FEDERAL REGISTER by the Environmental Protection Agency.

(c) When copies or summaries of the DEIS are sent to the Environmental Protection Agency, the copies or summaries will be electronically mailed with a request for comment to Federal agencies having jurisdiction by law or special expertise, to the Council on Environmental Quality, to the applicant, to individuals, groups and state and local agencies known to have an interest in the environmental consequences of a grant, and to any other person who has requested a copy. If an interested person lacks access to electronic mail and requests a hard copy or summary of the DEIS, it must be provided by mail.

(d) Any person or agency may comment on the DEIS and the environmental effect of the proposal described therein within 45 days after notice of the availability of the statement is published in the FEDERAL REGISTER. A copy of those comments shall be electronically mailed to the applicant by the person who files them pursuant to 47 CFR 1.47 and filed electronically with the Commission. If the interested person is unable to file electronically or mail the copy electronically, or if it would be unreasonably burdensome to do so, such person may submit the comments to the Commission and the applicant by mail, with a request for waiver under section 1.1304(b). If a person submitting comments is especially qualified in any way to comment on the environmental impact of the facilities, a statement of his or her qualifications shall be set out in the comments. In addition, comments submitted by an agency shall identify the person(s) who prepared them.

(e) The applicant may electronically file reply comments within 15 days after the time for filing comments has expired. Reply comments shall be filed with the Commission and served by the applicant on persons or agencies which filed comments.

PART 13 – COMMERCIAL RADIO OPERATORS

26. The authority citation for Part 13 continues to read as follows:

Authority: 47 U.S.C. 154, 303.

27. Amend section 13.9 by revising paragraph (c) to read as follows:

* * * * *

(c) Each application for a new General Radiotelephone Operator License, Marine Radio Operator Permit, Radiotelegraph Operator License, Ship Radar Endorsement, GMDSS Radio Operator's License, Restricted GMDSS Radio Operator's License, GMDSS Radio Maintainer's License, or GMDSS Radio Operator/Maintainer License must be accompanied by the required fee, if any, and submitted in accordance with §1.913 of this chapter. The application must include an electronic copy of the official PPC(s) from a COLEM(s) showing that the applicant has passed the necessary examination Element(s) within the previous 365 days when the applicant files the application. If a COLEM files the application on behalf of the applicant, an official copy of the PPC(s) is not required. However, the COLEM must keep the PPC(s) on file for a period of 1 year. When acting on behalf of qualified examinees, the COLEM must forward all required data to the FCC electronically.

* * * * *

28. Revise section 13.10 to read as follows:

§ 13.10 Licensee address.

In accordance with § 1.923 of this chapter, all applicants (except applicants for a Restricted Radiotelephone Operator Permit or a Restricted Radiotelephone Operator Permit-Limited Use) must specify an e-mail address where the applicant can receive electronic correspondence. Suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the applicant failed to provide the correct e-mail address.

PART 17 – CONSTRUCTION, MARKING, AND LIGHTING OF ANTENNA STRUCTURES

29. The authority citation for Part 17 continues to read as follows:

Authority: 47 U.S.C. 154, 301, 303, 309.

30. Amend section 17.4 by revising paragraphs (b), (c)(1)(ii), (c)(1)(iv), and (e) to read to read as follows:

§ 17.4 Antenna structure registration.

* * * * *

(b) Except as provided in paragraph (e) of this section, each owner of an antenna structure described in paragraph (a) of this section must electronically file FCC Form 854 with the Commission. Additionally, each owner of a proposed structure referred to in paragraph (a) of this section must submit a valid FAA determination of “no hazard.” In order to be considered valid by the Commission, the FAA determination of “no hazard” must not have expired prior to the date on which FCC Form 854 is received by the Commission. The height of the structure will be the highest point of the structure including any obstruction lighting or lightning arrester. If an antenna structure is not required to be registered under paragraph (a) of this section and it is voluntarily registered with the Commission after the effective date of this rule, the registrant must note on FCC Form 854 that the registration is voluntary. Voluntarily registered antenna structures are not subject to the lighting and marking requirements contained in this part.

