

# AREA CODE RELIEF FOR Eastern Upstate New York: 518 NPA

Projected Exhaust: Q1 2019

## A DESCRIPTION OF OPTIONS

### CASE 16-C-0297

Petition of the North American  
Numbering Plan Administrator on Behalf  
Of the New York Telecommunications  
Industry for Relief of the 518 NPA

Prepared by  
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**STATE OF NEW YORK  
DEPARTMENT OF PUBLIC SERVICE**

**AN OPTIONS PAPER FOR AREA CODE RELIEF IN  
EASTERN UPSTATE NEW YORK:  
518 NPA**

**BACKGROUND**

The April 2016 Numbering Resource Utilization Forecast (NRUF) published by Neustar, the North American Numbering Plan Administrator (NANPA) indicates that the geographic region served by area code (or numbering plan area or NPA) 518 in eastern upstate New York is running out of assignable telephone numbers. Due to the high demand for telephone numbers, the availability of central office codes in this area is projected by NANPA to deplete by the first quarter of the 2019 calendar year. Given that the NPA is projected to exhaust within 36 months or less, NANPA filed a petition with the New York State Public Service Commission (Commission) in May 2016, seeking approval of the industry consensus to overlay a new area code over the existing 518 geographic area. In accordance with the Industry Numbering Committee's (INC) Area Code Relief Planning Guidelines,<sup>1</sup> as approved by the North American Numbering Council (NANC) and the Federal Communications Commission (FCC), the relief process must begin 36 months before the projected exhaust date to ensure uninterrupted availability of telephone numbers in the affected area, sufficient time for the affected service providers to make necessary network changes, and the timely education of customers about the impending new area code.

Per FCC regulations, state commissions have delegated authority to: direct whether area code relief will take the form of a geographic split, an overlay area code, or a boundary realignment; establish new area code boundaries; establish necessary dates for the implementation of area code relief plans; and direct public education efforts regarding area code changes.<sup>2</sup> The Commission has the discretion to: approve a proposed relief option; modify a proposed option; or design and approve a wholly original relief plan.

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<sup>1</sup> ATIS-0300061, NPA Code Relief Planning and Notification Guidelines (issued January, 2016)

<sup>2</sup> 47 C.F.R. §52.19

The 518 NPA in eastern upstate New York was established as one of the original national area codes in 1947. It serves 17 counties<sup>3</sup> and its east-west boundaries extend from the eastern Mohawk Valley to the Vermont, Massachusetts and Connecticut borders and its north-south boundaries extend from the Canadian border to 70 miles south of Albany. The 518 NPA is the only original New York area code that still has its original boundaries, and one of the few remaining original national area codes (not counting those serving an entire state) that has never been split or overlaid with a new area code. For a map of its geographic boundaries, see Appendix A.

The matter of 518 area code relief was previously raised in September 1999, when NANPA filed a petition in Case 99-C-1292 requesting that the Commission approve the Industry's recommended overlay relief plan. The petition stated that the 518 NPA was projected to exhaust during the third quarter of 2000. However, the implementation of thousands-block pooling in September of 2000, extended the projected exhaust of the 518 NPA to 2010. The continued use of pooling and other number conservation measures undertaken by the Commission since 2000 successfully deferred the need for relief even further than originally expected. However, NANPA currently projects an exhaust date of 1Q2019, indicating that number conservation measures cannot further delay the need for additional numbering resources in the 518 area code.

In this White Paper, the Staff of the New York State Department of Public Service (Staff) considers how to provide maximum numbering relief with minimum disruption to consumers and businesses in the 518 area code. The views contained in this Paper are Staff's, and have not been reviewed by, nor are meant to represent the views of, the Commission.

Staff is seeking comment from telecommunications providers and the general public on the 518 NPA relief issues outlined in this Paper. Staff expects to present a recommendation for 518 NPA relief to the Commission in the fourth quarter of 2016, and the Commission is expected to make a final determination shortly thereafter.

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<sup>3</sup> The 518 area code serves all or part of the following counties: Albany, Clinton, Columbia, Dutchess, Essex, Franklin, Fulton, Greene, Hamilton, Montgomery, Rensselaer, Saint Lawrence, Saratoga, Schenectady, Schoharie, Warren and Washington.

