

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

In the Matter of)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
High-Cost Universal Service Support)	WC Docket No. 05-337

REPORT AND ORDER

Adopted: November 6, 2012

Released: November 6, 2012

By the Chief, Wireline Competition Bureau:

I. INTRODUCTION

1. In this Report and Order, we adopt data specifications for collecting study area¹ boundaries for purposes of creating a complete, publicly-accessible, nationwide set of study area boundaries, which we will use to implement universal service reforms adopted as part of the *USF/ICC Transformation Order*.² Specifically, we require incumbent LECs to submit certified study area boundary data in esri shapefile format,³ and we establish a procedure for resolving overlaps and voids in submitted data. Because state commissions and state telecommunications associations (state entities) often maintain study area boundary information for the incumbent LECs in their jurisdiction or membership, we will accept submissions of study area boundary data from these entities on behalf of incumbent LECs. Incumbent LECs or state entities will submit data by uploading zipped shapefiles to a Commission-sponsored website and will be able to view the submitted data through an interactive map. We require incumbent LECs to then certify that the study area boundary data are correct using this website. Having these data will assist the Commission in implementing universal service reforms as accurately and effectively as possible.

¹ 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. See 47 C.F.R. § 69.703(e). For purposes of the data collection discussed herein, we consider a study area to be the geographic area associated with a study area code as assigned and maintained by the National Exchange Carrier Association. As discussed below and in Appendix A, we require incumbent LECs to submit study area boundary data at the exchange level.

² See *Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing a Unified Intercarrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up; Universal Service Reform—Mobility Fund*; WC Docket Nos. 10-90, 07-135, 05-337, 03-109, CC Docket Nos. 01-92, 96-45, GN Docket No. 09-51, WT Docket No. 10-208, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663 (2011) (*USF/ICC Transformation Order and FNPRM*), *pets. for review pending sub nom.* In re: FCC 11-161, No. 11-9900 (10th Cir. filed Dec. 8, 2011).

³ 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). As explained below, esri created the industry standard for the shapefile format. See *infra* para. 12.

II. BACKGROUND

2. In the *USF/ICC Transformation Order*, the Commission comprehensively reformed universal service funding for high-cost, rural areas, adopting fiscally responsible, accountable, incentive-based policies to preserve and advance the deployment of voice and broadband services.⁴ As discussed below, confirming study area boundaries will assist us in implementing several components of those ongoing reforms, including the Commission's benchmarking rule and the rule eliminating support where an unsubsidized competitor offers voice and broadband service that overlaps an incumbent LEC's study area.

3. *Benchmarking Rule.* In the *USF/ICC Transformation Order*, the Commission adopted a benchmarking rule intended to moderate the expenses of rate-of-return carriers with very high costs compared to their similarly-situated peers, while encouraging other rate-of-return carriers to advance broadband deployment.⁵ On April 25, 2012, the Bureau adopted the methodology for implementing this rule, which establishes limits on the amount of capital costs and operating expenses a rate-of-return carrier can recover for high-cost loop support (HCLS).⁶ The methodology uses quantile regression analyses to generate a capital expense limit and an operating expense limit for each rate-of-return carrier study area based on the characteristics of the study area.⁷

4. In the *HCLS Benchmarks Implementation Order*, the Bureau relied on Tele Atlas wire center boundaries as an interim source for study area boundaries.⁸ Tele Atlas is a widely-used commercial source of this information. As an interim measure to address expressed concerns that the Tele Atlas boundaries used in the benchmark methodology misstate some rate-of-return study areas,⁹ the Bureau provided a streamlined, expedited waiver process for incumbent LECs affected by the HCLS benchmarks to correct errors on an *ad hoc* basis,¹⁰ while obtaining public input on a proposed process to collect new nationwide data on study areas boundaries.¹¹

5. *Overlap by Unsubsidized Competitors.* In the *USF/ICC Transformation Order*, the Commission adopted a rule to phase out universal service support where an unsubsidized competitor—or a combination of unsubsidized competitors—offers voice and broadband service throughout 100 percent

⁴ See *USF/ICC Transformation Order and FNPRM*, 26 FCC Rcd 17663.

⁵ *Id.* at 17741-47, paras. 210-26.

⁶ *Connect America Fund; High-Cost Universal Service Support*, WC Docket Nos. 10-90, 05-337, Order, 27 FCC Rcd 4235 (Wireline Comp. Bur. 2012) (*HCLS Benchmarks Implementation Order*).

⁷ These characteristics will include, for example, local geology, climate, and road systems.

⁸ TomTom Telecommunications Suite 2011.09 (formerly Tele Atlas North America), Wire Center Premium, for wire center boundary and central office location information.

⁹ See, e.g., Letter from Jerry Reisenauer, West River Cooperative Telephone Co., to Marlene H. Dortch, FCC (dated Apr. 10, 2012).

¹⁰ See, e.g., *Connect America Fund High-Cost Universal Service Support*, Order, WC Docket Nos. 10-90, 05-337, DA 12-1492 (Wireline Comp. Bur. Sept. 13, 2012) (granting the expedited waiver request of Wauneta Telephone Company) (Wauneta Waiver); Order, WC Docket Nos. 10-90, 05-337, 27 FCC Rcd 7147 (Wireline Comp. Bur. 2012) (granting the expedited waiver requests of West River Cooperative Telephone Company and Kennebec Telephone Companies) (West River/Kennebec Waiver).

