

December 2012

SUPPORTING STATEMENT

New collection entitled: Study Area Boundary Data Reporting in Esri Shapefile Format, DA 12-1777

Reason for request for emergency processing and approval. The Commission must have geographic data on study area boundaries in order to distribute accurately the universal service support to local exchange carriers (LECs) that operate in high cost, rural areas. Reasonable limits must be set on the expenses of rate-of-return companies compared to similarly situated peers through cost benchmarks. Without the requested data, the Commission cannot set appropriate and realistic limits on the level of high-cost loop support (HCLS) that rate-of-return carriers can receive. All of the geographic variables that the Commission uses to analyze cost and hence the level of support – including road miles, road crossings, density, depth of bedrock, soil difficulty, climate, and the percentage of land that is tribal, park and urban – are predicated on knowing the specific study area boundaries of each carrier. There is reason to believe that the interim data source used by the FCC misstates some rate-of-return study areas. Therefore, in order to incorporate reliably accurate data into the Commission’s analysis – and thereby establish the appropriate level of high-cost loop support that carriers can receive – as soon as possible, we request emergency processing and approval of the Study Area Boundary Data Reporting in Esri Shapefile Format collection. Due to the emergency nature of this request, the FCC cannot wait 120 days to notify the public and potential applicants of our intent to collect this information and is seeking a waiver of the requirement of a notice and comment period in the Federal Register. The FCC will conduct all the necessary regular submission requirements under the PRA after approval of this emergency request.

We acknowledge that the Commission adopted rules requiring each incumbent LEC that receives high-cost universal service support to submit – by July 1, 2013 – a five-year service quality improvement plan describing its proposed improvements or upgrades to its network, and starting in 2014, the incumbent LECs will be required to include maps in subsequent annual progress reports detailing progress toward the targets established in the initial five-year plan. That five-year service quality improvement plan requirement has not yet been submitted for PRA approval, however. Moreover, we note that while carriers may wish to include “baseline” maps in their initial filing of five-year plans, there is no requirement to do so, and Commission staff have so advised carriers that have informally inquired. Moreover, we expect that when carriers file the maps that will be required to be filed for the first time in 2014, they should be able to utilize the previously developed study area boundary map data that we are seeking approval for in this request. Therefore, we envision a unified program that will leverage existing data when meeting the requirements of the annual progress reports.

We view the study area boundary maps required by the information collection described herein as time sensitive. There would be a substantial risk of the Commission not establishing the HCLS levels described above in time to distribute support in 2014 if the study area boundary data collection is delayed for a period of months (*i.e.*, after the spring of 2013). Before the study

area boundary data can be used in the HCLS analysis, the Commission must have time to review and reconcile the data submitted by incumbent LECs. This reconciliation process will include resolving voids and overlap areas in the submitted maps and requesting updated submissions of incomplete or erroneous data, which could take several months to complete. The Commission must also build in time to address potential issues with the HCLS analysis itself, including designing proper calculations, addressing disputes over statistical specifications, and checking for errors or flaws in underlying data. Therefore, the Commission seeks to require incumbent LECs to submit or certify study area boundary data in the spring of 2013, thereby providing sufficient time to reconcile the data, use the data to adjust the HCLS model, publish the results of the HCLS analysis, provide an opportunity for public input, and then finalize the HCLS levels before 2014. While the HCLS model applies only to rate-of-return carriers, study area boundary data from price cap carriers are needed to complete the puzzle, since knowing the boundaries of neighboring price cap carriers will help the Commission greatly improve the accuracy of the boundaries of the rate-of-return carriers.

A. Justification:

1. 47 U.S.C. § 254(b) mandates the Federal Commission to preserve and advance “[a]ccess in rural and high cost areas [to] interexchange services and advanced Telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.” Pursuant to that mandate, the Commission adopted the *USF/ICC Transformation Order*, 76 FR 73830 (Nov 29, 2011), which comprehensively reforms universal service funding, including for high-cost, rural areas.¹ Confirming the relevant geographic boundaries is important for implementing several components of those reforms. In particular, the maps are needed to implement the Commission’s benchmarking rule, and to eliminate support where an unsubsidized competitor offers voice and broadband service that overlaps an incumbent carrier’s study area.