## **DISCUSSION**

Each telephone line is assigned a 10-digit phone number. The first three digits are the area code, the second three digits are the central office code, and the final four digits identify the particular telephone line in the particular central office within the specified area code.<sup>4</sup>

Central office codes are assigned to specific geographic areas, or rate centers, within each NPA, and there are approximately 750 utilizable central office codes associated with a particular area code.

As of NANPA's most recent April 6, 2016 forecast, a total of 726 central office codes were currently assigned, and only 38 central office codes remain available for assignment in the 518 NPA.<sup>5</sup> The annual central office code assignment history in the 518 NPA has been as follows: 2012: 23 code assignments; 2013: 5 code assignments; 2014: 10 code assignments; 2015: 26 code assignments; and 2016 through April 6th: 11 code assignments. For the twelve months ending April 2017, NANPA forecasts a need for five code assignments. While NANPA's petition prescribes a relief timeline geared to a first quarter 2019 exhaust date, NANPA states that it will continue to monitor the projected exhaust date and may adjust it accordingly based on increases or decreases in demand trends.

### **Proposed Options**

The petition proposes two alternatives to provide numbering relief: 1) an all services distributed overlay and 2) a two-way geographic split. While telecommunications industry guidelines indicate that an overlay is the preferred relief option, geographic splits are also discussed in the Industry Numbering Committee's Area Code Relief Planning Guidelines<sup>6</sup>, and a geographic split option was included in the industry petition.

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<sup>4</sup> These 10 digits are often referred to as NPA-NXX-XXXX numbers, where NPA refers to the NPA area code, N is any digit between 2 and 9, and X is any digit from 0 to 9.

<sup>5</sup> Thirty-six additional codes in the 518 NPA are classified as unavailable. Codes unavailable for assignment include, but are not limited to, test and special use codes (e.g. 958, 959, 970, 555, time), N11 and other unique codes (e.g., 976, 950) and codes with special dialing arrangements (e.g., 7-digit dialing across NPA boundary).

<sup>6</sup> ATIS-0300061, issued March 14, 2014. The Industry Guidelines do not permit the splitting of rate centers in favor of other kinds of geographic splits such as municipal boundaries, however a federal waiver can be requested, and such waivers have, in fact, been granted in past proceedings in New York.

*Overlay Area Code – Option 1*

An all services distributed overlay would provide additional numbering resources by superimposing a new area code over the exact same geographic area of the existing 518 area code. As carriers request new numbering resources, the requests are filled from the resources associated with the new area code. As shown in Appendix B, the same geographic area would be served by two area codes, rather than one. All existing customers (wireline or wireless) would retain their current area code and telephone numbers; however, ten-digit dialing for all calls within and between the 518 NPA and the new NPA would become necessary pursuant to federal regulation. The overlay method provides additional numbering resources over the entire geographic area for which impending area code relief is required. The overlay option would provide numbering relief in the 518 NPA for a projected life of 49 years.

Because the same geographic area would be served by two area codes, rather than one, it is possible that a customer assigned to both the old and new area codes will share the same seven digit telephone number comprising the identical three-digit central office code (NXX) and four-digit telephone line identifier (XXXX). To enable all telephone numbers to reach all other numbers, and consistent with FCC regulations, customers served by both the old area code and the new area code must dial all ten digits of the telephone number they are trying to reach. Calls made outside of these area codes are not affected and would continue to require 1+ ten-digit dialing. Operator services calls would require customers to dial 0+ ten digits. Central office codes from the new area code would be assigned as needed on a carrier-neutral (i.e., first-come, first-served) basis for new service requests. Local and long distance calling rates would not change by the implementation of an overlay NPA.

*Geographic Split – Option 2*

In a geographic split, the exhausting NPA is split into two geographic areas and a new area code is assigned to one of the areas formed by the split. All existing customers (wireline or wireless) on one side of the boundary line retain their current area code and telephone numbers while existing customers on the other side of the boundary line would be required to change their area code (while retaining their seven-digit telephone number).