* * * * *

(c)(1)(ii) For a reduction in height of an antenna structure or an increase in height that does not constitute a substantial increase in size as defined in paragraph I(E)(1)-(3) of Appendix B to part 1 of this chapter, provided that there is no construction or excavation more than 30 feet beyond the existing antenna structure property;

* * * * *

(c)(1)(iv) For replacement of an existing antenna structure at the same geographic location that does not require an Environmental Assessment (EA) under §1.1307(a) through (d) of this chapter, provided the new structure will not use a less preferred lighting style, there will be no substantial increase in size as defined in paragraph I(E)(1)-(3) of Appendix B to part 1 of this chapter, and there will be no construction or excavation more than 30 feet beyond the existing antenna structure property;

* * * * *

(c)(5)(ii) Content. An Environmental Request must state why the interested person or entity believes that the proposed antenna structure or physical modification of an existing antenna structure may have a significant impact on the quality of the human environment for which an Environmental Assessment must be considered by the Commission as required by § 1.1307 of this chapter, or why an Environmental Assessment submitted by the prospective ASR applicant does not adequately evaluate the potentially significant environmental effects of the proposal. The Request must be submitted as a written petition filed electronically, setting forth in detail the reasons supporting Requester's contentions. If the filer is unable to submit electronically, or if filing electronically would be unreasonably burdensome, the Request may be submitted by mail, with a request for waiver under section 1.1304(b).

* * * * *

(e) If the owner of the antenna structure cannot file FCC Form 854 because it is subject to a denial of Federal benefits under the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862, the first tenant licensee authorized to locate on the structure (excluding tenants that no longer occupy the structure) must register the structure electronically using FCC Form 854, and provide a copy of the Antenna Structure Registration (FCC Form 854R) to the owner. The owner remains responsible for providing to all tenant licensees and permittees notification that the structure has been registered, consistent with paragraph (f) of this section, and for posting the registration number as required by paragraph (g) of this section.

* * * * *

(f) The Commission shall issue to the registrant FCC Form 854R, Antenna Structure Registration, which assigns a unique Antenna Structure Registration Number. The antenna structure owner shall immediately provide to all tenant licensees and permittees notification that the structure has been registered, along with either a copy of Form 854R or the Antenna Structure Registration Number and a link to the FCC antenna structure Web site: <http://wireless.fcc.gov/antenna/>. This notification must be done electronically.

* * * * *

31. Amend section 17.6 by revising paragraph (c) to read as follows:

§ 17.6 Responsibility for painting and lighting compliance.

* * * * *

(c) If the owner of the antenna structure cannot file FCC Form 854 because it is subject to a denial of Federal benefits under the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862, the first tenant licensee authorized to locate on the structure (excluding tenants that no longer occupy the structure) must electronically register the structure using FCC Form 854, and provide a copy of the Antenna Structure Registration (FCC Form 854R) to the owner. The owner remains responsible for providing to all tenant licensees and permittees notification that the structure has been registered, consistent with § 17.4(f), and for posting the registration number as required by § 17.4(g).

32. Revise section 17.57 to read as follows:

§ 17.57 Report of radio transmitting antenna construction, alteration, and/or removal.

The owner of an antenna structure for which an Antenna Structure Registration Number has been obtained must notify the Commission within 5 days of completion of construction by filing FCC Form 854-R and/or dismantlement by filing FCC Form 854. The owner must also notify the Commission within 5 days of any change in structure height or change in ownership information by filing FCC Form 854. FCC Forms 854 and 854-R, and all related amendments, modifications, and attachments, shall be filed electronically.

PART 97 – AMATEUR RADIO SERVICE

33. The authority citation for Part 97 continues to read as follows:

Authority: 47 U.S.C. §§ 151-155, 301-609, unless otherwise noted.

34. Amend section 97.21 by revising paragraph (a)(1) to read as follows:

§ 97.21 Application for a modified or renewed license grant.

(a) A person holding a valid amateur station license grant:

(1) Must apply to the FCC for a modification of the license grant as necessary to show the correct mailing and e-mail address, licensee name, club name, license trustee name, or license custodian name in

accordance with § 1.913 of this chapter. For a club or military recreation station license grant, the application must be presented in document form to a Club Station Call Sign Administrator who must submit the information thereon to the FCC in an electronic batch file. The Club Station Call Sign Administrator must retain the collected information for at least 15 months and make it available to the FCC upon request. A Club Station Call Sign Administrator shall not file with the Commission any application to modify a club station license grant that was submitted by a person other than the trustee as shown on the license grant, except an application to change the club station license trustee. An application to modify a club station license grant to change the license trustee name must be submitted to a Club Station Call Sign Administrator and must be signed by an officer of the club.