A “study area” is the geographic area served by an incumbent local exchange carrier (LEC) within a state and consists of one or more exchanges. The benchmarking rule establishes limits on reimbursable capital costs and operating expenses for purposes of high-cost loop support by comparing rate-of-return carriers to their similarly situated peers. A geographic information system (GIS) shapefile is a data storage format for storing the location, shape, and attributes of geographic features.² The Bureau sought comment how best to collect the

¹ 47 U.S.C. § 254 (mandating FCC authority over universal service) and the FCC’s delegation of authority to the Wireline Competition Bureau in the *USF/ICC Transformation Order* are the most direct lines of authority for this Order. The Order as a whole is adopted pursuant to sections 1, 2, 4(i), 201-205, 218-220, 254, 256, 303(r), and 403 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 152, 154(i), 201-205, 218-220, 254, 303(r), and 403, and sections 0.91, 0.201(d), 0.291, and 1.427 of the Commission’s rules, 47 C.F.R. §§ 0.91, 0.201(d), 0.291, 1.427, and pursuant to the delegations of authority in paragraphs 157, 184, 187, 192, 217 of the *USF/ICC Transformation Order*.

² A shapefile is a vector data storage format for storing the location, shape, and attributes of geographic features. A shapefile at a minimum consists of a Main file (.shp), an Index file (.shx), and a dBASE table (.dbf). Esri introduced the shapefile format in the early 1990s. Since that time, the esri shapefile has become the industry standard for storing, depicting, and analyzing spatial data. As a result, there are multiple geographic information system (GIS) platforms capable of creating and managing esri shapefiles, and certain software programs can convert spatial data stored in other formats (such as MapInfo) to an esri shapefile format.

information in a public notice, *Data Specifications for Collecting Study Area Boundaries*, 77 FR 37402 (June 21, 2012) (*Study Area Boundary Public Notice*).

Fees totaling approximately \$4.5 billion dollars are assessed on interstate, end-user telecommunications revenues to support voice and broadband-capable infrastructure deployment in rural, high cost areas. The support is delivered to carriers based on the characteristics of their study areas. Complete and accurate study area maps are necessary in order to calculate a rate of return carrier's capital costs and operating expenses, which in turn determine the allocation of funds among those high cost carriers. Also, support levels for exchanges in some study areas have been frozen in order to prevent their sale merely to maximize the funds they receive through the high cost support mechanism, and those exchanges need to be identified. Carriers also occasionally sell exchanges among themselves, and standardized study area map data will allow the Commission to keep track of bought and sold exchanges.

The information collection request adopted in this order is mandatory, and failure to comply may lead to enforcement action, including forfeiture penalties, pursuant to the Communications Act and other applicable law.³

As noted on the OMB Form 83-I, this information collection does not affect individuals or households; thus, there are no impacts under the Privacy Act.

Statutory authority for this information collection is contained in 47 U.S.C. § 254(b), which charges the Commission, among other requirements, to preserve and advance “[a]ccess in rural and high cost areas [to] interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas.”

2. Commission staff will use the study area boundary data to implement certain reforms to universal service support. For example, as part of implementing the benchmarking rule, staff will use the data as an essential input in a model that determines the level of high cost support for rate of return carriers. All the geographical variables used in this model that affect the level of support—including road miles, road crossing, density, depth of bedrock, soil difficulty, climate, percent tribal, park and urban land—are predicated on knowing the specific service territory of each carrier. Exchange boundaries are necessary to ensure the calculations properly take into account an existing Commission rule that freeze support in exchanges when sold from one carrier to another. In addition, the Commission staff will use the data to determine whether unsubsidized competitors offer service within all or a portion of an incumbent rate of return carrier's study area. This analysis will be used to implement a rule that phases out universal service support where unsubsidized competitors offer voice and broadband service throughout 100 percent of an incumbent carrier's study area. The study area boundary data will also complement the data collected through the Commission's Form 477 Local Telephone Competition and Broadband Reporting effort, as they will indicate where fixed voice service is available from incumbent LECs. In addition, the data will help inform the work of the Commission's Technology Transitions Policy Task Force, which is developing recommendations on how the Commission

³ See 47 U.S.C. §§ 401(b), 409(m), 501, 502, 503; 47 C.F.R. § 1.80 (describing forfeiture penalty limits for entities regulated by the FCC).

can modernize policies to encourage technological transition, empower consumers, promote competition, and ensure network reliability. Finally, the Commission will make the study area boundary data available to the public for its use.