The geographic split would divide the 518 NPA into two Areas. The northern portion, Area A, would have a projected NPA life of 47 years to exhaust and the southern portion, Area B, would have a projected NPA life of 51 years to exhaust. Area A comprises the

southeastern corner of the existing 518 NPA, and includes the cities of Albany, Troy, Catskill, and Hudson. Area B, by far the larger of the two in terms of size, includes the cities of Schenectady, Gloversville, Saratoga Springs, Glens Falls, Lake Placid and Plattsburgh. The proposed geographic split boundary line for 518 NPA relief, runs along rate center boundaries in a southwest-to-northeast direction such that the rate centers of Middleburgh, Berne, Altamont, Schenectady, Mechanicville, Greenwich, and Salem are west of the boundary line and the rate centers of Oak Hill, Westerlo, Clarksville, Voorheesville, Colonie, Troy, Valley Falls, and Cambridge lie east of the boundary line. This option would require ten-digit dialing between Areas A & B, but within each Area seven-digit dialing would be permitted. Calls that were charged local rates before the area code split will remain local calls, even if they would cross NPA boundaries. Maps detailing this option are attached to this White Paper as Appendix C.

*Examination of Options 1 & 2*

While NANPA's petition presented both geographic and overlay relief options, the petition stated that industry representatives reached consensus to eliminate the geographic split alternative and to recommend to the Commission the all services distributed overlay plan as the preferred method of relief for the 518 NPA. This recommendation, in which Staff concurs, is the result of a number of factors, described below.

In reviewing national trends, overlay plans have been the preferred alternative in area code relief cases for nearly a decade, with a geographic split last implemented in the United States nine years ago.<sup>7</sup> Due to technological and policy changes, overlays have simply become the expected form of area code relief.<sup>8</sup> Industry representatives (including incumbent local wireline carriers, competitive local exchange carriers, cellular carriers, and broadband carriers) and NANPA Relief Planning experts all support all-services overlays, as they eliminate the need for consumer number changes, treat all consumers equitably, are simpler to implement from a

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<sup>7</sup> In 2006, in the New Mexico Public Regulation Commission ordered a geographic split. Amidst the split's implementation, tremendous customer dissatisfaction caused many to call for the reexamination of an overlay instead of the split. Due to the existing Order, another option could not be considered. See, New Mexico Public Regulation Commission Vacates Order on 505/575 Area Code Split (issued February 21, 2008), <http://www.nmprc.state.nm.us/news/pdf/022108575final08.pdf>.

<sup>8</sup> NANPA's website indicates that there are currently 19 relief plans for area codes nationally that are not yet implemented; in all of these cases, the recommended relief solution is an overlay code.

technical standpoint, and subsequent relief is more easily implemented through an additional overlay code. Importantly, the FCC has adopted the recommendation of the North American Numbering Council (NANC) to endorse overlay relief plans as a “Best Practice” in implementing numbering relief.<sup>9</sup>

Other important benefits of an overlay cited by NANPA in the petition include:

- Keeping communities of interest intact.
- Not splitting cities or counties into different area codes.
- Less financial impact on business customers because there is no need to change signage, advertising and stationery (unless they currently only advertise seven-digit numbers).
- Residential customers do not need to update personal printed materials such as checks (unless they currently only include seven-digit numbers).
- Provides the most efficient distribution of numbering resources by allowing assignments to follow demand, notwithstanding forecasts for growth.
- No technical impacts on number portability, text messaging or multimedia messaging.
- Helps move customers toward universal ten-digit dialing, recognizing the inevitable migration of technology to an internet protocol network, which requires ten-digit dialing.
- Time has proven that customers in locations where an overlay has been implemented have been able to adjust to ten-digit dialing much more readily than locations where a geographic split was applied.<sup>10</sup>

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<sup>9</sup> See, WC Docket No. 07-244 et al., In the Matter of Local Number Portability Interval and Validation Requirements, Telephone Number Portability, Number Resource Optimization, Order (issued June 20, 2014). Overlay relief is deemed a best practice because nationally the vast majority of NPAs require mandatory ten-digit dialing, and because most customers no longer “dial” numbers as they are stored in mobile phones or digital devices, where most calls originate. Looking to the future, new technologies such as IP networks and VOIP telephone services are increasingly utilizing ten-digit dialing.