* * * * *

35. Revise section 97.23 to read as follows:

§ 97.23 Mailing and e-mail addresses.

Each license grant must show the grantee's correct name, mailing address, and e-mail address. The e-mail address must be an address where the grantee can receive electronic correspondence. Revocation of the station license or suspension of the operator license may result when correspondence from the FCC is returned as undeliverable because the grantee failed to provide the correct e-mail address.

APPENDIX B
List of Commenters

E-Licensing Notice Comments:

AT&T Services, Inc. (AT&T)
Blooston, Mordkofsky, Dickens, Duffy & Prendergast, LLP
Charles P. Adkins
Enterprise Wireless Alliance (EWA)
Jay Brummett
Jim Gerke
Robert F. Olszewski, Jr., MD
Robert Kubinski
Verizon
Victor Magana

E-Licensing Notice Reply Comments:

American Tower Corporation
AT&T Services, Inc. (AT&T)
NTCA-The Rural Broadband Association (NTCA)

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),¹ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the *Notice of Proposed Rulemaking (Notice)* released in September 2019 in this proceeding.² The Commission sought written public comment on the proposals in the *Notice*, including comment on the IRFA. No comments were filed addressing the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.³

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

2. The Commission has made significant strides in recent years toward modernizing its legacy filing, communications, and information retention systems by improving access to electronic data and digitizing Commission communications in a wide variety of services. These efforts have improved public access to data, decreased costs for consumers, improved transparency and accessibility for a variety of users, and significantly improved administrative efficiency. With the *Report and Order*, the Commission adopts rules finalizing our transition to electronic interactions for licenses in the Wireless Radio Services that began more than two decades ago. Specifically, the *Report and Order* (1) eliminates the remaining exceptions to electronic filing in the Universal Licensing System (ULS) and its related systems⁴; (2) requires that pleadings related to these systems, and service thereof, be filed and delivered electronically; (3) requires that applicants and licensees in these systems provide an e-mail address on related FCC Forms; and (4) shifts from paper to electronic delivery of Commission correspondence generated from these systems. To provide sufficient time where necessary for licensees and applicants to modify practices, the Commission set a transition deadline of six months from the effective date of the *Report and Order*, for compliance. Together, these changes will decrease costs for consumers, businesses, and the Commission, enhance transparency of and access to data, significantly improve administrative efficiency, and save a substantial amount of paper annually—to the benefit of the Commission and those who interact with these systems alike.

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

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

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

4. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.⁵

5. The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

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

² *Completing the Transition to Electronic Filing, Licenses and Authorizations, and Correspondence in the Wireless Radio Services*, Notice of Proposed Rulemaking, 34 FCC Rcd 8397 (2019) (*Notice*).

³ See 5 U.S.C. § 604.

⁴ The related systems that accept filings and work in conjunction with or alongside the ULS are: the Antenna Structure Registration (ASR) System, the Tower Construction Notification System (TCNS) and the Electronic Section 106 (E-106) System.

⁵ 5 U.S.C. § 604(a)(3).

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

6. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the rules adopted herein.⁶ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁷ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁸ 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.⁹

7. *Small Businesses, Small Organizations, and Small Governmental Jurisdictions.* Our actions may, over time, affect small entities that are not easily categorized at present. We therefore describe here, at the outset, three broad groups of small entities that could be directly affected herein.¹⁰ 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.¹¹ These types of small businesses represent 99.9% of all businesses in the United States, which translates to 30.7 million businesses.¹²

8. 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.”¹³ 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.¹⁴ Nationwide, for tax year 2018, there were approximately 571,709 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.¹⁵

⁶ 5 U.S.C. § 604(a)(4).

⁷ 5 U.S.C. § 601(6).

⁸ 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.”

⁹ 15 U.S.C. § 632.

¹⁰ See 5 U.S.C. § 601(3)-(6).