¹¹ See *HCLS Benchmarks Implementation Order*, 27 FCC Rcd at 4246, para. 27 (“[T]o correct any remaining inaccuracies in the Tele Atlas data set, we will issue a Public Notice to initiate the process of collecting study area boundaries directly from all rate-of-return carriers”); see also *Connect America Fund; High-Cost Universal Service Support*, WC Docket Nos. 10-90, 05-337, Public Notice, 27 FCC Rcd 5970 (Wireline Comp. Bur. 2012) (*Study Area Boundaries Public Notice*).

of a rate-of-return carrier's study area.¹² In the *USF/ICC Transformation FNPRM*, the Commission sought comment on a process to reduce support where an unsubsidized competitor offers voice and broadband service to a substantial majority, but not 100 percent, of the study area.¹³ We need study area boundaries to determine whether unsubsidized competitors offer service within all or a portion of an incumbent's study area.

6. On June 1, 2012, the Bureau issued the *Study Area Boundaries Public Notice*, which proposed collecting study area and exchange boundary data from all incumbent LECs.¹⁴ Specifically, the Bureau proposed requiring all incumbent LECs to submit study area boundary data in an esri shapefile format with certain identifying feature attributes.¹⁵ The Bureau sought comment on this proposal, along with whether to allow states to assist incumbent LECs in submitting boundary data and how to resolve any overlap issues.¹⁶

III. DISCUSSION

A. Collection and Certification of Study Area Boundaries

7. As explained below, we require incumbent LECs to submit certified study area boundary data, at the exchange area level, in an esri shapefile format.¹⁷ Esri shapefiles will provide us with a consistent format for comparing, analyzing, and aggregating all of the study area boundary data, while minimizing the burden on incumbent LECs. We also encourage and will accept submissions of study area boundary data from willing state entities on behalf of incumbent LECs. The data submissions should be based on a diligent effort to identify state-defined incumbent LEC study areas boundaries using coordinate geography methods but do not require survey-grade field studies. We require all incumbent LECs to certify the accuracy of their study area boundaries, regardless of whether the boundary data are submitted by the incumbent LEC itself or a state entity.

1. Collecting Study Area and Exchange Boundaries

8. We require incumbent LECs to submit esri shapefiles of their study area boundaries, with each submitted shapefile representing a single study area in each state that the incumbent LEC serves. The shapefile for each study area must depict each exchange within the study area as a closed, non-overlapping polygon. Each exchange-area polygon must constitute one record in the shapefile and must contain associated data with certain attributes used to identify the exchange, such as the exchange name and CLLI (Common Language Location Identifier) code.¹⁸ We collect study area boundary data at the exchange level so that we can distinguish those exchanges that are subject to "frozen" support levels from

¹² See *USF/ICC Transformation Order and FNPRM*, 26 FCC Rcd at 17767, paras. 281-84.

¹³ See *id.* at 18056-59, paras. 1061-77. Specifically, the Commission sought comment on a proposed methodology for determining the extent of overlap, a process for preliminary determinations of such overlap, a process for the affected eligible telecommunications carrier (ETC) to challenge the accuracy of the purported overlap with input from the relevant state commission and the public, and how to adjust support levels in situations with less than 100 percent overlap. *Id.* at 18056, para. 1061.

¹⁴ *Study Area Boundaries Public Notice*, 27 FCC Rcd at 5970.

¹⁵ See *id.* at 5976-77, Appendix A.

¹⁶ See *id.* at 5973-74, paras. 7, 8.

¹⁷ See *infra* Appendix A.

¹⁸ See *infra* Appendix A for a complete list of data that must be included with each shapefile.

those that are not, and so that the data can be updated to reflect any exchanges that have been transferred from one incumbent LEC to another.¹⁹

9. Certain parties argued that incumbent LECs in Alaska should be able to provide a map of their current customer locations, rather than their actual study area boundaries, because Alaska contains vast unpopulated areas and non-contiguous study areas.²⁰ We do not adopt this proposal. The Commission needs study areas and exchange boundaries to implement the aforementioned reforms adopted in *USF/ICC Transformation Order*, and we believe incumbent LECs can use their customer location data, along with other data,²¹ to create their study area boundaries in an esri shapefile format at minimal additional cost. Moreover, vast, unpopulated lands with non-contiguous study areas are not unique to Alaska: incumbent LECs in the contiguous forty-eight states face similar geographic issues. We therefore require Alaskan incumbent LECs to submit study area boundary data in the same way as all other incumbent LECs.

2. Collecting Boundary Data in ESRI Shapefile Format

10. We find that collecting study area boundary data in an esri shapefile format best balances the need for accurate and timely data with the goal of minimizing burdens on providers. A number of commenters support this approach. NPSC, for instance, asserts that esri shapefiles will “ensure compatibility, limit potential errors, and provide a streamlined and efficient process to submit the information.”²² In addition, NRIC points out that esri shapefiles “have become standard in the last two decades and represent a commonly-used method for describing geographic data.”²³

11. We agree that the use of a single data format will facilitate the creation of a complete, accurate, uniformly-formatted, publicly-available, and easily-accessible set of study area boundary data. Having all of the data submitted in a uniform format will enable us to access, analyze, and aggregate the study area boundaries using the same software program, thereby minimizing the delay and inaccuracies associated with analyzing data in inconsistent formats or converting data to a single format.