3. Each incumbent LEC (or state entity – either a public service commission or state telecommunications association – filing on its behalf; see answer 5 below) is required to file a map of its study area in a uniform GIS esri shapefile format. The incumbent LEC or state entity filer is expected to use a standard xml or java secure internet-browser web interface. Filers will log into this web site that is being developed at the Commission using an existing FCC identification and verification protocol with a few screens for information collection by direct entry and upload. The web site will check the contents of the upload for compliance and display the uploaded data for certification by the filer.

This approach offers an efficient data collection process. It imposes a reasonable burden on incumbent LECs consistent with the policy goals of ensuring compatibility, limiting potential errors, and processing information efficiently. GIS shapefiles are easy to submit and access. Permitting respondents to file maps in other formats, such as hard-copy maps or non-GIS digitized formats, was considered and rejected. A uniform format is necessary, and the conversion of other formats to GIS can introduce errors that would be apparent to local filers, including state entities and the incumbent LECs themselves, but would not be readily apparent to Commission staff. We attempt to reduce the burden on small entities by encouraging state commissions or associations to file on their behalf.

4. There is no overlap with an existing information collection. Existing information, such as location information filed by ZIP Code, is not sufficient to produce an accurate GIS shapefile of an incumbent LEC's study area.

5. The requirements adopted in the Order impose the least possible burden on incumbent LECs consistent with the regulatory need for the information. Incumbent LECs typically record the locations of their customers and their facilities, making them well situated to verify where they actually offer service. In addition, incumbent LECs generally file maps of their study areas and exchange areas with state public utility commissions, in part because it is these maps that determine calling areas for rate purposes and help those state commissions resolve any conflicts on which carrier is required to serve a new customer located between exchange areas. Examples of exchange maps available at public service commissions or on carrier websites can be found at: all incumbent LECs in Wisconsin (<http://psc.wi.gov/apps40/DLLink/Maps/Exchange.aspx>); Teton Telephone (<http://www.puc.state.id.us/tariff/approved/Title61/Teton%20Telecom%20Tariff%20No.%202.pdf>); Qwest Colorado (CenturyLink) (http://www.centurylink.com/tariffs/co_qc_ens_t_no_23_maps.pdf); CenturyTel of Minnesota (CenturyLink) (http://www.centurylink.com/tariffs/mn_ct-mn_gen_t.pdf); Southwestern Bell Telephone Company d/b/a/ AT&T Oklahoma (<http://cpr.att.com/pdf/ok/h002.pdf>); Windstream Kentucky East (http://psc.ky.gov/tariffs/telecommunications/telecommunications_n-z/windstream%20kentucky%20east,%20inc/tariff%20no.%207/Tariff%20No.%207%20-%20%282%29%20General%20Customer%20Services%20-%20Section%203%20A.pdf); BellSouth (AT&T) of Kentucky (http://psc.ky.gov/tariffs/telecommunications/telecommunications_a-c/bellsouth

[%20telecommunications,%20inc/EXCHANGE%20SERVICE%20AREA%20MAPS%20A-Z/Tariff%201B%20OR%202A%20-%20Exchange%20Service%20Area%20Maps%20A-Z%20Travel%20File.pdf](https://www.psc.ky.gov/tariffs/telecommunications/telecommunications_a-c/cincinnati%20bell%20telephone/cincinnati%20bell%20-%20exchange%20rate/Tariff%20No.%202%20-%20Exchange%20Rate.pdf)); and Cincinnati Bell of Kentucky ([http://psc.ky.gov/tariffs/telecommunications/telecommunications_a-c/cincinnati%20bell%20telephone/cincinnati%20bell%20-%20exchange%20rate/Tariff%20No.%202%20-%20Exchange%20Rate.pdf](https://www.psc.ky.gov/tariffs/telecommunications/telecommunications_a-c/cincinnati%20bell%20telephone/cincinnati%20bell%20-%20exchange%20rate/Tariff%20No.%202%20-%20Exchange%20Rate.pdf)). If incumbent LECs have other geographic areas readily available that can be used to create exchange boundaries in a straightforward way (e.g., wire center boundaries may fit this description), the Commission is open to working with providers to collect the exchange boundaries by means of these other geographic areas.

