

NPA 226/519 RELIEF PLANNING COMMITTEE - TIF REPORT

Date Submitted: 17 May 2013

WORKING GROUP: NPA 226/519 Relief Planning Committee (Ad Hoc)

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REPORT TITLE: Relief Planning Committee (RPC) Recommendation for NPA 226/519 Relief (Planning Document and Relief Implementation Plan)

OUTCOME: Consensus

RELATED TASK(s) #: None

BACKGROUND:

The Canadian Numbering Administrator (CNA) initiated Relief Planning based on the results of the July 2012 NPA 226/519 Relief Planning Numbering Resource Utilization Forecast (R-NRUF), that indicated NPA 226/519 would exhaust in January 2017.

On 5 October 2012, the CNA advised the Canadian Radio-television and Telecommunications Commission (CRTC) and industry that NPA 226/519 had entered the Relief Planning window of 72 months according to the aggregate results from the July 2012 R-NRUF.

On 29 November 2012, the CRTC issued Telecom Notice of Consultation CRTC 2012-655, *Establishment of a CISC ad hoc committee for area code relief planning for area codes 226 and 519 in southern Ontario*, by which it established the CRTC Interconnection Steering Committee (CISC) ad hoc Relief Planning Committee (RPC) for NPA 226/519.

In this TIF Report, the NPA 226/519 Relief Planning Committee is submitting a Planning Document which includes the following recommendations:

- 1) The Relief Method should be a distributed overlay of a new NPA on NPA 226/519 (Option 5);
- 2) NPA 548 should be the relief NPA for NPA 226/519 in accordance with Telecom Decision CRTC 2010-784, *CRTC Interconnection Steering Committee consensus item- Reservation of Area Codes for future Area Code Relief*;
- 3) NPA 382 should be reserved for future subsequent relief in the 226/519 region as the 226/519 region has been forecast to exhaust again within 15 years; and,
- 4) The Relief Date should be 4 June 2016 to provide Carriers and customers with advanced notification and sufficient lead-time to implement relief, which would be 16 months in advance of the current Projected Exhaust Date.

In addition, the NPA 226/519 Relief Planning Committee is also submitting a Relief Implementation Plan.

The attached Relief Implementation Plan (RIP) was prepared in accordance with the above recommendations. The RIP establishes a public framework and timeframe for implementing relief for area code 226/519. The RIP also addresses the activities, deliverables, and issues impacting more than one individual TSP. It does not cover activities internal to each TSP. In addition, this RIP does not cover areas for which there is already an established process for coordination between TSPs to establish service (e.g., interconnection agreements between carriers).

The NPA 226/519 Relief Planning Committee hereby submits the attached NPA 226/519 Planning Document, associated Annexes and the Relief Implementation Plan for CISC and Commission approval.

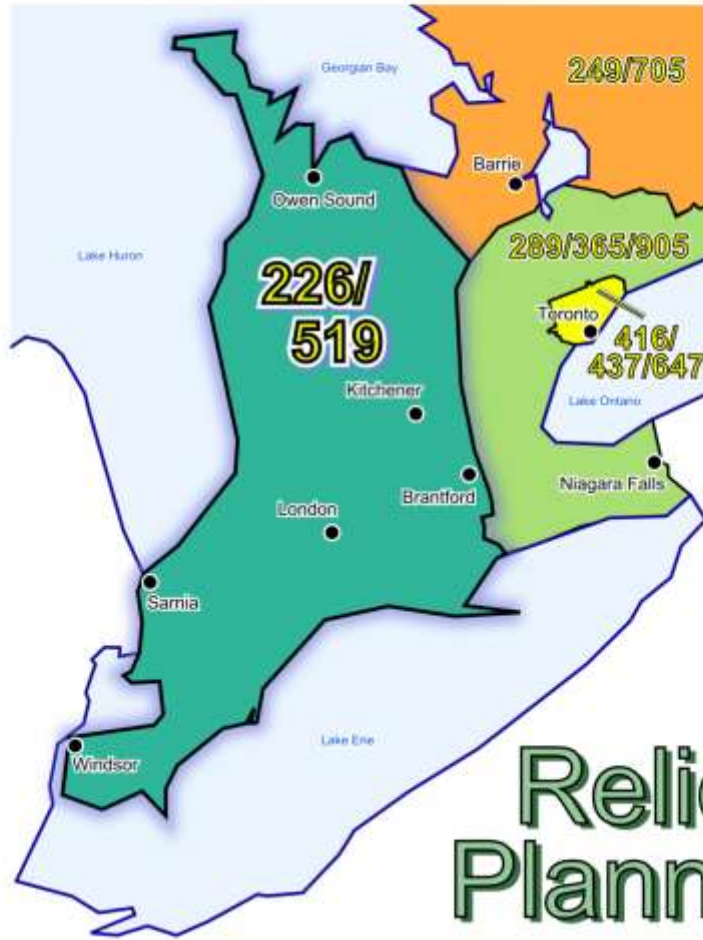
RECOMMENDATIONS:

The NPA 226/519 Relief Planning Committee recommends that the Commission approve the attached Planning Document and Relief Implementation Plan for NPA 226/519.

ATTACHMENTS:

NPA 226/519 Planning Document, dated 17 May 2013
NPA 226/519 Relief Implementation Plan, dated 17 May 2013

NPA 226/519



Relief Planning

Planning Document (PD)
Version 1.0
17 May 2013

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ANNEX C

Distribution List

Acronym List

CATF	Consumer Awareness Task Force
CISC	CRTC Interconnection Steering Committee
CLNPC	Canadian Local Number Portability Consortium
CNA	Canadian Numbering Administrator
CO	Central Office
CRTC	Canadian Radio-television and Telecommunications Commission
CSCN	Canadian Steering Committee on Numbering
G-NRUF	General Numbering Resource Utilization Forecast
IPD	Initial Planning Document
ISP	Internet Service Provider
JCP	Jeopardy Contingency Plan
J-NRUF	Jeopardy Numbering Resource Utilization Forecast
LEC	Local Exchange Carrier
MBIs	MIN Block Identifiers
MDNs	Mobile Directory Numbers
MIN	Mobile Identification Number
NANP	North American Numbering Plan
NANPA	North American Numbering Plan Administration
NITF	Network Implementation Task Force
NPA	Numbering Plan Area (Area Code)
NRUF	Numbering Resource Utilization Forecast
OSSs	Operating Support Systems
PBX	Primary Branch Exchange
PD	Planning Document
PED	Projected Exhaust Date
PL	Planning Letter
PSAP	Public Safety Answering Point
RIP	Relief Implementation Plan
R-NRUF	Relief Planning Numbering Resource Utilization Forecast
RP GL	Relief Planning Guidelines
RPC	Relief Planning Committee
TSPs	Telecommunications Service Providers
WNP	Wireless Number Portability
WSP	Wireless Service Provider

NPA 226/519 Planning Document (PD)

1. INTRODUCTION

Numbering Plan Area (NPA, area code) 226/519 consists of 210 Exchange Areas including the rapidly growing exchanges of Brantford, Chatham, Guelph, Hespeler, Kitchener-Waterloo, London, Orangeville, Sarnia, Windsor and Woodstock, located in the southwestern part of Ontario in Canada. The majority of the projected growth in NPA 226/519 is mainly limited to these 10 exchanges. In the remaining 200 exchanges there is little projected growth.

The Canadian Numbering Administrator (CNA) initiated Relief Planning based on the results of the July 2012 NPA 226/519 Relief Planning Numbering Resource Utilization Forecast (R-NRUF), that indicated NPA 226/519 would exhaust in January 2017.

On 5 October 2012, the CNA advised the Canadian Radio-television and Telecommunications Commission (CRTC) and industry that NPA 226/519 had entered the Relief Planning window of 72 months according to the aggregate results from the July 2012 R-NRUF.

On 29 November 2012, the CRTC issued Telecom Notice of Consultation CRTC 2012-655, *Establishment of a CISC ad hoc committee for area code relief planning for area codes 226 and 519 in southern Ontario*, by which it established the CRTC Interconnection Steering Committee (CISC) ad hoc Relief Planning Committee (RPC) for NPA 226/519. The Notice of Consultation directed the RPC to set aside 4 Central Office (CO) Codes for initial code assignments for Carriers already providing service in area codes 226 and 519, and 7 CO Codes for initial code assignments exclusively for new entrants.

The January 2013 NPA 226/519 R-NRUF results, when adjusted for the CO Codes set aside per Telecom Notice of Consultation CRTC 2012-655, indicated that NPA 226/519 would exhaust in October 2017.

The Initial Planning Document (IPD), dated 28 February 2013 and subsequently revised on 2 April 2013 to reflect the January 2013 R-NRUF results, was developed by the CNA in accordance with the CRTC-approved Canadian NPA Relief Planning Guideline (the Guideline) Version 4.0 dated 11 July 2012. A copy of the Guideline is available from the CRTC CISC CSCN guidelines web page at <http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm> or via a link from the CNA website at http://cnac.ca/npa_codes/relief/overview.htm.

This Planning Document (PD) was developed by the NPA 226/519 RPC based on the IPD and in accordance with the CRTC-approved Canadian NPA Relief Planning Guideline (the Guideline) dated 11 July 2012. Various options for providing relief in the NPA 226/519 Numbering Plan Area are examined in this PD.

The purpose of identifying Relief Options, and the objective of the NPA Relief Planning process, is to ensure that CO Codes and telephone numbers are always available for use by Telecommunications Service Providers (TSPs) and their customers in the geographic area requiring relief.

Given the magnitude of this undertaking, inter-company commitment and co-operation are essential throughout the planning, provisioning and implementation stages of the introduction of a new NPA.

It is very important to closely monitor the CO Code requirements of all existing and prospective CO Code Holders so that relief can be timed to ensure that CO Codes and telephone numbers are always available for service providers and customers.

NPA Relief Planning is conducted under the regulatory oversight of the CRTC in accordance with the Guideline. The CRTC may exercise its authority under the Telecommunications Act to alter this process at any time. The CRTC has the authority, under the Telecommunications Act, to review, modify and give final approval to the Planning Document (PD) and the Relief Implementation Plan (RIP) developed and submitted to the CRTC by the RPC via the CRTC Interconnection Steering Committee (CISC) process.

2. NPA RELIEF PLANNING PROCESS

The NPA Relief Planning process and the roles of the participants (e.g., CRTC, CNA, CRTC Interconnection Steering Committee (CISC), RPC participants, Interested Parties) for NPA Relief Planning are identified in the CRTC-approved Canadian NPA Relief Planning Guideline (the Guideline), dated 11 July 2012. A copy of the Guideline is available from the CRTC CISC guidelines web page at <http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm> or via a link from the CNA website at http://cnac.ca/npa_codes/relief/overview.htm.

To increase public awareness and participation in the NPA Relief Planning process, the CRTC has determined that NPA RPCs will be established as ad hoc committees of the CISC. Generally, a separate ad hoc committee is created to deal with relief in each area code. The CNA, in its function as NPA Relief Planning Coordinator, acts as chair of these ad hoc committees. Meetings and conference calls of the ad hoc NPA RPCs are all open to public participation and are conducted in accordance with the CISC Administrative Guidelines.

A copy of the CISC Administrative Guidelines can be obtained from the CRTC website at <http://www.crtc.gc.ca/public/cisc/c-docs/CISC2001-03-31.doc>.

Section 6.1.6 of the Canadian NPA Relief Planning Guideline requires the CNA to create and maintain a distribution list of parties who may be interested in participating in the RPC and to provide them with advance notice of the initial RPC meeting and the IPD.

Any person wishing to participate in the NPA Relief Planning process can contact the CNA and request to be added to the RPC distribution lists. In addition, individuals can also register with the CRTC as interested parties to any proceedings that result from the NPA Relief Planning process. More information on how to participate in CRTC public processes is available at: http://www.crtc.gc.ca/eng/info_sht/g4.htm.

3. NPA RELIEF METHODS

The term Numbering Plan Area (NPA) refers to a discrete geographic area, within the area served by the North American Numbering Plan (NANP), to which one or more NPA Codes (also known as area codes) may be assigned.

The following paragraphs provide descriptions and general attributes of the NPA Relief Methods that may be considered when the necessity for NPA relief is established. The following descriptions and general attributes are primarily extracts from the Canadian NPA Relief Planning Guideline. Information relating to the elimination of 7-digit local dialling has not been included since mandatory 10-digit local dialling is already in place in NPA 226/519. The NPA Relief Methods that may be considered are the Geographic Split, the Overlay (including the Distributed, Concentrated, and Boundary Extension), and the Boundary Realignment Relief Method.

3.1 Geographic Split

3.1.1 Description

Under the split method, the geographic area served by an existing NPA is divided or “split” into two or more unique geographic areas (i.e., new NPAs). One of the areas retains the existing NPA Code, and the other area or each of the other areas changes to a new unique NPA. The projected lives of all the areas following the split should be similar. The area with the largest quantity of customers usually retains the existing NPA Code in order to minimize the quantity of number changes.

Provided that new NPA boundaries created by a split do not divide Exchange Areas, the boundaries may be chosen to correspond to jurisdictional, natural or physical boundaries (e.g., county, municipality and city boundaries, rivers, major highways, etc.). Alternatively the boundaries may correspond to none of the above features but be chosen only so they do not divide Exchange Areas while meeting criteria such as the need for a balanced split, maintaining contiguous NPA areas, minimizing the quantity of Local Calling Areas (LCAs) that cross the new NPA boundaries, and aligning with general regional identities.

In order to facilitate the transition to the new NPA Code, a permissive dialling arrangement is established. During the Permissive Dialling Period, long distance calls and any local 10-digit local calls to numbers that are being changed to the new NPA Code may be dialled with either the old or new NPA Code. During the Permissive Dialling Period, when calls to numbers in the new NPA Code are dialled using the old NPA Code, all Carriers in the new NPA shall play a standard network announcement before completing the call in order to advise customers of the change of area code.

The length of the Permissive Dialling Period prior to the Mandatory Dialling date should be sufficient to permit callers and customers to adjust their dialling habits and for customers to reprogram their equipment and notify others of their number changes before the Mandatory Dialling Date. This is typically about four months.

The Permissive Dialling Period ends on the Mandatory Dialling Date, which is the date when callers must dial the new NPA Code in order to complete calls to the area where the NPA Code has changed.

At the end of the Permissive Dialling Period, calls that are dialled to CO Codes whose NPA has changed shall be intercepted and sent to a mandatory dialling announcement that informs the caller to hang up and redial using the new area code. The mandatory dialling announcement should be retained for a specified period of time with exceptions if the same CO Code is assigned in both NPA Codes. The “phasing-in” of the mandatory dialling announcement is not permitted.

Calls that are dialled using the new NPA Code before the start of the Permissive Dialling Period may be routed to a “pre-permissive recording” that advises the caller that the new area code is not effective until a specified future date, and to redial using the old area code.

Once an initial relief has been provided using an overlay method and 10-digit local dialling has been introduced, subsequent reliefs will generally not be provided using a split method, as splits would be impractical, disruptive, and not provide significant benefits. A split would be impractical and disruptive because it would require many number changes including CO Code changes as well as NPA Code changes. A split could allow reintroduction of permissive 7-digit local dialling however this would provide little or no benefit and would cause customers, Carriers and TSPs to incur additional costs after already having incurred costs to change to mandatory 10-digit local dialling. It would also be inconsistent with the industry migration towards the Uniform Dialling Plan (i.e., 10-digit local and toll dialling).

3.1.2 General Attributes

- A frequently implemented method of NPA relief in the past; last implemented in Canada in 1999.
- 7-digit dialling is usually retained for local calls within area codes.
- If CO Code protection is not in place after relief is implemented, 10-digit dialling is required for local calls between different area codes.
- Number changes are required within new area code boundaries (NPA Code changes).
- The time required to transition to a new area code with a split is usually longer than the time needed to transition to mandatory 10-digit local dialling for a first-time overlay.
- It is generally not a practical method for relief for an area that has previously been relieved by an overlay or already has mandatory 10-digit local dialling, since it is costlier and more time consuming than an additional overlay would be, and does not provide the benefit of retaining 7-digit dialling.
- Reprogramming or replacement of equipment (switches, Primary Branch Exchange (PBXs), large quantities of cellular phones, etc.).
- Many existing customers are affected by telephone number changes.
- More economic burdens may generally be caused by customer number changes (businesses, public costs, stationery, etc.) than an overlay.
- May not be as expensive to display numbers in telephone directories.
- Requires a permissive dialling period for customers’ numbers in the new area code.
- Possible dispute over which portion of the area retains the existing NPA Code.
- Potential for associating NPA Codes with smaller geographic areas within the exhausting NPA.

- All Mobile Directory Numbers (MDNs) in the portion of the existing NPA that is assigned the new NPA Code will change to the new NPA Code. This creates a problem for Wireless Carriers who require Mobile Identification Number (MIN) Block Identifiers (MBIs) to be associated with the Exchange Areas of the MDNs' corresponding CO Codes.

3.2 Overlay

3.2.1 Description

Under the overlay method, a relief NPA Code is superimposed or “overlaid” on top of part or all of an existing NPA or NPAs. With overlays, changes to existing telephone numbers are not required.

Once an initial overlay has been introduced, subsequent reliefs will generally be provided using additional overlays, as splits would be impractical, disruptive, and not provide significant benefits. A split would be impractical and disruptive because it would require many number changes including CO Code changes as well as NPA Code changes. A split could allow reintroduction of permissive 7-digit local dialling however this would provide little or no benefit and would cause customers, Carriers and TSPs to incur additional costs after already having incurred costs to change to mandatory 10 digit local dialling. It would also be inconsistent with the industry migration towards the Uniform Dialling Plan (i.e., 10-digit local and toll dialling).

When an overlay relief NPA Code is activated, mandatory 10-digit dialling must be in place for all local calls originating within the area being relieved, which means that local calls dialled with 7 digits will not be completed. When mandatory 10-digit local dialling is in place it will apply equally to calls originating from numbers in the existing NPA Code(s) and from numbers in any new overlay NPA Code(s). This is a CRTC policy that provides competitive equity for the communications industry since all customers in the area will have to dial the same number of digits regardless of the NPA Code in which the calling or called parties' numbers are assigned.

In some NPAs where relief is to be provided by an overlay, mandatory 10-digit dialling will already be in place because it was previously implemented for an earlier overlay or other reasons. This simplifies relief implementation for Carriers, TSPs, customers and users as no dialling changes are required.

Under the distributed overlay method, a new NPA Code is overlaid on top of the entire NPA (i.e., geographic area) requiring relief. The following types of distributed overlay may be considered:

- a) a distributed overlay over a single existing NPA served by a single NPA Code

Under this method a new NPA Code is overlaid over a single existing NPA (i.e., the geographic area) that is served by a single NPA Code; e.g., NPA Code 438 implemented as a distributed overlay on the NPA (i.e., the geographic area) served by NPA Code 514.

- b) a distributed overlay over a single existing NPA (i.e., the geographic area) served by multiple existing overlay NPA Codes

Under this method, a new NPA Code would be assigned to overlay a single existing NPA (i.e., the geographic area) that is served by multiple existing overlay NPA Codes; e.g., potential future relief NPA Code implemented as distributed overlay on the NPA (i.e., the geographic area) served by NPA Codes 416 & 647 (Toronto).

- c) a distributed overlay over multiple existing NPAs (i.e., different geographic areas) served by multiple NPA Codes

Under this method, a new NPA Code is overlaid over multiple existing NPAs (i.e., different geographic areas served by multiple NPA Codes); e.g., NPA Code 587 implemented as a distributed overlay on the NPAs served by NPA Codes 403 (S. Alberta) and 780 (N. Alberta). This method may be considered where relief is required in two or more NPAs (i.e., geographic areas) within a province.

Under the concentrated overlay method, a new NPA Code is overlaid on top of part of the NPA (i.e., geographic area) requiring relief (e.g., NPA Code 778 was initially overlaid on part of the geographic area already served by NPA Code 604). A concentrated overlay may be considered in situations where the majority of the demand for new telephone numbers is expected to be concentrated in one section of an existing NPA, for example, a fast growing metropolitan area in an NPA that also contains a slow growing rural area. The new NPA Code would be assigned to the section of the original NPA experiencing the greatest growth (e.g., the metropolitan area), and any need for new CO Codes in that section would be met by the assignment of CO Codes from the new NPA Code. In the area not covered by the new NPA Code(s), future needs for new CO Codes would be met by the assignment of CO Codes from the original NPA Code.

In order to ensure that sufficient CO Codes remain available for assignment from the original NPA Code to the section of the NPA that will not be covered by the new concentrated overlay NPA Code, relief using a concentrated overlay must be implemented sooner than relief using other overlay methods or a split. This may mean that there is insufficient time to implement a concentrated overlay, or, in some cases, CO Code assignment monitoring and CO Code conservation measures may have to be implemented prior to the introduction of the new concentrated overlay NPA in order to ensure that sufficient CO Codes will be available for growth in the area outside the concentrated overlay.

When subsequent relief is required in the original NPA due to growth in the sections outside the concentrated overlay, this could be provided by expanding the geographic coverage area of the concentrated overlay NPA Code with a boundary extension overlay, or by a new concentrated overlay of the exhausting sections, or by another Relief Method.

It is possible to implement two or more relief NPA Codes at the same time using concentrated overlays each covering a different section of a single existing NPA. This would avoid the need to advance the Relief Date to ensure that sufficient CO Codes remain available for assignment outside the concentrated overlay, but it is less efficient than implementing the same two or more relief NPA Codes as distributed overlays on a single existing NPA, since the number of planning areas will increase, and the next relief will occur sooner with multiple concentrated overlays than it will with the same number of multiple distributed overlays. Multiple simultaneous overlays should generally only be considered when the forecasted life for a single relief NPA Code is less than 72 months.