12. We also agree that the esri shapefile is the best among possible data formats. Since its introduction in the 1990s, the esri shapefile has become the industry standard for storing, depicting, and analyzing spatial data.²⁴ As a result, there are multiple geographic information system (GIS) platforms capable of creating and managing esri shapefiles, and multiple software programs can convert spatial data stored in other formats (such as MapInfo) to an esri shapefile format.²⁵ Therefore, incumbent LECs or state entities that maintain spatial data on study area boundaries in another format should be able to convert such data to an esri shapefile format.²⁶ In addition, there are many GIS specialists and

¹⁹ See *infra* para. 23 for a discussion of requirements to update study area boundary data to reflect, among other changes, the sale or addition of an exchange.

²⁰ See ACS Comments at 3 (arguing that the study areas of incumbent LECs serving Alaska do not touch), 6; ACS Reply Comments at 2; ARC Reply Comments at 3-4 (arguing that Alaska study areas lack contiguous boundaries), 5-6.

²¹ These data could include, for example, information on the location of network facilities, such as switches, remotes, and loops.

²² NPSC Comments at 2.

²³ NRIC Comments at 3.

²⁴ See Library of Congress, *Sustainability of Digital Formats – Planning for Library of Congress Collections*, <<http://www.digitalpreservation.gov/formats/fdd/fdd000280.shtml>> (visited Oct. 17, 2012).

²⁵ See University of Kentucky, <<http://www.uky.edu/KGS/gis/DVGQ/format.html#converting>> (visited Oct. 17, 2012).

²⁶ Certain formats may be easier to convert to esri shapefiles than others. See Letter from Mark Guttman, CostQuest Associates, Inc. to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90 (filed July 2, 2012).

engineering consultants in the United States that are able to provide expertise and develop spatial data for incumbent LECs and state entities without internal GIS resources.²⁷

13. We disagree with commenters that suggest that parties should be permitted to submit boundary data in other formats.²⁸ Allowing submission of data in other formats would require Commission staff to develop processes for converting these submissions into esri shapefiles. If incumbent LECs file hard-copy maps, for example, Commission staff would need to digitize the maps and then rectify (stretch) them to associate with specific geographic coordinates to give them a spatial reference and allow them to be displayed and used for geographic analyses. These processes are time consuming, and would have the potential to delay implementation of the reforms required by the *USF/ICC Transformation Order* if Commission staff had to undertake all the conversions. In addition, these processes can inject inaccuracies into the final map, which may not be readily apparent to Commission staff. Incumbent LECs and states entities are more familiar with the various factors – such as local geography and topography, customer locations, network configuration, and state obligations – that determine individual study area boundaries, and therefore are best suited to undertake the conversion of existing map data to an esri shapefile,²⁹ because they can identify and immediately correct any errors that might occur in this conversion process.³⁰ We therefore conclude that the benefits gained by requiring incumbent LECs to provide and verify esri shapefiles warrant the potential burdens imposed.³¹

14. Several commenters express concern that physical surveys will be required when state entities or incumbent LECs lack data delineating the exact boundaries of their service territories.³² We do not expect incumbent LECs or other entities to conduct physical surveys in order to produce the degree of accuracy required by the data specification.³³ Incumbent LECs reasonably can be expected to know where they offer services and thus should be able to create and submit an esri shapefile to the degree of accuracy required based largely on existing information.³⁴

²⁷ For a list of associations representing GIS professionals, see Esri, *Professional Organizations*, <<http://edcommunity.esri.com/aboutGIS/professionalOrganizations.cfm>> (visited Oct. 10, 2012).

²⁸ See, e.g., ACS Comments at 6; ARC Reply Comments at 1.

²⁹ Incumbent LECs that do not already have esri shapefiles of their study area boundaries may either use software and information technology, and/or rely on the expertise of consultants, to develop a shapefile based on the presumably known locations of their physical plant and their customers. See EATEL Reply Comments at 2 (expressing concern that the data incumbent LECs have will not meet the accuracy requirement). We have included the costs to incumbent LECs of hiring outside consulting in our burden estimates, which will be included in our submission to the Office of Management and Budget for approval of the information collection under the Paperwork Reduction Act. See NECA Comments at 3 (arguing that not all incumbent LECs have the software or expertise necessary to create shapefiles).

³⁰ *Study Area Boundaries Public Notice*, 27 FCC Rcd at 5973.

³¹ See, e.g., ACS Comments at 4; ACS Reply Comments at 2; ARC Reply Comments at 5.

³² See, e.g., *id.*; NECA Comments at 3-4.

³³ Appendix A provides further guidance on this matter. In short, polygons defining the 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. To conform to the 1:24,000 national mapping standards, features should have a horizontal accuracy of +/- 40 feet. At this scale of resolution, it is not necessary to perform field surveys or capture GPS data. However, source data must be at a scale of 1:24,000 or better. Possible source data for digitizing may include vector GIS data, digital USGS topographic maps, aerial and satellite photography, and scanned paper maps.