Incumbent LECs are also best-suited to undertake the conversion of existing map data to an esri shapefile, and should be able to do so based largely on existing information. Shapefile polygons defining exchange boundaries may be created in a variety of ways, including but not limited to: conversion of existing GIS and/or CAD data, digitizing from existing paper maps, heads-up digitizing using on-screen data, use of coordinate geometry from physical descriptions, GPS data, and field surveys. The submitted shapefile should conform to the U.S Geological Survey (USGS) National Map standard of 1:24,000-scale topographic quadrangles, which claims a horizontal accuracy of +/- 40 feet. Using a USGS standard will aid in the reconciliation process. For example, if two adjoining study areas are bound by a road, stream, or other geographic or topographic feature, it will produce more accurate maps if the study areas conform to a similar base map with a standard scale. Moreover, requiring the submission of data in esri shapefile format—which has become the standard mapping format over the last two decades—ensures compatibility, prevents delay, and helps minimize errors. As such, it best balances the need for accurate and timely data with the goal of minimizing burdens on providers.

To ease the burden on incumbent LECs, especially those that are small entities, we also encourage and will accept submissions of study area boundaries from willing state entities on behalf of carriers. The *Study Area Boundary Public Notice* asked whether state entities should be allowed to assist in the data collection process, and commenters strongly supported the idea.⁴ The Order agrees with commenters that state entities are well situated to assist carriers, and invites state entities to upload data to the mapping website on behalf of incumbent LECs within their states. The precise study area boundary filing procedures will vary slightly, depending on whether an incumbent LEC submits its own boundary data, or whether a state entity uploads the boundary data on behalf of the incumbent LEC. The steps for each procedure are listed below:

ILEC⁵ Process for those submitting their own study area boundary data

1. ILEC will log into a secure web interface using their FCC Registration Number (FRN) and password.
2. ILECs will provide cover page information and methodology process used to create the data.
3. ILEC will upload a zip file with their study area boundary data.

⁴ See, e.g., NPSC Comments at 2-3 (maintaining that submission by state commissions would ensure accuracy and consistency and eliminate conflict and confusion); ACS Reply Comments at 5 (arguing that state commission should submit mapping data).

⁵ For the sake of brevity we use acronyms in this list that we avoid in the text: “ILEC” for Incumbent LEC and “PUC” for the state regulatory commissions, e.g., Public Utilities Commission, Public Service Commission, and similar variations.

4. ILEC will review their map data.
5. If accurate, ILEC will certify and submit the data.
6. If the map is not accurate, ILEC will revise the data as needed, upload a revised zip file, and certify and submit the data at that time.

Process when state commission or telecommunications association uploads on behalf of the incumbent LEC

- A. *State PUC/Telecom. Association Process.*
 1. State PUC/Telecom. Association will log into a secure web interface using an assigned username and password.
 2. States will provide state specific cover page information and methodology process used to create the data.
 3. State will upload a zip file for the entire state or for any ILEC(s) within the state that distinguishes study areas and exchanges.
 4. State will review their map data.
 5. If accurate, the state will submit the data and then log out of the filing system.
 6. If the map is not accurate, the state can revise the data as needed, upload a revised zip file, and submit the data at that time.
- B. *ILEC process After the Study Area Boundary Data has been Uploaded for It.*
 1. ILEC will log into a secure web interface using their FRN and password.
 2. ILECs will provide cover page information.
 3. ILEC will be asked if they want to use study area data provided by the state PUC/telecom. Association or if they want to upload their own data.
 4. If yes, ILEC will review the map for accuracy. If no, ILEC can upload its own zip file.
 5. If data are correct, ILEC will certify and submit the data.
 6. If the map uploaded by the state PUC/Telecom. Association is not accurate, ILEC can upload its own map or reconcile discrepancies with state PUC or Telecom. Association.

It is critical to the Commission's universal service reform implementation efforts to ensure that the study area boundary data do not become out of date. Therefore incumbent LECs are required to submit updated data when their study area boundaries change. Incumbent LECs (or state commissions or telecommunications associations on their behalf) should submit updated data – using procedures similar to those described above – by March 15 of each year, beginning the year following the initial data submissions, showing any changes made as of December 31 of the previous year. In addition, all incumbent LECs should recertify their study area boundary data every two years, by logging into the web interface and reviewing and certifying the previously-submitted data.

