

A. Justification

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.

On April 28, 2016, the Federal Communications Commission (“Commission” or “FCC”) adopted an Order on Reconsideration and Second Report and Order, FCC 16-55, GN Docket No. 12-354 (*Second Report and Order*) that amends the rules established in the First Report and Order and Second Further Notice of Proposed Rulemaking (*First Report and Order*) for the commercial use of 150 megahertz in the 3550-3700 MHz (3.5 GHz Band) and created a new Citizens Broadband Radio Service. The rules will create additional capacity for wireless broadband by adopting a new approach to spectrum management to facilitate more intensive spectrum sharing between commercial and federal users and among multiple tiers of commercial users.

In the *First Report and Order*, the Commission introduced licensing, technical, and service rules that would enable spectrum sharing between three tiers of users in the 3.5 GHz Band: Incumbent Users; Priority Access Licenses (PALs); and General Authorized Access (GAA). The Commission sought further comment on three outstanding issues. In order to implement this new comprehensive regulatory scheme and balance the interests of the three types of spectrum users, the Commission sought comment on the rules which would allow maximum flexibility and efficiency. To that end, the *Second Report and Order* amended some of the rules released in the *First Report and Order*, as described below.

Because the Spectrum Access System (SAS) Administrators will be authorizing and coordinating the use of spectrum for Citizens Broadband Radio Service Devices (CBSDs) utilized by operators in both the PAL and GAA tiers, current information regarding CBSD use is needed to ensure accurate calculation of PAL Protection Areas (the area in “use” by a licensee, and, therefore, protected by the SAS). The Commission adopted a two pronged approach to determining “use” by Priority Access Licensees. First, Priority Access Licensees may report their PAL Protection Areas on the basis of their actual network deployments. Second, to establish an objective maximum PAL Protection Area, the SASs will use a consistent engineering model to determine the default protection contour around each CBSD. Priority Access Licensees will have the option to self-report a smaller protection contour if they choose, and a CBSD must make contact with the SAS Administrator at least once every seven days or it will not be included in the calculation of the PAL Protection Area.

The Commission previously sought and received approval from the Office of Management and Budget (OMB) for information collection requirements established by the *First Report and Order*.

Information Collection Requirements

Existing Information Collection Requirements Which Are Still In Effect Since Last Approved by OMB:

Registration Requirements (47 C.F.R. §§ 96.17(d)(1) and (2); 96.21(a)(3); 96.23(b); 96.33(b); 96.35(e); 96.39(a)(1)-(3); 96.39(c)-(g); 96.43(b); 96.45(b); 96.45(d))

CBSD Registration and Operational Parameters (47 C.F.R. § 96.39): All CBSDs must register with and be authorized by an SAS prior to initial service transmission. All CBSDs must be able to determine their geographic coordinates or, alternatively, a professional installer may determine them and report them to an SAS. All CBSDs shall incorporate security measures to ensure that they are capable of communicating only with SASs operated by approved SAS Administrators and that communications between CBSDs and SASs, individual CBSDs, and End User Devices are secure (47 C.F.R. §§ 96.39(f) and (g)). CBSDs must provide an SAS with operational parameters based on their category (47 C.F.R. §§ 96.43; 96.45). The GAA is intended to provide a low-cost entry point into the Citizens Broadband Radio Service for a wide array of users, and they will have no expectation of interference protection from incumbents or PALs. Registration requirements and operating parameters are necessary to ensure efficient use of available spectrum and prevent harmful interference. Security measures will prevent corruption and unauthorized interception of data.

Spectrum Access System (SAS) Administrator Requirements and Authorization (47 C.F.R. §§ 96.57(a)-(c); 96.59(a); 96.61; 96.63)

SAS Administrator Approval (47 C.F.R. § 96.63): The Commission will designate one or more SAS Administrators to provide nationwide service.

Registration, Authentication, and Authorization of CBSDs (47 C.F.R. § 96.57): The SAS must be capable of accepting CBSD registrations and authenticating and authorizing their operations. The SAS must also verify that the FCC ID of any CBSD seeking access is valid and obtain a list of devices with valid FCC IDs from the Commission's Equipment Authorization System.