³⁴ To comply with the requirements of this Report and Order, an incumbent LEC or its consultant could convert existing study area data in a CAD, paper, or other format into an esri shapefile. CostQuest argues that some incumbent LECs are working with CAD and not GIS and others rely on paper maps. See CostQuest Letter at 5. We (continued...)

15. Certain incumbent LECs in Alaska claim that because Alaska has large unpopulated and unserved areas, Alaskan incumbent LECs should be exempt from submitting study area boundaries in a uniform mapping format.³⁵ As discussed above, vast, unpopulated lands with non-contiguous study areas are not unique to Alaska.³⁶ In any event, we see little reason why this fact should increase the burden for Alaskan incumbent LECs of submitting study area boundaries as esri shapefiles. We therefore reject the proposal to exempt Alaskan incumbent LECs from a uniform method of submitting study area boundary data.

16. We reject EATEL's argument that the boundary data collection requirements should be shifted to the state commission in cases where the incumbent LEC is unable to reasonably comply.³⁷ As discussed below, we encourage states to assist in this endeavor, but recognize that some state commissions may have limited resources to undertake this responsibility, particularly if there are numerous incumbent LECs within the state. On balance, we conclude that the burden on incumbent LECs are reasonable, even if they turn to state entities or outside consultants for technical assistance.³⁸

3. State Involvement

17. In the *Study Area Boundaries Public Notice*, we asked whether state entities should be allowed to assist incumbent LECs by submitting study area boundaries for their states and/or by resolving boundary overlap and void issues.³⁹ No party opposes the voluntary involvement of state entities to act as the submitting entity, and we agree with commenters that state entities are well situated to assist incumbent LECs with their responsibilities under this Report and Order.⁴⁰ State commissions typically are the entities that establish incumbent LEC service areas. Involvement of state entities that undertake or assist with this data collection effort could reduce the burden on incumbent LECs and on Commission staff, particularly because some states already have digitized service territory boundaries.⁴¹ We therefore allow state entities to voluntarily submit shapefiles on behalf of any and/or all incumbent LECs within their states. State entities wishing to submit such data should notify the Commission in writing of their intention to do so and submit that notice to WC Docket No. 10-90 via the Commission's Electronic

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agree with CostQuest that incumbent LECs have this information in a variety of formats, but we consider the costs of converting such information to a uniform mapping format to be reasonable and any errors to be correctable by incumbent LECs.

³⁵ See ACS Comments at 3 (arguing that the study areas of incumbent LECs serving Alaska do not touch), 6; ACS Reply Comments at 2; ARC Reply Comments at 3-4 (arguing that Alaska study areas lack contiguous boundaries), 5-6.

³⁶ See *supra* Section III.A.1.

³⁷ See, e.g., EATEL Comments at 6.

³⁸ See, e.g., ACS Comments at 5; ARC Reply Comments at 5.

³⁹ *Study Area Boundaries Public Notice*, 27 FCC Rcd at 5973.

⁴⁰ See, e.g., ACS Reply Comments at 5; ARC Reply Comments at 6; EATEL Reply Comments at 4; NPSC Comments at 2-3; NRIC Comments at 3; OTA Comments at 1.

⁴¹ See, e.g., *Idaho Telephone Exchanges and Company Areas*, Idaho Public Utility Commission, <<http://www.puc.idaho.gov/telecom/exchanges.pdf>> (visited Oct. 11, 2012); *Wisconsin Telephone Exchange Boundaries – June 2011*, Wisconsin Public Service Commission, <<http://psc.wi.gov/utilityinfo/maps/documents/smallTeleMap2011.pdf>> (visited Oct. 11, 2012); *Telephone Service Areas in Ohio 2012*, Ohio Public Utility Commission, <<http://www.puc.state.oh.us/pucogis/statemap/ilecsb.pdf>> (visited Oct. 11, 2012); *Kentucky Exchange Boundaries*, Kentucky Public Service Commission, <<http://psc.ky.gov/agencies/psc/images/lecbyexchange.pdf>> (visited Oct. 11, 2012); Arkansas.gov, *Arkansas Official GIS Platform*, <<http://www.geostor.arkansas.gov/G6/Home.html?q=exchange>> (visited Sept. 20, 2012).

Comment Filing System (ECFS).⁴² We will release a Public Notice identifying the deadlines for these notices (as well as the deadlines for the shapefile submissions and incumbent LEC certifications).⁴³

18. Ultimately, however, the incumbent LECs are responsible for reviewing, verifying, and certifying that the study area boundary data are accurate and for ensuring that the ongoing obligations, such as updating of information, are satisfied.⁴⁴ Accordingly, in cases where a state entity uploads data to the Commission-sponsored website on behalf of one or more incumbent LECs, each incumbent LEC whose data are submitted by the state must log into the website to review the shapefile. If the incumbent LEC has a reasonable basis to conclude the shapefile is correct, the incumbent LEC can certify and submit the data using the same web interface.⁴⁵ The reporting obligation set forth in this Report and Order ultimately rests with incumbent LECs; for that reason, we decline to allow state commissions to certify as to the accuracy of the data on behalf of incumbent LECs. If the incumbent LEC cannot certify that the data submitted by the state commission are correct, the incumbent LEC must so notify the Bureau and upload corrected data, either on its own or in conjunction with the state entity that filed it. The incumbent LEC can then certify that the study area boundary data are accurate.