¹¹ See SBA, Office of Advocacy, “What’s New With Small Business?”, (Sept. 2019) <https://cdn.advocacy.sba.gov/wp-content/uploads/2019/09/23172859/Whats-New-With-Small-Business-2019.pdf>.

¹² *Id.*

¹³ 5 U.S.C. § 601(4).

¹⁴ 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 Internal Revenue Service, *Annual Electronic Filing Requirement for Small Exempt Organizations — Form 990-N (e-Postcard) – Who must file* (Mar. 20, 2020),

<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.

¹⁵ See Internal Revenue Service, *Exempt Organizations Business Master File Extract (EO BMF) - CSV Files by Region* (Mar. 9, 2020), <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

(continued....)

9. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”¹⁶ U.S. Census Bureau data from the 2017 Census of Governments¹⁷ indicate that there were 90,075 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States.¹⁸ Of this number there were 36,931 general purpose governments (county,¹⁹ municipal and town or township²⁰) with populations of less than 50,000 and 12,040 special purpose governments - independent school districts²¹ with enrollment populations of less than 50,000.²² 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.”²³

10. *Wireless Telecommunications Carriers (except Satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless internet access, and

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registered tax-exempt/non-profit organizations. The data used for purposes of this description was extracted from the IRS EO BMF data for Region 1-Northeast Area (76,886), Region 2-Mid-Atlantic and Great Lakes Areas (221,121), and Region 3-Gulf Coast and Pacific Coast Areas (273,702), which includes the continental U.S., Alaska, and Hawaii. This data does not include information for Puerto Rico.

¹⁶ 5 U.S.C. § 601(5).

¹⁷ 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 U.S. Census Bureau, *Census of Governments* (Apr. 25, 2019), <https://www.census.gov/programs-surveys/cog/about.html>.

¹⁸ See U.S. Census Bureau, *2017 Census of Governments – Organization Table 2. Local Governments by Type and State: 2017 [CG1700ORG02]* (Feb. 12, 2020); <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 Table 2. CG1700ORG02 Table Notes_Local Governments by Type and State_2017.

¹⁹ See U.S. Census Bureau, *2017 Census of Governments - Organization, Table 5. County Governments by Population-Size Group and State: 2017 [CG1700ORG05]* (Feb. 12, 2020); <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.

²⁰ See U.S. Census Bureau, *2017 Census of Governments - Organization, Table 6. Subcounty General-Purpose Governments by Population-Size Group and State: 2017 [CG1700ORG06]* (Feb. 12, 2020); <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>. There were 18,729 municipal and 16,097 town and township governments with populations less than 50,000.

²¹ See U.S. Census Bureau, *2017 Census of Governments - Organization, Table 10. Elementary and Secondary School Systems by Enrollment-Size Group and State: 2017 [CG1700ORG10]* (Feb. 12, 2020); <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 U.S. Census Bureau, *Table 4. Special-Purpose Local Governments by State Census Years 1942 to 2017 [CG1700ORG04]* (Feb. 12, 2020); <https://www.census.gov/data/tables/2017/econ/gus/2017-governments.html>.

²² 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.

²³ 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 Tables 5, 6, and 10.

wireless video services.²⁴ The appropriate size standard under SBA rules is that such a business is small if it has 1,500 or fewer employees.²⁵ For this industry, U.S. Census Bureau data for 2012 show that there were 967 firms that operated for the entire year.²⁶ Of this total, 955 firms had employment of 999 or fewer employees and 12 had employment of 1000 employees or more.²⁷ Thus under this category and the associated size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities.

11. The Commission has determined from data available in its Universal Licensing System (ULS) that there are approximately 2.25 million active licenses and 1.44 million distinct FCC Registration Numbers (FRNs) associated with these licenses in the Wireless Radio Services that could be affected by the *Report and Order*, as of May 1, 2020.²⁸ The Commission does not know how many licensees in these bands are small entities, as the Commission does not collect that information for these types of entities.