6. There is no source of the information sought other than the incumbent LECs or their state commissions, which are encouraged to file study area boundary data on the incumbent LECs' behalf. For the time being the Commission relies on commercially available data of doubtful accuracy, and has established an expedited waiver process for an incumbent LEC to challenge the accuracy of its map from that commercial source. But the Commission cannot sustain an accurate system for distributing universal service support nationwide if the data are known to be

unreliable. Sporadic and carrier-initiated waivers may introduce other inaccuracies. Only a complete and reliable set of study area map data that is kept up to date can assure that the substantial funds devoted to high cost support in rural areas are distributed fairly and in accord with federal rules and policies.

7. No special circumstances will apply to this information collection.
8. Due to the emergency nature of this request the Commission is requesting a waiver of the 60 day notice requirement. We will conduct all the required processes for the regular approval after this emergency is approved by the OMB.
9. There are no payments or gifts to respondents.
10. No questions of a confidential nature are asked.
11. This collection does not address any private matters or matters of a sensitive nature.
12. *Methodology:* For purposes of this data collection, we divide incumbent LECs into two categories, “large incumbent LECs” and “small incumbent LECs.” We consider an incumbent LEC to be large if it had more than 1,500 employees in 2010.⁶ Using this criterion, there are 301 large incumbent LECs that will be affected by this information collection. We consider it highly probable that a company with more than 1,500 employees will have adequate in-house technological expertise to produce a GIS shapefile from data, or to convert a paper map or map in another digital form into a GIS shapefile. Hence, we analyze the burden on large incumbent LECs below. By contrast, incumbent LECs with 1,500 employees or less are considered “small.” These small incumbent LECs are more likely to engage an expert contractor or other external entity and we analyze their burden separately under question 13.

In order to calculate the time burden of creating GIS shapefiles we consulted the Arkansas Geographic Information Office (GIO). The Arkansas GIO has created GIS shapefiles for incumbent LECs throughout the entire state. Using Arkansas exchange-boundary GIS data available at the Arkansas State Geostore and information obtained from the Arkansas GIO, we were able to estimate an average cost per meter unit of perimeter by exchange. The Arkansas GIO created these exchange boundaries using coordinate geometry, which is a labor intensive process of roughly the same magnitude as the process of scanning and digitizing paper maps. See <http://www.gis.state.ar.us/>

The Arkansas data was produced in 3 months, or approximately 60 working days, or 480 hours (60 days x 8 hrs/day). The total perimeter of the Arkansas exchanges is 38,434,278 meters. Dividing this by 480 hours yields a result of 80,000 meters per hour.

The total perimeter of these large incumbent LECs is 622,861,402 meters.
Total Exchange Perimeter/80,000 meters per hour: 7,768 hours.
The average total hours of each of 301 large incumbent LECs: 26 hours.

⁶ See *Trends in Telephone Service*, Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division at Table 5.3 (Sept. 2010) (*Trends in Telephone Service*). This is the same standard used in the Final Regulatory Flexibility Analysis of this Order, Appendix C, para. 9.

We consider the technical expertise needed to create GIS shapefiles to approximate that of a GS 12 step 5. The base hourly rate of a GS 12 step 5 is \$32.73. See http://www.opm.gov/oca/12tables/html/gs_h.asp. Given the range of actual GS hourly rates, which vary by locality, we consider it reasonable to round the expected hourly salary of in house technical staff to the nearest dollar: \$33.00.

Under this assumption, the average large incumbent LEC would pay for 26 hours of work at \$33.00 per hour to create a GIS shapefile. $26 \times \$33.00 = \858.00 .

The *subtotal* large incumbent LEC initial filing burden is 301 times \$858 = \$258,258.00.

In addition, an incumbent LEC that changes its study areas must report that change, and all incumbent LECs must certify the accuracy of its shapefile every two years. We consider an incumbent LEC's use of an Internet browser to log on to the Commission's study area maps web site in order to certify the accuracy of its study area shapefile to be a normal business activity. It is also a negligible burden unless the boundaries have changed. If, however, the incumbent LEC's study area boundaries have changed, a new and accurate shapefile must be resubmitted.

During the three years 2008-2011, three exchanges were sold from one large incumbent LEC to another large incumbent LEC, and on that basis we predict that three exchanges will be bought and sold over the course of this 3-year information collection request. (No small incumbent LECs reported buying or selling an exchange 2008-2011).