FSS Earth Station Registration (47 C.F.R. § 96.17(d)): FSS earth stations requesting interference protection must register with the SAS.

Incumbent 3650-3700 MHz Band Grandfathered Wireless Broadband Registration (47 C.F.R. § 96.21(a)(3)): Existing operators in the 3650-3700 MHz band may register with an SAS to be granted Incumbent User status and receive interference protection around base or fixed stations registered in the Commission's Universal Licensing System (ULS) before April 17, 2015.

Radio Frequency (RF) Safety (47 C.F.R. § 96.51):

Applications for equipment authorization must contain a statement confirming compliance with RF exposure requirements for both fundamental emission and unwanted emissions, which is necessary to ensure devices meet the Commission's RF safety limits.

Environmental Sensing Capability (ESC) Approval and Reporting (47 C.F.R. § 96.67)

ESC Approval (47 C.F.R. § 96.67(b)): An ESC¹ must demonstrate that it is qualified to operate and this information is necessary so that the Commission may make such a determination and approve its operation.

ESC Operation (47 C.F.R. § 96.67(c)): An ESC must be able communicate information about the presence of signals from a federal system and adjacent frequencies, maintain security of detected and communication signal information and respond to Commission requests for any information collected or communicated by the ESC. These requirements are necessary for the ESC to facilitate coexistence of Citizens Broadband Radio Service users and federal Incumbent Users and to enable Commission oversight.

Alternative Received Signal Strength Level (RSSL) Reporting (47 C.F.R. § 96.41(d)(1)):

PALs may agree to alternative RSSLs and communicate that to the SAS. This information is necessary to give PALs flexibility to maximize use of the band while allowing the SAS Administrator(s) to monitor for impermissible interference.

Approved Emergency Collection:

Grandfathered Wireless Broadband Licensee Construction Filing (47 C.F.R. § 96.21(c)): In order to receive interference protection for registered stations, Grandfathered Wireless Broadband Licensees must notify the Commission that these stations

¹ The ESC Operators will act in the capacity of a contractor for the Commission; therefore, the burden and cost for this collection will not be impacted by the functions that the ESC performs.

were constructed, in service, and fully compliant with relevant operating rules as of April 17, 2016.²

New Information Collection Requirements Which Require OMB Approval:

Priority Access Licenses (PALs) (47 C.F.R. § 96.25)

CBSD Deactivation Report (47 C.F.R. § 96.25(c)(1)(i)): Priority Access Licensees must inform the SAS if a CBSD is no longer in use.

PAL Voluntary Contour Self-Reporting (47 C.F.R. § 96.25(c)(2)(i)): The default protection contour for any CDSB is the outer limit of the PAL Protection Area, but a PAL may self-report a contour smaller than that established by the SAS.

The statutory authority for, these collections are contained in 47 U.S.C. §§ 151, 152, 154(i), 154(j), 155(c), 302(a), 303, 304, 307(e), and 316 of the Communications Act of 1934.

There are no impacts under the Privacy Act for this collection of information.

2. Indicate how, by whom and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

Incumbents and CBSDs will submit technical information to the SAS(s) so it can perform its core functions, including coordinating use of the 3.5 GHz band and managing three tiers of users and reducing interference. The SAS Administrators will also use technical information to set permissible power limits and communicate channel and frequency availability to users to ensure efficient use of the spectrum. SAS-to-SAS synchronization will ensure coordination occurs among CBSDs that use different SAS providers and will protect incumbent users.

The Commission will collect information from SAS applicants to determine whether they meet the qualifications to manage the database.

The SAS will use CBSD registration and geo-location requirements and acceptance of interference acknowledgements to effectively and efficiently assign channels and frequencies to users while protecting incumbents and PALs.

² The Commission sought emergency approval for collections triggered in the *First Report and Order*, and OMB approved this request on October 25, 2016.