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

12. The *Report and Order* does not adopt new or additional reporting or recordkeeping and other compliance requirements for small entities as well as other licensees. Therefore, the Commission does not anticipate that small entities will be required to hire additional legal or regulatory compliance staff to comply with these new requirements. Several of the rule changes are consistent with and mirror existing policies and practices already in place. Therefore, small entities may already be familiar with such policies and requirements and have the processes and procedures in place to facilitate compliance resulting in minimal incremental costs to comply with the *Report and Order*. All filing, recordkeeping, and reporting requirements adopted in the *Report and Order* will be the same for small and large entities.

13. *Electronic Filing in ULS and the ASR System.* The *Report and Order* eliminates the remaining exemptions to mandatory electronic filing in the ULS and mandates electronic filing in the ASR system. Today, the vast majority of ULS applications are filed electronically, and the remaining number of manual paper filings is on a downward trend. Moreover, nearly all applicants currently use the ASR system to electronically file for new registrations, modifications to existing structures, notifications of construction, and ownership changes. In 2018, the Commission received a total of 30,595 applications, and only 14 of those applications were filed manually. In 2019, the Commission saw even fewer manually filed applications. We therefore do not anticipate that requiring electronic filing in ULS and the ASR system will require a change in practices for most users of these systems, and we do not anticipate that small entities and other users will need to hire professionals to facilitate compliance with the Commission's new electronic filing rules. However, the Commission's waiver process is available on a case-by-case basis to handle any instances where exceptions may be appropriate.

²⁴ U.S. Census Bureau, *2017 NAICS Definitions*, "517312 Wireless Telecommunications Carriers (except Satellite)", <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517312&search=2017%20NAICS%20Search>.

²⁵ 13 CFR § 121.201, NAICS Code 517312 (previously 517210).

²⁶ U.S. Census Bureau, *2012 Economic Census of the United States*, Table ID: EC1251SSSZ5, *Information: Subject Series: Estab and Firm Size: Employment Size of Firms for the U.S.: 2012*, NAICS Code 517210. <https://data.census.gov/cedsci/table?text=EC1251SSSZ5&n=517210&tid=ECNSIZE2012.EC1251SSSZ5&hidePreview=false&vintage=2012>.

²⁷ *Id.* Available U.S. Census Bureau data does not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees. The largest category provided is for firms with "1000 employees or more."

²⁸ See <http://wireless.fcc.gov/uls>. For the purposes of this FRFA and consistent with Commission practice for wireless services, the Commission estimates the number of licensees based on the number of unique FCC Registration Numbers.

14. *Electronic Filing in TCNS and E-106.* The Commission requires applicants, reviewers, and consulting parties that choose to use the E-106 system to submit and review FCC Forms 620 and 621 only receive Commission notices related to the E-106 system electronically. All Commission notices generated as a result of interaction with the E-106 system will be delivered now solely via e-mail, with the exception of notices provided to Tribal Nations and Native Hawaiian Organizations who elect to receive paper notifications through TCNS. While this may alter the compliance vehicle for entities using these systems, the Commission does not anticipate that electronic correspondence will require small entities and other users of the E-106 system to hire additional legal or regulatory compliance staff. Most businesses today already maintain e-mail addresses and operate electronically. Therefore, most small entities may already be familiar with e-mail practices and have the processes and procedures in place to facilitate compliance resulting in minimal incremental costs to comply with the *Report and Order*.

15. *E-Pleadings and E-Service for Wireless Radio Services Applications and Licenses.* The Commission adopts rules requiring electronic filing of pleadings. Approximately 98% of pleadings are already filed electronically through ULS and the vast majority of our systems' users have the resources to submit and receive documents electronically. Therefore, we do not anticipate that this change will require small entities to hire additional legal or regulatory compliance staff. The *Report and Order* also requires interested parties to submit and receive electronically petitions, complaints, or requests for environmental review of proposed wireless communications facilities consistent with the Commission's NEPA rules. We do not anticipate that additional staff would be required by small entities to comply with this requirement. However, to the extent necessary, the Commission's waiver process is sufficient to provide relief where exceptions are warranted on a case-by-case basis.

16. *Electronic Service.* The *Report and Order* requires all petitions, pleadings, and other documents associated with licensing matters in the Wireless Radio Services to be served electronically upon a party, his attorney, or other duly constituted agent to the e-mail address listed in ULS. Currently, the Commission's rules require such service in paper form, unless parties agree otherwise. While this rule may change the vehicle through which parties serve documents, we do not anticipate that small entities and other parties will be required to hire additional staff to ensure compliance with this requirement.