<sup>10</sup> In 2008 the West Virginia PSC reversed its own decision to implement a geographic split pointing to the economic burden of a split relief plan, and that current technology generally alleviates most of the problems associated with ten-digit dialing. See, PSC Reverses Area Code Decision, WSAZ.com (February 13, 2008), <http://www.wsaz.com/news/wvnews/headlines/15597442.html>.

Alternately, the claimed detriments of an overlay are few, including:

- A change in end user dialing patterns to ten digits would be required for all local calls within and between the 518 NPA and the new NPA.
- Financial costs to add NPA to signage and printed material where only a seven-digit telephone number is shown.
- Customers need to reprogram any auto-dialing equipment currently programmed to dial seven-digits to dial ten-digits; this includes equipment such as alarm systems, PSAP dial systems, security gates, PBXs, life safety systems, computer modems, voicemail systems, and fax machines, etc.

The benefits attributed to a geographic split are comparatively few:

- A geographic split would retain the identification of certain locales with a single area code, thereby avoiding the potential confusion associated with the use of multiple area codes in a single neighborhood, building, or even household or business.
- A geographic split does not require all consumers to dial 10 digits within the same area code. Customers would continue to dial seven digits within their respective area code.

However, the detriments ascribed to a geographic split are much larger and potentially costly, especially for business customers.

- Approximately half of the currently-assigned telephone numbers in the 518 area code, including numerous businesses, would be required to adopt a new area code, including the absolute need to change advertising and other materials which contain their telephone number.
- All wireless customers who would be located in the new area code would have to bring their wireless devices to their service providers for reprogramming with the new area code.
- Future area code exhaust could require additional splits to smaller and smaller areas without clearly recognizable geographic boundaries.
- Consumers would be required to dial an area code for approximately half the numbers that were previously dialable on a seven-digit basis.

Staff's review of the benefits and detriments associated with each option presented by NANPA indicates that an overlay code is clearly the preferred solution for the 518 NPA. An overlay strikes the appropriate balance for the industry and consumers and, pending public comment, Staff will recommend that the Commission approve the industry consensus proposal to implement an overlay area code over the existing 518 NPA.



**CONSUMER OUTREACH AND EDUCATION**

Since consumers in the 518 region have not previously experienced the introduction of a new NPA, it is expected that the addition of another NPA will be unfamiliar, particularly in regards to how it will affect existing telephone numbers, dialing patterns and rates. Therefore, during the course of the proceeding, Staff will conduct a comprehensive public outreach and involvement program. The objectives will be to inform affected consumers of the need for a new area code in the current 518 footprint, receive consumer feedback regarding the alternatives presented in this White Paper, and to otherwise hear comments related to the need for additional numbering resources in the region.

The outreach effort will include information about the 518 relief proceeding on the AskPSC.com website, sending mailings to targeted stakeholders in the affected counties, and providing information at meetings and events. DPS Staff will also schedule informational forums prior to public statement hearings which will be held in various locations in the 518 NPA during the summer of 2016. The public statement hearings will be held by an Administrative Law Judge and will provide an opportunity for the public to comment on a formal, transcribed record. Specific dates, times and locations of the public statement hearings will be provided by Notice published on the Department's website and disseminated through mailings and press releases.

Consumers may also submit their views and comments via the following channels. All comments should reference the "518 Area Code Relief" and/or "Case 16-C-0297". All comments will become part of the formal record in the case.