The SAS will use registration information from FSS earth stations and 3650-3700 MHz Band Grandfathered Wireless Broadband Licensees to protect all licensees and users in accordance with the three-tier access model.

The Commission will use the RF compliance statement to ensure that devices comply with applicable Commission-adopted limits for RF exposure.

SAS Administrators will use Priority Access Licensee's reports of alternative received signal strength levels to enforce these agreements, while promoting technical flexibility in the band.

The Commission will collect information from ESC operator applicants to determine whether they are qualified to operate and will collect information from operators for oversight and to protect the security and confidentiality of federal operations.

Collection of information regarding Grandfathered Wireless Broadband Licensees will allow the commission and the SASs to protect existing networks from interference during the transition period to the new sharing framework.

Collection of information regarding CBSD use will allow the SASs to accurately calculate and designate PAL Protection Areas in order to provide the required interference protection. This will also foster stability and predictability which will maximize the availability of unused spectrum to GAA users. Priority Access Licensees basis must inform the SAS if a CBSD is no longer in operation so the SAS may alter the PAL Protection Area accordingly. Priority Access Licensees are permitted to report smaller contours within the boundaries of the default calculation which will minimize the risk of over-protecting areas beyond the extent of their network deployments. Both of these requirements maximize spectral efficiency in this band.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.

The Commission's Wireless Telecommunications Bureau conducts an analysis to determine whether improved information technology can be used to reduce the burden on the public. This analysis considers the possibility of obtaining and/or computer-generating the required data from existing databases in the Commission or other Federal agencies. The Commission believes information technology will reduce the burden on the public, as the SAS will collect registration and technical information via electronic means and the SAS will publish publicly available information on-line. The Commission expects that SAS-to-SAS synchronization and ESC communication will occur using electronic means. The majority of communication between and

among users, SASs, and ESCs will occur automatically through the device. Existing licensing information can be found on-line.

The Commission expects much of the communication between licensees and GAA users will occur automatically through the device, and PALs will communicate use or disuse through electronic means, as this is the most accurate and efficient means of relaying this information.

Because many of the interactions between the CBSDs and SASs require repeated collections, automated collection processes via the device will reduce the man-power and financial burden.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in item 2 above.

The Citizens Broadband Radio Service, ESCs, and the SASs were established by the *First Report and Order* and have not been commercially deployed. Therefore, all associated information collection requirements established in the *Second Report and Order* are new, and there is no similar data available and no duplication of effort by the FCC or any other agency.

5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.

The information that will be submitted to the SASs and ESCs is necessary to ensure that the Citizens Broadband Radio Service does not cause harmful interference to Incumbent Users and that CBSDs operate only consistent with parameters authorized by an SAS (As noted above, the ESC may be used to detect transmissions from DoD radar systems and transmit that information to an SAS to ensure that federal Incumbent Users are protected from interference.). The reporting, recordkeeping, and other compliance requirements resulting from the *First Report and Order* will apply to all entities in the same manner. The Commission does not believe that the costs and/or administrative burdens associated with the rules will unduly burden small entities. The Commission will work with the SAS Administrators to ensure that information is collected in the least burdensome manner to all businesses, both large and small.

The reporting, recordkeeping, and other compliance requirements resulting from the *Second Report and Order* will apply to all entities in the same manner and is consistent with the approach adopted in the *First Report and Order*. While the Commission does not believe that the costs and/or administrative burdens associated with the rules will unduly burden small entities, there is a chance that some small entities will need outside assistance to comply with the rules. However, the Commission believes that the rules adopted in the *Second Report and Order* will promote fairness among all users and provide small entities with more information and greater flexibility and access to spectrum.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

If Priority Access Licensees did not regularly report the status and operation of their CBSDs, then the SAS Administrators would not be able to accurately assign and enforce PAL Protection

Areas which could lead to harmful interference of higher priority users and a loss of available spectrum to GAA users.