Under a boundary extension overlay method, the boundary of one NPA that has spare capacity is extended to overlay part or all of the coverage area of the exhausting NPA or NPAs. Unassigned CO Codes from the NPA Code(s) whose boundary is extended can be assigned within the overlay area of the exhausting NPA(s) as well as within the original coverage area. An appropriate use of boundary extension might be in a province consisting of two or more NPAs, where one NPA is exhausting and another has spare capacity (e.g., the NPA served by NPA Code 778, originally a concentrated overlay of part of the NPA served by NPA Code 604, was extended to cover all of the exhausting NPA served by NPA Code 250 as well as the rest of the NPA served by NPA Code 604, thereby creating a province-wide NPA over British Columbia).

This solution has the advantage of not requiring a new NPA Code. The lives of the NPA whose boundary is being extended and the NPA being relieved will be shorter than if a new NPA Code is introduced, however it uses NPA Code capacity more efficiently (e.g. may provide an opportunity to use spare capacity from an NPA Code that would otherwise not exhaust until the distant future), and it reduces the number of relief planning areas. The boundary extension overlay would not normally be used to create an NPA that overlays more than one province.

Under the multiple NPA overlay, a new NPA would be assigned to overlay multiple existing NPA or NPAs serving more than one specific geographic area.

Under a technology-specific overlay, a new NPA Code would be assigned to overlay an existing NPA(s) serving a specific geographic area, and the numbering resources in the new NPA Code would be used only for a specific type of technology (e.g., wireline telephones, wireless telephones, facsimile). This type of overlay has been utilized in certain other nations for wireless telephones. With the introduction of wireless number portability (WNP) in Canada, telephone numbers can be moved between wireline and wireless services and therefore the use of an NPA Code exclusively by wireline or wireless technology is not possible.

3.2.2 General Attributes

- A frequently implemented method of NPA relief in recent years; the primary method used since 1999 for relief projects in Canada (e.g., 416/647, 226/519, 514/438, 581/418).
- Requires mandatory 10-digit local dialling throughout the area codes being relieved, and generally from adjacent area codes into area codes being relieved, usually prior to relief or a previous overlay relief.
- No number changes are required for existing customers.
- Least disruptive to end-users (allows users to retain current telephone numbers).
- Generally creates less economic burdens for existing businesses than a geographic split.
- In a single residence or business there may be numbers in two or more NPA Codes.
- Directory costs may increase to print 10-digit numbers.
- If mandatory 10-digit dialling does not exist in the area codes being relieved and a transition to mandatory 10-digit dialling is required, the transition can be implemented in a shorter time than the Permissive Dialling Period required with an area code split.
- Favoured by Carriers and TSPs due to cost considerations (e.g., no number changes in Operating Support Systems (OSSs), no need to reprogram wireless handsets).

- If the overlay is concentrated; it must be implemented sooner than if the overlay is distributed, and it increases the number of areas for which future relief must be planned separately.
- If the overlay is of multiple NPAs, it reduces the number of areas for which future relief must be separately planned.
- If the overlay is a boundary extension, a new NPA Code will not be needed at the time of relief, and the number of areas for which future relief must be separately planned may be reduced.
- Carriers must use 10-digit signalling for all local traffic they send to other Carriers, and must be able to receive 10-digit signalling on local traffic they receive from other Carriers.

3.3 *Boundary Realignment*

The boundary realignment described in this section is different than the boundary realignment that occurs with a boundary extension overlay described above.

3.3.1 *Description*

The NPA boundary realignment method as described in this section is the realignment of the boundary between the NPA that requires relief and an adjacent NPA such that some of the customers in the exhausting NPA have their telephone numbers changed to use the NPA Code of the adjacent NPA. The boundary realignment in this method is distinct from the boundary realignment in the boundary extension overlay method described in a previous section. With the boundary realignment method defined in this section, CO Codes that are not utilized in an adjacent NPA may be used to serve customers in part of the geographic area of the NPA requiring relief. As a result, the geographic coverage area of the exhausting NPA is reduced in size and the geographic area of the NPA with spare capacity is expanded. The customers in the geographic area affected by the boundary change are required to change their telephone numbers on a specific date. This method is generally viewed as an interim measure because it tends to provide only short term relief relative to the long term relief provided when introducing a new NPA Code under the split and overlay methods.

3.3.2 *General Attributes*

- A method of NPA relief never used in Canada.
- Requires customer number changes in the affected geographic area. (NPA and CO Code changes).
- Generally viewed as an interim measure because it tends to provide only short term relief.
- Causes inconvenience and creates an economic burden for those required to take number changes.

4. NPA EXHAUST INFORMATION

As indicated in the following table, Numbering Resource Utilization Forecasts (NRUFs) for NPA 226/519 were used to determine Projected Exhaust Dates, i.e. the dates when CO Codes in NPA 226/519 would be expected to exhaust.

226/519 NRUF	Projected Exhaust Date
G-NRUF January 2012	November 2017
R-NRUF July 2012	January 2017
R-NRUF January 2013, adjusted per Telecom Notice of Consultation CRTC 2012-655 directive setting aside 4 CO Codes for initial code assignments for Carriers already providing service, and 7 CO Codes for new entrants	October 2017

Refer to Annex A, Figures 3, 4, 5, 6, 7 and 8 for graphs of forecasted CO Codes and charts of Miscellaneous and Local Exchange Carrier (LEC) + Wireless Service Provider (WSP) CO Codes in area code 226/519.

5. RELIEF OPTIONS

The basic NPA Relief Methods described in section 3 of this PD are the Geographic Split, the Overlay, and the Boundary Realignment.

Based on two of the above basic methods, the following Relief Options were identified and examined in detail:

- Geographic Split - 4 options (Options 1, 2, 3 and 4)
- Distributed Overlay - 1 option (Option 5)

See Annex A, Figures 10 through 14 for diagrams of the Relief Options identified and examined by the CNA.

The Relief Options that are not examined in detail in this PD are:

- Boundary Realignment - not examined since growth is also occurring across adjacent NPAs, and Boundary Realignment is a short-term measure that would require NPA and CO Code changes for telephone numbers.
- Technology-specific Overlay - not examined because assigning NPAs to specific types of technology has not been possible since number portability between technologies came into effect.
- Concentrated Overlay - not examined since growth is concentrated in the Exchange Areas that are non-contiguous and are spread out across the NPA region.

5.1 *Geographic Split*

The geographic split method has never been used to provide relief to an area already served by overlay NPAs, however in order to ensure that this PD considers a wide range of Relief Options, four different Relief Options were evaluated in detail to introduce a new area code in the NPA 226/519 area using the geographic split method of providing NPA relief.

In NPA 226/519, the existence of two overlay NPAs serving one area means that a larger number of geographic split options exist than would be the case in an area served by a single NPA Code. In this PD the RPC has considered splitting the growing NPA 226 only.

With all geographic split options described for NPA 226/519, number changes are required. In areas that retain one existing NPA but not the other, approximately half the numbers change to a new NPA. In areas that retain neither existing NPA all numbers change to a new NPA, and up to half of the numbers would also have to change to a new CO Code. Selecting a split option for NPA Relief would impact from 47% to 53% of the customers in NPA 226 with a number change.

A split usually allows existing 7-digit local dialling to be retained in both portions of the split area code after relief. This attribute does not apply in NPA 226/519 since 7-digit local dialling was

eliminated in 2006 with the implementation of mandatory 10-digit local dialling and distributed overlay of NPA 226 on NPA 519.

After the split, local calls in the NPA 226/519 and NPA 519/New NPA would continue to be dialled using 10-digits.

Split Options 1, 2, 3, and 4

With these options, NPA 226 would be split into NPA 226 and a new NPA, while NPA 519 would remain as an overlay covering NPA 226 and the new NPA, i.e. the same geographical coverage area for NPA 519 as currently exists.

5.1.1 Option 1: Split - North South Split of NPA 226 - South retains NPA 226

Southern Region (108 Exchange Areas) retains NPA 226 and remains in 519, and Northern Region (102 Exchange Areas) remains in NPA 519 and telephone numbers in NPA 226 change to a new NPA. The area that would retain NPA 226 contains the rapidly growing Exchange Areas of Chatham, London, Sarnia, Windsor and Woodstock, while the new NPA would contain the rapidly growing Exchange Areas of Brantford, Guelph, Hespeler, Kitchener-Waterloo and Orangeville. Using this option, customers in 329 CO Codes would be affected by a telephone number change to the new area code.

This Relief Option would increase the number of separate Relief Planning areas in Ontario from six to seven.

After the split, both NPA 226/519 and the 519/New NPA would be expected to exhaust in 2030 and 2029 respectively.

5.1.2 Option 2: Split - North South Split of NPA 226 - North retains NPA 226

Northern Region (102 Exchange Areas) retains NPA 226 and remains in 519, and Southern Region (108 Exchange Areas) remains in NPA 519 and telephone numbers in NPA 226 change to a new NPA. The area that would retain NPA 226 contains the rapidly growing Exchange Areas of Brantford, Guelph, Hespeler, Kitchener-Waterloo and Orangeville while the new NPA would contain the rapidly growing Exchange Areas of Chatham, London, Sarnia, Windsor and Woodstock. Using this option, customers in 329 CO Codes would be affected by a telephone number change to the new area code.

This Relief Option would increase the number of separate Relief Planning areas in Ontario from six to seven.

After the split, both NPA 226/519 and the 519/New NPA would be expected to exhaust in 2029 and 2030 respectively.

5.1.3 Option 3: Split – East West Split of NPA 226 - East retains NPA 226

Eastern Region (80 Exchange Areas) retains NPA 226 and remains in 519, and Western Region (130 Exchange Areas) remains in NPA 519 and telephone numbers in NPA 226 change to a new NPA. The area that would retain NPA 226 contains the rapidly growing Exchange Areas of Brantford, Guelph, Hespeler, Kitchener-Waterloo, Orangeville and Woodstock while the new NPA would contain the rapidly growing Exchange Areas of Chatham, London, Sarnia and Windsor. Using this option, customers in 348 CO Codes would be affected by a telephone number change to the new area code.

This Relief Option would increase the number of separate Relief Planning areas in Ontario from six to seven.

After the split, NPA 226/519 and the 519/New NPA would be expected to exhaust in 2030 and 2029 respectively.

5.1.4 Option 4: Split – East West Split of NPA 226 - West retains NPA 226

Western Region (130 Exchange Areas) retains NPA 226 and remains in 519, and Eastern Region (80 Exchange Areas) remains in NPA 519 and telephone numbers in NPA 226 change to a new NPA. The area that would retain NPA 226 contains the rapidly growing Exchange Areas of Chatham, London, Sarnia and Windsor while the new NPA would contain the rapidly growing Exchange Areas of Brantford, Guelph, Hespeler, Kitchener-Waterloo, Orangeville and Woodstock. Using this option, customers in 310 CO Codes would be affected by a telephone number change to the new area code.

This Relief Option would increase the number of separate Relief Planning areas in Ontario from six to seven.

After the split, NPA 226/519 and the 519/New NPA would be expected to exhaust in 2029 and 2030 respectively.

With these options, the NPA 226 assigned CO Codes would split as follows:

Area	Forecasted CO Codes in NPA 226 (01-01-15)
	% of Total NPA 226 CO Codes
Northern Region	329 codes - 50%
Southern Region	329 codes - 50%
Eastern Region	348 codes - 53%
Western Region	310 codes - 47%

As 10-digit local dialling is mandatory throughout NPA 226/519, there would be no requirement to implement CO Code Protection to address local dialling between these regions.

5.1.5 Assessment of the four Split Options:

The RPC views the overlay option as preferable to the split options (1, 2, 3, and 4). The RPC's rationale for not recommending any of the split options is based on the following assessment:

A large quantity of customers in 47% to 53% of the assigned CO Codes in NPA 226 would be affected by a telephone number change, which would be very inconvenient for those customers and would be significantly more expensive for business customers as they would be required to change their advertising, stationery, CPE, etc.

In addition, costs for all Carriers would be higher for a split due to the need to modify operational, network, customer, and billing support systems due to telephone number changes. Additional costs would also be incurred by Wireless Carriers to reprogram wireless telephones due to changes in telephone numbers and Mobile Identity Numbers (MINs).

NPA 226/519 already has mandatory 10-digit local dialling. As it would be impractical and costly for customers and Carriers to change the local dialling plan back to 7-digits, one of the perceived benefits of a split would not be obtainable.

One drawback of the split options is that the number of separate relief planning areas in Ontario would be increased to 7 compared to 6 for the distributed overlay option, thus increasing the quantity of geographic areas that would require future relief planning activity.

The use of a new NPA in a split configuration for the geographic area served by NPA 226/519 would be an inefficient use of numbering resources compared to the distributed overlay option 5 because it would require one new NPA in 2016 plus two new NPAs to be implemented in subsequent relief projects (in 2028 and 2029). This compares to two new NPAs in subsequent relief projects in 2016 and 2029 for a distributed overlay of a new NPA on NPA 226/519.

Furthermore, split options may cause discrimination against some customers and Carriers in the area served by the new NPA since some customers and Carriers may operate only in the area that is changing to the new NPA and some customers and Carriers may operate only in the area that is retaining the existing NPA. Customers and Carriers that will operate in the area changing to the new NPA would incur additional implementation costs while customers and Carriers that only operate in the area retaining the existing NPA would not have to incur such costs.

5.2 Distributed Overlay

One Relief Option was evaluated using the distributed overlay method of providing NPA relief.

5.2.1 Option 5: Distributed Overlay of New NPA on NPA 226/519

Description:

Currently, NPA 226/519 is expected to exhaust in the year 2017. This Relief Option would introduce a new NPA Code as an overlay on the NPA 226/519 area.

With this Relief Option, the number of separate Relief Planning areas in Ontario (i.e. six) would not change.

After this distributed overlay, NPA 226/519 and the new NPA would be expected to exhaust in 2030.

5.2.2 Assessment of Distributed Overlay Option:

As indicated in section 5.1, overlay options are significantly better than splits.

The RPC considers that the overlay of a new NPA on the area served by NPAs 26/519 would provide the best method to address CO Code exhaust in the 226/519 NPA as it would: (i) allow all existing customers to keep their current telephone numbers unlike in a split where many customers would be required to change their telephone numbers, (ii) cost less for TSPs to implement than the split options evaluated, (iii) provide more efficient use of numbering resources as one new NPA would be required for subsequent relief rather than 2 new NPAs as would be required for any of the split options.

The RPC views the overlay option as the preferred Relief Option and therefore recommend that a distributed overlay of a new NPA on NPA 226/519 be approved for NPA 226/519 relief.

6. SUMMARY OF RELIEF OPTIONS

The following table summarizes the Relief Options, Projected Exhaust Dates, Relief Timing and Type, and Impacts:

Option		Projected Exhaust Dates			Relief - Timing & Type		Quantity of CO Codes affected by No. changes	Local Dial # of digits
#	Description	NPA 226/519	New NPA	NPA 226	Relief Date	Type		
1	Split - North South Split of NPA 226 - South retains NPA 226	2017	2029	2030	2016 (226) 2028 (New) 2029 (226)	S ? ?	329 ? ?	10 10 10
2	Split - North South Split of NPA 226 - North retains NPA 226	2017	2030	2029	2016 (226) 2028 (226) 2029 (New)	S ? ?	329 ? ?	10 10 10
3	Split – East West Split of NPA 226 – East retains NPA 226	2017	2029	2030	2016 (226) 2028 (New) 2029 (226)	S ? ?	348 ? ?	10 10 10
4	Split – East West Split of NPA 226 – West retains NPA 226	2017	2030	2029	2016 (226) 2028 (226) 2029 (New)	S ? ?	310 ? ?	10 10 10
5	Distributed Overlay of New NPA on NPA 226/519	2017		2030	2016 (226/519) 2029 (226/519/New)	O	Nil. ?	10 10
Key	10-D = mandatory 10-digit local dialling, O = Overlay, S= Split, ? = Unknown (subsequent relief type, Qty of CO Codes affected by No. Changes, and dial plan)							

7. COMPARATIVE ASSESSMENT OF RELIEF OPTIONS

The RPC identified 5 Relief Options in section 5 of this document. A Pro, Neutral or Con (P, N or C) rating was established for each Relief Option for each of the following attributes. The results are listed in the table below the list of attributes.

- A. NPA Code Conservation – quantity of new NPAs required in NPA 226/519 within the next 20 years after this relief (P = 1 new NPAs; N = 2 new NPAs; C = 3 or more new NPAs)
- B. Number of separate Relief Planning areas in Ontario in the long term (P = decrease; N = stays same; C = increase)
- C. Quantity of Number Changes for existing customers' numbers (P = none; C = many)
- D. Level of Carrier Costs – e.g., including implementation, customer awareness (P = low; N = medium; C = high)
- E. Time required to implement relief, i.e., time between the CRTC's Decision date and the date when CO Codes in the new/relief NPA can be activated (P = shortest; N = medium; C = longest)
- F. Longevity – the length of time between this relief and subsequent relief activity in NPA 226/519 (e.g., a new area code) (P = 15 or more years; N = 9 through 14 years; C = within 8 years)
- G. Established Geographic Identities – changes in boundaries of existing NPAs (P = none; N = 1 existing NPA affected, C = more than 1 existing NPA affected)
- H. New Geographic Identities – boundaries of new NPA align with boundaries of known areas (e.g., existing NPA areas, provinces) or identifiable geographical features (e.g., rivers, islands) (P = aligns with existing NPA boundaries; N = aligns with geographical features but not with existing NPA boundaries; C = aligns with neither existing NPA boundaries, nor identifiable geographical features)
- I. Reprogram Mobile Phones – requirement to reprogram wireless devices to accommodate the number changes (P = low; N = medium; C = high)
- J. Maximum quantity of NPAs in an Exchange Area in the next 20 years including this relief (P = 2 NPAs; N = 3 NPAs; C = 4 NPAs)
- K. Does the option consider the potential direction for future reliefs in NPA 226/519? (P = Yes; C = No)

Relief Options		Pro, Neutral or Con for Each Attribute											Rating
#	Description	A	B	C	D	E	F	G	H	I	J	K	
1	Split - North South Split of NPA 226 - South retains NPA 226	N	C	C	C	C	N	N	C	C	N	C	-7
2	Split - North South Split of NPA 226 - North retains NPA 226	N	C	C	C	C	N	N	C	C	N	C	-7
3	Split – East West Split of NPA 226 - East retains NPA 226	N	C	C	C	C	N	N	C	C	N	C	-7
4	Split – East West Split of NPA 226 - West retains NPA 226	N	C	C	C	C	N	N	C	C	N	C	-7
5	Distributed Overlay of New NPA on NPA 226/519	P	N	P	N	P	N	P	P	P	C	P	+6

Note: None of the options require Exchange Area boundary changes.

If P, N and C are assigned a weighting of +1, 0 and -1, respectively, then analysis of the above table gives the highest rating of +6 points to Option 5, and of -7 points to Options 1, 2, 3, and 4. Option 5 is clearly superior when assessed using the above criteria.

8. DIALLING IMPACTS FOR LOCAL CALLS

Currently 10-digit dialling is mandatory for local calls originating within area code 226/519, and for local calls to area code 226/519 from neighbouring area codes 289/365/905 and 249/705.

Local dialling plans will not change when NPA 226/519 relief is implemented. Mandatory 10-digit dialling will continue to apply on local calls originating in the NPA 226/519 area and on local calls to the NPA 226/519 area from neighbouring NPAs. Mandatory 10-digit dialling will apply to local calls to and from the new NPA that will be implemented in the NPA 226/519 area.

Note regarding long distance calling: NPA relief will not affect the dialling plan for long distance calls originating in NPA 226/519 or any neighbouring Canadian NPA. No local calling will become long distance and no long distance calling will become local as a result of this NPA relief.

9. CO CODES FOR INITIAL CODE ASSIGNMENTS AND CO CODES FOR INITIAL CODE ASSIGNMENTS FOR NEW ENTRANTS ONLY

In Telecom Notice of Consultation CRTC 2012-655, the CRTC stated in item 7 that: "*In developing its recommendations, the 226/519 RPC is directed to set aside, at a minimum, four central office (CO) codes for initial code assignments for carriers already providing service in the area served by area codes 226/519 and seven CO codes for initial code assignments exclusively for new entrants*".

Accordingly the CNA has set aside 4 NPA 226 CO Codes for initial code assignments for Carriers already providing service in the 226/519 area, and 7 NPA 226 CO Codes for initial code assignments exclusively for new entrants.

If the CRTC-approved Relief Method is an overlay, then these quantities of set-aside CO Codes would become available for assignment as specified above during the two-year time period after implementation of the overlay. Any set-aside CO Codes remaining unassigned at the end of the two-year time period would be returned to the general pool of assignable CO Codes, in accordance with the Canadian NPA Relief Planning Guideline.

If the CRTC-approved Relief Method is a split, the set-aside CO Codes would become available for initial code assignments when the general pool of assignable CO Codes exhausts prior to relief. After implementation of the split, any remaining set-aside CO Codes would be returned to the general pool of assignable CO Codes.

If a Jeopardy Condition is declared, then for the purposes of calculating the CO Code Inventory quantities in the Jeopardy Contingency Plan, it is assumed that CRTC staff would approve that the 4 CO Codes for initial code assignments for Carriers already providing service should be made available for general assignment prior to relief.

10. PROPOSED SCHEDULE

The RPC developed the following proposed schedule using the best available information at the time. A number of assumptions were made with respect to the timeframes for certain events. Depending upon the Relief Option that is approved by the CRTC, the following proposed schedule will be modified accordingly.