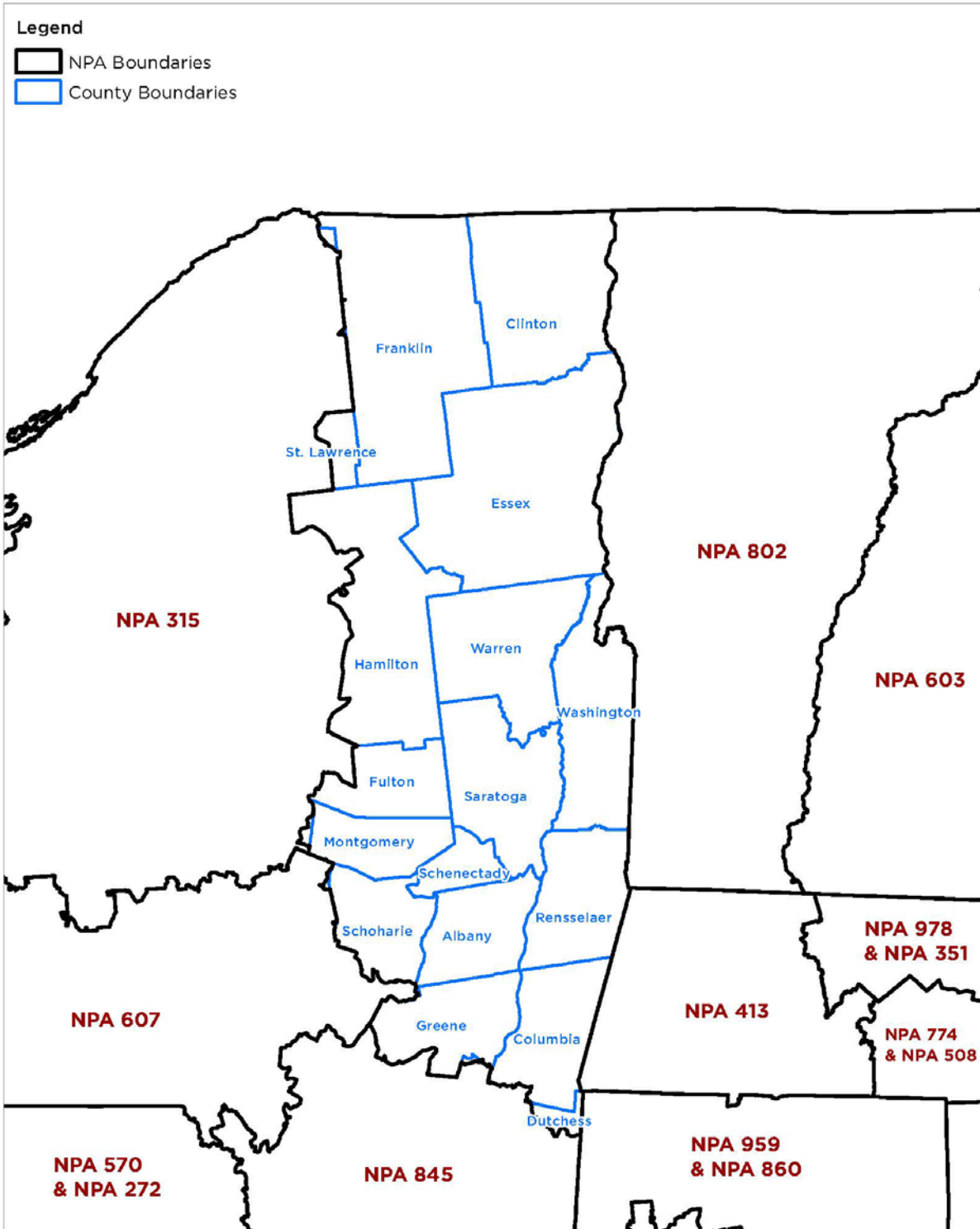
1. **Mail:**  
Addressed to the Hon. Kathleen H. Burgess, Secretary, New York State Public Service Commission, 3 Empire State Plaza, Albany, New York 12223-1350.
2. **Email:**  
[secretary@dps.ny.gov](mailto:secretary@dps.ny.gov).
3. **Toll-Free Opinion Line:**  
1-800-335-2120; 24 hour access for leaving a recorded comment.
4. **Internet website:**  
[www.AskPSC.com](http://www.AskPSC.com).

Questions regarding the content of this White Paper may be directed to Lauri Mullen at 518-457-5762 or [lauriann.mullen@dps.ny.gov](mailto:lauriann.mullen@dps.ny.gov), or Graham Jesmer at 518-473-4628 or [graham.jesmer@dps.ny.gov](mailto:graham.jesmer@dps.ny.gov).