If Grandfathered Wireless Broadband Licensees did not register their sites and provide proof of construction, the SAS will not be able to adequately protect these licensees from harmful interference in the 3.5 GHz Band, unfairly harming their existing investment in the band. The Commission also believes generally that any burden associated with the reporting requirement is outweighed by the advantages of affording these licensees interference protection.

7. Explain any special circumstances that cause an information collection to be conducted in a manner: requiring respondents to report information to the agency more often than quarterly; requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it; requiring respondents to submit more than an original and two copies of any document; requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.

Respondents will provide some information to the SAS more frequently than a quarterly basis. CBSDs must register with an approved SAS before initial use and within 60 seconds if any of the required registration information changes. ESCs will transmit information to the SAS whenever a radar transmission is detected. However, this information is vital to the Citizens Broadband Radio Service framework and an SAS or ESC could not function properly without it. Given the nature of the tiered spectrum access system, it is vital that the most up to date information is provided regularly.

8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 C.F.R. 1320.8(d), soliciting comments on the information prior to submission to OMB.

The Commission has met the notice requirements of 5 C.F.R. § 1320.8. The public has been given the opportunity to comment via publication of the Notice in the Federal Register on November 22, 2016 (81 FR 83840).

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

The respondents will not receive payments in connection with this collection of information.

10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation or agency policy.

The Commission is not requesting respondents to submit confidential information.

11. Provide additional justification for any questions of a sensitive nature.

No sensitive information is required for this collection of information.

12. Provide estimates of the hour burden of the collection of information. The statement should: indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance.

Existing Burden Hour Estimates³:

- a. *CBSD Registration (47 C.F.R. §§ 96.23(b); 96.33(b); 96.39(c)-(e); 96.43(b); 96.45(b) and (d); 96.57; 96.59; 96.61).* It is estimated that approximately 45,800 CBSDs will file registrations with an SAS. The estimate is based on the number of existing 3650-3700 MHz band sites registered in ULS. The required registration information and interference reporting is automated via the device and the burden for automated submission of information is insignificant.

$$45,800 \text{ (CBSDs)} \times 0 \text{ hrs./registration} = \mathbf{0 \text{ hours}}$$

- b. *CBSD Geo-location Information Registered Automatically via Device (47 C.F.R. §*

³ The figures in this section refer to the calculations made with respect to the *First Report and Order*. These collection requirements have not changed as of this new supporting statement.

96.39(a)). It is estimated that half of CBSD users will send geo-location automatically through the device.

$$22,900 \text{ (CBSDs)} \times 0 \text{ hrs./automatic geo-location delivery} = \mathbf{0 \text{ hours}}$$

- c. *CBSD Security Measures (47 C.F.R § 96.39(f) and (g))*. It is estimated that all CBSDs (45,800) will incorporate security measures, but this is automated via the device so the burden is insignificant.

$$45,800 \text{ (CBSDs)} \times 0 \text{ hrs.} = \mathbf{0 \text{ hours}}$$

- d. *Category B CBSD Voluntary Coordination (47 C.F.R. § 96.35(e))*. Based on the number of existing incumbent 3650-3700 MHz wireless broadband licensees, it is estimated that there will be 2,750 Category B CBSDs users that will file coordination agreements and that it will take .25 hours to file the agreement.

$$2,750 \text{ (users)} \times .25 \text{ hrs./agreement} = \mathbf{688 \text{ hours}}$$

- e. *Alternative Received Signal Strength Limit (RSSL) Reporting (47 C.F.R. § 96.41(d)(1))*. Based on the 518,000 available license areas (74,000 license areas and up to seven licenses available in each), it is estimated that one-third of the available licenses will result in 172,667 Priority Access Licenses, based on previous auction results. It is estimated that one-third of these licensees (57,556) will use alternative RSSL's and it will take .25 hours to report this to an SAS.

$$57,556 \text{ (licenses)} \times .25 \text{ hrs./report} = \mathbf{14,389 \text{ hours}}$$

- f. *RF Safety Compliance Certificate (47 C.F.R. § 96.51)*. It is estimated that it will take each CBSD operator .5 hours to submit a statement confirming compliance with radiofrequency radiation exposure requirements.