Item	Task or Event	Prime	Start	End
1	CNA identifies NPA exhaust and notifies by e-mail CRTC staff, CSCN, North American Numbering Plan Administration (NANPA) & CISC that the NPA will exhaust within 72 months	CNA		10-Apr-12
2	CNA conducts R-NRUF & releases results	CNA	8-Aug-11	5-Oct-12
3	CRTC issues Telecom Notice of Consultation regarding establishment of an ad hoc Relief Planning Committee (RPC)	CRTC	5-Oct-12	29-Nov-12
4	CNA announces the date for the initial NPA Relief Planning face-to-face meeting & requests contributions	CNA	28-Feb-2013	28-Feb-2013
5	CNA develops and distributes the IPD to the RPC	CNA	5 Oct-2012	28-Feb 2013
6	RPC participants review the IPD & submit contributions to the RPC	RPC	28-Feb 2013	2-Apr-2013
7	CNA chairs initial RPC meeting to start development of the Planning Document (PD), Relief Implementation Plan (RIP) & Planning Letter (PL), & schedules future meetings/conference calls	CNA, RPC	16-Apr-2013	17-Apr-2013
8	CNA chairs subsequent RPC meetings/conference calls to finalize the PD	CNA, RPC	17-Apr-2013	17-Jul-2013
9	CNA forwards the PD to the CISC and CRTC for approval	CNA	17-Jul-2013	31-Jul-2013
10	Special Types of Telecommunications Service Users (9-1-1 Public Safety Answering Points (PSAPs), alarm companies, Internet Service Providers (ISPs), paging companies, etc.) to identify any concerns to the RPC & CRTC	Special Users		17-Jul-2013
11	CRTC issues Telecom Decision approving the Relief Method, Relief Date, New NPA & directs the RPC to develop the Relief Implementation Plan (RIP)	CRTC	31-Jul-2013	31-Oct-2013
12	CNA obtains relief NPA from NANPA	CNA	31-Oct-2013	14-Nov-2013
13	CNA holds RPC meetings to create Consumer Awareness and Network Implementation Task Forces (NITF) and the RPC develops and finalizes the RIP	CNA, RPC	31-Oct-2013	31-Dec-2013
14	CNA forwards the RIP to the CISC and CRTC for approval	CNA	31-Dec-2013	14-Jan-2014
15	CRTC issues Telecom Decision approving the RIP	CRTC	14-Jan-2014	14-Apr-2014

Item	Task or Event	Prime	Start	End
16	Task Forces, Telecommunications Service Providers (TSPs) and users implement relief (starts at CRTC approval of Relief Method & Date and ends on Relief Date)	TSPs	31-Oct-2013	4-Jun-2016
17	All TSPs to develop and file individual consumer awareness programs with the CRTC (may be done collectively by the Telecommunications Alliance) (starts at CRTC approval of RIP and should be completed about 24 months prior to the Relief Date)	TSPs	14-Apr-2014	4-Jun-2014
18	CNA issues media release (in coordination with the Telecommunications Alliance) (may start upon CRTC approval of the RIP and should be issued at least 18 months prior to the Relief Date)	CNA	14-Apr-2014	4-Dec-2014
19	CNA submits the PL and RIP to NANPA (should be submitted at least 18 months prior to the Relief Date)	CNA		4-Dec-2014
20	NANPA receives and posts the PL to the NANPA website (within 2 weeks of receipt from the CNA)	NANPA	4-Dec-2014	19-Dec-2014
21	All TSPs implement consumer awareness activities (starts upon filing of Consumer Awareness Programs with the CRTC and is completed on the Relief Date)	TSPs	4-Jun-2014	4-Jun-2016
22	All TSPs to notify all customers (residence, business & special customers) of the new NPA (may start with the filing of Consumer Awareness Programs with the CRTC and all customers should be notified at least 18 months prior to the Relief Date)	TSPs	4-Jun-2014	4-Dec-2014
23	TSPs to submit Progress Report #1 to NITF and Consumer Awareness Task Force (CATF) (starts after completion date for all TSPs to notify their customers and requires 2 weeks)	TSPs	4-Dec-2014	19-Dec-2014
24	NITF and CATF develop & submit Progress Report #1 to the RPC (linked to TSP reports to NITF and CATF)	NITF & CATF	19-Dec-2014	2-Jan-2015
25	The RPC submits Progress Report #1 to CISC/CRTC (linked to NITF and CATF reports)	RPC	2-Jan-2015	16-Jan-2015
26	iconectiv TRA database updates to add Exchanges to new overlay NPA (starts on the date that the PL is posted to the NANPA web site and must be completed by 6 months prior to the Relief Date)	iconectiv TRA		4-Dec-2015
27	All Telecommunications Service Providers and Telecommunications Service Users (including Special Users 9-1-1 PSAPs, alarm companies, ISPs, paging companies, payphone providers, etc.) to implement changes to their telecom equipment & systems to accommodate the new NPA (starts upon CRTC approval of RIP and ends on the Relief Date)	Telecom Service Users	14-Apr-2014	4-Jun-2016
28	Payphone Providers Reprogram Payphones (starts upon CRTC approval of the RIP and ends on the Relief Date)	Payphone Providers	14-Apr-2014	4-Jun-2016
29	TSPs and database owners/operators to modify systems and industry databases (starts on CRTC approval of the RIP and ends on the Relief Date)	TSPs & Database Owners	14-Apr-2014	4-Jun-2016

Item	Task or Event	Prime	Start	End
30	Operator Services & Directory Assistance Readiness (starts on CRTC approval of the RIP and ends on the Relief Date)	TSPs	14-Apr-2014	4-Jun-2016
31	Directory Publisher Readiness for relief (ability to identify the NPA in telephone numbers in the directory published after the new NPA is activated) (starts upon CRTC approval of the RIP and ends on the Relief Date)	Directory Publishers	14-Apr-2014	4-Jun-2016
32	9-1-1 Systems and Databases Readiness (starts on CRTC approval of the RIP and ends on the Relief Date)	PSAPS, 9-1-1 Service Providers & TSPs	14-Apr-2014	4-Jun-2016
33	Network Systems & Equipment Readiness (starts on CRTC approval of the RIP and ends on the Relief Date)	TSPs	14-Apr-2014	4-Jun-2016
34	Service Order & Business System Readiness (starts on CRTC approval of the RIP and ends on the Relief Date)	TSPs	14-Apr-2014	4-Jun-2016
35	International Gateway Switch Translations Readiness for new NPA (starts on CRTC approval of the RIP and ends on the Relief Date)	Int'l TSPs	14-Apr-2014	4-Jun-2016
36	Canadian Local Number Portability Consortium (CLNPC) Database Readiness for new NPA (starts on CRTC approval of the RIP and ends on the Relief Date)	CLNPC & NPAC	14-Apr-2014	4-Jun-2016
37	Toll Free SMS Database Readiness for new NPA (starts on CRTC approval of the RIP and ends on the Relief Date)	Toll TSPs	14-Apr-2014	4-Jun-2016
38	TSPs apply for Test CO Codes in new NPA (applications may be submitted no more than 6 months and no less than 66 days prior to the start date for the Inter-Carrier Testing Period) (Section 7.16.4 Canadian RP GL)	TSPs	4-Sep-2015	29-Dec-2015
39	Develop Inter-Carrier Network Test Plans and prepare for testing (individual TSPs to make arrangements in accordance with interconnection agreements) (may start upon CRTC approval of the RIP and must be completed by start date for the Inter-Carrier Testing Period)	NITF & TSPs	14-Apr-2014	4-Mar-2016
40	All international and domestic TSPs must activate the new NPA in their networks by the start date for the Inter-Carrier Testing Period	TSPs		4-Mar-2016
41	Activation date for new NPA Test CO Codes and Test Numbers in the network must be completed by the start date for the Inter-Carrier Testing Period	TSPs		4-Mar-2016
42	Inter-Carrier Testing Period (subject to Inter-Carrier Network Test Plans)	NITF & TSPs	4-Mar-2016	4-Jul-2016
43	TSPs to submit Progress Report #2 to NITF and CATF (starts on commencement of Inter-Carrier Testing Period)	TSPs	4-Mar-2016	18-Mar-2016
44	NITF and CATF develop & submit Progress Report #2 to the RPC (linked to TSP reports to NITF and CATF)	NITF & CATF	18-Mar-2016	1-Apr-2016
45	The RPC submits Progress Report #2 to CISC/CRTC (linked to NITF and CATF reports)	RPC	1-Apr-2016	15-Apr-2016

Item	Task or Event	Prime	Start	End
46	Relief Date (earliest date when CO Codes in new NPA may be activated)			4-Jun-2016
47	TSPs submit Final Report to CATF and NITF (starts on the Relief Date and provides 2 weeks for preparation & submission)	TSPs	4-Jun-2016	18-Jun-2016
48	NITF and CATF develop & submit Final Progress Report to the RPC (linked to TSP reports to NITF and CATF)	NITF & CATF	18-Jun-2016	2-Jul-2016
49	The RPC submits Final Progress Report to CISC/CRTC (linked to NITF and CATF reports)	RPC	2-Jul-2016	16-Jul-2016
50	TSPs disconnect Test Codes & Numbers, and submit Part 1 form to return Test Codes (starts 1 month after Relief Date and allows 1 month for completion)	TSPs	4-Jul-2016	3-Aug-2016

11. JEOPARDY CONTINGENCY PLAN (JCP)

This Jeopardy Contingency Plan (JCP) takes effect when the CNA declares a Jeopardy Condition. See section 8.0 (Jeopardy Condition) of the Canadian NPA Relief Planning Guideline.

This JCP shall remain in effect until superceded by a CRTC-approved JCP, the Jeopardy Condition is suspended, or 66 days prior to the Relief Date.

The following measures shall be implemented in NPA 226/519 while a Jeopardy Condition is in effect.

During a Jeopardy Condition, CO Code Applicants shall submit all CO Code applications and related correspondence for the Jeopardy NPA to CRTC staff in addition to the CNA. The CNA shall only assign CO Codes from the exhausting NPA to a CO Code Applicant upon instruction from CRTC staff.

- 1) Carriers and/or Telecommunications Service Providers (TSPs):
 - a) shall age disconnected residential wireline telephone numbers for a maximum of two months;
 - b) shall age disconnected wireless telephone numbers for a maximum of three months;
 - c) shall age disconnected business wireline telephone numbers for a maximum of six months. Under special circumstances, the six month aging limit for business telephone numbers may be extended to twelve months, if required, to accommodate local directory publishing dates for high volume call-in applications (e.g., heavily advertised local business numbers such as radio talk shows, food ordering services, ticket sales, chat lines), or for numbers associated with public service emergency applications or for numbers advertised in directories for which customers have requested reference of calls;
 - d) shall return all CO Codes that are not being used, nor intended to be used to directly serve customers to the assignment pool within two months (e.g., plant test codes);
 - e) should work towards, and encourage existing customers, to either activate or return the reserved numbers in order to bring the reserved quantity down to a maximum of 10% of the quantity of numbers In-Service for that customer;
 - f) shall not allow the quantity of reserved numbers to be increased by new reservation requests by existing customers to more than 10% of the quantity of numbers in service for that customer. In the case of new customers, number reservations shall be limited to 10% of the total quantity of telephone numbers being placed into service for that customer;
 - g) shall, within 45 days from the date that the CNA declares a Jeopardy Condition submit a Part 1 Form for each remaining reserved CO Code either returning the reserved CO Code to the CNA or requesting assignment of the reserved CO Code. Once the 45-day period has elapsed, the CNA shall make available for general assignment all CO Codes that are still reserved and have not been applied for as assignments on a Part 1 Form received by the CNA. Within 60 days from the date that the CNA declares a Jeopardy Condition, the CNA shall

- report to CRTC staff and the RPC as to how many of these codes have been assigned or made available for general assignment;
- h) shall not be permitted to obtain a new CO Code reservation;
 - i) shall place all CO Codes assigned prior to the Jeopardy Condition being declared In-Service within three months of the effective date for CO Code activation in the network, or within three months of the date that the Jeopardy Condition was declared. If the CO Code is an Initial Code and the CO Code Holder can demonstrate that, due to circumstances beyond its control, the In-Service date has been delayed beyond the applicable timeframe, then the CNA may grant an extension of up to two months to the In-Service date. The CNA shall initiate reclamation procedures for all CO Codes that have not been placed In-Service within these timeframes unless CRTC staff provides a further extension.
- 2) For new applications for Initial Codes, each CO Code Holder shall certify that the CO Code will be activated in the network and placed In-Service within four months of the date of application for the Code. If the CNA does not receive a Part 4 Form within this timeframe, confirming that the CO Code has been placed In-Service, the CNA will initiate reclamation measures. If the CO Code Holder can demonstrate that, due to circumstances beyond its control, that the In-Service date has been delayed not more than six months from the original application date, then the CNA may grant an extension to the In-Service date, so long as the In-Service date is not more than six months beyond the original application date. If the In-Service date has been delayed more than six months from the original application date, then the CNA shall reclaim the Code unless CRTC staff provides a further extension.
- 3) When applying for an Additional Code for Growth, a CO Code Holder who is submitting a Part 1 Form and Appendix B worksheet shall also submit a completed Supplementary Form for a Growth CO Code Application (attached) which certifies and/or provides the following information for the specific switching entity/POI and Exchange Area when the Growth CO Code is being requested in a Jeopardy Condition:
- a) certification that all held telephone numbers have been released;
 - b) certification that reserved numbers do not exceed ten percent of the total quantity of numbers as defined in Appendix G of the Canadian CO Code (NXX) Assignment Guideline;
 - c) certification that each reseller/dealer had been advised of the Jeopardy Condition and the requirement that they would only be allocated additional numbers during the Jeopardy Condition on the provision to the CO Code Holder of written confirmation that their number inventory has been reduced to an amount less than two times the highest quantity of customer numbers assigned in any month during the previous 12 months. Additional numbering resources will only be provided by the CO Code Holder to the reseller/dealer to the extent that the reseller's/dealer's inventory can only increase up to a maximum of three months' inventory;
 - d) confirmation that the Part 1 form submitted with the application has the Jeopardy Condition box in section 1.6 checked to certify that the existing CO Codes are projected to exhaust within 4 months of the date of application or within the period specified within an approved JCP, and that the months-to-exhaust is documented on an Appendix B submitted to the CNA;
 - e) a completed Telephone Number Utilization Report;

- f) confirmation that the requested Growth CO Code was forecasted in the most recent NRUF or an explanation as to why it was not is attached; and
 - g) confirmation that the requested Growth CO Code will be placed In-Service within four months of the date of assignment.
- 4) Any CO Codes for growth assigned after the implementation of this JCP must be activated in the network and placed In-Service within four months of assignment. In the event that a CO Code Holder is unable to place the CO Code In-Service within four months of the date of assignment, the CO Code Holder must submit a written request for extension to the CNA. Such written requests must include documentation explaining the reason(s) for the missed date and proposing the new In-Service date. If the explanation includes reasons beyond the control of the CO Code Holder, the CNA may extend the In-Service date a maximum of one month. If the CO Code Holder does not place the CO Code In-Service within the one-month extension, the CNA shall reclaim the CO Code immediately at the end of the one-month extension unless CRTC staff provides a further extension.
 - 5) A Carrier that has multiple switching entities within an Exchange Area shall examine the possibility of, and implement where feasible, number sharing between those switches as a potential method to delay requirements for additional CO Codes.
 - 6) The CNA will request two versions of the Jeopardy Numbering Resource Utilization Forecast (J-NRUF) input from all current and prospective CO Code Holders quarterly until three (3) months before relief is provided.
 - a) The forecasted quantities in Version 1 should be the same as or lower than the **XXXX 201X J-NRUF** input submitted by CO Code Holders for the period up to 66 days prior to the Relief Date. CO Code Holder forecasts may reflect an increase in demand in the period subsequent to the Relief Date.
 - b) Version 2 will reflect the actual demand required by the CO Code Holder's current business plan and will be provided for information purposes only.
 - 7) The CNA will compare the initial J-NRUF input to the recent NRUF inputs, in order to assess forecasting trends. The CNA shall monitor all inputs and shall test them for reasonableness in consultation with the Carrier. If the CNA is dissatisfied with the reasonableness, or the rationale provided for the deviations, then the matter will be referred to the Commission.
 - 8) The CNA will request subsequent J-NRUF input from all current and prospective CO Code Holders quarterly until 3 months before relief is provided. If one or more R-NRUFs have already been conducted, and depending on the severity of the Jeopardy Condition, the CNA may defer a J-NRUF by up to two months if such a deferral brings the timing of that J-NRUF and subsequent J-NRUFs into alignment with other NRUFs that are conducted at 12, 6 or 3 month intervals. Subsequent J-NRUF input will be compared with the initial J-NRUF input to evaluate the effectiveness of the JCP. The CNA shall monitor all J-NRUF inputs and shall test them for reasonableness in consultation with the Telecommunications Service Providers. If the CNA is dissatisfied with the reasonableness, or the rationale provided for the changed forecasts, then the matter will be referred to the Commission.

- 9) A CO Code Applicant must have submitted a completed J-NRUF to the CNA before the CNA may assign a CO Code to that CO Code Applicant.
- 10) When a CO Code Applicant requests more CO Codes than it identified in its most recent J-NRUF forecast, the CNA will discuss the matter with the CO Code Applicant and if the CO Code Applicant wishes to proceed with the request, the CNA will forward the request to CRTC staff for consideration.
- 11) The CO Codes identified in the NPA CO Code Inventory Chart as “Assignable CO Codes in a Jeopardy Condition” will be assigned in the order determined by the RPC after all CO Codes which are “Available for Assignment as of dd/mm/yyyy” have been assigned.
- 12) After each J-NRUF, the CNA shall provide the Commission and the RPC participants with a report providing an updated NPA CO Code Inventory Chart for the NPA in jeopardy as well as the aggregate results of the most recent J-NRUF.
- 13) Exceptional issues or concerns may be referred by the CNA, or by individual entities (with a courtesy copy to the CNA), to the Commission for resolution.
- 14) In a situation where the Relief Date is on or after the Projected Exhaust Date (PED), the quantity of CO Codes that may be assigned to a CO Code Applicant prior to the end of the Jeopardy Condition (i.e., 66 days prior to the Relief Date) shall be limited to the quantity forecasted by the CO Code Applicant in its most recent NRUF forecast submitted prior to the Jeopardy Condition being declared by the CNA (if no previous NRUF was submitted, then the previous forecast will be deemed to be zero codes). When making requests to obtain CO Codes prior to the end of the Jeopardy Condition (i.e., 66 days prior to the Relief Date), the CO Code Applicant may change the Exchange Area or the month when the CO Code assignment is required, provided a new J-NRUF and explanation accompanies the application. The control imposed by this option may be relaxed if subsequent J-NRUFs defer the PED to after the Relief Date. CO Codes that become available for assignment due to future reduced demand from other current and prospective CO Code Holders may be assigned at the discretion of CRTC staff.
- 15) If the CNA determines that the implementation of the JCP has not extended the Projected Exhaust Date of the NPA beyond the Relief Date, the CNA will consult with Commission staff and further CO Code conservation and assignment procedures may be ordered by the Commission (e.g., rationing, lottery, etc.).
- 16) In circumstances where the CRTC has directed the CNA to set aside a quantity of CO Codes for Initial Code assignments for Carriers already providing service in the exhausting NPA, and a quantity of CO Codes for Initial Code assignments exclusively for New Entrants, the following actions will be taken.¹

The CO Codes set aside for Initial Code assignments exclusively for New Entrants shall be made available, subject to any CRTC staff instruction, for Initial Code assignment to New Entrants prior to the relief if all other available CO Codes in the exhausting NPA have been assigned. Any CO Codes from this previously set-aside pool that remain

¹ A New Entrant is an entity who, at the time of their first request for assignment of CO Code(s) in an NPA, does not provide any telecommunications services and does not hold any CO Codes within the boundaries of the NPA.

when the Jeopardy Condition ends shall be returned to the pool for Initial Code assignments for New Entrants for assignment following relief.

The CO Codes set aside for Initial Code assignments for Carriers already providing service in the exhausting NPA shall be made available, subject to any CRTC staff instruction, for Initial Code assignment prior to relief. Any CO Codes from this previously set-aside pool that remain when the Jeopardy Condition ends shall be returned to the pool for Initial Code assignments for applicants in general for assignment following relief.

If all other available CO Codes in the exhausting NPA have been assigned, CRTC staff may make some or all of the CO Codes in the two set-aside pools available for assignment to any entity for any purpose.

NPA 226/519 CO Code Inventory Chart

The following chart and the instructions it contains will apply in NPA 226/519 in a Jeopardy Condition.

The chart shown below lists quantities of CO Codes unassignable prior to a Jeopardy Condition, CO Codes that become assignable in a Jeopardy Condition, and CO Codes in NPA 226/519 assigned and In-service as of 17 May 2013. It identifies 57 CO Codes that are unassignable prior to a Jeopardy Condition, 10 of which become assignable in a Jeopardy Condition. The CO Codes that become assignable in a Jeopardy Condition shall only be made available for assignment when all other available CO Codes have been assigned. The types of CO Codes that become assignable in a Jeopardy Condition should be made available in the same order as listed in the chart.