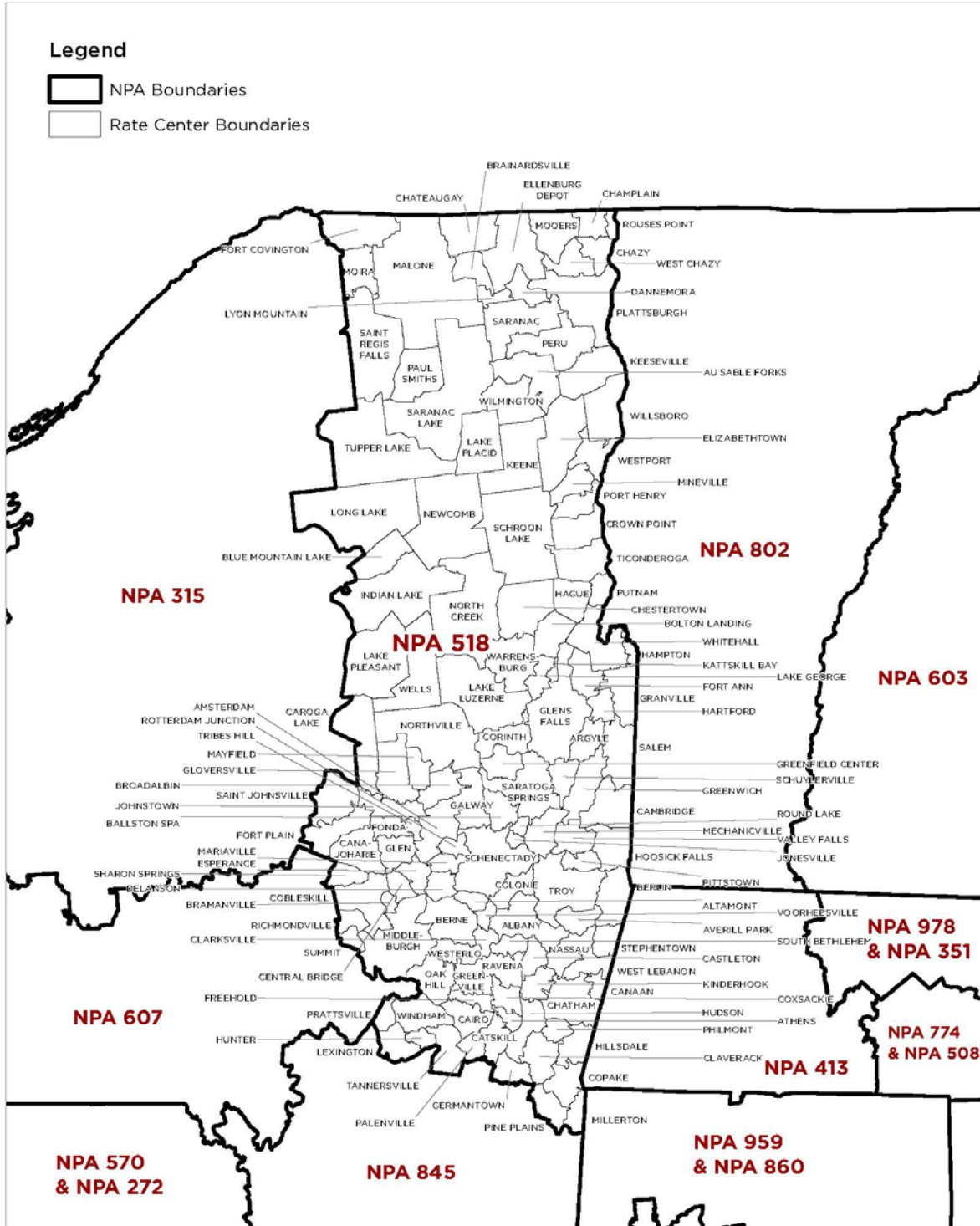
### **CONCLUSION**

This White Paper describes the various options presented by NANPA for providing area code relief in the 518 NPA. As discussed herein, Staff agrees with NANPA's recommendation that the Commission approve an all services distributed overlay for the current 518 NPA. Comments are sought from the affected public, including residents, businesses, elected officials and organizations in the region, on the relief options contained herein. The feedback received will be included in the official record provided to the Commission to base its decision.