$$45,800 \text{ (CBSD operators)} \times .5 \text{ hrs./statement} = \mathbf{22,900 \text{ hours}}$$

Existing Burden Hours to the Respondents:

- | | | |
|---|---|---------------------|
| a. CBSD Registration and Interference Reporting | = | 0 hours |
| b. CBSD Geo-location Information Registered Automatically | = | 0 hours |
| c. CBSD Security Measures | = | 0 hours |
| d. Category B CBSD Voluntary Coordination | = | 688 hours |
| e. Alternative RSSL Reporting | = | 14,389 hours |
| f. RF Safety Compliance Certification | = | <u>22,900 hours</u> |

37,977 hours

Existing Number of Respondents: 110,782⁴

Existing Number of Annual Responses: 136,432⁵

Existing Burden Hours: 37,977 hours

Approved Emergency Burden Hour Estimates⁶

Grandfathered Wireless Broadband Licensee Construction Filing (47 C.F.R. § 96.21(c)): In order to receive interference protection for registered stations, Grandfathered Wireless Broadband Licensees must notify the Commission that these stations were constructed, in service, and fully compliant with relevant operating rules as of April 17, 2016. There are 2,750 existing Grandfathered Wireless Broadband Licensees and approximately 30,000 registered base stations entitled to protection, and, on average, one construction filing will cover three locations. Therefore, we expect there will be a total of 10,000 one-time filings.

With regard to the time burden, the Commission believes that, depending on the complexity and level of communication involved, it will take each party approximately 1 hour to review and verify site information using in-house staff. The Commission believes that it will take each party .5 hours to review information and consult with outside counsel.

10,000 (responses) x 1 hr. =	10,000 hrs.
10,000 (responses) x .5 hrs. =	<u>5,000 hrs.</u>
Total:	15,000 hrs.

⁴ This figure was calculated as follows: 45,800 CBSD users + 57,556 Priority Access Licensees + 4,658 FSS earth stations + 2,750 Grandfathered Wireless Broadband licensees + 9 SAS Administrator applicants + 9 ESC Operator applicants.

⁵ This figure was calculated as follows: 2,750 coordination agreements + 57,556 Alternative RSSL reports + 45,800 RF Safety Compliance Statements + 22,900 Geo-location Information Registrations (by a professional installer)+ 4,658 FSS Earth Station Registrations + 2,750 Grandfathered Wireless Broadband Registrations + 9 SAS Administrator Authorization Applications+ 9 ESC Operator Certification Applications = 136,432 responses.

⁶ As aforementioned, the Commission sought emergency approval for collections triggered in the *First Report and Order*, and OMB approved this request on October 25, 2016. The calculations in this section are based on the information collection requirements outlined in the supporting statement for the emergency approval (OMB 3060-2011).

Total Average Annual Burden: 5,000 hrs.⁷

Number of Annual Respondents: 0

Number of Annual Responses: 3,333 (averaged over a three year period)

Burden Hours: 5,000 hours

New Burden Hour Estimates⁸:

- a. *CBSD Deactivation Report (47 C.F.R. § 96.25(c)(1)(i))*: The number of CBSDs is based on the total estimated band sites currently registered in ULS. A CBSD must make contact with the SAS if a previously operational CBSD is no longer operating, but because devices automatically report to the SAS, the burden for information submission is insignificant.

45,800 (CBSDs) x 0 hrs. = **0 hrs.**

- b. *PAL Voluntary Contour Self-Reporting (47 C.F.R. § 96.25(c)(2)(i))*: PALs may choose to self-report smaller protection contours based on individual requirements; otherwise, the default protection contour will be determined by the SAS as a -96 dBm/MHz contour around each CBSD.

Based on the 518,000 available license areas (74,000 license areas and up to seven licenses available in each), it is estimated that one-third of the available licenses will result in 172,667 Priority Access Licenses, based on previous auction results. It is estimated that one-half of these licensees (86,334) will choose to self-report protection contours and it will take .25 hours to report this to an SAS.