4. Incumbent LEC Certification

19. After reviewing and, if necessary, correcting the study area boundary data submitted by itself or a state entity, each incumbent LEC must certify the accuracy of the data. An official of the firm, such as a corporate officer, managing partner, or sole proprietor, must provide an electronic signature certifying that he or she has examined the study area boundary shapefile and that, to the best of his or her knowledge, information, and belief, the data contained in the shapefile are accurate and correct.⁴⁶ The certifying official may be different from the GIS specialist or other individual who developed the study area boundary shapefile, and the web interface will allow filers to enter contact information for both the certifying official and the individual most knowledgeable about the spatial data.⁴⁷

5. Data Reconciliation

20. Once the shapefiles have been submitted and certified, the Bureau will review the study area boundaries and resolve any voids and overlaps. Overlap areas would be those shown to be served by more than one incumbent LEC, while void areas would be those shown to be served by no incumbent LEC. We will attempt to distinguish unpopulated void areas from populated void areas that are likely to be served by some incumbent LEC, in which case an error in the submitted data may need to be resolved. We may also seek help from state commissions to resolve gaps, voids, and overlap issues, as many commenters suggest.⁴⁸ During our review, if we find boundary overlaps or void areas in the submitted

⁴² ECFS is available at <<http://apps.fcc.gov/ecfs/>>.

⁴³ See *infra* para. 24.

⁴⁴ See *infra* Section III.C for a discussion of updating requirements.

⁴⁵ CostQuest contends that data collected by state entities may not be correct because rectification and digitization can create inaccuracies. See CostQuest Letter at 5. By requiring incumbent LECs to certify as to the accuracy of their own study area boundaries, even if those data are submitted by a state entity, we adequately address this concern. See also NPSC at 4-5 (arguing that state commissions have the most knowledge, expertise, and experience of LEC boundaries and have been performing the suggested boundary process for years).

⁴⁶ We note that NECA requested that the Commission “make clear that [] submissions should reflect ‘best efforts’ in establishing boundary data, and certification requirements (if any) should be phrased accordingly.” NECA Comments at 4. We set forth in Appendix A the specifications for the submissions, including the required degree of accuracy, and we expect certifying officials to be confident that their submissions comply with these requirements.

⁴⁷ See *infra* Appendix A.

⁴⁸ See, e.g., EATEL Comments at 5; NECA Comments at 4; NPSC Comments at 3-4; NRIC Comments at 3; OTA Comments at 1.

boundary data, we will contact the filer(s) to resolve such issues.⁴⁹ Once we have resolved these issues, we will ask incumbent LECs to recertify the new, corrected boundaries. When we have compiled a complete set of the reconciled boundaries, we will publish the study area boundary data.

21. NPSC suggests that the Commission may want to consider an extension request process for states where a conflict or dispute arises.⁵⁰ While we want to ensure the accuracy of study area boundary data that we ultimately release and use in meeting our policy goals, we do not believe a formal process for addressing extension requests is necessary. The Bureau has not established a formal extension or reconciliation process in other data collection efforts, such as Form 477, and we do not believe that one is necessary here.

B. Non-Filers

22. We will contact, either directly or via a state entity, any incumbent LEC that does not submit study area boundary data in the format requested by the required date and request that the incumbent LEC submit the required shapefiles within 30 days. We will also contact any incumbent LEC that has not certified the accuracy of the required study area data, whether filed by the incumbent LEC itself or by another party, and request that the incumbent LEC certify the data, or submit corrected data, within 30 days. Compliance with the rules adopted in this Report and Order is mandatory, and failure to comply may lead to enforcement action, including forfeiture penalties, pursuant to the Communications Act and other applicable law.⁵¹

C. Mandatory Updating and Recertification of Study Area Boundaries

23. It is critical to our universal service reform implementation efforts to ensure that the boundary area data do not become out-of-date. Therefore, incumbent LECs must provide updated data when their study area boundaries change. Study area boundaries can change as the result of a transaction involving the addition or sale of exchanges; new deployment into previously-unserved areas, such as a new housing subdivision; or an incumbent LEC relinquishing its ETC designation and no longer being obligated to serve an area as a carrier of last resort. We require incumbent LECs and/or state entities to submit updated data by March 15 of each year, beginning the year following the initial data submissions, showing any changes made by December 31 of the previous year.⁵² In addition, we require all incumbent LECs to recertify their study area boundary data every two years.⁵³ Filers will need to examine, through the web interface described below, the boundary data previously submitted, and then either certify that they are correct or submit revised data.

D. Filing Procedures

24. Once the Office of Management and Budget (OMB) has completed its review of the study area boundary data collection requirements adopted today, we will issue a Public Notice providing

⁴⁹ We expect that the submitted, certified shapefiles will require further refinement as adjacent incumbent LECs submit data and as we analyze any overlap or void areas. We will work with incumbent LECs to resolve any issues.

⁵⁰ See, e.g., NPSC Comments at 5.