17. *E-Mail Addresses for Applications, Registrations, and Notifications.* The Commission requires the inclusion of an e-mail address for all new ULS and ASR applicants, and encourages existing licensees and tower owners to complete administrative updates to existing licenses and registrations in order to receive electronically courtesy letters from the Commission going forward. While some small entities that relied solely on paper correspondence may be required to establish an e-mail address, we anticipate that most users will already have an e-mail address and will not be required to hire additional staff to comply with the new requirement. The Commission already has an e-mail address on file for roughly 83% of the more than 2.2 million active Wireless Radio Service licenses and 93% of granted and constructed antenna registrations. Small entities will be also required to keep their e-mail addresses up-to-date, but the Commission's rules already require a similar obligation for physical addresses, so we do not anticipate that small entities will be required to hire additional staff to comply with this requirement.

18. The *Report and Order* encourages existing licensees and tower owners to complete administrative updates to existing licenses and registrations in order to receive courtesy letters from the Commission. Moving forward, courtesy letters will only be sent electronically to licensees and tower owners with e-mail addresses on file. Thus, licensees and tower owners seeking to receive such courtesy letters must complete administrative updates to their existing licenses and registrations to continue receiving such correspondence. Most small entities already have e-mail addresses, and the Commission does not anticipate that completing administrative updates to continue receiving courtesy letters will be so complex as to require additional legal or regulatory compliance staff.

19. *Electronic Notices, Correspondence, and Alerts.* The Commission adopts rules mandating electronic delivery for all ULS and ASR compulsory and courtesy correspondence and eliminates requests for the Commission to mail hard copies of authorizations and letters. To ensure that an e-mail is delivered to the appropriate recipient, users may list up to two e-mail addresses associated

with their license or application. Small entities will not need to hire professionals to facilitate compliance with this requirement, given that most businesses today maintain e-mail addresses and operate electronically and therefore likely already have staff to comply with this requirement.

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

20. The RFA requires an agency to describe any significant alternatives, specifically small business, that it has considered in developing 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.”²⁹

21. By finalizing the Commission’s transition to an electronic-only ULS, the *Report and Order* will decrease costs for consumers and the Commission, enhance transparency of and access to data, significantly improve administrative efficiency, and save a substantial amount of paper annually—to the benefit of the Commission and those who interact with these systems alike. This action is an important step in the Commission’s modernization efforts, finalizing the transition to electronic interactions for licenses in the Wireless Radio Services that began more than two decades ago. The Commission is committed to ensuring that the economic impact of this proceeding on small entities is minimal and as discussed below, has taken steps to minimize the economic impact on small entities that could occur as a result of the rules adopted in the *Report and Order*.

22. In this proceeding, the Commission specifically sought to identify whether small entities face any special or unique issues with respect to our transition to electronic interactions. In transitioning to an electronic-only ULS, we considered how our rule changes would impact our system’s users, which includes small entities as well as other applicants and licensees. On balance, we determined that transitioning to electronic interactions will decrease costs for small entities significantly, enhance transparency of and access to data, and improve administrative efficiency thereby minimizing the economic impact for small entities when interacting with the Commission.

23. With respect to electronic filing, we sought comment on alternatives for transitioning to electronic filing, including retaining exemptions for certain categories of filers which included small businesses. After reviewing the record, we determined it is in the public interest to eliminate the exemptions in section 1.913 of our rules for manual filings and to mandate electronic filing for all Wireless Radio Services in the ULS and the ASR systems. This action furthers several longstanding Commission goals, including reducing regulatory burdens and environmental waste while streamlining our wireless services application process. The record demonstrates that the vast majority of ULS applications are filed electronically, and the remaining number of manual paper filings is declining. Virtually all commenters agree that the Commission should mandate electronic filing of ULS, eliminating all remaining exemptions. With regard to electronic submission in the ASR system, we determined that electronic filing is less burdensome for applicants, more error-proof, and more easily allows applicants to implement the two-step environmental notification process for the registration of antenna structures.