86,334 (PALs) x .25 hrs. = **21,584 hrs.**

New Burden Hours to the Respondents

- a. CBSD Deactivation Report = 0 hours
b. PAL Voluntary Contour Self-Reporting: = 21,584 hours

⁷ Because this is a one-time burden, the Commission calculates the additional burden by averaging across the three-year approval period: 15,000 hours/3 years = 5,000 hours per year.

⁸ The calculations in this section are based solely on the information collection requirements created in the *Second Report and Order*.

21,584 hours

New Number of Annual Respondents: 0

New Number of Annual Responses: 86,334

New Burden Hours: 21,584 hours

Total Cumulative Number of Annual Respondents: 110,782⁹

Total Cumulative Number of Annual Responses: 136,432 + 3,333 + 86,334 = 226,099¹⁰

Total Cumulative Number of Burden Hours: 37,977 + 5,000 + 21,584 = 64,561 hours¹¹

The Commission estimates the following **in-house costs** to respondents for each collection based on its knowledge of its respondents providing this information:

Existing In-House Cost Estimates:

- a. CBSD Registration (47 C.F.R. §§ 96.23(b); 96.33(b); 96.39(c)-(e); 96.43(b); 96.45(b) and (d); 96.57; 96.59; 96.61): 45,800 (CBSDs) x 0 hrs. x \$0/hr. = **\$0**
- b. CBSD Geo-location Information Registered Automatically via Device (47 C.F.R. § 96.39(a)): 22,900 (CBSDs) x 0 hrs. x \$0/hr. = **\$0**
- c. CBSD Security Measures (47 C.F.R. § 96.39(f) and (g)): 45,800 (CBSDs) x 0 hrs. x \$0/hr. = **\$0**
- d. Category B CBSD Voluntary Coordination (47 C.F.R. § 96.35(e)): 2,750 (users) x .25 hrs. x \$50.04/hr. (in-house attorney based on salary for 2015 GS-13, Step 5 federal government employee) = **\$34,403**
- e. Alternative RSSL Reporting (47 C.F.R. § 96.41(d)(1)): 57,556 (licensees) x .25 hrs. x \$50.04/hr. (in-house engineer based on salary for 2015 GS-13, Step 5 federal government employee) = **\$720,026**
- f. RF Safety Compliance Certification (47 C.F.R. § 96.51): 45,800 (CBSD operators) x .5 hrs. x \$50.04/hr. (in-house engineer based on 2015 salary of GS 13, Step 5 federal government employee) = **\$1,145,916**

⁹ This figure was calculated in the *First Report and Order* and there are no additional Annual Respondents resulting from the *Second Report and Order* or Emergency Information Collection Approval.

¹⁰ This figure was calculated by adding the sum of the Annual Responses from the *First Report and Order* and the additional Annual Responses in the *Second Report and Order* and Emergency Information Collection Approval.

¹¹ This figure was calculated by adding the sum of the Hour Burden from the *First Report and Order*, the additional Hour Burden in the *Second Report and Order*, and the one-time hour burden for Grandfathered Wireless Broadband Licensees, as described in the Emergency Information Collection Approval, averaged across the three-year approval period.

Existing In-House Cost to Respondents = \$1,900,345¹²

Approved Emergency In-House Estimates:

Grandfathered Wireless Broadband Licensee Construction Filing: 10,000 (estimated responses) x 1 hrs. x \$50.04/hr. (in-house engineer based on 2015 salary of GS 13, Step 5 federal government employee) = \$500,400 (one-time cost) / 3 (to reflect average across three-year approval period) = **\$166,800**

New In-House Cost Estimates:

- a. CBSD Deactivation Report (47 C.F.R. § 96.25(c)(1)(i)): 45,800 (CBSDs) x 0 hrs. x \$0/hr. = **\$0**
- b. PAL Voluntary Self-Reporting (47 C.F.R. § 96.25(c)(2)(i)): 86,334 (Licensees) x .25hrs. x \$50.04/hr. (in-house engineer based on 2015 salary of GS 13, Step 5 federal government employee) = **\$1,080,038**