⁵¹ See 47 U.S.C. §§ 401(b), 409(m), 501, 502, 503; 47 C.F.R. § 1.80.

⁵² The incumbent LEC is responsible for making any necessary changes and for filing the revised shapefile. The changes cannot be made using the web interface itself; incumbent LECs will need to modify the shapefile. However, incumbent LECs can upload a revised shapefile to the same website used for the original filing.

⁵³ The biennial recertification requirement will provide us with an incumbent LEC's confirmation that its study area boundary remains accurate, or it can provide incumbent LECs with an opportunity to notify us of small, incremental changes – such as those less significant than the sale of an exchange or building lines into a new subdivision – that might not have been submitted under the requirement described above.

detailed instructions and announcing the deadline for the submission of data. Each incumbent LEC or submitting state entity will need to log into the web interface, at the announced website URL, to upload the data. After logging in, the submitting entity will provide contact information for the individual most knowledgeable about the study area boundary data, in case questions about the submitted data arise. After completing the contact information, the incumbent LEC or state entity will upload a single zip file containing the required files per Appendix A. Once the zip file has been uploaded, the web interface will display a map of the submitted data on the filer's screen, allowing the filer to review the map and associated data for accuracy and completeness before certifying and submitting it. In cases where a state entity has uploaded data on behalf of an incumbent LEC(s), each incumbent LEC will be required to log in to the filing system separately to review and certify that the data are correct prior to submitting them. A corporate officer of an incumbent LEC will need to provide contact information and certify under penalty of perjury that he or she has examined the study area boundary shapefile and that – to the best of his or her knowledge, information, and belief – the data contained in the shapefile are accurate and correct. If the data need to be revised, the incumbent LEC or state entity will have to correct the data before the incumbent LEC certifies and submits them.

IV. PROCEDURAL MATTERS

A. Final Regulatory Flexibility Analysis

25. As required by the Regulatory Flexibility Act of 1980 (RFA),⁵⁴ the Commission has prepared a Final Regulatory Flexibility Analysis (FRFA) relating to this Report and Order. The FRFA is set forth in Appendix C.

B. Final Paperwork Reduction Act of 1995 Analysis

26. This Report and Order contains new information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law No. 104-13. It has been or will be submitted to OMB for review under section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the new information collection requirements contained in this proceeding.

C. Congressional Review Act Analysis

27. The Commission will 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.⁵⁵

V. ORDERING CLAUSES

28. Accordingly, IT IS ORDERED, 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*, that this Report and Order IS ADOPTED.

29. IT IS FURTHER ORDERED that this Report and Order SHALL BE EFFECTIVE thirty (30) days after publication in the Federal Register, except for the requirements contained in paragraph 23 and Appendix A, which are subject to the PRA. These requirements include new or modified information collection requirements that require approval by OMB under the PRA, and SHALL BECOME

⁵⁴ See 5 U.S.C. § 603. The RFA, see 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. 847 (1996). The SBREFA was enacted as Title II of the Contract With America Advancement Act of 1996 ("CWAAA").

⁵⁵ See 5 U.S.C. § 801(a)(1)(A). The Congressional Review Act is contained in Title II, § 251, of the CWAAA; see Pub. L. No. 104-121, Title II, § 251, 110 Stat. 868.

EFFECTIVE after the Commission publishes a notice in the Federal Register announcing such approval and the relevant effective date(s).

30. 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.

31. IT IS FURTHER ORDERED that the Commission SHALL SEND a copy of this Report and Order 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

Julie A. Veach
Chief
Wireline Competition Bureau

APPENDIX A

Specification for Study Area Boundary Submission

I. General

Incumbent local exchange carriers (LECs) must submit study area and exchange boundaries.¹ Boundaries must be submitted in esri shapefile format such that each shapefile represents a single study area. The shapefile must contain one data record for each exchange that constitutes the study area. Each exchange should be represented as a closed, non-overlapping polygon with the associated feature attributes described below. Uploaded boundaries must be accompanied by metadata or a plain text “readme” file containing the information listed below. When submitting the study area boundaries, an officer of the LEC must certify under penalty of perjury that the information accurately portrays the LEC’s study area to the best of his/her knowledge.

Since shapefiles typically consist of 3 to 9 individual files, the shapefile for the study area should be submitted as a single, zipped file containing all the component files. The shapefile and encapsulating zip file names must contain the company name and the 6-digit study area code. Shapefile templates are available at <http://transition.fcc.gov/wcb/iatd/neca.html>.

Note that submitted boundaries are public data and may be used in published FCC documents and webpages.

II. Shapefile

A shapefile template is available at <http://transition.fcc.gov/wcb/iatd/neca.html>. Submitted shapefiles must:

- A. contain one closed, non-overlapping polygon for each exchange in the study area that represents the area served from that exchange
- B. have associated with each exchange polygon the following identifying feature attributes:
 1. OCN – NECA-assigned operating company number as in the LERG
 2. Company Name
 3. Exchange Name
 4. Acquired Exchange subject to section 54.305 of the Commission’s rules²
 5. CLLI Code(s) associated with the exchange
 6. Study Area Code
 7. State
 8. FRN (please use the FRN used for the 477 filing in the state)

¹ The Commission will be using these data as a general map base for universal service and other landscape level analysis for which these data are useful. For the purposes of this collection, boundary does not refer to an architectural or engineering drawing, meets and bounds descriptions or other surveyed body of work. Boundary does refer to the general extent of the incumbent LEC’s exchange which can be identified on a base map scale of 1:24,000. If appropriate, the boundary should be consistent with or snapped to existing political, geographic or physical features (e.g. county, road, river etc) at or below 1:24,000. 1:24K national mapping standards are available at <http://egsc.usgs.gov/isb/pubs/factsheets/fs17199.html>.