Both buyer and seller would have to submit corrected shapefiles, for an industry total of 6 new shapefiles. Although amending a shapefile would likely be less burdensome than creating one, we have no rational means of estimating the difference, and so consider the burden of amending a shapefile to be the same as creating a new shapefile.

The *subtotal* industry hour burden of an estimated 6 amended shapefiles: $6 \times 26 \text{ hours} = \underline{156 \text{ hours}}$.

The *subtotal* industry cost burden of an estimated 6 amended shapefiles: $156 \text{ hours} \times \$33.00 = \underline{\$5,148.00}$.

Total large incumbent LEC industry hour burden:
7,768 hours for first-time shapefiles + 156 hours for amended shapefiles.
 $7,768 + 156 = \underline{7,924 \text{ hours}}$.

Total large incumbent LEC industry cost burden:
\$258,258.00 for first-time shapefiles + \$5,148.00 for amended shapefiles.
 $\$258,258.00 + \$5,148.00 = \underline{\$263,406.00}$.

13. *Methodology*. We consider all remaining respondent incumbent LECs (i.e., those with 1,500 employees or fewer) to be small incumbent LECs. According to the National Exchange Carrier Association (NECA), there are 1,443 incumbent LEC study areas.⁷ We subtract the 301 incumbent large LECs considered in question 12 above and conclude that there are 1,142 small incumbent LECs. Although some small incumbent LECs may have adequate in-house

⁷ See HC NECA ILEC Support Data - by Study Area.xls, available at http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC_State_Link/Monitor/2011_MR_Supplementary_Material.zip.

technological expertise to convert a map or location data into a GIS shapefile, we consider it likely that most small incumbent LECs will have the GIS shapefile made for them by another entity: either a state commission, a telecommunications association, or an outside specialist GIS mapping contractor.

As discussed in question 12 above, we consulted the Arkansas GIO in order to estimate the average cost per meter unit of perimeter by exchange. The Arkansas data was produced in 3 months, or approximately 60 working days, or 480 hours (60 days x 8 hrs/day). The total perimeter of the Arkansas exchanges is 38,434,278 meters. Dividing this by 480 hours yields a result of 80,000 meters per hour. We begin our analysis by applying the same “80,000 meters per hour” to the total exchange perimeters of the small incumbent LECs. In short, we replicate the methodology used in question 12, above.

The total perimeter of small incumbent LECs is 387,049,793 meters.

Total Exchange Perimeter/80,000 meters per hour: 4,838 hours.

The average total hours of each of 1,142 small incumbent LECs: 4.25 hours.

We believe, however, that 4.25 hours represents a reasonable expectation of the cost of contracting out the task for only a minority of small incumbent LECs.

If the small incumbent LEC contracts out the work commercially, we believe that, realistically, a consulting firm would not create a single shapefile for just one incumbent LEC without charging a minimum “small job” fee that would compensate the consultant for setting up the account, and cover the cost of billing and related administrative expenses. Therefore, we estimate that a reasonable minimum for a single small project by a GIS specialist might be approximately 12 hours of work.

But if a state telecommunications association creates the shapefiles for small incumbent LECs, the association would likely combine the shapefiles of many small incumbent LECs into a single order for a GIS consulting firm, and thereby enjoy considerable benefits of scale, which it would presumably pass on to the individual small incumbent LECs. Therefore, for these incumbent LECs, we consider 4.25 hours to reasonably approximate the actual contracting out cost to the incumbent LEC. The Order specifically allows telecommunications associations to create and upload GIS shapefiles for incumbent LECs. Although we fully expect telecommunications associations to participate, we lack a reasonable basis to predict how many will do so. Therefore, we limit our prediction to 10 percent of small incumbent LECs, which we consider a plausible and conservative minimum.

By contrast, if a state commission creates the shapefiles for the small incumbent LECs it regulates, there will likely be no out-of-pocket burden on the small incumbent LEC for “contracting out the work.” Interaction between a state commission and a small incumbent LEC concerning service territory is an ordinary and customary part of doing business for both parties. Therefore, for small incumbent LECs whose files are created and uploaded by state commissions, we assign a zero cost burden to “contracting out” the work. The record indicates that “the knowledge, expertise, and experience in matters involving LECs and telecommunications boundaries lies with state commissions” and that state commissions have

been performing the boundary process for many years.⁸ The record also includes strong support by both incumbent LECs and state commissions, and the order endorses state participation. We therefore estimate conservatively that a minimum of 30 percent of small incumbent LECs will have their shapefiles created and uploaded by state commissions.