Total Cumulative In-House Cost to Respondents = \$1,900,345 + \$166,800 + \$1,080,038 = \$3,147,183¹³

13. Provide estimates for the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in items 12 and 14).

In the first supporting statement, the Commission estimated the following costs to respondents and recordkeepers based on the burden required to provide the information:

- a. CBSD Geo-location Information Registered by a Professional Installer (47 C.F.R. § 96.39(b)): 22,900 (CBSDs) x .5 hrs. x \$250/hr. (outside engineer) = **\$2,862,500**
- b. FSS Earth Station Registration (47 C.F.R. § 96.17(d)): 4,658 (licensees) x 2 hrs. x \$300/hr. (outside legal counsel) = **\$2,794,800**
- c. Grandfathered Wireless Broadband Registration (47 C.F.R. § 96.21(a)(3)): 2,750 (licensees) x 2 hrs. x \$300 hr. (outside legal counsel) = **\$1,650,000**
- d. SAS Administrator Authorization (47 C.F.R. § 96.63): 9 (applicants) x 2 hrs. x

¹² These figures are based on the information collection requirements established in the *First Report and Order*, with updated hourly wages to account for increases in salary.

¹³ This figure was calculated based on the total In-House Cost Burdens from both the *First and Second Report and Order* and the Emergency Information Collection Approval, with updated hourly wages to account for increases in salary.

\$300/hr. (outside legal counsel) = **\$5,400**

- e. ESC Operator Certification (47 C.F.R. § 96.67(b) and (c)): 9 (applicants) x 2 hrs. x
\$300/hr. (outside legal counsel) = **\$5,400**

Existing Cost Burden = \$7,318,100¹⁴

Approved Emergency Cost Burden:

Grandfathered Wireless Broadband Licensee Construction Filing: 10,000 (Respondents)
x .5hr. x \$300/hr. (outside legal counsel) = \$1,500,000 (one-time cost) / 3 (to reflect
average across three-year approval period) = **\$500,000**

New Cost Burden:

In this statement, the Commission recognizes that the design of the CBSDs will enable
automated responses thus reducing the burden on respondents. Therefore, the only new
collection requirement for which there is an associated cost is:

PAL Voluntary Self-Reporting (47 C.F.R. § 96.25(c)(1)(i)): 86,334 (Licensees) x .25hr.
x \$250/hr. (outside engineer) = **\$5,395,875**

Total Cumulative Cost Burden = \$7,318,100 + \$500,000 + \$5,395,875 = 13,213,975¹⁵

14. Provide estimates of annualized costs to the Federal government. Also provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff) and any other expenses that would not have been incurred without this collection of information.

¹⁴ This figure was calculated using the sum of the Annual Cost Burden in the *First Report and Order*.

¹⁵ This figure was calculated based on the total Annual Cost Burdens from both the *First and Second Report and Order* and the Emergency Information Collection Approval.

- a. *CBSD Registration.* CBSDs will provide this information directly to an SAS and there is no cost to the federal government.

\$0

- b. *CBSD Geo-location Information Registered Automatically via Device.* CBSDs will send this information directly to an SAS and there is no cost to the federal government.

\$0

- c. *CBSD Security Measures.* CBSDs will incorporate security functions at the manufacturing stage and there is no cost to the federal government.

\$0

- d. *FSS Earth Station Registration.* FSS earth station licensees will register directly with an SAS and there is no cost to the federal government.

\$0

- e. *Grandfathered Wireless Broadband Registration.* Incumbent 3650-3700 MHz Grandfathered Wireless Broadband licensees will register directly with an SAS and there is no cost to the federal government.

\$0

- f. *Category B CBSD Voluntary Coordination.* Category B CBSDs users will file coordination agreements directly with SAS and there is no cost to the federal government.

\$0

- g. *Alternative Received Signal Strength Limit (RSSL) Reporting.* Priority Access Licensee's will file alternative RSSL's directly with SAS and there is no cost to the federal government.