² See 47 C.F.R. § 54.305; see also *HCLS Benchmarks Implementation Order*, 27 FCC Rcd at 4255, App. A, n.2. Rural incumbent LECs that incorporate acquired exchanges into an existing study area provide NECA with separate cost data for the acquired portions of the study area. Submitted shapefiles must include separate polygons for portions of exchanges subject to section 54.305.

- C. have an assigned projection w/accompanying .prj file
- D. use unprojected (geographic) WGS84 geographic coordinate system
- E. have a minimum horizontal accuracy of +/- 40 feet or less, conforming to 1:24K national mapping standards
- F. be submitted as a WinZip archive with a name containing the company name and study area code (e.g., CompanyName_123456.zip).

III. Cover Page Information

In addition to the shapefile data described above, we also will collect electronically the following information:

- A. Contact person name
- B. Contact person address
- C. Contact person phone number
- D. Contact person email address
- E. Date created/revised
- F. Methodology – process steps to create the data
- G. Certifying official name
- H. Certifying official address
- I. Certifying official phone number
- J. Certifying official email address

APPENDIX B

List of Commenters

Commenter	Abbreviated name
Alaska Communications Systems Group, Inc.	ACS
Alaska Rural Coalition	ARC
Alexicon Telecommunications Consulting	Alexicon
East Ascension Telephone Company, LLC	EATEL
National Exchange Carrier Association, Inc., Independent Telephone and Telecommunications Alliance, National Telecommunications Cooperative Association, Organization for the Promotion and Advancement of Small Telecommunications Companies, United States Telecom Association, Eastern Rural Telecom Association, and the Western Telecom Alliance	NECA
Nebraska Public Service Commission	NPSC
Nebraska Rural Independent Companies	NRIC
Oregon Telecommunications Associations	OTA

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 *Study Area Boundaries Public Notice*.² The Bureau sought written public comment on the proposals in the *Study Area Boundaries Public Notice*, including comment on the IRFA. No comments were received addressing the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.³

A. Need for and Objective of the Report and Order.

2. The Report and Order adopts data specifications for collecting study area boundaries for purposes of implementing various reforms adopted as part of the *USF/ICC Transformation Order*.⁴ In the *USF/ICC Transformation Order*, the Commission comprehensively reformed universal service funding for high-cost, rural areas, adopting fiscally responsible, accountable, incentive-based policies to preserve and advance voice and broadband service.⁵ As discussed in the Report and Order, the Commission must confirm the relevant geographic boundaries in order to implement several components of those reforms, including: the Commission's benchmarking rule and the elimination of support where an unsubsidized competitor offers voice and broadband service that overlaps an incumbent LEC's study area.⁶

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

3. No parties have raised significant issues in response to 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, 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. The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

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

¹ See 5 U.S.C. § 603. The RFA, see 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 See *Connect America Fund; High-Cost Universal Service Support*, WC Docket Nos. 10-90, 05-337, Public Notice, 27 FCC Rcd 5970 (Wireline Comp. Bur. 2012) (*Study Area Boundaries Public Notice*).

³ See 5 U.S.C. § 604.

⁴ See *Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing a Unified Inter-carrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up; Universal Service Reform—Mobility Fund*; WC Docket Nos. 10-90, 07-135, 05-337, 03-109, CC Docket Nos. 01-92, 96-45, GN Docket No. 09-51, WT Docket No. 10-208, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663 (2011) (*USF/ICC Transformation Order and FNPRM*); *pets. for review pending sub nom.* In re: FCC 11-161, No. 11-9900 (10th Cir. filed Dec. 8, 2011).

⁵ See *id.*

⁶ See Report and Order at paras. 2-6.

5. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the rules and policies adopted herein.⁷ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”⁸ In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.⁹ 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.¹⁰ Nationwide, there are a total of approximately 27.5 million small businesses, according to the SBA.

6. **Small Businesses.** Nationwide, there are a total of approximately 27.5 million small businesses, according to the SBA.¹¹

7. **Wired Telecommunications Carriers.** The SBA has developed a small business size standard for Wired Telecommunications Carriers, which consists of all such companies having 1,500 or fewer employees.¹² According to Census Bureau data for 2007, there were 3,188 firms in this category, total, that operated for the entire year.¹³ Of this total, 3144 firms had employment of 999 or fewer employees, and 44 firms had employment of 1000 employees or more.¹⁴ Thus, under this size standard, the majority of firms can be considered small.

8. **Local Exchange Carriers (LECs).** Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to local exchange services. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁵ According to Commission data, 1,307 carriers reported that they were incumbent local exchange service providers.¹⁶ Of these 1,307 carriers, an estimated 1,006 have 1,500 or fewer employees and 301 have more than 1,500 employees.¹⁷ Consequently, the Commission estimates that most providers of local exchange service are small entities that may be affected by the rules and policies adopted in the Report and Order.