		Overlay
A	Total CO Codes in NPAs 226/519 (NXX format)	1600
B	CO Codes unassignable prior to a Jeopardy Condition	
	N11 Service Codes (211, 311, 411, 511, 611, 711, 811 & 911)	16
	Special Use Codes (555, 950 & 976)	5
	Protected Code(s)	0
	Home NPA Code(s) (226 & 519)	4
	Current Neighbouring NPA Codes (249, 289, 705 & 905)	4
	Future Canadian Geographic NPA Codes (382, 460 ,487 & 548 - see Note 1)	8
	Plant Test Codes (958 & 959)	4
	Special 7-digit Dialling Codes (310, 610 & 810)	5
	CO Codes set aside for Initial Codes exclusively for New Entrants (for assignment after relief via an overlay or before, if a split)	7
	CO Codes set aside for Initial Codes for carriers already providing service (for assignment after relief via an overlay, or before, if a split)	4
	Total B	57
C	CO Codes assignable prior to a Jeopardy Condition (C=A-B)	1543
D	CO Codes unassignable prior to a Jeopardy Condition that become assignable in a Jeopardy Condition:	
	Future Canadian Geographic NPA Codes (460 & 487 - Note 2)	4
	Current Neighbouring NPA Codes (249, 289, 705 & 905 – see Note 3)	0
	CO Codes set aside for Initial Code assignments after relief via an overlay or before, if a split (available subject to CRTC staff approval)	4
	Total D	8
E	Assignable CO Codes in a Jeopardy Condition (E=C+D)	1551
F	Assigned CO Codes as of 17 May 2013	1154
G	Net CO Codes available for assignment as of 17 May 2013 without a Jeopardy Condition (G=C-F)	389
H	Net CO Codes available for assignment as of 17 May 2013 in a Jeopardy Condition (H=E-F)	397

Notes:

1. 22 of the 26 CO Codes corresponding to Future Canadian Geographic NPA Codes are already assigned, in-service, or available for assignment in NPA 226/519.
2. The following 4 CO Codes corresponding to the Future Canadian Geographic NPA Codes are currently unavailable for assignment in NPA 226/519: 382, 460, 487 and 548. Future Canadian Geographic Code 548 should remain unavailable for assignment as a CO Code in NPA 226/519 since it is recommended as the relief NPA for NPA 226/519 per Section 13. Future Canadian Geographic Code 382 should remain unavailable for assignment as a CO Code in NPA 226/519 as it is recommended as the relief NPA Code for the subsequent exhaust. The following 2 CO Codes corresponding to Future Canadian Geographic NPA Codes may be made available for assignment in NPA 226/519 (i.e. total 4 CO Codes) during a Jeopardy Condition if required, subject to CRTC staff approval: 460 and 487.
3. In an extreme Jeopardy Condition (i.e., when the Projected Exhaust Date is earlier than the Relief Date), the 4 CO Codes corresponding to current Neighbouring NPA Codes (249, 289, 705 and 905) may be made assignable in certain portions of NPA 226/519 with CRTC staff approval.

12. SELECTION OF RELIEF NPA

When an immediate or subsequent NPA relief requires a new NPA Code, some of the criteria for selecting the new NPA Code from the list of available Future Canadian Geographic NPAs are described in section 4.9 of the Canadian NPA Relief Planning Guideline as follows.

- a) The preferred Future Canadian Geographic NPA Code should not be assigned as a CO Code in the area that is being relieved (Home NPA(s)).
- b) The preferred Future Canadian Geographic NPA Code should not be assigned as a CO Code in another NPA within the same province where there is a possibility that a single new NPA Code could be overlaid on more than one NPA within the province, or where a boundary realignment could occur that affects another NPA.
- c) The preferred Future Canadian Geographic NPA Code should not be assigned as a CO Code in an Exchange Area in a neighbouring NPA, if the neighbouring NPA has 7-digit local calling within the NPA, and i) the Exchange Area in the neighbouring NPA where the CO Code is assigned has local calling to the NPA being relieved, or ii) the Exchange Area in the neighbouring NPA where the CO Code is assigned does not have local calling to the NPA being relieved, but other Exchange Areas within that neighbouring NPA have 7-digit local calling to the Exchange Area where the CO Code is assigned as well as local calling to the new NPA.

The NPA Code Selection Tool located on the CNA web site at http://www.cnac.ca/npa_codes/relief/overview.htm can assist in selecting a relief NPA Code from the pool of NPA Codes reserved for relief of geographic Canadian NPAs. The following table, extracted from the NPA Code Selection Tool, shows all codes corresponding to Future Canadian Geographic NPA Codes that are designated as unassignable CO Codes in Home or Home and Neighbouring NPAs, therefore are preferred candidates when selecting a relief NPA Code for NPA 226/519.

NXX corresponding to Future NPA →	382	460	487	548
Split - North South Split of NPA 226 - South retains NPA 226	✓	✓	✓	✓
Split - North South Split of NPA 226 - North retains NPA 226	✓	✓	✓	✓
Split – East West Split of NPA 226 – East retains NPA 226	✓	✓	✓	✓
Split – East West Split of NPA 226 – West retains NPA 226	✓	✓	✓	✓
Distributed Overlay of New NPA on NPA 226/519	✓	✓	✓	✓

✓ indicates that corresponding CO Code is designated as unassignable in Home NPA(s)

In Telecom Decision CRTC 2010-784, *CRTC Interconnection Steering Committee consensus item - Reservation of Area Codes for future Area Code Relief*, the Commission directed the CNA to set aside area code 548 for the relief of NPA 226/519 in Southern Ontario.

In light of the Decision and the fact that the area code 548 still meets the criteria for relief of NPA 226/519, the RPC proposes that NPA Code 548 be implemented for relief of NPA 226/519.

In addition, due to the fact that NPA 226/519 is projected to exhaust again within 15 years, the RPC considered the potential Future NPA Codes to determine the optimum future NPA for subsequent relief of NPA 226/519/548.

In Telecom Decision CRTC 2010-784, the Commission agreed that there are benefits to knowing which future area codes will be used for relief of certain area codes.

RPC participants have agreed that efficiencies may be gained by adding a reserved NPA into their Operational Support Systems (OSS) and Information Technology (IT) systems at the same time as they are making other changes and the total cost of such changes may be less if they are done together than if they are done at separate times. This approach may also be beneficial to other industry stakeholders. In addition, it would be clear which Central Office Codes (NXXs) corresponding to Future NPA Codes cannot be assigned within each area code, which would help prevent dialling issues when future relief area codes are put into service.

Of the three Future NPA Codes that meet the second choice criteria for NPA 226/519, Future NPA 382 meets the second choice criteria for a limited number of NPAs compared to Future NPAs 460 and 487. Therefore the RPC recommends that NPA Code 382 be reserved by the CRTC for future subsequent relief in the 226/519 region. This would leave Future NPAs 460 and 487 available for relief of other NPAs. CO Codes 460 and 487 may then be made available for assignment in NPA 226/519 during a Jeopardy Condition if required, subject to CRTC approval.

13. RECOMMENDATIONS

Based on the assessment of Relief Options and other issues contained in this document, the RPC submits the following recommendations to the CISC and CRTC:

- 5) The Relief Method should be a distributed overlay of a new NPA on NPA 226/519 (Option 5);
- 6) NPA 548 should be the relief NPA for NPA 226/519 in accordance with Telecom Decision CRTC 2010-784, *CRTC Interconnection Steering Committee consensus item-Reservation of Area Codes for future Area Code Relief*;
- 7) NPA 382 should be reserved for future subsequent relief in the 226/519 region as the 226/519 region has been forecast to exhaust again within 15 years; and
- 8) The Relief Date should be 4 June 2016 to provide Carriers and customers with advanced notification and sufficient lead-time to implement relief, which would be 16 months in advance of the current Projected Exhaust Date.

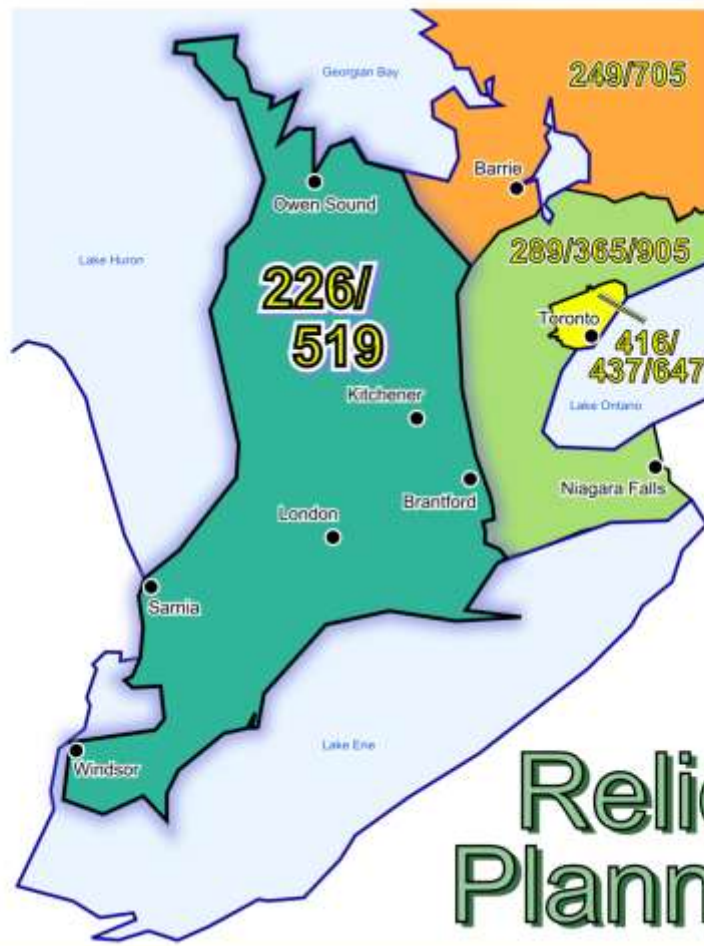
NPA 226/519
INITIAL PLANNING DOCUMENT
ANNEXES

Annexes

Planning Document NPA 226/519 Numbering Relief



NPA 226/519



Planning Document (PD)
Version 1.0 – 17 May 2013

Canadian Numbering Administrator (CNA)
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Figure 1 - Overview Map of NPA 226/519 and Adjacent NPAs