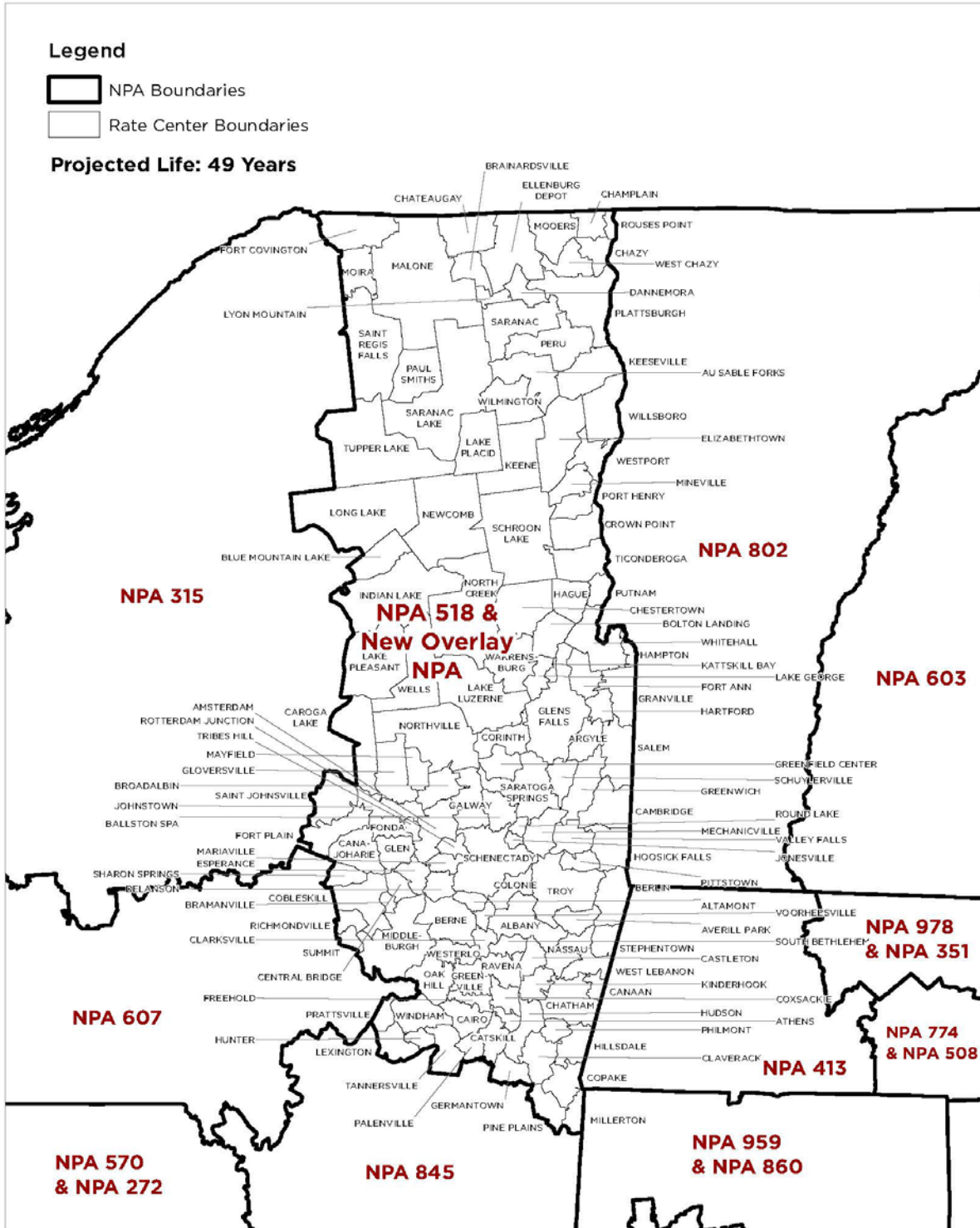
NEW YORK NPA 518 County Map



NEW YORK NPA 518 Rate Center Map



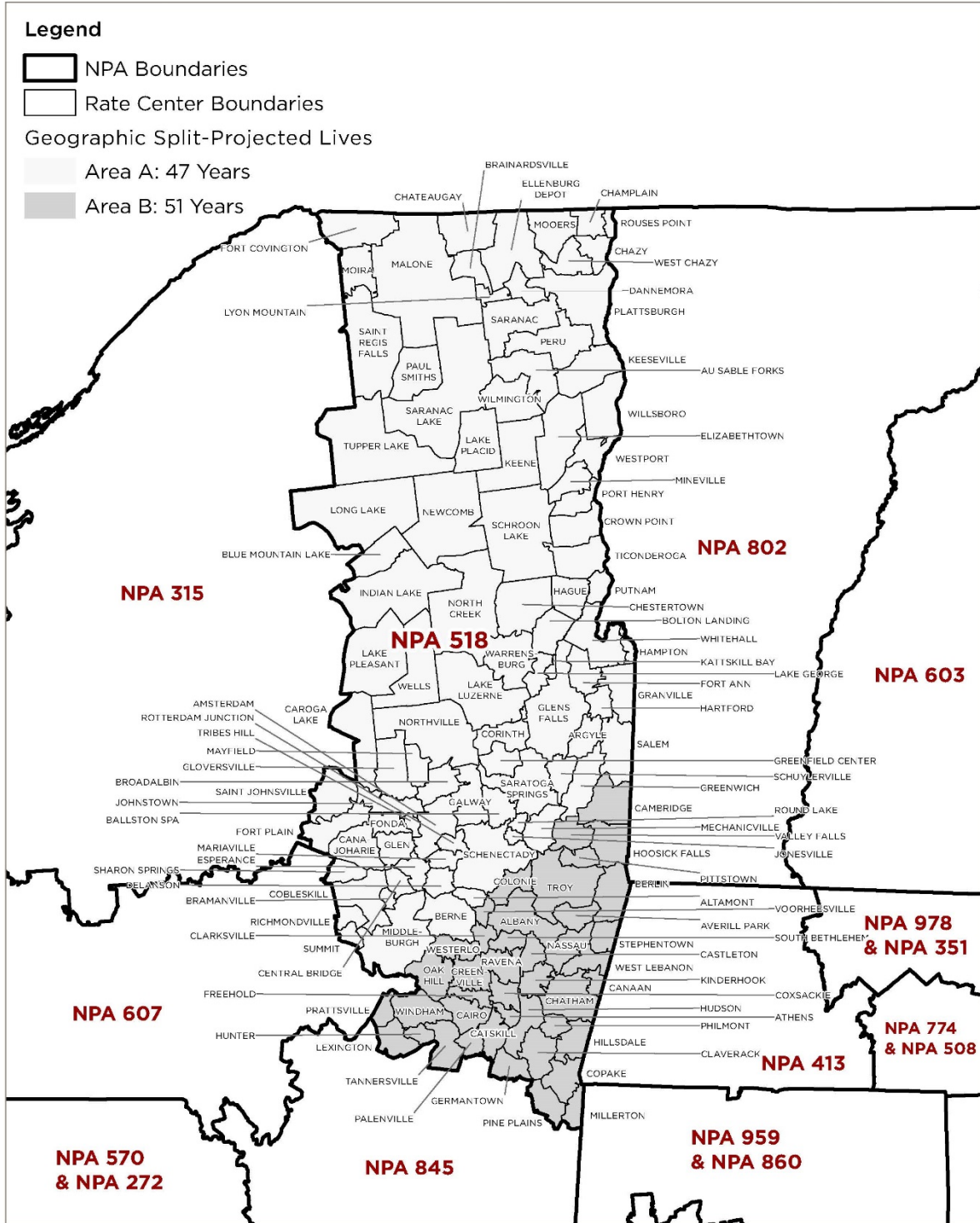
**NEW YORK NPA 518 Rate Center Map  
Alternative #1: All Services Overlay**



rev. 2016-02

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NEW YORK NPA 518 Rate Center Map  
Alternative #2 - Geographic Split



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NEW YORK NPA 518 County Map  
Alternative #2 - Geographic Split