9. **Incumbent Local Exchange Carriers (incumbent LECs).** Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to incumbent local

⁷ 5 U.S.C. § 603(b)(3).

⁸ 5 U.S.C. § 601(6).

⁹ 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.”

¹⁰ 15 U.S.C. § 632 (1996).

¹¹ See SBA, Office of Advocacy, “Frequently Asked Questions,” <http://www.sba.gov/sites/default/files/FINAL%20FAQ%202012%20Sept%202012%20web.pdf> > (visited Oct. 5, 2012).

¹² 13 C.F.R. § 121.201, NAICS code 517110.

¹³ U.S. Census Bureau, 2007 Economic Census, Subject Series: Information, Table 5, “Establishment and Firm Size: Employment Size of Firms for the United States: 2007 NAICS Code 517110” (issued Nov. 2010).

¹⁴ See *id.*

¹⁵ 13 C.F.R. § 121.201, NAICS code 517110.

¹⁶ 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*).

¹⁷ See *id.*

exchange services. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁸ According to Commission data, 1,307 carriers reported that they were incumbent local exchange service providers.¹⁹ Of these 1,307 carriers, an estimated 1,006 have 1,500 or fewer employees and 301 have more than 1,500 employees.²⁰ Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by rules adopted in the Report and Order.

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

10. In the Report and Order, the Bureau adopts data specifications for collecting study area boundaries.²¹ Specifically, it requires incumbent LECs to submit certified study area boundary data in esri shapefile format, and establishes a procedure for resolving overlaps and voids in submitted data.²² State commissions and state carrier associations (state entities) may, on a volunteer basis, submit shapefiles on behalf of any and/or all incumbent LECs within their states.²³ But where a state entity submits a shapefile on behalf of an incumbent LEC, the incumbent LEC must still review the shapefile and certify that the data are accurate.²⁴ Incumbent LECs must also recertify their study area boundary data every two years.²⁵ These requirements affect all incumbent LECs, including small entities, and may include new administrative processes.

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

11. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed 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 or reporting requirements under the rule for 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 small entities.²⁶

12. The requirements adopted in the Report and Order comprise an efficient data collection process that imposes the least possible burden on incumbent LECs.²⁷ As explained in the Report and Order, incumbent LECs are best-suited to convert study area boundary information to an esri format, and should be able to do so based largely on existing information.²⁸ Incumbent LECs and states entities are more familiar with the various factors – such as local geography and topography, customer locations, network configuration, and state obligations – that determine individual study area boundaries, and therefore are best suited to undertake the conversion of existing map data to an esri shapefile, because they can identify

¹⁸ See 13 C.F.R. § 121.201, NAICS code 517110.

¹⁹ See *Trends in Telephone Service* at Table 5.3.

²⁰ See *id.*

²¹ See Report and Order at para. 1.

²² See *id.* at paras. 7-13, 20-21.

²³ See *id.* at paras. 17-18.

²⁴ See *id.*

²⁵ See *id.* at para. 23.

²⁶ See 5 U.S.C. § 603(c).

²⁷ See Report and Order at para. 7.

²⁸ See *id.* at paras. 12-13.

and immediately correct any errors that might occur in this conversion process.²⁹ Meanwhile, requiring the submission of study area boundary data in esri shapefile format—which has “become the standard in the last two decades”³⁰ — helps ensure compatibility, prevents delay, and minimizes inaccuracies.³¹ As such, it too best balances the need for accurate and timely data with the goal of minimizing burdens on providers.³²

13. Additionally, to help ease the burden on incumbent LECs, especially those that are small entities, the Bureau encourages and will accept submissions of study area boundaries from willing state entities on behalf of incumbent LECs.³³ The *Study Area Boundaries Public Notice* asked whether state entities should be allowed to assist in the data collection process,³⁴ and commenters “strongly supported” the idea.³⁵ NPSC, for instance, asserts that allowing state commissions to opt-in as the submitting entity would “ensure accuracy and consistency . . . and eliminate conflict and confusion as to boundaries.”³⁶ And ACS points out that state entity involvement could “improve[] efficiency and reduce[] the burden of this project on small companies.”³⁷ The Bureau is persuaded by these comments and finds that state entities are well situated to assist incumbent LECs. Accordingly, state entities may, on a volunteer basis, upload data to the Commission-sponsored website on behalf of one or more incumbent LECs within their states.³⁸

G. Report to Congress

14. 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. 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 the FRFA (or summaries thereof) will also be published in the Federal Register.

²⁹ See *id.*

³⁰ See NRIC Comments at 3.

³¹ See Report and Order at paras. 10-12.

³² See *id.*

³³ See *id.* at paras. 17-18.

³⁴ See *Study Area Boundaries Public Notice*, 27 FCC Rcd at 5973, para. 8.

³⁵ See, e.g., OTA Comments at 1; EATEL Reply Comments at 4-5.

³⁶ NPSC Comments at 2-3

³⁷ See ACS Reply Comments at 5.

³⁸ See Report and Order at paras. 17-18.