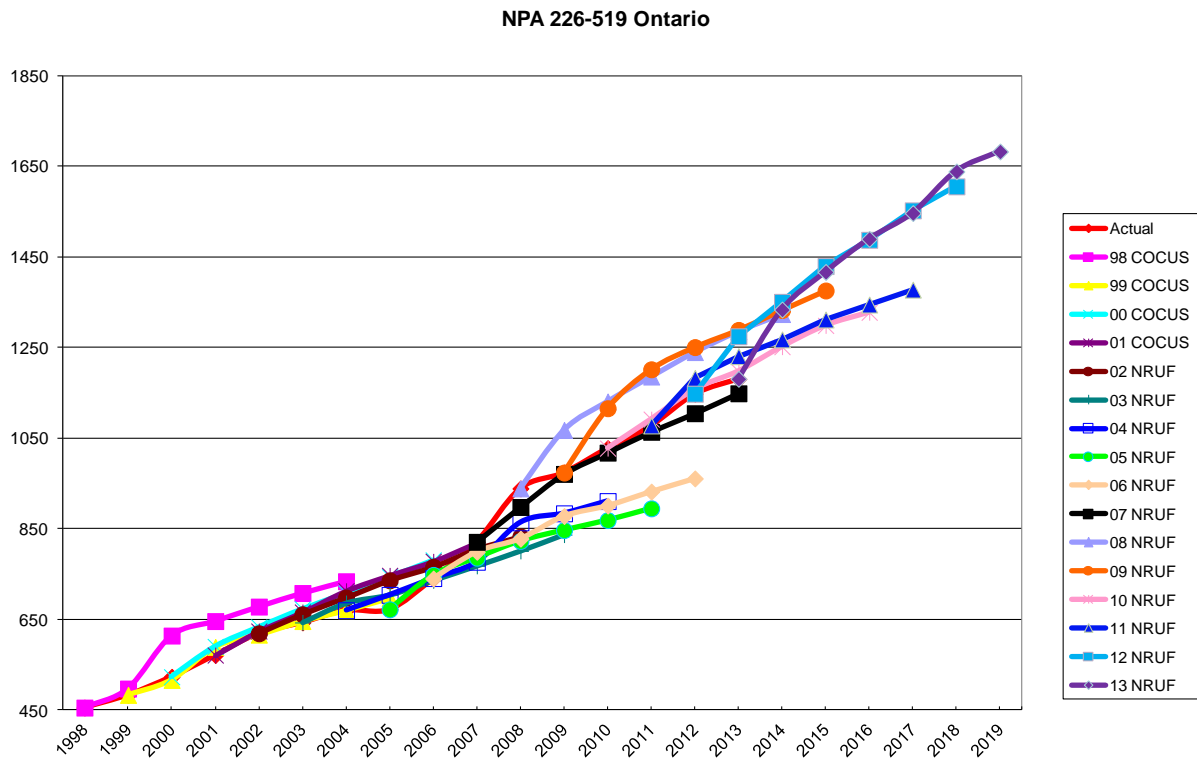


Figure 2 - NPA 226/519 Actual and Forecast CO Code Assignments

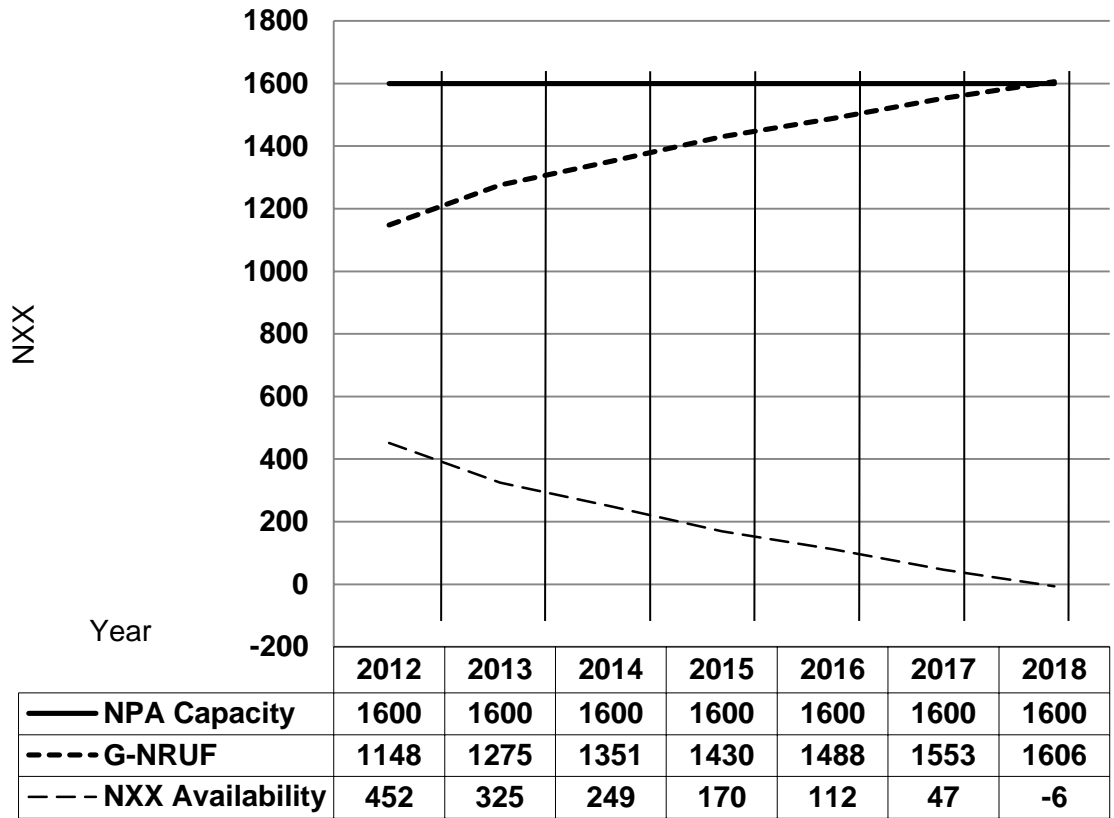


Figure 3 - NPA 226/519 CO Code Exhaust, January 2012 G-NRUF

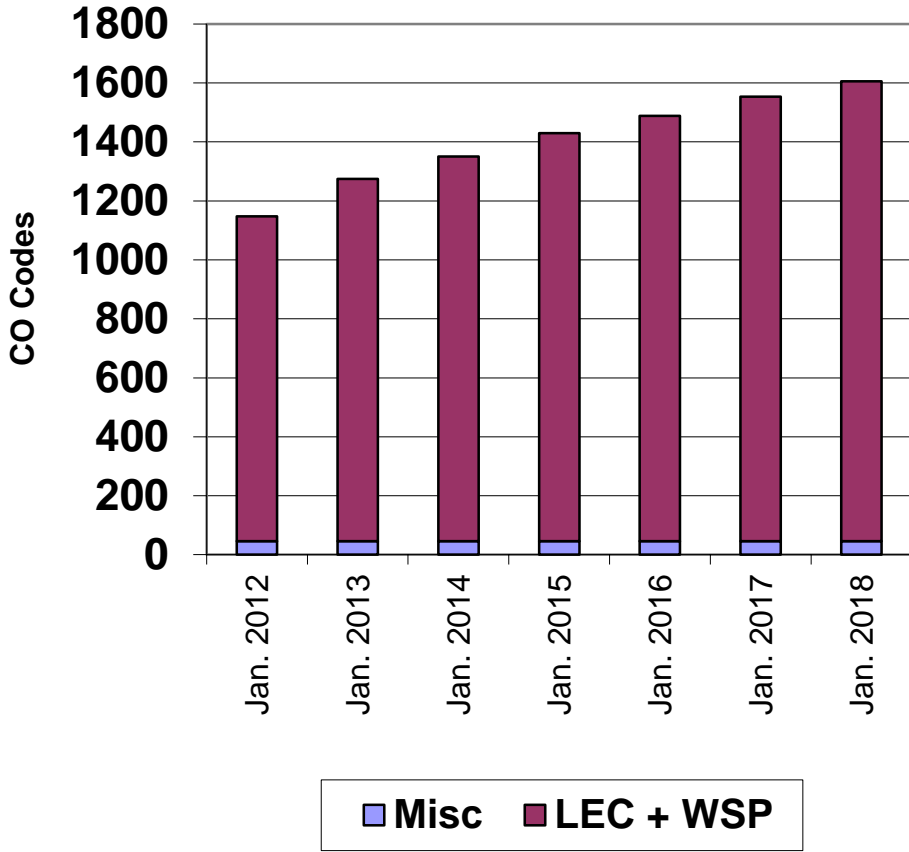


Figure 4 - NPA 226/519 Miscellaneous and LEC+WSP CO Codes, January 2012
G-NRUF

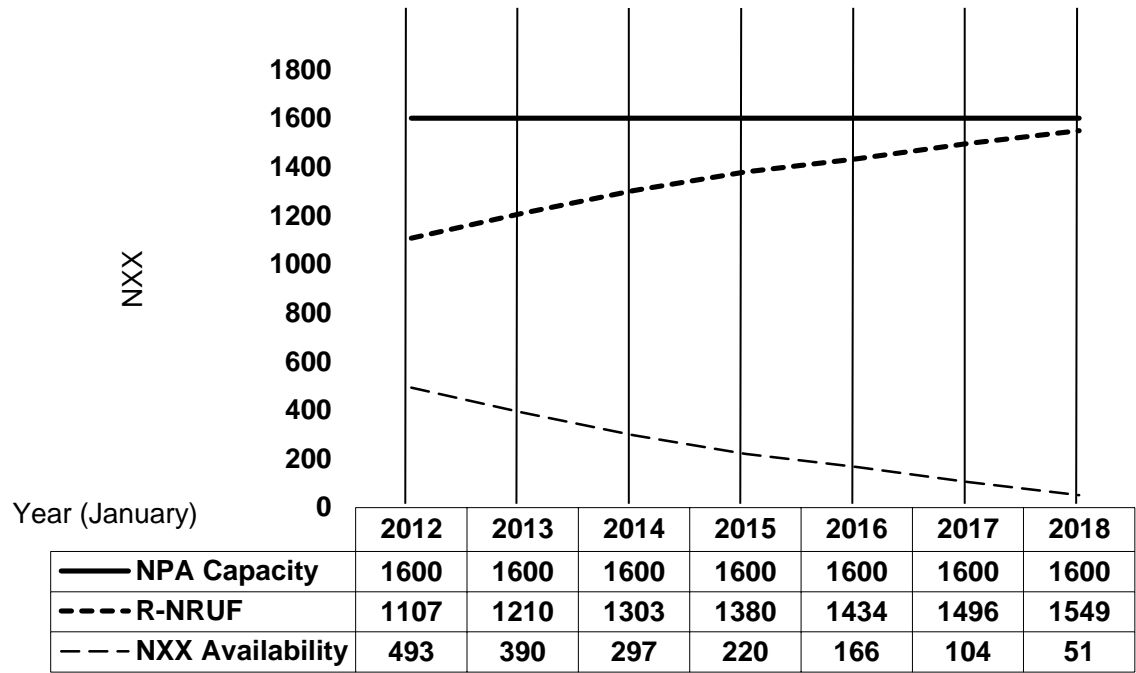


Figure 5 - NPA 226/519 CO Code Exhaust, July 2012 R-NRUF

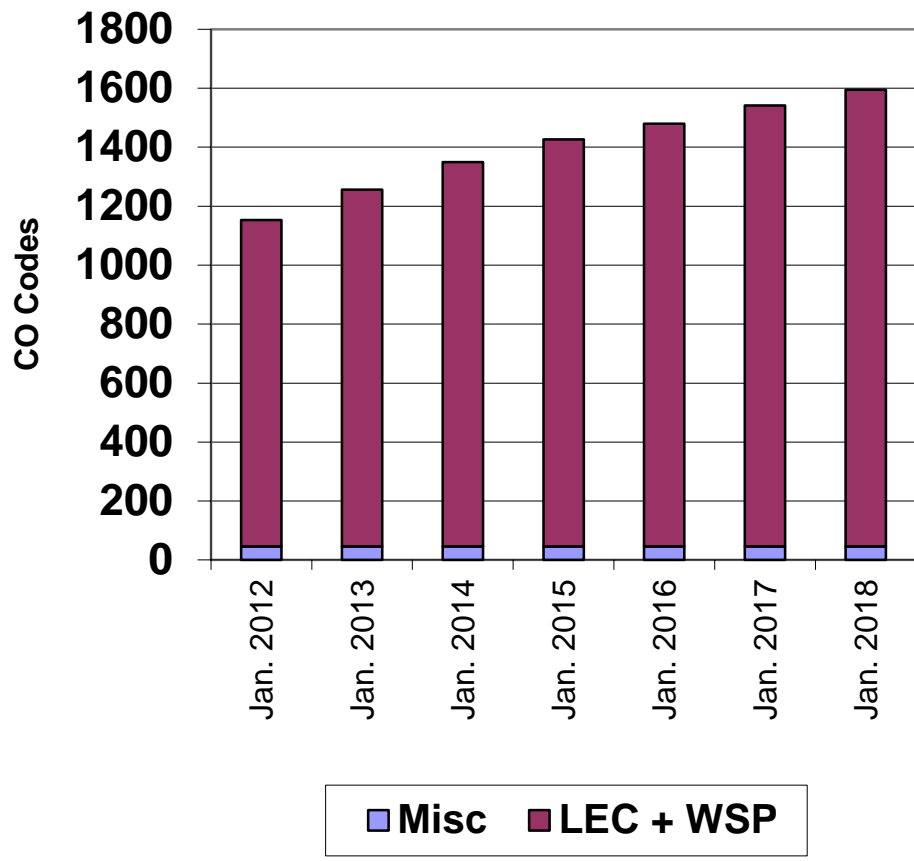


Figure 6 - NPA 226/519 Miscellaneous and LEC+WSP CO Codes, July 2012 R-NRUF

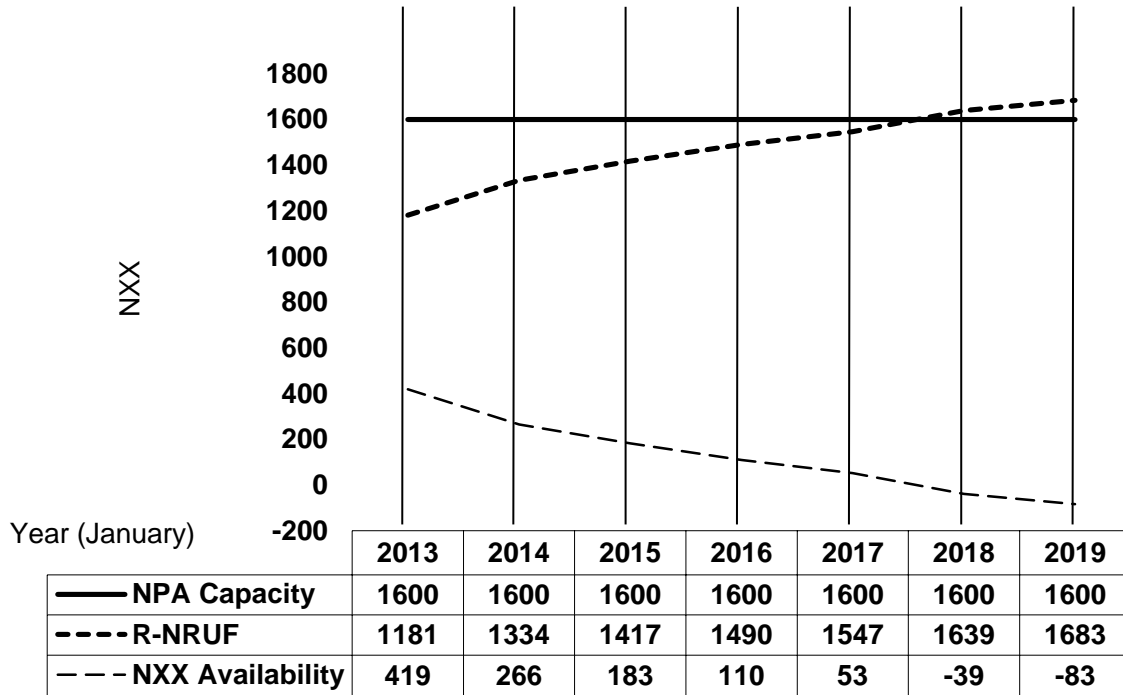
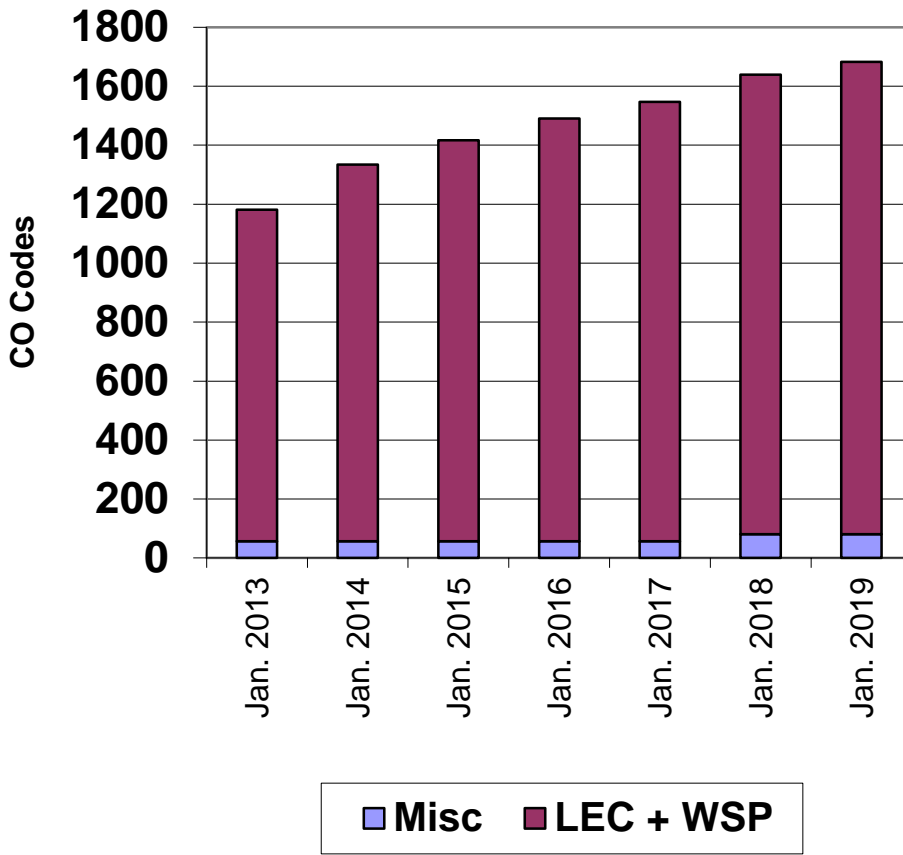


Figure 7 - NPA 226/519 CO Code Exhaust, January 2013 R-NRUF (including NOC directives)



**Figure 8 - NPA 226/519 Miscellaneous and LEC+WSP CO Codes, January 2013
R-NRUF
(including NOC directives)**



Figure 9 - NPA 226/519 LIRs

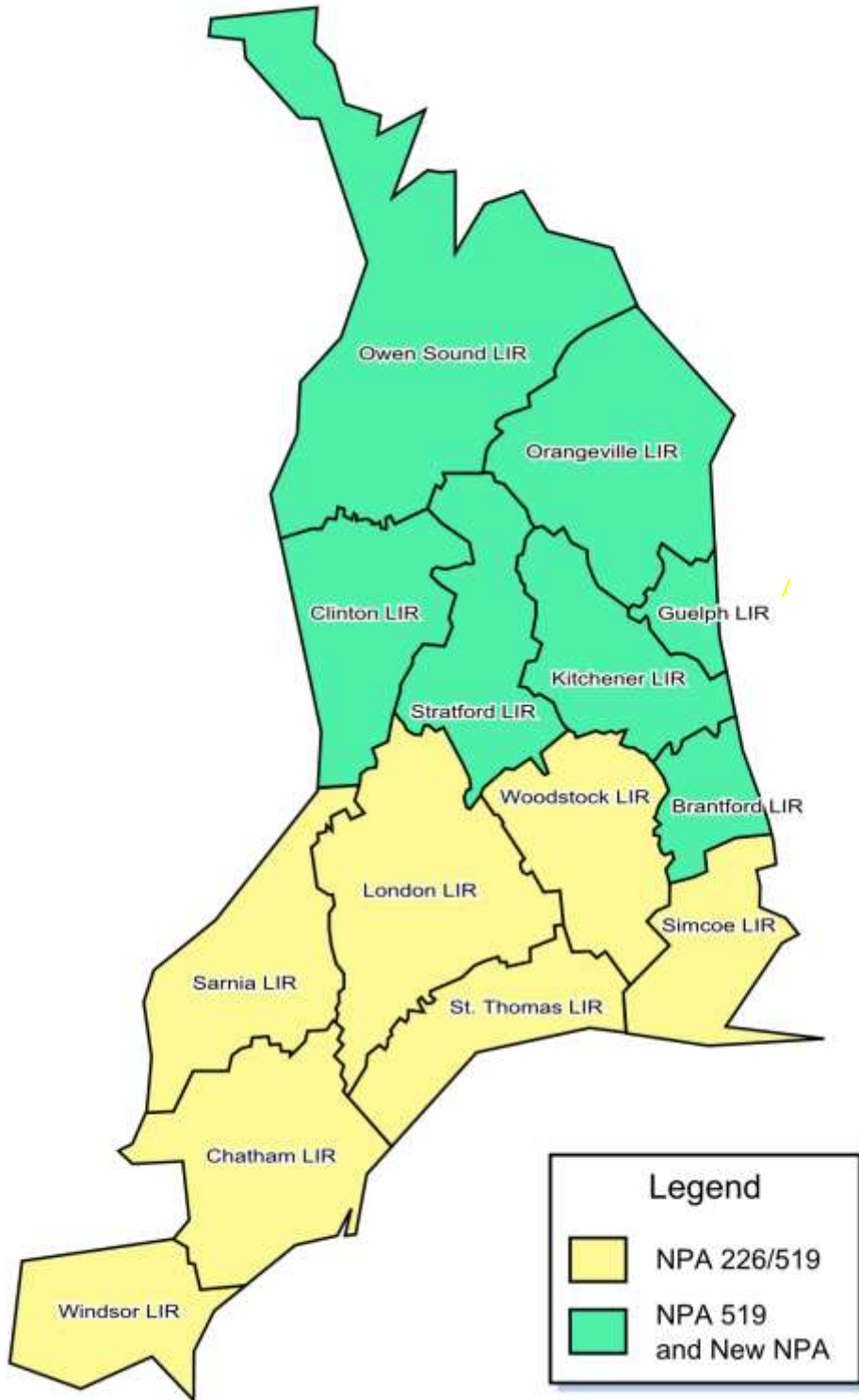


Figure 10 - Option 1: Split – North South Split of NPA 226 - South retains NPA 226

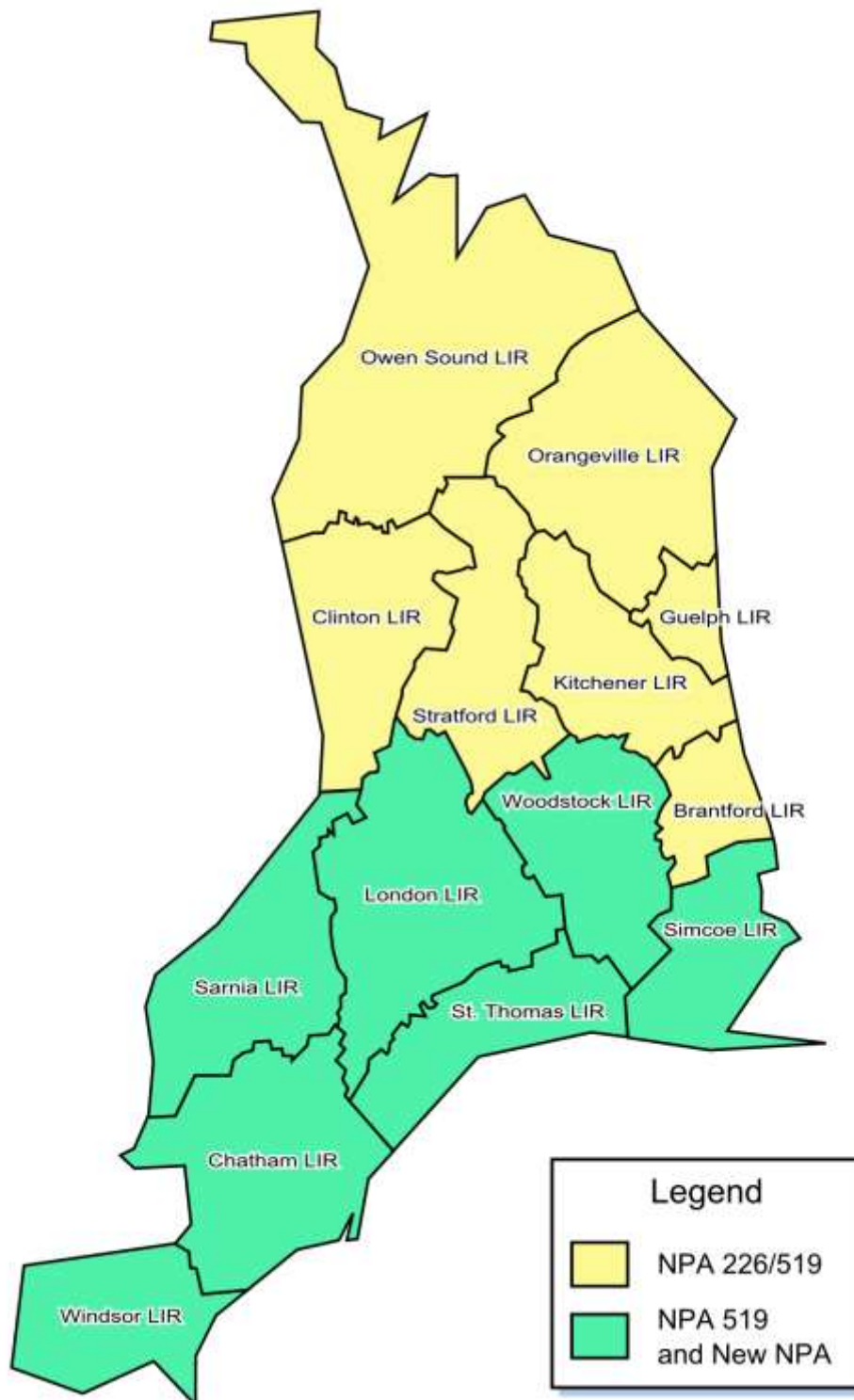


Figure 11 - Option 2: Split – North South Split of NPA 226 – North retains NPA 226