24. Today, approximately 98% of pleadings are already filed electronically through ULS, and the record in the proceeding demonstrated that the vast majority of our systems’ users have the resources to submit and receive documents electronically. By requiring electronic filing for all pleadings related to ULS and ASR licenses and applications and requiring electronic service of those pleadings where service is mandated, small entities will save costs by eliminating paper, printing, and delivery expenses. Electronic filing of pleadings is convenient and allows small entities to file documents nearly 24 hours a

²⁹ 5 U.S.C. § 603(c)(1)-(4).

day, 7 days a week through the online ULS pleadings platform. Electronic filings are transmitted instantaneously, which facilitates faster communications between small entities and the Commission and may increase efficiencies. Requiring electronic service of pleadings where service is required, will similarly promote efficiencies and result in significant cost savings and greater flexibility for small entities. Unlike traditional service of process, which can be effectuated only during limited business hours, electronic service can be made at nearly any hour, results in instantaneous delivery, and eliminates the expenses of a process serve for small entities. Thus, as a result of our actions small entities will benefit from the cost savings and convenience of electronic filings, and, given that most entities already operate electronically, these entities should not be unduly burdened by the transition to mandatory electronic filing for the ULS and ASR systems.

25. For the same reasons, we determined that requiring small entities and other interested parties, to electronically submit and receive petitions, complaints, or requests for environmental review of proposed wireless communications facilities consistent with the Commission's NEPA rules is in the public interest and not unduly burdensome. Likewise, our adoption of the exclusive use of electronic communication within the E-106 system yield similar benefits and will enable greater efficiency for small entities by reducing the time required to receive paper communications and reducing costs associated with paper letters. Notwithstanding, if necessary, small entities can use the Commission's waiver process to seek relief relating to electronic filings and communications on a case-by-case basis.

26. In the proceeding, the Commission considered how the transition to electronic correspondence would impact small entities in terms of cost, resources, and time. Similar to the use of electronic communications mentioned above, the vast majority of businesses today, including small businesses, maintain e-mail addresses. In addition, most applicants, licensees, and ASR registrants already furnish voluntarily an e-mail address on the appropriate FCC Form. Therefore, most small entities are already familiar with e-mail practices and have the processes and procedures in place to provide e-mail addresses and correspond electronically, resulting in minimal incremental costs to comply with the rules adopted in the *Report and Order*. The Commission already requires that applicants, licensees, and registrants keep their physical addresses up-to-date, and comply with similar e-mail requirements. Thus, mandating the inclusion of an e-mail address is therefore reasonable for the vast majority of our systems' users. Moreover, while we considered whether to adopt exemptions for certain classes of filers, we found that the costs of compliance with the e-mail requirement are minimal and that the Commission's waiver process is sufficient to handle the limited instances where exemptions may be warranted.

27. Similarly, we considered the economic impact of requiring licensees and tower owners to complete administrative updates to their existing licenses and registrations in order to continue receiving courtesy letters and determined that this requirement will not pose a significant economic impact on small entities, given the minimal costs of compliance in completing these updates. The Commission also considered alternatives to electronic correspondence, but concluded that e-correspondence provides substantial benefits to small entities and other users of our systems. In addition, the Commission considered whether privacy issues related to the collection of e-mail addresses may have an adverse impact on small entities, but concluded that e-mail addresses provided to ULS have always been publicly available, users have not reported privacy issues related to this practice, and use of suggested best practices users can adopt should address any remaining privacy concerns.

28. By requiring electronic delivery for all ULS and ASR compulsory and courtesy correspondence and eliminating requests for the Commission to mail hard copies of authorization and letters, we reduce regulatory burdens and make interactions more accessible and efficient while facilitating reduced administrative costs and faster communications for small entities. Additionally, the Commission's action establishing a transition deadline of six months from the effective date of the *Report and Order* for compliance, provides more than sufficient time for small entity licensees and applicants to prepare and change their practices, if needed.

G. Report to Congress

29. The Commission will send a copy of the *Report and Order*, including this FRFA, in a report to Congress pursuant to the Congressional Review Act.³⁰ In addition, the Commission will send a copy of the *Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the *Report and Order* and FRFA (or summaries thereof) will also be published in the Federal Register.³¹

³⁰ See 5 U.S.C. § 801(a)(1)(A).

³¹ See 5 U.S.C. § 604(b).