\$0

- h. *SAS Administrator Authorization.* It is estimated that it will take an engineer at the GS-13, Step 5 earning \$50.04/hr. eight hours to review each application for authorization.

$$9 \text{ (applicants)} \times 8 \text{ hrs.} \times \$50.04/\text{hr.} = \mathbf{\$3,603}$$

- i. *SAS Database Creation and Maintenance.* There is no cost to the federal government for the SAS database creation and maintenance.

\$0

- j. *ESC Operator Certification*. It is estimated that it will take an engineer at the GS-13, Step 5 earning \$50.04/hr. 8 hours to review each application for authorization.

$$9 \text{ (applicants)} \times 8 \text{ hrs.} \times \$50.04/\text{hr.} = \mathbf{\$3,603}$$

- k. *RF Safety Compliance Certificate*. It is estimated that it will take an engineer earning at the GS-13, Step 5 earning \$50.04/hr. one hour per submission to review each certificate.

$$45,800 \text{ (CBSD operators)} \times 1 \text{ hr.} \times \$50.04 = \mathbf{\$2,291,832}$$

Existing Cost to the Federal Government With Updates = \$2,299,038¹⁶

Approved Emergency Collection Cost to the Federal Government:

Grandfathered Wireless Broadband Licensee Construction Filing. It is estimated that it will take an engineer at the GS-15, Step 5 earning \$69.56/hr. one hour per submission to review each filing.

$$10,000 \text{ (responses)} \times 1 \text{ hr.} \times \$69.56 = \$695,600 \text{ (one-time cost)} / 3 \text{ (to reflect average across three-year approval period)} = \mathbf{\$231,867}$$

New Information Collection Cost to the Federal Government:

- a. *CBSD Deactivation Report*. Devices communicate automatically with the SAS. There is no cost to the federal government.

\$0

- b. *PAL Voluntary Contour Self-Reporting*. Priority Access Licensees that wish to self-report contours may do so directly with a Spectrum Access System Administrator, thus there is no cost to the federal government.

¹⁶ This figure was calculated using the Annual Cost to the Federal Government from the *First Report and Order*.

Total Cost to the Federal Government is = \$2,299,038 + \$231,867 = \$2,530,905¹⁷

15. Explain the reasons for any program changes or adjustments to this information collection.

Amendments to the information collection requirements in the *Second Report and Order*, FCC 16-55, aim to further the Commission's goal of promoting efficient spectrum sharing in its new tiered use regime. Additional required communications between the Priority Access Licensees and SAS Administrators will ensure that the most accurate information is available for other users. Additionally, the new voluntary reporting by PALs will encourage the "use or share" scheme and promote secondary markets. The following burdens/program changes will be added to OMB's inventory as a result of the information collection requirements contained in FCC 16-55: +86,334 to the annual number of responses, +21,584 to the annual burden hours and + \$5,395,875 to the annual cost burden.

The Commission also has adjustments to the number of annual responses of -6,667, -10,000 to the annual burden hours and -\$1,000,000 to the annual cost burden. These adjustments are due to the Commission averaging the burdens and costs for the Grandfathered Wireless Broadband Licensee Construction Filing (approved emergency collection) instead of accounting for them as a whole.

16. For collections of information whose results will be published, outline plans for tabulation and publication.

The information and data will not be published.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

The information will be collected automatically through the CBSDs, therefore, no form will be required.

18. Explain any exceptions to the Certification Statement.

There are no exceptions to the certification statement.

¹⁷ This figure was calculated based on the total Annual Cost to the Federal Government from both the *First* and *Second Report and Order* and the Emergency Information Collection Approval, with updated hourly wages to account for increases in salary.

**Sections 96.17; 96.21; 96.23; 96.25; 96.33; 96.35; 96.39; 96.41; 96.43;
96.45; 96.51; 96.57; 96.59; 96.61; 96.63; 96.67, Commercial
Operations in the 3550-3650 MHz Band**

**3060-1211
March 2017**

Collection of Information Employing Statistical Methods.