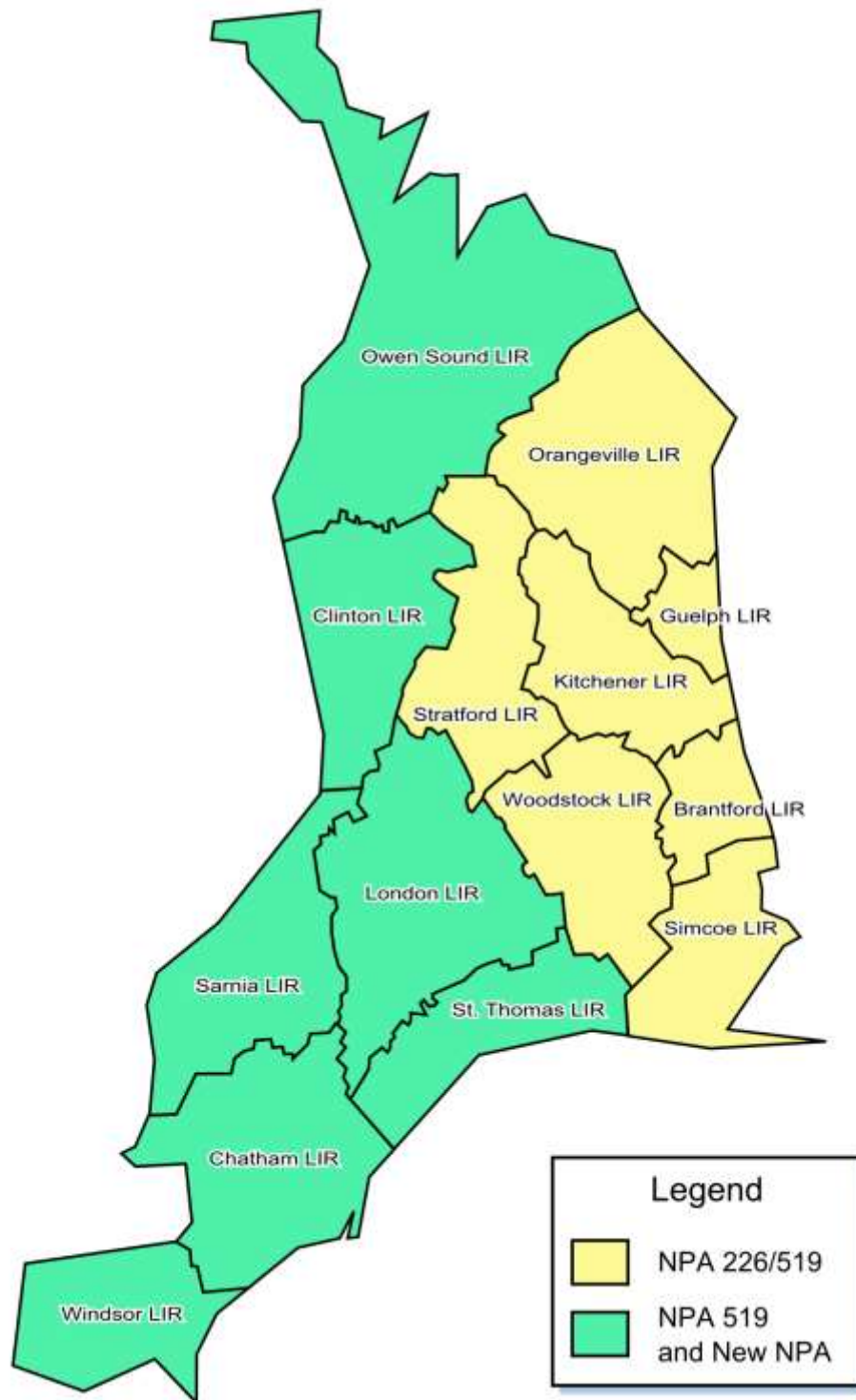


Figure 12 - Option 3: Split – East West Split of NPA 226 – East retains NPA 226

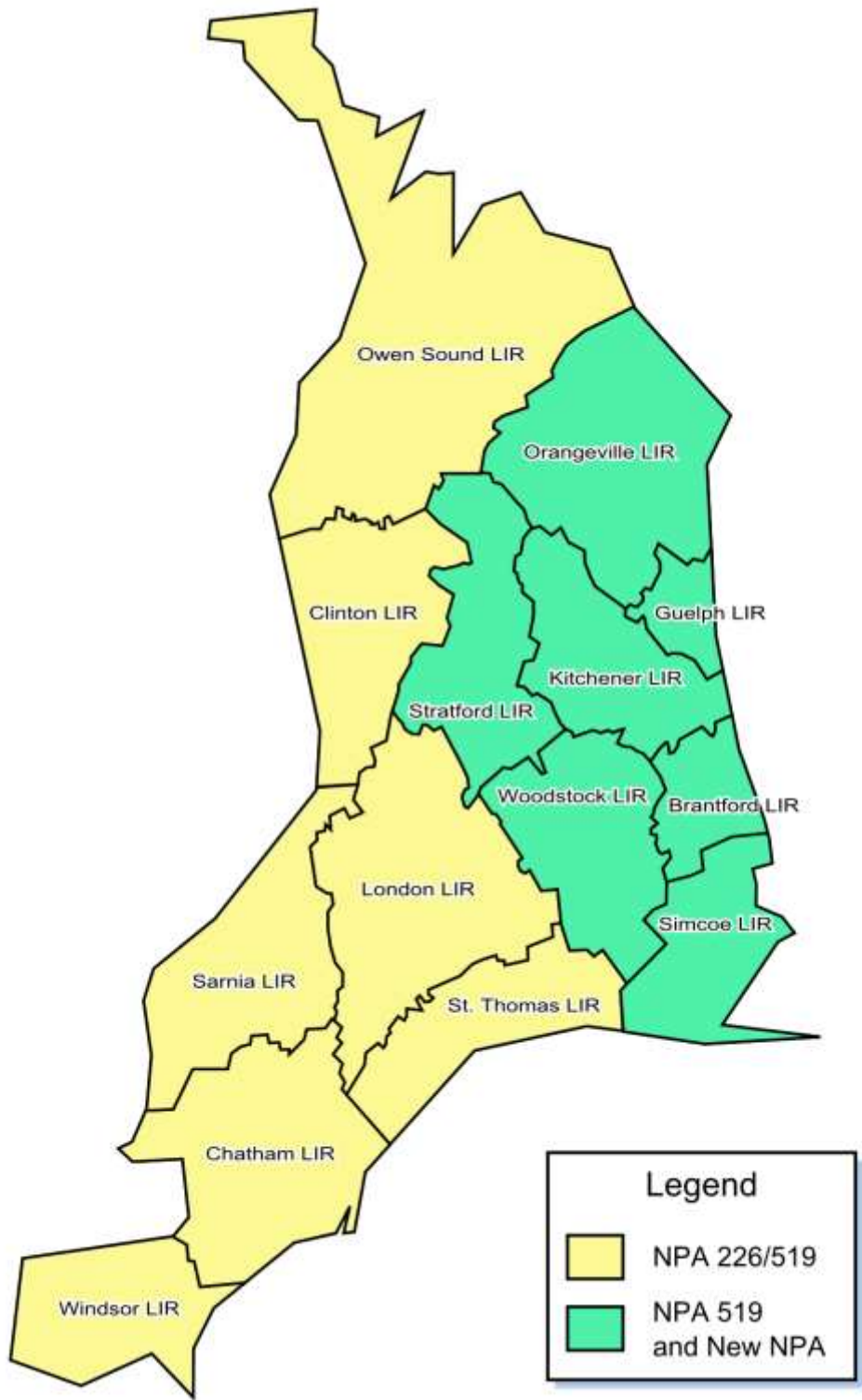


Figure 13 - Option 4: Split – East West Split of NPA 226 – West retains NPA 226

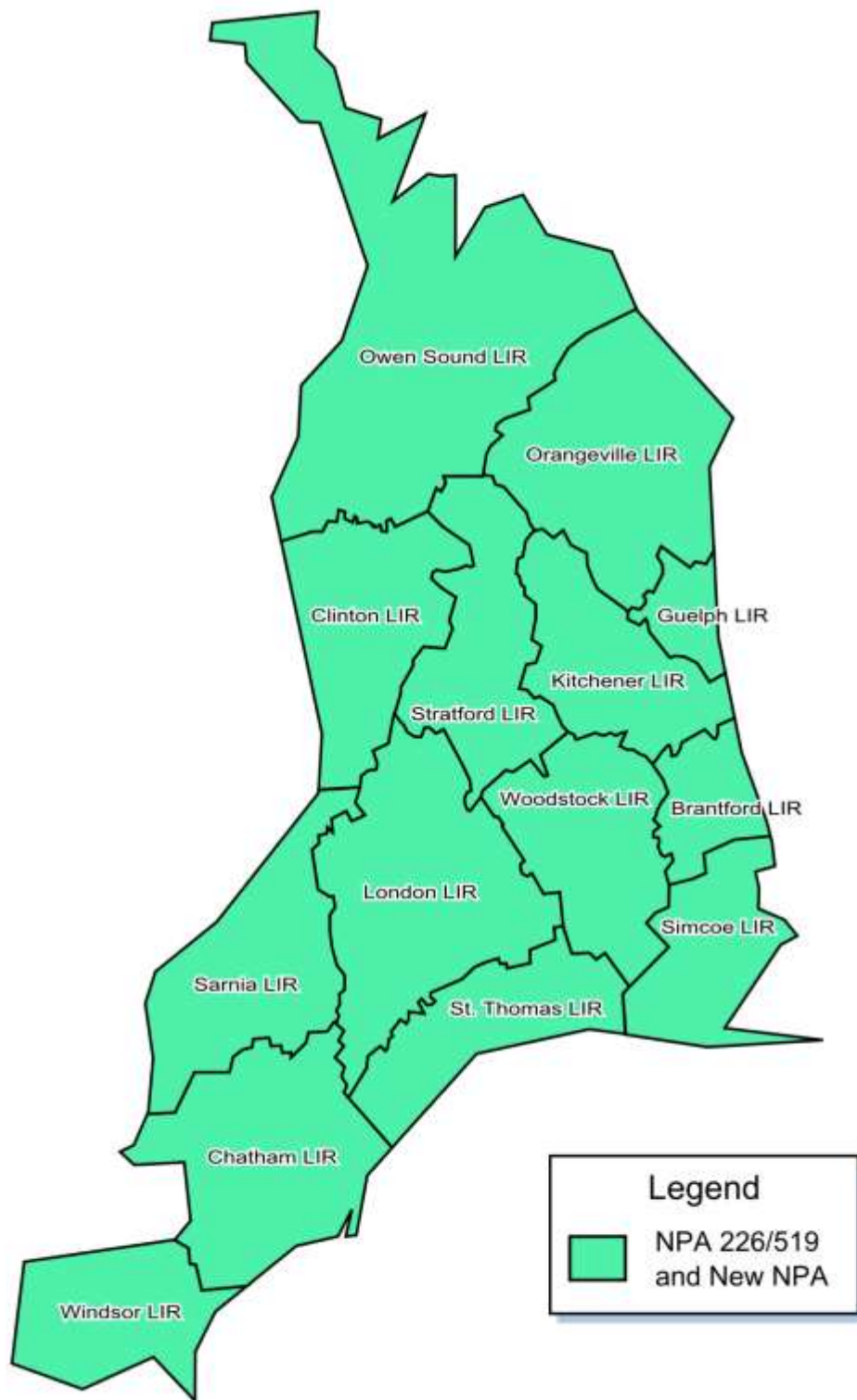


Figure 14 - Option 5: Distributed Overlay of New NPA on NPA 226/519

Table 1 – Exchange Areas currently in NPA 226/519 and NPAs for these Exchange Areas after each Relief Option

No.	Options Exchange Area	1			2			3			4			5		
		519	226	New	519	226	New	519	226	New	519	226	New	519	226	New
1	Aberarder	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
2	Acton	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
3	Ailsa Craig	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
4	Alvinston	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
5	Alvinston Independant	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
6	Amherstburg	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
7	Arkona	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
8	Arthur	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
9	Atwood	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
10	Auburn	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
11	Aylmer	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
12	Ayr	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
13	Ayton	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
14	Baden	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
15	Bayfield	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
16	Beachville	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
17	Belle River	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
18	Belmont	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
19	Blenheim	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
20	Blyth	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
21	Bothwell	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
22	Brantford	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
23	Breslau	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
24	Brigden	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
25	Bright	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
26	Bright's Grove	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
27	Brownsville	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
28	Brussels	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
29	Burford	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
30	Burgessville	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
31	Caledon	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
32	Cargill	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
33	Centralia	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
34	Chatham	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
35	Chatsworth	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
36	Chesley	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
37	Clifford	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓

No.	Options Exchange Area	1			2			3			4			5		
		519	226	New	519	226	New	519	226	New	519	226	New	519	226	New
38	Clinton	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
39	Clinton Independant	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
40	Comber	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
41	Corunna	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
42	Cottam	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
43	Courtright	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
44	Crediton	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
45	Dashwood	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
46	Delhi	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
47	Dorchester	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
48	Drayton	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
49	Dresden	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
50	Drumbo	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
51	Dublin	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
52	Dundalk	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
53	Dungannon	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
54	Durham	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
55	Dutton	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
56	Dyer's Bay	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
57	Eastwood	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
58	Elmira	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
59	Elora	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
60	Embro	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
61	Emeryville	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
62	Erin	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
63	Essex	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
64	Exeter	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
65	Fergus	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
66	Feversham	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
67	Fingal	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
68	Flesherton	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
69	Forest	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
70	Galt	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
71	Glencoe	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
72	Goderich	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
73	Gorrie	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
74	Grand Bend	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
75	Grand Valley	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
76	Granton	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
77	Guelph	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓

No.	Options Exchange Area	1			2			3			4			5		
		519	226	New	519	226	New	519	226	New	519	226	New	519	226	New
78	Hanover	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
79	Harrietsville	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
80	Harriston	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
81	Harrow	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
82	Hensall	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
83	Hensall Independent	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
84	Hepworth	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
85	Hespeler	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
86	Hickson	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
87	Highgate	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
88	Hillsburgh	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
89	Holstein	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
90	Ilderton	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
91	Ingersoll	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
92	Innerkip	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
93	Inwood Independant	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
94	Jarvis	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
95	Kerwood	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
96	Kincardine	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
97	Kingsville	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
98	Kintore	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
99	Kirkton	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
100	Kitchener- Waterloo	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
101	La Salle	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
102	Lambeth	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
103	Langton	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
104	Leamington	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
105	Linwood	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
106	Lions Head	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
107	Listowel	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
108	London	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
109	Lucan	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
110	Lucknow	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
111	Lynden	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
112	Maidstone	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
113	Markdale	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
114	McGregor	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
115	Meaford	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓

No.	Options Exchange Area	1			2			3			4			5		
		519	226	New	519	226	New	519	226	New	519	226	New	519	226	New
116	Melbourne	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
117	Merlin	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
118	Mildmay	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
119	Milverton	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
120	Mitchell	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
121	Monkton	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
122	Mount Brydges	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
123	Mount Forest	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
124	Mount Pleasant	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
125	Nairn	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
126	Neustadt	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
127	New Dundee	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
128	New Hamburg	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
129	Norwich	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
130	Norwich Independent	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
131	Ohsweken	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
132	Oil Springs	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
133	Orangeville	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
134	Otterville	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
135	Owen Sound	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
136	Paisley	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
137	Palmerston	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
138	Paris	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
139	Parkhill	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
140	Pelee Island	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
141	Petrolia	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
142	Plattsville	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
143	Pleasant Park	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
144	Port Burwell	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
145	Port Dover	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
146	Port Elgin	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
147	Port Franks	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
148	Port Lambton	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
149	Port Rowan	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
150	Port Stanley	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
151	Preston	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
152	Princeton	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
153	Ridgetown	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
154	Ripley	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
155	Rockwood	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓

No.	Options Exchange Area	1			2			3			4			5		
		519	226	New	519	226	New	519	226	New	519	226	New	519	226	New
156	Rodney	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
157	Sarnia	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
158	Sauble Beach	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
159	Scotland	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
160	Seaforth	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
161	Seaforth Independant	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
162	Sebringville	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
163	Shakespeare	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
164	Shedden	✓	✓		✓		✓			✓		✓				
165	Shelburne	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
166	Simcoe	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
167	Sombra	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
168	Southampton	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
169	Sparta	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
170	St. Clements	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
171	St. George	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
172	St. Jacobs	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
173	St. Marys	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
174	St. Thomas	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
175	Stokes Bay	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
176	Stoney Point	✓	✓		✓		✓			✓		✓				
177	Straffordville	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
178	Stratford	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
179	Strathroy	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
180	Tara	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
181	Tavistock	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
182	Tecumseh	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
183	Teeswater	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
184	Thamesford	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
185	Thamesville	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
186	Theford	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
187	Thornbury	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
188	Thorndale	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
189	Tilbury	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
190	Tillsonburg	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
191	Tiverton	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
192	Tobermory	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
193	Uniondale	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	
194	Walkerton	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
195	Wallaceburg	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓

No.	Options Exchange Area	1			2			3			4			5		
		519	226	New	519	226	New	519	226	New	519	226	New	519	226	New
196	Wardsville	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
197	Waterford	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
198	Watford	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
199	Watford Independent	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
200	Wellesley	✓		✓	✓	✓		✓	✓		✓		✓	✓	✓	✓
201	West Lorne	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
202	Wheatley	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
203	Wiaraton	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
204	Windsor	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
205	Wingham	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓
206	Woodslee	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
207	Woodstock	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
208	Woodstock Independent	✓	✓		✓		✓	✓	✓		✓		✓	✓	✓	✓
209	Wyoming	✓	✓		✓		✓	✓		✓	✓	✓		✓	✓	✓
210	Zurich	✓		✓	✓	✓		✓		✓	✓	✓		✓	✓	✓

Table 2 – Exchange Areas in each LIR

LIR	Exchange Name
Brantford	Brantford
Brantford	Burford
Brantford	Lynden
Brantford	Mount Pleasant
Brantford	Ohsweken
Brantford	Paris
Brantford	Scotland
Brantford	St. George
Chatham	Blenheim
Chatham	Bothwell
Chatham	Chatham
Chatham	Dresden
Chatham	Highgate
Chatham	Merlin
Chatham	Ridgetown
Chatham	Thamesville
Chatham	Tilbury
Chatham	Wallaceburg
Clinton	Bayfield
Clinton	Clinton Independant
Clinton	Dashwood
Clinton	Dungannon
Clinton	Dyer's Bay
Clinton	Gorrie
Clinton	Hensall Independent
Clinton	Seaforth Independant
Clinton	Zurich
Clinton	Auburn
Clinton	Blyth
Clinton	Brussels
Clinton	Clinton
Clinton	Goderich
Clinton	Hensall
Clinton	Lucknow
Clinton	Seaforth
Clinton	Wingham
Guelph	Acton
Guelph	Guelph
Guelph	Rockwood
Kitchener-Waterloo	Ayr
Kitchener-Waterloo	Baden
Kitchener-Waterloo	Breslau
Kitchener-Waterloo	Drayton
Kitchener-Waterloo	Elmira

LIR	Exchange Name
Kitchener-Waterloo	Galt
Kitchener-Waterloo	Hespeler
Kitchener-Waterloo	Kitchener-Waterloo
Kitchener-Waterloo	Linwood
Kitchener-Waterloo	New Dundee
Kitchener-Waterloo	New Hamburg
Kitchener-Waterloo	Plattsville
Kitchener-Waterloo	Preston
Kitchener-Waterloo	St. Clements
Kitchener-Waterloo	St. Jacobs
Kitchener-Waterloo	Wellesley
London	Granton
London	Ailsa Craig
London	Belmont
London	Centralia
London	Crediton
London	Dorchester
London	Exeter
London	Glencoe
London	Harrietsville
London	Ilderton
London	Kerwood
London	Lambeth
London	London
London	Lucan
London	Melbourne
London	Mount Brydges
London	Nairn
London	Parkhill
London	Strathroy
London	Thorndale
London	Wardsville
Orangeville	Arthur
Orangeville	Caledon
Orangeville	Dundalk
Orangeville	Elora
Orangeville	Erin
Orangeville	Fergus
Orangeville	Grand Valley
Orangeville	Hillsburgh
Orangeville	Holstein
Orangeville	Mount Forest
Orangeville	Orangeville
Orangeville	Shelburne
Owen Sound	Ayton
Owen Sound	Kirkton

LIR	Exchange Name
Owen Sound	Lions Head
Owen Sound	Mildmay
Owen Sound	Paisley
Owen Sound	Port Elgin
Owen Sound	Ripley
Owen Sound	Stokes Bay
Owen Sound	Teeswater
Owen Sound	Tiverton
Owen Sound	Tobermory
Owen Sound	Cargill
Owen Sound	Chatsworth
Owen Sound	Chesley
Owen Sound	Durham
Owen Sound	Feversham
Owen Sound	Flesherton
Owen Sound	Hanover
Owen Sound	Hepworth
Owen Sound	Kincardine
Owen Sound	Markdale
Owen Sound	Meaford
Owen Sound	Neustadt
Owen Sound	Owen Sound
Owen Sound	Sauble Beach
Owen Sound	Southampton
Owen Sound	Tara
Owen Sound	Thornbury
Owen Sound	Walkerton
Owen Sound	Warton
Sarnia	Aberarder
Sarnia	Alvinston Independant
Sarnia	Arkona
Sarnia	Forest
Sarnia	Inwood Independant
Sarnia	Grand Bend
Sarnia	Port Franks
Sarnia	Theford
Sarnia	Watford Independent
Sarnia	Alvinston
Sarnia	Brigden
Sarnia	Bright's Grove
Sarnia	Corunna
Sarnia	Courtright
Sarnia	Oil Springs
Sarnia	Petrolia
Sarnia	Port Lambton
Sarnia	Sarnia

LIR	Exchange Name
Sarnia	Sombra
Sarnia	Watford
Sarnia	Wyoming
Simcoe	Delhi
Simcoe	Jarvis
Simcoe	Langton
Simcoe	Port Dover
Simcoe	Port Rowan
Simcoe	Simcoe
Simcoe	Waterford
St. Thomas	Aylmer
St. Thomas	Port Burwell
St. Thomas	Straffordville
St. Thomas	Dutton
St. Thomas	Fingal
St. Thomas	Port Stanley
St. Thomas	Rodney
St. Thomas	Shedden
St. Thomas	Sparta
St. Thomas	St. Thomas
St. Thomas	West Lorne
Stratford	Clifford
Stratford	Milverton
Stratford	Sebringville
Stratford	Atwood
Stratford	Dublin
Stratford	Harriston
Stratford	Listowel
Stratford	Mitchell
Stratford	Monkton
Stratford	Palmerston
Stratford	Shakespeare
Stratford	St. Marys
Stratford	Stratford
Stratford	Tavistock
Windsor	Cottam
Windsor	Amherstburg
Windsor	Belle River
Windsor	Comber
Windsor	Emeryville
Windsor	Essex
Windsor	Harrow
Windsor	Kingsville
Windsor	La Salle
Windsor	Leamington
Windsor	Maidstone

LIR	Exchange Name
Windsor	McGregor
Windsor	Pelee Island
Windsor	Pleasant Park
Windsor	Stoney Point
Windsor	Tecumseh
Windsor	Wheatley
Windsor	Windsor
Windsor	Woodslee
Woodstock	Burgessville
Woodstock	Norwich Independent
Woodstock	Uniondale
Woodstock	Woodstock Independent
Woodstock	Beachville
Woodstock	Bright
Woodstock	Brownsville
Woodstock	Drumbo
Woodstock	Eastwood
Woodstock	Embro
Woodstock	Hickson
Woodstock	Ingersoll
Woodstock	Innerkip
Woodstock	Kintore
Woodstock	Norwich
Woodstock	Otterville
Woodstock	Princeton
Woodstock	Thamesford
Woodstock	Tillsonburg
Woodstock	Woodstock

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NPA 226/519 RELIEF IMPLEMENTATION PLAN (RIP)

17 MAY 2013

DATE of RPC Consensus: 9 MAY 2013

**TITLE: NPA 226/519 Relief Implementation Plan (RIP)
(Implementation of new NPA 548 as a Distributed Overlay on
NPA 226/519)**

DISTRIBUTION: CRTC

ISSUED BY: NPA 226/519 Relief Planning Committee (RPC)

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NPA 226/519 Relief Implementation Plan (RIP)

(for a Distributed Overlay of new NPA 548 over NPA 226/519)

1. INTRODUCTION

This Relief Implementation Plan (RIP) was developed in accordance with the Canadian NPA Relief Planning Guideline. This RIP is a set of activities and deliverables established by the Relief Planning Committee (RPC) that are required to provide relief to the exhausting NPA. The objective of the NPA Relief Planning process is to ensure an adequate supply of Central Office (CO) Codes and telephone numbers is always available to the Canadian telecommunications industry and users.

Telecom Notice of Consultation CRTC 2012-655

On 29 November 2012 the CRTC issued Telecom Notice of Consultation CRTC 2012-655, *Establishment of a CISC ad hoc committee for relief planning for area codes 226 and 519 in southern Ontario*, by which it established a CRTC Interconnection Steering Committee ad hoc Relief Planning Committee (RPC) to examine options for providing numbering relief to the area served by area codes 226 and 519 in southern Ontario.

On 28 February 2013, the CNA issued an Initial Planning Document (IPD) and the RPC commenced its work to develop a Planning Document (PD) and this Relief Implementation Plan (RIP).

The Planning Document recommended relief as follows:

- 1) The Relief Method should be a distributed overlay of a new NPA on NPA 226/519 (Option 5);
- 2) NPA 548 should be the relief NPA for NPA 226/519 in accordance with Telecom Decision CRTC 2010-784, *CRTC Interconnection Steering Committee consensus item-Reservation of Area Codes for future Area Code Relief*;
- 3) NPA 382 should be reserved for future subsequent relief in the 226/519 region as the 226/519 region has been forecast to exhaust again within 15 years; and,
- 4) The Relief Date should be 4 June 2016 to provide Carriers and customers with advanced notification and sufficient lead-time to implement relief, which would be 16 months in advance of the current Projected Exhaust Date.

Projected Exhaust Dates

The Projected Exhaust Date for an NPA is the date on which it is expected that the NPA will run out of assignable CO Codes (NXXs). When an NPA is projected to exhaust within about a 6 year period, the CNA initiates relief planning for that NPA with the objective of implementing relief 12 to 18 months in advance of the then Projected Exhaust Date. Over time, the Projected Exhaust Date may change as the forecast requirement for CO Codes and telephone numbers

changes in response to customer demand for existing and new telecommunications services and the requirements of existing and new TSPs. The CNA monitors assignment data and conducts special studies called the C-NRUF in order to predict NPA exhaust.