Using this conceptual framework, we predict that:

1,142 small incumbent LECs x 60 percent that contract independently with map makers.
685 at 12 hours each.

1,142 small incumbent LECs x 10 percent telecommunications association filers
114 at 4.25 hours each.

1,142 small incumbent LECs x 30 percent state commission filers
343 at 0 hours each.

Total hours equals $(114 \times 4.25 = 484.5) + (685 \times 12 = 8,220)$

484.5 + 8,220 equals 8,704.5 total hours of contracting expenses for all small incumbent LECs.

In 2011, GIS consultants charged from \$35 per hour to \$133 per hour, with an average rate of \$81.10 per hour. Directions Magazine, *How Much Do GIS Consultants Charge in 2011?* (April 28th 2011)

<http://www.directionsmag.com/articles/how-much-do-gis-consultants-charge-in-2011/176035>

8,704.5 hours x \$81.10 equals \$705, 935.00.

Thus, industry-wide cost for contracting out shapefile maps equals **\$705, 935.00**

Divided by 1,142 small incumbent LECs:

\$705, 935.00/1,142 = average cost per small incumbent LEC of \$618.00.

14. The costs to the federal government for the initial collection are expected to far exceed the costs for keeping the shapefiles accurate and up-to-date after they are collected.

We expect all work to be performed by a GS 14 Geospatial Data Specialist at a base hourly rate of approximately \$46.00 per hour. The base hourly rate of a GS 14 step 5 is \$45.99. See http://www.opm.gov/oca/12tables/html/gs_h.asp. Given the range of actual GS hourly rates, which vary by locality, we consider it reasonable to round the expected hourly salary of federal in house professional staff to the nearest dollar: \$46.00.

The initial development, reconciliation, and processing of GIS shapefile maps for all 1409 reporting incumbent LECs is expected to cost the federal government as follows:

Task: Coordination with developers for web interface:

Hours: 40

$40 \times \$46.00 = \$1,840.00$

Task: Data reconciliation:

Hours: 520

$520 \times \$46.00 = \$23,920.00$

⁸ Nebraska PSC Comments at 4-5.

Task: Data processing and distribution:

Hours: 80

$80 \times \$46 = \$3,680.00$

Thus, the subtotal cost for the initial information collection:

40 hours + 520 hours + 80 hours = 640 hours

$\$1,840.00 + \$23,920.00 + \$3,680.00 = \$29,440.00$

In addition, after the initial information collection, incumbent must notify the FCC if the boundaries their service territories change. Also, all incumbent LECs must recertify the accuracy of their maps every two years. During the three years 2008-2011, three exchanges were sold from one large incumbent LEC to another large incumbent LEC, and on that basis we predict that three exchanges will be bought and sold over the course of this 3-year information collection request. (No small incumbent LECs reported buying or selling an exchange 2008-2011).

Task: Data Processing and Redistribution

Times 3

Hours: 8

Total: 24 hours

$24 \times \$46.00 = \$1,104.00$

The cost off the initial data collection plus the cost of 3 years of maintenance equals:

640 initial collection hours + 24 biannual upkeep hours = 664 total federal hours.

$\$29,440.00 + \$1,104.00 = \text{total cost to the federal government of } \$30,544.00$

15. The Commission is reporting a program change increase of 7,924 hours and \$705,935 in annual costs.

16. When we have compiled a complete set of the reconciled boundaries, we will publish the study area boundary data. We have not yet estimated a date for release, but our expectation is that it would probably be 4Q13 (1QFY14) or 1Q14 (2QFY14).

17. The Commission does not intend to seek approval not to display the OMB expiration date for OMB approval of the information collection. The Commission publishes a list of OMB-approved information collections displaying the OMB control number, OMB expiration date and title of each collection in 47 CFR 0.408 of the Commission's rules.

18. There is an exception: we are not soliciting comment during the full 60 days at this time but rather are seeking emergency approval. We will conduct all the regular PRA processes after OMB approves this emergency request.

B. Collections of Information Employing Statistical Methods:

The Commission does not anticipate that the collection of information will employ statistical methods.