The following table summarizes the various Projected Exhaust Dates forecast by the CNA:

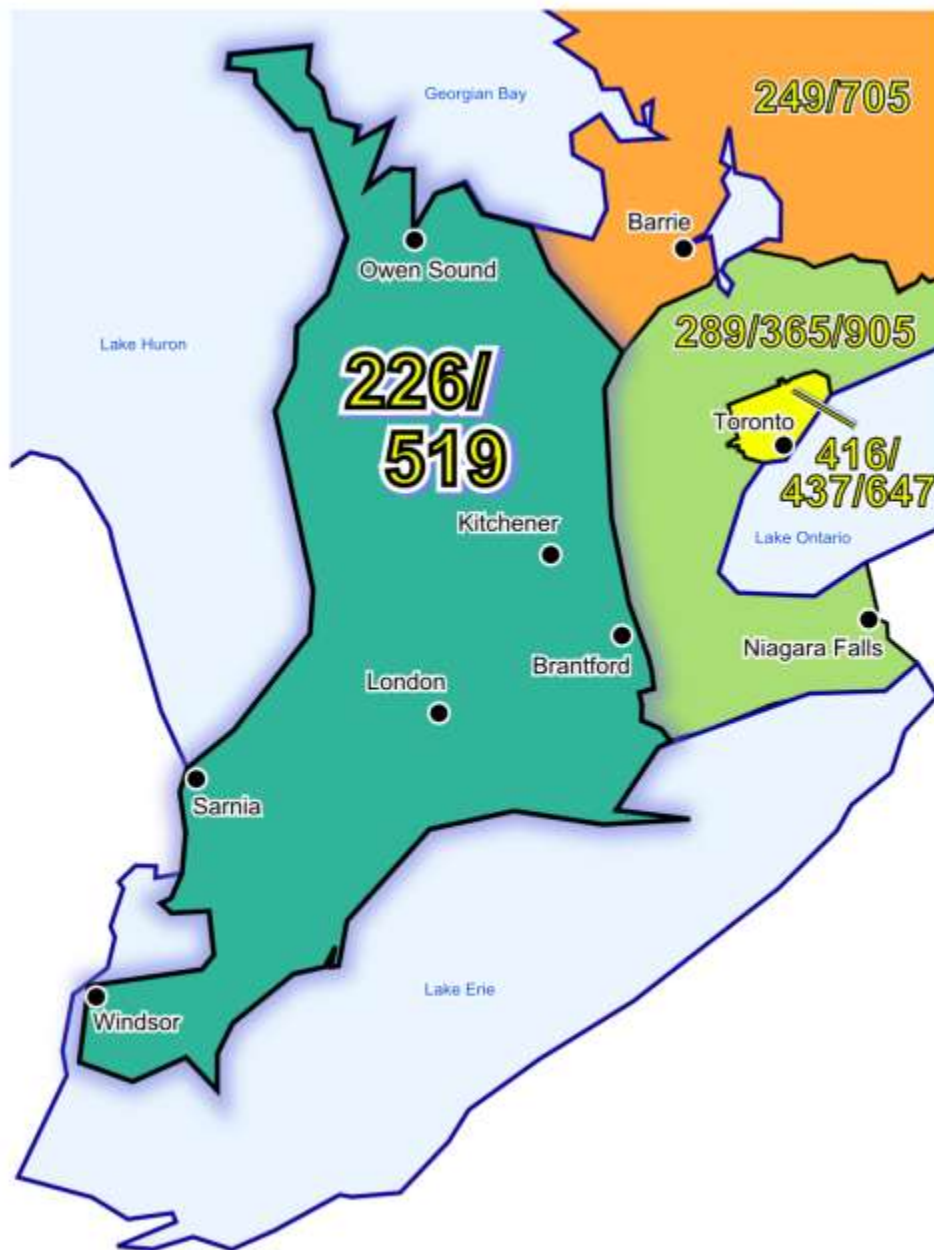
Summary of Projected Exhaust Dates

226/519 NRUF	Projected Exhaust Date
G-NRUF January 2012	November 2017
R-NRUF July 2012	January 2017
R-NRUF January 2013, adjusted per Telecom Notice of Consultation CRTC 2012-655 directive setting aside 4 CO Codes for initial code assignments for Carriers already providing service, and 7 CO Codes for new entrants	October 2017

This RIP contains a Relief Implementation Schedule, Consumer Awareness Program (CAP) (see Attachment 1) and Network Implementation Plan (NIP) (see Attachment 2).

Map of NPA 226/519

A map showing NPA 226/519 is on the following page. The 226/519 Numbering Plan Area (NPA) contains 210 Exchange Areas including the rapidly growing exchanges of Brantford, Chatham, Guelph, Hespeler, Kitchener-Waterloo, London, Orangeville, Sarnia, Windsor and Woodstock, located in the southwestern part of Ontario in Canada.



Dial Plan Impacts

Currently 10-digit dialling is mandatory for all local calls originating within area code 226/519. Local dialling plans will not change when NPA 226/519 relief is implemented.

NPA relief will not affect the dialling plan for long distance calls originating in NPA 226/519.

No local calling will become long distance and no long distance calling will become local as a result of NPA relief.

The dial plans for calls originating in NPA 226/519 and the new overlay NPA 548 will be as follows:

NPA	Local Dial Plan	Local Dial Plan	Toll Dial Plan	Toll Dial Plan
	Current	Future	Current	Future
226/519/548	10 digits	10 digits	1 + 10 digits	1 + 10 digits

Currently 10-digit dialling is and will continue to be mandatory for local calls originating in adjacent area codes and terminating in the 226/519/548 area.

Purpose of RIP

The purpose of this RIP is to establish a plan and timeframe for implementing relief for the Numbering Plan Area (NPA) currently served by NPA Codes 226/519.

This RIP addresses the activities, deliverables, and issues impacting all Telecommunications Service Providers (TSPs) operating in NPA 226/519. It does not cover activities internal to each TSP; however Attachment 3, Individual Telecommunications Service Provider Responsibilities, provides a list of activities that each TSP will need to address in its own network, systems and business operations. In addition, this RIP does not cover activities for which there is already an established process for coordination between TSPs to establish service (e.g., interconnection agreements between Carriers).

In the event that circumstances change after the date when the Commission approves this RIP, the RPC may propose modifications to this RIP as necessary.

2. NPA RELIEF PLANNING PROCESS

NPA Relief Planning is conducted under the regulatory oversight of the Commission in accordance with the Canadian NPA Relief Planning Guideline. This Guideline was developed by the Canadian Steering Committee on Numbering (CSCN), accepted by the CISC and approved by the Commission.

The Canadian NPA Relief Planning Guideline and related information on relief planning may be obtained from the www.cnac.ca web site. The CISC operates under the CISC Administrative Guidelines that may be obtained from the Commission web site (see www.crtc.gc.ca).

For each NPA projected to exhaust within a 72-month time period, the Commission informs the public that an RPC, chaired by the CNA, will be formed as an Ad Hoc Working Group of the CISC to do relief planning for the exhausting NPA. Any interested party may participate in the relief planning process. Each RPC operates as an open public forum. Any party wanting to participate in this process is encouraged to visit the above web sites to obtain information on the process and schedule of events and activities. Any questions regarding the relief planning process may be directed to the CNA as follows:

Contact: Glenn Pilley
Telephone: 613-683-3289
Facsimile: 613-563-9293
E-mail: pilleyg@saiccanada.com
Address: CNA – SAIC Canada
Suite 1516 - 60 Queen Street
Ottawa, Ontario, Canada K1P 5Y7

Individual TSPs are responsible for their own activities to implement relief (see Attachment 3). Each TSP employs a variety of information and operation support systems for the operation, maintenance, control, and administration of its network and to serve its customers. Each TSP is responsible to make the necessary changes in its systems in order to operate in the new environment and specifically to process the full 10-digit telephone number of each subscriber. Each TSP is responsible to ensure its customers are informed and implement the changes necessary to support the relief activity. Also, each TSP is responsible to ensure its own suppliers of products and services (e.g., Operator Services) implement the changes necessary to support the relief activity. Accordingly, no activities have been identified for the coordination of these functions between different TSPs, except as otherwise provided for in this RIP (e.g., Consumer Awareness Program (CAP) and Network Implementation Plan (NIP)).

Individual TSPs and industry database owners/operators shall advise Commission staff of any concerns or problems as they arise with respect to modifying their systems and databases in time to implement relief in accordance with this RIP.

3. NPA RELIEF IMPLEMENTATION TASK FORCE(S)

The RPC developed this RIP with the assistance and input of two Task Forces created by the RPC:

- 1) Consumer Awareness Task Force (CATF), and
- 2) Network Implementation Task Force (NITF).

The CNA sent an e-mail to all current and prospective Code Holders in the affected NPA requesting those entities to provide a contact name to the Co-chairs of the two Task Forces (with a courtesy copy to Commission staff). Independent telephone companies may choose to be represented by their associations. In addition, the CNA communicated with municipalities in NPA 226/519 to provide them with the opportunity to join the CATF.

Each Task Force has at least one voluntary Co-chair. The Co-chairs of the CATF and NITF act as the single point of contact and spokespersons for their respective Task Forces. The Co-chairs maintain the list of participants on their Task Forces as confidential. All Carriers operating in the affected NPA should have a participant on each of the Task Forces.

The two Task Forces have developed and submitted separate but coordinated plans for their respective activities:

- 1) Consumer Awareness Program (CAP) (see Attachment 1), and
- 2) Network Implementation Plan (NIP) (see Attachment 2).

Individual Carriers are expected to develop individual consumer awareness programs and network implementation plans within the parameters of the CAP and NIP contained in this RIP. The CATF and NITF will meet periodically to perform their industry level functions identified in this RIP. The RPC will provide oversight and coordination of the CATF and NITF in accordance with the RIP.

Consumer Awareness Task Force (CATF)

The purpose of the CATF is to develop a comprehensive and consistent consumer awareness program for relief activities in the NPA 226/519 region, and to forward it to the CISC by the due date in the Relief Implementation Schedule.

To develop a CAP, the RPC created a CATF. Each Carrier operating in the exhausting NPA was requested to provide the name of a representative to serve on the CATF. The CATF is Co-chaired by volunteer participants of the CATF. The Co-chairs of the CATF compile, maintain and distribute the list of all representatives on the CATF to the CATF distribution list (i.e., contact name, title, telephone number, fax number, street address, e-mail address), including the CNA.

Purpose and Mandate

The responsibilities of the CATF include, but are not limited to:

- 1) Develop and agree on a CAP and schedule;
- 2) Develop and submit progress reports;

- 3) Identify and address CAP issues;
- 4) Act as single point of contact on CAP issues; and,
- 5) Identify any consumer concerns or issues regarding the implementation of relief and advise the RPC, the Commission or Commission staff as appropriate.

The role of the individual CATF representative of each Carrier is to ensure that its organization develops, submits and implements its individual consumer awareness program in accordance with the CAP and associated schedule. Each representative acts as the single point of contact with respect to implementation of the CAP and activities for its organization. Each Carrier is responsible for developing, submitting and implementing its individual consumer awareness program in accordance with the industry level CAP.

All Carriers shall provide progress reports to the CATF for submission to the RPC in accordance with the Relief Implementation Schedule.

Individual Carriers should notify the CATF, or Commission staff, or the Commission, as appropriate, if there are any problems or concerns with respect to their individual consumer awareness program activities to implement relief in accordance with this RIP.

The recommended CAP is attached to this RIP (see Attachment 1).

Network Implementation Task Force (NITF)

The purpose of the NITF is to develop a Network Implementation Plan (NIP) for relief activities in the NPA 226/519 region to be submitted to the CISC. This complies with the Canadian NPA Relief Planning Guideline.

Each Carrier operating in the exhausting NPA was requested to provide the name of a representative to serve on the NITF. The NITF is Co-chaired by volunteer participants of the NITF. The Co-chairs of the NITF compile, maintain and distribute the list of all representatives on the NITF to the NITF distribution list (i.e., contact name, title, telephone number, fax number, street address, e-mail address), including the CNA.

Purpose and Mandate

The role of the NITF is to identify and address network implementation issues that affect all carriers. The responsibilities of the NITF include, but are not limited to:

- 1) Develop and agree on a NIP and schedule;
- 2) Develop and submit progress reports;
- 3) Identify and address NIP issues;
- 4) Act as single point of contact on NIP issues;
- 5) Identify any network concerns or issues regarding the implementation of relief and advise the RPC, the Commission or Commission staff as appropriate; and,
- 6) Develop inter-network test plans, as necessary.

The role of the individual NITF representative of each Carrier is to ensure that its organization develops, submits and implements its individual network implementation plan in accordance with the NIP and associated schedule. Each representative acts as the single point of contact for implementation of the NIP and activities for its organization. Each Carrier is responsible to

develop, submit and implement its individual network implementation plan in accordance with the industry level NIP.

All Carriers shall provide progress reports to the NITF for submission to the RPC in accordance with the Relief Implementation Schedule.

Test plans and tests shall be arranged on a bilateral basis between interconnecting Carriers in accordance with bilateral agreements and the Relief Implementation Schedule.

Individual Carriers and industry database owners/operators (e.g., Canadian Local Number Portability Consortium) should notify the NITF, or Commission staff, or the Commission, as appropriate, if there are any problems or concerns with modifying their systems and databases in time to implement relief in accordance with this RIP.

The recommended NIP is attached to this RIP (see Attachment 2).

4. NPA RELIEF IMPLEMENTATION SCHEDULE

The following table identifies the major implementation activities, deliverables and associated dates based upon the tasks identified in the Canadian NPA Relief Planning Timeline as well as major events in both the CAP and NIP. All TSPs and telecommunications service users should plan their internal relief activities in accordance with the following Relief Implementation Schedule.

RELIEF IMPLEMENTATION SCHEDULE for a Distributed Overlay of new NPA 548 over NPA 226/519

Item	Task or Event	Prime	Start	End
1	CNA identifies NPA exhaust and notifies by e-mail CRTC staff, CSCN, North American Numbering Plan Administration (NANPA) & CISC that the NPA will exhaust within 72 months	CNA		10-Apr-12
2	CNA conducts R-NRUF & releases results	CNA	8-Aug-11	5-Oct-12
3	CRTC issues Telecom Notice of Consultation regarding establishment of an ad hoc Relief Planning Committee (RPC)	CRTC	5-Oct-12	29-Nov-12
4	CNA announces the date for the initial NPA Relief Planning face-to-face meeting & requests contributions	CNA	28-Feb-2013	28-Feb-2013
5	CNA develops and distributes the IPD to the RPC	CNA	5 Oct-2012	28-Feb 2013
6	RPC participants review the IPD & submit contributions to the RPC	RPC	28-Feb 2013	2-Apr-2013
7	CNA chairs initial RPC meeting to start development of the Planning Document (PD), Relief Implementation Plan (RIP) & Planning Letter (PL), & schedules future meetings/conference calls	CNA, RPC	16-Apr-2013	17-Apr-2013
8	CNA chairs subsequent RPC meetings/conference calls to finalize the PD	CNA, RPC	17-Apr-2013	17-Jul-2013
9	CNA forwards the PD to the CISC and CRTC for approval	CNA	17-Jul-2013	31-Jul-2013
10	Special Types of Telecommunications Service Users (9-1-1 Public Safety Answering Points (PSAPs), alarm companies, Internet Service Providers (ISPs), paging companies, etc.) to identify any concerns to the RPC & CRTC	Special Users		17-Jul-2013
11	CRTC issues Telecom Decision approving the Relief Method, Relief Date, New NPA & directs the RPC to develop the Relief Implementation Plan (RIP)	CRTC	31-Jul-2013	31-Oct-2013
12	CNA obtains relief NPA from NANPA	CNA	31-Oct-2013	14-Nov-2013
13	CNA holds RPC meetings to create Consumer Awareness and Network Implementation Task Forces (NITF) and the RPC develops and finalizes the RIP	CNA, RPC	31-Oct-2013	31-Dec-2013
14	CNA forwards the RIP to the CISC and CRTC for approval	CNA	31-Dec-2013	14-Jan-2014
15	CRTC issues Telecom Decision approving the RIP	CRTC	14-Jan-2014	14-Apr-2014

Item	Task or Event	Prime	Start	End
16	Task Forces, Telecommunications Service Providers (TSPs) and users implement relief (starts at CRTC approval of Relief Method & Date and ends on Relief Date)	TSPs	31-Oct-2013	4-Jun-2016
17	All TSPs to develop and file individual consumer awareness programs with the CRTC (may be done collectively by the Telecommunications Alliance) (starts at CRTC approval of RIP and should be completed about 24 months prior to the Relief Date)	TSPs	14-Apr-2014	4-Jun-2014
18	CNA issues media release (in coordination with the Telecommunications Alliance) (may start upon CRTC approval of the RIP and should be issued at least 18 months prior to the Relief Date)	CNA	14-Apr-2014	4-Dec-2014
19	CNA submits the PL and RIP to NANPA (should be submitted at least 18 months prior to the Relief Date)	CNA		4-Dec-2014
20	NANPA receives and posts the PL to the NANPA website (within 2 weeks of receipt from the CNA)	NANPA	4-Dec-2014	19-Dec-2014
21	All TSPs implement consumer awareness activities (starts upon filing of Consumer Awareness Programs with the CRTC and is completed on the Relief Date)	TSPs	4-Jun-2014	4-Jun-2016
22	All TSPs to notify all customers (residence, business & special customers) of the new NPA (may start with the filing of Consumer Awareness Programs with the CRTC and all customers should be notified at least 18 months prior to the Relief Date)	TSPs	4-Jun-2014	4-Dec-2014
23	TSPs to submit Progress Report #1 to NITF and Consumer Awareness Task Force (CATF) (starts after completion date for all TSPs to notify their customers and requires 2 weeks)	TSPs	4-Dec-2014	19-Dec-2014
24	NITF and CATF develop & submit Progress Report #1 to the RPC (linked to TSP reports to NITF and CATF)	NITF & CATF	19-Dec-2014	2-Jan-2015
25	The RPC submits Progress Report #1 to CISC/CRTC (linked to NITF and CATF reports)	RPC	2-Jan-2015	16-Jan-2015
26	iconectiv TRA database updates to add Exchanges to new overlay NPA (starts on the date that the PL is posted to the NANPA web site and must be completed by 6 months prior to the Relief Date)	iconectiv TRA		4-Dec-2015
27	All Telecommunications Service Providers and Telecommunications Service Users (including Special Users 9-1-1 PSAPs, alarm companies, ISPs, paging companies, payphone providers, etc.) to implement changes to their telecom equipment & systems to accommodate the new NPA (starts upon CRTC approval of RIP and ends on the Relief Date)	Telecom Service Users	14-Apr-2014	4-Jun-2016
28	Payphone Providers Reprogram Payphones (starts upon CRTC approval of the RIP and ends on the Relief Date)	Payphone Providers	14-Apr-2014	4-Jun-2016

Item	Task or Event	Prime	Start	End
29	TSPs and database owners/operators to modify systems and industry databases (starts on CRTC approval of the RIP and ends on the Relief Date)	TSPs & Database Owners	14-Apr-2014	4-Jun-2016
30	Operator Services & Directory Assistance Readiness (starts on CRTC approval of the RIP and ends on the Relief Date)	TSPs	14-Apr-2014	4-Jun-2016
31	Directory Publisher Readiness for relief (ability to identify the NPA in telephone numbers in the directory published after the new NPA is activated) (starts upon CRTC approval of the RIP and ends on the Relief Date)	Directory Publishers	14-Apr-2014	4-Jun-2016
32	9-1-1 Systems and Databases Readiness (starts on CRTC approval of the RIP and ends on the Relief Date)	PSAPS, 9-1-1 Service Providers & TSPs	14-Apr-2014	4-Jun-2016
33	Network Systems & Equipment Readiness (starts on CRTC approval of the RIP and ends on the Relief Date)	TSPs	14-Apr-2014	4-Jun-2016
34	Service Order & Business System Readiness (starts on CRTC approval of the RIP and ends on the Relief Date)	TSPs	14-Apr-2014	4-Jun-2016
35	International Gateway Switch Translations Readiness for new NPA (starts on CRTC approval of the RIP and ends on the Relief Date)	Int'l TSPs	14-Apr-2014	4-Jun-2016
36	Canadian Local Number Portability Consortium (CLNPC) Database Readiness for new NPA (starts on CRTC approval of the RIP and ends on the Relief Date)	CLNPC & NPAC	14-Apr-2014	4-Jun-2016
37	Toll Free SMS Database Readiness for new NPA (starts on CRTC approval of the RIP and ends on the Relief Date)	Toll TSPs	14-Apr-2014	4-Jun-2016
38	TSPs apply for Test CO Codes in new NPA (applications may be submitted no more than 6 months and no less than 66 days prior to the start date for the Inter-Carrier Testing Period) (Section 7.16.4 Canadian RP GL)	TSPs	4-Sep-2015	29-Dec-2015
39	Develop Inter-Carrier Network Test Plans and prepare for testing (individual TSPs to make arrangements in accordance with interconnection agreements) (may start upon CRTC approval of the RIP and must be completed by start date for the Inter-Carrier Testing Period)	NITF & TSPs	14-Apr-2014	4-Mar-2016
40	All international and domestic TSPs must activate the new NPA in their networks by the start date for the Inter-Carrier Testing Period	TSPs		4-Mar-2016
41	Activation date for new NPA Test CO Codes and Test Numbers in the network must be completed by the start date for the Inter-Carrier Testing Period	TSPs		4-Mar-2016
42	Inter-Carrier Testing Period (subject to Inter-Carrier Network Test Plans)	NITF & TSPs	4-Mar-2016	4-Jul-2016
43	TSPs to submit Progress Report #2 to NITF and CATF (starts on commencement of Inter-Carrier Testing Period)	TSPs	4-Mar-2016	18-Mar-2016
44	NITF and CATF develop & submit Progress Report #2 to the RPC (linked to TSP reports to NITF and CATF)	NITF & CATF	18-Mar-2016	1-Apr-2016

Item	Task or Event	Prime	Start	End
45	The RPC submits Progress Report #2 to CISC/CRTC (linked to NITF and CATF reports)	RPC	1-Apr-2016	15-Apr-2016
46	Relief Date (earliest date when CO Codes in new NPA may be activated)			4-Jun-2016
47	TSPs submit Final Report to CATF and NITF (starts on the Relief Date and provides 2 weeks for preparation & submission)	TSPs	4-Jun-2016	18-Jun-2016
48	NITF and CATF develop & submit Final Progress Report to the RPC (linked to TSP reports to NITF and CATF)	NITF & CATF	18-Jun-2016	2-Jul-2016
49	The RPC submits Final Progress Report to CISC/CRTC (linked to NITF and CATF reports)	RPC	2-Jul-2016	16-Jul-2016
50	TSPs disconnect Test Codes & Numbers, and submit Part 1 form to return Test Codes (starts 1 month after Relief Date and allows 1 month for completion)	TSPs	4-Jul-2016	3-Aug-2016

5. OTHER ISSUES

Payphone Service Providers

All Payphone Service Providers are required to comply with the requirements contained in this RIP.

It is the responsibility of each Payphone Service Provider to update any system or process associated with the operation of their payphones in order to accommodate this relief project.

Telecommunication Service Users

All users are required to comply with the requirements contained in this RIP and any Telecom Decisions issued by the CRTC.

Users of telecommunications services are required to make the necessary changes to their telecommunications systems and equipment to accommodate the new overlay NPA code. Users include, but are not limited to, 9-1-1 Public Safety Answering Points (PSAPs), N11 Service Providers, alarm companies, internet service providers, paging companies, owners of Customer Premises Equipment, unified messaging service companies, governments, apartment building owners, hydro meter readers, residential customers and the general public.

Special types of Telecommunication Service Users (e.g., 9-1-1 PSAPs, N11 Service Providers (i.e., the entities that provides the services that are accessed via dialling the N11 Codes), alarm companies, internet service providers, paging companies, owners of Customer Premises Equipment requiring modification, unified messaging service companies, governments, apartment building owners, hydro meter readers) must take special measures to ensure that their services continue to function properly. All special types of Telecommunication Service Users are requested to co-ordinate their equipment and system modifications with their Carriers to implement the new overlay NPA. This is necessary to ensure a smooth and timely transition.

Users of telecommunications services should notify their Carrier and the Commission or Commission staff, as appropriate, if they have any problems or concerns with modifying their systems and databases in time to implement relief in accordance with this RIP. It is important that service users, in particular alarm service providers, make the required or necessary modifications to their systems, databases and terminal equipment.

9-1-1 PSAPs must make any required changes to their systems and databases to accommodate the new overlay NPA. Individual 9-1-1 PSAP system operators shall identify specific problems or concerns to the Commission or Commission staff, as appropriate. It is critically important that 9-1-1 PSAPs make the required or necessary modifications to their systems, databases and terminal equipment prior to the Relief Date.

Directories

All Directory Service Providers are required to comply with the requirements contained in this RIP and any Telecom Decisions issued by the CRTC.

It is the responsibility of Directory Service Providers to make the necessary changes to their systems and directories to facilitate the introduction of the new overlay NPA. All directory publishers should modify their systems to accept telephone numbers in the 10-digit format.

To facilitate the implementation of the new overlay NPA, directories must contain appropriate dialling instructions and information.

After the implementation of the new overlay NPA, all future directories in this NPA and affected Exchange Areas in neighbouring NPAs should identify the NPA code associated with the telephone number so that customers can obtain the appropriate 10 digit number.

6. RECOMMENDATIONS

The RPC recommends that the CRTC approve this RIP.

Attachments:

- 1) Consumer Awareness Program (CAP)
- 2) Network Implementation Plan (NIP)
- 3) Individual Telecommunications Service Provider Responsibilities

ATTACHMENT 1

Consumer Awareness Program (CAP)

Background

On 29 November 2012 the CRTC issued Telecom Notice of Consultation CRTC 2012-655, *Establishment of a CISC ad hoc committee for relief planning for area codes 226 and 519 in southern Ontario*, by which it established a CRTC Interconnection Steering Committee ad hoc Relief Planning Committee (RPC) to examine options for providing numbering relief to the area served by area codes 226 and 519 in southern Ontario.

On 28 February 2013, the CNA issued an Initial Planning Document (IPD) and the RPC commenced its work to develop a Planning Document (PD) and this Relief Implementation Plan (RIP).

The Planning Document recommended relief as follows:

- 1) The Relief Method should be a distributed overlay of a new NPA on NPA 226/519 (Option 5);
- 2) NPA 548 should be the relief NPA for NPA 226/519 in accordance with Telecom Decision CRTC 2010-784, *CRTC Interconnection Steering Committee consensus item- Reservation of Area Codes for future Area Code Relief*;
- 3) NPA 382 should be reserved for future subsequent relief in the 226/519 region as the 226/519 region has been forecast to exhaust again within 15 years; and,
- 4) The Relief Date should be 4 June 2016 to provide Carriers and customers with advanced notification and sufficient lead-time to implement relief, which would be 16 months in advance of the current Projected Exhaust Date.

Introduction

The Canadian NPA Relief Planning Guideline requires the RPC to create a Consumer Awareness Task Force (CATF) with a mandate to develop a CAP for implementing relief and to submit such CAP to the CISC.

Accordingly, the RPC has established a Consumer Awareness Task Force (CATF) to develop and implement this CAP.

This CAP addresses the introduction of overlay NPA 548 in the NPA 226/519 area.

This CAP identifies key milestones and establishes completion dates as agreed to by the RPC and approved by the CRTC. It is the responsibility of all Telecommunications Service Providers (TSPs) operating or intending to operate in NPA 226/519 to file their individual consumer awareness plans with the Commission in accordance with the Relief Implementation Schedule. Carriers must implement those programs in accordance with

this industry CAP and submit progress reports to the CATF and RPC for inclusion in the Progress and Final Reports to be filed with the Commission. The Relief Implementation Schedule contains start and end dates for industry consumer awareness activities.

In order to implement the CAP, Carriers may act individually or collectively to accomplish their objectives. However, where Carriers act collectively (e.g., create a Consumer Awareness Program Alliance), such Carriers are individually responsible to report their progress to the CATF and RPC. In the case where Carriers act collectively, all major Carriers should join the Alliance.

All Carriers are required to report any major relief plan concerns as they are identified, along with proposed solutions, and to address consumer concerns reported directly to the Commission.

The RPC requested that the CATF develop a CAP that incorporates the following:

- 1) Develop and agree on a CAP schedule
- 2) Co-ordinate and schedule progress reports with the NITF
- 3) Identify and address CAP issues
- 4) Communications objectives
- 5) Target audiences (e.g., government, media and various business and residence market segments)
- 6) Special types of telecommunications users (e.g., alarm, apartment owners, hydro readers)
- 7) NPA-specific communications messages
- 8) Communications tactics
- 9) Communications theme
- 10) Key messages

Communications Objectives

The Communications Objectives of this CAP are as follows:

- 1) Increase consumer and user awareness of the introduction of the new area code in the 226/519 area.
- 2) Advise customers that local and long distance calling areas, prices and dialling plans will not change with the adoption of the new overlay area code.
- 3) Provide open communication channels to address questions and concerns from residents and businesses regarding the implementation of the new overlay NPA code.
- 4) Continue to lay the foundation for seamless addition of new NPA codes in the future.

Communications Tactics

Carriers should consider using the following tactics to accomplish their individual consumer awareness program activities. Carriers may opt to implement some or all of these tactics on their own or as part of an association with other Carriers. In the event that an association of Carriers is formed to coordinate consumer awareness activities, all Carriers operating in the affected area codes are strongly encouraged to participate in the association activities.

Government Relations

Carriers should ensure that governmental authorities in the affected NPA 226/519 are informed of the relief plan (federal, provincial and municipal governments, government offices, and elected representatives).

Media Relations

To introduce and raise awareness of the new area code, Carriers should conduct an ongoing media relations campaign targeting key media (including local newspapers, broadcast media, and community publications) in area code 226/519. Carriers should offer spokespersons for interviews that focus on how residents and businesses can prepare for the new overlay NPA and to encourage them to start getting ready now.

Carriers should determine newsworthy announcements and issue press releases accordingly. The press release program will serve to update local media on the progress of the introduction of the new overlay area code.

When required, Carriers should issue a series of media alerts and public service announcements to local radio and broadcast stations to provide updated information on the new overlay NPA code.

Each TSP shall provide the news media and general public with basic information about the new NPA, and referrals related to Commission decisions and regulations. Each Carrier should identify its own spokesperson to speak on its behalf to the media. Individual TSPs may form alliances with other TSPs for media relations purposes and such an alliance may also have its own spokesperson.

The Canadian Numbering Administration (CNA), in its role as the Chair of the RPC, shall act as a spokesperson for the RPC.

Carriers' Web Sites

Carriers should provide up-to-date information about the implementation of the new overlay NPA code on their Internet web sites.

Customer Bill Inserts & Messages

Carriers should print information on customer bills and/or distribute bill inserts to their customers advising them of the key dates for the implementation of the new overlay NPA Code and associated changes required to customer equipment and systems.

Advertising Campaign

Carriers should implement their own individual media advertising as necessary and voluntarily participate in a media advertising campaign coordinated with other Carriers' activities to increase awareness amongst consumers in the affected NPA 226/519 region. All media advertising campaigns, whether conducted individually or collectively, should meet the objective of providing clear and consistent messages to consumers and users as established in this CAP.

Targeted Customer Communications

Carriers should identify and communicate directly with their customers who will be required to make major changes to their telecommunications equipment and systems to accommodate the new area code. Targeted communications identifying the changes required should be sent to those customers well in advance of the relief date in order to provide those customers with sufficient time to make the necessary changes. Such targeted customers may include 9-1-1 Public Safety Answering Points (PSAPs), N11 Service Providers, alarm companies, Internet service providers, paging companies, unified messaging service companies, apartment building owners, and hydro meter readers.

Other Means of Customer Communications

Carriers should use other means (e.g., customer messaging, direct customer contacts, Interactive Voice Response, etc.), as required, to reach their customers and provide appropriate information about the new overlay NPA code.

Communications Themes and Key Messages:

The proposed theme for the CAP should be: "Area code 548 is being added to the 226/519 area."

This theme should be reinforced with more detailed key messages in customer awareness activities:

- a) To meet the growing demand for telecommunications services and numbers, area code 548 will be overlaid on top of the 226/519 geographic area on 4 June 2016. The 548 area code will co-exist within the same geographic region as area codes 226 and 519. There will be no change to customers' existing 226 and 519 telephone numbers. Telephone numbers beginning with the 548 area code may be assigned for use after the Relief Date.
- b) 10-digit dialling will continue to be used for local calls within the area served by area codes 226, 519 and 548.
- c) Local and long distance calling areas and prices will not change with the adoption of the new 548 overlay area code. Customers with telephone numbers in the overlay area code 548 will get the same calling areas and prices as customers with telephone numbers in area codes 226 and 519.
- d) Emergency calls (9-1-1) and other N11 services will continue to be dialled using 3-digits.

Consumer Awareness Program Timeline

All Carriers that have or plan to have customers in the affected area codes must implement their own consumer awareness program activities in accordance with this CAP and associated dates contained in the Relief Implementation Schedule.

It is the responsibility of each Carrier to submit its individual consumer awareness program to the Commission and to provide progress reports to the CATF on its own consumer awareness program activities so that the CATF can submit its required Progress Reports. In the event that a Carrier does not submit its individual progress report to the CATF, the CATF will note this discrepancy in its progress report.

ATTACHMENT 2

Network Implementation Plan (NIP)

Background

On 29 November 2012 the CRTC issued Telecom Notice of Consultation CRTC 2012-655, *Establishment of a CISC ad hoc committee for relief planning for area codes 226 and 519 in southern Ontario*, by which it established a CRTC Interconnection Steering Committee ad hoc Relief Planning Committee (RPC) to examine options for providing numbering relief to the area served by area codes 226 and 519 in southern Ontario.

On 28 February 2013, the CNA issued an Initial Planning Document (IPD) and the RPC commenced its work to develop a Planning Document (PD) and this Relief Implementation Plan (RIP).

The Planning Document recommended relief as follows:

- 1) The Relief Method should be a distributed overlay of a new NPA on NPA 226/519 (Option 5);
- 2) NPA 548 should be the relief NPA for NPA 226/519 in accordance with Telecom Decision CRTC 2010-784, *CRTC Interconnection Steering Committee consensus item- Reservation of Area Codes for future Area Code Relief*;
- 3) NPA 382 should be reserved for future subsequent relief in the 226/519 region as the 226/519 region has been forecast to exhaust again within 15 years; and,
- 4) The Relief Date should be 4 June 2016 to provide Carriers and customers with advanced notification and sufficient lead-time to implement relief, which would be 16 months in advance of the current Projected Exhaust Date.

Introduction

The Canadian NPA Relief Planning Guideline requires the RPC to create a Network Implementation Task Force (NITF) with a mandate to develop a NIP for implementing relief and to submit such NIP to the CISC.

Accordingly, the RPC has established a Network Implementation Task Force (NITF) to develop and implement this NIP.

This NIP addresses the introduction of overlay NPA 548 in the NPA 226/519 area.

The NIP identifies key milestones and establishes completion dates as agreed to by the RPC. It is the responsibility of all Carriers operating or intending to operate in NPA 226/519 to file their individual network implementation plans with the Commission in accordance with the Relief Implementation Schedule. Carriers must implement those programs in accordance with this industry NIP and submit progress reports to the NITF and RPC for inclusion in the Progress and Final Reports to be filed by the RPC with the Commission.

All Carriers are required to report any major relief plan concerns as they are identified, along with proposed solutions, and to address consumer concerns reported directly to the Commission.

The RPC requested that the NITF develop a NIP in accordance the Canadian NPA Relief Planning Guideline that incorporates the following:

- 1) Develop and agree on a NIP schedule
- 2) Co-ordinate and schedule progress reports with the CATF
- 3) Identify and address NIP issues
- 4) Network implementation objectives
- 5) Co-ordinate equipment modifications with special types of telecommunications users (e.g., alarm companies, apartment building owners, hydro meter readers)
- 6) NPA-specific network changes
- 7) Inter-carrier network and technical interfaces (e.g., test plan and test numbers, 9-1-1 impacts if any)

Network Implementation Objectives

The objective of this NIP is to ensure that all necessary network and interconnections are modified to implement the overlay NPA 548 in the NPA 226/519 region.

All Carriers are required to implement the necessary network changes to implement relief.

Carrier Coordination with Special Types of Telecommunications Users

All Carriers are requested to co-ordinate their network and service modifications with special types of telecommunications users (e.g., 9-1-1 Public Safety Answering Points (PSAPs), N11 Service Providers, alarm companies, internet service providers, paging companies, owners of Customer Premises Equipment, unified messaging service companies, governments, apartment building owners, hydro meter readers). This is necessary in order to ensure a smooth and timely introduction of the new overlay NPA.

Test Plans

All Carriers are required to modify their networks, systems databases, and operator services and directory assistance databases, to accommodate the new overlay NPA as per the Relief Implementation Schedule.

Test plans, if required, should be arranged on a bilateral basis between interconnecting Carriers in accordance with bilateral agreements.

In preparation for the start of inter-carrier testing, all Carriers are expected to complete modifications to their networks, systems databases, and Operator Services and Directory Assistance databases, as necessary to facilitate inter-carrier testing per the Relief Implementation Schedule.

Test Codes and Numbers

Test numbers in the new overlay NPA 548 will permit all Carriers and other entities to test their equipment and ensure that the proper network changes have been made to route calls to each Carrier operating in the new NPA. The test numbers shall permit Carriers and users to test their equipment with or without having to incur toll charges.

Carriers should submit a written request to the CNA verifying their intention to establish a test CO Code in the new NPA. Each Carrier may establish two test numbers in a test CO Code (NXX) for the new NPA to facilitate testing of network and billing system functionality.

Routing of calls to the new NPA can be verified by dialling the new 548-XXX-8378 (TEST) numbers which shall not provide answer supervision and therefore should not result in a billed call to the “calling” party.

Billing of calls to the new NPA can be verified by dialling the new 548-NXX-2455 (BILL) numbers which shall provide answer supervision and therefore should result in a billed call to the “originating” network.

The following Carriers have agreed to provide test numbers in the new NPA:

- Bell Canada

Other Carriers may request and receive test CO Codes and numbers in accordance with the timeframe contained in the Relief Implementation Schedule.

Per the Canadian NPA Relief Planning Guideline, requests for test CO Codes must be received by the CNA no more than six months and no less than 66 days prior to the activation date on which testing to the number can begin. The CNA will reclaim test CO Codes about four weeks after the Relief Date. Test numbers shall be activated in all networks in accordance with the inter-network test plan and date in the Relief Implementation Schedule. Test numbers in a new overlay NPA should be activated at least 90 days prior to the introduction of the new NPA Code, or by the start of the inter-carrier testing period if sooner. Test numbers shall remain active until about four weeks after the Relief Date.

The test CO Codes used for the test numbers must be returned to the CNA in accordance with the Relief Implementation Schedule. The CNA shall initiate CO Code reclamation in accordance with the Canadian Central Office (NXX) Code Assignment Guideline for all CO Codes allocated for testing purposes in the event that such CO Codes are not returned by the above Carriers to the CNA in accordance with the Relief Implementation Schedule.

The standard network announcement for the test number must be as follows:

“You have successfully completed a call to the 548 Area Code Test Number at [CARRIER NAME] in Ontario, Canada. La communication a été établie avec succès au numéro de vérification de l'indicatif régional 548, à [NOM DU TÉLÉCOMMUNICATEUR], Ontario, Canada.”

Carriers may request other test CO Codes in the relief NPA for test purposes within their own networks during the relief implementation timeframe, in accordance with the Canadian Central Office Code (NXX) Assignment Guideline.

9-1-1 Service

The introduction of the new overlay NPA is not expected to have any impact on the dialling of the 9-1-1 abbreviated dialling number nor the routing of emergency calls to the appropriate Public Service Answering Point (PSAP).

However, the introduction of the new overlay NPA may have an impact on 9-1-1 service, trunking and systems.

Carriers who intend to provide service using CO Codes in the relief NPA or to port numbers into their switch from the relief NPA, shall establish 9-1-1 trunking and associated interconnection arrangements as per existing interconnection agreements. Carriers that provide 9-1-1 networking services to any PSAP shall establish 9-1-1 trunking and associated interconnection arrangements as per existing interconnection agreements. These arrangements shall be made prior to the relief date upon request of Carriers, and provided that these arrangements are in accordance with the timelines, terms and conditions set out in existing interconnection agreements.

The existing procedure for implementing new Carrier trunk groups for 9-1-1 traffic, including testing with local Carriers 9-1-1 Control Centers and PSAPs, should be used. All Carrier related changes that impact 9-1-1 must be completed in accordance with the Relief Implementation Schedule.

Other N-1-1 Services

Carriers should review routing to other N-1-1 numbers including 211, 311, 411, 511, 611, 711 and 811 as necessary to ensure that calls will be properly routed.

Payphone Service Providers

It is the responsibility of each Payphone Service Provider to update any system associated with the operation of their payphones to accommodate the new overlay area code. As well, each Payphone Service Provider must update any instructions for using their payphones to advise customers regarding the new overlay area code if necessary.

International Gateway Service Providers

International Gateway Service Providers are responsible to implement changes to their network in order to accommodate the new overlay area code.

It is recommended that Commission staff notify Canadian International Gateway Service Providers of the implementation of the new overlay area code.

Intra Carrier Network and Customer Interface

All Carriers must make and test the necessary internal system, network and customer interface changes as per the Relief Implementation Schedule in order to accommodate the introduction of the new overlay area code.

All Carriers are required to implement the necessary network changes to route traffic to/from the relief area code. Switch translations must be updated and modified in all Carriers’ networks in order to process calls to/from the relief area code.

By the start date of the inter-carrier testing period, Carriers must use 10-digit signalling for all local traffic they send to other Carriers, and must be able to receive 10-digit signalling on local traffic they receive from other carriers. In the event that Carriers have network equipment limitations that cannot accommodate 10-digit signalling, alternative arrangements may be made with interconnecting carriers to route calls using only 7-digit signalling, where feasible.

Each TSP is responsible for determining the impact of the new overlay NPA code on its operations and the products and services it provides to its own customers. Each TSP is responsible for making all necessary modifications to ensure service can be provided to its own customers who may receive, or make calls to, telephone numbers in the new overlay NPA code. Furthermore, TSPs shall notify all of their customers of the introduction of the new overlay area code in accordance with the CAP (see Attachment 2).

Network Implementation Plan Timeline

All Carriers who have or plan to have customers in the affected area codes must implement their own network implementation plan activities in accordance with this NIP and associated dates contained in the Relief Implementation Schedule.

It is the responsibility of each Carrier to provide progress reports to the NITF on its own network implementation plan activities so that the NITF can submit its required Progress Reports. In the event that a Carrier does not submit its individual progress report to the NITF, the NITF will note this discrepancy in its Progress Report.

Dial Plan

The dial plan for calls originating from NPA 226/519 will not change. The dial plan for NPA 226/519 and the new overlay NPA 548 will be as follows:

Local Dial Plan		Toll Dial Plan	
Current	Future	Current	Future
10 digits	10 digits	1 + 10 digits	1 + 10 digits

ATTACHMENT 3

Individual Telecommunications Service Provider Responsibilities

Each Telecommunications Service Provider (TSP) is responsible to make the necessary changes in their information/operation support systems for the operation, maintenance, control, and administration of its network and to serve its customers. Accordingly, no activities have been identified in the Relief Implementation Plan (RIP) for the coordination of these functions between different TSPs. Such “internal” systems include, but are not limited to, the following functions:

- Operations Support
- Products & Services
- Marketing & Sales
- Carrier Services
- Network Planning & Provisioning
- Network Operations
- Service Assurance
- Billing
- Financial Systems
- Customer Care & Customer Services (e.g., Business Offices)
- Operator Services
- Directories
- Direct Marketing Centers
- Quality Control
- Service Provisioning & Activation
- Repair Services
- Human Resources/Logistics
- Corporate Information Databases
- Customer Provided Equipment Reprogramming, Upgrades and Testing